Notation Musician 4 User Guide

Notation Musician 4 User Guide

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1 Introduction

Welcome to **Notation Musician**!

In this documentation we will refer to this music software program as **Musician** for short.

Musician is a tool for converting certain types of music files to sheet music. **Musician** helps you find and download MIDI (.mid) and Karaoke (.kar) files from the Internet, and converts them to sheet music with amazing accuracy. You can print the music, view it on the screen, and sing or play along with it as the score is played. You can also extract particular parts for performers in your music group.

You likely will be able to learn how to use most of **Musician**'s features by simply trying out menu commands and clicking buttons here and there. However, for a quick start in learning how to use **Musician**, we recommend going through the Quick Start Tutorial 32.

> **TIP**: The most important tip we can offer you for getting started with **Musician** is to have *fun* exploring it! Explore **Musician**'s menus, toolbar, and palettes by clicking items to learn what happens. If you do not like a result, you can always undo it.
>
> **Musician** has a large number of options, but they are well organized to help avoid overwhelming you. You probably won't need all of the features of **Musician**. Don't worry that you're not using all of the features and options. When you accomplish your musical goals with **Musician**, and have fun doing so, then you will have taken full advantage of **Musician.** Many unexplored features of **Musician** will remain waiting for you for a later project!

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1.1 What's New in Version 4

Notation Musician 4 introduces even more intuitive features to make your music making experience smoother than ever.

- **New - SmartMode** 133 – automatic mode switching and cursors so you can see at a glance which tool you're using, making the interface more intuitive. Now, rather than having to manually toggle between Add and Select mode (though you can still do that, too), **Musician** "knows" what you want to do and shows you an "add"-ready cursor, or intelligently lets you select a score element that you mouse over and click.
- **New** - Full DPI awareness for high-resolution screens and high resolution support
- **New - Newsletter** on splash screen to keep you up-to-date

- **New - 64 bit application** for the latest operating systems -**Windows** 7 x64 through Windows 10 x64, **Mac** OSX El Capitan to macOS Catalina, **Ubuntu** LTS 18.04, LTS 20.04, other **Linux** distributions on request
- **New** - Fresh and flexible look with **selectable fonts** 126 for the interface.
- **New** - Microsoft Print to PDF capability
- **New technology** - New Prof-UIS, and fluidsynth libraries for enhanced performance of the interface, and sound for the Notation Software Synth.
- And of course, many bug fixes.

1.2 What's New in Version 3

The following new features and improvements are included in **Notation Musician version 3.**

Sound Enhancements

- **Notation Software Synth** 419 - an internal sound synth using a General MIDI (GM) soundfont to guarantee sound on any machine.
- **ASIO driver support** 419**,** eliminates latency (delay) issues. Selecting the ASIO driver 514 and the Notation Software Synth 419 for playback assures you of good sound.
- **Sounds of original imported MIDI files** supported, especially useful for devices that use specific extended bank voices.
- **Recovers "select" sound sets** from original MIDI files created using device-specific banks and instrument patches. If you have a Yamaha (or other keyboard/synthesizer/library) that generates files with special sound sets, Notation Musician can now find and preserve those special sounds, even from older saved .not files, and put them back in so that your songs sound great when you play them, or when you export a MIDI (.mid) file to play on your keyboard or other device.

Direct Image Export

- Specific pages or the entire score can be exported as High Resolution image files 81 for use in other documents. BMP, PNG, JPG, and GIF export are supported (.gif is not available yet for Mac and Ubuntu systems).

Direct PDF Export

- Notation music sheets can be exported directly using our High Resolution PDF Export 81 for crisp notation sheets.

Use files created with notation composer 3's Band in a Box® plugin

- Files that have been created with the **Band in a Box®** plugin can be used just like any other .not file.

More Language Versions

- Now available in **German** and **Spanish** versions.
- **QuickStart Guides available** for each language version.

- German version uses **German style notation**.
- **A German version of the website** is also in place to support German-speaking/reading customers.
- A **flexible upgrade path** to switch the language variant of the software when upgrading your product.

New platforms supported

- **Mac -** Founded on the Wine HQ environment, the latest version is enhanced to provide the best experience on Apple MACs. See our MAC installation guide at www.notation.com/MAC.php
- Linux's **Ubuntu** and **openSUSE** are now supported, also founded on the WineHQ environment. See our Ubuntu installation guide at www.notation.com/Ubuntu.php

Detection of Modern Keyboards

- Modern keyboards today have a certain structure through their USB interface. Version 3.0.2 and later detects those accurately.

Improved User Interface

- More stream-lined user interface for fast and effective work with the software
- Better feedback for correcting musical problems with song files
- Enhanced color scheme

Yamaha XF Chord Format Support

- Full implementation of Yamaha's XF format for chord names, both for importing from .mid files and exporting to .mid files.

Chord Name Enhancements

- Chord names are compared to the underlying notation and checked for validity. Chord names that are "suspect" are marked for easy correction using the Chord Name tools.
- Verification of chord name compatibility with different MIDI export filetypes and for the Band in a Box® plugin.

MIDI Device Configuration Manager (DCM) Enhancements

- Improved interface for easier access and use
- New folder structure for saving and restoring backup configuration files

Quality and Security Initiative

- Many bugs corrected in Version 3
- Security enhancements to protect users who purchase a license
- Easy installation procedure with "Readme" guides
- Easy update process for free updates
- Easy restoration later if a problem should occur requiring reinstallation of the software.

- Improved service support with real-time logging and fault diagnosis for better customer service
- Backup installation is saved in a zip folder for easy user storage and recovery.

Technology

- Enhanced User Interface libraries from Microsoft, Inc. and FOSS Software, Inc.
- New user-friendly grids using the modern grid technology of Ultimate Grid
- Version 3 has been developed with Microsoft's modern development environment to provide support for future operating systems
- ASIO 514 integration for better visual and sound experience.

Tutorial Videos

- Tutorial videos are available on the website to help you get going fast

1.3 Getting Started

If you have already successfully installed **Musician**, and are already comfortable using this documentation, you might want to skip this Getting Started section. Before beginning the Quick Start Tutorial 32, you might find it helpful to read about The Purpose of Notation Musician 25, so that you will have a better idea about what you should expect in this music software.

This Getting Start section offers the following introductions and instructions:

- About the Trial Version of Notation Musician
- Using this Documentation
- Printing this Documentation
- Installing Notation Musician
- Finding and Starting Notation Musician
- Backing up Your Purchased Copy of Notation Musician
- Uninstalling Notation Musician
- How to Buy Notation Musician 25

1.3.1 About the Trial Version of Notation Musician

The trial version of **Notation Musician** is functional for 30 days from the installation date**.** The trial version offers all features of **Musician** available in the full version, except printing and saving files.

To determine what version you are using of **Notation Musician**, choose the About command from the Help menu. A window will display the **Notation Musician** graphics logo and the version number of **Musician**. This window also displays "Trial Version" if you are using the trial version rather than the full purchased version of **Musician**.

With the trial version of **Musician** you can edit the score and play it back, work with the practice features, and see how it can help you with your music.

If you have enjoyed using the trial version of **Musician**, we hope you will consider purchasing the full version of the software, which removes the 30-day trial period limitation and allows you to save and share your work. To purchase the full version of

Musician, please visit our website at www.notation.com/Buy.php to review your options.

1.3.2 Using Helps Provided in the Documentation and Software

This **Musician** documentation is organized according to tasks that you can do, and will want to learn about, in **Musician** rather than "reference" documentation, which is organized according to the structure of the software program-- menus, toolbars, dialog boxes, etc. We hope this helps you get things done quicker.

You can also choose the language for viewing this User Guide. Please note that this feature uses a translation service for the text only. All screenshot annotations will not be translated, but the layout of each language variant of **Musician** is the same, so you should still be able to understand the screenshots.

To change the language for displaying the User Guide:

1. Open **Musician**
2. Click "Setup", and then "Select Language of User Guide" (the last command in the menu list).
3. Choose the language you want to use from the drop list.
4. Click "Ok."
5. Now when you use Help -> User Guide, and if you have chosen a language other than English, the User Guide will open in the translation service window. It may take a minute or two to load depending on connection speed and the internet speed time, so please be patient. English is the original language of the User Guide, and the English version will open directly on our website.

To learn how to accomplish a certain task:

In Help/User's Guide:

- You will see the Table of Contents on the left side of the help window. Navigate through the Table Contents until you find the category and sub-category of documentation that is relevant to your need

  -- OR --

- (Better) Click on the Index or Search tab in the left side of the help window. If you are interested, for example, in help topics that specifically focus on preparing piano scores or parts, then look up "piano" in the Index, or use "piano" as the keyword for Search.

To learn about a particular menu item:

- While holding the mouse over the menu item, hit the F1 key. Musician will display this help window, presenting the topic that describes the situations in which you might want to use that menu command, and the overall procedures in which you would use that command.

To learn about a button or control in the main toolbar 129, or a button in one of the palettes 136:

- While holding the mouse over the button or control, hit the F1 key.

To learn about the details of a dialog box:

- Click the Help button in the dialog box.

To learn about keyboard shortcuts in Musician:

- See Appendix A: Keyboard Shortcuts 501.
- You can find out what the keyboard shortcut for a command is by placing the mouse over the menu item or palette button, and Musician will display a tip describing the command and its keyboard shortcut.

1.3.3 Printing This Documentation

If you would like to print out portions of this documentation then we suggest that you download the documentation available in Adobe Acrobat PDF file format. You can then use your favorite PDF reader or editing program to print out the pages you would like. Alternatively you can purchase a bound book copy of this documentation.

1.3.4 Installing, Backing up, and Reinstalling Notation Musician

You may have received the installation file for **Musician** either via download from the Internet or on a CD-ROM. Either way, the setup program will be named something like Inst_NS_Musician_4_English.msi.

The number "4" in the setup file name represents the **Musician** version number 4.0. Newer versions of the **Musician** software and setup program might be released before this documentation is updated. In that case, the number in the setup program might be something like "402" for **Musician** version 4.0.2.

Installing on Windows 16

The following three platforms require Wine, specifically WineBottler 514, to be installed first. The most up-to-date download links will be found in the respective Installation Guides for those platforms:

Installing on a Mac

Installing on Ubuntu

Installing on openSUSE

For all installations you should be sure to backup your installation immediately 17 after installing the software. In the event that your computer should suffer any disruption that causes you to lose the functionality of the software you can then use the backup that you made to reinstall the software and get going again quickly.

For Windows machines

To install Musician using the installation file downloaded from the Internet:

- ***We strongly encourage you to select "Download" and not "Run" when downloading the software.***

After downloading the installation file simply double-click it to begin the installation.

- If you did not immediately run the setup program after downloading it, then you will first need to find it on your system. One way to do this is as follows:

  1. At the lower, left corner of the screen, click the Windows button:

      OR

  2. In the Search field, type in the word "Musician".

     Windows will find NotationInst_NS_Musician_4_English.msi file in your Internet download directory, and display it in the right panel of the Search Results window.

  3. With the mouse, double-click the name of the found file. That will start the setup program.

  4. Follow the steps in the Notation Musician setup program. These will include entering your registered name, email address, mailing address, and your license number.

  5. IMPORTANT: We recommend that you restart Windows after finishing the installation. It might not be necessary for you to do this. But if you have any problems initially running **Musician** after installing it, then it is highly recommended that you restart Windows.

To start Musician installation from the CD-ROM:

1. Insert the Notation Musician CD-ROM into your computer's CD-ROM drive. Normally the setup program will start automatically.

2. If the setup program does not start automatically:

   (a) At the lower left corner of the screen, click the Windows button:

    OR

   (b) Choose (or type) "Run".

   (c) In the Run dialog, type "D:\setup.exe" if your CD-ROM is the "D:" drive. If you do not know the drive letter for your CD-ROM, then click the Browse button to find letter for your CD-ROM drive.

3. Follow the steps in the **Notation Musician** setup program. These will include entering your registered name, email address, mailing address, and license number. It is probably a good idea to have your receipt email handy so you can simply copy/paste this information into the fields and avoid any problems.

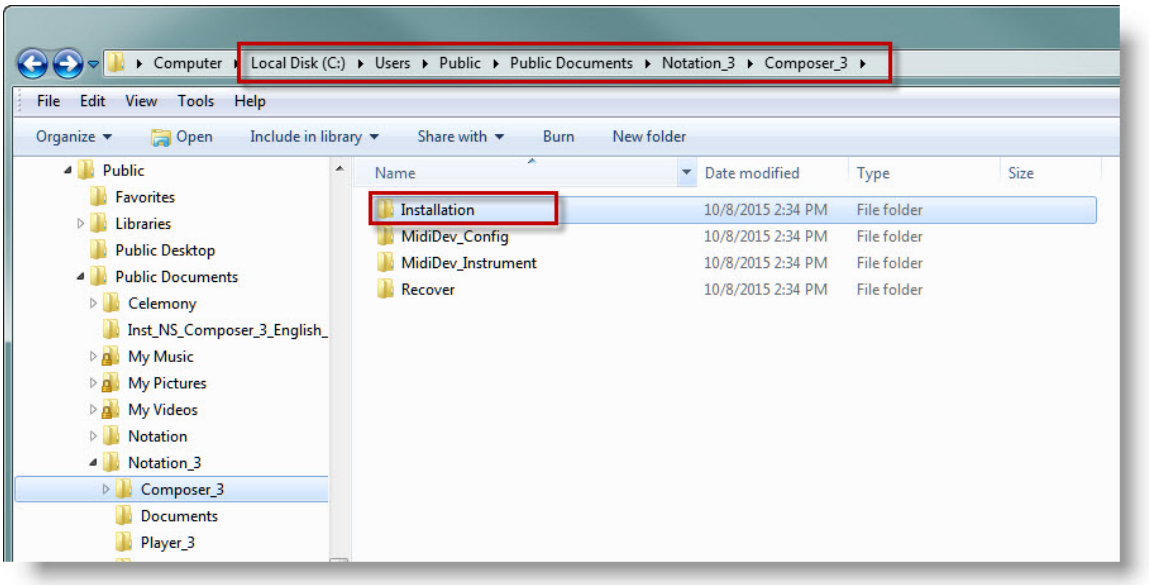
4. IMPORTANT: We recommend that you restart Windows after finishing the installation. It might not be necessary for you to do this. But if you have any problems initially running **Musician** after installing it, then it is highly recommended that you restart Windows.

Always backup your installation:

- When you first install **Notation Musician** using either method above, or when you update your software, the installation file creates a backup installation folder. In the event that you have a problem with your machine (eg. a viral infection which has to be cleaned up, a hard drive crash, etc.) which requires the re-installation of your software, you can use this folder of files to reinstall

the software on the same machine. Therefore, we strongly recommend that you make a copy of this folder and save it in a safe location (eg. memory stick, external hard drive, etc.)

1. Use Windows Explorer to navigate to the folder C:\Users\Public\Documents\Notation_4\Musician_4\Installation For systems that use the WineHQ paradigm, this folder will be located within the "Wine" folder on your machine.



2. **Copy the entire "Installation" folder** to a backup drive or other secure media backup that you may have. Alternatively, you can make a copy to a CD or DVD disc if your machine has the capability to "burn" CDs or DVDs. You may also wish to copy the MidiDev_Config folder or other files that are contained here if you have a complicated MIDI Device Configuration that you want to preserve in case of problems later.

To reinstall the software on the same machine:

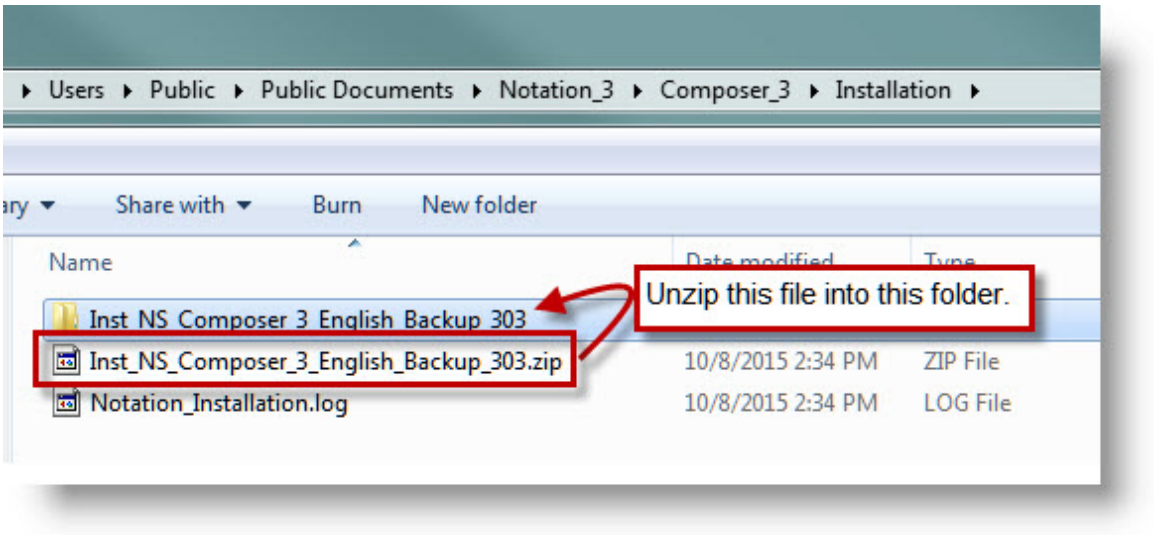
1. If you find that you need to reinstall the software on the same machine that you originally installed it on, you can use the backup that you created above. Copy the entire "Installation" folder that you saved in the steps above to your computer's hard drive.

   IMPORTANT: the files

   - Inst_Notation_Musician_4_English_Backup_401.zip (or whichever language and version variant you have)
   - Notation_Installation_LOG.log

   both need to be located in the "Installation" folder on your hard drive for reinstallation to be successful!

2. Unzip the file Inst_Notation_Musician_4_English_Backup_403.zip to its own folder within the /Installation folder.



3. Follow the instructions in the "Read_me_to_reinstall_Notation.txt" for the reinstallation.
4. In the folder "Inst_NS_Musician_4_English_Backup_403" is a file named "Installation_Notation_Musician_4_English.msi" - double-click the filename to start the reinstallation.
5. Run Notation Musician to make sure that everything has reinstalled correctly.

▸ **If you wish to transfer your license to a different machine:**

Please use the form at our website to Request a Redownload.

1.3.5 Finding and Starting Notation Musician on Your System

Once you have installed **Musician**, there are a couple of ways you can start the program.

On most systems you can simply double-click the **Musician** icon 

on your desktop to start the program**.**

▸ **To start Musician on Windows:**

Double-click the **Musician** icon 

on your desktop to start the program**.**

To start Musician on a Mac:

Double-click the **Musician** icon 

on your desktop to start the program**.**

To start Musician on Ubuntu:

Simply double-click the **Musician** icon 

on your desktop to start the program**.**

To start Musician on openSUSE:

Simply double-click the **Musician** icon 

on your desktop to start the program**.**

1.3.6 Setting up Your Default MIDI Playback Device

Beginning with the version 3.0.3 release, the default MIDI playback device on first installing **Musician** is the **Notation Software Synth** 419. Unless you have other "specialty" synths or sound libraries, or an external unit you want to use for playback, you won't need to read any further in this section.

If you have a previous version of Musician the default device was the GS Wavetable Synth. This synth is turned off by default with later releases of Musician because many later Windows operating systems do not have the synth. If you would like to turn the GS Wavetable Synth back on, please see GS Wavetable Activation 23. Please note, however, that the latency of the GS Wavetable Synth makes it unsuitable for play-along, and it can interfere with ASIO drivers. We do not recommend using it with these later versions of our software.

Your computer may have more than one MIDI device that can be used for listening to your files. You will be able to hear the difference in how one MIDI device versus another plays, for example, a grand piano sound.

A MIDI device can be "software synthesizer" on your system, or a physical device, most commonly an external MIDI keyboard that is connected to the computer via a MIDI cable or USB cable.

The Quick MIDI Device Setup command in **Musician**'s Setup menu offers you an easy way to choose the default MIDI device that will be used for playback.

Most MIDI devices offer a list of 128 different instrument sounds, and certain drum sounds, which together are called the "General MIDI" sounds. Many MIDI devices also offer one or more additional "banks" of sounds, where each bank can have up to 128 sounds. If your MIDI device has additional banks of sounds besides General MIDI sounds, you can also use the Quick MIDI Device Setup command to inform **Musician** about what particular MIDI device manufacturer and model you are using. With that information, **Musician** lets you select instrument sounds by meaningful names, such as "pizzicato violin" instead of MIDI "patch" numbers.

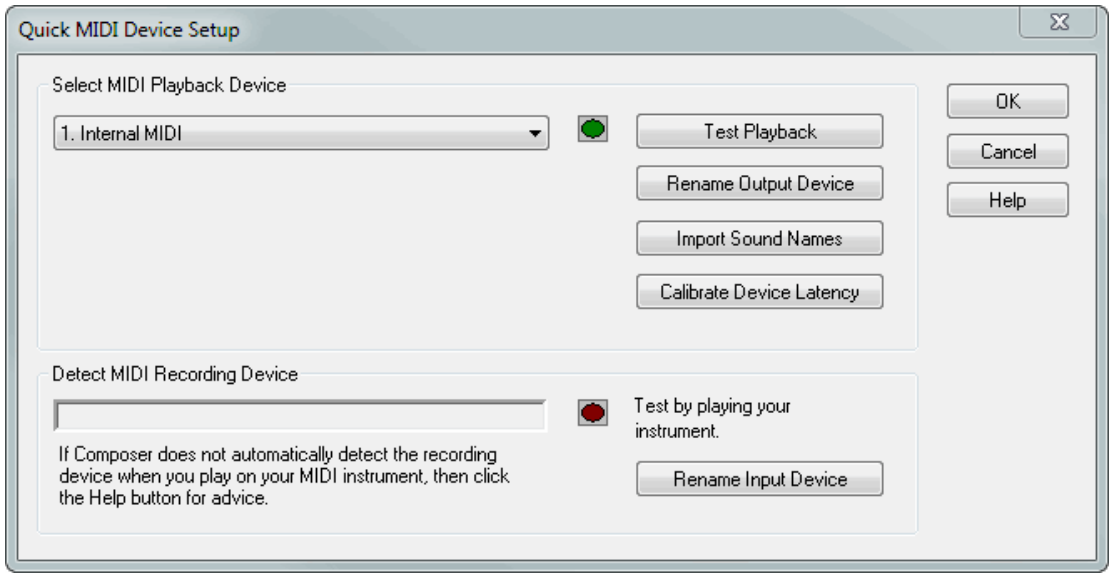
To set up the default MIDI playback device in Musician:

1. In the Setup menu, choose the Quick MIDI Device Setup command.

   -- OR --

   Type "qqds" for (Quick command) quick device setup.

   Musician will display the Quick MIDI Device Setup dialog box:



2. Select one of the MIDI playback devices in the list.

   To use an external MIDI device that is connected to your system via a MIDI cable or USB cable, select a MIDI device that has "MIDI Out" or "Out" in its name.

3. To test the sound for the selected playback device, click the Test Playback button.

   Musician will display and play a 12-note chromatic scale. The notes will be highlighted as they play. Also, the green playback indicator in the Quick MIDI Device Setup window will display a bright green color as the notes are played. Upon completion of the playback, **Musician** will close the window that displays the notes.

   If the device is an "internal" device on your Windows system, then you should hear sound through the speakers connected to your sound card. If the device is "external", such as a MIDI keyboard capable of producing its own sound, then you should hear that device play the sound.

4. If you do not hear sound for a device when you choose the Test Playback option, then some possible explanations and remedies are discussed in What To Do If You Do Not Hear Any Sound 427.

5. Click the OK button when you have selected the desired playback device.

6. After you click OK, if you have already opened a song, **Musician** will display a simple dialog box that offers you the option to reassign all of the staves of that song to the newly assigned default device.

If your MIDI device has additional MIDI sound banks besides the General MIDI sounds, then it is a good idea to import the sound names, as described in the next procedure. Once you have done this, you can refer to instrument sounds according to names, such as "pizzicato violin", rather than MIDI patch numbers.

You can import instrument sound names from either of two types of files: (1) a Cakewalk[tm] Instrument Description (.ins) file, or (2) a Notation Software[tm] MIDI Device Description (.mdd) file. The .ins and .mdd files are available at the web site of, respectively, Cakewalk and Notation Software, as described in the procedure below. An .ins or .mdd file usually is named according to a MIDI device manufacturer's name, as in yamaha.ins or roland.ins. The file typically has descriptions for several MIDI device models offered by the manufacturer.

To set up sound names for a device that has additional MIDI sound banks besides the General MIDI sounds:

1. Find a Cakewalk .ins file for the manufacturer of your MIDI keyboard or device from our collection in our User Forum's "Instrument Defintion" list.

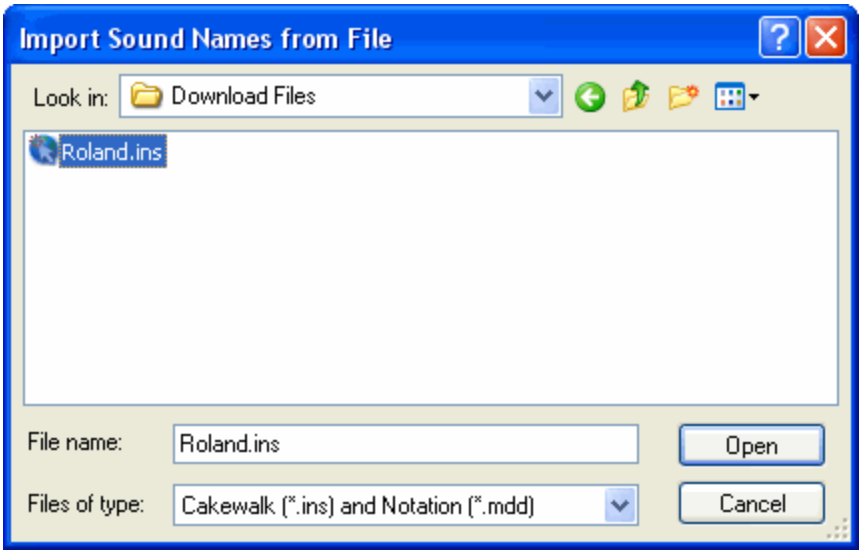
   -- OR --

   Find a file using your internet browser and searching for "INS" and the name of your device.

2. In your Internet browser, download the .ins or .mdd file to a directory that you can easily remember.
3. In the Quick MIDI Device Setup dialog, select a MIDI output port under Select MIDI Playback Device.

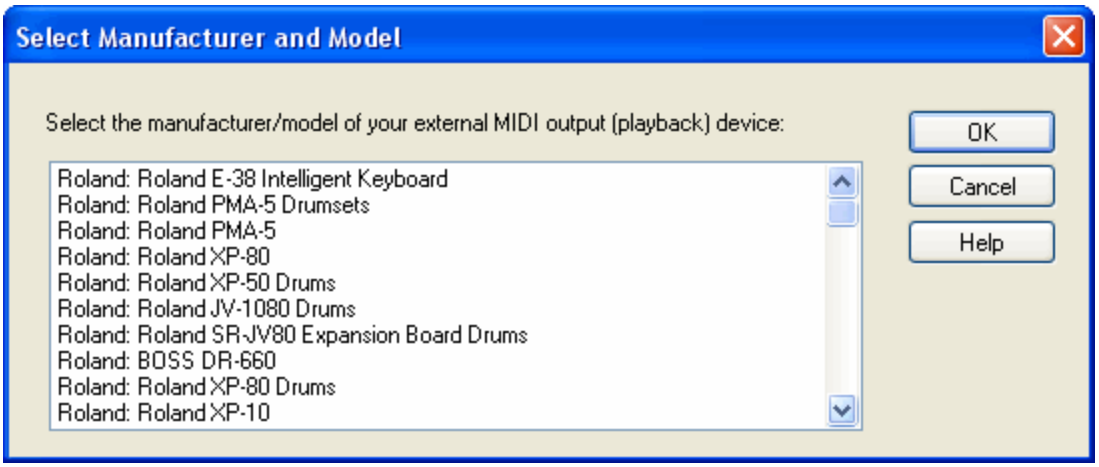
   A MIDI output port will include "MIDI Out" or "Out" in its name. If your device is connected via a USB cable, then the MIDI output port will also have "USB" in its name.
4. Click the Import Sound Names button.

   Musician will display the Import Sound Names from File dialog box:



5. In the dialog box, navigate to the directory where you downloaded the .ins or .mdd file, and select the file. Click the Open button.

Musician will display the Select Manufacturer and Model dialog box:



6. Select your particular manufacturer / model in the list, and click the OK button.

   Musician will then return you to the Quick MIDI Device Setup dialog box.

7. Click the OK button in the Quick MIDI Device Setup dialog box.

To reactivate the GS Wavetable Synth:

Important note: If you want to playback with Musician using your MIDI instrument, do NOT enable the Microsoft GS Wavetable. It interferes with the ASIO 514 drivers that are used to reduce latency (delays) in the sound you hear when playing your keyboard. We encourage you to use the built-in Notation Software Synth as your default playback device, or any other ASIO 514-enabled device, to avoid latency issues when playing along with Musician.

1. Run Musician and click "Setup / MIDI ... configuration."
2. Now click "Device" in the menu heading, and "Enable Microsoft GS Wavetable Synth" at the bottom of the menu list.
3. A dialog box telling you that the change will take effect when you restart the software will come up. Click "Ok."
4. Exit the program and restart it for the change to take effect. The GS Wavetable will now show up in your MIDI playback devices list.

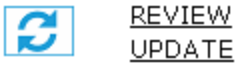
1.3.7 Getting Free Software Updates to Musician

From time to time, Notation Software provides free updates to the **Notation Musician** software. These updates offer new features, usability enhancements, and bug fixes.

If you have an Internet connection, it is easy for you to find out whether there is a free software update and then immediately download and install it.

To review the feature enhancements and bug fixes available in recent Musician software updates:

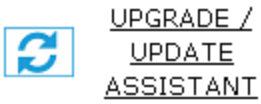
1. Click on Help / Software Updates
2. Click the link for "Review Update":



That will take you to a page at Notation Software's web site where you can review descriptions of recent feature enhancements and bug fixes in **Musician**.

To check on updates for Notation Musician and to download and install it:

1. Click on Help / Software Updates
2. Click the link for "Upgrade/Update Assistant":



Musician will display the Web Upgrade/Update Assistant window.

3. The Web Update Assistant will inform you whether an update for **Musician** is available. If so, just follow the instructions on the page to receive your download link.
4. Upon completion of the update, the program will offer you the option to immediately restart the newly updated **Musician** software.

1.3.8 Uninstalling Notation Musician

To uninstall Musician:

Use the Remove option of the Windows Control Panel as follows:

1. Click the Windows Start button at the bottom left corner of the screen.
2. In the Start list, select the main Settings option. (On Windows 7 choose the Control Panel sub-option).
3. In the Control Panel folder, choose Applications (or Programs).
4. Scroll down in the list of currently installed programs on your system to the entry for **Musician**.
5. Select Uninstall to remove **Musician** from your system.

1.3.9 Transferring Your Musician License to a Different Machine

MusicianThe licensing agreement for Musician states that one license is for one machine. If you wish to have multiple licenses for multiple machines, please see our website at https://www.notation.com/UpgradeOrder.php Enter your email address, and follow the instructions to purchase an "extension" of a second license for **Musician**.

If you wish to transfer your license to a different machine, please follow the next steps.

To transfer your license to a different machine, simply click on Help -> Transfer license to another computer.

The software will walk you through the steps of the transfer process. If you encounter any problems or have questions, please contact us at support@notation.com

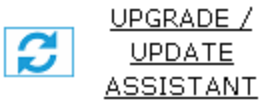
1.3.10 How to Buy Notation Musician

We will be delighted if you choose to purchase **Notation Musician**. Your purchase will support our dedicated efforts to continue developing and supporting this software.

To review the price of Notation Musician and purchase it please visit us at www.notation.com/Buy.php where we offer discounts for multiple license purchases and discount bundles of **Musician** and **Composer** licenses**.**

To check on upgrades for Notation Musician or to "extend" your license to include an additional license, and to purchase, download, and install it:

1. Click on Help / Software Updates
2. Click the link for "Upgrade/Update Assistant":



Musician will display the Web Upgrade/Update Assistant page via your web browser.

3. Enter your email address and click "enter".
4. In Step 2 select your current product and click "enter".
5. In Step 3, click the product you would like to either "upgrade" to (eg. upgrade to **notation composer** if you currently have **notation musician,** or upgrade to a higher level release) or "extend" to (eg. purchase an additional license of either product at a discount).
6. In Step 4 Click "buy now". You will be directed to the ordering page to add your payment information and complete your purchase.

1.4 The Purpose of Notation Musician

Notation Musician is a tool for converting music (MIDI) files from the Internet to sheet music, and for studying, practicing and enjoying music.

With **Notation Musician**, you can:

- find music (MIDI) files on the Internet and convert them to printable sheet music
- study and enjoy music

- practice music on your instrument or practice singing
- arrange music for your particular instrument 27

1.4.1 Preparing and Printing Sheet Music from the Internet

You can use **Notation Musician** to prepare and print sheet music that it helps you find on the Internet:

- Use your favorite Internet browser to search the Internet for a MIDI file of the music you want. Using the song name and "MIDI" in the search field.
- When you find the MIDI file at a web site, click its name, and **Musician** will download it and open it as sheet music.
- Print the sheet music.
- If the music is for multiple instruments or voices, extract the parts and print them individually or all together with one command.

1.4.2 Studying and Enjoying Music

Musician adds an extra visual dimension to your study and enjoyment of music. Whatever song or piece of music you are interested in, you will likely be able to find it as a MIDI file on the Internet. Download it using your favorite browser and open it in **Musician**.

When you open the MIDI file in **Musician**, it will immediately display the sheet music. Although with **Musician** you can change the notes or any detail of the music or notation, in many cases you might just want to use **Musician** as a tool for visually studying and enjoying music as it plays:

- You can easily follow the music as it plays because a blue vertical cursor shows the current playback position, and actively playing notes are highlighted.
- Slow down the music so that you can hear the details of rhythms.
- Select a particular instrument and increase its volume level, so that you can focus on the role of that instrument in the harmony and orchestration.

If you have never followed a score while listening to music, **Musician** might open up a whole new way for you to enjoy and experience music, with your eyes as well as your ears.

1.4.3 Practicing Music

You can use **Musician** as a tool for practicing on your instrument or with your voice in several ways:

- Play along with your acoustic instrument, or sing along, as you read the notes from your part on the screen.
- Let **Musician** play the accompaniment for other instruments.
- Slow down the tempo when you are first learning the music.
- Temporarily increase the font size of the notes so that you can comfortably read them.
- Turn off the volume (that is, "mute") the part that you are performing, so that only your "live" performance is heard.
- Let **Musician** automatically turn pages for you.
- Set up practice loops. You can specify:

-- the number of lead-in measures

-- the range of measures in the loop, or the starting and ending rehearsal marks

-- how many times the loop should repeat

-- how much the tempo should increase in each repeated loop

1.4.4 Rearranging Music for Your Particular Instrument

Sometimes you might find a MIDI file that has approximately the right notes, but they are not arranged well for your particular instrument. You can use **Musician** to rearrange the music to meet the requirements of your instrument:

- Transpose the notation according to the key of your instrument. For example, if your instrument is a Bb clarinet, transpose the shown notes up a whole step, so that a 'C' in the score is heard as the Bb a whole step below.
- Transpose the actual pitches up or down to fit within the range of your instrument.
- Change the pitches of individual notes to stay within the range of your instrument, or to avoid awkward fingerings.
- Prepare a piano reduction of an ensemble or choral score.
- Prepare fake book lead sheets for guitar or keyboard. **Musician** automatically analyzes the harmonies of the song for chords and displays them.

1.5 Comparison Between Notation Composer and Notation Musician

The following chart compares the purposes and features of **Notation Musician** and **Notation Musician**. For ordering and pricing information for these two products, see How to Buy Notation 25.

Purpose and Features	Notation Musician	Notation Composer
Download MIDI files Internet and transcribe them to sheet music that you can print or view on the screen as the notes play.	Yes	Yes
Search the Internet for MIDI files, download, and open them as sheet music.	Yes	Yes
Transcribe MIDI file to sheet music 70 with excellent accuracy, including detection of swing rhythms, grace notes, trills and tremelos.	Yes	Yes
Correct any errors that might be made in the transcription of the note rhythms 265.	Yes	Yes
Automatically analyze and display chord names 409.	Yes	Yes
Enjoy and study the music notation a song as it plays.	Yes	Yes

Purpose and Features	Notation Musician	Notation Composer
Highlight the notes and lyrics as they play 101.	Yes	Yes
Slow down the tempo 102 so that you can hear the rhythms more clearly.	Yes	Yes
Temporarily increase the volume of one staff 104 while decreasing the volume of other staves, so that you can focus your listening on a particular instrument or voice. "Solo" a staff while the others are muted 104.	Yes	Yes
Organize songs into playlists and play them back with Notation's built-in jukebox.	Yes	Yes
Practice music as you sing along or play your instrument with accompaniment	Yes	Yes
Transpose the pitch of a vocal part 287 to match your voice range.	Yes	Yes
Automatically turn pages 100.	Yes	Yes
Set up practice loops 115, to repeat a section of the song at optionally increasing tempos.	Yes	Yes
Remotely execute commands from your keyboard 143, such as Start Playback, End Playback, and Fast Forward.	Yes	Yes
Quickly prepare parts from a MIDI file, for use by yourself or musicians in a performing group.	Yes	Yes
Prepare an "Easy Notes" part 186 for student musicians, showing note letters (for example "C") in the noteheads.	Yes	Yes
Prepare a "Sing-Along" vocal part 191, for easy sight-reading from the screen while the song plays.	Yes	Yes
Prepare a fake book lead sheet part 186, with melody and chords.	Yes	Yes
Prepare piano reduction of a score 190 that has multiple instruments or voices.	Yes	Yes
Extract individual parts 178 for the players or singers in your music group.	Yes	Yes

Purpose and Features	Notation Musician	Notation Composer
Transpose an instrument's part to its natural key 289, such as for a Bb clarinet,	Yes	Yes
Split a single piano/keyboard staff into right- and left-hand staves 171.	Yes	Yes
Split a MIDI drum staff into separate one-line drum instrument staves 173.	Yes	Yes
Split a staff into melody and accompaniment parts 175.	Yes	Yes
Annotate the sheet music that has been transcribed from a MIDI file.	Yes	Yes
Add lyrics 376.	Yes	Yes
Edit note beams 274.	Yes	Yes
Transcribe the following types of ornaments: ■ grace notes ■ trills ■ tremelos 315 Temporarily display an ornament as written-out notes 307, or revert it to a written-out performance 306.	Yes	Yes
Add accent marks and articulations 340, dynamic marks 341, hairpin crescendo marks 344, slurs 352, pedal marks 362, and other special music symbols 348.	Yes	Yes
Add staff symbols 315: brackets and braces 317, clefs 321, key signatures 322, and barline types 327.	Yes	Yes
Add free text 390 anywhere in the score.	Yes	Yes
Add rehearsal marks. 416	Yes	Yes
Add 8va octave marks 261.	Yes	Yes
Add repeat barlines and endings 328, which will be interpreted during playback.	Yes	Yes
Add special repeat directives, such as "D.C.", for which you can specify the destination measure 334.	Yes	Yes
Format and print the score and parts.	Yes	Yes

Purpose and Features	Notation Musician	Notation Composer
Choose the default font size, face, and style for various categories of music symbols and types of text 202. The default can be overridden for specific items.	Yes	Yes
Specify the default horizontal spacing (degree of stretch or compression) and default vertical spacing between staves 228.	Yes	Yes
Control the layout of each page 214: ■ page breaks 221, system (line) breaks ■ number of measures on any given system 223, ■ number of systems on any given page ■ vertical spacing between any pair of staves ■ vertical spacing between adjacent systems ■ relative horizontal spacing of individual measures within a system (line) 226.	Yes	Yes
Add and control the placement of page title, footer and header text 198.	Yes	Yes
Optionally hide resting staves 209.	Yes	Yes
Expand or collapse multiple-measure rests 295.	Yes	Yes
Format parts using templates 212.	Yes	Yes
Display one-line drum instrument staves using special percussion noteheads 283.	Yes	Yes
Export a High Resolution PDF for sharing your score 51	Yes	Yes
Export a High Resolution image (.png, .jpg, .bmp, .gif) for sharing your score	Yes	Yes
Purpose: Re-arrange the notes of an existing song, or create music from scratch.	No	Yes
Create a new song using a pre-defined template for a variety of solo instruments, duet pairs, small ensembles, and large ensembles. Or, use a custom song template that you have previously prepared.	No	Yes
Add notesby whatever method is most convenient for you:	No	Yes

Purpose and Features	Notation Musician	Notation Composer
■ with the mouse and computer keyboard. ■ using the Sequential Note Entry method, whereby where you rarely have to select the note duration, even when the sequence of notes has different note duration. ■ using Step-Time recording, one note or chord at a time, from your MIDI keyboard or input device.		
Change pitches of notes.	No	Yes
Add staves (instrument parts).	No	Yes
Add measures.	No	Yes
Add ornaments: ■ grace notes ■ trills ■ turns ■ mordents ■ arpeggios ■ tremelos	No	Yes
Change the meter and barline positions.	No	Yes
Transfer your score to other popular music notation programs, such as Finale(tm) and Sibelius(tm), using the MusicXML file format.	No	Yes
Purpose: Record music from your MIDI keyboard or input device.	No	Yes
The recording of your performance is transcribed using the same excellent MIDI-to-notation transcription technology that **Notation** uses to transcribe MIDI files to sheet music.		
Set up the tempo for recording.	No	Yes
.Set up the number of pick-up measures	No	Yes
Record (punch in) into a selected region of a staff.	No	Yes
Add (punch in) a recording of pitch bends or MIDI controllers, on top of notes previously recorded.	No	Yes
Purpose: Edit the performance (MIDI) of the song.	No	Yes

Purpose and Features	Notation Musician	Notation Composer
Notation Composer offers the features of a typical MIDI sequencer program but in a more musically oriented way. Editing of the music performance is highly integrated with the music notation. **Notation Composer** offers an intuitive and fun way to refine the details of the performance without requiring that you know details about MIDI nor requiring you to work with tedious numbers.	No	Yes
Edit the exact as-performed rhythms of notes while viewing Piano Roll Notation that is drawn on top of the notes.	No	Yes
Edit the loudness of individual notes while viewing "vectors" (lines drawn at an angle from each notehead) that graphically show the loudness of each note.	No	Yes
Snap ("quantize") the as-performed attack or release of a note to its notated rhythm.	No	Yes
Independently edit the notation or the performance of notes, or edit both.	No	Yes
Edit the underlying performance of ornaments: grace notes, trills, turns, tremelos, and arpeggios.	No	Yes
Graphically edit the song tempo.	No	Yes
Graphically edit the volume level, left-to-right pan, pedal, and pitch bend activity in a staff.	No	Yes
Graphically edit any MIDI controller data.	No	Yes
Export an audio file of the song	No	Yes

1.6 Quick Start Tutorial

The following tutorial will get you started quickly in enjoying some of **Musician**'s main features. This tutorial can typically be completed in about 40 minutes, but much more quickly if you just read it on the screen rather than actually do the tutorial steps yourself.

As you follow the steps of this tutorial, you should feel free to explore side tours on your own. Click buttons; try menu commands; add, change, and delete music symbols. To return to the place where you were in the tutorial, use the multiple-level Undo command in the Edit menu, or type CTRL+Z, as many times as you need. Also, at various points in the tutorial, you might want to save your work, using the Save As command in the File menu.

After completing this tutorial, you should be able to successfully explore many of **Musician**'s features on your own without needing to refer to this User Guide.

If you prefer to read about how **Musician** works first, you may want to skip forward to the section "Navigating through Musician and the Score" 124 for a full explanation of how **Musician** is laid out.

> **TIP**: With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do, depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

1.6.1 Tutorial: Opening a File on Your System

Notation Musician can open any MIDI .mid or Karaoke .kar file, and transcribe it to notation. If you wish to arrange some existing music for your own purpose, then the easiest way to get started is to find a MIDI file of the song, and then modify it to suit your needs.

This first step of the tutorial illustrates how you would open a MIDI file that you had previously downloaded from the Internet to your system. Or, perhaps you have a file that you have created, and now you wish to work with it further in **Notation Musician**.

This tutorial will work with the simple children's tune, *Twinkle Twinkle Little Star*. You can find the MIDI file for it, twinkle.mid, in your C:\Users\Public\Documents\Notation_4\Songs directory.

To open the file on your system:

1. Start **Notation Musician**, as described in Finding and Starting Notation Musician on Your System 19.
2. If no files are currently opened, then click the following icon or text, displayed in **Notation**'s front panel:

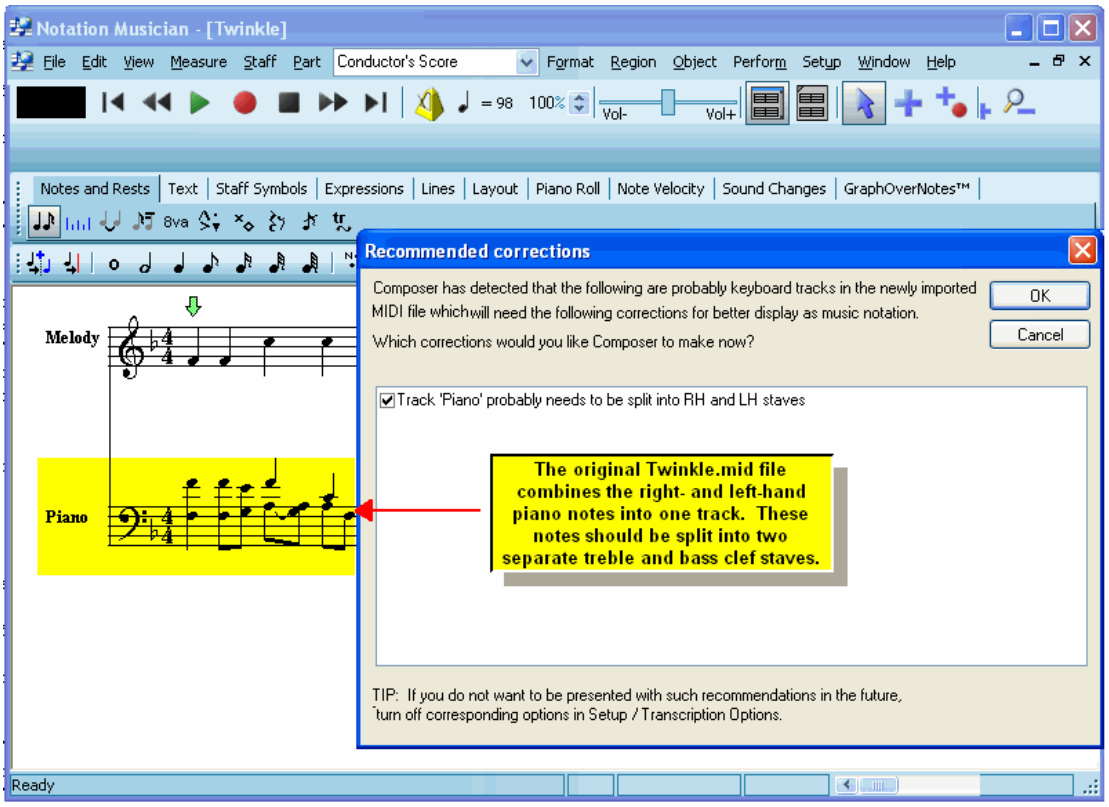
   -- OR --

   (If at least one file is opened, you will not see the above front panel.)

   In the File menu, choose the Open command.

   Musician will present you with the File Open dialog box.
3. By default, the C:\Users\Public\Documents\Notation_4\Songs directory will already be opened. If another directory is opened, then navigate to the Notation\Songs directory.
4. Open the file twinkle.mid

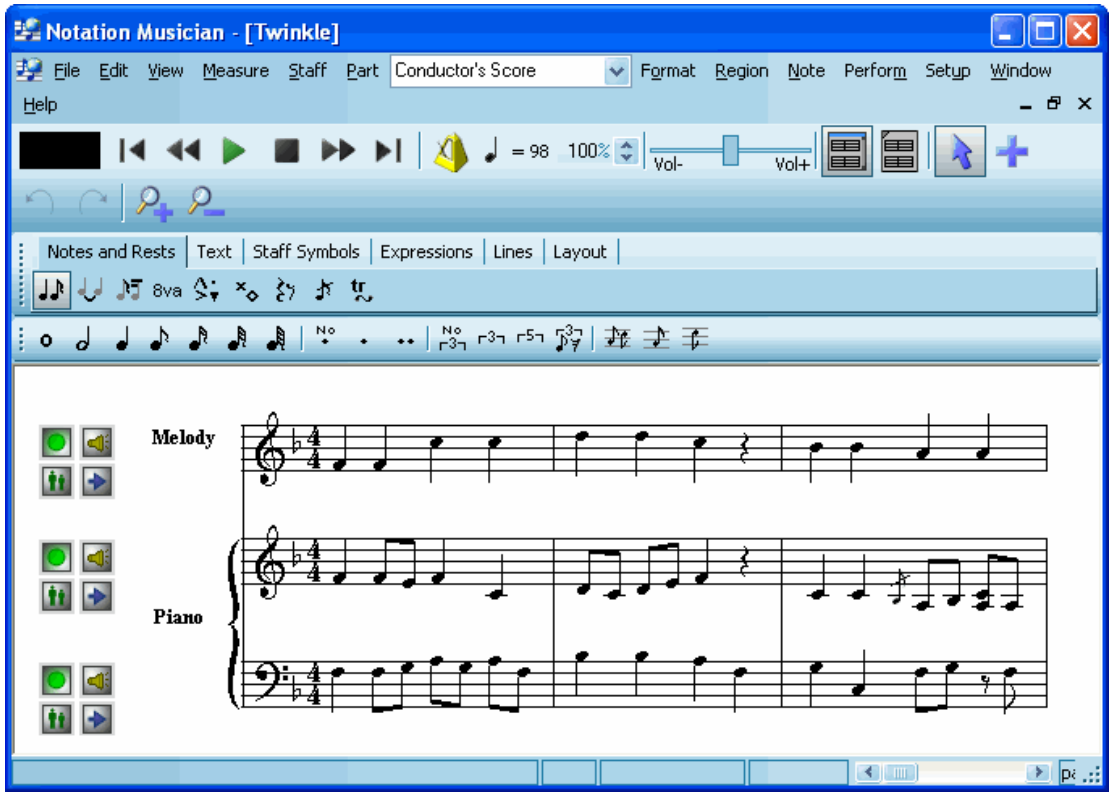
Musician will display the following Recommended Corrections dialog box:



MIDI files are often not ideally created for transcription to sheet music. One of the most common examples of that is a MIDI file which combines the right- and left-hand notes of a keyboard part into one staff (track). **Musician** detects these kinds of problems in MIDI files and automatically fixes them. (You can also manually do any such score fixing with commands such as, for this example, the Split Hands 171 command.)

5. Click the OK button in the Recommended Corrections dialog box.

Musician will display as many measures of the song as will fill the window. If you want to see more measures in the window, click the Zoom Out button in the main toolbar. Notice how the piano staff has now been split into right- and left-hand treble and bass staves:



To close a song file:

- Choose the Close command in the File menu.

  -- OR --

- Type CTRL+F4, the standard Windows shortcut for Close Window.

1.6.2 Tutorial: Playing the Song

If your computer has a sound card, it is likely that **Musician** will be able to immediately play through your computer's sound card to the speakers. **Musician** requires that the sound card support MIDI, which is a certain computer music standard that almost all of today's sound cards support.

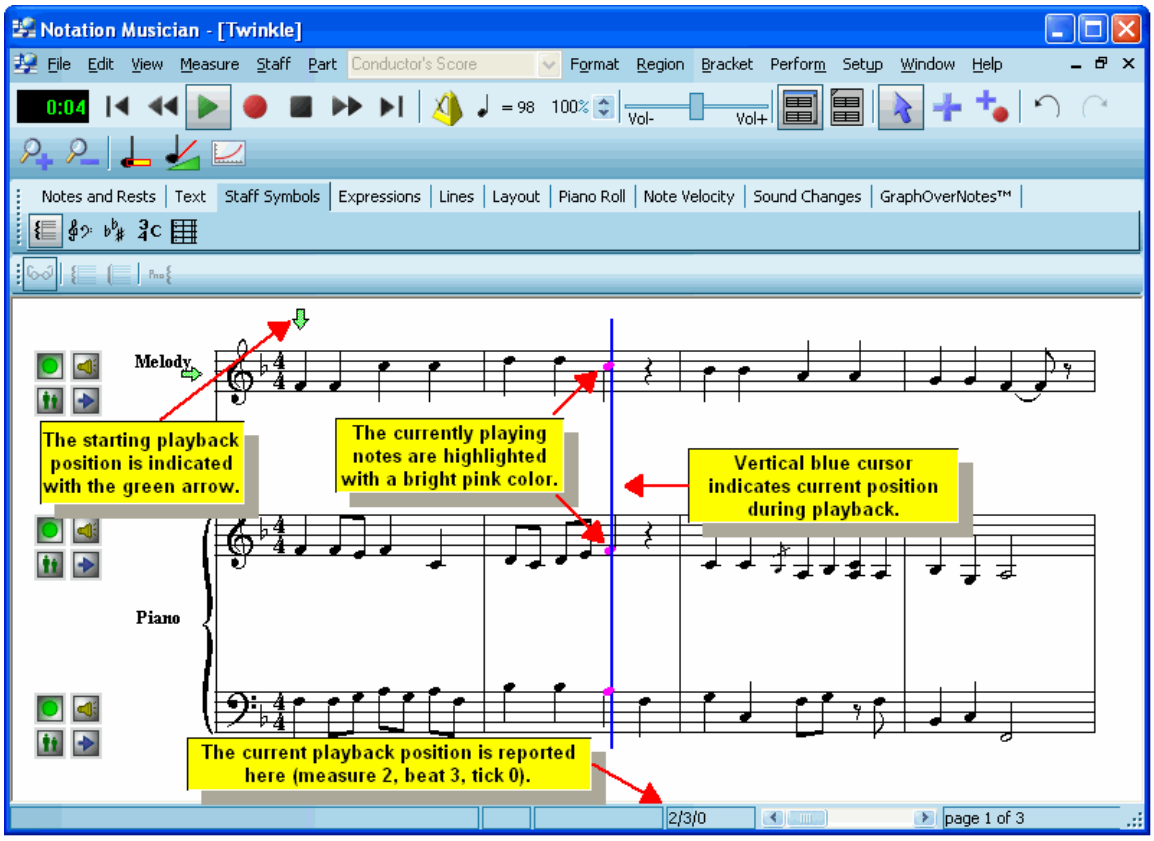
To play back the currently opened song:

- Hit the SPACE key.

  -- OR --

- Click the Play  button in the toolbar at the top of the window.

Playback starts wherever the green playback marker is currently located. A vertical blue cursor moves along in the score as the song plays, to indicate the current playback position. The currently playing notes are highlighted in a bright pink color.



TIP: Do you hear the *Twinkle Twinkle Little Star* playing? If so, then **Musician** will not need any assistance from you in setting up the MIDI sound card. If you do not hear the song play, then follow the instructions in Quick MIDI Device Setup 422. If after using the Quick MIDI Device Setup option you still do not hear sound, then read about What To Do If You Do Not Hear Sound 427.

To temporarily fast forward through the song during playback:

1. Click the Fast Forward button once to increase the playback speed by a factor of five.
2. Click the button a second time to resume the original playback speed.

To stop playback:

- Hit the SPACE key.

  -- OR --

- Click the Stop button.

  -- OR --

- Toggle the Playback button in the toolbar at the top of the window.

The green playback marker will be moved to the song location where you interrupted playback.

To jump to a different location in the song during playback.

- Click the mouse wherever you want the playback to jump to.
- If you want to jump ahead a few pages, use the PAGEDOWN key to preview the page. **Musician** will continue playing where you left it, uninterrupted, while you look ahead. If you wait for about 5 seconds, **Musician** will return to the page that it is currently playing. However, if you click somewhere on the look-ahead page, then playback will immediately jump to the location of your mouse click.

To change the location of the playback marker before you start playback:

- While holding down the "P" key, click the mouse where you want to set the playback marker.

To change the location of the playback marker to the beginning of the score, even during playback:

- Type CTRL+HOME.

  -- OR --

- Click the Start of Song button.

1.6.3 Tutorial: Using a Playlist of Multiple Songs

Sometimes you may want to keep an ordered list of songs in a *playlist*, where the playback of each song continues after the previous song. The most obvious use of a playlist is for listening enjoyment, to listen to several songs-- perhaps ones you have arranged yourself-- in sequence.

Another use of a playlist is to play different parts of a larger musical piece, where each part is kept in a separate Notation .not file. These might be movements of a sonata or orchestral piece. Or, they might be numbers of a simple suite of children's music.

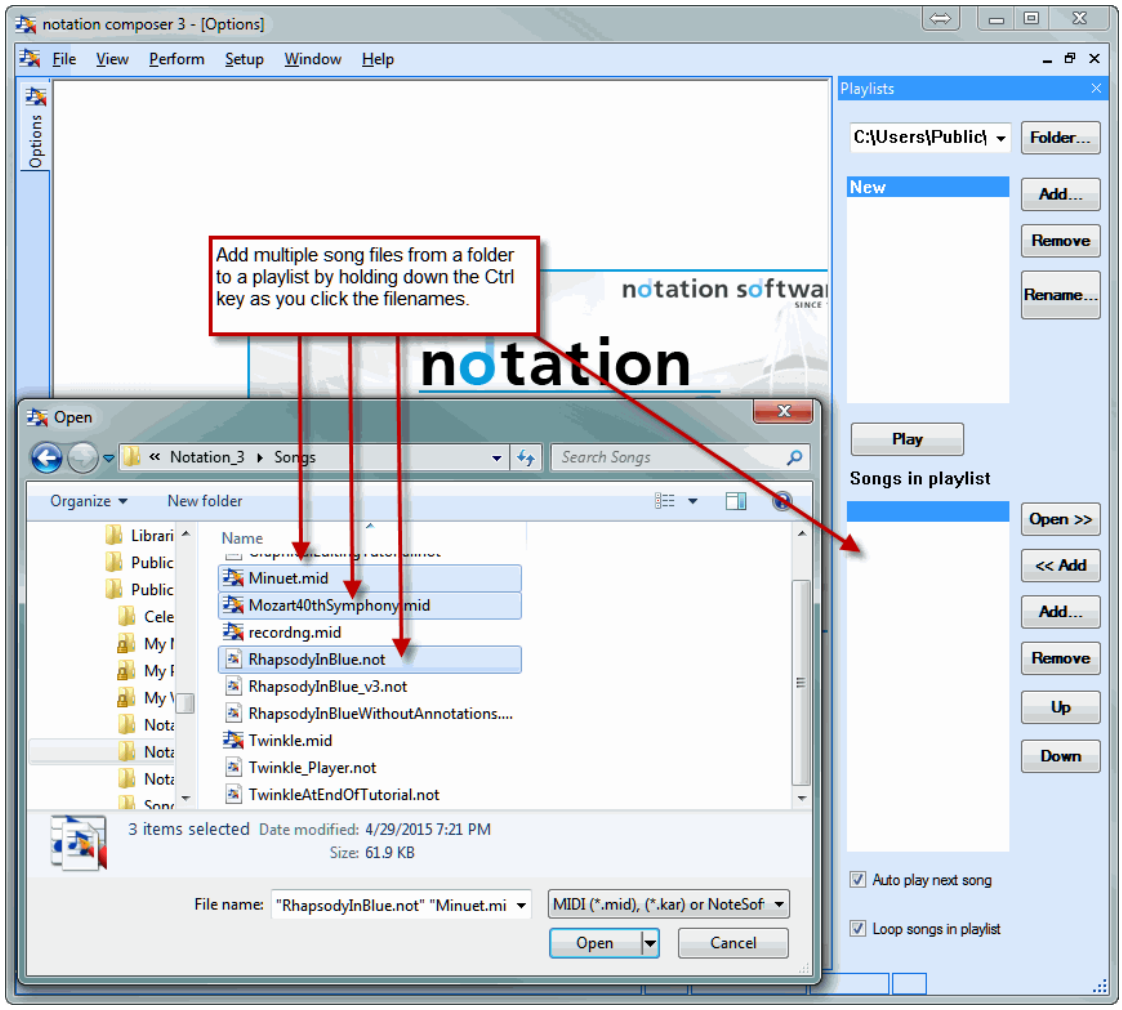
In the following example, we will create a playlist of three songs that are installed by default in the C:\Users\Public\Documents\Notation_4\Songs directory.

To create a playlist of songs:

1. Turn on the Show Playlists option in the View or File menu.
2. In the Playlists panel, click the Add... button.

   Musician will present a File Open dialog box

   Note, the << Add button is for adding to the playlist a song you've already opened and are currently viewing.
3. In the File Open dialog box, navigate to the C:\Users\Public\Documents\Notation_4\Songs directory or whatever folder you have your song files in. Select one or more songs (Notation .not, MIDI .mid, or Karaoke .kar) that you want to add to the playlist. To select multiple, non-adjacent songs, hold down the CTRL key as you click the file name.



4. Click the OK button in the Open dialog.

   You will see that the select songs have been added to the current playlist, which currently is named "New". You can use the Rename... button to change the name of the playlist from "New" to something like "Tutorial Examples".

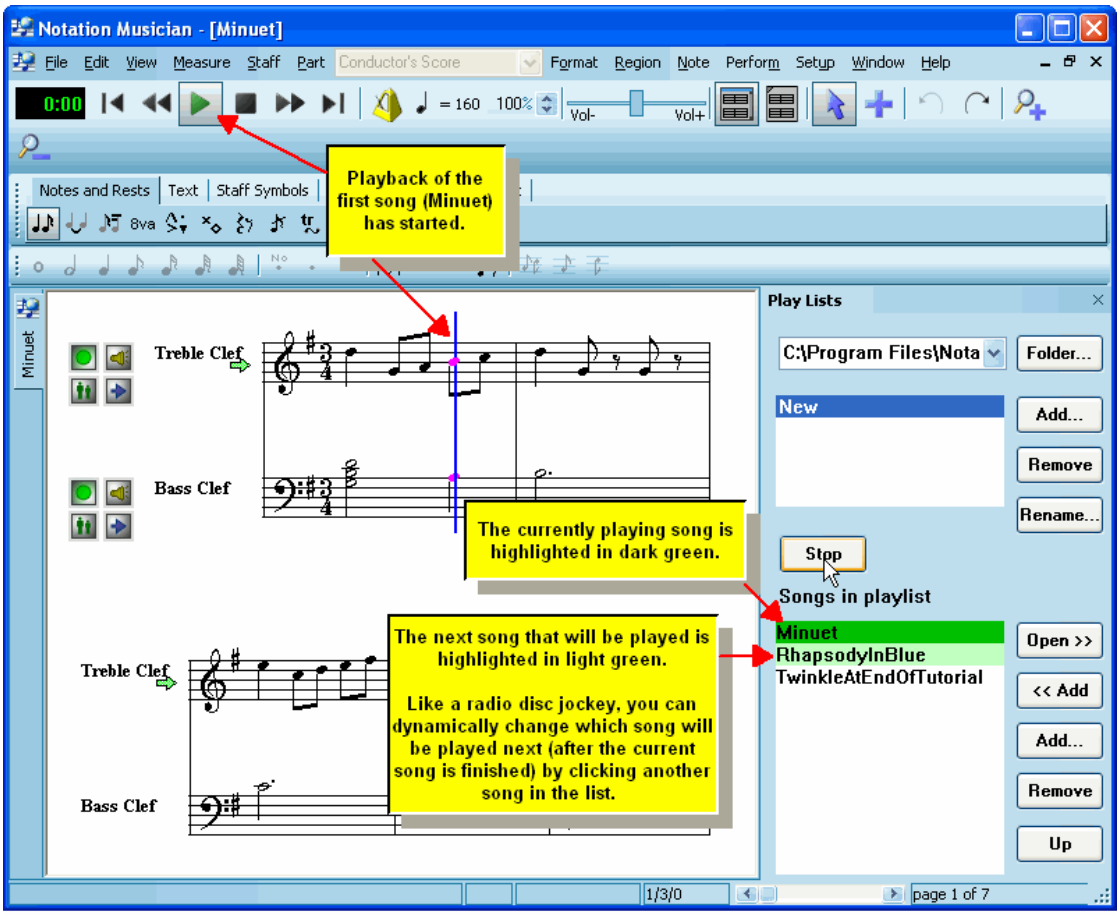


To play the songs in the playlist, one after another:

1. Turn on the check mark for "Auto play next song", as illustrated above.
2. If you want the playback to continuously cycle through all of the songs, starting at the first again after playing the last, then turn on the check mark for "Loop songs in playlist".
3. If you want to start at a song other than the currently selected song, click its name in the playlist.
4. Click the 

button in the Playlist panel.

   Playback of the currently selected song will begin. Notice that the highlighting of the select song in the playlist changes from blue to green. Also, the next song to be played after the completion of the currently selected song will be highlighted in a light green.



5. While any song in the playlist is playing, you can click any other song, out of sequence, to play next, upon completion of the currently playing song.

If you play a MIDI keyboard and have it connected to your computer that is running **Musician**, then you can use the Pitch-to-Command feature to control the playback of your songs 121 in your Playlists. This feature makes it very convenient for musicians who use **Musician** in a live performance setting to easily control playback of setlist songs using your instrument keyboard rather than having to stop and use the mouse or touch screen for your computer.

1.6.4 Tutorial: Correcting the Notes and Accidentals

Musician usually does an excellent job of transcribing a MIDI performance into notation note rhythms and spellings of accidentals. The MIDI-to-notation transcription technology in **Notation Musician** was first developed in 1994 and 1995, and has been improving ever since. **Notation Musician** and **Notation Composer** offer the highest quality of transcription available in any music software program.

However, the transcription of note rhythms and spellings of accidentals by **Musician** is not perfect. After you open a MIDI file in **Musician**, you may need to correct some notation errors.
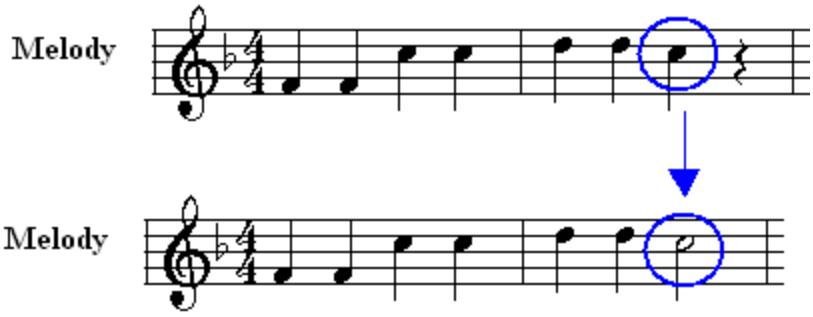
The following are some of the common types of corrections you might want to make after **Musician** has transcribed a MIDI File:

- Change the displayed duration of a note.
- Change the displayed starting location of a note.

- Shift a note between the left and right hands of a piano or keyboard part.
- Change a small note to a grace note, or vice versa.
- Change the enharmonic spelling (such as C# versus Db) of notes.
- Undo one or more editing changes. **Musician** offers many convenient tools for editing the notation of files you find. However, the underlying performance of the file (the MIDI data) will remain unchanged.

To change the displayed duration of a note:

Suppose you want to change the notated duration of the last quarter note in the second measure of the melody*Twinkle Twinkle Little Star* to be a half note instead, thus replacing the quarter note rest after it:

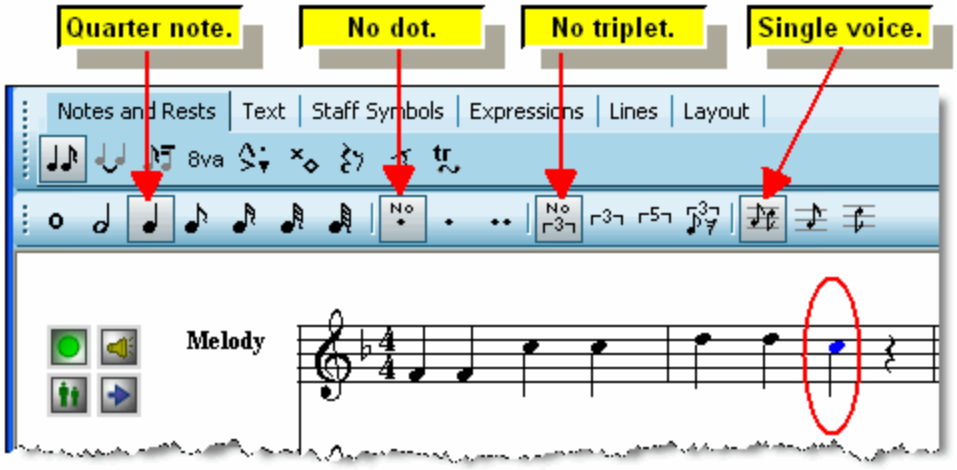


Here are two ways you can do this.

Method 1: Change the duration of a note by explicitly giving it a new duration value

1. To select a note, mouse over it and you will see it "pre-select" in red. Just click to select it.

   Musician highlights the selected note. The detail palette indicates the duration of the currently selected note. The illustration below shows the palette in a horizontal orientation. By default, **Musician** displays the palette horizontally across the top of the window, but you can drag the palette wherever you want.



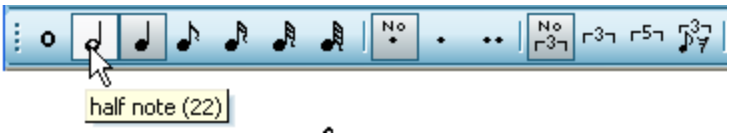
2. Click the half note button in the Note Palette to change the duration of the note.

-- OR --

Type "22" on your keyboard, which is the shortcut for half note.

Examples of other shortcuts are "4", "8", "16", and "32" for quarter, eighth, sixteenth, and thirty-second notes. The shortcuts for one or two dots are "1d" and "2d". The reason that the shortcut for half note is "22" instead of "2" is so that it is not confused with "2d" for "two dots".

To find out what the keyboard shortcut for a palette button is, hold the mouse cursor briefly over the button:
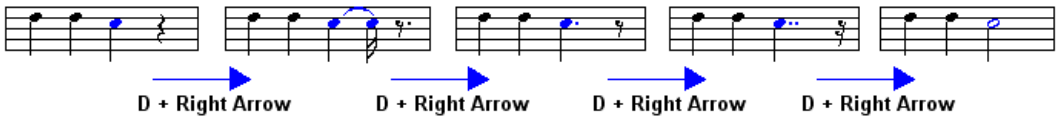


Method 2: Change the duration of a note by extending it in increments with D+→ or D+←

If you have already tried Method 1, then undo the most recent command by choosing Undo Set Note Duration command in the Edit menu, or by typing CTRL+Z.

1. Mouse over the note and click it to select the note whose duration you wish to change.
2. While holding down the "D" key (for "duration"), type the → or ← key one or more times.
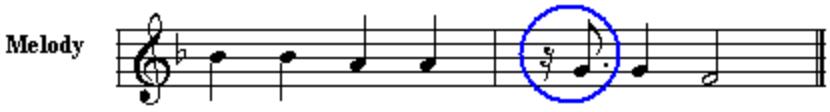
   Each time you type D+→, the duration will be increased.



TIP: If you do not know or recall the keyboard shortcut such as D+→ for the Increase Duration command, you can look it up in the menu for the type of object you have selected. In this case, you can look up the shortcut in the Note menu.

To change the displayed starting location of a note:

In the last measure of the melody of *Twinkle Twinkle Little Star* , the first note was performed so late that **Musician** perhaps too literally interpreted the rhythm of that note to be intended as a 16th note after the start of the measure. If you play this part of the song, you will indeed hear the delayed note, and may or may not agree that **Musician** should have notated the rhythm the way it did:
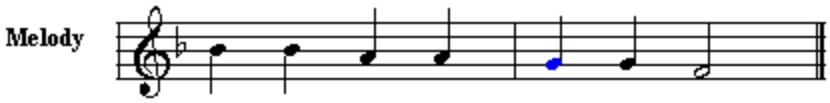


In this example, the starting location ("attack") of the note should be moved to the beginning of the measure.

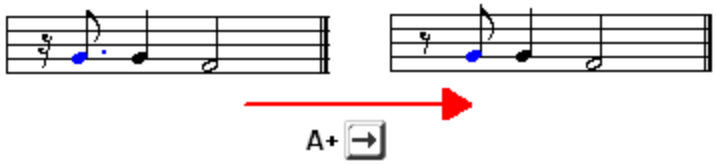
1. Select the note whose attack location you wish to change.

2. While holding down the "A" key (for "attack"), type the ← or → key one or more times.

   In this example, you need only type A+← once. The result is:



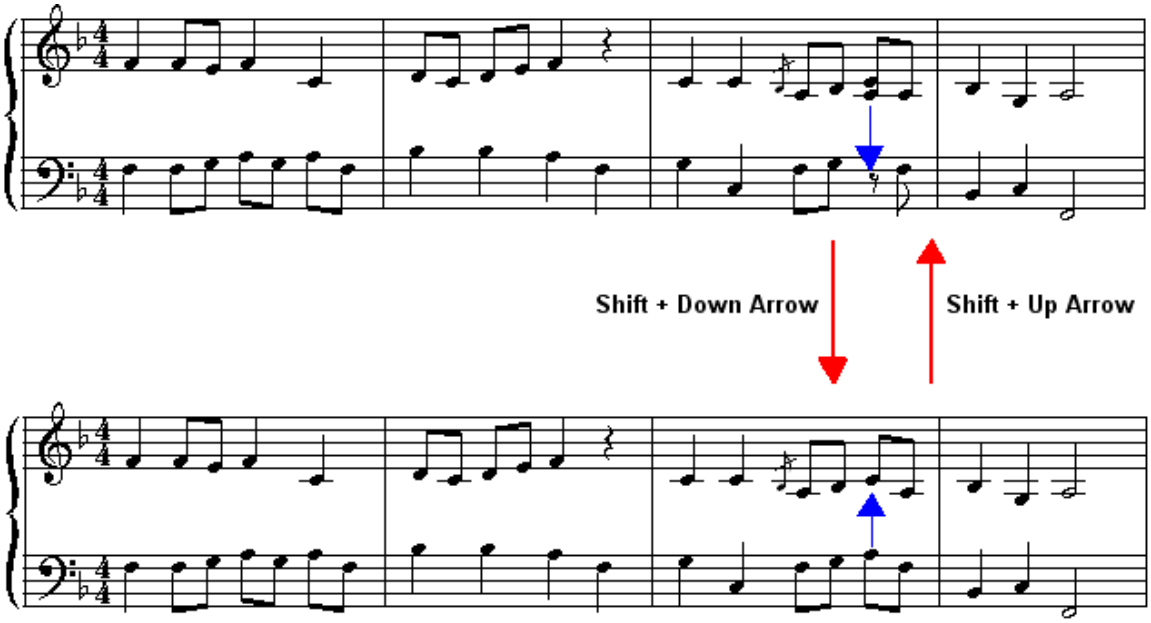
   Notice that in moving the attack to the left by a 16th duration, the total duration of the note increases by a 16th duration. If you had typed A+→, instead of A+←, the result would be as shown here:



To shift a note between the left and right hands of a piano or keyboard part:

Musician's automatic splitting of the keyboard staff into right- and left-hand (treble and bass clef) staves generally does an excellent job determining which notes are most likely to be played by the right or left hand. Sometimes, however, **Musician** might make mistakes. You can quickly correct a mistake by shifting a note between the right- and left-hand staves of a piano or keyboard part.

For the fairly simple piano accompaniment for the*Twinkle Twinkle Little Star* , **Musician** made no mistakes in assigning notes to the right and left hands. For purposes of illustration, we will intentionally create such a mistake and then correct it.



1. Select the note that you intend to shift to another staff.

   In this example, select the 'A' note in the left-hand staff in the third measure.

2. Type SHIFT+↑ to shift a note to the staff above, and SHIFT+↓ to shift a note to the staff below.

In this example, first type SHIFT+ to shift the 'A' note in the left-hand staff to the right-hand staff. The result will look like the first of the two above examples. This is a fairly realistic example of the kind of mistake that **Musician** might make, because the two hands are playing very closely together. In fact, the right hand has just played the same 'A' note one quarter note beat earlier. Yet, **Musician** was smart enough to determine that the left hand should be playing the note.

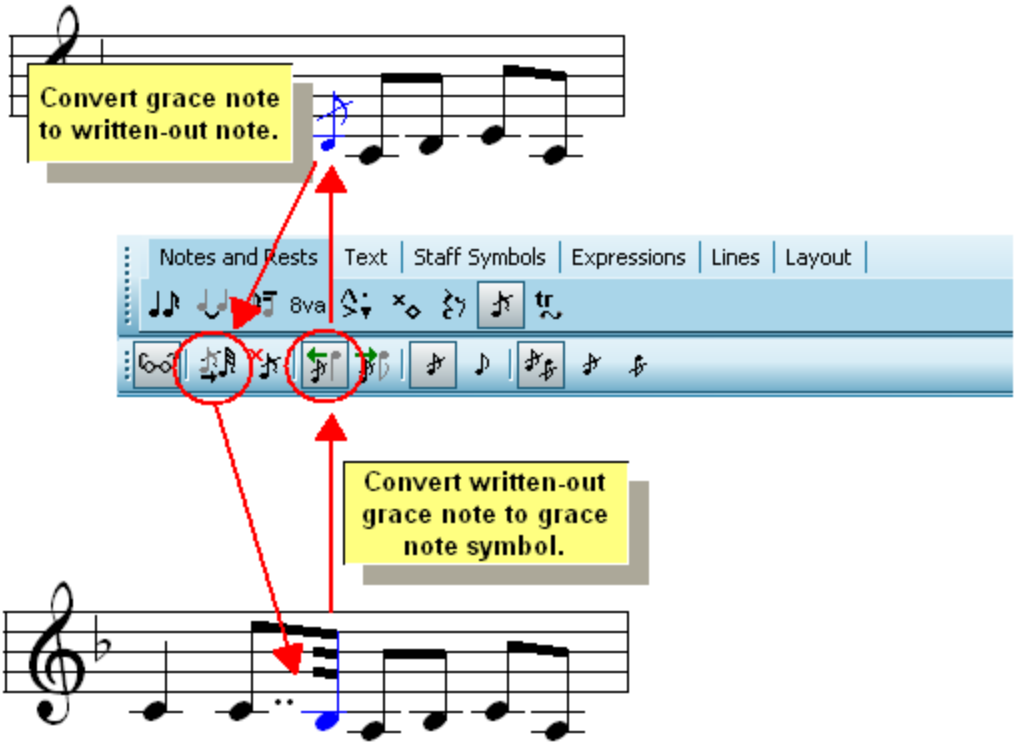
3. While the 'A' note is still selected, now type SHIFT+ to shift it back to the correct left-hand staff.

To change a small note to a grace note, or vice versa:

In the third measure of the right-hand piano staff, **Musician**'s transcription correctly identified a grace note and displayed it so. Before you open a MIDI file, you can set up transcription options, including an option regarding whether grace notes should be displayed as grace notes or written out as short notes, such as 32nd notes. By default, the grace note transcription option is turned on.

Sometimes **Musician** might not correctly identify a grace note, or it might display a note as a grace note, but you would prefer to have it written out as a short note.

We will use the example of the grace note in the third measure to show how you can change a note back and forth between being displayed as a grace note and being written out as a short note.



1. Select the grace note which you wish to convert to a written-out note.

   When you select a grace note, **Musician** automatically displays the Grace Note Palette, as illustrated above.

2. Click the Convert Grace Note to Written-Out Note button in the Grace Note Palette.

-- OR --

Hit the BACKSPACE key.

3. Select the short note which you wish to convert to a grace note.

   In this example, the short note is already selected.

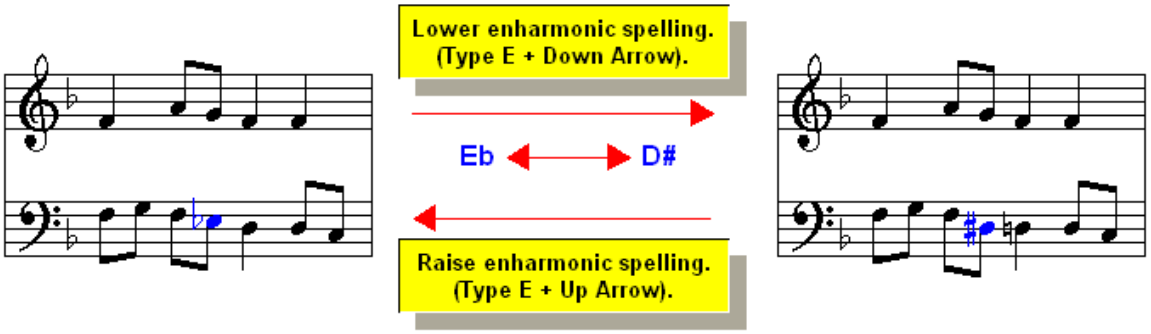
4. Click the Grace Note Left button if this grace note borrows its time from the note on the left. Click the Grace Note Right button if this grace note borrows its time from the note on the right. For an explanation of Grace Note Left versus Grace Note Right, see Understanding the Two Types of Grace Notes 296.

To change the enharmonic spelling (such as C# versus Db) of a note:

In this simple*Twinkle Twinkle Little Star* song in the key of F-major, there was only one note that required an accidental, namely Eb in measure 9 for the left-hand piano part. **Musician** correctly determined that the spelling of the note was Eb rather than D#.

When a song has complex harmonies, **Musician** might sometimes incorrectly spell a note. In such cases, you will find it easy to correct the mistake.

For purposes of illustration, we will intentionally make a spelling mistake and then correct it.



1. Select the note for which you wish to change its spelling.

   In this example, select the Eb in measure 9 of the piano left-hand staff.

2. Type E+ to lower the enharmonic spelling.

   A good way to think about "lowering" versus "raising" the enharmonic spelling is to think about which direction the notehead moves. When you lower the enharmonic spelling, the notehead always moves *down* a step lower on the staff. When you raise the enharmonic spelling, the notehead always moves *up* a step higher on the staff.

   In this example, the Eb will be changed to D#.

3. Type E+ to raise the enharmonic spelling.

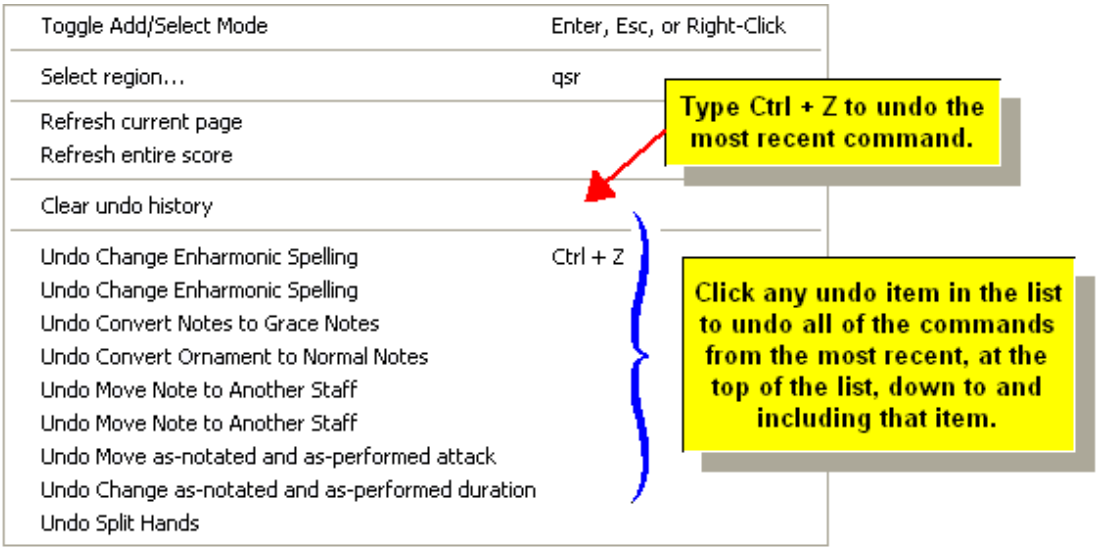
   In this example, the D# will be changed back to the originally correct spelling Eb.

To undo and redo editing changes:

Earlier in this step of the tutorial, you probably already had a little practice using the Undo command, to try out the different ways to change a note duration.

Musician supports multiple level undo. You can go back as many steps in your editing as there is memory on your system to keep the history of changes. **Musician** is efficient about storing the history of changes; so it supports a large number of undo requests.

1. Click the Edit menu to view all your editing activities, the most recent one listed at the top of the Undo list.



2. Click any item in the Undo list to undo all of the commands from the most recent, at the top of the list, down to and including the item you select.

   -- OR --

   Type CTRL+Z to undo the most recent command. This is the standard Windows shortcut for the Undo command.

3. If you have undone some commands, they will be listed as Redo commands in an additional section of the Edit menu. You can redo commands you previously requested to be undone by selecting them in the Edit menu.

   -- OR --

   Type CTRL+Y to redo the most recent command for which you requested Undo.

1.6.5 Tutorial: Adding Lyrics

Some MIDI files include lyrics, and all Karaoke (.kar) files include lyrics, but many MIDI files do not. You can quickly add lyrics to a song, as ilustrated in this step of the tutorial.

So far in this *Twinkle Twinkle Little Star* tutorial, we have edited existing notes, but we have not added any new notes, new music symbols, or text to the score. This step of the tutorial provides an introduction to adding "objects" to a score.

TIP: With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode or vice versa to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do, depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

To add lyrics to a song:

1. With the mouse, navigate to the Lyrics Palette, as illustrated here:

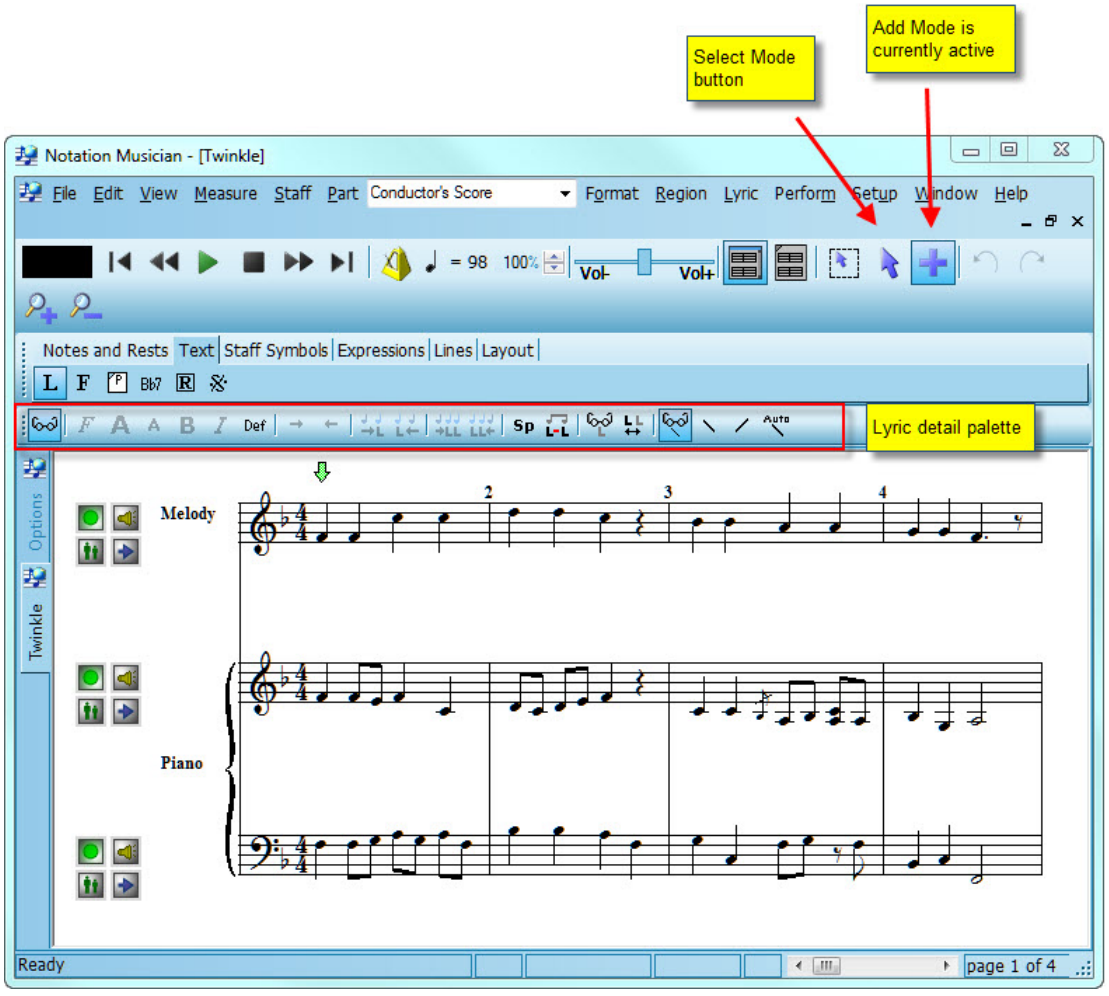


-- OR --

Type SHIFT+L. The shortcut for all palettes is Shift and some letter, such as SHIFT+N for Note Palette.

Musician will automatically enter Add Mode 133.

So far, you have been working in Select Mode, where you click the mouse to *select* an "object". An object is a note, a music symbol, or some text. In Add Mode, you click the mouse to *add* an object. **Musician** will automatically display the palette for that type of object, which, in this case, is the Lyric Palette.



In Add Mode, the mouse cursor usually changes to this shape: and has an additional "dongle" to show you what you are adding.

2. Click the mouse where you want to add the first lyrics.

In this example, click somewhere below the first note in the melody.

Musician will display a blinking text cursor, where you can start typing text.

3. Type the one word or syllable of the lyrics for the current note. If you want an dash "-" character to appear after a syllable, then type it after the syllable.
4. To advance to the next note, hit the SPACE or TAB key.

   The blinking text cursor will now be located under the second note.
5. Type the second word or syllable of the lyrics.
6. Repeat steps #4 and #5 as many times as desired.

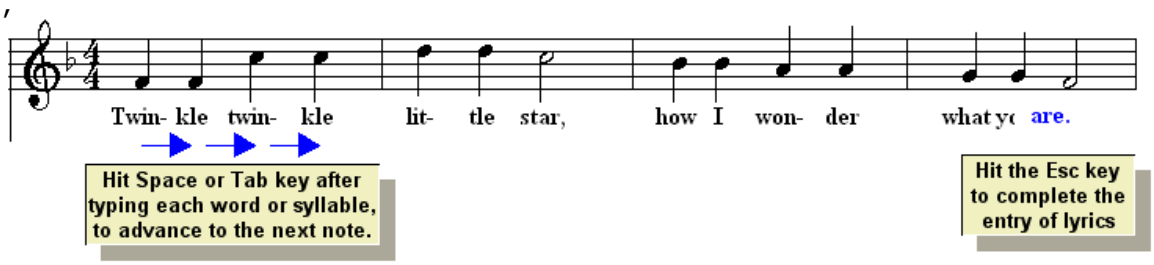
   Musician will automatically advance the text cursor for lyrics across barlines and onto next systems (lines of music). It will also automatically turn pages as you advance to the next lyric.
7. To complete the entry of lyrics, hit the ESC key.

   -- OR --

   Click the Select Mode  button in the toolbar to prepare to select some object for editing.

   -- OR --

   Navigate to another palette, or type SHIFT+Letter to select a different type of object, or to start adding a different type of object.



Many options available for editing lyrics, which are not illustrated in this simple example include:

- Common text editing operations, such as supported by the DEL and BACKSPACE keys and the  and  keys.
- Copying and pasting of lyrics from one section of the song to another.
- Copying and pasting of lyrics via the Windows text clipboard so that, for example, you can type lyrics in Windows NotePad and paste the lyrics into the song.
- Editing of multiple verses of lyrics.

For a more thorough overview of **Musician**'s lyrics features, see the documentation section on Lyrics 376.

1.6.6 Tutorial: Saving Your Work in a File

Musician's multiple level undo feature 243, which you have already explored in this tutorial, offers a certain degree of protection against mistakes that you might want to undo.

In addition, **Musician** has an auto-recovery feature. Periodically (by default every 10 minutes), **Musician** makes a backup copy of your work. If your system fails, you can return to a recent state of the song, using the Open Files from automatic backup 245 command in the File menu.

There are also various other formats in which you can save your song.

Saving as a NoteSoft (.not) file. 49

Exporting a MIDI (.mid) or Karaoke (.kar) file 50

Exporting a High Resolution PDF (.pdf) file 51

Exporting a High Resolution Graphic (.bmp, .png, .jpg, or .gif) file 51

Notation Musician and **Notation Composer** use and share a music file format that includes not only MIDI performance data but also notation data. Normally, you should save the song in the Notation file format, used by Notation Software's **Notation** family of music software products. A Notation file has the .not filename extension.

To save your work in a .not file:

1. Choose the File / Save As command.

   Musician will present the File Save As dialog box.

   -- OR --

   Type CTRL+S, which is the standard Windows shortcut for File Save.

   A default directory will be opened. It will be C:\Users\Public\Documents\Notation_4\Songs unless you installed **Musician** in a different directory. You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default".

2. Enter a new file name or, use the same file name. The .not file that is saved will not overwrite your .mid file.

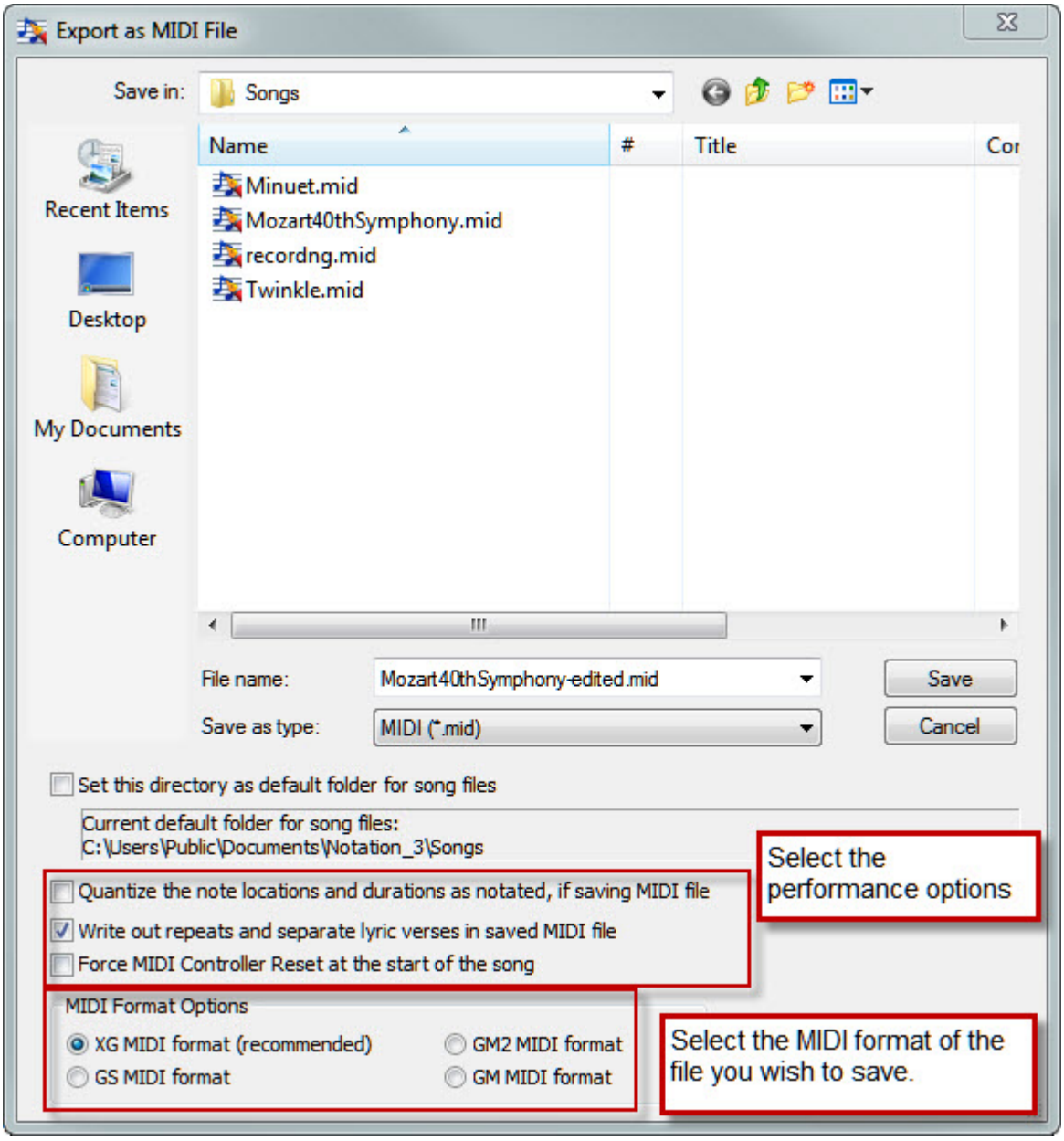
   For example, use Twinkle1 as the file name. **Musician** will automatically add the Notation .not file name extension.

3. Click the OK button.

To Export your work to share with others:

Exporting a MIDI file (.mid) or Karaoke (.kar) file - MIDI (.mid) files can be used in sequencers and other MIDI software. Karaoke (.kar) files have some special text formatting, and can be used in Karaoke machines or other MIDI playback software. The options for exporting either filetype are the same.

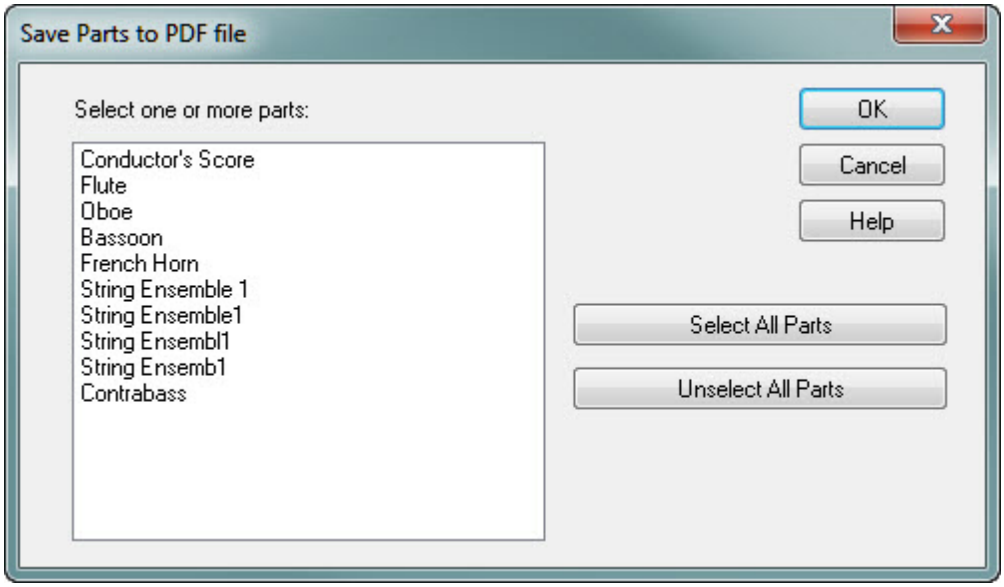
1. Select "File / Export ... MIDI (.mid) file (or "File/Export...Karaoke(.kar)") and the Export dialog box will open (the dialog for Karaoke is the same, only it will have "Karaoke" and ".kar")



2. Enter the filename (probably different than the original file)

3. Select the performance options you want for the MIDI (or karaoke) file. For example, if your file has repeats, you will want to check the "Write out repeats" box so that the repeats are played correctly in the exported .mid file. If the device that you will be using the MIDI (or karaoke) file on needs to have the MIDI Controllers reset before the new file is played, check the "Force MIDI Controller Reset at the start of the song" box.
4. Select the MIDI format you wish to save in. XG format saves the most information, such as bank and patch information for the song. GS or GM2 format is required for some devices. GM MIDI format is the most basic format, and may be desired if you'd like to change the format later to another MIDI format.
5. After making all the appropriate selections, click "Save".

Exporting a PDF - PDF files can be shared with others who want to see the finished print version of your music. **Musician's** High Resolution PDF export gives you great crisp sheets to share or print anywhere.

1. Select "File / Export... PDF" and the "Save Parts to PDF file" dialog will appear. It will show all the Parts 179 that have been created for the song file.
2. 

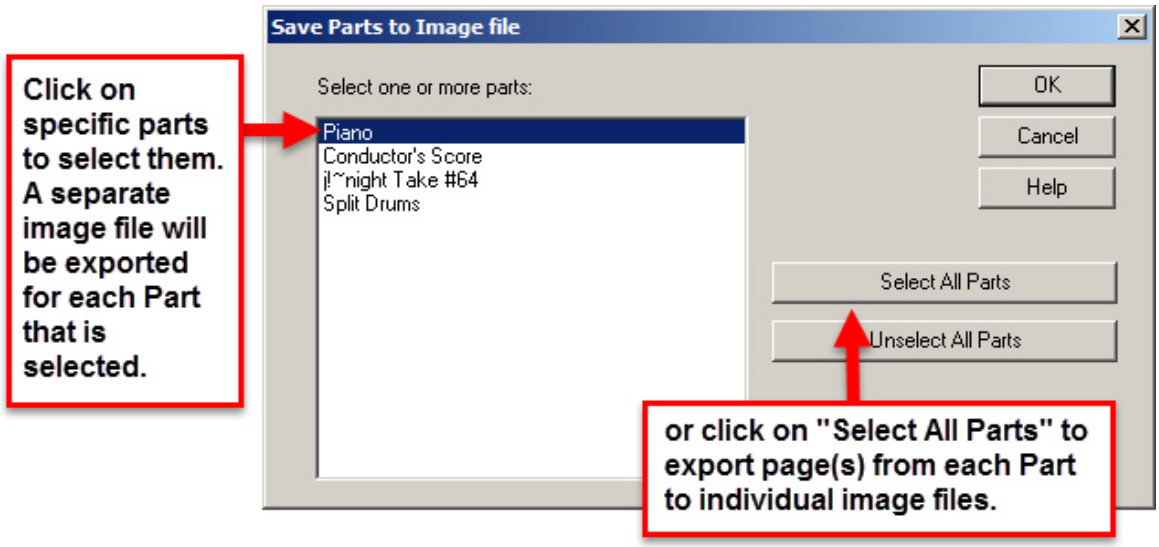
3. Click on each part to select it and export a pdf, then click "Ok."
4. Each exported Part file will have the Part name appended to it so that you can easily see which file is for which part.

Exporting an Image (.png, .jpg, .bmp, or .gif) file:

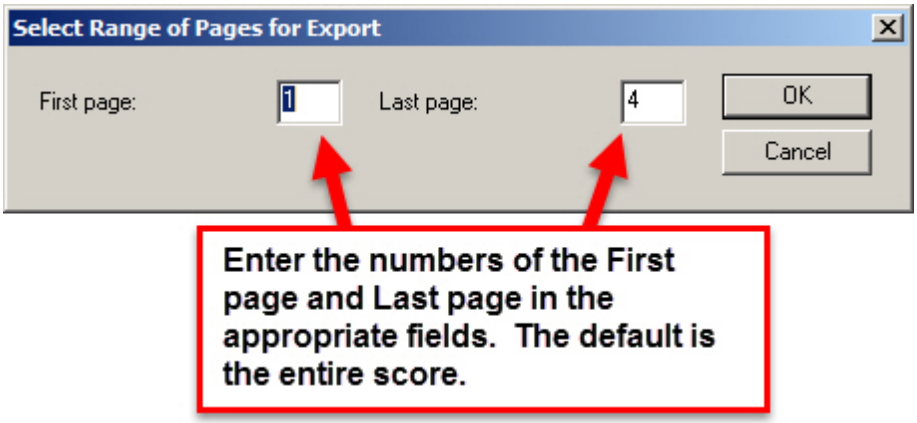
Please note that if you export multiple pages of a Part as an image file, that all those pages will appear in the same image file. If you plan to use the exported image to insert in a document (eg. as a musical "snippet" example), then you probably want to just export the page where your example occurs and then use your favorite editor to crop the image.

To export an image file of your score:

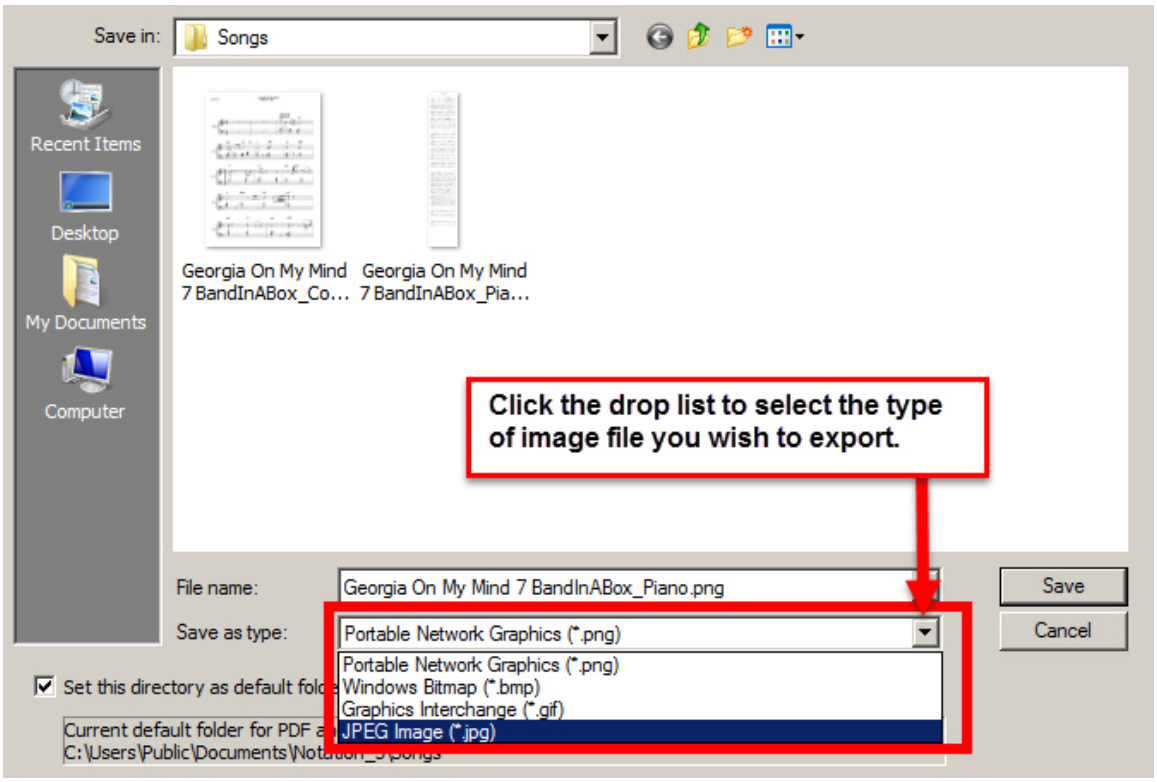
1. In the File menu, choose Export, then select "Image...."The "Save Parts to Image file" dialog will come up:



1. After selecting the Part(s) you want to export an image from, click "Ok."
2. You can then select the page range that you wish to export in the image file(s) then click "Ok.". The default range is the entire score.



1. The "Save in:" dialog will then come up, where you can navigate to the folder you wish to save the file in, as well as select the image filetype you want to export. The default directory is C:\Users\Public\Documents\Notation_4\Songs. You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default". Click "Save" to save the image file(s) in the selected folder. For each Part a progress window will come up showing you the progress of the export, and will close when the Part is done.



1.6.7 Tutorial: Working with Parts

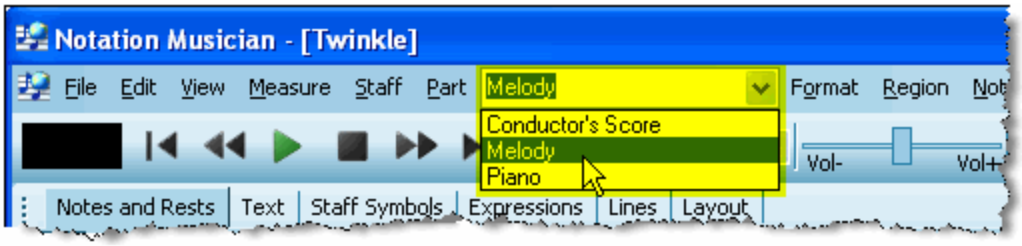
The *Twinkle Twinkle Little Star* song has two parts: the vocal melody and the piano accompaniment. The score that you have been working is called the "conductor's score" in **Musician**, although that term might seem too grand for this 16-measure children's song. But imagine instead that you are working with a larger score with multiple parts for a small group of musicians, or choir members, or an ensemble as large as a school band or symphony orchestra. Or, you might be working on a score for a duet for two instruments. In all of these cases, it is likely that you will want to print separate parts to be read by each musician in the ensemble rather than all of the staves together as the conductor's score.

Although you can view and print parts separately, they are always integrated with the conductor's score. If you change notes, lyrics, or music annotations in the part, they are automatically reflected in the staff for that instrument or voice in the conductor's score. Conversely, if you edit notes, lyrics, or annotations in a staff in the conductor's score, those changes are automatically reflected in the individual instrument or vocal part.

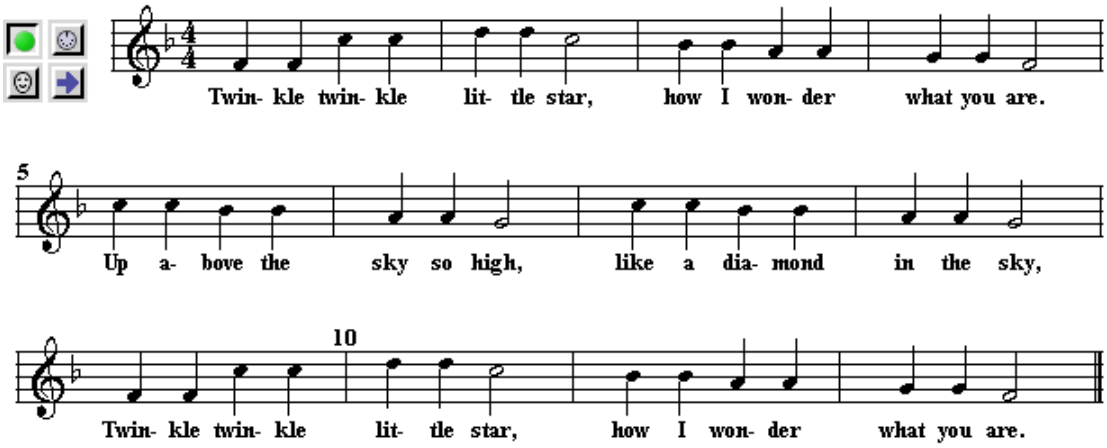
We will see how this works, using the *Twinkle Twinkle Little Star* song.

To view a part:

- Select the part in the part list in **Musician**'s menu:
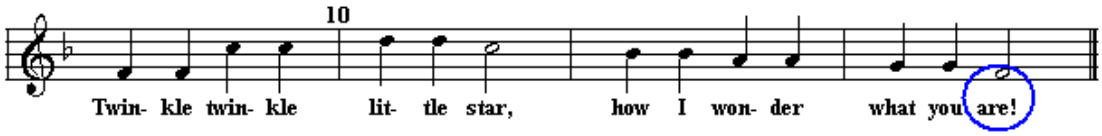


Musician displays the melody part:
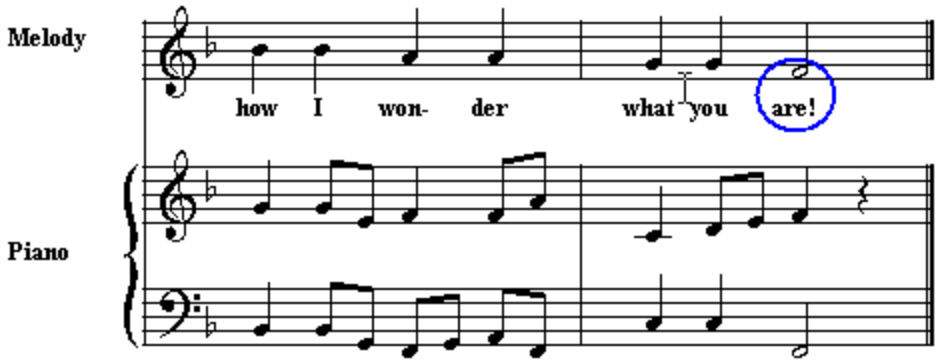


To learn how editing in a part is automatically reflected in the conductor's score:

1. In the Melody part that you just extracted in the above procedure, make some change, such as changing the period to an explanation point in the last lyric:



2. Choose the Conductor's Score in the part list in **Musician**'s main menu to view it again.

Musician will now display both the Melody and Piano parts together:



Notice how the change you made to the lyric in the Melody part is now reflected in the conductor's score. This also works for most other types of objects, such as notes and dynamic marks.

You might want to preview on the screen what the part will look like before you print it. **Musician** offers many options for formatting the printed page, setting up page titles and headers, changing the font size, and so on. **Musician**'s default choices for these formatting options offer an excellent starting point. You can customize your own templates that will determine how scores and parts will be formatted.

In this step of the tutorial, we will preview on the screen what **Musician**'s default formatting choices look like, and then print the individual parts for the voice (melody) and accompaniment of *Twinkle Twinkle Little Star*.

To preview what a printed score or part looks like:

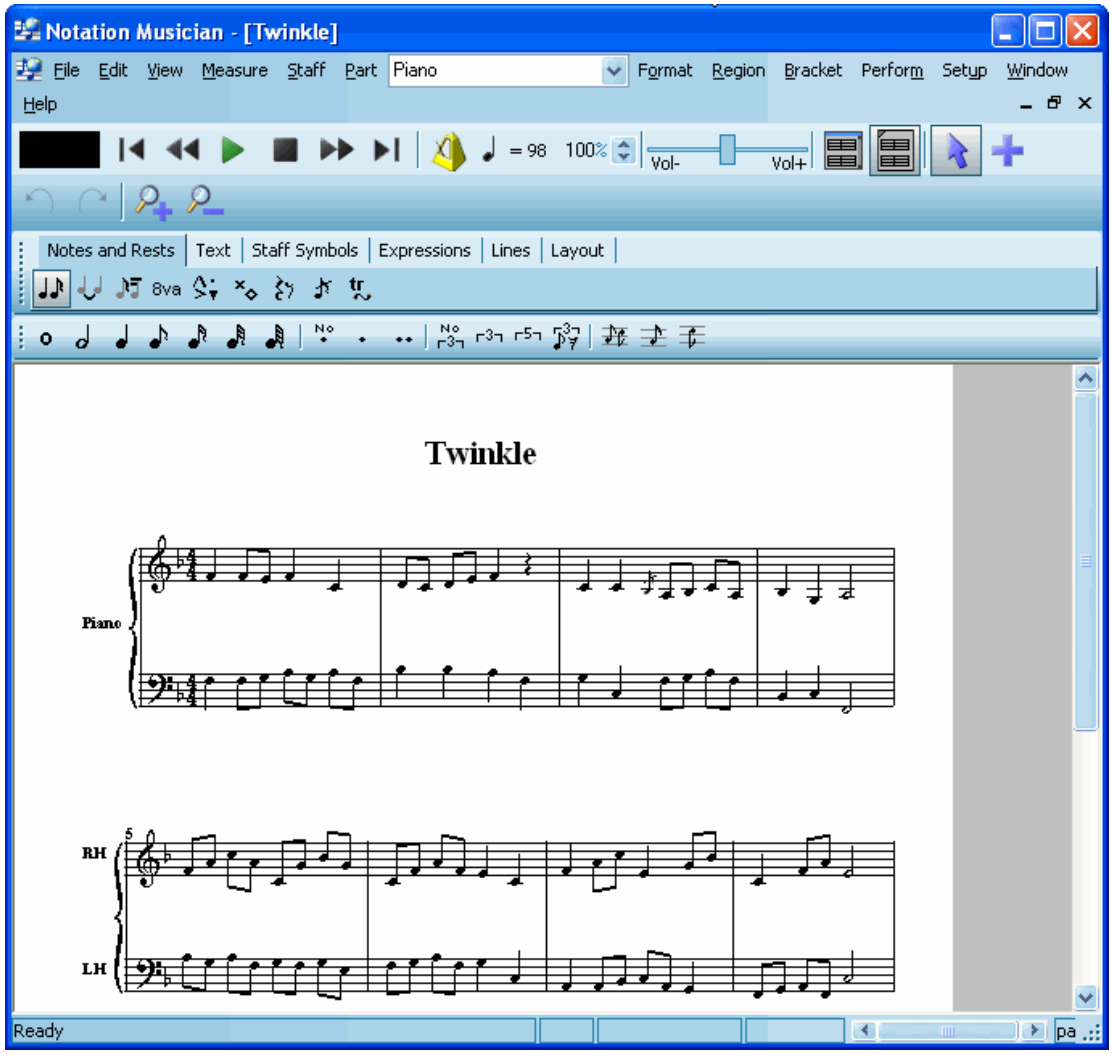
- Choose the Page View command in the View menu.

  -- OR --

  Type "qpv" for Quick Page View.

  Many menu commands in **Musician** offer such keyboard shortcuts that begin with the letter "q" and are acronyms of the command.

  In the last step, we were most recently viewing the extracted piano part. In Page View, this is what it looks like:



- If you want to preview the whole page on the screen, then hit the Zoom Out  button as many times as necessary.

  In the above example, the Zoom Out button was clicked a couple of times.

Notice in the above example how **Musician** has already formatted the top of the page with the song title "Twinkle". **Musician** chooses the default paper size for your printer.

Note that you can edit the score in Page View, just as in Window View. For example, you can add and change notes, lyrics, and chord names.

To print the currently viewed part:

1. Choose the Print command in the File menu.

   -- OR --

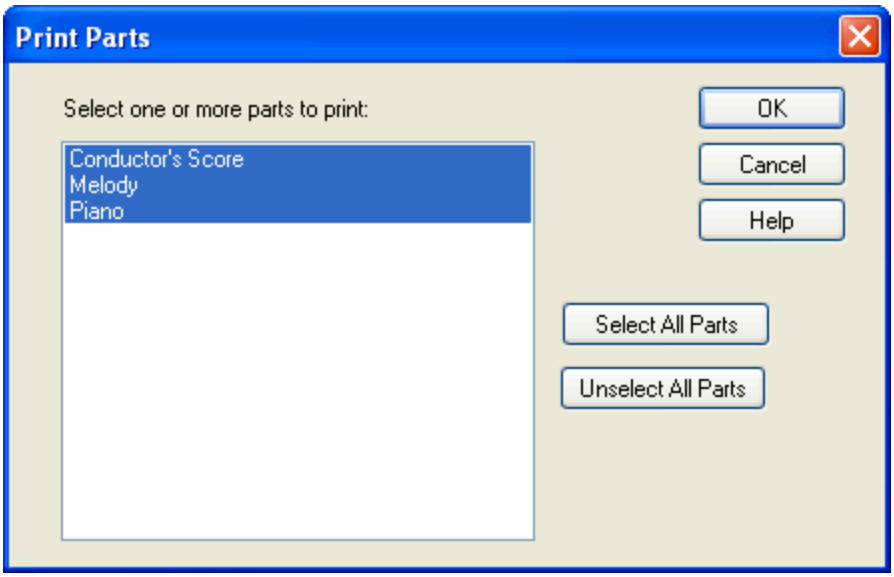
   Type CTRL+P, which is the standard Windows shortcut for the Print command.

2. In the Print dialog, select the destination printer, and range of pages you wish to print, the number of copies, and other common printing options.

To print several parts at one time:

1. Choose the Print Parts command in the File menu.

Musician will present the following dialog box:



2. Select the parts you wish to print, and click the OK button.

   Musician will present the Print dialog box.

3. In the Print dialog box, select the destination printer and other printing options. Note that you will not be offered the choice for a range of pages. All pages for each selected part will be printed. Each part might have a different number of pages.

1.6.8 Tutorial: Adding Annotations

In this final step of the tutorial, we will "dress up" a score with several types of annotations, which offer the musician reading the score instructions and suggestions for performing the music:

- accent marks
- dynamic marks
- hairpin crescendo marks
- tempo marks
- slurs (phrase marks)

We will start with an excerpt from the main theme of George Gershwin's *Rhapsody in Blue*. The starting file RhapsodyInBlueWithoutAnnotations.not will include only the notes, and no annotatons. We will add one of each type of annotation listed above. To see what the completely annotated score looks like, you can open and view the file RhapsodyInBlue.not.

To open the starting file for this step of the tutorial:

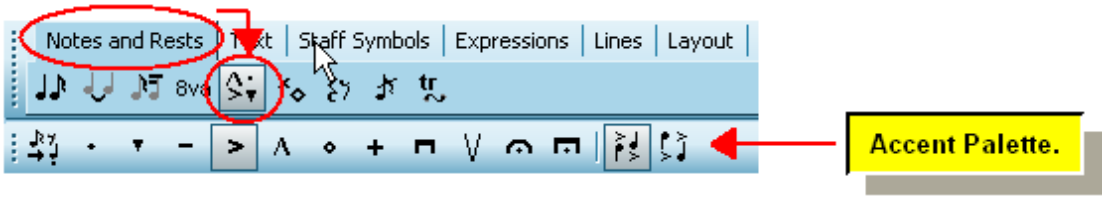
- Choose the Open command in the File menu, and open the file RhapsodyInBlueWithoutAnnotations.not in the directory C:\Users\Public\Documents\Notation_4\Songs

To add an accent mark:

1. With the mouse, navigate to the Accent Palette.

   -- OR --

Type SHIFT+A.



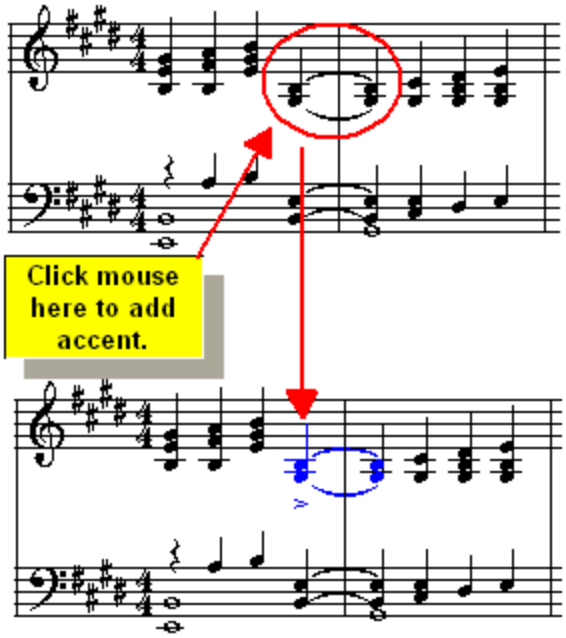
Technically, some of the symbols in the Accent Palette are not accents. Rather, these marks are annotations that are displayed immediately above or below notes.

2. In the Accent Palette, choose the type of accent you wish to add.

   You can add two accents for the same note or chord by selecting two symbols in the Accent Palette.

3. Choose the Accent Palette option that determines whether the accent is displayed at the notehead  or at the end of the stem  .

4. Click the mouse somewhere near (on top of, above, or below) the note or chord where you want to add the accent.



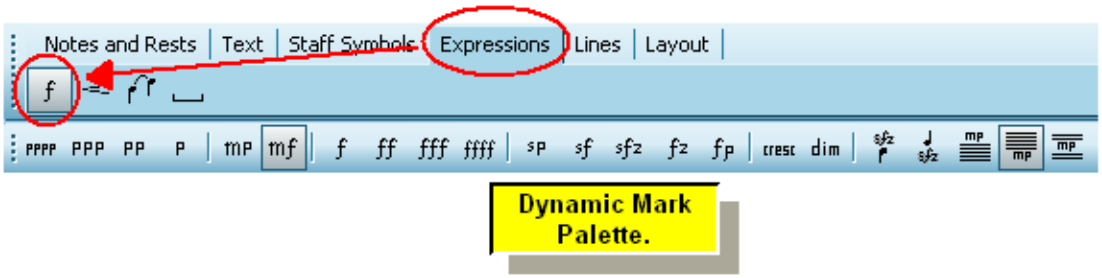
5. To add more accents of the same type, click the mouse at other notes and chords. To add more accents of a different type, select a different accent from the palette, and then continue clicking the mouse where you want to add those accents.

To add a dynamic mark:

1. With the mouse, navigate to the Dynamic Mark Palette.

   -- OR --

   Type SHIFT+D.



2. In the Dynamic Mark Palette, choose the first letter of the type of dynamic mark you wish to add.

   -- OR --

   Type the shortcut for the dynamic mark. For example, the shortcut for *mf* is "mf". The shortcut for *f* is "f1", and for *ff* is "f2".

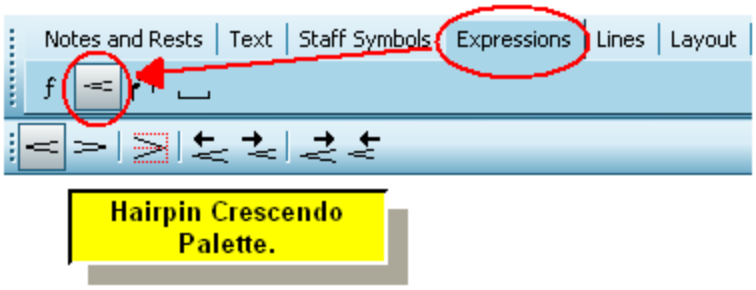
3. Specify whether the dynamic mark should be placed above the staff, below the staff, between two staves, above a note, or below a note.
4. Click the mouse where you want to add the dynamic mark.

To add a hairpin crescendo mark:

1. With the mouse, navigate to the Crescendo Mark Palette:

   -- OR --

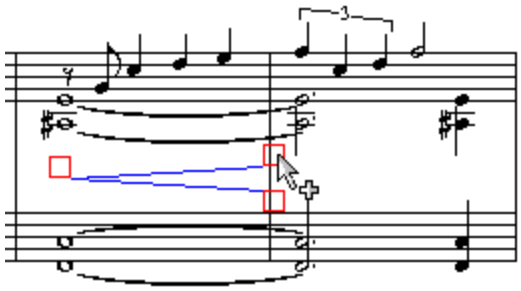
   Type"<" for a crescendo, or ">" for a decrescendo mark.



2. In the Crescendo Mark Palette, click the Crescendo Mark button or Decrescendo Mark button.

   This step is not necessary if you typed "<" or ">" in the previous step.

3. Click the mouse where you want the beginning of the crescendo mark to start. Do not release the mouse button yet.



Musician will add a new crescendo mark, which will initially extend to almost the barline of the same measure.

3. While still holding down the mouse button, drag the end of the crescendo mark to the left or right. Then release the mouse button.
4. Adjust the position of the crescendo mark by dragging the red ☐ handles.

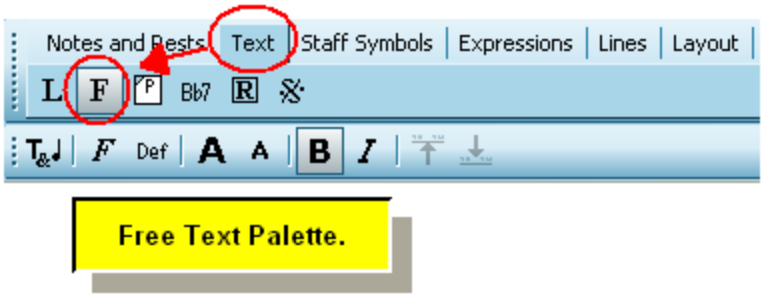
   Other options are available in the Crescendo Mark Palette for vertically centering the crescendo, or extending the start or end of the mark to an adjacent measure which is perhaps on a different line (system) or page of the score.

To add a tempo mark:

1. With the mouse, navigate to the Free Text Palette.
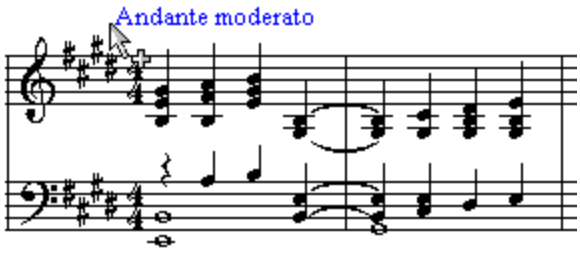
   -- OR --

   Type SHIFT+F.



2. Click the mouse where you want to add the tempo mark.

   Musician will display a blinking text cursor.
3. Type the tempo mark text, and optionally use any text editing keys, such as Del and BACKSPACE, in the same way that you edit lyrics.



4. Optionally, click buttons on the Free Text Palette to increase A or decrease A the font size of the text, or to make it bold B or italic I.

   -- OR --

Type CTRL+ or CTRL+ to increase or decrease the font size, and CTRL +B or CTRL+I for bold or italic.

5. Hit the ESC key when you are done typing and editing the tempo mark text.
6. To move the free text object, unselect it first by typing ESC or clicking elsewhere in the score. Then click the mouse on the text, and without releasing the mouse button, drag the text to a new position.

It is also possible to mix music symbols with normal text in free text objects. For example, you can create a tempo mark that looks like this:

Andante moderato (= 78)

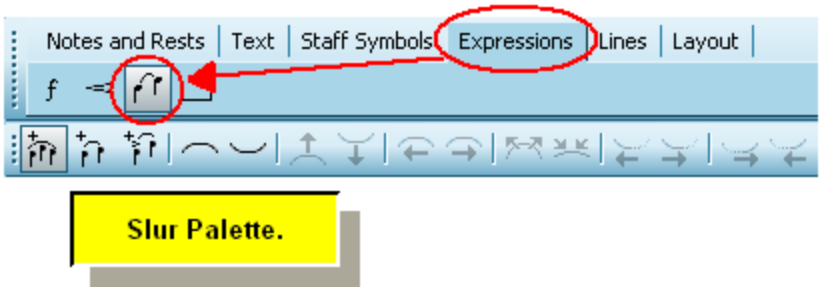
For instructions, see Mixing Music Symbols and Normal Text 392.

To add a slur (phrase mark):

1. With the mouse, navigate to the Slur Palette:

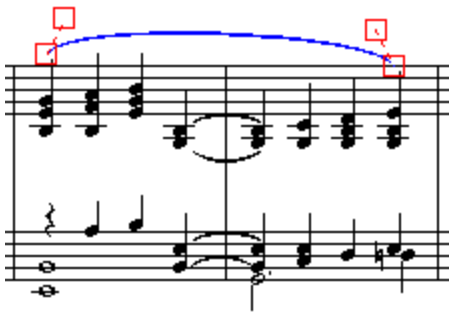
   -- OR --

   Type SHIFT+S. If the Sustain Pedal Palette is displayed first, type SHIFT+S a second time for the Slur Palette.



2. To add a slur across several notes:
   - Click the mouse where you want the slur to start, but do not release the mouse button yet.
   - Drag the end of the slur to the last note that should be under the slur.
   - Start and end the slur above the notes to draw the slur above the notes. Start and end the slur below the notes to draw the slur below the notes.
   - Release the mouse button to complete the addition of the slur.

   Musician will automatically fit the slur to the contour of the notes above or below, and will adjust the start and end of the slur to appropriate positions relative to the first and last notes under the slur.



In many cases, you will likely find **Musician**'s automatic placement of the slur quite acceptable. However, if desired, you can adjust the start and end position of the slur, and the shape of the slur.

3. Adjust the position and shape of the slur by dragging the red ☐ handles.

   Try dragging the four red ☐ handles to get a feel for how they work. For details, see Changing the Shape and Extent of a Slur 355.

Congratulations! You now know the basic procedures to accomplish most common tasks in **Musician**. Now, explore **Musician** on your own to learn about the many more types of notation and performance editing you can do. And, of course, read other parts of this **Musician** documentation for a more structured exploration of **Musician**'s features.

2 Creating, Opening, Transcribing, Printing, Playing, Practicing, and Saving Songs

This section of the **Musician** documentation describes how to work with song files as a whole. Other sections of the documentation describe how to edit details of the music and the score. Please note that to Create a New Song, you will need **Notation Composer** rather than **Notation Musician**. Please visit our website for more information.

Musician reads and writes the following file formats 63: MIDI (.mid), Karaoke (.kar), and the **Notation** (.not) file type used by **Notation Musician**.

You can open a MIDI or Karaoke file already on your system 64 or use your favorite Internet browser to download and open the file in **Musician**.

When you open a MIDI or Karaoke file, you can select various transcription options 73 to control the MIDI-to-notation results. If you are not happy with the results of the transcription, you can use the Re-Transcribe 78 command to try out different transcription options.

You can view multiple songs 89 at a time, and copy and paste sections between them.

You can print 90 one score part at a time, or a range of measures for a given part. You can also print several separate parts 182 with one command. **Musician** also exports High Resolution PDF 51 or image (graphics) 81 files that you can share.

Musician offers a variety of options for enjoying and studying music during playback 92, for listening to multiple songs in a playlist 107 (jukebox), and practicing your instrument or voice with accompaniment. 112

2.1 Music File Formats That You Can Use in Musician

The following table identifies common music file formats that **Musician** does and does not support.

File Type	Description	Extension	Opens	Saves/Exports
Notation	Special format for music notation *and* performance used by **Musician** and other music software programs by Notation Software.	.not	yes	yes 81
MIDI	Music performance data, not music notation data.	.mid	MIDI File Type 0 and 1	MIDI File Type 1 81 (but not Type 0)
Karaoke	A version of MIDI file that includes specialized lyrics information.	.kar	yes	yes 81

MusicXML	A standard file format for exchange music scores between music notation programs.	.xml .musicxml .mxl	no*	no*
Wave	An audio sound wave file format.	.wav	no	no*
MP3	A compressed audio sound wave file format.	.mp3	no	no*
OGG	A compressed audio sound wave file format.	.ogg	no	no*
FLAC	A compressed lossless audio sound wave file format.	.flac	no	no*

*Please note that Notation Composer 3 can handle these filetypes if you should need them.

"Does Musician transcribe audio files or CD music to notation?" Musician does not do this. Some music software can do this only for very clear single note instruments and voice. Many audio engineers have spent years attempting to develop software that can identify what pitches are being played by what instruments at what times in an audio recording. But there has been very little success for music in which more than one note is played at a time. See our page on audio-to-notation for more information.

2.2 Opening a MIDI or Karaoke File Already on Your System

The central feature of **Musician** is that it can open MIDI and Karaoke files and transcribe them into music notation with amazing accuracy.

A MIDI file usually has a .mid or .midi file name extension.

A Karaoke file is a special type of MIDI file, which has a lyrics staff normally intended to be displayed as text without notes. A Karaoke file usually has a .kar file name extension. Most Karaoke playing programs display only the lyrics; but Musician displays both the lyrics and the notes. Since a Karaoke is technically only a special type of MIDI file, this Musician documentation will sometimes use the terminology MIDI file to refer to both MIDI and Karaoke files.

When **Musician** opens the MIDI or Karaoke file, it preserves all of the fine details of the musical performance. Even though **Musician** nicely rounds off notes to readable note durations, the underlying exact timings of the notes are preserved and accurately performed by **Musician** during playback. If **Musician** does not perfectly transcribe the note locations, durations, and rests, you can edit them without changing the underlying performance.

After you open a MIDI or Karaoke file, you may want to rearrange the parts to match those in your ensemble. If you are a pianist or keyboardist, you might want to condense several instrument parts into a keyboard arrangement. **Musician** is particularly well-designed for such purposes.

To open a MIDI or Karaoke file on your system using "Drag and drop":

1. Open **Musician**.
2. With a Windows Explorer window open to your file location, or from the desktop if that's where the file is, click and hold the file, and then drag it over to the open **Musician** window and "drop" it there.

To open a MIDI or Karaoke file on your system using the File Open dialog:

1. Choose the Open command from the File menu.

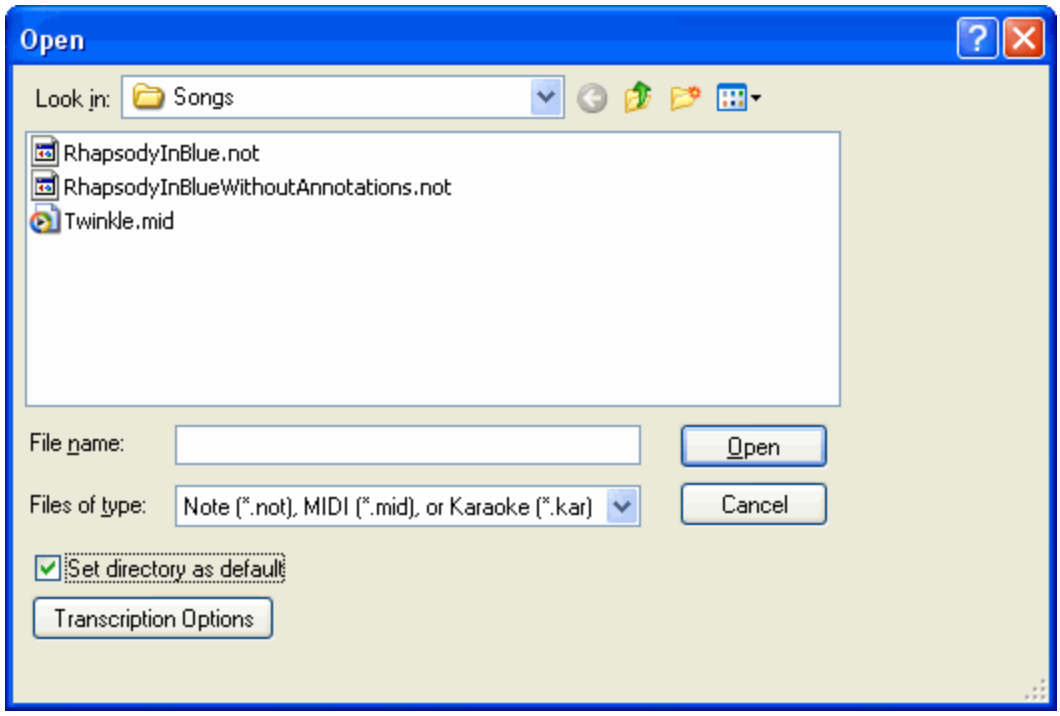
   -- OR --

   Type CTRL+O, the standard Windows shortcut for the File Open command.

   -- OR --

   Type ALT+F to open the File menu, followed by "O", for the File Open command.

   Musician will display the File Open dialog box. By default, **Musician** will show you files in the C:\Users\Public\Documents\Notation_4\Songs directory, as illustrated here:



2. If the MIDI file you want to open is in another directory, navigate to that directory in the File Open dialog box.
3. If your MIDI files are usually located in a particular directory, then you may find it convenient to specify that one as the default directory in the File Open dialog box. After navigating to your directory of choice, add a check mark to the box labeled "Set as default directory".
4. Optionally click the Transcription Options to specify how **Musician** should transcribe the MIDI data into music notation. Otherwise, **Musician** will use the transcription options you have most recently specified.

   The transcription options determine whether:

- Standard versus jazz (swing) rhythm notation will be used.
- Single voices or split (upper and lower) voices will be detected and notated.
- Grace notes, trills, and tremolos will be detected and notated.
- Overlaps of notes will be removed to reduce the number of ties in the score.
- Rests smaller than a specified size (quarter, eighth, or sixteenth) will be removed.
- Certain types of adjustments to the staves will be recommended, such whether single-track keyboard parts are automatically split into right- and left-hand staves.
- Lyrics greater than a certain length (default 12 characters) are hidden, which is what you'll typically want to do for lyrics that really are MIDI file author comments and copyright notices.

For details about the above options, see Transcription Options 73.

5. If the file is a Karaoke file, then after transcribing the file **Musician** will immediately present you with Step 1 of the Prepare Part Wizard. In Step 1, you will usually want to accept the default option for "Sing-Along" part. The Sing-Along part will display the Karaoke lyrics in a large font size, for easy reading from the screen.

   If, after displaying the Karaoke lyrics part, you find that **Musician** chose the wrong staff for melody notes, then you can redo the preparation of the Karaoke part by using the Prepare Sing-Along Part command in the Staff menu. The dialog box for the Prepare Sing-Along Part is very similar to the above Prepare Karaoke Part dialog.

   If you would like to view all of the accompaniment staves, as well as the lyrics staff, of the Karaoke file, then hit the Cancel button in the Prepare Part Wizard.

   If you initially choose to display just the Karaoke part but then decide you would like to view the entire score, use the Undo command in the Edit menu to undo the operation "Prepare Karaoke Part."

   For details about using the Prepare Part Wizard, see Preparing Parts 178.

▸ To open a MIDI file from the Windows desktop Explorer or File Manager (this is a general desription; specifics may vary depending on your operating system):

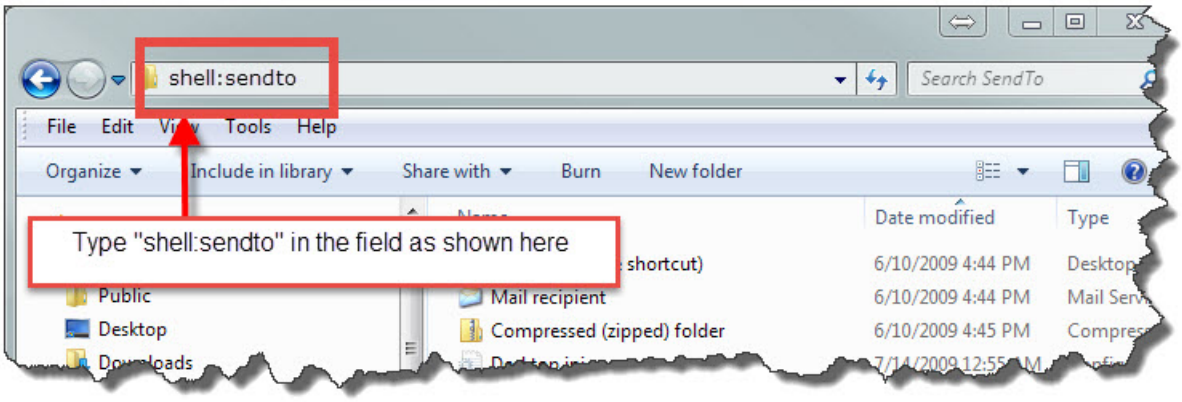
1. Open Windows Explorer and navigate to a folder with .mid, .kar, or .not files.
2. Right-click on one of the filetypes that you want to associate with **Musician**.
3. In the displayed menu, choose "Open with/Choose default program". A list of Recommended Programs will be displayed.
4. Select **Musician** from the list and click on it.
5. Set a checkmark for "Always use the selected program to open these files."
6. Click "Ok" to set the association. Now when you double-click on the selected filetype, it will automatically open in **Musician**.

2.3 Opening Multiple Files at Once

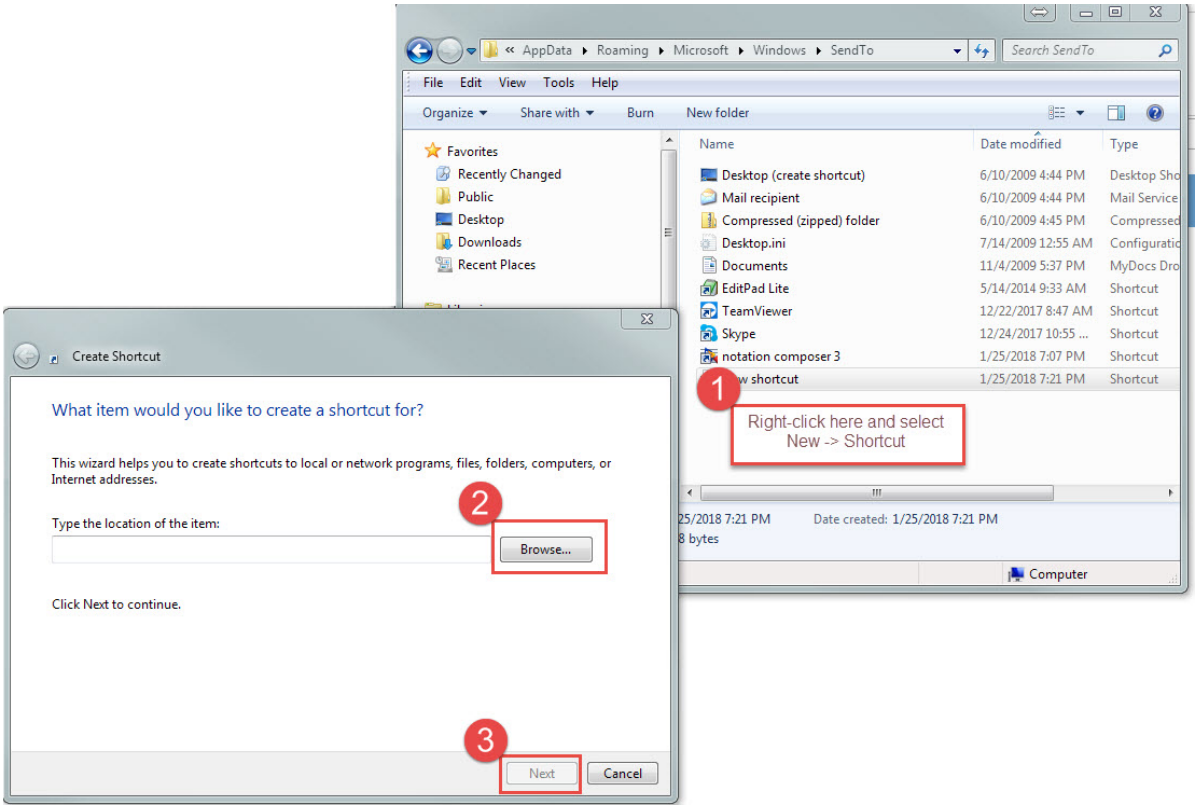
Notation Musician does not natively open multiple files at once, but you can set up the Windows® "Send to" feature to allow you to open multiple files at once (you can also use this method to set up other software as well.)

▸ To set up "Send to" for Notation Musician on your machine:

1. Click on Windows Explorer and open a dialog.
2. In the address field, type "shell:sendto"

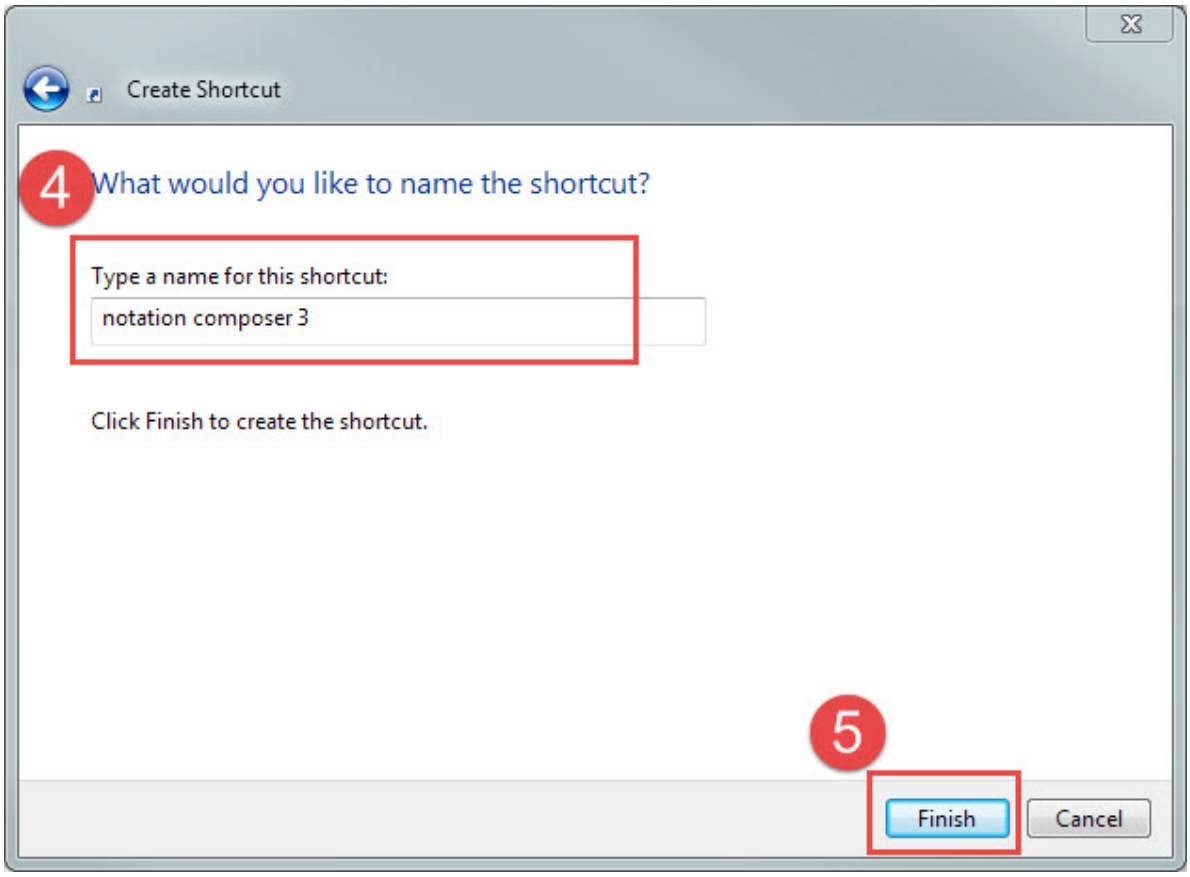


3. Right-click your mouse in the right-hand panel and select "**New -> Shortcut**".

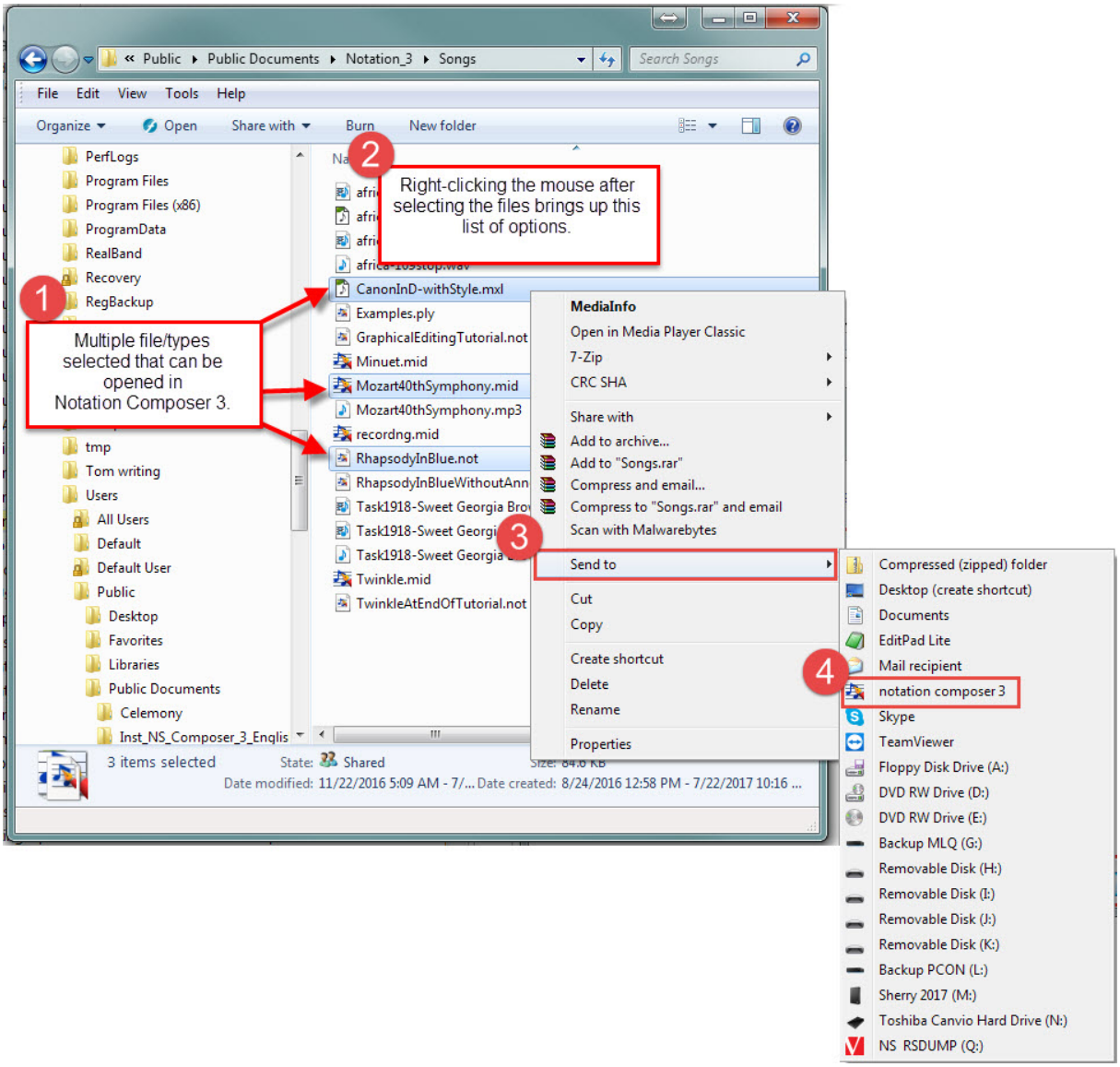


4. Click the "Browse" button, and navigate to "C:\Program Files\Notation_4\Musician_4\Musician.exe" and click "Ok".
5. Click "Next" to continue.

6. Now enter a name for the shortcut - here we have named it "notation composer 3."
7. Then click "Finish."



8. Now when you are using Windows Explorer, you can select multiple files in any folder, right click and choose "Send to -> notation Musician 3" (or whatever you named the shortcut), and all the files will open in Musician.



2.4 Associating Notation Musician with Compatible Filetypes

You can set up Windows to always use **Musician** to open a MIDI (.mid), NoteSoft (.not), or Karaoke (.kar) file when you open it from Windows Explorer, or download it using your favorite Internet browser.

▸ To associate Musician with compatible files 63:

1. In Windows Explorer, navigate to a .mid, .not, or .kar file on your computer.
2. Right-click on the filename, and select "Open with..." then "Choose default program" from the list.
3. Select **Musician** from the list, and set a checkmark for "Always use the selected program to open these files."
4. Click "Ok" to save and exit.

To remove the association of Musician with specific types of files:

1. Follow the same procedure as above, but remove the check mark(s).
2. After you remove the association of **Musician** with the filetype, the next time you open one of these files Windows might ask you to choose which new program to associate with it. You should follow Windows instructions for making the new file association.

For internet browsers, you will need to follow the instructions for the particular browser to set **Notation Musician** as the default program to open compatible files. These options are typically in "Options" or "Preferences", and are related to "Programs" or "Applications."

2.5 Searching for and Downloading Song Files from the Internet

You can use your favorite Internet browser to search for and download song files from the Internet. If you have associated 69 the compatible filetypes with **Musician**, then as soon as the download of the file has completed, **Musician** will automatically start up and open the file. You will see the MIDI or Karaoke file transcribed to sheet music.

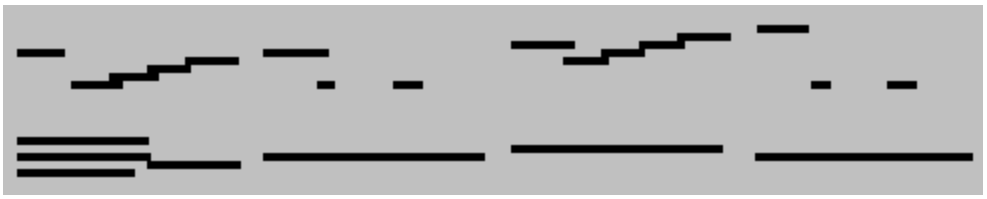
Also, you can use your favorite Internet browser to download song files to a folder on your system. Then you can use **Musician**'s File Open command to open any of the compatible 63 downloaded song files.

2.6 Transcribing MIDI Files and Recordings to Notation
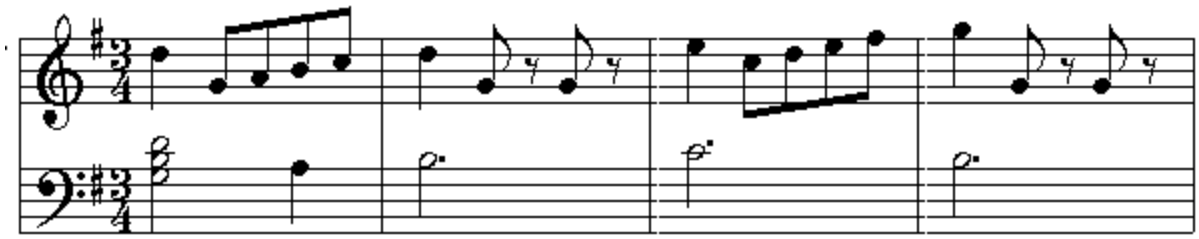
When you open a MIDI file, **Musician** *transcribes* the performance in the MIDI file to notation. The data stored in the MIDI file is basically a recording of what notes (pitches) are played at what exact times by various instruments (in staves).

A good way to understand transcription is to think of the MIDI performance as a piano roll used on player pianos that were popular in the late 1800's and early 1900's. The holes in the piano roll determine what notes are played at what times. If you unroll the piano roll horizontally, you will observe that the holes mark the beginning and ending times of played notes. The vertical position of the holes determine the pitch of the notes.

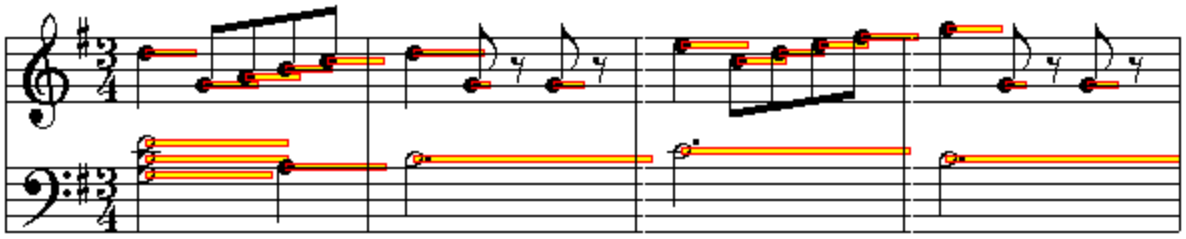
Here is an example of a piano roll:



Basically, the above piano roll is all that **Musician** is given when it must transcribe a MIDI file, to notation. **Musician** is able to transcribe the above piano roll information into notation. This example happens to be the Bach Minuet file, minuet.mid, that is installed in the C:\Users\Public\Documents\Notation_4\Songs directory. The result of the transcription looks like this:



In **Notation Composer**, but not **Notation Musician**, you can actually see the piano roll "holes", as illustrated here:

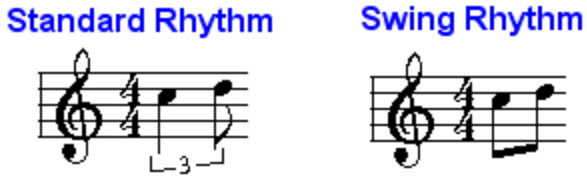


Musician must make many decisions about how to transcribe any given MIDI performance to notation. These decisions are similar to those that a trained musician would make when he or she hears music and writes down the notes on paper. (Very few musicians have this special training in "music dictation".)

Some decisions about how to transcribe the music are closely related to the style of the music. **Musician** does not attempt to determine what the style of music is, in order to make the appropriate decisions in transcribing the MIDI performance to notation. Instead, **Musician** lets you make a few simple choices about how to transcribe the music.
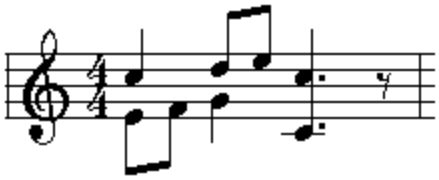
In particular, you can instruct **Musician** to:

- Choose either Standard or Swing style in determining how to display rhythms such as illustrated here:
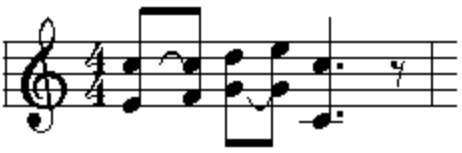


- Detect and display split upper and lower voices as opposed to single voice, as illustrated here:

Split Upper and Lower Voices
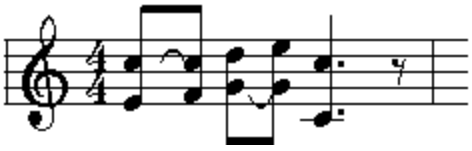


Single Voice
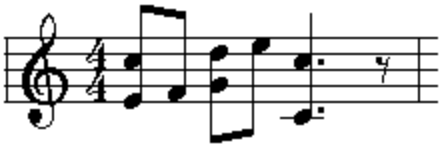


- Remove overlapping notes in order to reduce the number of ties, as illustrated here:

Transcription Without Removal of Note Overlaps
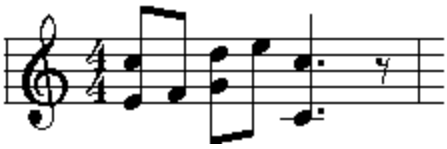


Transcription With Removal of Note Overlaps
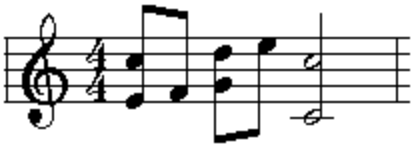


- Remove rests smaller than some size you specify, such as a quarter rest, as illustrated here:

Transcription With Eighth Rest Minimum Size
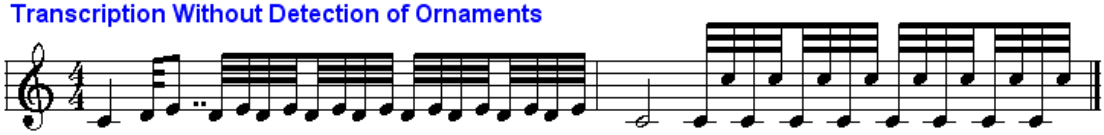


Transcription With Quarter Rest Minimum Size
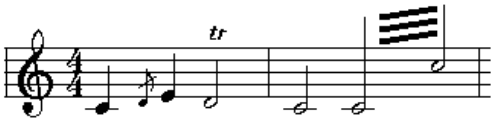


- Detect grace notes, trills, and tremolos.

Transcription Without Detection of Ornaments



Transcription With Detection of Ornaments



The options described above are offered in the Transcription Options dialog described in the next topic. **Musician** offers you the opportunity to specify the transcription options in several circumstances:

- When you open a MIDI file, click the Transcription Options button in the File Open dialog box.
- As you download a MIDI file from the Internet, click the Transcription Options button in the File Save As dialog box.
- Before you record from your MIDI keyboard, choose the Transcription Options command in the Setup menu.
- When you use the Split Hands command, click the Transcription Options button in the Split Hands dialog box.

- When you use the Merge Staves command, click the Transcription Options button in the Merge Staves dialog box.

Also, after you have opened a MIDI file, or recorded a performance at your music keyboard, you can re-transcribe the performance using a different set of transcription options, by using the Re-Transcribe 78 command.

PLEASE NOTE: Re-transcribing a file will only keep notes and lyrics - all other editing will be lost. it is best to review the transcription of any file first to see if it needs to be re-transcribed with different options before spending much time working on it.

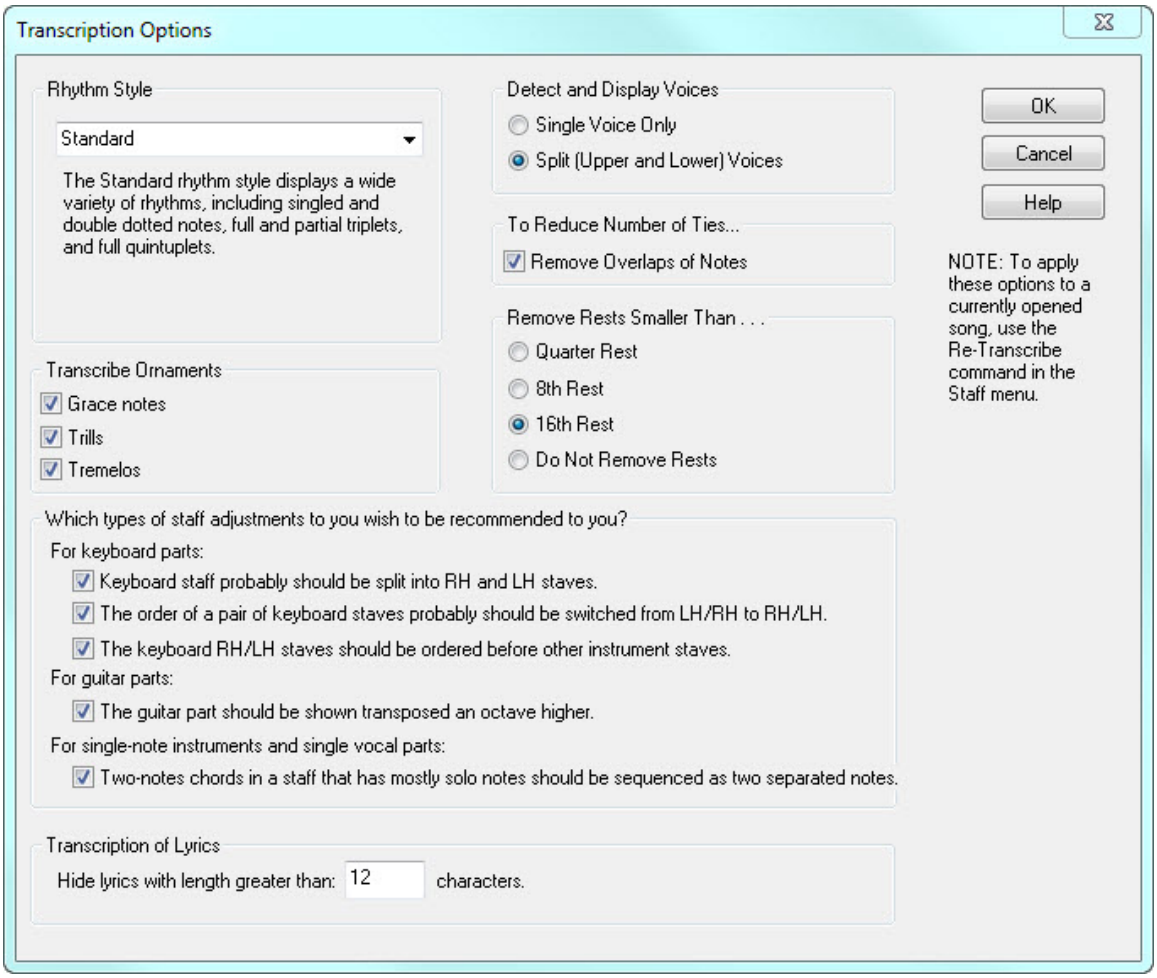
About Quantization

If you have used other music notation programs with a transcription feature, that feature very likely includes an option for specifying the "quantization level". Such an option tells the program to round note duration values and attack times to the nearest, say, thirty-second note, or sixteenth note. Rather than using "quantization", **Musician** has a better way of determining note durations and attack times than simply rounding to some nearest value. Such quantization only works well for fairly simple rhythms. Notes with long values tend to be "over-enthusiastically" notated with extra dotted values and ties. Separate notes with short values and small differences in attack times may be incorrectly collapsed into chords. **Musician** does a much better job at transcribing rhythms than notation programs that use a simple quantization approach. **Musician** analyzes the rhythmic context of each note to determine what quantization level to apply to the note.

2.6.1 Transcription Options

For an overview of how **Musician** transcribes an opened MIDI file, or the recording of your performance at the music keyboard, to music notation, see the preceding overview topic, Transcribing MIDI Files and Recordings to Notation.

The Transcription Options dialog box offers you the opportunity to determine how **Musician** transcribes an opened MIDI file, or the recording of your performance at the music keyboard, to music notation:



There are several ways that you can access the Transcription Options dialog box:

- Choose the Transcription Options command in the Setup menu.
- Click the Transcription Options button in any of the dialog boxes for File Open 64, Split Hands 171, or Merge Staves 168.
- Choose the Re-Transcribe 78 command in the Format menu.
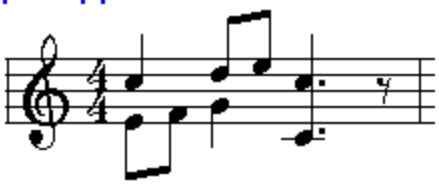
The transcription options you choose will be applied in all subsequent transcriptions, not only in the current session in which you are running **Musician**, but also in future sessions. The transcription options will apply to newly opened MIDI files and recordings from your keyboard, as well as the Split Hands and Merge Staves commands.

Each of the transcription options are described below. To Retranscribe a song that is already open, you can use the **Format / Retranscribe** command.
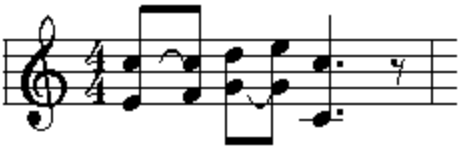
Detect and Display Voices

The difference between the two voice options is illustrated here:

Split Upper and Lower Voices



Single Voice



Choose the Split (Upper and Lower) Voices option under these circumstances:
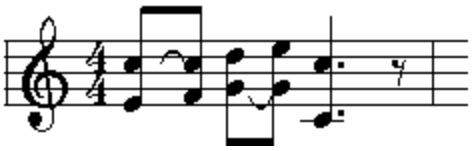
- The MIDI file includes keyboard parts, or your recording is at a music keyboard.
- You want the notation to clarify how some notes are held for longer durations while other notes played at the same time are held for shorter durations.

You can simplify the notation by choosing the Single Voice Only option, but only if you also choose the Remove Overlaps of Notes option. The above single voice example is actually more difficult to read than the split voice example, because the overlappings of notes has not been removed.
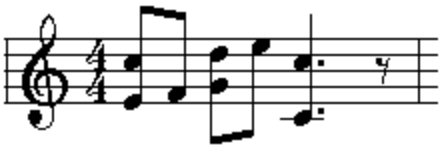
Remove Overlaps of Notes

The result of choosing the Remove Overlaps of Notes option is illustrated here:

Transcription Without Removal of Note Overlaps



Transcription With Removal of Note Overlaps



Removing overlaps of notes reduces the number of ties, and thus simplifies the overall notation. However, this also results in notation that less accurately represents the actual duration of notes.
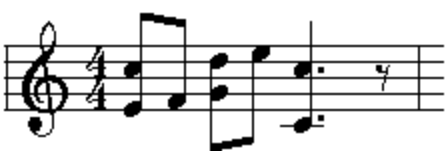
If you are working with keyboard parts and find that transcriptions have too many ties, you first should consider choosing the Split (Upper and Lower) Voices options. Then, if there are still too many ties, use the Remove Overlaps of Notes option.

If you are working with single-note instrument or vocal parts, then choose the Single Voice Only option and the Remove Overlaps of Notes option.
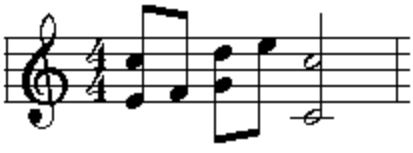
Reduce Rests Smaller Than...

If you find that **Musician** transcribes with too much accuracy with respect to the use of dotted note values and rests, then you can instruct **Musician** to eliminate any rest that is smaller than a certain size (quarter rest, eighth rest, or sixteenth rest), as illustrated here:

Transcription With Eighth Rest Minimum Size



Transcription With Quarter Rest Minimum Size

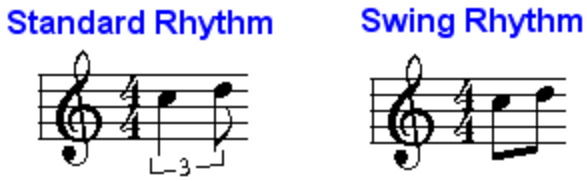


In general, you should choose a smaller minimum rest size for slow tempos, and a larger minimum rest size for fast tempos. In slow tempos, you may want the

notation to clarify the duration of notes and rests. In fast tempos, you may want to reduce the complexity of the notation by eliminating smaller rests.

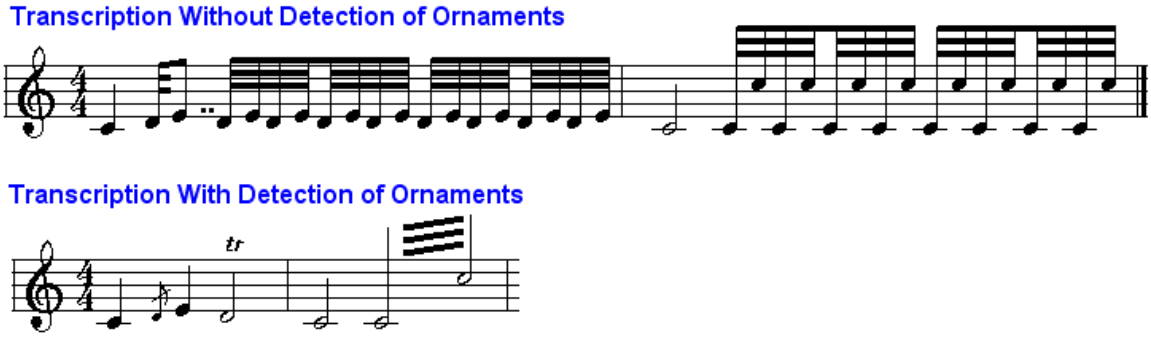
Rhythm Style

In jazz and swing styles of music, triplets with a missing middle member are quite common. There is a convention in jazz and swing notation that simplifies the notation of such partial triplets by displaying the two members of the triplet as a simple pair of notes with equal durations. You can instruct **Musician** which style of rhythm notation to use, as illustrated here:



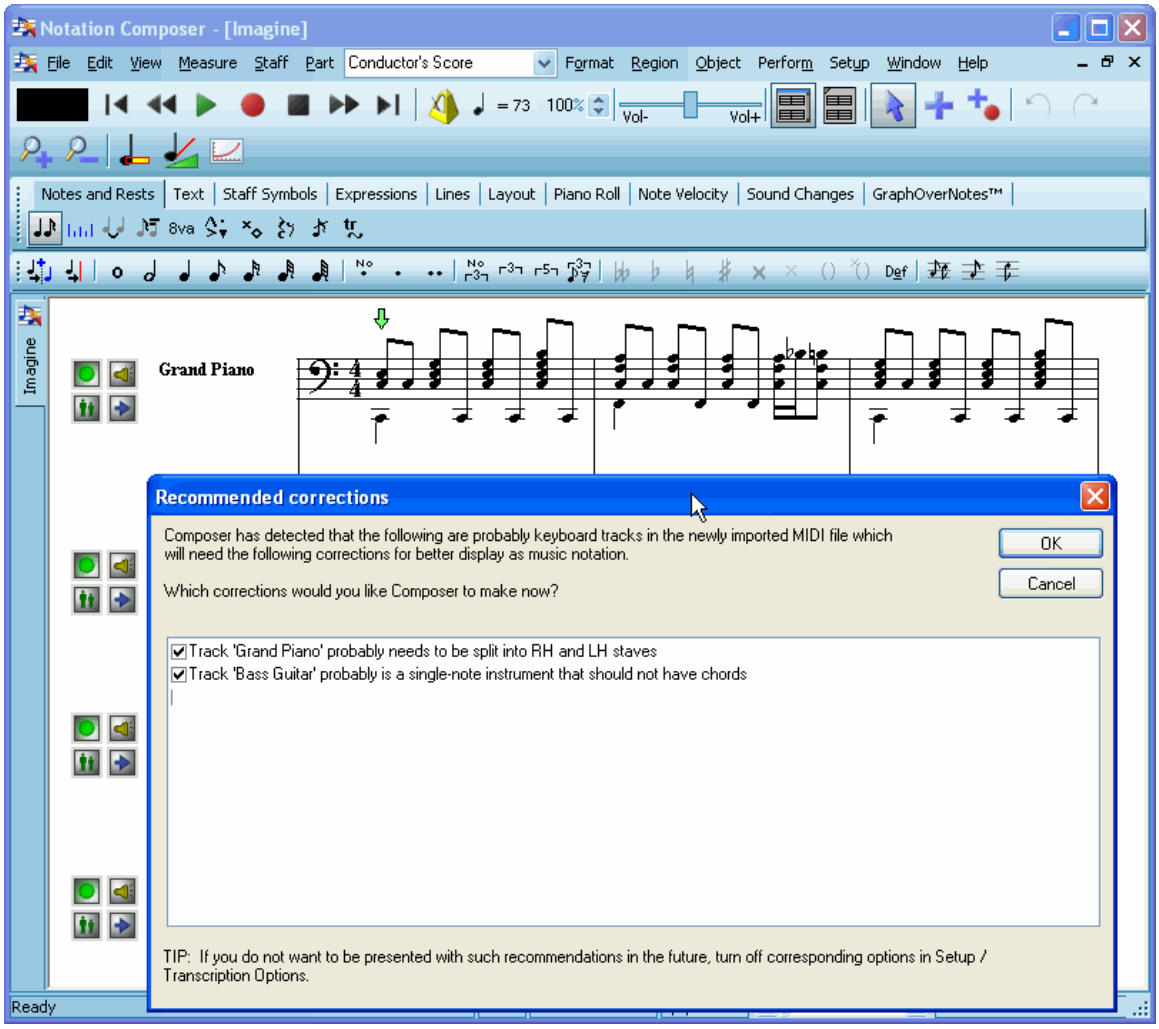
Transcribe Ornaments

Musician recognizes grace notes, trills and tremolos. Instead of literally writing the notes of the ornamented performance, **Musician** displays the standard notation for the type of detected ornament. All of the details of the ornament's performance are preserved-- the exact timing of the notes and the loudness of each note. You can view the written-out performance at any time, and edit the performance. While viewing the written-out performance you can edit details of the performance 307-- the timing and loudness of the notes.



Staff Adjustment Recommendations

Musician recognizes certain common problems in MIDI files, and offers you the opportunity to immediately fix those problems when opening the MIDI files. The most common problem is that a keyboard part in a MIDI file might have only one track, so that the notes for the right- and left-hand staves would otherwise be mixed together into a single, unplayable staff. If you choose the Transcription Option for **Musician** to automatically detect when a keyboard track probably needs to be split into right- and left-hand staves, then when **Musician** opens such a MIDI file, you will be presented with a dialog box such as the following:



If you do not correct these kinds of problems with the MIDI file when you first open it, don't worry, you still have another chance to fix the problems later. The following table indicates what commands you can use that accomplish the same thing as the automatic corrections:

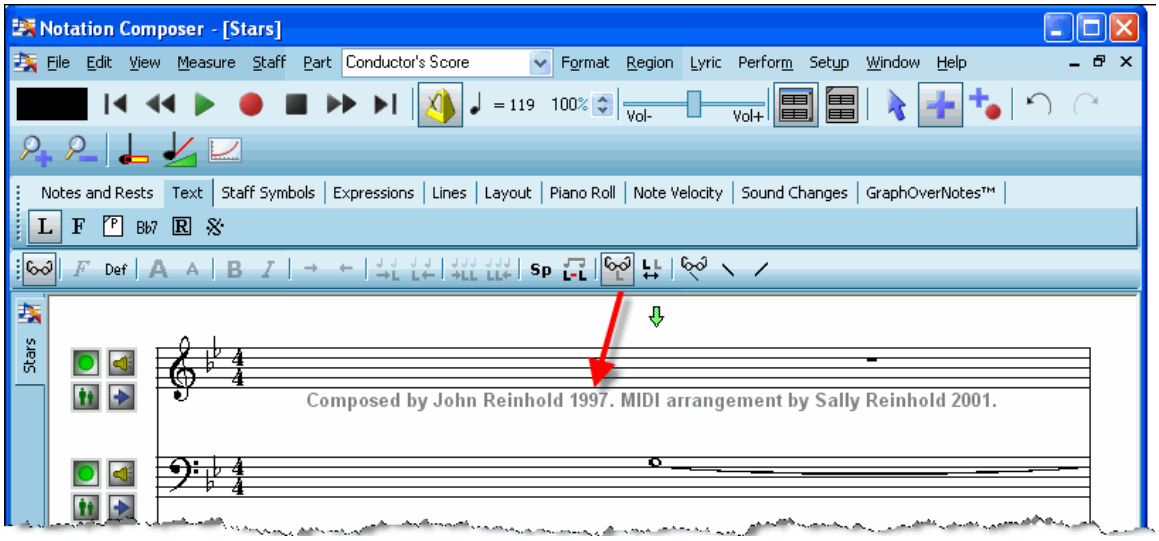
Transcription Recommendation	Alternative Command You Can Use
Keyboard staff probably should be split into RH and LH staves.	Split Hands command in the Staff menu 171.
The order of a pair of keyboard staves probably should be switched from LH/RH to RH/LH.	Move Up and Move Down buttons in the Staff Setup window (Staff menu, Setup command) 176.
The keyboard RH/LH staves should be ordered before other instrument staves.	Move Up and Move Down buttons in the Staff Setup window (Staff menu, Setup command) 176.
Two-note chords in a staff that has mostly solo notes should be sequenced as two separate notes.	Convert To Solo Notes command in the Staff menu 175.

Transcription of Lyrics

Many MIDI files have one or more tracks with no notes but with a "lyric", which is actually some notice that the author of the MIDI file wishes to be kept with the file, such as a "by line" or copyright notice. **Notation Musician** respects the intention of the author of the MIDI file to preserve this information with the file. However, it is typically distracting to see a newly opened MIDI file with one or more empty tracks with these notices.

Musician offers you the option to temporarily hide this information. It is still kept in the song file, and will be included when you resave the file in any of the file formats: MIDI (.mid), Karaoke (.kar), or Notation (.not). This information will only not be saved if you choose to delete the track (staff) that holds this "lyric" information.

You can view such temporarily hidden lyrics by going to the Lyrics palette, and turning on Reveal Hidden Lyrics  button, as illustrated here:



2.6.2 Re-Transcribing a MIDI File or Recording

When you open a MIDI file,**Musician** applies the transcription options that you have most recently specified in the Transcription Options dialog. If you are not satisfied with the results of the transcription, you might be able to improve the results by choosing different transcription options. You can select specific staves to which the new transcription options are applied.

NOTE: **The Re-Transcribe command keeps notes and lyrics in the re-transcribed staves, but discards all other kinds of editing** you may have made after the original transcription of the MIDI file. Some examples of editing changes that will be discarded are editing of: enharmonic spellings, beams, dynamic marks, free text, and crescendo marks.

Therefore, it is a good idea to review the transcription of a song or staff immediately after you have opened the MIDI file. If you want to re-transcribe the song or staff, do that before you start editing it.

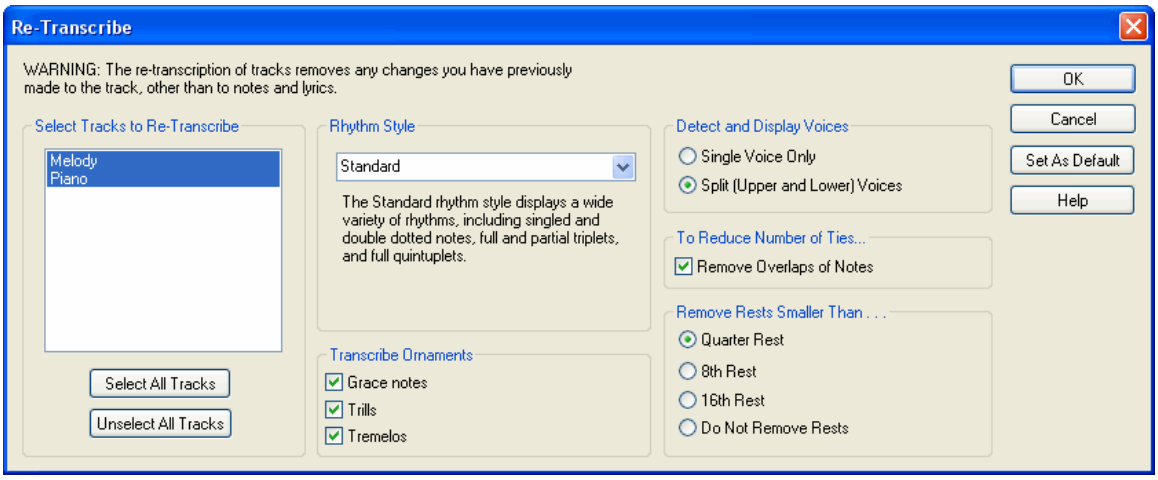
To re-transcribe specified staves in a song:

1. Choose the Re-Transcribe command in the Format menu.

   -- OR --

   Type "qrt" for Quick Re-Transcribe.

   Musician will display the Re-Transcribe dialog box, such as the following:



2. Select the staves that you wish to re-transcribe. Click a staff name to toggle its selection. Use the buttons below the list of staves to select all of the staves, or to unselect all of the staves so that you can then select individual staves.
3. The re-transcription options are the same as those in the Transcription Options dialog box. Refer to the Transcription Options 73 topic for a description of the options for voices, overlaps of notes, minimum rest size, and rhythm style.
4. If you wish to set the new transcription options as the default for future transcriptions, click the Set As Default button. This is equivalent to choosing the Transcription Options command in the Setup menu, and selecting the same options.

NOTE: Some MIDI files are recorded without reference to a metronome. **Musician** cannot correctly analyze the rhythms in such MIDI files on its own, nor can most other music notation programs.

You can tell whether a MIDI file has been recorded without reference to a metronome by following this simple procedure: After **Musician** has opened the MIDI file, start playback. Watch the vertical playback cursor (blue, by default) move along with the playback. Listen to playback and start tapping the beats with you hand or foot. Does the playback cursor move in synchronization with the beats you hear? If so, the MIDI file was indeed recorded with reference to a metronome. If the beat movements of the playback cursor do not relate to the beats you hear, then the MIDI file was recorded without reference to a metronome. **Musician** does not support fixing the barlines for such files, but **Composer** does. You can try out **Composer** free to test on such files by visiting our website's Download page at www.notation.com/Download.htm and installing the trial version to test it on your file.

2.7 Creating Your Own Song Templates

You can use a song template to quickly apply page text 395 to newly opened MIDI files or to reopened Notation .not files.. See the description of the Format Part Using Template command 214 in the Format menu.

A song template is kept in a special directory, which is typically C:\Users\Public\Documents\Notation_4\Templates.

To create a song template:

1. Open a song file that has the formatting that you want to apply to other songs.
2. Add or modify any page text that you want to appear in songs that borrow from the template. For example, add your own name to the title page. See Adding and Editing Page Text 395 and Specifying Page Text in Templates 400.
3. Save the song as a **Notation** (.not) file in the C:\Users\Public\Documents\Notation_4\Templates directory.

To edit an existing song template:

1. Use the Open command in the File menu, and choose a template (.not) file in the C:\Users\Public\Documents\Notation_4\Templates directory.
2. Edit the page text in the template file.
3. Save the template (.not) file using the Save command in the File menu.

2.8 Editing the Song Title and Author Information

After you have created a new song, you can add the song title and author information.

The song title is displayed on the title page of the song, if you choose to display it as standard page text 399.

The author information, such as your name and copyright notice, is kept in a special place that can be viewed by another **Notation Musician** or **Notation Composer** user with the Song Titles and Authors command in the File menu.

To edit the song title and author information:

1. Choose the Song Title and Authors command in the File menu.

   Musician will display the Song Title and Authors dialog box.
2. In the dialog box , enter text for the:
   - song title
   - composer
   - arranger
   - lyricist
   - copyist
   - copyright notice
   - other information

2.9 Saving Your Work in a Notation .not

Notation Musician and **Notation Composer** use and share a proprietary music file format that includes not only MIDI performance data but also notation data. Normally, you should save the song in the **Notation** file format, used by Notation Software's **Notation** family of music software products. A **Notation** file has the .not filename extension.You can export the music performance of a song as a MIDI file, but this is only the performance and not the annotations you may have added.

Only **Notation** music software programs can read and write files in Notation Software's **Notation** .not file format.

> **NOTE:** MIDI files contain almost no information about the notation of the music. If you wish to save your music notation and annotations, then you need to save it as a Notation .not file (preferred) rather than export it as a MIDI .mid file.

To save your work in a Notation .not file:

1. Choose the Save As command in the File menu.

   Musician will present the File Save As dialog box.

   You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default".

2. Enter a file name, or use the same file name if you are certain that you want the newly saved file to replace the old. **Musician** will automatically add the Notation .not file extension if you do not provide it at the end of the file name.

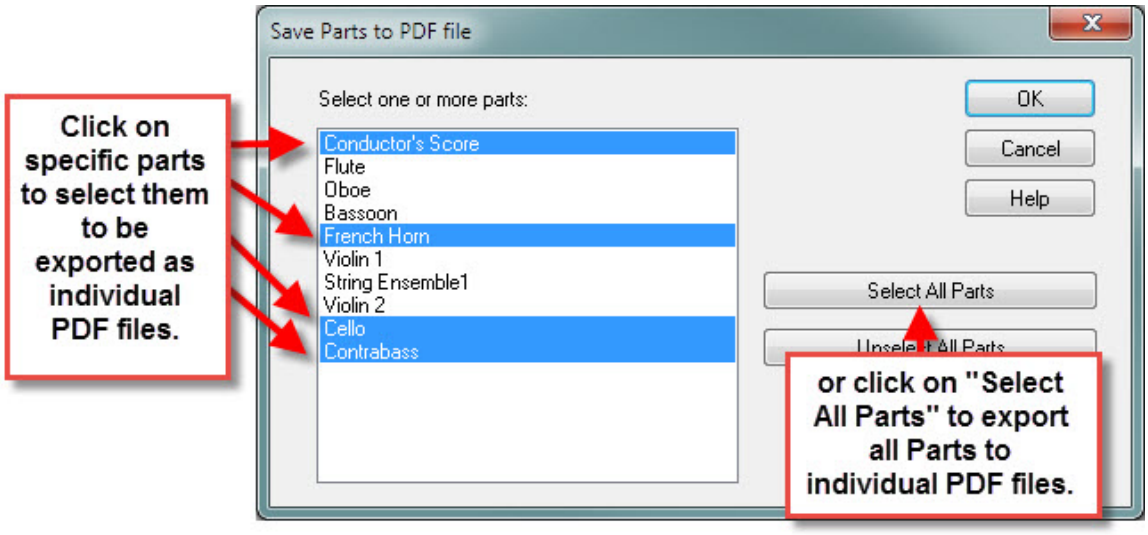
2.10 Exporting Your Work in Other File Formats

To export your song as a PDF .pdf:

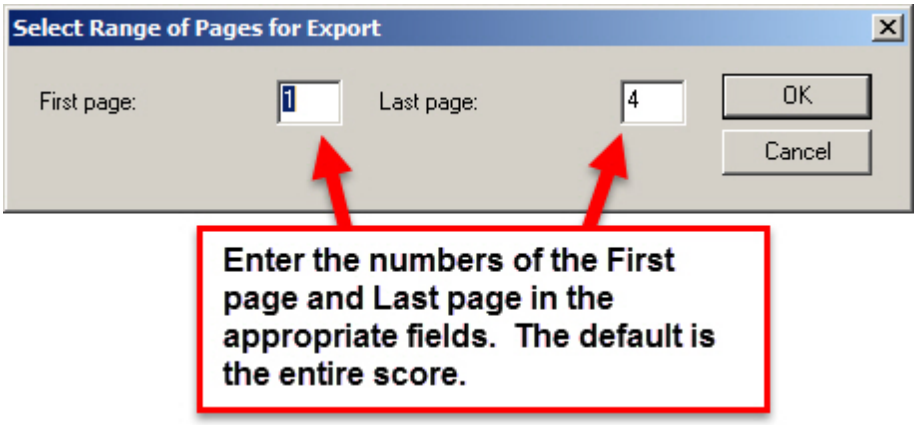
Before exporting a PDF of your song it's a good idea to check each part you want to export in Page View first to make sure that all formatting is the way you want it to look.

Please note that when saving PDF files, each Part is saved in it's own file and will be in the filename format "SongTitle_PartName.pdf" to make it easy for you to keep PDF Parts of the same song together in your folders.

1. In the File menu, choose Export, then select "PDF."The "Save Parts to PDF file" dialog will come up:



2. After selecting the Parts you wish to export (save) as PDF files, click "Ok."
3. You can then select the page range that you wish to export in the PDF then click "Ok.". The default range is the entire score.



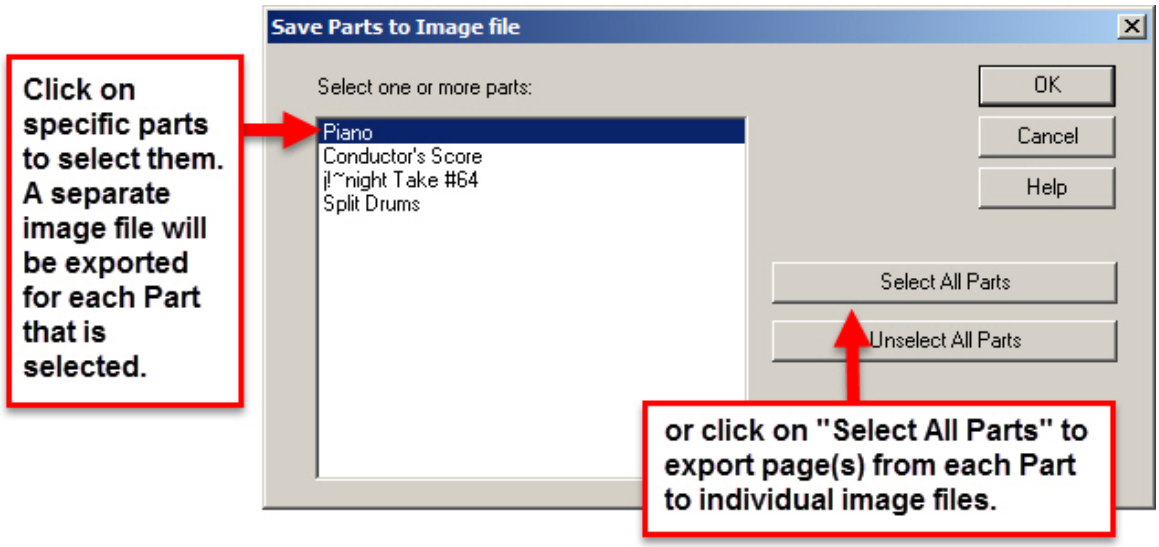
4. The Export as PDF File dialog will then come up, where you can navigate to the folder you wish to save the files in. The default directory is C:\Users\Public\Documents\Notation_4\Songs. You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default". Click "Save" to save the PDF files in the selected folder. For each Part a progress window will come up showing you the progress of the export, and will close when the Part is done.

To export your song as an Image (.png, .jpg, .bmp, or .gif) file:

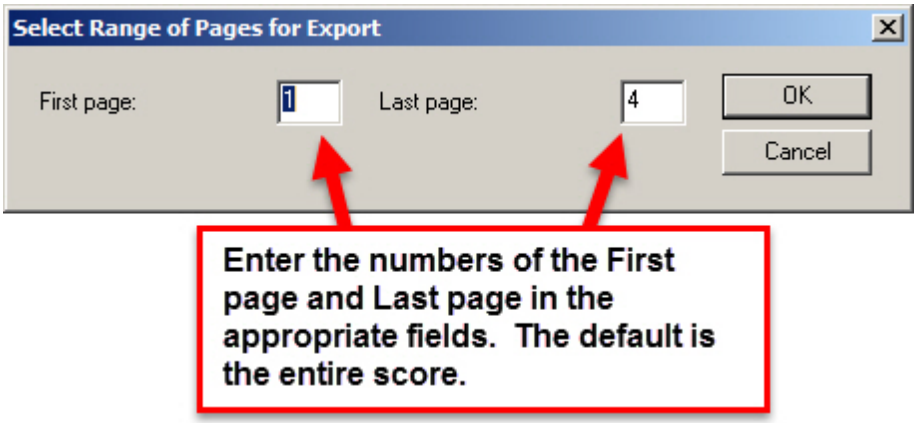
Please note that if you export multiple pages of a Part as an image file, that all those pages will appear in the same image file. If you plan to use the exported image to insert in a document (eg. as a musical "snippet" example), then you probably want to just export the page where your example occurs and then use your favorite editor to crop the image.

To export an image file of your score:

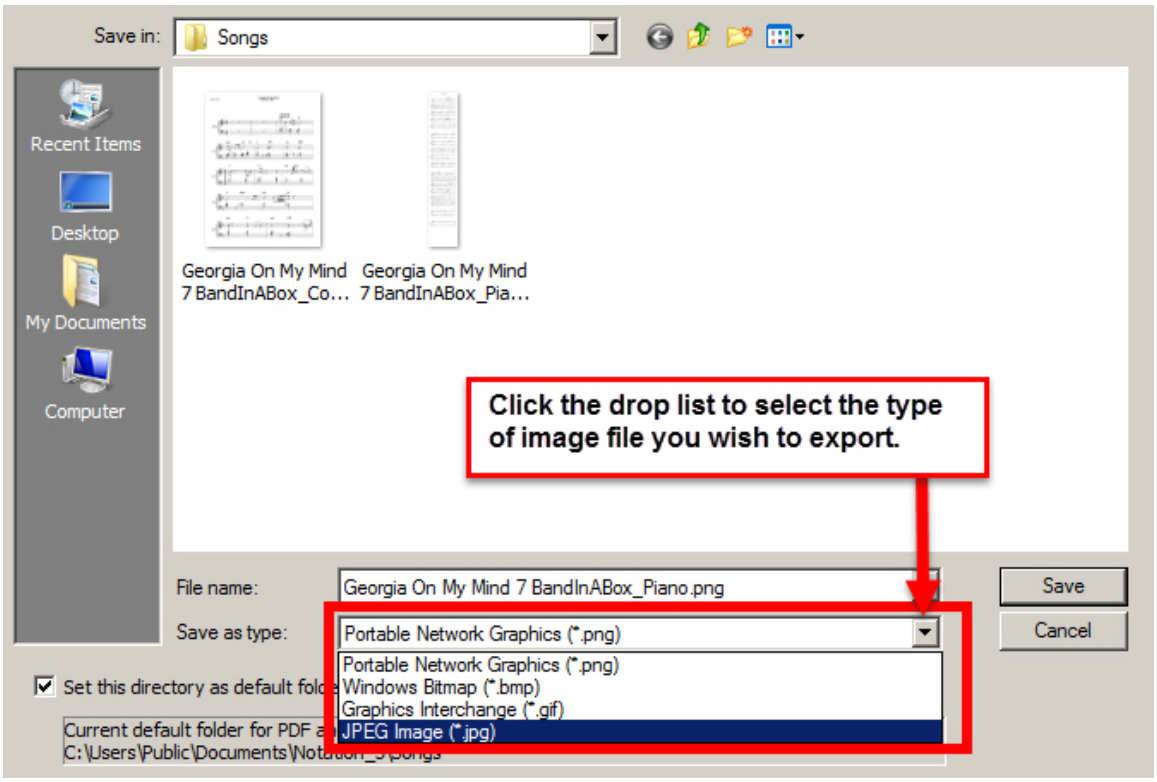
1. In the File menu, choose Export, then select "Image...."The "Save Parts to Image file" dialog will come up:



1. After selecting the Part(s) you want to export an image from, click "Ok."
2. You can then select the page range that you wish to export in the image file(s) then click "Ok.". The default range is the entire score.



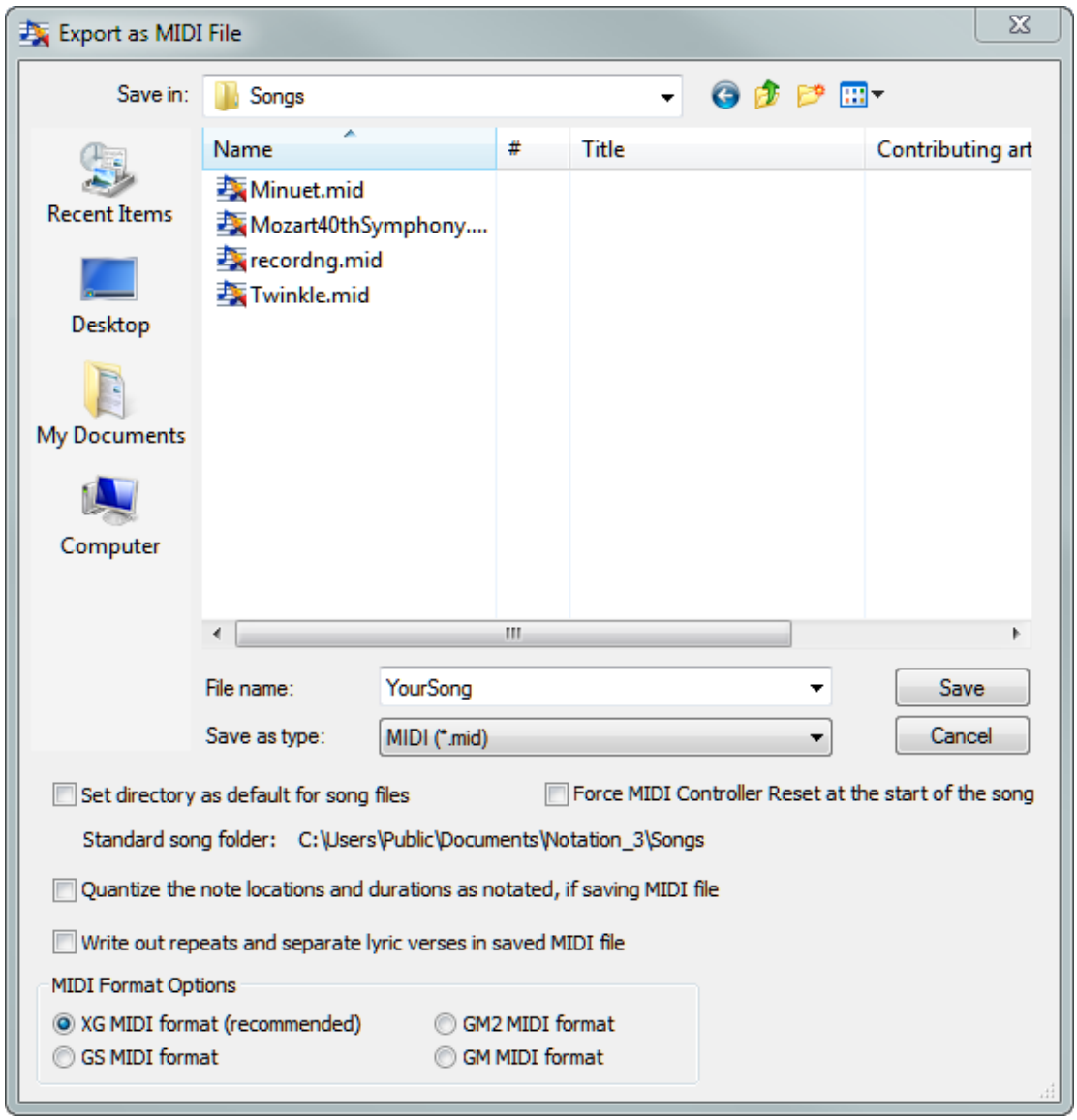
1. The "Save in:" dialog will then come up, where you can navigate to the folder you wish to save the file in, as well as select the image filetype you want to export. The default directory is C:\Users\Public\Documents\Notation_4\Songs. You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default". Click "Save" to save the image file(s) in the selected folder. For each Part a progress window will come up showing you the progress of the export, and will close when the Part is done.



To export your song as a MIDI .mid or Karaoke .kar:

1. In the File menu, choose Export, then select "MIDI".

   For MIDI and Karaoke filetypes**, Musician** will present the Export MIDI File dialog box:



The default directory is C:\Users\Public\Documents\Notation_4\Songs. You can change the default directory, if desired, by navigating to another directory and then setting a check mark by "Set directory as default".

2. Enter the name of the MIDI or Karaoke file you wish to export, and select either "MIDI (*.mid)" or "Karaoke (*.kar)" from the "Save as type:" drop list..

3. If your keyboard or synthesizer needs to have the MIDI controllers cleared before a song begins playback, check the "Force MIDI Controller Reset at the start of the song" box.

4. Optionally set a check mark by "Quantize the note locations and durations as notated".

   Choose this option if you are using **Musician** as a tool for transcribing MIDI-to-notation, and wish to import the results into another music notation program. This will have the undesirable effect of making the MIDI performance sound very mechanical. However, this will adjust the notes so another music notation program can more successfully import and transcribe the MIDI performance. Said another way, **Musician** will do the hard work in transcribing the MIDI to notation, and the other music notation program can take advantage of **Musician**'s MIDI-to-notation transcription.

5. Optionally set a check mark by "Write out repeats and separate lyric verses." For example, if your song has repeat instructions 334 to play four verses, and four lines of lyrics are included, then this option will expand the song into four written-out sections of the verse, each time with one of the four verses. Karaoke players will need this setting.
6. Select the MIDI file format that will best suit the device you will play your exported .mid file on. The XG format is recommended as it has the most capabilities and flexibility. However, some equipment can only handle other MIDI file formats, and so **Musician** offers the option of saving in the file format that you need. Please note that if a MIDI .mid file that you have opened in **Musician** is a particular MIDI format, then you cannot change the MIDI format to a different type on export. There are other software tools available elsewehere for making such format changes.

2.11 Sharing Your Music With Others so They Can View, Play, and Print Your Songs

Once you have prepared a song with **Notation Musician**, you might want to share it with others.

- **Share your Notation .not file, which can be viewed, played, or printed by the free Notation Player.**

  Others can download the free **Notation Player** from www.notation.com/DownloadNotationPlayer.php to see and hear your files.

  The free **Notation Player** lets the user view and play your music exactly as you saved it. .

- **Share your song as a MIDI .mid or Karaoke .kar file.**

  The MIDI file format is the most common format supported by **Musician** for sharing your song with others. On most Windows systems, the user can double-click the MIDI file name and it will immediately start playing.

  The MIDI file format directly supports only playing, not viewing and printing.

  To export your song as a MIDI file 84, use the File menu's Export as MIDI command, and choose MIDI File as the save-as file type.

- **Share your song as a PDF .pdf file.**

  PDF files are easily shared between computer platforms, making them a great way to share music sheets with friends.

  To export a high resolution copy of your song in PDF format 81, simply use the File / Export...PDF command.

  .
- **Share your song, or parts of it, as an image (.bmp, .jpg, .png, or .gif) file.**

  Image files can be easily inserted into other document types which makes them a great way to share snippets or examples from your work.

To export a high resolution image from your song, simply use the File / Export...Image command.

2.12 Backing Up Your Work with Automatic Backup

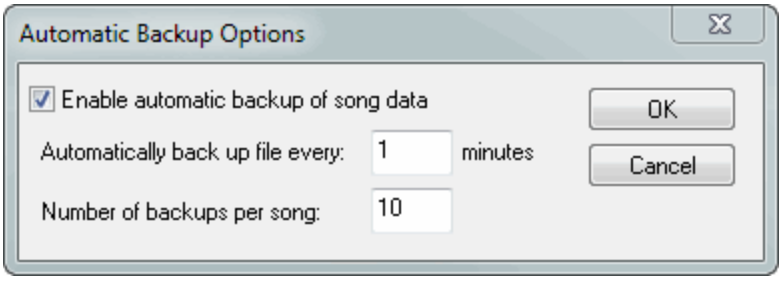
Musician will back up your work on a song file at a periodic interval, such as every 10 minutes. It will do this without any interruption to your editing work. This Automatic Backup feature helps protect you against loss of much work if your computer system fails or even if **Musician** itself fails. If there is such a failure, it is easy to recover a very recent backup of your work, such that you will lose no more than a few minutes of work, depending on the time interval you set.

TIP: Although Musician's Auto-Save feature offers you protection against loss of work, you should not rely on it as the only means of backing up your work. You should still periodically back up your song files to a safe, external backup media, such as CD ROM. In addition, even as you are working in a single Musician session, if it is a long session last, say, 20 or 30 minutes or longer, you should also manually back up your work, using some file naming convention such as MySongBk1.not, MySongBk2.not, etc. This is a good habit for any type of work you do stored in a file by a software program. It offers you not only additional protection against failure of your computer system, or failure of the software program, but also protection against yourself-- that is, in case you make a mistake deleting a large portion of a song that you would later regret.

To set up Musician to periodically back up your song file as you edit it:

1. In the File menu, choose the Automatic Backup Options command.

   Musician will display the following dialog box:



2. Set a check mark for "Enable auto-save".
3. Specify the frequency at which you wish the automatic backups to be done. Ten minutes is a good compromise between (1) minimizing how much work you might lose in the event of a computer or software failure and (2) not over-burdening your computer with too much background work backing up your song files.
4. Specify how many backups per song file will be done before recycling the files.

   If you song is named MySong.not, then the backup files will be named MySong-1.not, MySong-2.not, etc., up to the number of backups per song that you specify. These files are saved in the C:\Users\Public\Documents\Notation_4\Musician_4\Recover directory. If you have a lot of disk space, you might want to specify a larger number than the default 5 for the number of backups per song file.

To recover an Automatic Backup file:

1. In the File menu, choose the "Open files from automatic backup" command.

   Musician will display a File Open dialog box listing all of the backup files in your \Notation\Musician\Recover directory.

2. In the File Open dialog box, find the files that have the same name as the file you want to recover, differing only with the suffix "-1", "-2", as explained above.

   These backup files are numbered so that the most recent backup file is "-1", and the second is "-2", etc.

3. Select the backup file with the "-1" suffix, such as MySong-1.not.

   Usually, this file will open without any problems. However, if it does not open, perhaps because it was not completely saved at the time of the software failure, then try opening the "-2" file.

4. Review your newly opened backup file carefully. Make sure that it reflects your most recent work.

5. Manually back up the older copy of the song file that you are about to replace with the restored Auto-Save backup file. Do this just in case there is a problem with the Auto-Save backup file that you have not yet discovered.

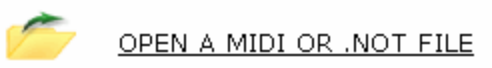
6. Save the Auto-Save backup file using the name and directory location of your older file. Save it in a location where you will remember that you saved your more recently edited and restored backup file.

7. Continue working now with the restored file.

2.13 Opening a Notation .not File

To open a previously saved Notation .not file:

1. If no files are currently opened, then click the folder icon or the text "Open a MIDI or Notation file on My Computer", which is displayed in the main part of **Musician**'s window:

   -- OR --

   Choose the Open command in the File menu.

   -- OR --

   Type CTRL+O, the standard Windows shortcut for File Open.

   Musician will present the File Open dialog box.

2. If the file is not in the default directory, navigate to the directory where it is located.

3. Select the file in the directory.

4. Click the Open button.

2.14 Viewing Multiple Song Files at a Time

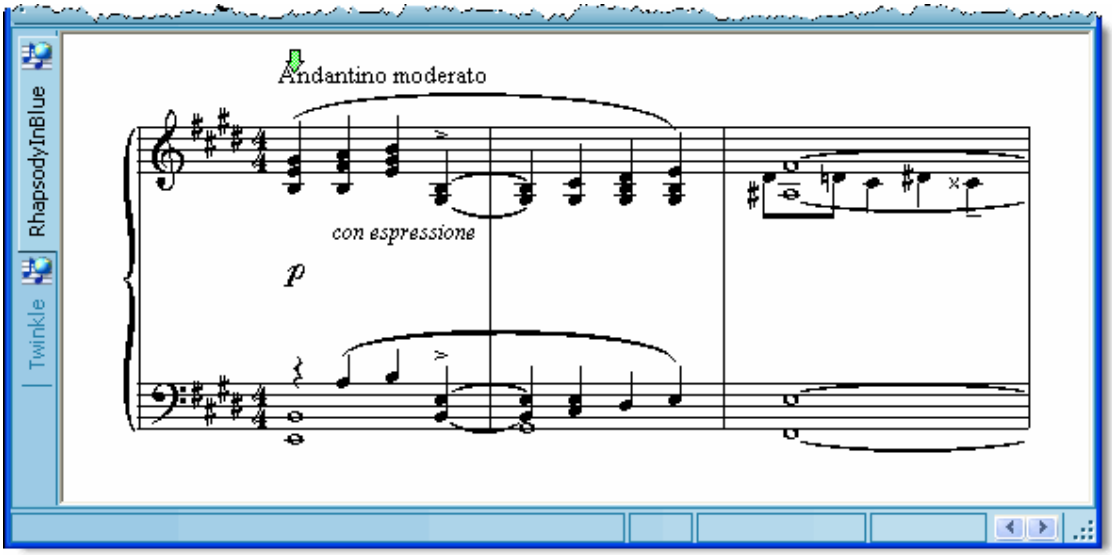
You can open multiple songs in **Musician** and view them in separate sub-windows. Normally, you will see one song at a time. You can quickly switch from one song to another using the Song Tabs. You can also view and work with multiple songs at a time, for example, to compare the notes in two songs, or to copy portions of one song to another.

To open a second song in Musician:

- Open the file as usual, using the Open command in the File menu, or download and open a MIDI file from the Internet 70.

To switch from one opened song to another:

- If the Song Tabs are not already visible, turn on the check mark for Song Tabs in the View menu. Then click the tab for the song you wish to view.



-- OR --

- Type CTRL+F6 or SHIFT+CTRL+F6 to cycle forward or backward through the list of songs currently opened. This strange shortcut is a standard one defined by Windows for Next Window and Previous Window.

  -- OR --

- Open the Window menu, and select one of the opened songs listed at the bottom of that menu.

To view multiple opened songs at the same time:

- In the Window menu, choose the **Cascade**, **Tile Horizontally**, or **Tile Vertically** command. These are standard Windows commands for organizing multiple windows within a single application. Try them out to see how they work.

  After you have used one of these commands, you can resize the individual song windows within **Musician**'s overall window by dragging sides or corners of the windows with the mouse.

To maximize, minimize or close these song windows, just use the standard Windows control buttons in the upper right of each open song window.

2.15 Printing the Score

The procedures below describe how to:

- print a single part from a score
- print some range of measures for a single part
- print multiple parts with one command

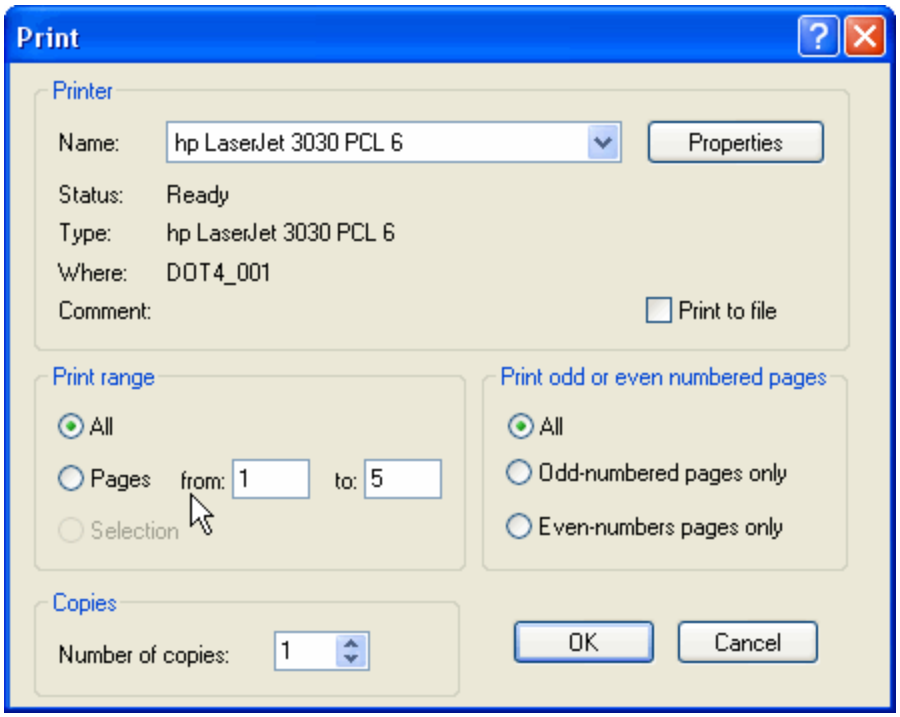
To print a single part from a score:

1. If you are not already viewing the score part you wish to print, use the Select Part 180 command in the Part menu.
2. Choose the Print command in the File menu.

   -- OR --

   Type CTRL+P, the standard Windows shortcut for File Print.

   Musician will present a Print dialog box such as the following:



3. In the Print dialog box, select options:

   -- which printer you want to use, if you have more than one printer

   -- what range of pages should be printed, or all of them

   -- how many copies

   -- for purposes of two-sided printing, whether to print odd-numbered or even-numbered pages only (some printers offer this option)

If you have previously prepared a part for a given paper size (such as 8-1/2x11, Legal, or A4) and orientation (portrait versus landscape), then you should use the same page size when printing the current page. By default, **Musician** will offer the paper properties that you have previously specified for the part. This way, any special formatting you have prepared for the part that is dependent on the paper size and orientation will correctly match the paper for the print job.

To print a range of measures instead of all of the measures in the score:

1. Choose the View Measures command in the Measure menu. The View Measures menu item indicates what range of measures are currently being displayed, such as "View Measures 25 to 49".

   -- OR --

   Type "qvm" for Quick View Measures.

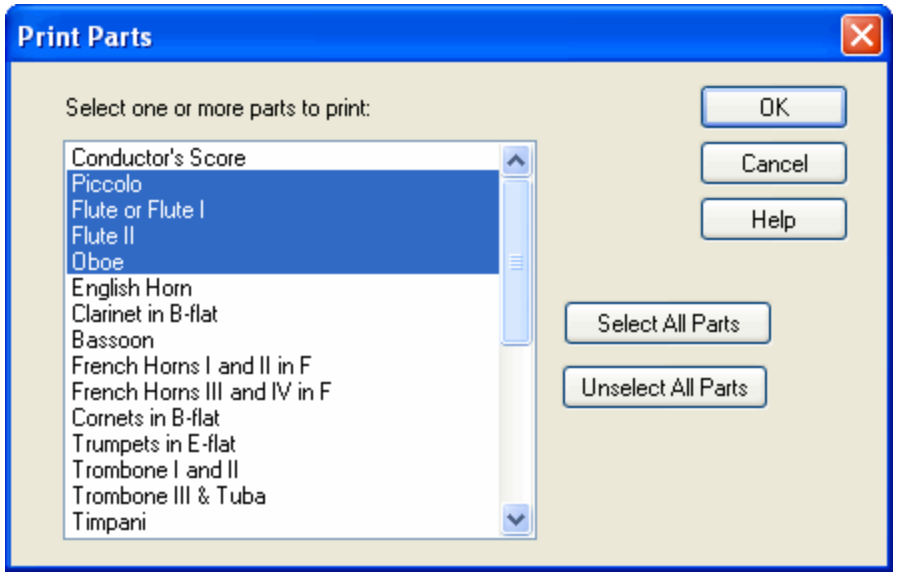
2. **Musician** will present a View Measure Range dialog. In the dialog, specify the starting and ending measures that you wish to display or print. The measure numbers of a score start at 1 (not 0), unless you have specified a different starting measure with the Measure Numbers 255 command in the Score menu.
3. Then print the score 90, using the Print command in the File menu, or by typing CTRL + P.
4. If after printing the score you wish to view the entire score again on the screen, use the View Measures command again to reset the range from the first measure to the last measure of the score.

To print several parts at one time.

1. Choose the Print Parts command in the File menu.

   Musician will display the simple Print Parts dialog box. Initially, all parts of the song will be pre-selected.

2. In the Print Parts dialog box, unselect any parts that you do not wish to print, by clicking the highlighted part name. Selected parts are highlighted, and unselected parts are not, as illustrated below:



3. Hit the OK button.

   Musician will display the Print dialog box.

4. In the Print dialog box, choose options as described earlier in this topic.

   Note that the Print dialog box will not offer you the option to print a range of pages. The Print Parts command supports printing only of the entire range of pages of each part. For the same range of measures, each part can require a

different number of printed pages. To print the parts for only a selected range of measures, use the View Measures command in the Measure menu, as described earlier in this topic.

2.16 Playing the Song

With **Musician** you can play back a song while viewing the score on the screen. **Musician** highlights notes as they are played, and automatically turns pages.

This section describes:

- Playback Location and Staff Markers
- Starting and Stopping Playback
- Fast Forwarding
- Setting Up the Metronome
- Changing the Song Position During Playback
- Setting the Focus on a Staff During Playback
- Anticipating Page Turns
- Playing or Ignoring Repeats and Endings
- Highlighting Active Notes and Lyrics
- Turning Off Stuck Notes
- Viewing and Adjusting the Tempo
- Controlling Overall Volume Level
- Muting and Soloing Staves
- Adjusting the Volume of Selected Staves During Playback 105

In another section, see also:

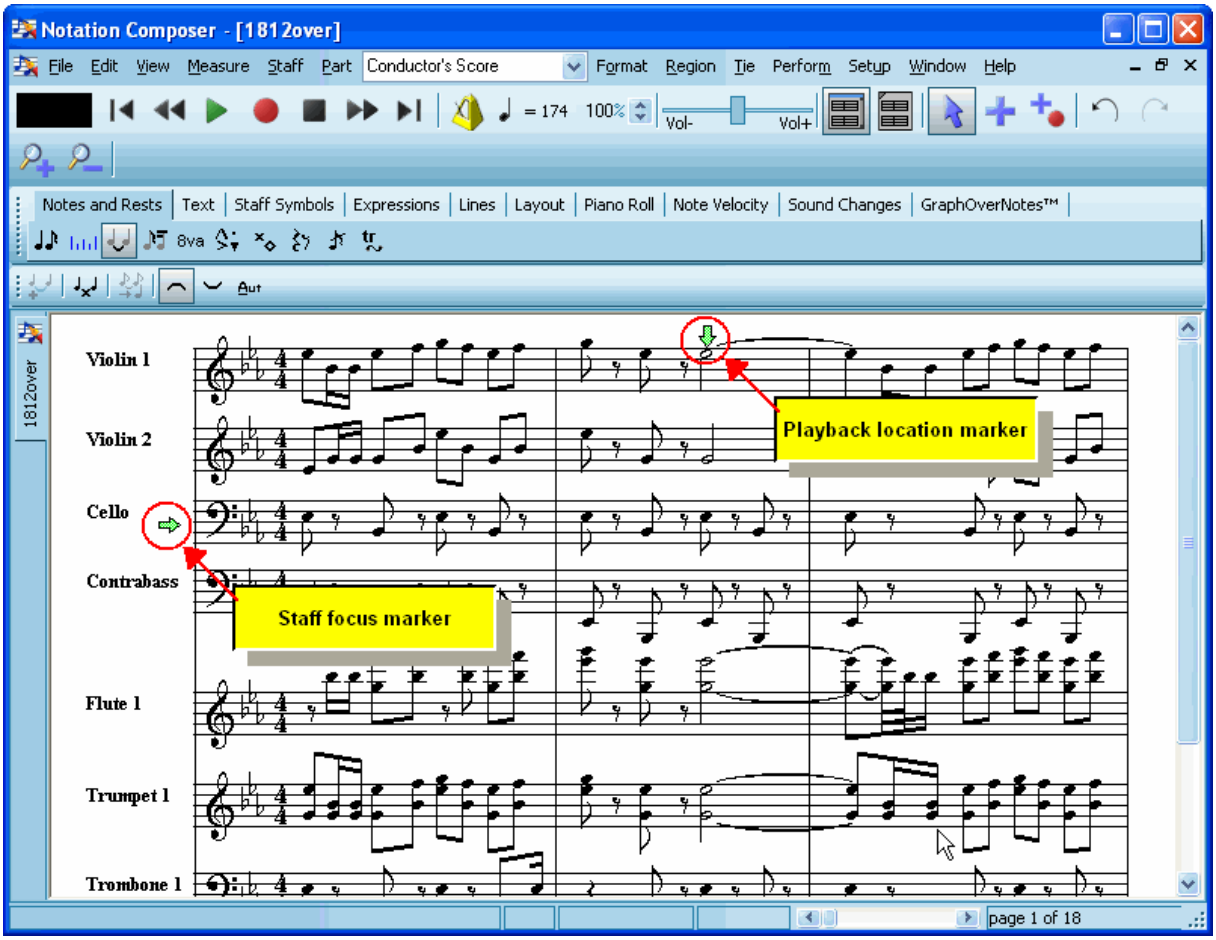
- Changing the Instrument Sound of a Staff 161.Changing
- Using Playlists (Jukebox) 107

2.16.1 Playback Location and Staff Focus Markers

The score window displays two green playback markers.

The playback location marker indicates where playing will begin the next time your start playback. Once you stop playback, the marker will be automatically moved to the location where the playback stopped.

The staff focus marker indicates the staff on which **Musician** will attempt to stay focused during playback. When a staff has the focus, and **Musician** turns a page during playback, **Musician** will attempt to keep that staff in exactly the same vertical position in the window by scrolling the window up or down as necessary. This feature helps you better follow a particular instrument part during playback.



You can temporarily hide the display of these playback markers.

You can set the playback markers either before playback or while playback is in progress.

To change the position of the playback location marker before playback:

- While holding down the 'P' (for "position") key, click anywhere in the score. The horizontal position where you click the mouse will determine the playback location.
- To move the playback location marker to the beginning of the score, choose Rewind from the Perform menu.

  -- OR --

  Type CTRL+HOME.

  -- OR --

  Click the Rewind button.
- To set the playback marker to one beat before the end of the score, choose the Last Page command in the Go To submenu of the View menu.

  -- OR --

  Type CTRL+END.

To change the positions of the staff focus marker before or during playback:

- While holding down the 'V' (for "vertical") key, click somewhere in the score. The vertical position where you click the mouse will determine which staff has the playback focus. If playback is in progress, when **Musician** turns a page, the staff where you click the mouse will maintain the same vertical position in the window.

To change the both positions of the playback location and the playback staff marker during playback:

- Double-click the mouse at the horizontal position where you want the playback to jump to, and at the vertical position where you want the staff focus to be held.

To hide the display of the and playback markers:

- Turn off the check mark for the Show Playback Position command in the View menu.

-- OR --

- Type "qspp" for Quick Show (or Hide) Playback Position.

To turn back on the display of the playback markers, repeat (toggle) the Show Playback Position command.

You can also hide the vertical line that is displayed during playback, or you can change its color. See Highlighting Active Notes and Lyrics 101.

2.16.2 Starting and Stopping Playback

The playback location marker 92 indicates where playback will begin when you hit the SPACE key.

You can also start playback at the beginning of the current list of selected notes and rests, or at the beginning of the current region selection 241, by holding down the SHIFT key when you hit the SPACE key. This feature is quite handy when you have added or edited some notes. You can immediately hear the notes you are working with. If you want to start the playback a few beats before the notes you are working with, then hit the key a few times, before hitting SHIFT+SPACE, to select some previous notes.

To start playback at the playback location marker:

1. Hit the SPACE key.

-- OR --

2. Click the Play button in the toolbar at the top of the window.

-- OR --

3. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first F# above Middle C. See Controlling Musician From Your Keyboard 121.

To start playback at the current selection of noteheads and rests, or the current selection region:

- Type SHIFT+SPACE. That is, while holding down the SHIFT key, hit the SPACE key.

If some noteheads or rests are selected, and a region is also selected, **Musician** starts playback at the first of the noteheads or rests rather than at the start of the region.

▸ **To stop playback:**

1. Hit the SPACE key.

-- OR --

2. Click the Stop  button in the toolbar at the top of the window.

-- OR --

3. Toggle the Play  button in the toolbar at the top of the window.

-- OR --

4. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first F# above Middle C. See Controlling Musician From Your Keyboard 121.

2.16.3 Fast Forwarding

▸ **To temporarily fast forward through the song during playback:**

1. Click the Fast Forward  button once to increase the playback speed five times as fast.

   Click the button a second time to resume the original playback speed.

-- OR --

2. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first Bb above Middle C to fast forward, and play it a second time to end fast forward. See Controlling Musician From Your Keyboard 121.

2.16.4 Using Staff Setup To Change Instruments and Settings

Notation Musician gives you multiple ways to control various aspects of the instruments and their playback settings for each staff (which corresponds to a MIDI "track").

You can use either the Single Staff Setup, or the "big" Staff -> Setup dialog to:

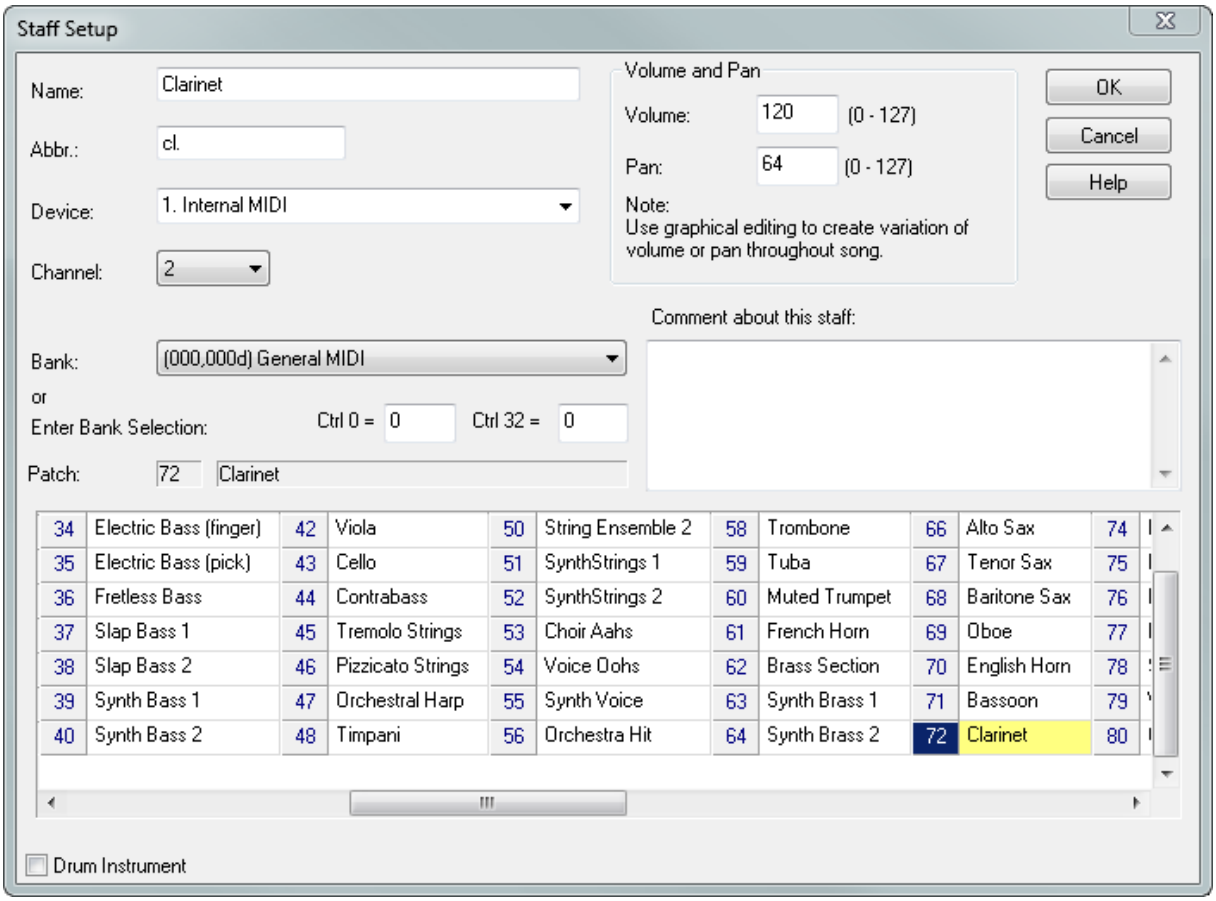
- Edit the instrument name(s) as it appears on the score 159
- Change the instrument sound of a staff or staves 161
- Adjust the Volume level and Pan 169
- Rearrange the order of the staves 176
- Set whether a staff shows normal noteheads or drum notation noteheads 192.

To access the Staff Setup for a single staff

In Window View**,** the Staff Control buttons are visible. Clicking on the Staff Setup button for any staff will bring up the Staff Setup dialog for that staff.



Clicking the Staff Setup button will bring up the dialog for that staff, where you can make changes for just that staff.

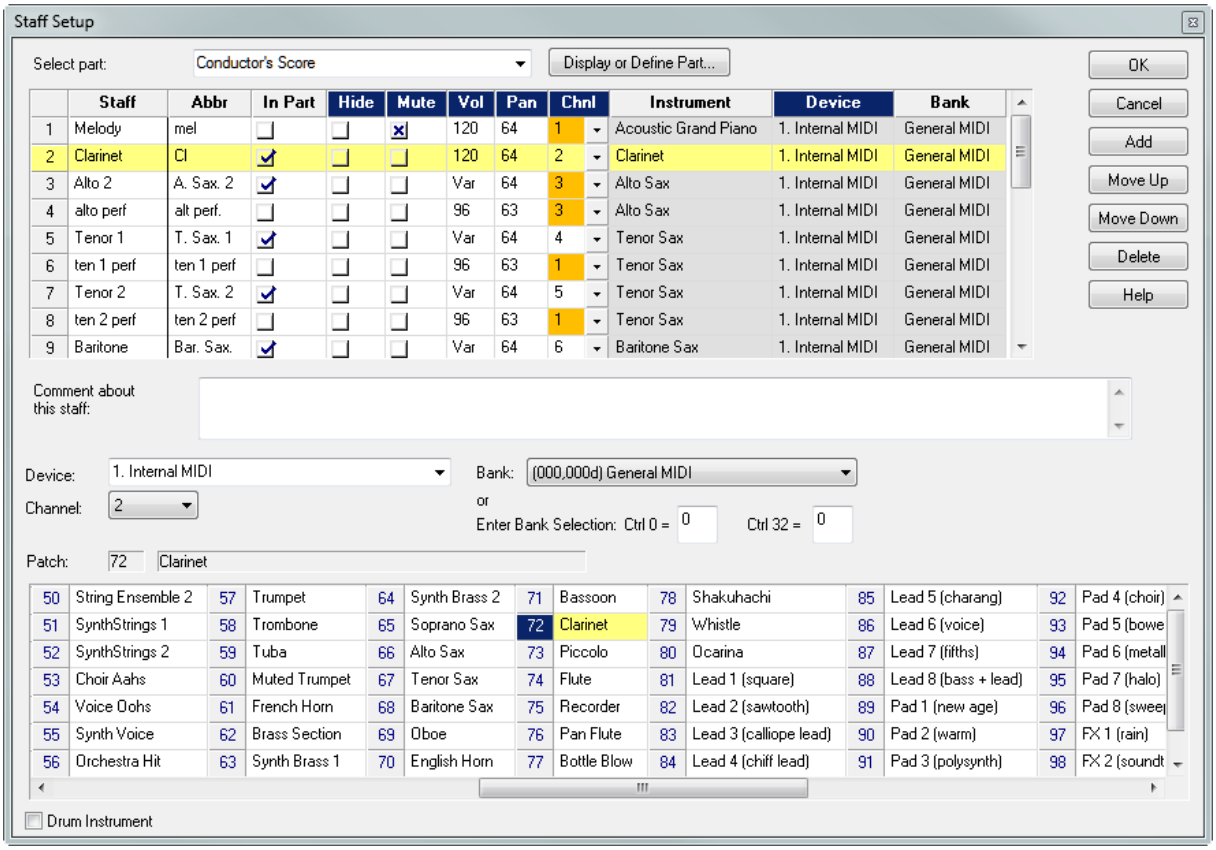


To access the Staff Setup for all the staves of your song

On the menu bar, select "**Staff**", and then select "**Setup**" from the menu list.



You will then be able to edit all the staves of your song in one location.



2.16.5 Setting Up the Metronome

The **Musician** metronome produces a sound at major and minor beats in measures as you play or record music. You can define the specific metronome sounds, typically various types of percussion notes, for the major and minor beats.

When you first record into an empty section of a song, you will almost always want **Musician** to play the metronome, so that you can synchronize your performance with barlines and beats within measures. You can specify how many measures and beats of pickup the **Musician** will play on the metronome before beginning the song that you are recording.

When you play back a song, you might want to turn off the metronome.

The metronome appropriately stays in synchronization with any tempo changes in the song.

To turn off or on the metronome:

- Toggle the metronome  button in the toolbar to the down or up position for on or off.

  -- OR --

- Type CTRL + M.

To specify whether the metronome should be on or off by default:

1. In the Perform menu, choose Metronome Setup command.

-- OR --

While holding down the CTRL key, click the  button in the toolbar.

Musician will display the Metronome Setup dialog box , as illustrated in the next procedure.

2. Set a check mark or not for the two options at the top of the dialog box, for "Metronome is on during playback" and "Metronome is on during recording".

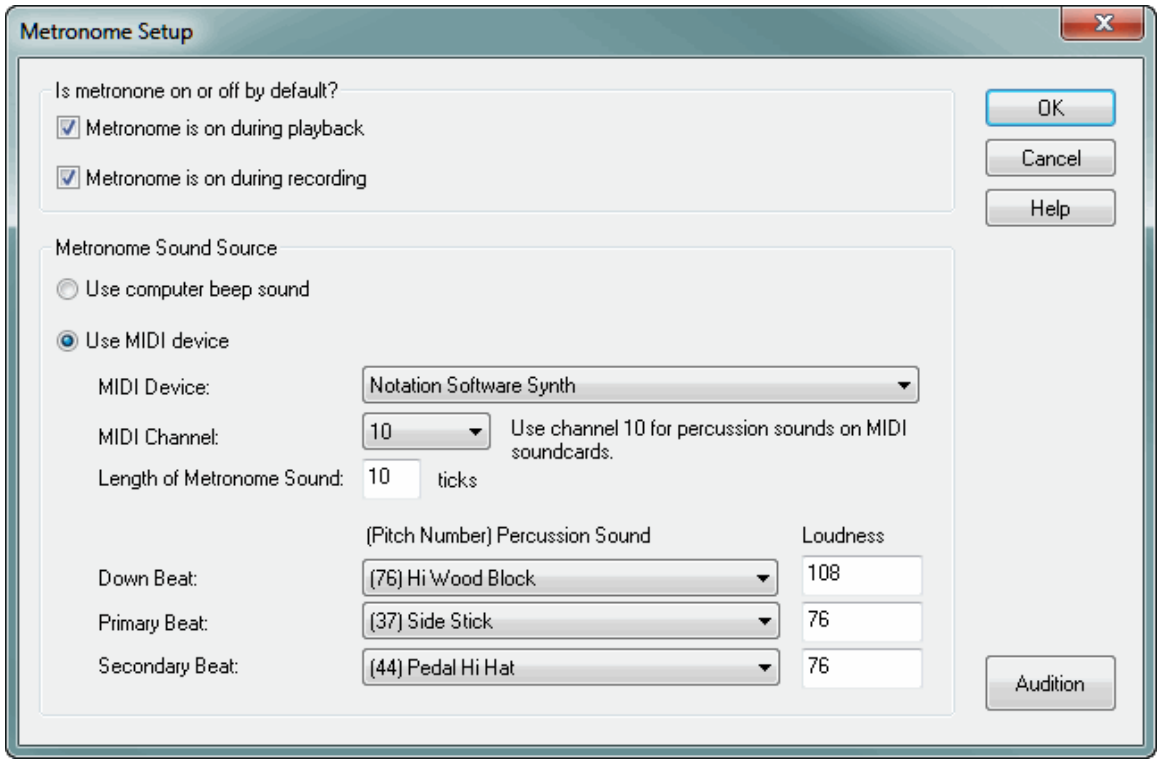
To select the sounds used by the metronome for the major and minor beats:

1. In the Perform menu, choose Metronome Setup command.

   -- OR --

   While holding down the CTRL key, click the  button in the toolbar.

   Musician will display the following Metronome Sound dialog box:



2. If you wish to use your Windows system default beep sound instead of your sound card for metronome sounds, then select "Use computer beep sound". Then click the OK button. No other options apply to the beep sound.

   In general, you should avoid the computer beep sound option unless you have a good reason, because that option gives you very little control over the volume level and type of sound that is used.

3. Choose the Use MIDI Device option for Metronome Sound Source, and choose a MIDI Device that you know will produce sound - the default Notation Software Synth 419 is a good choice. (However, if you are not sure, you can use the Audition option described below.)

4. For almost all playback devices, choose 10 for the MIDI Channel if you want to use percussion sounds for the metronome beats.
5. Enter the Length of Metronome Sound, as measured in ticks. There are 480 ticks in a quarter note. So, 120 ticks is equal to a sixteenth note, which is usually a good length for percussion sounds.
6. For the Down Beat, Primary Beat, and Secondary Beat, select a Percussion Sound and Loudness.

   The down beat is the beat at the beginning of each measure. The primary beat is a major beat within the measure. The second beat is a minor beat between major beats in the measure. For example, in a 4:4 meter, there is a down beat at the beginning of the measure; a primary beat at the middle of the measure; and a secondary beat at the second and fourth quarter note beats of the measure. In a 9:8 meter, there is a down beat at the beginning of the measure; primary beats at the second and third dotted quarter note beats; and secondary beats at each eighth note beat between the dotted quarter note beats.

   For almost all sound cards, if you specify MIDI channel 10, then the percussion sounds will be those indicated in the lists. If you do not specify MIDI channel 10, then the sounds will be actual pitches on some instrument such as a piano--which is probably not what you want. So, be sure to choose MIDI channel 10 unless you have a good reason not to.

   For the loudness value, specify a number between 1 and 127. (This is the MIDI velocity value.)
7. If you want to hear what the metronome beats sound like, hit the Audition button. **Musician** will display and play a score for a 12-note chromatic scale in a 4:4 meter with the metronome playing in the background. **Musician** will automatically close the audition score when the playback has completed. You can also close the audition score by clicking the Audition button a second time.
8. Set a check mark by "Metronome is on during recording". Optionally, set the check mark for "Metronome is on during playback."
9. Click the OK button to save the metronome settings.

2.16.6 Jumping to or Previewing Another Location in the Song During Playback

While the song is playing back, you can immediately jump to another location in the song by clicking the mouse elsewhere on the same page or on another page. This action also causes playback to proceed from the point where you clicked.

Alternatively, during playback you can preview another page in the score without disrupting the current playback. Use the Next Page or Previous Page commands of the Page menu, or hit the PAGEDOWN or PAGEUP keys. Playback will continue uninterrupted, without changing its song position. This feature is intended to offer you the opportunity to look ahead (or behind) in the score, without having to commit to a decision to change where the song is currently playing.

If you then click somewhere on the currently displayed page, playback will immediately jump to that position.

When you click on a page during playback, the staff focus 100 will also change. If you want to change the playback position in the song without changing the staff focus, then hold down the 'P' click when you click the mouse.

If you do not click anywhere after moving to another page,**Musician** will, after a few seconds, return to the page that is currently playing.

2.16.7 Setting the Focus on a Staff During Playback

During playback, **Musician** displays the measure and beat location of the score that is currently playing. If **Musician**'s window is not tall enough to display all of the staves (staves) for the current measure, then **Musician** must decide which staves to display.

You can instruct **Musician** where to vertically scroll the window, according to which staff you want to keep in focus during playback. You may wish to do this while you are studying the role of a particular instrumental part or voice during playback.

You can assign the playback focus to a staff by setting the playback staff focus marker, as described in Playback Location and Staff Focus Markers 92. To set the focus on a staff either before playback starts or during playback, click the mouse anywhere in that staff while holding down the "V" (vertical) key.

If you scroll the window during playback, then the focus will shift to another staff, approximately in the middle of the window. Afterwards, that staff will remain in the same vertical position upon subsequent page turns.

If the Hide Resting Staves 209 option is in effect, then the staff with the playback focus might temporarily drop out during playback, if there is no staff for the instrument. In this case, **Musician** attempts to find a nearby staff to temporarily assume the role of playback focus. As soon as the originally focused staff has notes, its staff will reappear, displayed in the same position as before.

2.16.8 Anticipating Page Turns

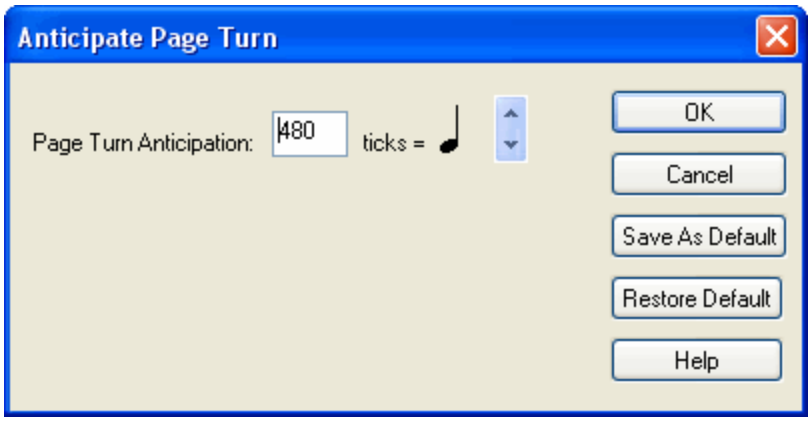
During playback, **Musician** automatically turns page, just as though someone were turning the pages for you as you read the music. If you are singing or playing an instrument while sight-reading music, you usually will want the page to be turned a short time ahead of the first beat on the next page. Even if you are just listening to the score, you may want the pages to turn ahead of time.

Musician lets you specify how many beats ahead of time it will turn pages. You can specify the page turn value for each song.

To choose how many beats ahead of time pages will be turned:

1. Choose the Playback / Page Turns command in the Perform menu.

   Musician will display the following dialog box:



2. Specify the beat value for which page turns will be anticipated, by clicking one or more times on the up or down scroll buttons.

   -- OR --

Enter the page turn anticipation value in ticks. In **Musician**, there are 480 ticks per quarter note.

3. Click the OK button to apply the new page turn anticipation value to the current song.
4. If you wish the newly entered page turn anticipation value to be applied to any subsequently opened MIDI file, or any newly created song, then hit the Save As Default button.

   To recall the most recent page turn anticipation value that you saved with Save As Default, click the Restore Default button.

2.16.9 Playing or Ignoring Repeats and Endings

Musician enables you to add repeat marks 329 and endings 330 in a song. By default **Musician** performs repeats and endings during playback. However, you can instruct **Musician** to ignore these.

To perform or ignore repeats and endings during playback:

- In the Perform menu, toggle the "Ignore Repeats and Endings" option.

2.16.10 Highlighting Active Notes and Lyrics

While **Musician** plays a song, it normally highlights those notes and lyrics that are currently playing, and it displays a vertical line, called the *playback cursor*,. The playback cursor indicates the currently playing beat within some measure. You can choose what colors **Musician** uses to highlight the notes, lyrics, and the playback cursor. You can optionally suppress the highlighting of any of these cues. You can also specify whether, and by how much, lyrics are displayed in advance of the time that they are normally sung.

To change the color used to highlight actively playing notes, lyrics, or the playback cursor:

1. Choose the Playback Highlighting Options command in the View menu.

   Musician will display the following Playback Highlighting Options dialog box:



2. Click the Color example box for Notes, Playback Cursor, or Lyrics.
3. **Musician** will present you with a Color dialog box. Select the color to be used for the active notes, playback cursor, or lyrics. Click OK in the Color dialog box.

The above Playback Highlighting Options window will immediately display the new color you have chosen.

To suppress the highlighting of actively playing notes, lyrics, or the playback cursor:

1. Choose the Playback Highlighting Options command in the View menu.
2. Remove the corresponding check mark in the left portion of the window for Notes, Playback Cursor, or Lyrics.

To specify the lead time for the highlighting of lyrics:

1. In the Lyrics portion of the window, use the  and  buttons to select a note duration for the lead time.

   -- OR --

2. Manually enter a tick value for the lead time. In **Musician**, there are 480 ticks per quarter note.

2.16.11 Turning Off Stuck Notes

Occasionally, you may hear stuck notes that continue sounding indefinitely. This can happen if the connection to your MIDI device is temporarily disrupted, so that it does not signal the "note-off" corresponding to a preceding "note-on".

If you hear stuck notes, you can turn them off, either during playback, or after playback has completed.

To turn off stuck notes:

1. Type SHIFT + CTRL + S.

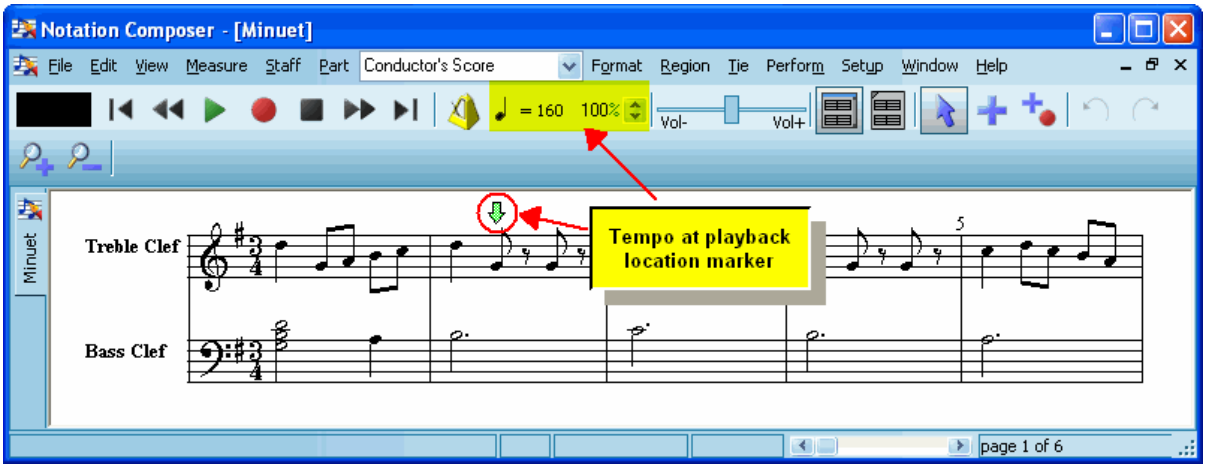
-- OR --

2. Choose the Turn Off Stuck Notes command from the Perform menu.

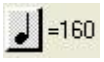
Note that this command not only turns off the stuck notes but also turns off any other notes that happen to be playing.

2.16.12 Viewing and Adjusting the Tempo

The toolbar indicates the tempo at the current playback location marker 92, as shown below:



If you do not see the toolbar in the window, then choose Show Toolbar from the View menu, or type "qstb" for Quick Show Toolbar.

The tempo is indicated in beats per minute. The example  illustrates 160 quarter notes per minute. The note duration used for the tempo beat is determined by the meter, and in some cases also the speed of the tempo, as specified in the following table:

Meter	Tempo Speed	Tempo Beat Value
2:4, 3:4 or 4:4	Any	
2:4 or 4:2	Any	
3:8, 6:8, 9:8, or 12:8	Slow	
3:8, 6:8, 9:8 or 12:8	Medium or Fast	
irregular N:8, such as 5:8	Any	

During playback, the tempo value is constantly updated if the tempo changes throughout the song.

Musician enables you to change the tempo of the song before you start playback, or dynamically during playback. The tempo adjustment is measured as a percentage of the tempo as originally recorded in the song. The displayed tempo reflects the percentage adjustment. For example, if the percentage adjustment in the above example is set at 75%, then the tempo during playback is displayed as:



To change the tempo before or during playback:

1. Click the up or down arrow button next to the percentage value displayed in the toolbar.

-- OR --

2. Type in a number for the tempo percentage.

-- OR --

3. While holding down the 'T' key, press the  or  key to increase or decrease the tempo. Or, type T+ENTER to reset the tempo to 100%.

-- OR --

4. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the second Eb above Middle C to increase the tempo, or the second C# above Middle C to decrease the tempo. See Controlling Musician From Your Keyboard 121.

To save a percentage tempo change to the song:

1. Follow the above procedure for temporarily changing the tempo. Play back some of the song to make sure you are happy with the revised tempo.
2. Choose the Keep Adjusted Tempo command in the Tempo submenu of the Perform menu.

-- OR --

Type "qkte" or "qktm" for "Quick Keep Tempo".

2.16.13 Controlling the Overall Volume Level

If you do not hear any sound during playback, then see What To Do When You Do Not Hear Any Sound 427.

There are several ways that you can control the volume level for playback:

1. Turn the volume level up or down on the speakers connected to your computer.
2. Use **Musician**'s volume control, located in the main toolbar:

   With **Musician**'s volume control, you can dynamically change the volume level of one or more selected instruments during playback.
3. Individually set each staff's volume level 169 before starting playback.
4. Use the Windows volume control for your system. This may vary, depending on your sound configuration and/or sound card.

2.16.14 Muting and Soloing Staves

There are a variety of occasions in which you might want to listen only to certain staves of a song while other staves are muted (silenced). For example, if a song has a melody staff played by some instrument, but you want to sing the melody yourself, then you can mute the melody staff. Or, you might want to study the composition and arrangement of a song and focus on how a particular instrument part is written by "soloing" that instrument part, thus muting all of the other staves.

Musician enables you to play any combination of staves while muting other staves. You can even do this while the song is playing back. There are two places where you can see whether a staff is muted or not. If the staff controls 144 are visible, you can tell that a staff is muted if the top-left button is not pressed down and has a dull light instead of the normal bright green light:

 staff playback is active

 staff is muted

If the staff controls are not visible, then you can set the Mute check mark for the staff in the Staff Setup window, as described later in this topic.

If you save the song as a MIDI file, any muted staff will be restored as an audible staff when you reopen the MIDI file. If you wish the staff to remain muted, you should save the file as a Notation (.not) file 81. If you save a muted staff in a Notation file, you have the option to later open the Notation file and unmute the staff.

To toggle the play/mute status of a staff using the staff control:

1. If the staff controls are not already visible, set the Show Staff Controls 144 option in the View menu. Note that the Show Staves Controls option is not available in Page View 143.
2. In the group of four staff controls, toggle the play/mute button to active  or muted  .

To toggle the play/mute status of a staff using the Staff Setup window:

1. Select the Staff Setup command from the Staff menu. **Musician** will display the Staff Setup window.
2. In the Mute column of the Staff Setup window, set or unset the check mark for the staff.

   -- OR --

   Click the Mute column header to change the status of play/mute for all staves at once.

Another option allows you to mute all staves except one staff that you wish to "solo". The play/mute status of the other staves are only temporarily changed. Once you turn off the solo option for the staff, any staff that was previously playing will continue to play, and any staff that was previously muted will continue to be muted.

To toggle the solo status of a staff:

- Toggle the solo button to a down  or up  position.

You can temporarily solo any number of staves together by setting their respective solo buttons to the down position.

2.16.15 Adjusting the Volume Level of Selected Staves During Playback

During playback you can increase the volume of selected staves relative to other non-selected staves, so that you can focus your listening on these staves. This is a useful aid for studying orchestrations and arrangements.

You can control volume with your mouse and the volume control in the toolbar; or by typing V+  or V+  ; or by playing special notes on your keyboard, using the Pitch-to-Command 121 feature.

The volume control is in the toolbar 129, and looks like this:



Normally, when no staves are selected, the volume control applies uniformly to all of the staves in the score.

When one or more staves are selected, and you move the volume control to the right of center, the selected staves will sound louder, while the non-selected staves will remain at their normal level.

When one or more staves are selected, and you move the volume control to the left of center, then the behavior is probably not initially what you would expect. You might expect the volume level of the selected staves to decrease. Instead, the volume level of the selected staves remains at the normal level, and the volume of the non-selected staves decrease.

When you move the volume slider to the left, why does Musician decrease the volume level of the non-selected staves instead of decreasing the volume level of the select staves?

Consider why it is you would usually want to change the volume level of some staves but not others. It is probably so that you can hear one or a few staves better than all of the others. You want sound of that staff to stand out.

One way you can do this is to select the staff in make it louder. But maybe it is already set at a maximum volume level. Or maybe the overall sound level is already loud enough that you don't want it any louder.

You have an alternative: Select the staves for which you want their sound to stand out, but instead of increasing the volume level of those staves, instead you can decrease the volume level of the non-selected staves. Do this by moving the volume slider to the left. Try it out so your ears can learn how this works. Your ears might be grateful that the overall sound level is decreasing rather than increasing!

If you are familiar with the distinction between MIDI staff volume control events and individual MIDI note-on velocities, then you might find it useful to know how **Musician**'s volume control is implemented. The volume control affects both individual MIDI note velocities and the overall MIDI staff volume (via controller event 7). The reason for this design is that some sound cards do not implement staff volume controller events well or at all. **Musician**'s design, which relies on both MIDI note-on velocity adjustments and staff volume controller events, produces more reliable volume control across a wider variety of sound cards.

If you find that the overall volume level is too soft, then you might find it preferable to increase the volume level of your computer speakers, or use the Windows volume control 104, rather than to use **Musician**'s 

control. Some of the expressiveness of volume changes in the song, as well as some instrument panning, will be lost the more you increase **Musician**'s volume level.

To change the volume of selected staves relative to other staves:

1. Select one or more staves as follows: Choose Show Staff Controls from the View command. Click the staff selection button to select a staff. While holding down the SHIFT key, click the staff selection button  to extend the range of staves.

2. Increase (or decrease) the volume of the selected staves, using one of these methods:

   (a) Drag the volume control button 

to the right (or left).

   -- OR --

   (b) Type V+  (or V+ ).

   -- OR --

   (c) If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first Eb above Middle C to increase the volume, or the C# to decrease the volume. See Controlling Musician From Your Music Keyboard 121.

To reset the volume level back to normal:

1. Type V+ENTER.

-- OR --

2. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first D above Middle C. See Controlling Musician From Your Keyboard 121.

2.17 Using Playlists (Jukebox)

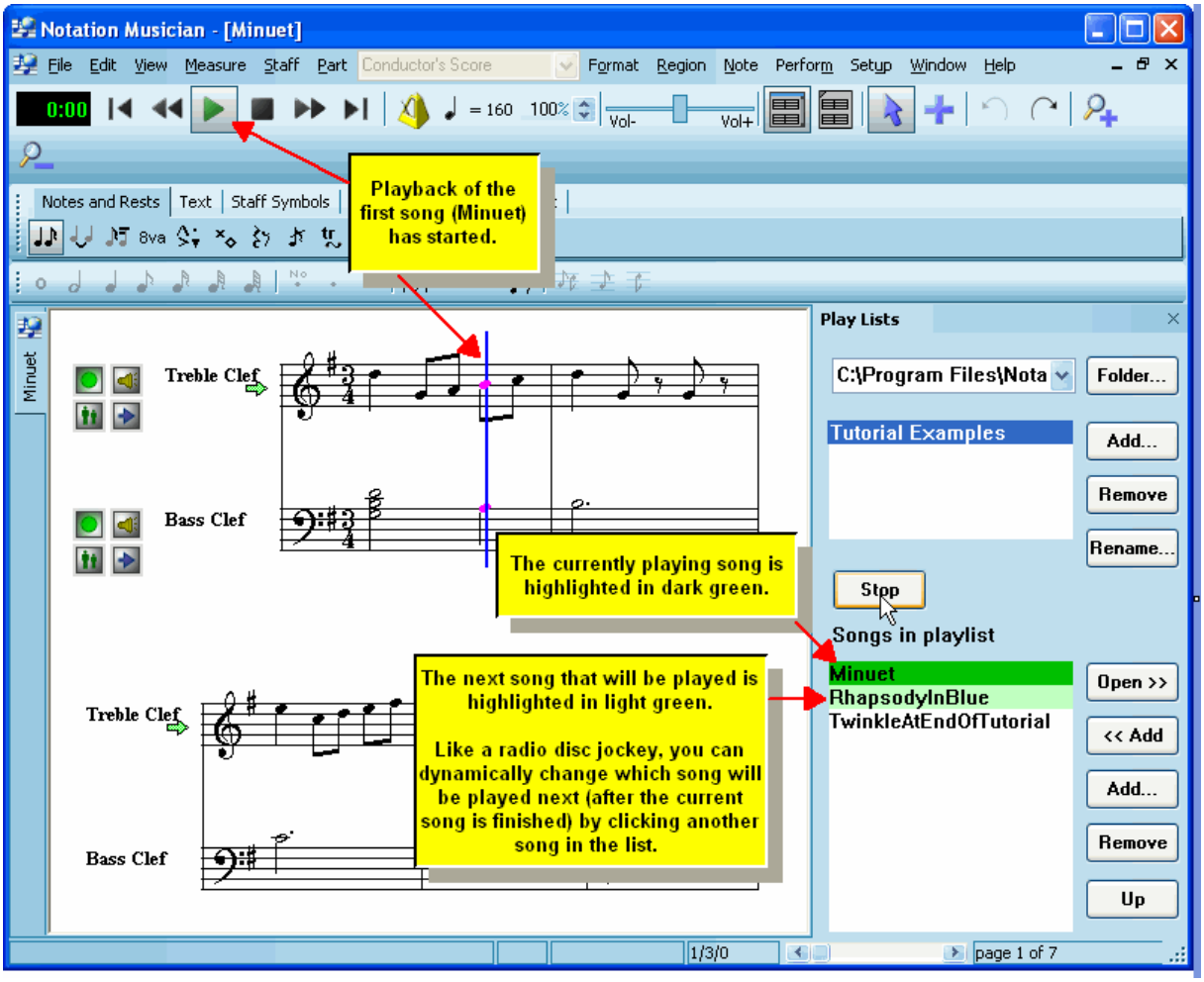
Sometimes you may want to keep an ordered list of songs in a collection, where the playback of each song continues after the previous song. Such a collection of songs is called a *playlist* in **Musician**.

The most obvious use of a playlist is for listening enjoyment, to listen to several songs-- perhaps ones you have arranged yourself-- in sequence.

Another use of a playlist is to play different parts of a larger musical piece, where each part is kept in a separate Notation .not file. These might be movements of a sonata or orchestral piece. Or, they might be numbers of a simple suite of children's music.

The Playlist feature is also very helpful for organizing your practice or performance sessions. You can keep groups of songs together in separate playlists to quickly access them for your sessions. **Musician** keeps the last saved version of the songs as the one in the playlist, so you will have instant access to the last settings for each song in your playlist. You can use **Musician**'s Pitch-to-Command feature 121 to control playback from your MIDI instrument, and avoid having to use your computer mouse or touch-screen to control the playback of the songs in your Playlist.

The following screen shot shows the first song ("Minuet") in the playlist playing. The next song ("RhapsodyInBlue") will play immediately after the first song completes.



The topics that follow describe:

- How to organize songs in a playlist 108.
- How to play songs in a playlist 110.
- How to move playlists 112.

2.17.1 Organizing Songs in a Playlist

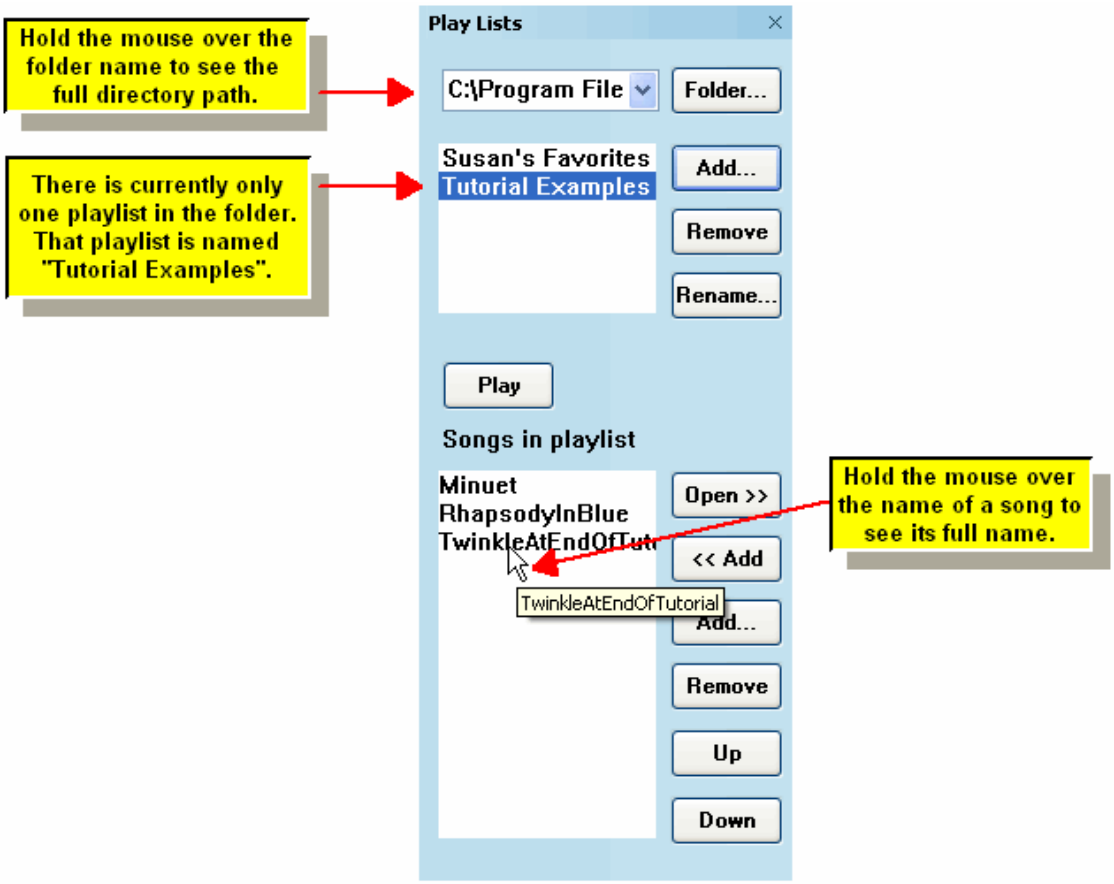
A *playlist* is a collection of Notation .not, MIDI .mid, and/or Karaoke .kar files, which will automatically play one after another. Ideally, these should be Notation .not files, because then they do not need to be re-transcribed each time they are opened and played.

You will probably want to have multiple playlists. Each playlist might have a group of songs that you like to listen to together. Or, a playlist might have parts of one larger piece of music, such as multiple sections of an instrumental or vocal suite, or multiple movements of a classical style composition.

To view a playlist:

1. If the Playlist Panel is not already showing, set a check mark by Show Playlists in the View menu.

   Musician will display the Playlist Panel, which looks like this:



2. If the playlist you want to see is in a different directory (folder) than the current one listed at the top of the Playlist Panel, then click the Folder... button, and choose another directory. The default directory for playlists is C:\Users\Public\Documents\Notation_4\Songs. You will probably find that there is no need to keep playlists in any other directory than this default directory,

unless you intend to move playlists 112 and their song files to other directory locations or to another computer.

3. In the upper panel, click the mouse on the name of the playlist you wish to view.

   In the lower portion of the Playlist Panel, the songs belonging to that playlist will be displayed, as illustrated above.

To create a new playlist:

1. If you want to add the new playlist to a different directory (folder) than one one currently listed at the top of the Playlist Panel, then click the Folder... button, and choose another directory.
2. Click the Add... button in the upper half of the Playlist Panel, not the same-named button in the lower half.

   Musician will display a small Add Playlist dialog box.
3. In the Add Playlist dialog box, enter the name of the new playlist, such as "Susan's Favorites".

   Musician add the new playlist to the list of playlist names at the top of the Playlist Panel. The list of songs in the lower half of the Playlist Panel will initially be empty for this new playlist.
4. Add songs to the new playlist as described in the next procedure.

To add songs to a playlist:

1. Click the Add... button in the lower half of the Playlist Panel.

   Musician will display a File Open dialog box.
2. In the File Open dialog box, navigate to the directory where the song files are located.
3. Choose one or more files listed in the File Open dialog box. You can select multiple adjacent songs in the File Open dialog box by selecting the first one, and then while holding down the SHIFT key, click the mouse on the last song. You can also select multiple non-adjacent files by holding down the CTRL key as you click the mouse on each file name.

-- OR --

Instead of the above three steps:

- If you have already opened the song and are currently viewing it, click the << Add button.

To change the order of songs in a playlist:

1. Click the mouse on the name of the song in the lower half of the Playlist Panel.

   The selected song will be highlighted with a blue background.
2. Hit the Up or Down button to move the song up or down in the playlist.

To remove a song from a playlist:

1. Click the mouse on the name of the song in the lower half of the Playlist Panel.
2. Hit the 

button.

2.17.2 Playing Songs in a Playlist

After you select a playlist 108 in the Playlist Panel, you can:

- Start playback at any song.
- Automatically play each of the songs in their order in the playlist.
- Loop through the songs in the playlist multiple times.
- Dynamically queue a different song to be played next after the completion of the currently playing song, as a disc jockey might do so.

To start playback in a playlist:

1. Click the mouse on the song you want to play first.

   That song will be highlighted with a dark blue background to indicated that it has been selected.

   If you want to start playback with the first song, and no song has been previously selected, then you can skip this step: the first song will automatically be selected.

2. Click the 

button.

   The song you selected will start playing. You will see the notes highlighted as they play, just as in normal playback. The currently playing song will be highlighted with a dark green background in the Playlist Panel. The next song to be played will be highlighted with a light green background.



To stop playback:

- Click the Stop button in the Playlist Panel.

-- OR --

- Use any other method you normally use to stop playback of a single song, such as by hitting the SPACE key, or by clicking the Stop button in the toolbar, or toggling off the Playback button in the toolbar.

To play the songs one after another in their order in the playlist:

- Turn on the "Auto Play Next Song" check mark at the bottom of the Playlist Panel.
- To play all of the songs as an endless loop, restarting with the first after completing the last song in the playlist, turn on the "Loop Songs in Playlist" check mark.

You can toggle either of the above options during playback as well as before playback.

▸ To dynamically queue a different song to be played next after the completion of the currently playing song:

- While the current song is playing, simply click the next song in the playlist that you wish to play next.

  This will not interrupt the playback of the current song. The song that you selected to play next will be highighted with a light green background. After it plays, the playback will continue with the next song after it.

▸ To control the above features with your MIDI instrument, please see the details for the Pitch-to-Command feature 121.

2.17.3 Moving Playlists

This is an advanced topic.

By default, playlists will reside in your C:\Users\Public\Documents\Notation_4\Songs directory. The playlist is actually just a simple text file with the list of songs in it. The playlist has a .ply file name extension. If a song in the playlist belongs to the same directory as the playlist .ply file itself, then just the name of the song is listed. Otherwise, the full path name of the song is listed in the .ply file.

If you intend to move a playlist and its song files to another directory, perhaps on another computer, then it is a very good idea to keep all of the songs in the same directory as the playlist. That way, when the playlist .ply file is moved to the new directory, the song files it refers to will be assumed to be in the same directory, which is what you'll want.

You can optionally archive a playlist .ply file, along with the song files that belong to it, in a .zip file or other type of archive file. You might find that to be a handy way to send a list of your songs to another person. Note, the recipient of your song files does not need to own a copy of **Notation Musician** or **Composer**. He or she can view, print, and play your songs using the **free Notation Player** 86.

Why are the song file names in a playlist .ply file missing the file name extension .not, .mid, or .kar?

Suppose you add a MIDI file to a playlist. Later, you might decide to edit the song, and save it as a Notation .not file in the same directory. It would be inconvenient if you had to remove the MIDI file from the playlist and add its corresponding Notation .not file back to the playlist. Instead, the playlist .ply file stores just the name of the song, such as "Minuet", without the file name extension, such as "Minuet.mid". When you resave Minuet.mid as Minuet.not, the playlist .ply file will automatically refer to Minuet.not instead of Minuet.mid. When **Musician** looks for a song file referred to in the playlist, it always looks for the file name with the Notation .not extension first.

2.18 Practicing Music with Accompaniment

Musician provides useful and entertaining features to help you practice music with your voice, your music keyboard, MIDI instrument, or acoustical instrument. **Musician**'s central features are that it displays a score as it plays the notes, highlights notes and lyrics, and automatically turns pages. **Musician** lets you set up a section of

the song that you can practice in a loop with optionally increasing tempo. If you have a MIDI keyboard, then you can control some of **Musician**'s playback features remotely from your music keyboard.

This section describes:

- Playing Along with Your MIDI Instrument
- Setting up Practice Loops
- Starting and Stopping a Practice Session
- Advancing to the Next (or Previous) Rehearsal Mark
- Practicing a Part While Singing or Playing a non-MIDI Instrument
- Practicing a Part Using Your MIDI Keyboard or MIDI Instrument
- Controlling Musician From Your Music Keyboard 121

2.18.1 Playing Along with Your MIDI Instrument

If you have a MIDI keyboard or other MIDI controller such as a MIDI guitar, then you can play along while **Musician** plays the song. **Musician** will route your MIDI performance to a MIDI output device and channel that you specify; and it will use an instrument sound (MIDI patch) that you specify.

This topic describes how you can play along, or "jam", with **Musician**'s playback of a song, if you have a MIDI keyboard or controller. If you are interested in practicing a part in the song, where you perform it rather than **Musician**, then see Practicing a Part Using Your MIDI Keyboard 119.

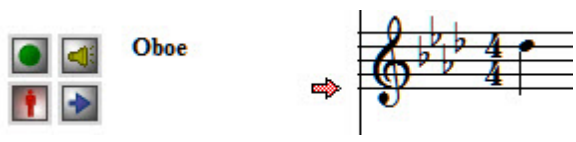
If you want to play along, or jam, using the instrument sound of one of the staves in the song, then there is a quick way for you to select that sound, by double-clicking the solo button, as described in the first procedure below. If you want to play along using an instrument sound that is not associated with any staves in the song, then follow the second procedure below.

You can also set up **Musician** to produce a selected sound as you play at your keyboard, even while **Musician** is not playing any song. Just follow the same instructions below.

To play along with your MIDI instrument, using an instrument sound that is already assigned to one of the song staves:

1. Open the MIDI (.mid) file or **Notation** (.not) file that you want to play along with.
2. Double-click the solo button at the left side of the staff. If the staff controls 144 are not visible, you can make then visible using the Show or Hide Staff Controls command in the View menu.

   When you double-click the solo button, it will turn to red, and a red arrow will be displayed to the left of the staff, as illustrated below.



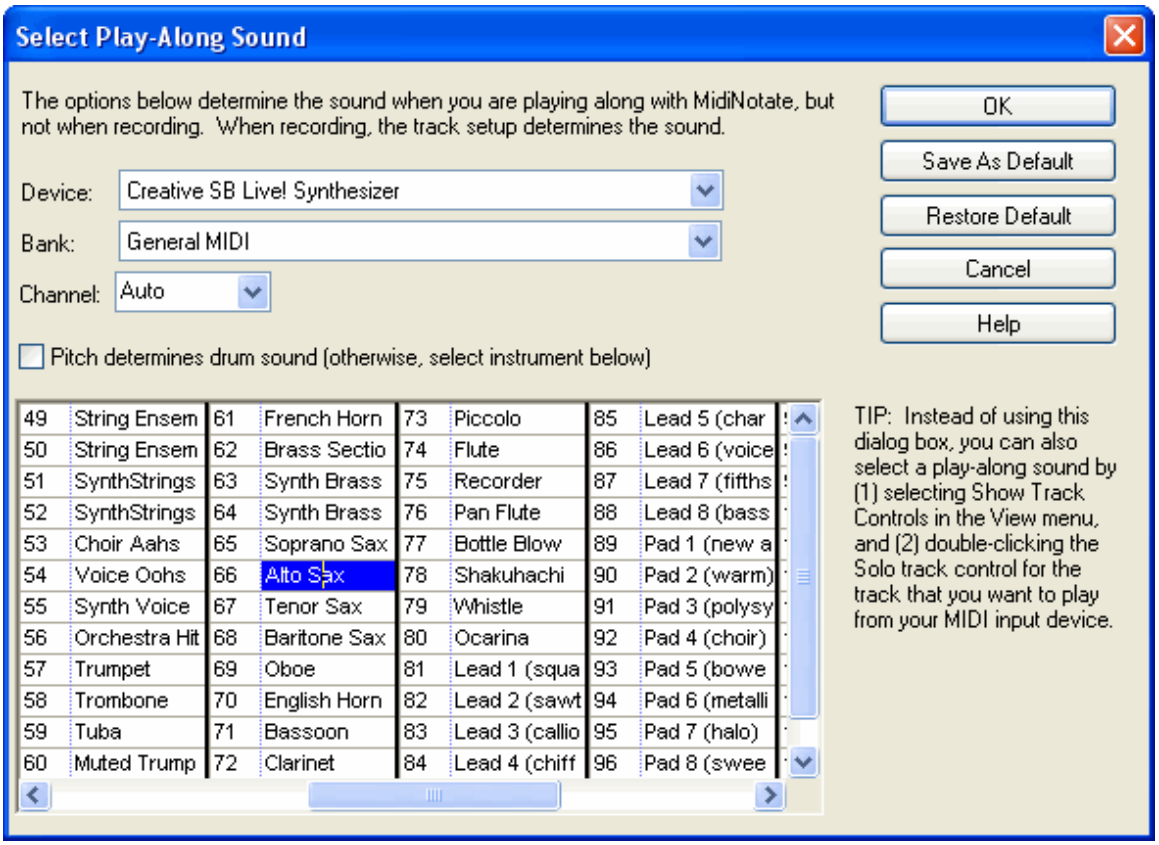
   In addition, the selected staff will be muted, as indicated by the playback button in the up position.

3. If you now play back the song, the staff that you selected will be muted (silenced). If you play along on your music keyboard, the notes you play will be heard using the instrument sound of the selected staff.
4. If you do not want the selected staff to be muted, just click the solo button again, to its up position. The instrument sound for that staff will continue to be used for your play-along performances.

To play along with your MIDI instrument, using any available instrument sound:

1. Open the MIDI (.mid) file or **Notation** (.not) file that you want to play along with.
2. Choose the Select Play-Along Sound command in the Perform menu.

   Musician will display a Select Play-Along Sound dialog box such as the following:



3. Specify the MIDI device and bank that you want to produce the sound for notes that you play on your MIDI keyboard or controller.

   NOTE: Do not choose a MIDI device that has a built-in delay. Otherwise, there will be a frustrating delay between the time you play a note on your MIDI keyboard or controller and the time you hear it played. You can review the delay for a MIDI output device in the Device Properties dialog 477.
4. To play drum sounds instead of note-pitch sounds, check the "Pitch determines drum sound ..." checkbox.

5. To play note-pitch sounds, turn *off* the check mark in the "Pitch determines drum sound ..." checkbox. Choose the instrument sound (MIDI patch) that you want to use.
6. If you want this Play-Along Sound selection to be used by default when you run **Musician** at later times, then click the Save As Default button.
7. Click the OK button when you are done selecting the Play-Along Sound.
8. Start playback of the song 94.
10. Play your MIDI keyboard or controller to accompany **Musician**'s performance of the song. You will hear the instrument sound you have selected for the notes that you play.

2.18.2 Setting up Practice Loops

You can sing or play along with **Musician** as you read the music from the screen. **Musician** highlights the active notes and lyrics and automatically turns pages for you. In addition to adding accompaniment and fun to your singing and playing, **Musician** can also help you practice part of the song with your voice or instrument. You can set up sections in your song to practice in a loop, for a specified number of repeats, with pauses between each repeat, and with an optionally increasing tempo in each repeat.

You can specify a practice loop for a specific range of measures. You can also specify a practice loop between any two rehearsal marks that you add to the score. With rehearsal marks, you can specify starting and ending locations in the middle of measures instead of at barlines. Also, you can define rehearsal marks with names that are easy for you to remember for sections of the song that you want to practice. For more information, see Editing Rehearsal Marks 416.

Musician automatically turns pages for you during a practice session. You can instruct **Musician** to turn the pages ahead of time, so that you can look ahead in your performance. For instructions, see Anticipating Page Turns 100.

▸ To set up the section of the song you wish to practice, and to set up the number of repeats and tempo:

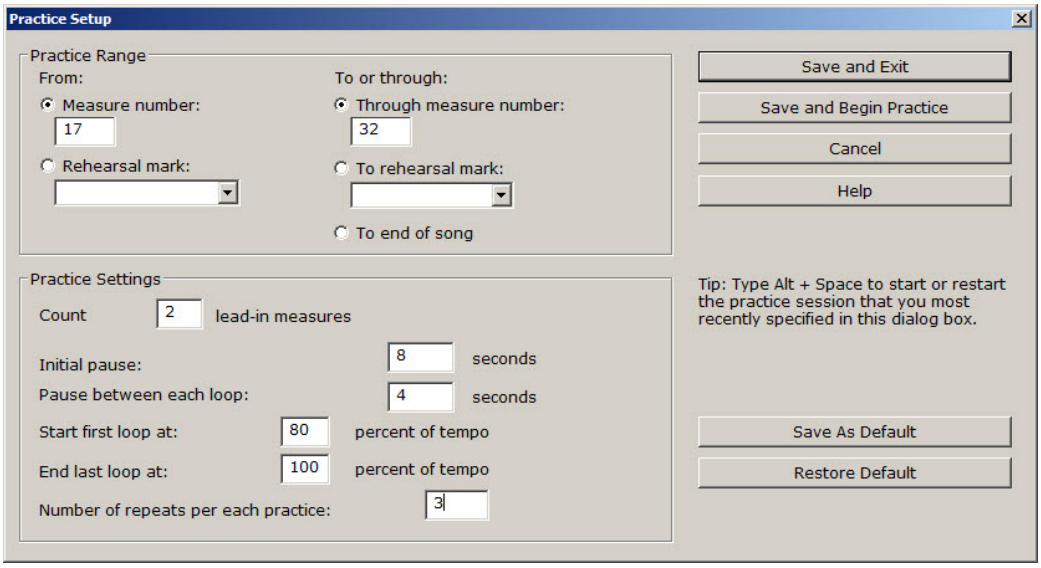
> **TIP:** For a quick way to set up a practice loop without using the Practice Setup dialog box, see the next procedure after this one.

1. Choose the Practice Setup command in the Perform menu.

   -- OR --

   Type "qpra" for Quick Practice.

Musician will display the Practice Setup dialog, such as the following:



2. In the Practice Range section of the dialog, specify the section of the song you wish to practice. You can specify the section of the song with measure numbers or rehearsal marks.

   Musician initially sets the "from" measure to 1 and the "to" measure to the last measure in the score. Or, if you previously have selected a range of measures with CTRL+Drag (holding down the CTRL key while you drag the mouse), then the measures will be pre-selected to the range of measures you have selected.

   The Rehearsal Mark list displays a list of rehearsal marks 416 that you have previously defined. The rehearsal marks are listed in the order in which they are located in the song.

3. In the Practice Settings section of the dialog, seconds you want **Musician** to wait before playing after you click the Start Playback 94 button or hit the SPACE key. This pause will give you time to get your instrument into position for playing, for example, if you are playing a guitar or clarinet. You can also specify how many "lead in" measures you want. This helps you get the tempo established before you start playing.

   Also, specify how many seconds you want **Musician** to wait between each practice loop. This pause will give you a chance to catch your breath between each practice repeat.

4. In the Practice Settings section of the dialog, specify how many times you want the practice section to repeat. Also, if you want the tempo to increase during each repeat, specify the tempo of the first and last repeats in terms of percentage of the song's tempo.

   Musician remembers the tempo setting 102 before you start a practice session. Once the practice session completes, **Musician** resets the tempo to what it was before the practice session.

5. Click the Save As Default button to set the current Practice Settings as the default for any subsequently opened song.

6. Click the Save and Begin Practice button if you wish to begin practicing immediately with the specified settings. Or, click the Save and Exit button to save the settings without starting a playback session.
7. The easiest way to start the practice loop after you have set up the practice section is to type ALT+SPACE. Stop the practice by hitting the SPACE key, or by clicking the Stop  button, or toggling off the  button. More more details, see the next topic, Starting and Stopping a Practice Session 117.

To quickly set up the section of the song and start practice:

1. Use CTRL+Drag to select the range of measures you wish to practice.
2. Start the practice session by typing ALT+SPACE.

   For this practice session, **Musician** will use the practice settings that you most recently entered in the above Practice Setup dialog box.

2.18.3 Starting and Stopping a Practice Session

Use the Practice Setup command 115 in the Perform menu to set up the section of the song you want to practice, to specify the number of repeats of the practice section, and to set the tempo. Or, if you have already used the Practice Setup command to practice another section of the song, and now you just want to practice a new section of the song with the same settings (for number of repeats and tempo), then select the range of measures you wish to practice with CTRL+Drag; that is, hold down the CTRL key while dragging the mouse over the range measures.

Once you have chosen the range of measures to practice, and have specified the options for number of loops and tempo, you can practice the same section of the song as many times as you would like.

To start practicing:

1. After you have filled out the options in the Practice Setup dialog 115, press the Begin Practice button in the dialog.

-- OR --

2. Type ALT+SPACE.

-- OR --

3. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the second F# above Middle C. See Controlling Musician From Your Music Keyboard 121.

To stop practicing:

Stop playback just as you would stop normal playback, as follows.

1. Hit the SPACE key.

-- OR --

2. Click the Stop  button in the toolbar at the top of the window.

-- OR --

3. Toggle the Playback  button in the toolbar at the top of the window.

-- OR --

4. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first F# above Middle C. See Controlling Musician From Your Music Keyboard 121.

2.18.4 Advancing to the Next (or Previous) Rehearsal Mark

If you have added rehearsal marks 416 to the score, then you can practice from one rehearsal mark to the next as many times as you want, and then with a simple command, advance to the next rehearsal mark. Using the practice commands described here, you can practice from one rehearsal mark to the next one in the score.

If you wish to set up a practice loop that crosses over one or more intermediate rehearsal marks, then you can identify the starting and ending rehearsal marks, as described in Setting Up Practice Loops 115.

To advance to the next (or previous) rehearsal mark and start practicing:

1. In the Perform menu, choose the command Set Practice Loop at Next Rehearsal Mark or Set Practice Loop at Previous Rehearsal Mark command.

   -- OR --

   Type "qpnr" or "qppr" for Quick Practice Next Rehearsal Mark or Quick Practice Previous Rehearsal Mark.

   -- OR --

   If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the second Bb above Middle C to advance to the next rehearsal mark, or the second Ab above Middle C to go to the previous rehearsal mark. See Controlling Musician From Your Music Keyboard 121.

2. Choose the Start Practice command in the Perform menu.

   -- OR --

   Type ALT+SPACE.

   -- OR --

   If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the second F# above Middle C. See Controlling Musician From Your Music Keyboard 121.

2.18.5 Practicing a Part While Singing or Playing a non-MIDI Instrument

This topic describes how to use **Musician** to practice a section of a song if you want to practice singing or playing with an acoustical instrument while reading notes from the screen. If you have a MIDI keyboard or other MIDI input device such as a MIDI guitar that you wish to use, then see Practicing a Part Using Your MIDI Keyboard or MIDI Instrument 119.

To practice a section of a song while singing or playing your instrument:

1. Choose the Practice Setup command in the Perform menu to specify the section of the song you wish to practice; the number of times you wish the practice section to repeat; and the optional increase of tempo for each repeat of the practice loop. For detailed instructions, see Setting up Practice Loops 115.
2. You can optionally mute the sound of the part you will be practicing so that your singing or instrument playing will replace the sound of the part played back by **Musician**.

To mute the part, click the play/mute staff control 104 button to change it from  to  . If the staff controls are not visible, turn on the Show Staff Controls 144 option in the View menu, or type "qssc" for "Quick Show Staff Controls".

-- OR --

While holding down the 'S' (staff) key, click somewhere in the staff. **Musician** will display a pop-up menu. Choose the Mute Staff command in the pop-up menu.

3. Choose Start Practice in the Perform menu.

   -- OR --

   Type ALT+SPACE.

Before each practice loop, **Musician** displays (in the status bar) the number of remaining practice loops, and a countdown in seconds to the start of the practice loop, such as the following:



To stop a practice session in progress:

1. Hit the SPACE key.

-- OR --

2. Click the Stop  button in the toolbar at the top of the window.

-- OR --

3. Toggle the Playback  button in the toolbar at the top of the window.

-- OR --

4. If you have enabled **Musician**'s Pitch-to-Command feature, while holding down the "trigger key" on your music keyboard, play the first F# above Middle C. See Controlling Musician From Your Music Keyboard 121.

2.18.6 Practicing a Part Using Your MIDI Keyboard or MIDI Instrument

This topic describes how to use **Musician** to practice a section of a song if you have a MIDI keyboard or other MIDI input device, such as a MIDI guitar. You can play a part "live" through your MIDI keyboard or other input device. **Musician** will produce the instrument sound assigned to the part through your sound card or external MIDI sound module.

If you do not have a MIDI keyboard or MIDI instrument, then see Practicing a Part While Singing or Playing a non-MIDI Instrument 118.

To practice a section of a song using a MIDI keyboard or MIDI instrument:

1. Choose the Practice Setup command in the Perform menu to specify the section of the song you wish to practice, the number of times you wish the practice section to repeat, and the optional increase of tempo for each repeat of the practice loop. For detailed instructions, see Setting up Practice Loops 115.

2. Double-click the solo staff control 144 button to change it from  to  . If the staff controls are not visible, then set the Show Staff Controls 144 option in the
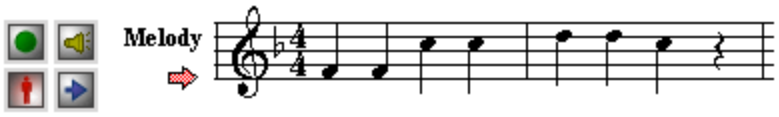
View menu, or type "qssc" for Quick Show Staff Controls. Note that the Show Staff Controls option is not available in Page View 143.

-- OR --

While holding down the 'R' key, click anywhere in the staff for the part you want to practice.

NOTE: If the MIDI device for this staff is one that has a built-in delay, the procedure described here will not work successfully. There will be a frustrating delay between the time you play a note on your MIDI keyboard or controller and the time you hear it played. You can review the delay for a MIDI output device in the Device Properties dialog 477. Instead of using the procedure described here, you should mute the staff 104 for the part you want to practice. Then you should use the "jam along" feature described in Playing Along with Your MIDI Instrument 113. Also, for the "play along sound", you should assign a MIDI device that does not have a delay.

3. **Musician** displays a red arrow to the left of the part you will practice.



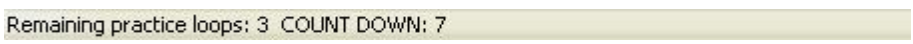
If you are practicing a part with two or more staves, such as the right- and left-hand staves for a keyboard part, then double-click the solo button of each part; or while holding down the 'R' key, click anywhere in each additional staff. For each staff you will be practicing, **Musician** will turn the solo staff color to red and will display a red arrow to the left of the staff, as illustrated above.

4. To unselect a staff, double-click the red solo button, or while holding down the 'R' key, click anywhere in the staff.
5. If the staff controls are visible, you might want to hide them while practicing, so that more of the screen will be used for the score. To do so, toggle the Show Staff Controls option in the View menu.
6. To begin the practice session, choose Start Practice in the Perform menu.

   -- OR --

   Type ALT+SPACE.

Before each practice loop, **Musician** displays (in the status bar) the number of remaining practice loops, and a countdown in seconds to the start of the practice loop, such as the following:



As you play from your MIDI keyboard or other MIDI input device, the notes you play will be routed by **Musician** through the MIDI output device and channel assigned to the part you selected, or the first staff if you selected more than one staff. Also, **Musician** will use the instrument sound (MIDI patch) assigned to that staff. Note that you can change the sound for the staff 161, if desired.

To stop a practice session in progress:

1. Hit the SPACE key.

-- OR --

2. Click the Stop  button in the toolbar at the top of the window.

-- OR --

3. Toggle the Playback  button in the toolbar at the top of the window.

2.18.7 Controlling Notation Musician from Your Music Keyboard

When you are practicing at your music keyboard, you may find it convenient to control **Musician** directly from your music keyboard rather than switching back and forth between it and your computer keyboard or mouse.

Musician's Pitch-to-Command feature associates certain keys (pitches) on your music keyboard to commands that you are most likely to want to use while you are working at your music keyboard:

- Start, Stop, Step forward, or Step backward for songs in a Playlist
- Start and stop playback.
- Rewind.
- Fast forward.
- Increase, decrease, and reset tempo.
- Increase, decrease, and reset volume level.
- Start a practice loop.
- Advance to the next or previous practice loop.

When you play one of the keys on your music keyboard to execute one of the above commands, **Musician** needs some way to determine whether you intend it to be interpreted as a command versus a normally detected pitch. For this purpose, you need to (1) define a "trigger key" and (2) enable the Pitch-to-Command feature.

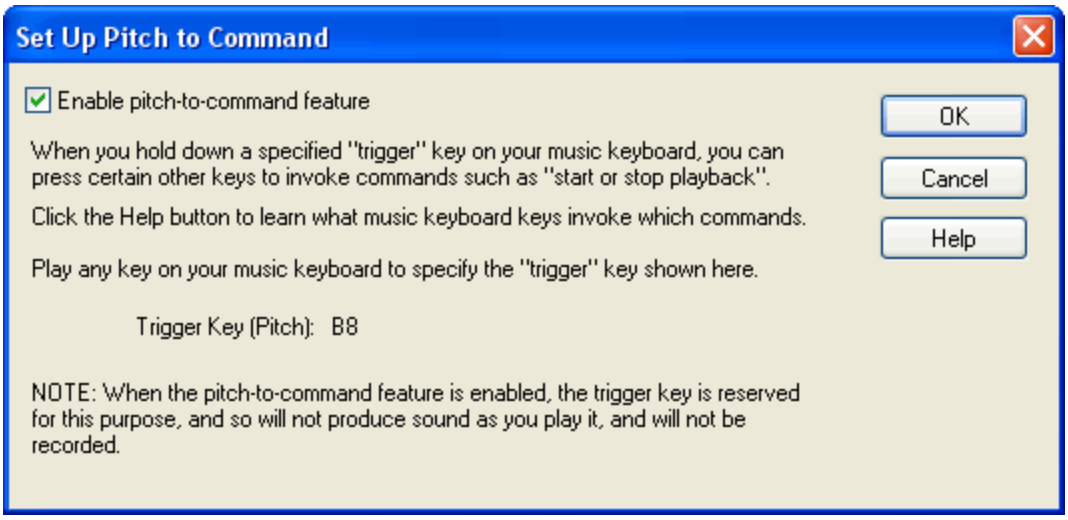
The "trigger key" is a key on your music keyboard that is reserved specifically for the purpose of informing **Musician** that you are "playing a command" rather than "playing a note". We recommend that you define the highest or lowest note on your keyboard as the trigger key, whichever of the two you are least likely to need during normal playing. When you want to "play a command" at your music keyboard, you simultaneously hold down the trigger key and play the particular command key, as described later in this topic.

You can enable or disable the Pitch-to-Command feature. When the Pitch-to-Command feature is enabled, the trigger key will not be available for normal performance or recording. When the Pitch-to-Command feature is enabled, if you play the trigger key, you will hear nothing. Nor will you hear anything when you play any other notes while the trigger key is down. When you do not need the Pitch-to-Command feature, and you need to perform or record the trigger key as a normal pitch, then you should disable the Pitch-to-Command feature.

To identify the trigger key on your music keyboard:

1. Choose the Set Up Pitch-to-Command command in the Setup menu.

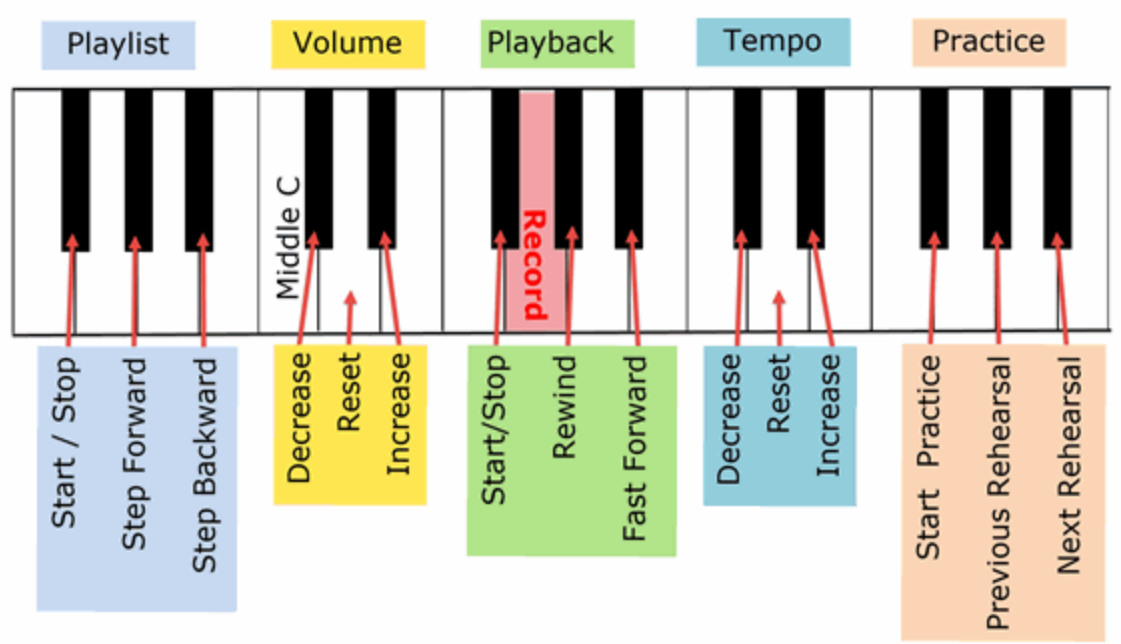
Musician will display the Set Up Pitch to Command dialog box:



2. At your music keyboard, play the key that you wish to serve as trigger key. You will see the pitch letter and octave displayed in the dialog box. If it does not change as you play a key on your music keyboard, then see What To Do if Play-along Does Not Work 431.
3. Set the check mark for Enable Pitch-to-Command Feature.
4. Click OK to commit the settings.

To play a command from your music keyboard:

1. Hold down the trigger key that you specified above.
2. While holding down the trigger key, play one of the keys identified in the music keyboard diagram below:



3. Release the trigger key.

To enable or disable the Pitch-to-Command feature:

- Toggle the check mark for Enable Pitch-to-Command in the Setup menu.

  -- OR --

- Type "qpc" for Quick Pitch-to-Command.

3 Navigating through Musician and the Score

The previous section of this **Musician** documentation describes how you can download from the Internet, open, view, print, and play MIDI files or previously created Notation .not files 63. You can accomplish those tasks without needing to understand details about how **Musician**'s window, menus, toolbar, and palettes are arranged.

After you have gained some experience and enjoyment viewing and playing existing MIDI files, you will likely want to start editing them. To edit music in **Musician**, you will need to understand how **Musician**'s window is basically arranged.

If you like to "learn by doing", then you will probably have success learning how **Musician** works by simply exploring on your own the menus, the toolbar, and the palette. There is little harm you can do by exploring **Musician** this way. If you ever accidentally delete or change part of the score, you can always undo the change. **Musician** offers multiple-level undo 243, that goes back for as many operations as can be held in your computer's memory.

Alternatively, if you like to learn by reading first, then read this introductory section. It provides an overview of all of the parts of **Musician** 's window, and details about how to navigate through a score.

This section is organized as follows:

Parts of the Musician Window 125

- Showing and Hiding Parts of the Window 127
- Menus 127
- Toolbar 129
  - Play Buttons 130
  - Metronome Button 131
  - Tempo and Volume Controls 132
  - Zoom-In and Zoom-Out Buttons 135
  - Mouse Mode Buttons: Add, Select 133
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Where Are All of the Buttons? 133

Palettes 136

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Executing Commands from Your MIDI Keyboard 143

Window View and Page View 143

Staff Control Buttons 144

- Play, Mute, or Solo Staff 145
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View Range of Measures 152
First Page, Next Page, Previous Page, and Last Page 152
Go to a Measure or Page 153
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3.1 Parts of the Musician Window

The following picture identifies the main elements of **Musician**'s window:

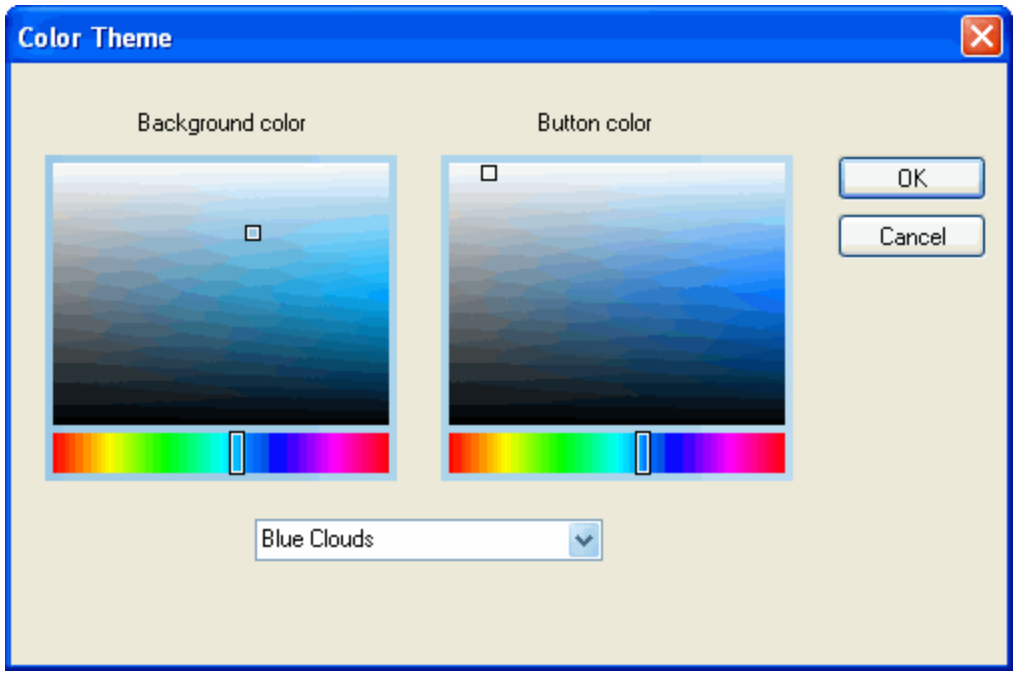
3.1.1 Customizing Colors in Musician

You can easily change the overall color scheme in **Musician**, and also the colors using for highlight the music during playback.

To change the overall color scheme:

1. Choose the Color Theme command in the Setup menu.

   Musician will display the Color Theme window:



2. In the list at the bottom of the window, choose one of the standard color themes pre-defined by **Musician**.

   -- OR --

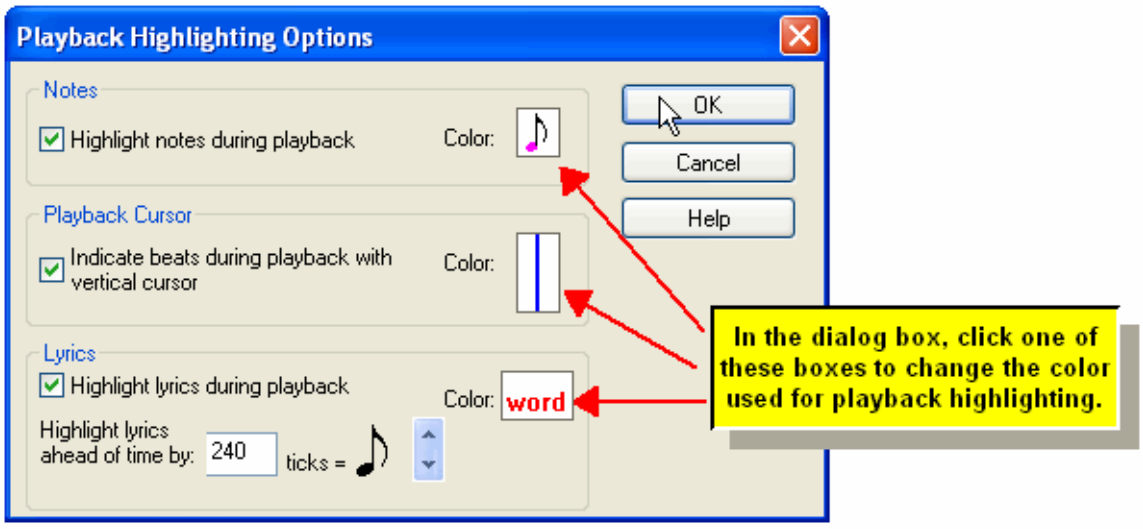
   Change the background color, used for the background of palettes and windows, or the button color (of buttons in palette), by selecting clicking a color "of the rainbow" at the bottom of the color palette, and then selecting a shade of the color in the main portion of the color palette.

   You can immediately preview your color selection by observing Musician's palettes and menus.

3. Click the OK button to save the new color theme, or Cancel to return to the most recent color theme.

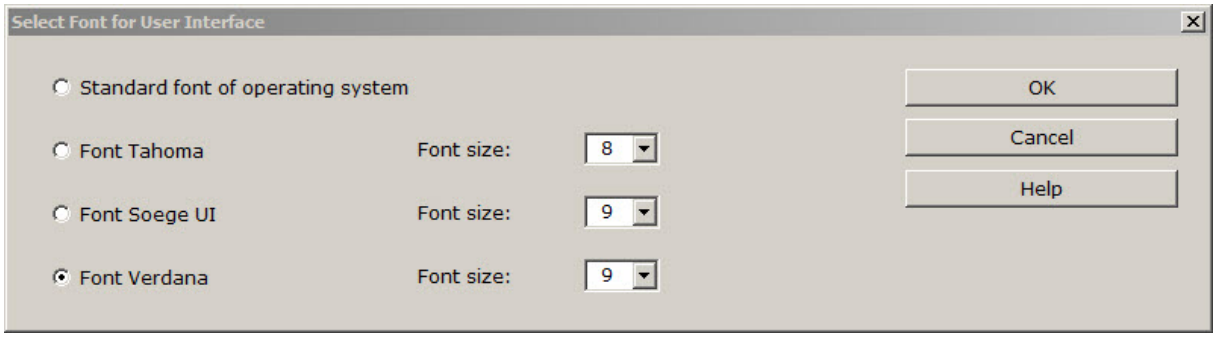
To change the colors used to highlight the score during playback:

1. Choose the Playback Highlighting Options in the Perform menu.
2. In the Playback Highlight Options dialog, choose the colors that are used during playback:



3.1.2 Selecting the Default Font for the User Interface

To select the default font for the user interface, click on Setup -> Select font of User Interface. The following dialog will appear:



You can select the font and then use the corresponding Font size drop list for that font. Font size choices are limited due to various aspects of the interface.
After making your selection, click "Ok". The changes will be implemented on the next start up of **Musician.**

3.1.3 Showing and Hiding Parts of the Musician Window

Musician offers options to show or hide most of the parts of the window described in the previous topic: the toolbar, palette, staff controls, and status bar.

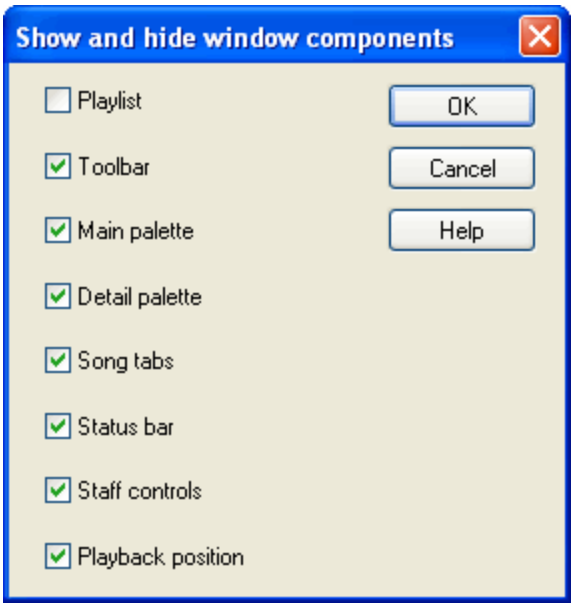
To show or hide parts of the Musician window:

1. In the View menu, choose the Show Multiple Selections command.

   -- OR --

   Type "qsh" for Quick Show Hide.

   Musician will display the following dialog box:



   Add or remove check marks for the types of window components you wish to show or hide.

-- OR --

2. In the View menu, toggle the check mark for, as example, the Show Song Tabs menu item.

3.1.4 Menus (But Not Too Much)

First, here's some advice about how you might use **Musician**'s menus. In general, menus provide a reliable way to find commands that accomplish your music editing goals. However, for many commands you also have the alternative of using toolbar and palette buttons or keyboard shortcuts. For commands that you use often, such as Page View, consider using the Page View button in the toolbar, or the shortcut command characters "qpv" for Quick Page View. **Musician**'s menus show the keyboard shortcuts so that you can easily learn the ones you use often. When you use a menu command, just take a brief look at its corresponding Quick command letters. The next time you may find it more convenient to just type the command letters.

Musician offers a convenient way for you to learn about the purpose and use of any menu command.

To display Help for a menu command:

1. Click the menu, and submenu if needed, that has the command.
2. Hold the mouse over the text of the command name.

3. Without clicking the mouse, hit the F1 key. This will display the on-screen help topic that describes the purpose and use of the selected menu command.

-- OR --

Instead of the above steps, use the Index option in this Help to look up the name of the menu, such as "Staff menu", and then choose the name the comment.

Listed below is a summary of each main menu selection in **Musician**. This summary is intended to help you to better anticipate where a command for a given operation might be found.

- **File**

  Open 64, close, save or download (from the Internet), or print 90 songs.

- **Edit**

  Undo and redo 243 transactions.

- **View**

  Determine how the **Musician** window displays the score and shows or hides window parts 125, such as the palettes and staff controls.

- **Measure**

  Edit measures 246: temporarily view a range of measure 152 rather than all measures of the score; display measure numbers; add barlines 327, repeats 329, and endings 330 .

- **Staff**

  Edit staves 158:delete 158 staves; merge 168 and clone 168 staves; split a staff 171 into two staves for piano right- and left-hand, for drum instruments, and for melody and accompaniment; and transpose notes 284.

- **Part**

  Prepare separate instrumental and vocal parts that are fully integrated with the main score, so that changes you make in the main score are reflected in the parts, and vice versa. Prepare special parts 183 (sing-along 185, fake book lead sheet 186, Easy Notes 186, and piano reduction 190).

- **Region**

  Select a region of the score 241, which is a range of measures or beats in one or more staves. Manipulate the selected region with commands in this menu, as well as with clipboard commands in the Edit menu.

- **Object (renamed according to currently selected type of musical object)**

  In Select Mode, the Object Menu 136 changes according to the type of object selected.

  In Add Mode, the Object Menu provides options for the type of object that will be added when the mouse is clicked somewhere. In Add Mode, you can determine the type of object that will be added by navigating through the palettes with the mouse, or by using palette keyboard commands such as SHIFT+N for the Notes Palette or SHIFT+D for the Dynamic Mark Palette.

TIP: With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode or vice versa to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do,

depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

- **Perform**

  Play 92 and practice 112 portions of a song.

- **Setup**

  Configure **Musician** to work with Windows, and in particular, the MIDI devices under the control of Windows.

- **Window**

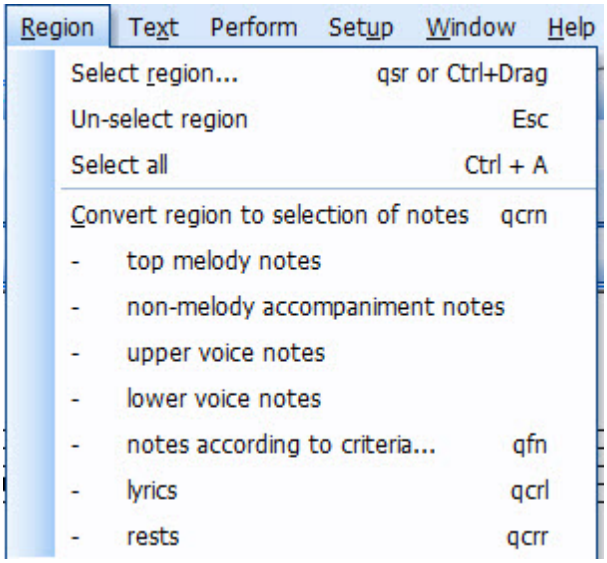
  Within **Musician**'s window, arrange the size and positions of score windows for multiple songs.

- **Help**

  Get help from **Musician**'s online documentation or from Frequently Asked Questions (FAQ) or other resources at Notation Software's web site.

Bring up any menu by using the Windows shortcut "Alt + underlined letter"

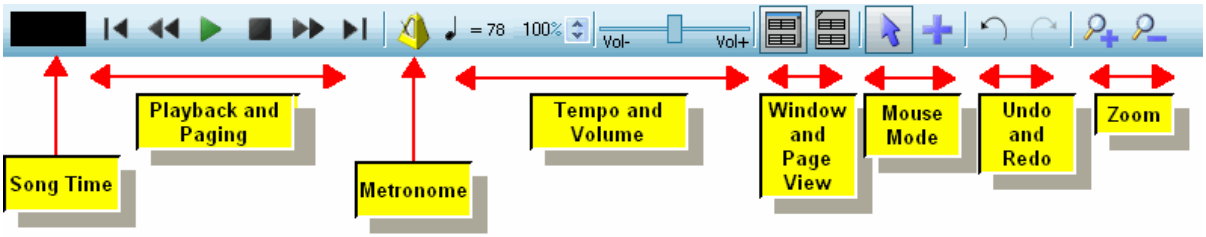
You can bring up the command list for any menu by using the Windows shortcut "Alt + underlined letter". For example, to bring up the command list for "Region" you can use the keyboard combination "Alt + R"



Similarly, you can use "Alt + x" to open the "Text" menu command list. You can do the same for any main menu item that is displayed. Please note that the menu items will vary, depending on the score element or Tab (eg. Notes, Rests; Text, etc.) that is selected at the time.

3.1.5 Toolbar

The toolbar is displayed along the top of **Musician**'s window. The buttons and controls in the toolbar are grouped as indicated:



Each group of buttons and controls are described in the topics that follow:

- Song Time
- Playback and Paging
- Metronome Button
- Tempo and Volume Controls
- Window and Page View Buttons
- Mouse Mode Buttons: Add and SelectAdd, Select, and Step-Time Record
- Zoom-In and Zoom-Out Buttons 135

To show or hide the toolbar:

- Toggle the Show Toolbar check mark in the View menu.

-- OR --

- Type "qstb" for Quick Show Toolbar.

3.1.5.1 Song Time

The song time indicator in the main toolbar 129 shows how far along the playback of a song is, measured in minutes and seconds from the beginning of the song:



The song time indicator reflects elapsed time for repeated sections of the song.

3.1.5.2 Playback and Paging Buttons

The following buttons for controlling playback are located in **Musician**'s toolbar 129:





Start of Song

Go to the start of the song.



Previous Page

Go to the previous page.

 **Start/Stop Playback**

Click this button to start playback at the current location of the Playback Location Marker. The Play button is shown in a down position if playback is in progress. If playback is in progress, click either this button or the Stop  button to stop playback.

 **Stop**

Click this button to stop playback or recording that is in progress. To pause button, use this Stop button, and then resume playback with the Play button.

 **Next Page of Fast Forward**

If playback is in progress, click this button to quickly play through the song at five times normal speed.

 **End of Song**

Go to the end of the song.

3.1.5.3 Metronome Button

To turn off or on the metronome for playback:

- Toggle the metronome  button in the toolbar 129 to the down or up position for on or off.

To specify whether the metronome should be on or off by default:

1. In the Perform menu, choose Metronome Setup command.

   -- OR --

   While holding down the CTRL key, click the metronome  button in the toolbar.

   Musician will display the Metronome Setup dialog box, as illustrated in Setting up the Metronome 97.

2. Turn on or off the check mark for "Metronome is on during playback."

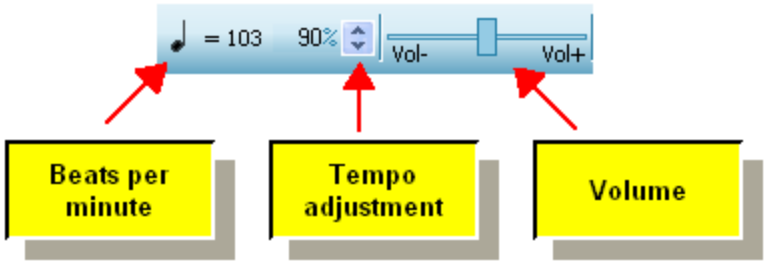
To specify how many measures and beats the metronome should lead in before the start of playback:

- Choose the Pickup Beats command in the Perform menu.

  For more information, see Setting Up Pickup Beats.

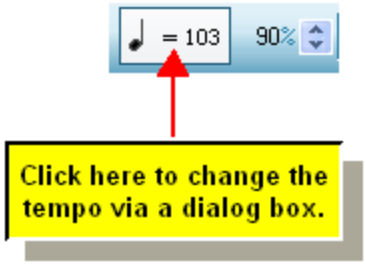
3.1.5.4 Tempo and Volume Controls

The following buttons for tempo and volume level are located in **Musician**'s toolbar 129:



Beats Per Minute

The tempo of the song is displayed in beats per minute. For many meters, the beat is a quarter note. For a 6:8 meter, the beat is indicated as a dotted quarter note if the tempo is fast, or an eighth note is the tempo is slow. You can click either the note duration symbol for the beat, or the tempo value (160 quarter notes per minute in this example), to change the tempo value for the entire song, or for any selected range of the song.



The song may have several tempo changes throughout. During playback, the Beats Per Minute value shows the tempo at the current location. If playback is not in progress, the indicated tempo is that where the playback marker 92 is located.

For details, see Viewing and Adjusting the Tempo 102.

Tempo Adjustment

During playback you can temporarily increase or decrease the tempo as a percentage of the underlying tempo in the song. You can adjust the tempo by clicking up the arrow buttons at the right of the tempo adjustment number. Or, you can type T + Up (or Down) Arrow. Type T + Enter to reset the tempo to normal (100%).

To save a file with the adjusted tempo, click on the **Perform** menu item, and select "**Tempo** / **Keep adjusted tempo**".

For further details, see Viewing and Adjusting the Tempo 102.

Volume Control

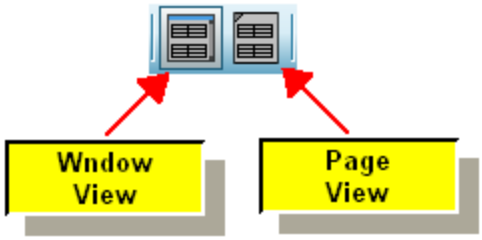
During playback you can adjust the overall volume level of all staves. Also, if one or more staves are currently selected, the volume control changes the volume level of these staves relative to other non-selected staves. This feature is useful for focusing on certain instruments during playback. For details, see Adjusting Volume of Selected Staves During Playback 105.

3.1.5.5 Window and Page View Buttons

In Window View, **Musician** arranges the pages of the score as though the page size were exactly the size of the window. If you change the window size 150, **Musician** will automatically and quickly repaginate the score for the new "page size", which is, in this case, the window size.

In Page View, **Musician** displays an image of the page as it would be printed, which is usually larger than what can be seen all at once in the window. Therefore, in Page View, **Musician** usually displays scrollbars that enable you to scroll horizontally and/or vertically in the page. In Page View you can view the entire printed page by using the Zoom Out 151 command.

You can toggle between Window View and Page View using these two buttons in the toolbar 129:



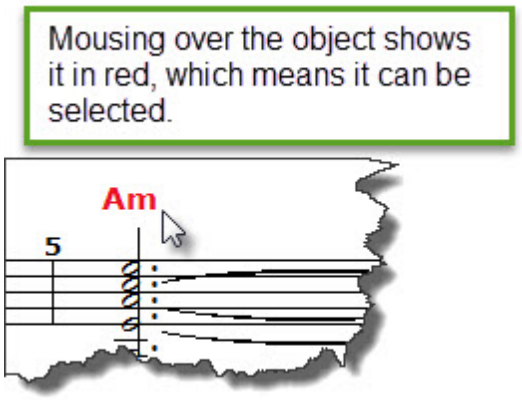
For more information, see the topic on Window View and Page View 143.

3.1.5.6 Mouse Mode Buttons

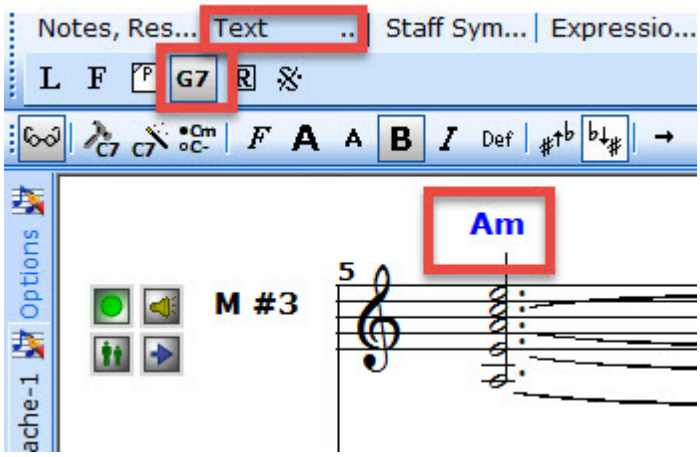
With version 4 and going forward, **Musician** has **SmartMode**, which means that you will not typically have to bother with changing back and forth from "Add" to "Select" mode to do your work.

With **SmartMode**, **Musician** intuitively puts you in the right mode to either add score objects, and allows you to select any other object on the score.
When you click a tab and tool set, SmartMode puts you in the correct mode for working with that type of object.

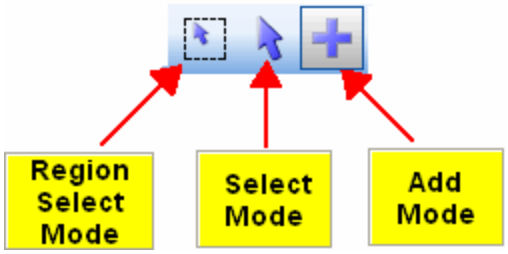
To select a different object, just move the cursor over it - the object will turn red to show it is ready to be selected:



Clicking on the object will then turn it blue, showing that it is ready to be edited. The Palette tools will also switch to the selected object so that you can quickly edit it:



However, if you deliberately want to change the mode you are in, you can choose which mode using these buttons in **Musician**'s toolbar 129:



Region Select Mode -- double-right-click the mouse to get into Region Select Mode, then drag the mouse to select a region 241 for operations such as copy and paste

Select Mode -- mouse-click to select objects for editing. SmartMode means you can select an object even if you're in Add mode.

Add Mode -- mouse-click to add objects. SmartMode means you can select an object even if you're in Add mode.

You can easily switch between Select Mode and Add Mode by (1) right-clicking your mouse or (2) pressing the "Enter" key on your qwerty keyboard.

A quick double-right-click will put you in Region Select Mode.

To switch between Add Mode and Select Mode:

- Click the Select Mode button or Add Mode button in the main toolbar.

-- OR --

- Hit the ENTER key.

-- OR --

- Right-click the mouse anywhere on the score.

In SmartMode (the default) or Select Mode, when you select one (or more) objects of the same type, **Musician** displays a palette that offers options for changing the properties of that object. For example, when you click the mouse on a clef, **Musician** displays the clef palette. You can use this palette to change the clef from, say, a treble to bass clef. For details, see Selecting One or More Objects Before Editing Them 239.

To add objects to the score, you can navigate through palettes to determine the type of object you wish to add. Once you have chosen the type of object you wish to add from a palette, click the mouse where you want to add it. For details, see Adding Objects Using Palettes 238.

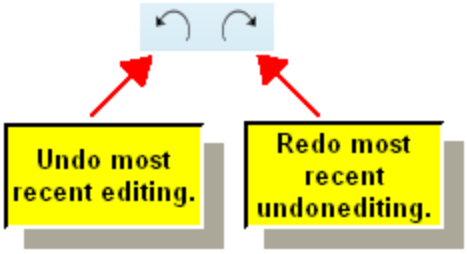
When you are working to add something to the score, the cursor will change to an "Add" style cursor like this  .
Depending on what you want to add to the score, there will be a "dongle" associated with the cursor so you can see immediately what type of element you are adding to the score. The "dongle" will typically be related to the palette button for that tool.

For example, if you are adding Chord Names, the cursor will look like this:



3.1.5.7 Undo and Redo Buttons

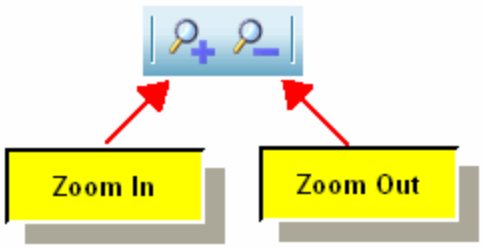
Use the following two buttons on the main toolbar 129 to undo your most recent editing operation, and to redo the most recent editing operation you have undone:



Musician keeps a long list of editing operations in its undo history. You can view the names of the undoable editing operations in the Edit menu. You can also undo or redo several editing operations with one click in the Edit menu. For details, see Undoing Editing Operations 243.

3.1.5.8 Zoom-In and Zoom-Out Buttons

The following buttons in **Musician**'s toolbar 129 let you temporarily enlarge or shrink the size of the score notation viewed on the screen:



Zoom In makes everything look bigger, and Zoom Out makes everything look smaller.

It is important to understand that zooming in and out does *not* affect the size of what is printed. To change the size of what is printed, use the Font Size and Spacing command in the Format menu. For details, see Overall Font Size 199.

3.2 Palettes

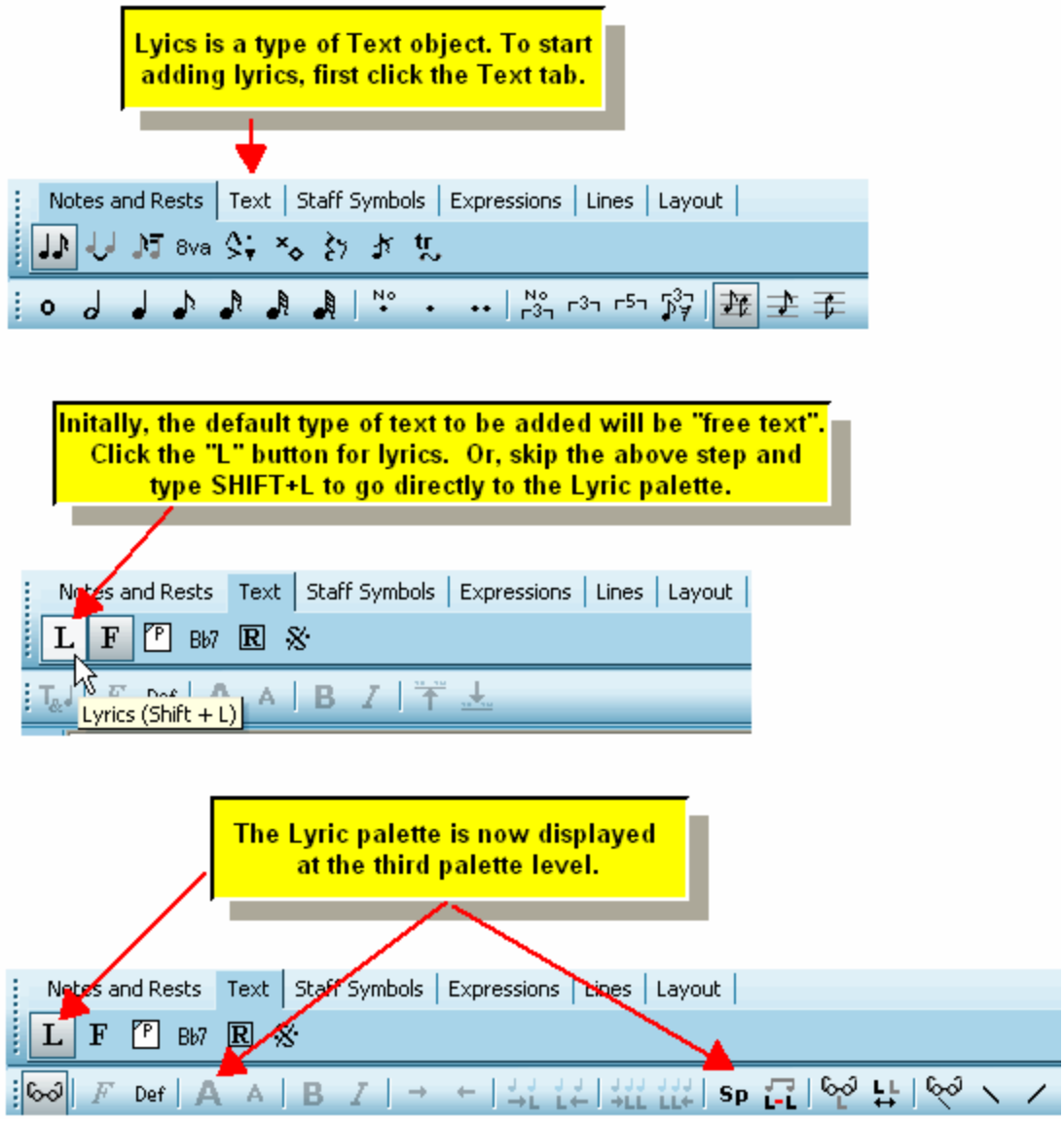
Musician's palette offers a large number of choices for adding and editing music symbols.

The palettes are organized in a 3-level hierarchy. If you wish to *add* a music symbol of a certain type, you "drill down" through the three level to select the type of object you wish to add. When you *select* a music symbol, then **Musician** automatically goes to the palette for the type of object you have selected.

> **TIP**: With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do, depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

Navigating Through Palettes

The following example shows how you would navigate through the three levels of palettes to start adding lyrics:



Using the Palettes to Edit Music Symbols and Text

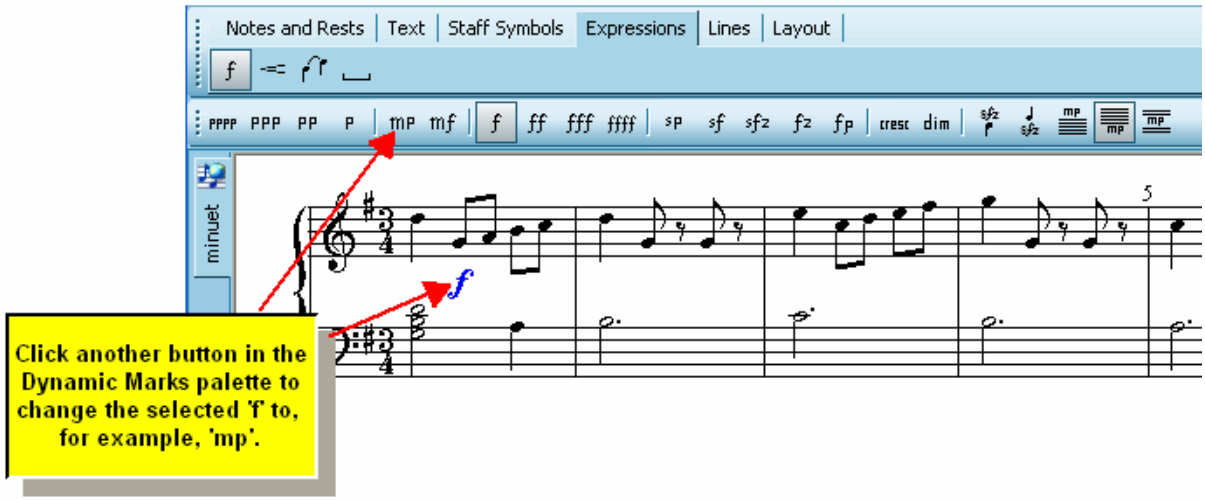
Use the third-level (detail) palette to edit music symbol or text you have selected.

To edit a music symbol or text using the palette:

- Click the music symbol or text to select it.

  The object will be highlighted in blue. Musician will automatically select the third-level (detail) palette for the type of selected object.

- Click one or more buttons in the detail palette to edit the selected object.



Keyboard Shortcuts for Palettes

You can quickly navigate a third level palette with a keyboard shortcut, which is SHIFT+{letter}, such as SHIFT+L for the Lyrics palette.

You can learn the SHIFT+{letter} shortcut for a palette by holding the mouse over the second-level palette button for that third-level palette, as illustrated in the above example for the Lyric palette.

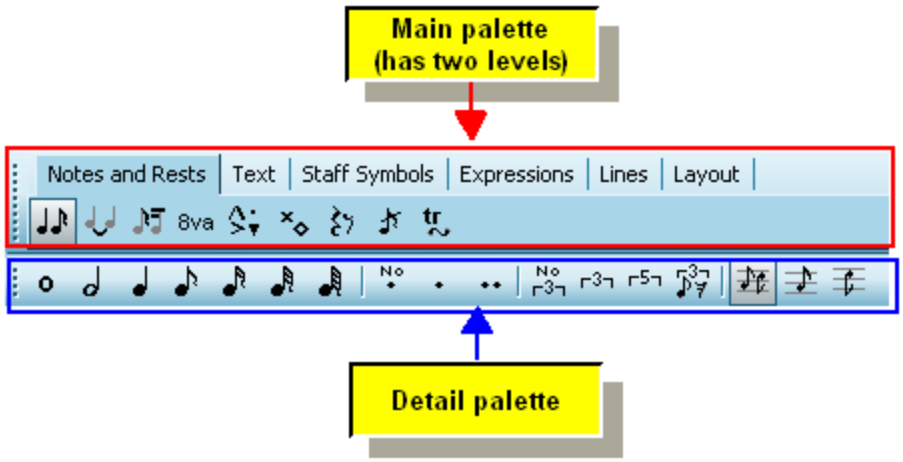
Note, some palettes share the same SHIFT+{letter} shortcut. For example, the shortcut for the Rehearsal Mark palette and the Rest palette are both SHIFT+R. If you type SHIFT+R and the wrong palette comes up, just type SHIFT+R a second time. We figure it is easier for you to type SHIFT+R twice than it is to type something like CTRL+SHIFT+R, which is both difficult to type and difficult to remember.

Hiding Palettes

When you are first learning **Musician**, it is a good idea to leave all three levels of the palettes displayed. After you learn the simple SHIFT+{letter} shortcuts for the palettes, you might prefer to free up some of **Musician**'s window by hiding the first two levels of the palettes, leaving only the third-level palette showing. You can switch between different third-level palettes by typing the SHIFT+{letter} shortcut.

Also, you might want to temporarily hide all levels of the palettes, when you are just viewing or singing or playing along with the score, but not editing it.

The first two levels of the palette-- the palette tabs and the intermediate palette buttons-- are together called the *main palette*. The third-level palette is called the *detail palette*.



To show or hide the main palette or detail palette:

- Toggle the Show Main Palette or Show Detail Palette command in the View menu.

-- OR --

- Choose the Show Multiple Selections command in the View (or type "qsh") and toggle the check mark for main palette or detail palette.

-- OR --

- Type "qsmp" for Quick Show (or hide) Main Palette, or "qsp" for Quick Show (or hide) Palette for the detail palette.

Moving Palettes

You can dock the main palette or detail palette to any of the four sides of **Musician**'s window according to your personal preference. Also, you can "float" the palette in the middle of the window and drag it around with the mouse on the window, close to where you are working,

To move or "float" the detail palette or main palette:

- Press down the left mouse button on the dotted lines along the left edge of the palette, or top edge of a vertically oriented palette.



- While holding down the left mouse button, drag (move) the palette to another edge of **Musician**'s window, or to the middle of the window.
- Release the left mouse button.

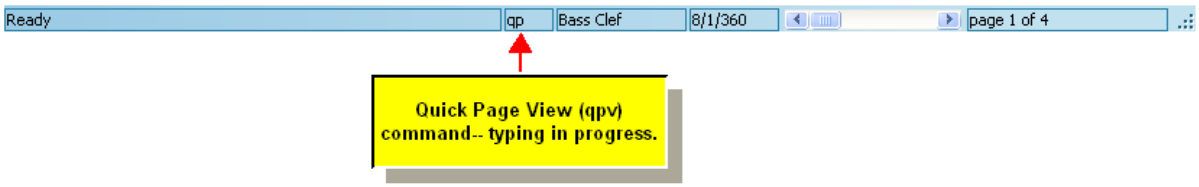
3.3 Keyboard Commands (shortcuts)

Musician enables you to edit music using your computer keyboard without having to use awkward and difficult-to-remember key combinations such as CTRL+ALT+N. Instead, most commands in **Musician** are typed not by holding down two or three keys at a time but, rather, by typing a sequence of keys, such as "qpv" for "Quick Page View".

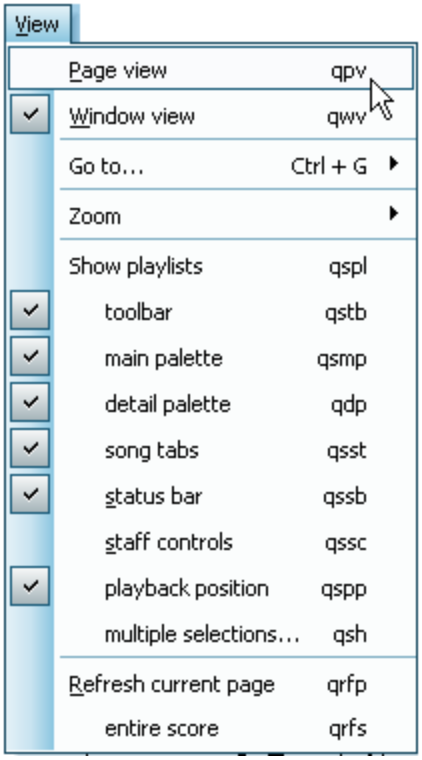
Quick "Q" Commands

Many keyboard commands in **Musician** begin with the letter "q" for "Quick". Many other commands do not. The "q" commands are for commands that are listed in the top menus and tool bar, such as View or Staff commands . Commands that occur within palette tabs do *not* begin with the letter "q". For example, when the clef palette is showing, you can type "t" to prepare to add a treble clef - you do not use a "q".

As you type command letters, **Musician** displays them in the status bar. For example, this is what the status bar looks like when you have typed the first two letters of the Page View command, before typing the last letter of "qpv":



You can quickly learn the Quick command letters for commands you use frequently by observing them in **Musician**'s menu. The following example shows that "qpv" are the Quick command letters for the Page View command:

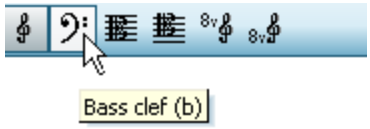


A summary of all of the Quick command shortcuts is provided in Appendix A: Keyboard Shortcuts 501.

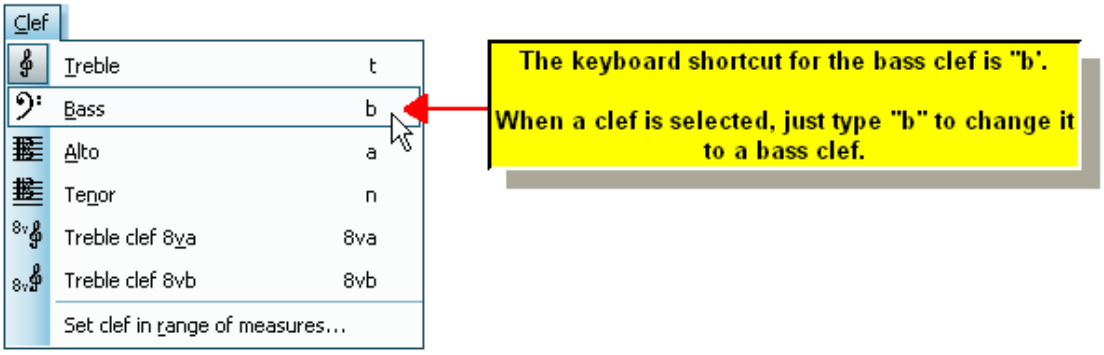
Shortcuts for Object-Specific Commands

Commands specific to a given type of object do not begin with the letter "q". For example, if in Add Mode you are preparing to add a bass clef, then you can type "b" for bass clef.

There are two ways that you can learn the keyboard shortcuts for object-specific commands. The first way is to hold the mouse cursor over the palette button for the command, as illustrated here:



The second way to learn the keyboard shortcuts for object-specific command is to review it in the Object Menu. At any given time, the Object Menu is named according to the type of object you are working with:



Here is a fairly easy way to remember whether a command begins with a "q" or not. If the command has a corresponding palette button, then it will not begin with the letter "q". If the command is found in the Object Menu (which will be renamed to whatever type of object you are working with, such as Note or Clef or Accent), then the command also will not begin with the letter "q". Otherwise, if the command is only available in some other menu-- not in the Object Menu, and not in a palette-- then the command will begin with the letter "q".

How is Musician able to offer such simple keyboard shortcuts compared to other programs?

The reason that **Musician** is able to offer you convenient keyboard commands is that, with one exception, you do not need the keyboard for other purposes. Normally you do not need to enter text as you would in a word processor or an email program. The exception, of course, is that sometimes you do need to enter text, such as for lyrics or textual annotations in the score.

When you add a new lyric or text annotation, you just click the mouse where you want to add it, and then you start typing. When you are done typing, hit the ESC key. Similarly, if you want to edit text, just click the lyric or text object. hit the ENTER or ESC key when you are done editing the text.

In all circumstances other than the editing of lyrics and text annotations, **Musician** interprets your keystrokes as Quick commands when they begin with "q", and otherwise as palette short-cut commands. You don't have to use awkward and difficult-to-remember combinations of ALT, CTRL, and SHIFT keys!

For more details about editing lyrics and text annotations, see Editing Types of Text 365.

Using the ALT Key for Menus

Alternatively, while holding down the ALT key, type the letter of the menu, such as "V" for the Staff menu. That sequence displays the menu. Then type the letter that is underlined in the command name, such as the P in the Page View command name.

You might find this alternative method particularly useful for commands you are used to using in other programs, such as ALT+F and "O" for the File Open command.

If the menu has more than one command with the same letter, then type the letter once for the first command, or a second time for the second command, followed by the ENTER key.

A Few CTRL+Letter Commands

Musician does use a few CTRL+letter commands according to conventions you have likely learned in other Windows programs.

There are only a few, all of which are listed here:

File Commands

CTRL+N create a new file

CTRL+O open an existing file

CTRL+P print the currently viewed score

CTRL+S save the currently viewed score

Clipboard and Region Editing

CTRL+X cut (remove) and copy to the clipboard

CTRL+C copy to the clipboard

CTRL+V paste from the clipboard

CTRL+D delete (clear) selected region of score

Undo and Redo

CTRL+Z undo most recent transaction

CTRL+Y redo most recent undone transaction

Window and Page Navigation

CTRL+G go to measure, page, or rehearsal mark

CTRL+F6 show next window when viewing multiple opened songs

CTRL+F4 close score (song) window

ALT+F4 exit **Musician**

Miscellaneous

SHIFT+CTRL+S turns off stuck notes that will not otherwise stop sounding.

Arrow Key Commands

Musician does use some two-key combination commands, where one of the letters is an arrow key and the other is a letter. Hold down both the letter key and the arrow key, just as you are probably used to doing with CTRL and ALT. These arrow key combination commands all make good sense because the directions of the arrows are meaningful, and the letters relate to the purpose of the two-key arrow commands.

For example, while holding down the 'T' key, hit the ↑ (or ↓) key to increase or decrease the tempo during playback. In this documentation, that two-key combination is indicated as T+↑ (or T+↓).

Another example is D+→ to increase the duration of a selected note.

This makes sense, doesn't it? These Letter + Arrow combinations are easy to learn and remember. For a list all of Letter + Arrow commands, see Appendix A: Keyboard Shortcuts 501.

3.4 Executing Commands from Your MIDI Keyboard

MusicianWhen you are practicing or playing along with **Musician** at your music keyboard, you may find it convenient to control **Musician** directly from your music keyboard rather than switching back and forth between your music keyboard and your computer keyboard or mouse.

Musician's Pitch-to-Command feature associates certain keys (pitches) on your music keyboard to commands that you will most likely to want to use while you are working at your music keyboard, such as Start Playback and Stop Playback. You specify a "trigger key" on your music keyboard, typically the highest or lowest note. When you hold down the trigger key, **Musician** will not play that note. Instead, while you are holding down the trigger key, you simultaneously play another key to instruct **Musician** to perform a command, such as starting playback.

For details about **Musician**'s Pitch-to-Command feature, see Controlling Notation Musician from Your Music Keyboard 121.

3.5 Window View and Page View

Musician offers two ways to view a score on the screen: Window View and Page View.

In Window View, **Musician** arranges the pages of the score as though the page size were exactly the size of the window. If you change the window size 150, **Musician** will automatically and quickly repaginate the score for the new "page size", which is, in this case, the window size.

In Page View, **Musician** displays an image of the page as it would be printed, which is usually larger than what can be seen all at once in the window. Therefore, in Page View, **Musician** usually displays scrollbars that enable you to scroll horizontally and/or vertically in the page. In Page View you can view the entire printed page by using the Zoom Out 151 command.

> **NOTE: Page View is the same thing as Print Preview**
>
> Some software programs offer a Print Preview command, which enables you to preview pages exactly as they would be printed. **Musician**'s Page View command offers you everything that a Print Preview command does, and a lot more. In **Musician**'s Page View you can not only preview the printed pages but also *edit* them.

In Window View, **Musician** evenly spaces the measures so that the barline of the last visible measure is right-justified in the window. As many measures are displayed as can comfortably fit horizontally. If more than one system (also called a "line", which includes multiple staves) can be displayed in the window, then multiple systems are displayed. If only one system can be displayed, but it has more staves (staves) than

can be shown without crowding, then the window adds a vertical scrollbar that enables you to view the lower staves.

In Page View, **Musician** simulates the layout of the notation symbols as they would appear on a printed page. Because the size of various symbols are not exactly proportional as rendered by the printer versus the monitor, the image displayed by Page View cannot exactly represent the spacing of the printed page. Therefore, whereas the spacing between accidentals and noteheads, for example, may look ideal when printed, the spacing may seem less than perfect on the screen. Usually the difference is insignificant, but we mention the issue here in case you do notice any difference.

To view the score in Window View:

- Click the  Window View button in the main toolbar129.

-- OR --

- Type "qwv" for Quick Window View.

To view the score in Page View:

- Click the  Page View button in the main toolbar.

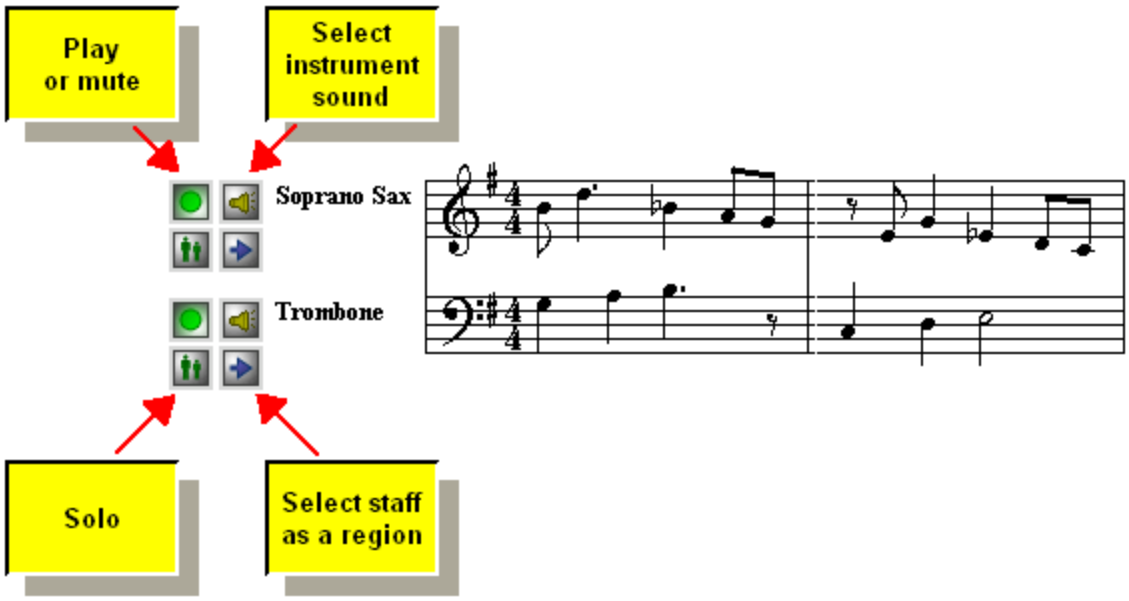
  -- OR --

- Type "qpv" for Quick Page View.

For either view you may want to "Refresh" the page to make sure that you are seeing the score properly. To do this, you can use the "**View / Refresh Current Page**" or "**View / Refresh Entire Score**" menu command. This is especially helpful if you have made many edits and want to review your pages for printing.

3.6 Staff Controls

Along the left-side of each staff you will see a group of four staff control buttons, as shown:



These four buttons affect the entire staff. Therefore, these buttons are displayed only at the beginning of the first set of staves in the window.

The purpose of each button is summarized below, and described in more detail in the topics that follow.

 Play or mute 145: turn the staff sound on or off during playback.

 Solo 145: play only this staff while muting all other staves (except other soloed staves).

 Instrument sound 148: assign a new device, MIDI bank, MIDI patch, or name to the staff.

 Select the staff 148: prepare for a Staff menu command such as Split Hands, or a Region menu command such as Remove Inaudible Notes.

You can use any of these controls during playback.

You may not always want these staff controls to use up space on the screen. In such cases, follow this next procedure.

To show or hide the staff control buttons.

- Turn off the Show Staff Controls check mark in the View menu.

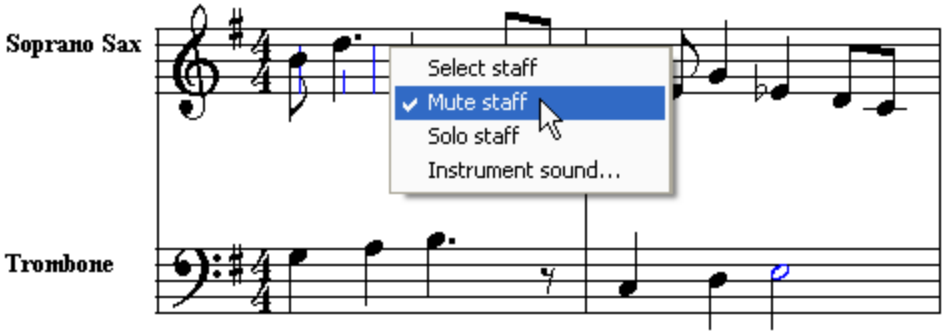
  -- OR --

- Type "qssc" for Quick Show Staff Controls, to toggle between show and hide.

If the staff controls are not currently visible, there is an alternative way you can accomplish the same tasks as offered by the staff controls.

To do staff control tasks when the controls are not visible:

1. While holding down the 'S' key, click the mouse anywhere in a staff. **Musician** will display a pop-up menu, such as illustrated here:



2. Choose the equivalent staff control command from the pop-up menu.

3.6.1 Play, Mute or Solo Staff

There are a variety of occasions where you might want to listen to only certain staves of a song while other staves are muted (silenced). For example, if a song has a melody staff played by some instrument, but you want to sing the melody by yourself, then you can mute the melody staff. Or, you might want to study the composition and arrangement of a song and focus on how a particular instrument part is written by "soloing" that instrument part, thus muting all of the other staves. If you have a MIDI keyboard, you can temporarily mute a staff and perform the part yourself; **Musician** will assign the instrument sound of the staff to the notes you play.

Musician enables you to play any combination of staves while muting other staves. You can even do this while the song is playing back. If the staff controls are visible, you can tell that a staff is muted if the top-left button is not pressed down and has a dull light instead of the normal bright green light:

 staff playback is active

 staff is muted

Note that you can also mute staves using the Staff Setup command in the Staff menu.

If you save the song as a MIDI file, then any muted staff will be restored as an audible staff in the MIDI file; the staff will not be deleted.

To toggle the mute status of a staff:

- If the staff controls are not already visible, choose the Show Staff Controls 144 option in the View menu. Note that the Show Staff Controls option is not available in Page View 143.

  In the group of four staff controls, toggle the play/mute button between  and  .

-- OR --

- If the staff controls are not visible, and you do not wish to display them, then while holding down the 'T' key, click anywhere in a staff. **Musician** will display a pop-up menu offering choices for Select Staff, Mute Staff, Solo Staff, and Instrument Sound. In the pop-up menu, choose the Mute Staff command.

Another option allows you to mute all staves except one (or a few) staff(s) that you wish to temporarily "solo". The play/mute status of the other staves are only temporarily changed. Once you remove the solo status of all staves, any staff that was previously playing will continue to play, and any staff that was previously muted will continue to be silent.

To temporarily solo one staff so that no other staves are heard:

- Toggle the solo button from the up position  (in which two musicians are shown) to the down position:  (in which a solo musician is shown).

-- OR --

- While holding down the 'S' key, click anywhere in a staff belonging to that staff. **Musician** will offer a pop-up menu. Choose the Solo Staff command.

To temporarily solo multiple staves so that only they are heard:

1. Click the solo  button for one staff.
2. While holding down the SHIFT key, click the solo  button for additional staves.

To temporarily solo all of the staves in the current part, while muting all accompaniment staves not included in the part:

- While holding down the SHIFT key, click the solo  button for one staff.

-- OR --

- Type "qsolo" for Quick Solo.

To remove a staff from the list of solo staves:

- While holding down the CTRL key, toggle the solo button from the down position  to the up position  .

To resume playback of all staves, and turn off the solo of any staves:

- While holding down the SHIFT key, click the play/mute  button for any staff. It does not matter whether that particular staff has been previously muted.

Yet another option lets you temporarily mute a staff and assign the sound of that staff to any notes you play at your music keyboard. This option is useful when you want to play one of the instrument parts of a song instead of having **Musician** play it. **Musician** will still play the other parts as accompaniment.

To temporarily mute a staff and assign its instrument sound to notes that you play on your music keyboard:

- Double-click the solo  button for the staff.

  -- OR --
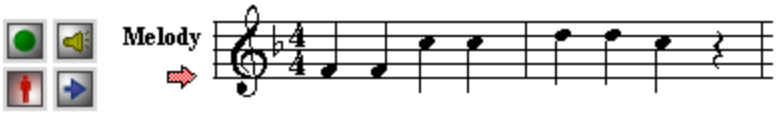
  While holding down the "R" key (for "record", although you will not actually be recording), click anywhere in the staff of the staff.

  Musician indicates that this staff has been muted by changing the staff play button to the up position: 

  At the same time, **Musician** indicates that this staff has been selected to provide the instrument sound for your music keyboard by changing the solo button from green to red:

  In addition, **Musician** indicates that this staff has been so selected by drawing a red arrow right before the beginning of the first staff shown in the window for this staff:

To return the staff to normal playback:

- Just click the staff's solo button again.

If the part you want to play has two staves, such as a piano or keyboard part, then you will find the following procedure useful.

To temporarily mute more than one staff and assign the instrument sound of one of the staves to notes that you play on your music keyboard:

1. Double-click the solo  button for the staff whose instrument sound you want to assign to your music keyboard.

   -- OR --

   While holding down the "R" key (for "record", although you will not actually be recording), click anywhere in the staff for that staff.

2. For the other staff(s) that you want to play instead of **Musician**, toggle the playback button to the up position: 

3.6.2 Instrument Sound Selection

Among the staff controls, the Instrument Sound Selection button lets you change the instrument sound of a staff. You can change the instrument sound even while the song is playing.

If the staff controls are not visible, and you do not wish to display them, then while holding down the 'S' key (for 'staff'), click the mouse somewhere in the staff.

Musician will display a pop-up menu such as illustrated here:



In the pop-up menu, choose the Instrument Sound command.

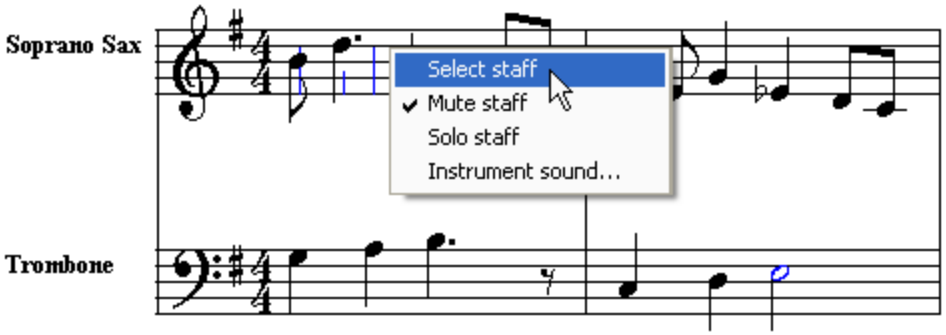
For details, see Changing the Instrument Sound of a Staff.

3.6.3 Select Staff

If you click the Select Staff button among the staff controls, **Musician** will select the entire staff as the current region.

Alternatively, if some notes are already selected in a staff, or if some region of the staff is already selected, you can use the Select Staff command in the Note or Region menu, or type "st" for "select staff".

As another alternative, if the staff controls are not visible, and you do not wish to display them, then hold down the 'S' key (for 'staff'), and click the mouse somewhere in the staff. **Musician** will display a pop-up menu in which you can choose the Select Staff command:



Musician displays a light blue background for the entire selected staff. You can then use commands that edit the entire staff. Commands that edit the entire staff are located in the Edit, Region, and Staff menus.

If you want to apply commands to more than one staff at a time, you can select more than one adjacent staff using the Select Staff controls for the respective staves.

To select the entire range of one or more adjacent staves:

- Click the Select Staff button among the staff controls to select one staff. While holding down the SHIFT key, click another staff to select it and all of the other staves between it and the first selected staff.

3.7 Scrolling, Resizing and Zooming the Window

The **Musician** window shows some portion of the score at any given time. In Page View 143, the window shows some or all of one printed page of the score. In Window View 143, the window shows some range of measures of the score-- as many as will fit in the window.

The window will display a vertical scrollbar in the following circumstances:

- In Page View, if the entire height of the page does not fit in the window.
- In Window View, if only part of one system fits in the window.

The window will display a horizontal scrollbar in the following circumstances:

- In Page View, if the entire width of the page does not fit in the window.
- In Window View, if only part of one measure fits in the window.

If a vertical and/or horizontal scrollbar is present in the window, then you can use it to scroll the window 149, to see other parts of the page in Page View, or other staves of a system in Window View, or other beats of a measure in Window View. You can also scroll from one page to the next page or the previous page. If your mouse has a scroll wheel, you can use it to scroll the window. You can also use keyboard shortcuts, such as PAGEDOWN to scroll down through a large portion of the page, and SHIFT+PAGEDOWN to advance to the top of the next page.

During playback, **Musician** automatically scrolls the window 150 to show the current position in the song, and to keep the focus on the staff that you have selected 100.

If you want to see a larger portion of the score in the window, you can resize the window 150 to see more. Or you can use the Zoom Out 151 command to make the notes smaller and therefore view more notes at once.

If are editing the score and need to increase the accuracy of the placement of objects in the score, you can use the Zoom In 151 command to make the notes and annotations larger.

Options summarized above are described in detail in the topics that follow.

3.7.1 Scrolling the Window

Musician displays a horizontal and/or vertical scrollbar along the right and bottom edges of the window if the page does not fully fit within the window.

To scroll the current page displayed in the window:

- If there is a vertical scrollbar, hit the PAGEDOWN or PAGEUP key to scroll the window by almost the full height of the window. Alternatively, click the mouse cursor in an empty area of the scrollbar.

-- OR --

- To scroll by smaller amounts, move the horizontal or vertical scrollbar button with the mouse.

-- OR --

- If your mouse has a scroll wheel, scroll it up or down to scroll the window vertically.

-- OR --

- Type CTRL +  , CTRL +  , CTRL +  , or CTRL +  to scroll the window down, up, left, or right by relatively small increments.

To continue scrolling to the next or previous page:

- Hit the PAGEDOWN or PAGEUP key for the next or previous page.

-- OR --

- When you reach the bottom of a page, click the bottom vertical scroll button ; or when you reach the top of the page, click the top vertical scroll button.

-- OR --

- If your mouse has a scroll wheel, continue scrolling it up or down to scroll the window vertically.

Musician will hesitate for about a half second between each page, so that you do not unintentionally overshoot the next page.

To advance to the top of the next or previous page, without scrolling through the rest of the current page:

- Type SHIFT+PAGEDOWN for the next page, or SHIFT+PAGEUP for the previous page.

Also see Navigating through Pages of the Score 151.

3.7.2 Automatic Scrolling During Playback

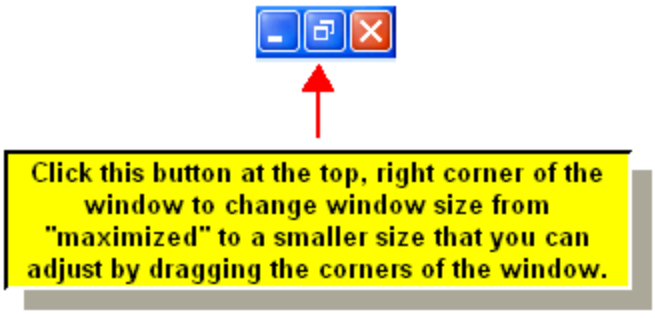
During playback, **Musician** automatically scrolls the window vertically and horizontally to show the current position in the song. It scrolls horizontally a few extra beats ahead of the current playback position so that you can see the notes ahead. **Musician** also turns the page a few beats ahead of the current playback position. You can specify the exact number of beats for the page turn anticipation 100.

If **Musician**'s window is not tall enough to display all of the staves for the current measure, then **Musician** automatically scrolls the window vertically to a position that maintains the focus on some staff that you have selected, or which otherwise **Musician** selects by default. You can assign playback focus to a staff 100, thus setting the playback staff marker, by clicking the staff while you hold down the "V" key (for "vertical focus").

3.7.3 Resizing the Window

To resize Musician's window:

1. If the window occupies the full screen, then you will first need to toggle the Maximize button at the top, right corner of the window:



2. "Drag" the window's corner or edge: hold the mouse down, starting at the corner or edge, and move the mouse to the new position before releasing the mouse button.

In Window View 143, **Musician** automatically and quickly repaginates the score so that each page exactly fits the window size.

3.7.4 Zooming the Window

Musician enables you to change the magnification of the score displayed on the screen. "Zooming in" increases the magnification so that the music symbols appear larger. "Zooming out" makes the symbols appear smaller, so that more of the musical score appears at once in the window.

Although you can specify exact zoom percentage levels with the Zoom Percentage command in the View menu, **Musician** may limit small zoom values to 30% or 40% if you are using Windows 95, 98, or Millennium. On Windows NT, 2000 and XP, **Musician** can handle arbitrarily small zoom levels.

> **NOTE:** Changing the zoom level affects only the size of music symbols as displayed on the screen. To change the size of music symbols as printed, use the Font Size and Spacing 195 command in the Format menu.

To change the zoom level:

1. Choose the Zoom command in the View menu, and the Zoom In or Zoom Out command from the Zoom submenu.

-- OR --

2. Type Z+ to zoom in, or Z+ to zoom out.

-- OR --

3. In the toolbar, click the button to zoom in, or the button to zoom out.

-- OR --

4. To change the zoom level to a specific percentage magnification, choose the Zoom command in the Zoom menu, and the Zoom Percentage command in the Zoom submenu.

To reset the zoom level back to 100%:

1. Choose the No Zoom command from the Zoom submenu.

-- OR --

2. Type Z+ENTER.

3.8 Navigating through Pages of the Score

You can go to different pages of the score by referring to any of the following:

- Page number 153.
- Measure number 153.
- Rehearsal mark 154.

You can do this by using:

- Commands in the Go To submenu of the View menu.

-- OR --

- Keyboard shortcuts, such as CTRL+PAGEDOWN for next page.

-- OR --

- The Fast Forward  and Rewind  buttons in the main toolbar. Using these will move the Playback Position Marker to the top of the page.

-- OR --

- The Page Scroller 

in the lower right of the Status Bar. Using this scroller allows you to view other pages without changing the position of the Playback Position Marker when play is stopped, as well as when the file is playing.

You can also temporarily view and print a range of measures in the score 152 rather than all of the measures.

For details about the above navigation and viewing options, see the topics that follow.

3.8.1 Viewing a Range of Measures

To display or print a range of measures instead of all of the measures in the score:

1. Choose View Measures in the Measure menu. The View Measures menu item indicates what range of measures are currently being displayed, such as "View Measures 25 to 49".

   -- OR --

   Type "qvm" for Quick View Measures.

   Musician will present a View Measure Range dialog.

2. In the dialog, specify the starting and ending measures that you wish to display or print. The measure numbers of a score normally start at 1, unless you have specified a different starting page number in the Page Setup 196 dialog box.
3. To then print the score 90, use the Print command in the File menu.

3.8.2 First Page, Next Page, Previous Page, and Last Page

In Page View 143, the page on the screen is an image of the page as it would be printed. In Window View 143, the page on the screen simulates a printed page that is exactly the size of the window. In either Page View or Window View, you can advance forward and backward through the pages.

If the song is currently playing when you use any of the First Page, Next Page, or Previous Page commands, then the song will continue playing where it was, without jumping to the new page. After a few seconds, **Musician** will return to the page that is currently playing. However, if you use one of these commands during playback and you decide you would like playback to jump to the new page, just click on that page.

If an object is currently selected, and you use the Next Page or Previous Page command, then the page will be vertically scrolled so that staff of the selected object will have the staff vertical position in the window. This is done so with the assumption

that you will want to continue working in the same staff as that of the most recently selected object, as you go to the next or previous page.

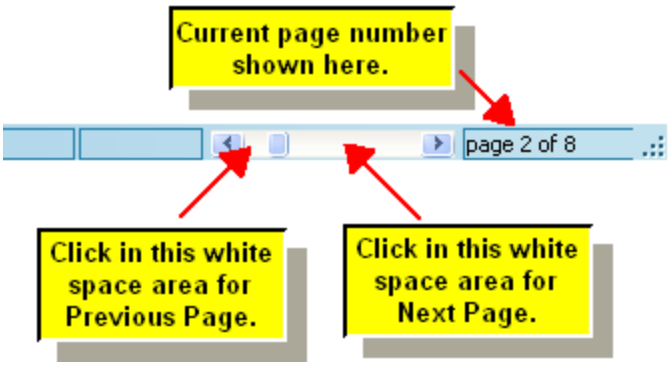
To advance to the next or previous page:

- Type SHIFT+PAGEDOWN for next page, or SHIFT+PAGEUP key for previous page.

  See the previous topic, Viewing a Range of Measures 152, to learn about the action of the PAGEDOWN and PAGEUP keys without the CTRL key.

-- OR --

- Click the ">>" or "<<" areas in the Page Slider in the status bar at the bottom of **Musician**'s window for the next or previous page:



-- OR --

- Click the Next Page or Previous Page button in the main toolbar 129.

To go to the first or last page of the score:

- Type CTRL+HOME for first page, or CTRL+END key for the last page.

-- OR --

- Double-click the Start of Song or End of Song button in the main toolbar.

3.8.3 Go to a Measure or Page

To go to specific measure number:

1. Choose the Go To command in the View menu, and Measure in the Go To submenu.

   -- OR --

   Type "qgm" for Quick Go to Measure.

   Musician will display the Go To Measure dialog box.

2. In the dialog box, enter the measure number that you want to go to.

To go to specific page number:

1. Choose the Go To command in the View menu, and Page in the Go To submenu.

   -- OR --

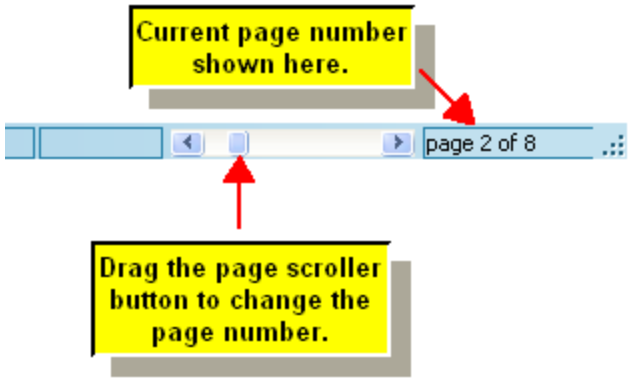
   Type "qgp" for Quick Go to Page.

Musician will display the Go To Page dialog box.

2. In the dialog box, enter the page number that you want to go to.

-- OR --

3. In the status bar at the bottom of the window, drag the Page Scroller button.



3.8.4 Go to a Rehearsal Mark

You can add any number of rehearsal marks in a score, as described in Rehearsal Marks 416. Rehearsal marks help ensemble musicians to easily refer to locations in a score during rehearsals. You can also use rehearsal marks as bookmarks while you are composing or editing the song. Once you have added a rehearsal mark, you can quickly go to it from wherever you are in the score.

To go to a previously added rehearsal mark:

1. Choose the Go To command in the View menu, and Rehearsal Mark in the Go To submenu.

   -- OR --

   Type "qgr" for Quick Go to Rehearsal Mark.

   Musician will display the **Go To Rehearsal Mark** dialog box.

2. In the dialog box, select the rehearsal mark that you want to go to.

4 Editing Staves and Formatting Parts

In **Musician**, the largest unit of musical data is the song. (The term "song" is admittedly inappropriate for many types of music compositions, but it is a convenient term to use.) A song is all of the music-- the performance and the notation-- that you can save and later retrieve from a Notation .not file 63.

> **TIP**: Actually, the largest unit of musical data in **Musician** is a playlist 37. You might find it handy to break up a musical composition into multiple Notation .not files, perhaps one for each major section of a composition or arrangement.

The next largest unit of musical data is a "staff". A staff is the line of music throughout the song performed by one instrumentalist or vocalists, or group of musicians sharing the same notes. Some instruments have multiple staves, such as a pair of piano right-hand and left-hand staves. In **Musician**, a staff also holds underlying MIDI performance details. If you are familiar with MIDI sequencing software, a staff is similar to a MIDI track, except that a staff also includes notation details.

In **Musician**, the concept of a "part" is similar to what you would think of as an individual part that lies on a music stand as an instrumentalist or vocalist reads it. A part shows one or more staves. The part for an oboe or saxophone has only one staff. The part for a piano or keyboard instrument typically has two staves for the right and left hands.

If the song has multiple instruments or vocal parts, then the score that shows all of the instruments and vocal parts together is called the "conductor's score". In **Musician**, the conductor's score is treated just like another instrument part; it just happens to show all of the staves for all of the instruments.

> **NOTE**: Instrument and vocal parts are integrated with the conductor's score. For example, if you change a note in a part, it is automatically reflected in the conductor's score; or if you change a note in a staff in the conductor's score, that change is automatically reflected in the instrument or vocal part.

In **Musician**, you can format a part 195 or layout pages of a part 214 for printing using a wide variety of options, whether the part is for a single instrument or voice, or whether it is the overall conductor's part. The main idea here is that a "part" is a primary unit in **Musician** that you can format independently of other parts. For instance, in an orchestra, you could create a Part for the "Strings" by including the violins, violas, cellos, and basses in a Part, and view/print it separately from the other instruments/Parts.

The above introductions to the terms "staff" and "part" are far from adequate to help you understand their central roles in **Musician**. It is highly recommended that you read the topic Understanding Staves, Staves and Parts 156 before exploring these major areas of **Musician**:

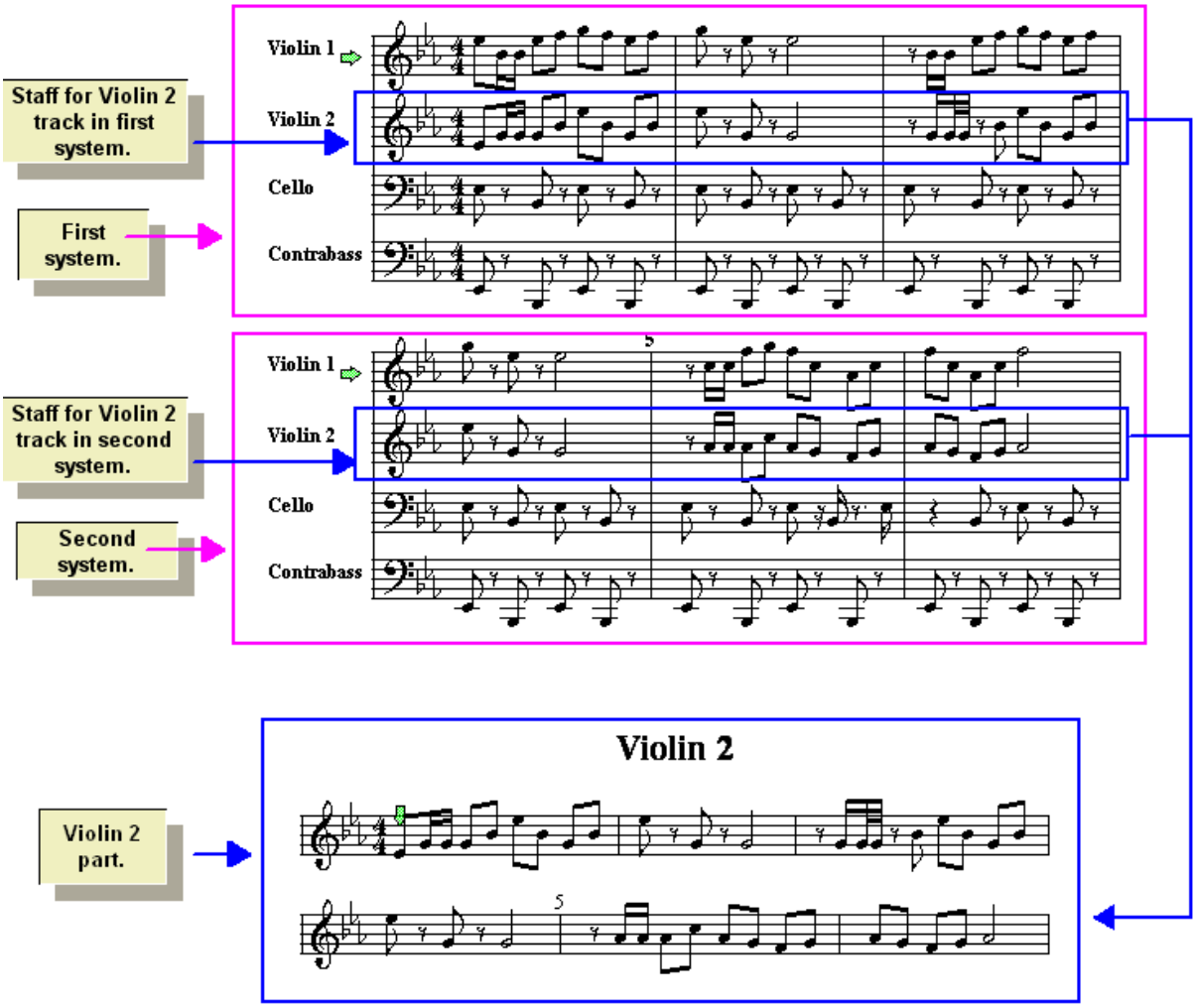
- Editing Staves
- Preparing Parts
- Formatting Parts
- Laying out Pages of a Part 214

4.1 Understanding Tracks, Staves, and Parts

It is important to understand how **Musician** defines the terms *staff* and *part*. These two terms are closely related, yet they have distinct meanings in **Musician**, and are used extensively in **Musician**'s user interface. For example, **Musician**'s main menu includes both a Staff menu and a Part menu.

If you have worked with MIDI sequencing software, then you are probably familiar with the term *track*. The relationship between a staff in **Musician** and a MIDI track is explained at the end of this topic.

The following excerpt from the string section of Tchaikovsky's *1812 Overture*: illustrates the relationships between staves and parts. The remainder of this topic explains these terms.



The above example illustrates:

- two systems on a page of the string section from the conductor's score
- four staves per each system, for Violin 1, Violin 2, Cello, and Contrabass
- the Violin 2 part extracted from the conductor's score

System

A *system* is one line of music played together by possibly multiple instruments and voices. In the top half of the above example, there are two systems, that is, two lines of music. A *system break* is like a *line break* in a text documentation, where a sentence

ends at the right side of the page and continues below on the page or at the beginning of the next page.

Staff

In strict music terminology, a staff is the set of five (or sometimes a different number of) staff lines that hold the notes for a particular instrument or voice in one system (line of music). Music software programs have traditionally departed from this strict definition of the term staff, and so does **Musician.** A *staff* is defined as all of the music (and all MIDI details) played by given instrument or voice across all of the systems and pages in the score.

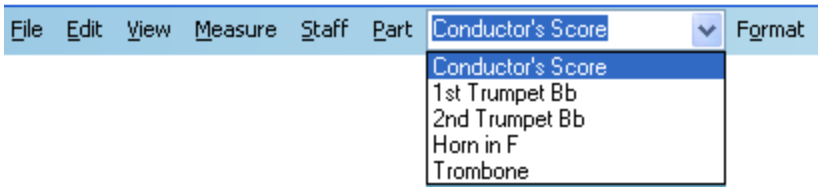
Part

In **Musician**, the most common example of a "part" is the music played by one instrumentalist or vocalist (or multiple musicians performing the same part). The part is the sheet music that lies on the music stand in front of the musician.

Vocal parts and single-melody instruments usually have just one staff. Piano parts usually have two staves for the right and left hands.

The "conductor's score" is a special part that shows all of the staves in the score.

The currently selected part is displayed in the main menu. You can view a different part by selecting in the dropdown list of part names:



A part can be formatted and paginated independently of other parts extracted from the conductor's score. You can choose special formatting options 195 for the display of a given part. You can also control the page breaks and system breaks 214 (at particular measures) for that part. You can assign a name to that part 180 and later recall it, so that only the staves assigned to that part are displayed, and the saved formatting options and pagination details are restored.

One of the powerful features of **Musician**, which you will not find in many other music notation programs, is that all "extracted" parts of a score remain perfectly synchronized with the full conductor's score. If you add a note for, say, the Violin 2 part in the conductor's score, it will also be added in the separately extracted, formatted and paginated Violin 2 part. Conversely, if you are viewing the Violin 2 part, and add a note to it, the next time you view the conductor's part, you will see that the note was added there also.

Potential Confusion between the Terms 'Staff' and 'Part'

This terminology is potentially confusing, because **Musician**'s definition of staff is what some musicians might say is a "part". When a musician talks about a "part", is he referring to his lines (staves) of music in the conductor's score, or is he referring to the sheet music on his music stand that he plays from? Both concepts of the music are commonly called "part", but **Musician** needs to distinguish the two concepts.

If at first you are confused about the difference between the terms staff and part, you might find it helpful to think about piano music. A solo piano piece has just one part-- the piano part. But the solo piano piece has two staves-- the right- and left-hand staves.

Relationship between Staff and MIDI Track

In **Musician**, there is exactly one MIDI track for each staff. If an instrument has two staves, then it has two MIDI tracks. If you are familiar with MIDI and MIDI sequencers, you can think of "staff" as being a MIDI track for which the music notation is displayed.

Some other music software programs, called "MIDI sequencers", offer a "staff view", which is an automatic transcription of the notes in the MIDI track. In **Musician**, the notes displayed in the staff are similarly automatically transcribed. However, after the notes have been recorded and transcribed, in **Musician** you can further refine the notation (such as the interpretation of rhythms) while optionally leaving the underlying MIDI performance unchanged.

4.2 Editing Staves

A staff is a storage area within a song, that collects all of the notes and musical performance details (such as volume level and pan) that are associated with a particular instrument or vocal part. If you have not done so yet, it is highly recommended that you read the previous topic Understanding Tracks, Staves, and Parts 156.

This section is organized as follows:

- Deleting Staves
- Editing Instrument (Staff) Names
- Changing the Instrument Sound of a Staff
- Assigning MIDI Channel
- Cloning a Staff
- Merging Staves
- Adjusting Per-Staff Volume Level and Pan
- Transposing a Staff
- Splitting Staves 171
  - -- Splitting a Staff into Right- and Left-Hand Staves 171
  - -- Splitting the Drum Staff into Individual Drum Staves 173
  - -- Splitting a Staff into Melody and Accompaniment
- Removing Double Played Notes from Solo Instrument
- Rearranging the Order of Staves
- Shifting Notes Between Staves 177

4.2.1 Adding New Staves

In Musician the only way to add a new staff is to use the Clone Staff 168 command.

4.2.2 Deleting Staves

In **Musician** you can either delete a staff or temporarily hide a staff. If you delete a staff, it is permanently removed from the song. If you save the song as a MIDI file or Notation file 81, the deleted staff will not be included in the file.

In contrast, if you "hide" a staff, it is only temporarily removed from the current part 156. If you save the song as a MIDI file or Notation file 81, the hidden staff will also be saved. If the MIDI file is later reopened, the hidden staff will displayed again.

To delete a staff:

1. Select a staff by clicking the Select Staff 148  button.
2. Choose the Delete command in the Staff menu.

   -- or --

   Type "qds" for Quick Delete Staff.

   Musician will display the Delete Staff dialog box.
3. Select a staff in the Delete Staff dialog box. To select a set of adjacent staves, hold down the SHIFT key as you click a second staff name. To select non-adjacent staves, hold down the CTRL key as you click the staff names.

-- OR --

1. Choose the Staff Setup command from the Staff menu.

   -- or --

   Type "qsus" for Quick Set Up Staves.

   Musician will display the Staff Setup window with a list of staves.
2. In the left-most column of the staff list, click the number of the staff you wish to delete. This will highlight the row of information for that staff.
3. Click the Delete button on the right side of the Staff Setup window.
4. Click OK in the Staff Setup window to delete the staff.

To temporarily hide a staff:

1. Click "Staff/Setup"
2. In the dialog click in the staff's "HIde" box to temporarily hide the staff in that Part. This does not delete the staff, but only hides it temporarily. If the file is closed and then re-opened, the staff will again show in the displayed Part.
3. To show the staff again for that Part in the same session, simply uncheck the "Hide" box.

4.2.3 Editing Instrument (Staff) Names

Musician optionally displays instrument names in the left margin of the window or printed page. Each staff has a "long name" and an abbreviated name. Many MIDI files have staff names that are so long that too much of the printed page or viewing area of the screen would be wasted. Therefore, you might want to abbreviate the staff names. In addition, you can specify a long staff name for the beginning of the score, and an abbreviation for subsequent pages of the score. This is a common practice in orchestral scores.

Musician allows you to specify whether a long name or short name is displayed after the first page of a given part 156. Or, you can omit the display of staff names altogether. Look further down this topic for details.

If two or more staves are grouped together in the left margin with a brace or bracket 317, then you can assign an instrument name or instrument group name, as explained at the end of this topic.

To change a staff name:

1. Enter Window View 143 by choosing the Window View command in the View menu.

   -- OR --

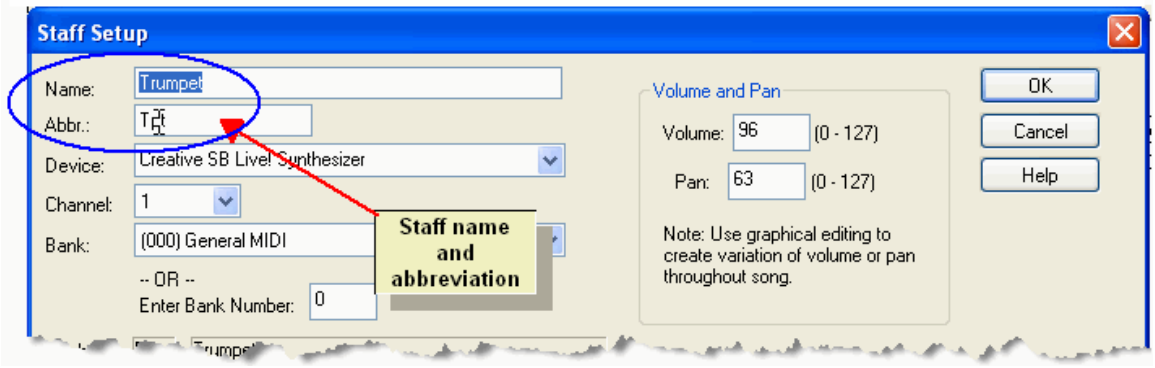
   Type "qwv" for Quick Window View.

2. Make sure that the staff controls are visible at the start of the staff, by choosing the Show Staff Controls 144 option from the View menu. The staff controls look like this:



3. Click the instrument sound 148  button for one of the staves.

   Musician will display a Staff Setup dialog box such as the following:



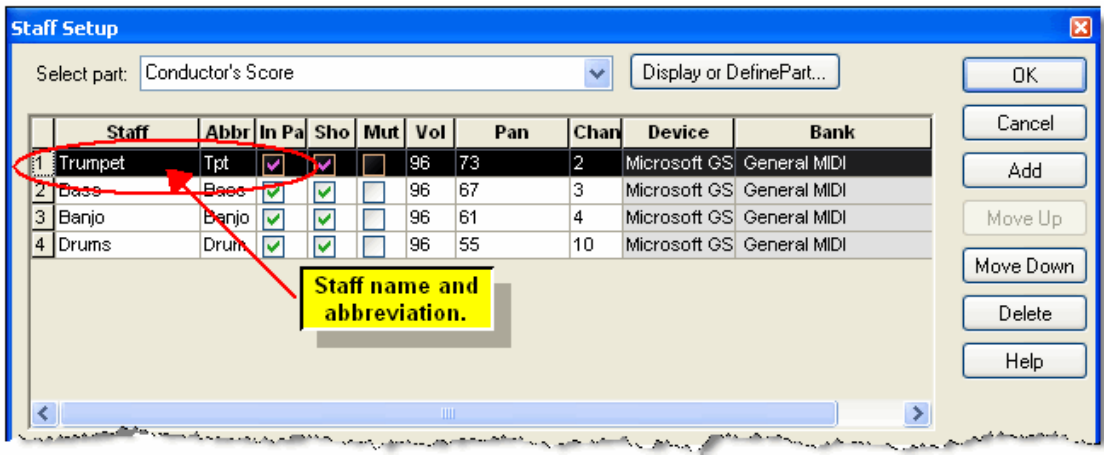
4. Type in a new long name and an abbreviation.
5. Click OK to save the change(s).

Alternatively, if you need to change the names of several staves at once, you can use the multiple Staff Setup window.

To change several staff names at once:

1. Choose the Staff Setup command from the Staff menu.

   Musician will display the Staff Setup dialog box, such as below:
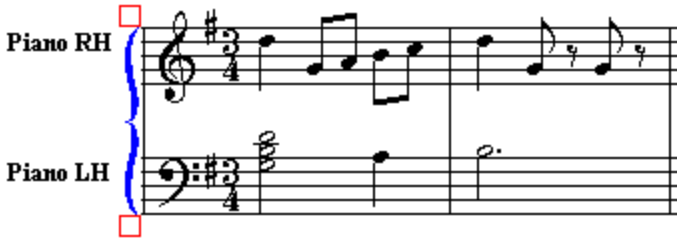


2. Change the staff name and/or abbreviation in the first and second columns of the upper panel.
3. Click OK to complete any staff name change(s).

To specify whether the staff name and/or abbreviation (or neither) are to be displayed on pages and staff systems throughout the current part 156:

- Follow instructions in the topic Showing and Hiding Instrument Names 207.

To add an instrument name or instrument group name to the left of a brace or bracket for multiple staves:
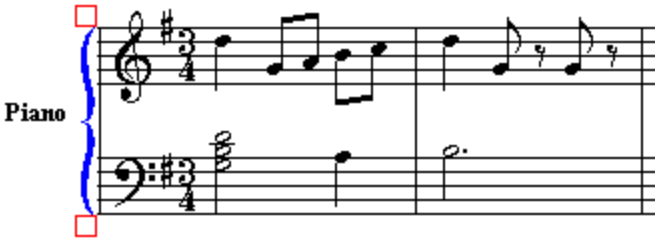
1. Add the brace or bracket, and extend it vertically across all of the staves it belongs to.
2. If the brace or bracket is not already selected, then mouse over it and click it.



3. In the Bracket Palette, click the  Bracket Group Name button.

   Musician will display the Bracket Staff Group Name dialog box.
4. In Bracket Staff Group Name dialog, enter the "long" name and the abbreviation for the instrument or instrument group.

   In determining whether to display the long or abbreviated name at the left of the bracket or brace, Musician applies the same rules as it does for determining whether the long or abbreviated name of individual staves are displayed, as described in Showing and Hiding Instrument Names 207.



4.2.4 Changing the Instrument Sound of a Staff

For each staff, you can specify what kind of instrument sound will be used by specifying the MIDI device, channel, bank, and instrument sound (MIDI program number). You can change the sound of a staff while the song is playing.

Use the MIDI Device Configuration Window 455 to determine what devices, banks, and patches are available in your current configuration of MIDI devices.

NOTE: If this is your first time using Musician, and it does not produce sound from your sound card, then follow the procedure as described in **Quick MIDI Device Setup** 422.

Special Note Regarding Imported MIDI Files:

A staff may include MIDI "program" (patch) events that are not visible to you in the printed score. Although not visible, the MIDI program events can be heard as changes of instrument sounds during the playback of the staff. **Musician** enables you to specify initial MIDI program (patch) events at the beginning of a staff, but does not enable you edit other MIDI program events later in the staff. If you change the MIDI program (patch) for a staff, any MIDI program events after the beginning of the staff will be removed. Said another way, if a staff changes instrument sounds at different times in the song, and you assign a new instrument sound to the staff, the new instrument sound will be applied throughout the entire staff.

Notation Software's **Notation Composer** offers full control over the editing of MIDI mid-staff program changes.

There are two ways you can change the instrument sound of a staff. The first method is convenient for changing the sound for one staff. The second method is convenient for changing the sounds for several staves. The first method has the advantage that you can change instrument sounds while a song is playing.

To change the instrument sound for a single staff (even during playback):

1. Make sure that the staff controls are visible at the start of the staff, by choosing the Show Staff Controls option from the View menu, or by typing "qssc" for "Quick Show Staff Controls". The staff controls look like this:

   Then click the Staff Selection  button.

   - OR --

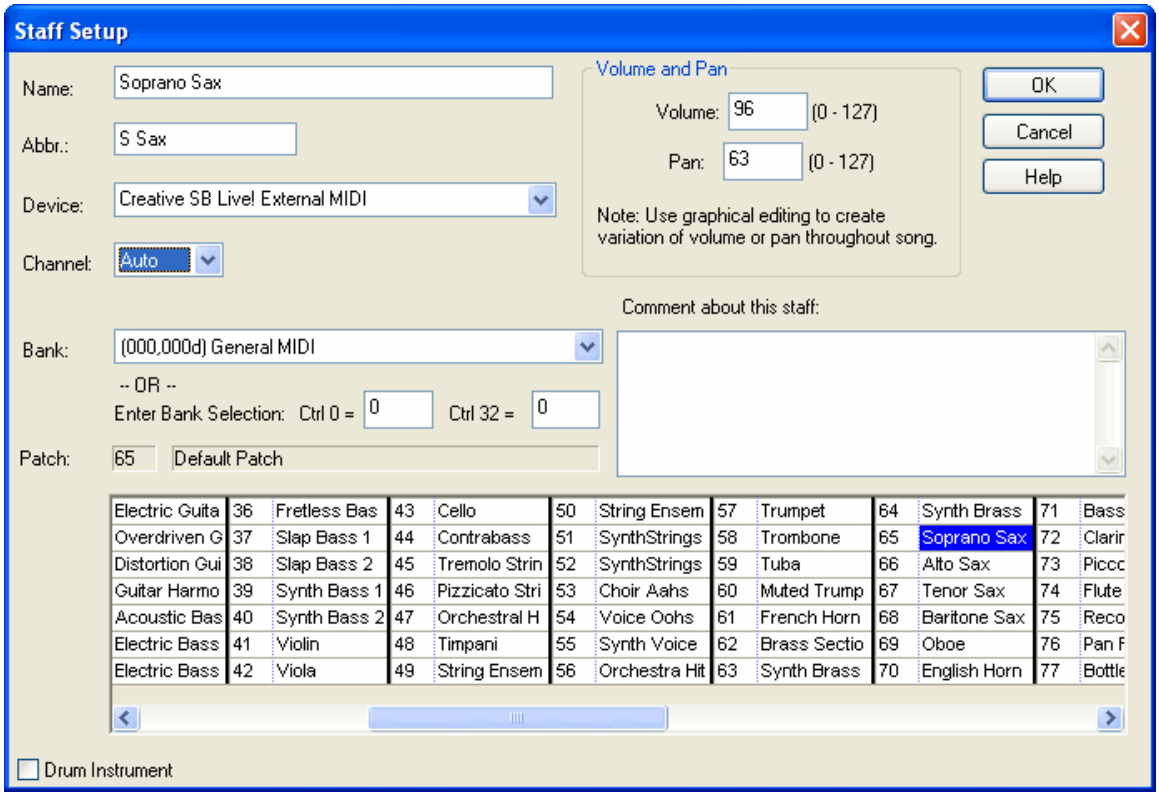
   If you do not wish to display the staff controls, use the right mouse button to click any empty area in the staff's staves.

   Musician will display a pop-up menu such as illustrated here:



   In the pop-up menu, choose the Instrument Sound command.

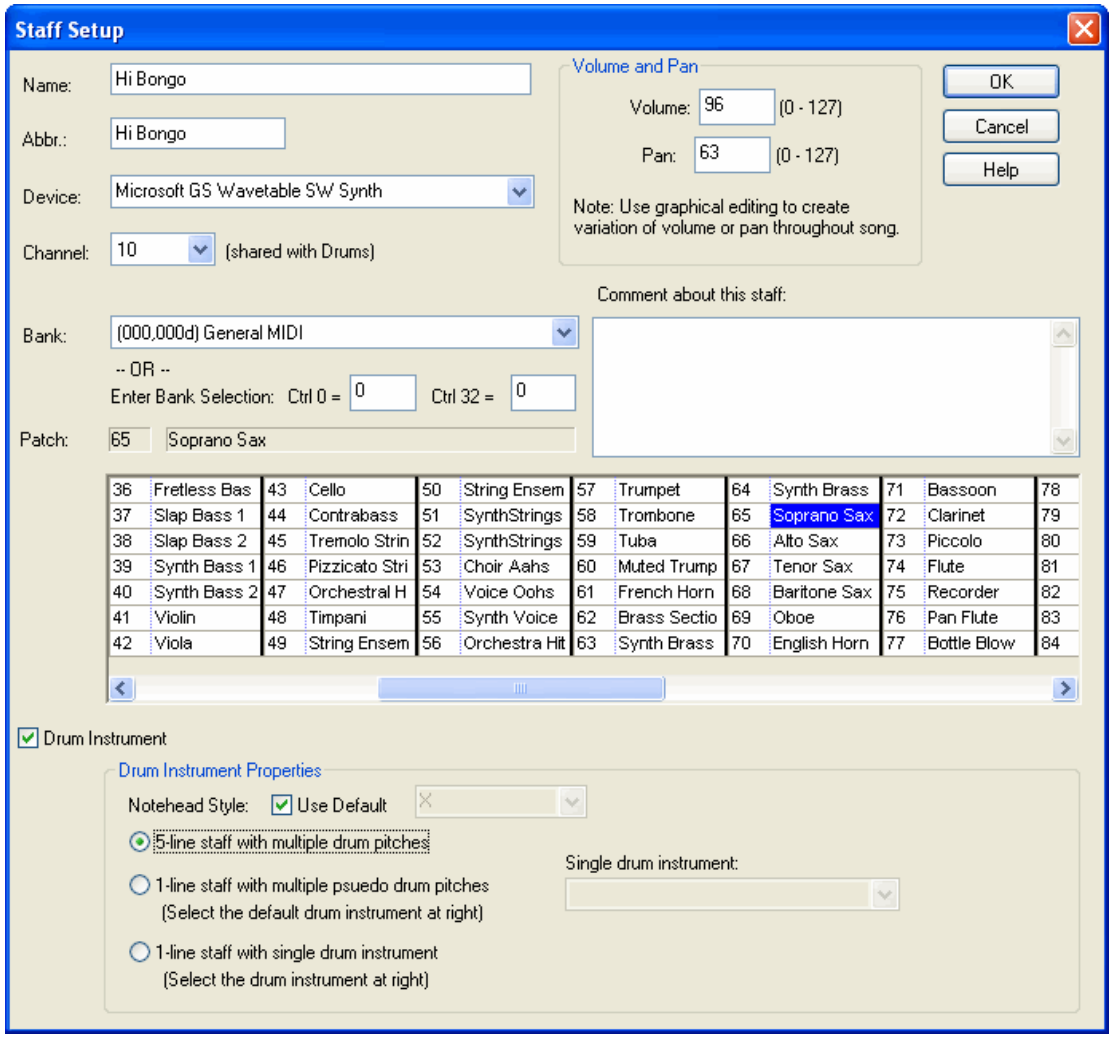
   Musician will display the Staff Setup dialog, such as shown below. The most important setting that determines the sound of a staff is the "instrument sound". Select the instrument sound from the list at the bottom of the window.



3. Choose a device 468 from the list of choices. The available devices will be those MIDI output devices in the current MIDI device configuration.
4. Choose a MIDI channel, 1 to 16, or Auto Channel. Here are some important guidelines in choosing the right MIDI channel:
   - If the MIDI file plays well, and you only intend to change the patch for a staff, then you probably should not change the MIDI channel.
   - If the device is a General MIDI (GM) 482 device, and the staff is intended to play General MIDI drum sounds, then assign channel 10.
   - If your song has more than 16 staves that must share the same MIDI output port, then assign all of the staves to Auto Channel. One exception is that the General MIDI drum staff must still be assigned to channel 10. For more information, see Assigning Auto Channel 166.
5. Choose a bank from the list of choices, which will depend on the type of device selected.
6. Choose an instrument sound from the Patch table. The list of available patches will depend on the type of device and specific bank selected.

   TIP: To search for an instrument sound, click anywhere in the list of patch names. Then type the first letter of the instrument name, such as "V" for Viola. If another instrument is selected, such as "Violin", then type "V" again for the next instrument name that begins with that letter.
7. If this staff is for one or more drum instruments, then following these steps:

(a) Set a check mark by Drum Instrument. The bottom of the Staff Setup dialog box will expand, offering extra choices for the drum instrument:



If the playback device is a General MIDI (GM) device, then channel 10 will be automatically assigned-- the standard channel for GM drum tracks.

The patch selection will remain unchanged. For GM devices, you can ignore the patch selection.

(b) For some devices, select from the Patch list a patch that specifies one of possibly several available "drum kits". For other devices, it does not matter which patch you select. For more information about this, see Managing Drum Note Lists 492.

(c) Choose one of the following three options for 5-line or 1-line drum staff:

5-line staff with multiple drum pitches: Use this for a "drum kit" that assigns pitches to distinct drum sounds. For example, the General MIDI drum kit specifies the "Hi Bongo" drum sound for pitch 60 (middle-C), and "Tambourine" sound for pitch 54 (F# below middle-C). The pseudo drum pitches are indicated on a treble or bass clef staff, like normal pitches. A pseudo drum pitch might have an accidental. Note,this version of **Musician** does not offer a option with which you can reassign drum instruments to specific lines of the 5-line drum staff.

1-line staff with multiple pseudo drum pitches: This option collapses a 5-line drum staff into a 1-line drum staff. The distinct drum sounds are still heard during playback. But the 1-line staff places the noteheads all on the same single staff line.

1-line staff for this drum instrument: The 1-line drum staff plays a single drum instrument sound for a specific pseudo drum pitch in the drum kit.

(d) If you choose either of the two 1-line staff options, then choose the drum sound, that is, one the *drum notes* that has been specified for this device. For information about how to configure drum notes for a device, see Managing Drum Note Lists 492

(e) Optionally, choose a percussion notehead style for the drum staff.

8. Click the OK button to complete the assignment of the instrument sound to the selected staff.

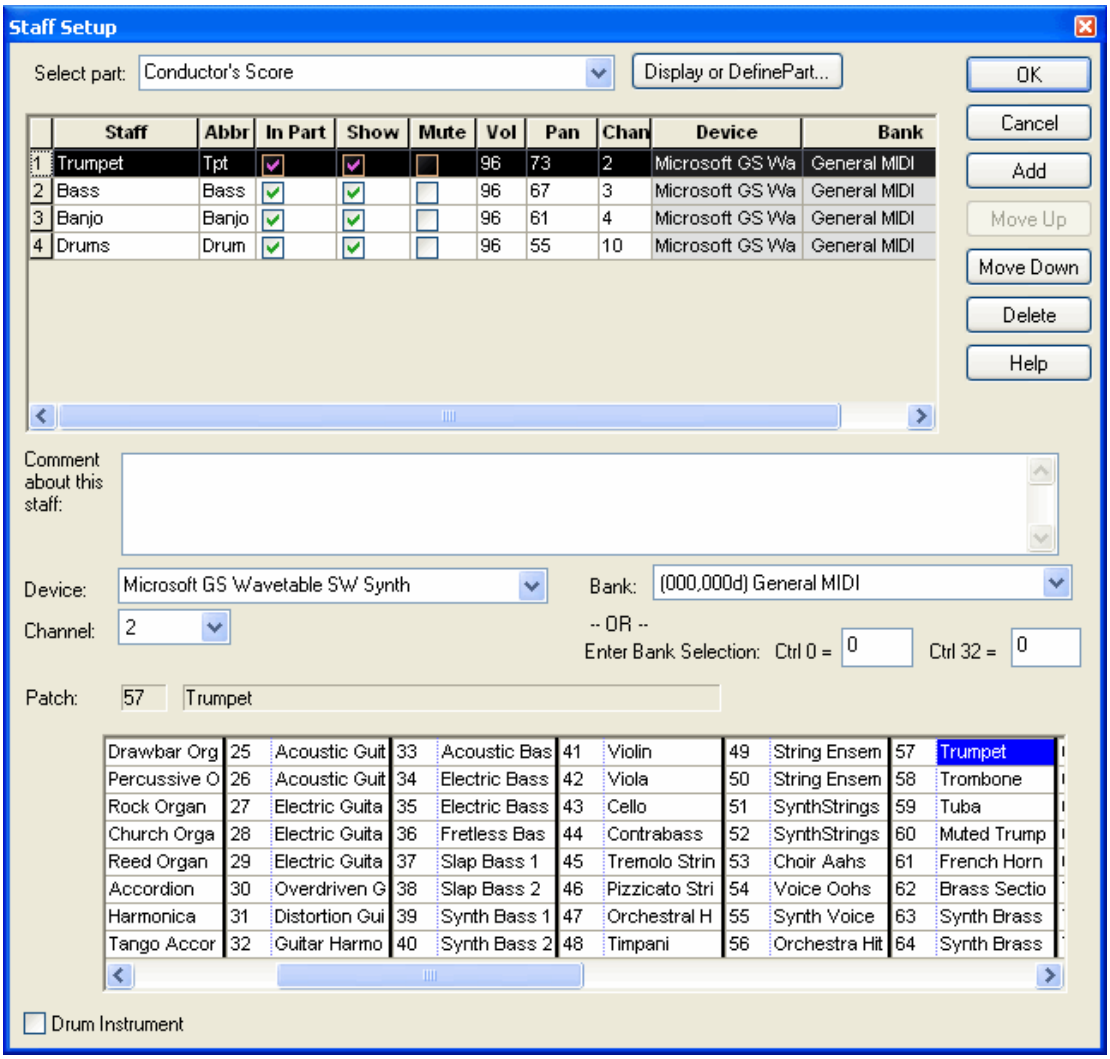
To change the instrument sounds for several staves at a time:

1. Choose the Staff Setup command from the Staff menu.

   -- OR --

   Type "qsus" for Quick Set Up Staves.

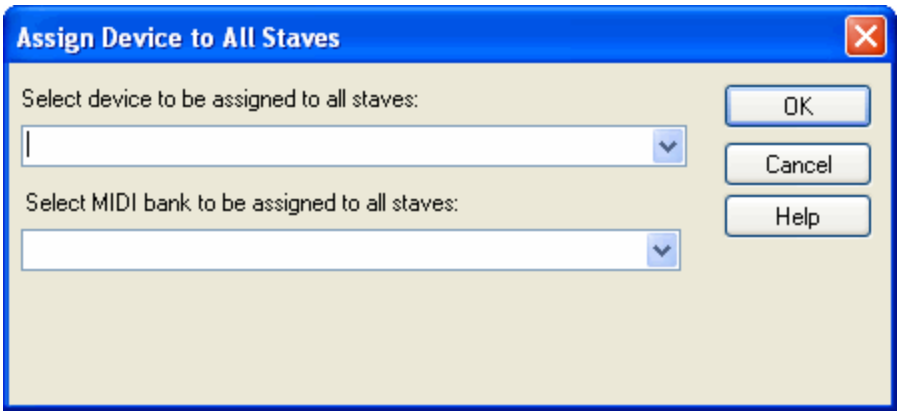
   Musician will display a Staff Setup window, such as the following:



2. Each row in the Staff Setup table offers the same choices as those described above for the single staff setup procedure: device, channel, bank, and patch. When you click one of the cells, **Musician** will display a list of choices for the device, channel, bank, or patch.
3. Click the OK button to complete the new sound assignments.

To assign all staves to the same device and MIDI bank:

1. Choose the Staff Setup command from the Staff menu. **Musician** will display a Staff Setup window, such as shown above.
2. Click the column header for Device. **Musician** will display the following dialog box:



3. Select the device and MIDI bank to be assigned to all staves, and click the OK button.

   Note, non-General MIDI patches generally differ among alternative devices and MIDI banks. Therefore, after you assign the new device and bank, you will also probably need to reassign patches on a per-staff basis.

To automatically reassign staves to a new default MIDI device when you reopen Notation .not files:

- See Changing the Default Playback Device 437.

4.2.5 Assigning MIDI Channels

In the Staff Setup 161 dialog, you can assign a staff either to a specific MIDI channel, 1 to 16, or to Auto Channel. When a staff is assigned to Auto Channel, **Musician** may assign different notes in the same staff to different MIDI channels during playback. Auto Channel is explained later in this topic.

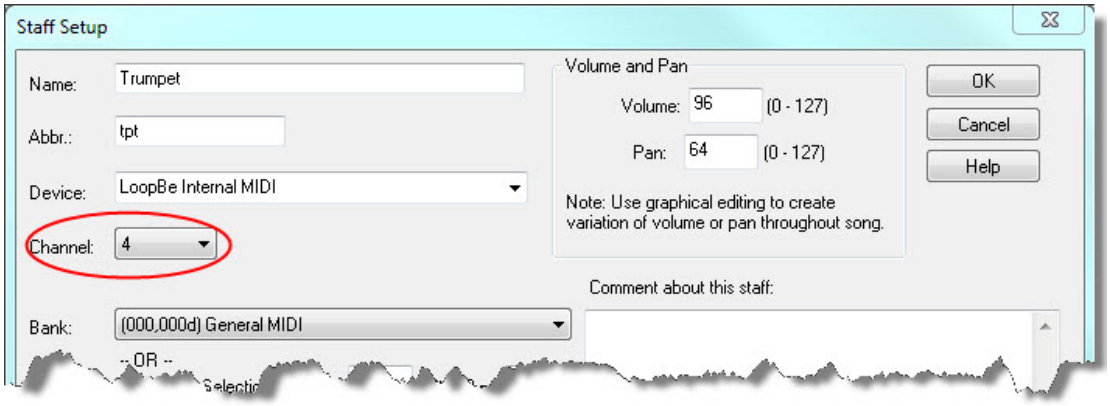
To change the MIDI channel for a single staff:

1. If the staff controls are visible, click the Instrument Sound  button. To display the staff controls, choose the Show Staff Controls command in the View menu, or type "qssc for Quick Show Staff Controls.

   -- OR --

   While holding down the 'S' key, click anywhere in a staff of the staff. **Musician** will display a pop-up menu. Choose the Instrument Sound command in the pop-up menu.

2. **Musician** will display a Staff Setup dialog, such as the following:

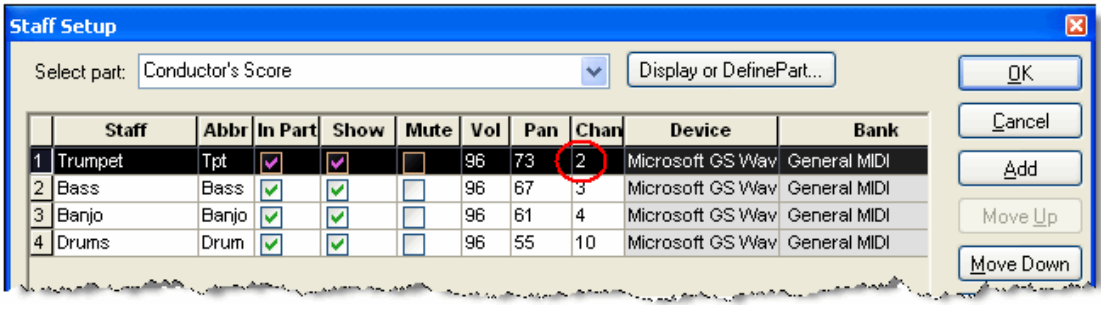


3. In the Staff Setup dialog, select a channel number, 1 to 16, or select "Auto" for automatic channel assignment. Automatic channel assignment is explained below. For General MIDI devices, assign channel 10 to drum staves.

To change the MIDI channel for several staves at a time:

1. Choose the Staff Setup command from the Staff menu.

   Musician will display a Staff Setup window, such as the following:



2. For each staff row, click the Channel cell. In the Channel cell, select a channel number, 1 to 16. For General MIDI devices, assign channel 10 to drum staves.
3. Click the Exit button to complete the new channel assignments.

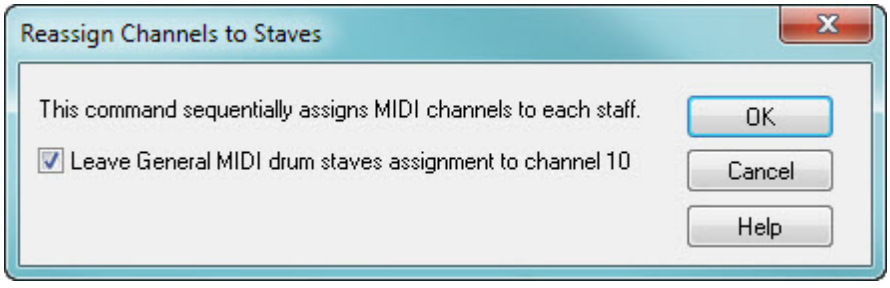
To assign MIDI channels to all staves in one step:

1. Choose the Staff Setup command from the Staff menu.

   Musician will display a Staff Setup window, such as illustrated above.

2. Click the Channel column header.

   Musician will display the following dialog box:



3. If you click "Ok", then channel 1 will be assigned to the first staff, 2 to second, and so forth; but channel 10 will be skipped if the lower checkbox has a check mark. Using this method of assigning channels to staves all at once can be

useful if you have a single MIDI playback device, but the original file used multiple devices and had the same channel numbers assigned to multiple staves.

4.2.6 Cloning a Staff

Sometimes you may want to clone (copy) an entire staff, such as to back up a staff before you experiment with some new musical ideas for that staff. The procedure for cloning a staff is simple.

To create a new staff as a copy of another:

1. If the staff controls are visible, then click the Staff Selection button to select the first staff:

2. Choose the Clone Staff command from the Staff menu.

   Musician will display the Clone Staff dialog box.

3. In the Clone Staff dialog box, confirm the staff you selected in step #1.

   -- OR --

   Select a staff that you wish to copy.

4. If you are cloning the staff for backup purposes, then you will likely want to mute the newly cloned staff. See Muting and Soloing Staves 104 for instructions.

4.2.7 Merging Staves

Sometimes you may find it useful to merge two or more staves. For example, some MIDI files for Baroque keyboard pieces assign a separate staff to each voice in a hand, rather than just a right- and left-hand staff. You will want to merge these staves into a single staff, and then use the Split Hands 171 command to separate the now single staff into right- and left-hand staves.

If you intention is to produce a piano reduction of a score of multiple instruments or vocal parts, then you can use the Prepare Piano Reduction command in the Part menu. It basically combines the Merge Staves command and the Split Hands command into one easy step. For details, see Preparing a Piano Reduction of a Score 190.

When **Musician** merges staves, it merges both the underlying MIDI performance and the visible notation. The merging of the notation can become complicated. For example, if one staff has triplets, and another quintuplets, and another dotted rhythms, the merging of the rhythms could result in more than the maximum of two voices (upper and lower voices with stems pointing up and down) supported by **Musician**. In this case, **Musician** attempts to simplify the displayed rhythms; but it will not change the underlying MIDI performance-- the actual timing of the played notes.

To merge two or more staves:

1. If the staff controls are visible, then click the Staff Selection button to select the first staff.

Then while holding down the SHIFT key, click the Staff Selection  button for another staff. These two staves and all of the staves in between will be selected.

2. Choose the Merge Staves command from the Staff menu.

   -- OR --

   Type "qms" for Quick Merge Staves.

   Musician will display the Merge Staves dialog box.

3. In the Merge Staves dialog box, confirm the staves you selected in step #1.

   -- OR --

   Select the staves that you wish to merge.

4. Also, in the Merge Staves dialog box, you may wish to click the Transcription Options button. The transcription options will apply to the newly merged staff. The determine whether:

   - Standard versus jazz (swing) rhythm notation will be used.
   - Single voices or split (upper and lower) voices will be detected and notated.
   - Overlaps of notes will be removed to reduce the number of ties in the score.
   - Rests smaller than a specified size (quarter, eighth, or sixteenth) will be removed.
   - Grace notes, trills and tremolos will be detected and notated.

   For details about these options, see Transcription Options 73.

5. Click the OK button.

   Musician will merge the selected staves.

4.2.8 Adjusting Per-Staff Volume Level and Left-to-Right Pan

You can independently adjust the volume level and left-to-right pan for each staff. Adjusting the left-to-right pan is similar to setting the balance between the left and right speakers on a stereo audio system.

The range of volume level is 0 to 127. This is the "MIDI channel volume", controlled by MIDI controller number 7.

The range of the left-to-right pan value is also 0 to 127. This is the "MIDI pan", controlled by MIDI controller number 10.

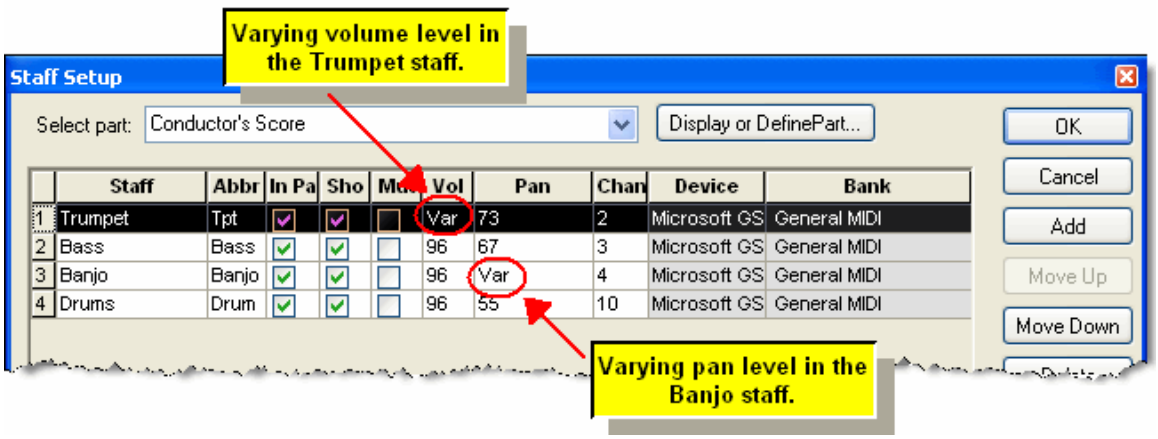
Musician lets you temporarily adjust the volume of one or more selected staves during playback. See Adjusting Volume of Selected Staves During Playback 105.

You should be aware that some sound card drivers cleanly separate sounds into the left and right speakers when you assign the maximum left and right values, 0 and 127. Other sound card drivers bleed the sounds to some degree between the left and right speakers, even when the maximum left and right values (0 and 127) are used. Other sound card drivers do not support left-to-right pan at all.

The staff for an imported MIDI file may have varying per-staff volume and pan values throughout the song.

To determine whether a staff has a constant volume level or left-to-right pan, versus a varying volume or pan throughout the song:

1. Choose the Staff Setup command from the Staff menu. **Musician** will display a Staff Setup window, such as the following:



2. Observe the values in the Volume and Pan columns of the Staff Setup table for each staff. A number for the volume or pan indicates that the staff has a constant value for the volume or pan throughout the entire song. If the value is displayed as "Var" (for "varying") then the volume or pan changes at one or more places in the song.

To change the volume level or left-to-right pan for one or more staves:

1. Choose the Staff Setup command from the Staff menu, as above.
2. For each staff row, click the Volume or Pan cell. In the Volume or Pan cell, enter a value 0 to 127.

> **NOTE**: If the value was "Var" and you enter a number, then the varying volume or pan level will be replaced with a constant level throughout the entire song. Once you have entered a number, you cannot restore the varying volume or pan levels in the song by typing "Var" back into the table cell. To restore the varying volume or pan level, hit the Cancel button to exit the dialog box without saving the changes.

3. Click the OK button to complete the new volume or pan assignments.

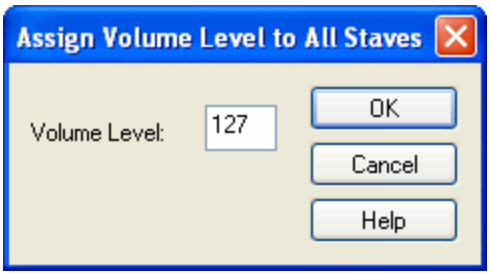
To assign a volume level or left-to-right pan value to all staves in one step:

1. Choose the Staff Setup command from the Staff menu.

   Musician will display a Staff Setup window, such as illustrated above.

2. Click the column header for Volume or Pan.

Musician will display the following dialog box (or a similar one for Pan):



3. Enter a value from 0 to 127.

4.2.9 Transposing a Staff

If you wish to transpose the as-notated pitches according to the natural key or clef of the instrument, then use the Transpose Instrument Key 289 command in the Staff menu.

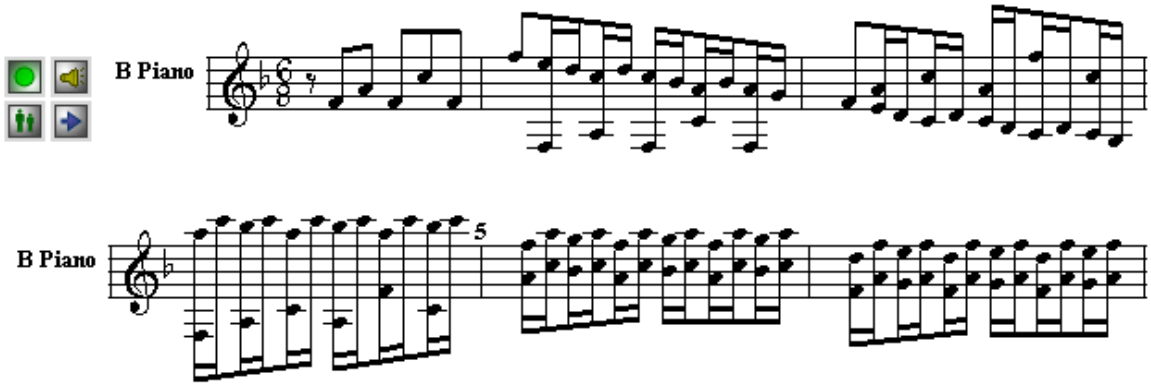
4.2.10 Splitting Staves

Musician offers the following commands in the Staff menu to split a staff into two or more staves, with certain ways of distributing the notes between the staves:

- If a piano or keyboard staff combines the notes for both the right and left hands, then use the Split Hands 171 command to divide the notes into right- and left-hand staves.
- A MIDI file normally combines the notes for all drum instruments on one staff, and misrepresents the notes as pitches on a 5-line staff. You can use the Split Drums 173 command to divide the percussion notes into separate one-line staves per each instrument.
- If a staff combines a melody and accompaniment, use the Split Melody and Accompaniment 175 command to separate them into two staves.

4.2.10.1 Splitting a Staff into Right- and Left-Hand Staves

In a MIDI file, the notes for a keyboard instrument are often kept in one staff, combining the notes of both the left and right hands. When **Musician** first transcribes the keyboard staff, it might display the notes for both hands in a single staff, such as the following:



At your request, **Musician** will split the notes into left- and right-hand staves. **Musician** makes intelligent guesses about the distribution of notes between the two hands, based on an analysis of hand positions, finger positions, and hand motions. If

Musician makes an error in determining which hand a particular note is assigned to, you can easily reassign it to the other hand.

> **TIP**: You can instruct **Musician** to automatically recognize tracks in imported MIDI files that probably need to have the Split Hands command applied. Use the Transcriptions Option command in the Setup menu, and set a check mark for the automatic recommendation named: "Keyboard staff probably should be split into RH and LH staves." For more information, see Transcription Options 73.

To split notes in a keyboard staff into left- and right-hand staves:

The remaining steps of this procedure will replace the original staff that you are splitting. If you want to preserve a copy of the original staff, then use the Clone Staff 168 command in the Staff menu to make a copy of the staff.

1. If the staff controls are visible, then click depress the Staff Selection  button to select a staff.

   If the staff controls are not visible, you can make them visible by choosing the Show Staff Controls option from the View menu.

2. Choose the Split Hands command from the Staff menu.

   -- OR --

   Type "qsplh" for Quick Split Hands.

   Musician will present you with the Split Hands dialog box.

3. In the Split Hands dialog box, confirm the staff you selected in step #1, or select a staff.

4. Also, in the Split Hands dialog box, you might wish to click the Transcription Options button.
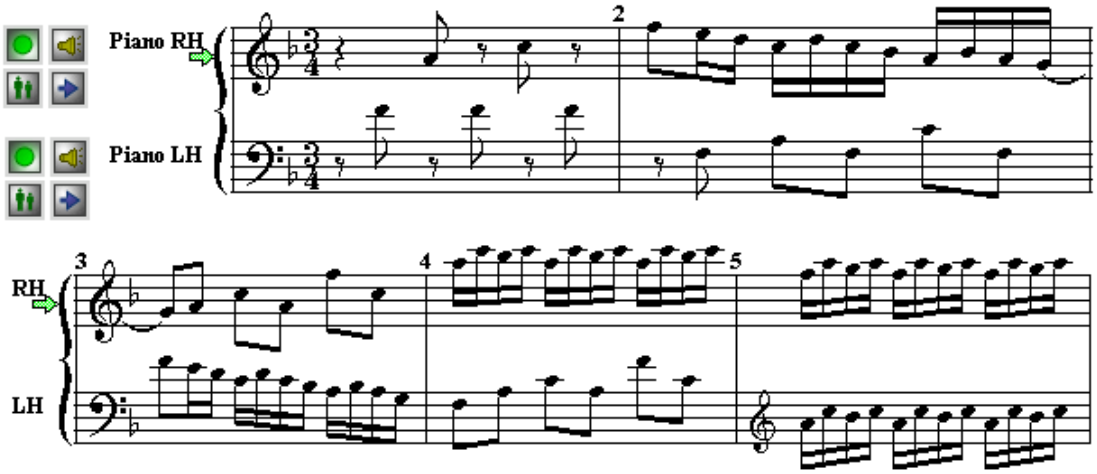
   The transcription options will apply to the two newly created right- and left-hand staves, and determine whether:

   - Standard versus jazz (swing) rhythm notation will be used.
   - Single voices or split (upper and lower) voices will be detected and notated.
   - Overlaps of notes will be removed to reduce the number of ties in the score.
   - Rests smaller than a specified size (quarter, eighth, or sixteenth) will be removed.
   - Grace notes, trills and tremelos will be detected and notated.

   For details about these options, see Transcription Options.

5. Click the OK button to confirm the Split Hands command.

   Musician will replace the single selected staff with two staves, one for the left hand and one for the right hand. It will also add a brace along each pair on the left side of the right- and left-hand staves. For the above example, the result will look like this:
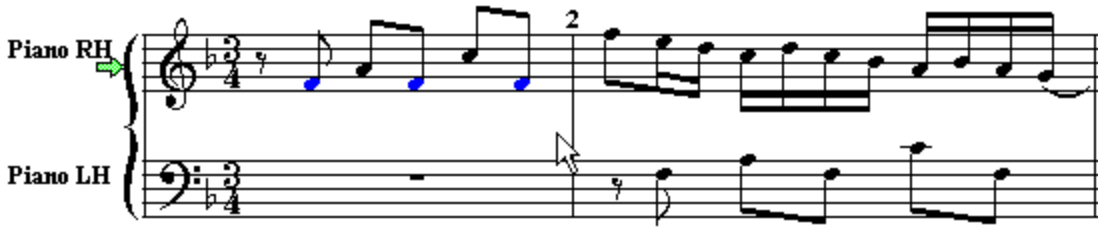


You might notice that the first measure distributes the notes between the left- and right- hands differently than as scored by Bach. Of course, Bach is right, and **Musician** is wrong. You can quickly correct such mistakes.

To correct the placement of one or more notes between the right- and left-hand staves:

1. Select one or more notes 239: Click a note with the mouse. Or click and drag the mouse cursor across multiple notes. Or click one note with the mouse, and to select additional separate notes, hold down the SHIFT key while clicking them.
2. While holding down the SHIFT key, hit the ↑ key to move the selected note(s) from the left-hand staff to the right-hand staff above, or the ↓ key to move the note(s) down to the next staff.

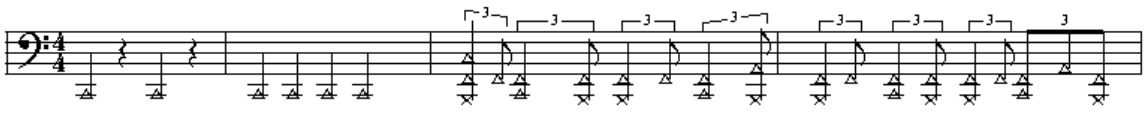
Here is what the same example looks like after the three notes in the left hand of the first measure are selected and then moved to the right-hand staff with SHIFT+ ↑:



4.2.10.2 Splitting the Drum Staff into Individual Drum Staves

In MIDI files, the notes for drum kit instruments are typically kept in a single staff. Even though most percussion instruments do not have pitches, the various instruments are assigned unique pseudo pitches to distinguish the multiple percussion instruments that can be simultaneously playing in a staff. To learn about viewing and editing the drum note pitches for a MIDI device, see Managing Drum Note Lists 492.

When **Musician** first transcribes a percussion staff, it will display the drum notes as though they have pitches, as illustrated here:



NOTE: Most drum sounds do not have pitches. However, in MIDI files, different types of drum sounds are distinguished by pseudo pitches. Instead of displaying sharps and flats in front of the drum notes, **Musician** uses a upward ▵ triangle to indicate that the pseudo drum pitch is to be raised by a sharp, and a downward ▿ triangle to indicate that the pseudo drum pitch is to be lowered by a flat.

A drum player will not want to try to play from a part notated like the above. The drum player will prefer to play from a part in which the notes for each instrument are displayed on a separate staff line.

Musician offers an easy way for you to change a drum pitch staff such as the above to one or more single-line staves, one per each unique percussion instrument.

To split a drum note pitch staff into single-line staves, one per each drum instrument:

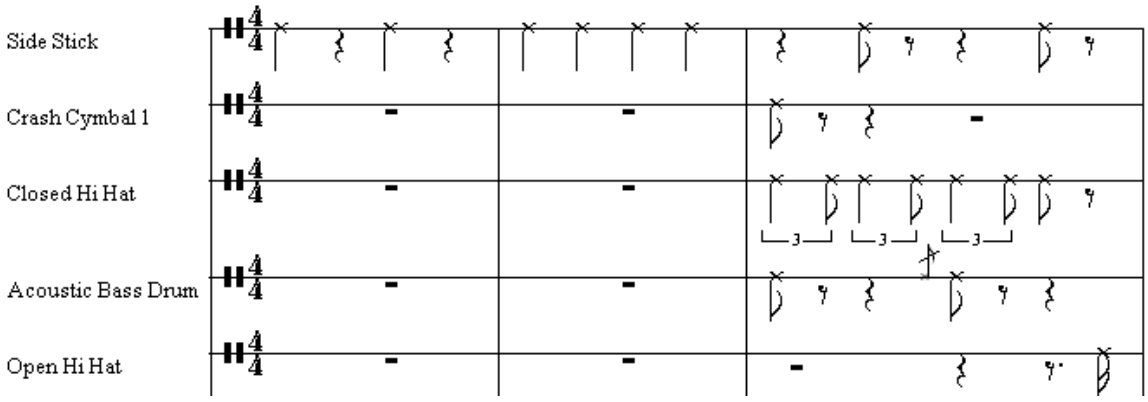
1. The remaining steps of this procedure will replace the original staff that you are splitting. If you want to preserve a copy of the original staff, then use the Clone Staff 168 command in the Staff menu to make a copy of the staff.
2. If the staff controls are visible, then click the Staff Selection button to select a staff. If the staff controls are not visible, you can make them visible by choosing the Show Staff Controls option from the View menu.
3. Choose the Split Drums command from the Staff menu.

   -- OR --

   Type "qspld" for Quick Split Drums.

   Musician will present you with the Split Drums dialog box.
4. In the Split Drums dialog box, confirm the staff you selected in step #1, or select a staff.
5. Click the OK button to confirm the Split Drums command.

   Musician will replace the original drum staff with one or more staves, one per each unique percussion instrument. For the above example, the result will look like this:



Musician will assign each percussion instrument the instrument name (such as "Side Stick") that is associated with the pseudo pitch of the drum sound. For more information, see Managing Drum Note Lists 492.

4.2.10.3 Splitting a Staff into Melody and Accompaniment

Sometimes it is useful to split the notes in a staff into two staves, one for melody notes and a second staff for accompaniment notes. For example, you might want to do this to prepare a melody vocal staff to which you will add lyrics.

To split a staff into two staves with melody notes and accompaniment notes:

1. The remaining steps of this procedure will replace the original staff that you are splitting. If you want to preserve a copy of the original staff, then use the Clone Staff 168 command in the Staff menu to make a copy of the staff.

2 If the staff controls are visible, then click depress the Staff Selection button to select a staff. If the staff controls are not visible, you can make them visible by choosing the Show Staff Controls option from the View menu.

3 Choose the Split Melody and Accompaniment command from the Staff menu.

-- OR --

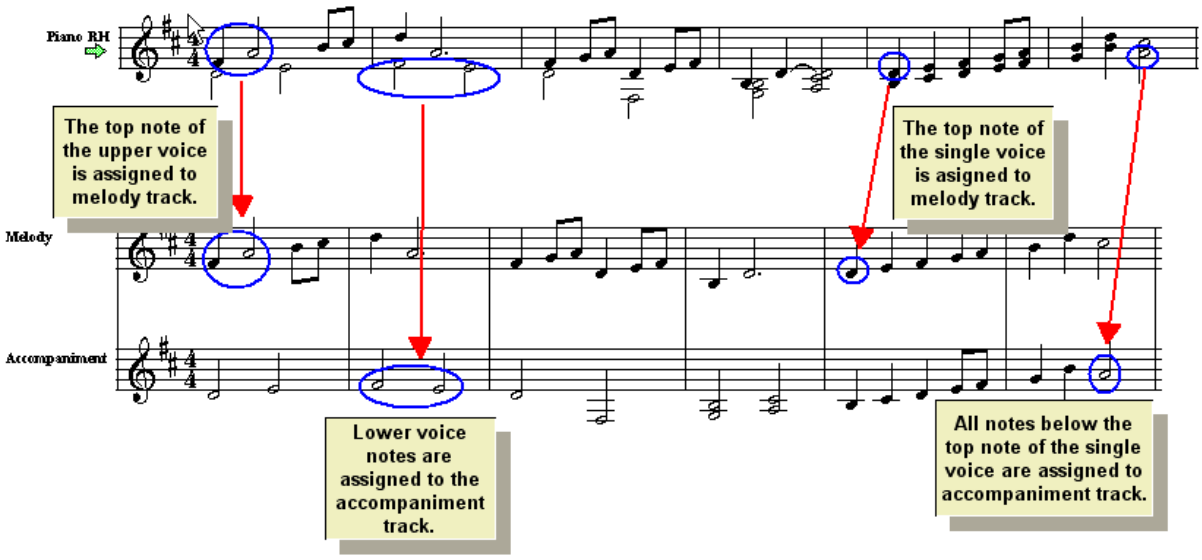
Type "qsplm" for Quick Split Melody.

Musician will present you with the Split Melody and Accompaniment Notes dialog box.

4 In the dialog box, confirm the staff you selected in step #1, or select a staff.

5 Click the OK button to confirm the Split Melody and Accompaniment Notes command.

Musician will replace the original staff with a pair of melody and accompaniment staves, as illustrated below:



4.2.11 Splitting Double-Played Notes from Solo Instrument

When **Musician** transcribes a track from a MIDI file, it makes many decisions about the timing of notes, including whether two notes are played together or not. For some instruments such as a piano, guitar, and violin, it is possible to play two notes simultaneously. For other instruments, such as an oboe or saxophone, it is not possible for two notes to be played at the same time.

Musician offers two way to clean up a staff for single-note instruments.

To split double-played notes in the staff for one or more solo instruments:

1. Choose the Convert to Solo Notes command in the Format menu.
2. In the Convert Staff to Solo Notes dialog box, select one or more staves.

To instruct Musician to recognize solo instrument staves (tracks) in imported MIDI files and automatically split double-played notes:

1. Choose the Transcription Options command in the Setup menu.
2. Under the Automatic Recommendations section, set a check mark for "Two-note chords in a staff that has mostly solo notes should be sequenced as two separated notes."

   When **Musician** detects a solo track, it will give you an opportunity to confirm that the double-notes in the staff should be split.

4.2.12 Rearranging the Order of Staves

If you have imported a MIDI file, **Musician** orders the staves in the score according to how they were ordered in the MIDI file. If you are not pleased with the order of the parts, you can change the order. If you have created multiple parts and then rearrange the order of staves, the new order of the staves will be applied to all parts, not just the part you are currently viewing.

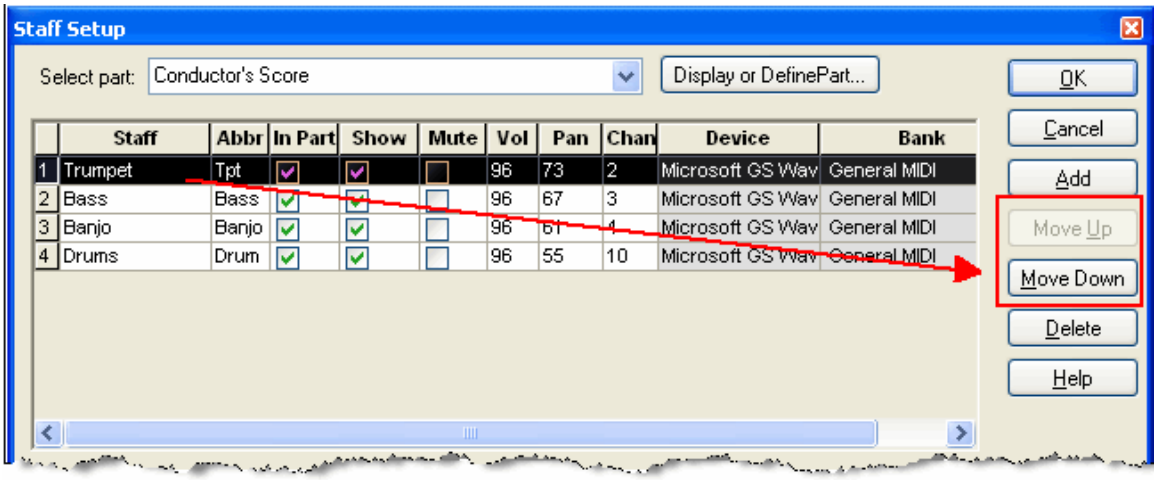
To change the order of the staves:

1. Choose Staff Setup from the Staff menu.

   -- OR --

   Type "qsus" for Quick Set Up Staves.

   Musician will display the Staff Setup dialog box, filled out with a list of staves as illustrated below:



2. The order of the staves in the top panel determines the order of printing of parts in the conductor score. To move a part up or down in the conductor score, click the staff name, and then click the Move Up or Move Down button.
3. Click the OK button to commit the changes.

4.2.13 Shifting Notes Between Staves

Musician lets you move selected notes between adjacent staves. This option is particularly useful after you have used the Split Hands 171 command to split a keyboard part into left- and right-hand staves. Although **Musician** does a good job splitting hands, it may not do it perfectly. **Musician** lets you correct any mistakes the Split Hands command might make in distributing notes between the left and right hands.

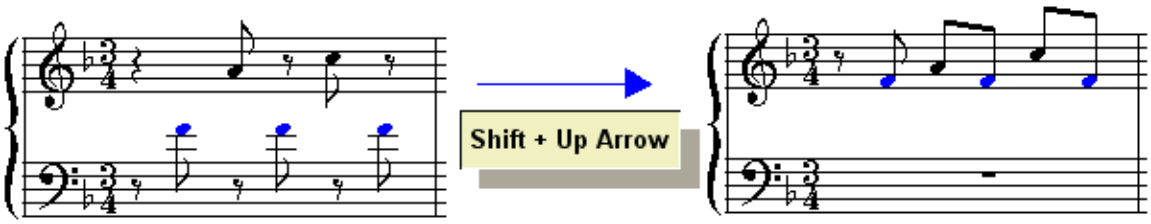
You can optionally change the voice (upper, lower, or single voice) of a note at the same time that you shift it to an adjacent staff.

To move one or more notes between adjacent staves, without changing the voice:

1. Mouse over a note and click select it when it turns red. The note will now turn blue to show that it is ready to be edited.
2. Select one or more notes by clicking or click-dragging the mouse.
3. Choose the Move Up One Staff or Move Down One Staff command in the Staff Assignment submenu Note menu to move the selected notes to an adjacent staff.

   -- OR --

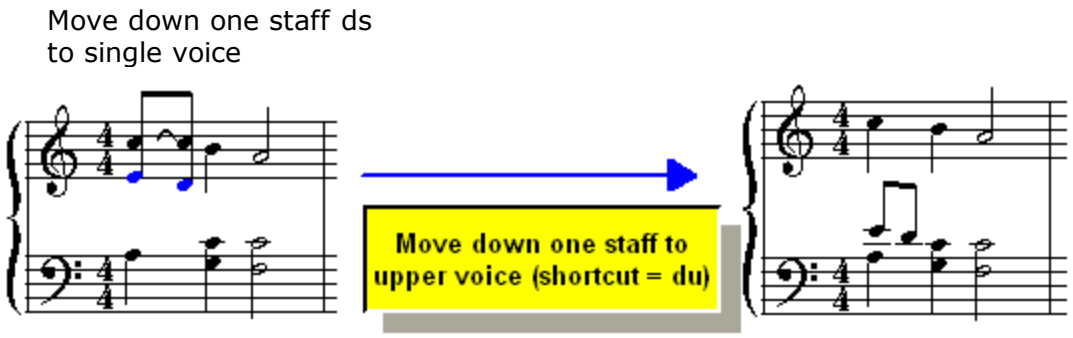
   Type Shift+↑ (or Shift+↓) for Move UpOne Staff (or Move Down One Staff).



To change the voice of one or more notes while moving them between adjacent staves :

1. Enter Select Mode 133 or just mouse over a note and select it to enter Select Mode.
2. Select one or more notes by clicking or click-dragging the mouse.
3. Choose the one of the following commands in the Staff Assignment submenu Note menu, or type its equivalent shortcut:

Command	Shortcut
Move up one staff to lower voice	ul
Move up one staff to upper voice	uu
Move up one staff to single voice	us
Move down one staff to upper voice	du
Move down one staff to lower voice	dl



4.3 Preparing Parts

In Musician, a part is a set of one or more staves throughout the song, that are viewed or printed together. In the simplest case, a part is for a solo voice or instrument for which the musician plays from only one staff at a time, such as an oboe or saxophone. Another case is a part for a keyboard instrument that has two staves for the right- and left-hands. In Musician, the conductor's score, which shows staves for all of the instruments and/or voices, is treated as a part.

A part can be formatted and paginated independently of other parts, and independently of the formatting of the conductor's score.

A given staff can be displayed in more than one part. For example, usually a staff is shown in both the conductor's score and a separately formatted part for just that instrument.

All of the parts of a score are integrated so that if you, for example, add a note to a staff that appears in more than one part, the note is automatically added to all of the parts. If you add a note in the conductor's score, that note also shows up in the instrument part that the staff belongs to. Or, if you add a note in the instrument part, that note will automatically show up in the conductor's score.

If you have not done so yet, it is highly recommended that you read the topic Understanding Staves, Staves, and Parts 156.

This section on Preparing Parts is organized as follows:

- Automatically Creating Parts
- Adding a Part
- Selecting a Part
- Renaming a Part
- Changing Which Staves Are Displayed in a Part
- Deleting a Part
- Printing Parts
- Wizard for Preparing a Part 183
  - -- Sing-Along Part 185
  - -- Easy Notes Part 186
  - -- Fake Lead Sheet Part 186
  - -- Customized Part
- Preparing Parts for Piano, Voice, Drums and Guitar 189

-- Preparing Piano or Keyboard Part 189
-- Preparing Piano Reduction of a Score 190
-- Preparing a Vocal Part 191
-- Preparing a Drum Part 192
-- Preparing a Guitar Part 194

4.3.1 Automatically Creating Parts

Musician automatically creates parts under the following circumstances:

- When you import a MIDI file 70, one part is created for each track, except for tracks with no notes. Said another way, one part is created for each staff in the score. Also, a conductor's part is created, which has all of the staves.
- The Prepare Part Wizard automatically creates the Sing-Along 185 part, Easy Notes 186 part, or Fake Book Lead Sheet 186 part.
- The Split Hand command 171 automatically creates a new keyboard part with the pair of right- and left-hand staves.
- The Split Drums command 173 automatically creates a new drum part has all of the split one-line percussion staves
- The Prepare Piano Reduction 190 command creates a single new keyboard part.

All of the Parts that have been created or added are visible in the Parts drop-down list 180 on the menu bar.

4.3.2 Creating a New Part

In **Musician**, a part 155 displays the staves for one or more instruments or voices. A part can be formatted and paginated independently of other parts and the conductor's score. However, any changes to notes and annotations in a part are always reflected in the conductor's score, and vice versa.

> **TIP**: Be sure to read the topic on Understanding Tracks, Staves and Parts 156.

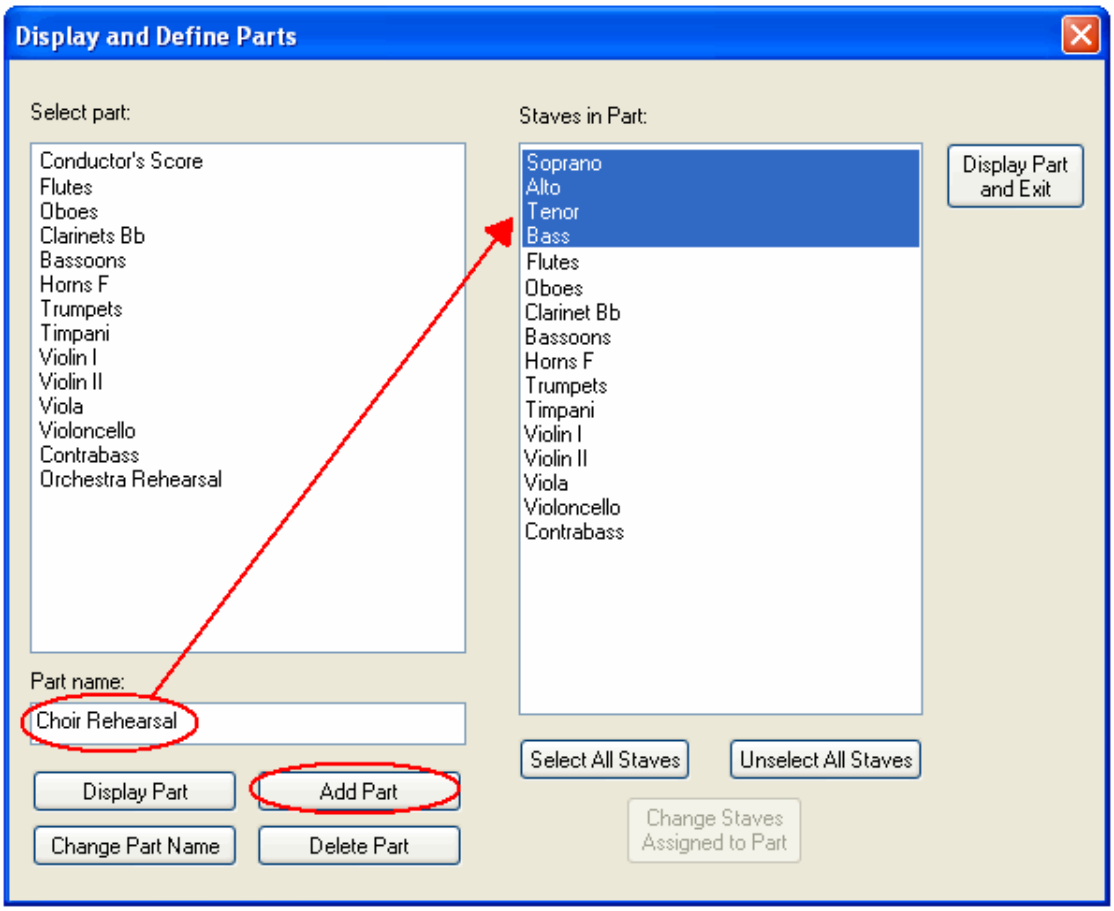
Usually, **Musician** automatically creates parts 179 for you as you import a MIDI file or prepare parts. However, there may be circumstances in which you will want to create additional parts with some combination of instrument staves that you select. For example, if you have an arrangement with a vocal choir section and instruments, you might want to prepare a separate choir section part for rehearsing the choir separately from the orchestra, and a separate orchestra section part for rehearsing the orchestra separately from the choir.

To add a new part:

1. Choose the Display or Define Part command in the Part menu.

   Musician will display the Display and Define Parts dialog box..

2. In the list of Staves in Part, select and unselect staves according to which you wish to be included in the new part.
3. In the Part Name field, enter the name for the new part.



4. Click the Add Part button.

   You can also start this procedure by first clicking the Add Part button. In that case, a new part will be created with the name "New Part". Replace that with the name you want, and then click the Change Part Name button.

5. Click the Display Part and Exit button to display the newly created part.

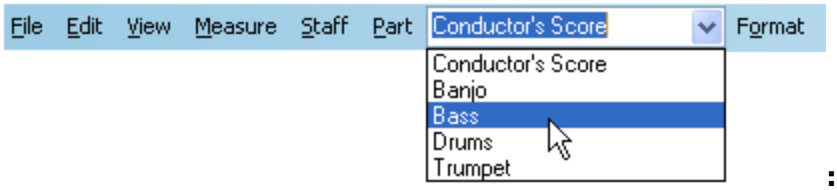
NOTE: When you add a part, **Musician** automatically applies the formatting and page text that is specified in the template file named "Extracted Part.not" in the C:\Users\Public\Documents\Notation_4\Templates directory. To control the automatic formatting and page text for extracted parts, you should directly edit this "Extracted Part.not" file, according to the procedure described in Creating Your Own Song Templates 80.

4.3.3 Selecting a Part

In **Musician**, a part 155 displays the staves for one or more instruments or voices. Usually, **Musician** automatically creates parts 179 for you as you import a MIDI file or prepare parts. You can also create additional parts 179 with some combination of instrument staves that you select.

To view a part:

- Select the name of the part from the list of parts in **Musician**'s main menu:



:

4.3.4 Renaming a Part

To rename a part:

1. Choose the Display and Define Parts command in the Part menu.
2. In the Display and Define Parts dialog box, select the part you wish to rename.
3. Enter the new name in the Part Name field.
4. Click the Change Part Name button.

4.3.5 Changing Which Staves Are Displayed in a Part

In **Musician**, a part 155 displays the staves for one or more instruments or voices.

You can create a new part 179 for some combination of staves you want to view and print together. For example, if you have an arrangement with a vocal choir section and instruments, you might want to prepare a separate choir section part for rehearsing the choir separately from the orchestra, and a separate orchestra section part for rehearsing the orchestra separately from the choir.

You can *temporarily* or *permanently* change which staves are displayed in a part. A temporary change in the list of staves that are displayed in a part lasts only as long as you are viewing that part. If you select another part 180, and then return to the former, the original list of staves for that part will be restored. Or, if you exit **Musician** and return, the temporary changes in the list of staves for that part will similarly be discarded.

To *permanently* change the list of staves in a part:

1. Choose the Display or Define Part command in the Part menu.

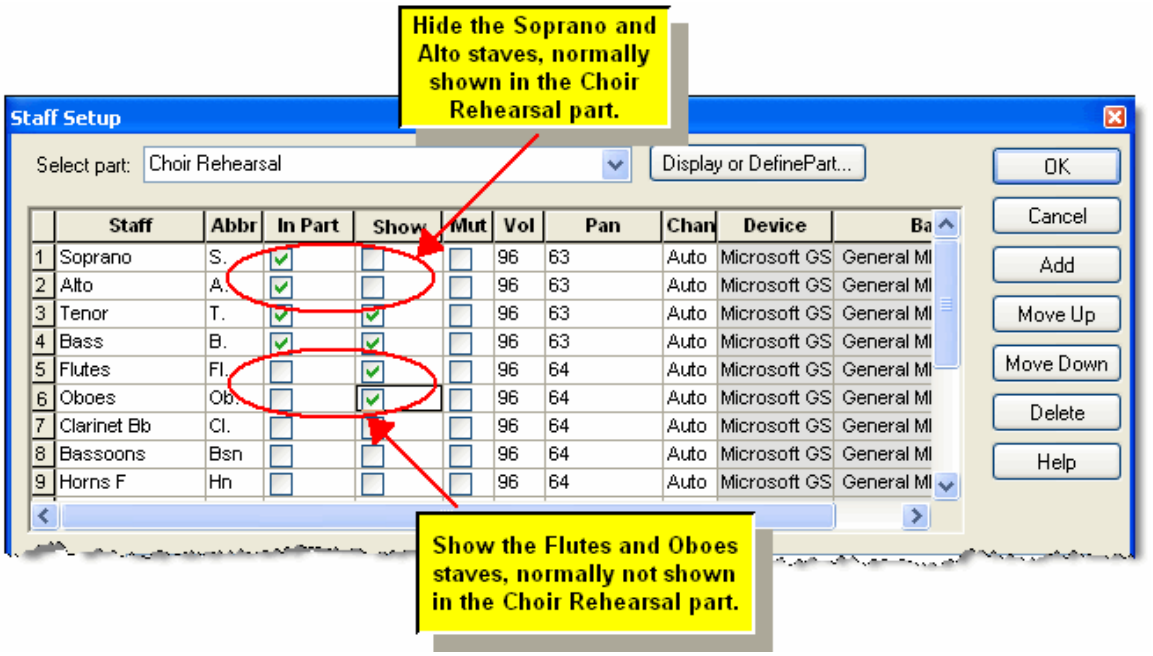
   The Display and Defined Parts dialog will be opened, as illustrated in Creating a New Part 179.
2. Select the part you wish to edit.
3. In the list of Staves in Part, select and unselect staves you wish to show and hide in the part.
4. Click the Change Staves Assigned to Part button.

To *temporarily* change the list of staves in a part:

1. Choose Setup command in the Staff menu.
2. Toggle the check mark for Show for each of the staves you wish to temporarily show or hide in the part.

NOTE: The check mark for 'In Part' indicates whether the stave is normally (permanently) included in the part. You cannot directly change the check mark

for 'In Part'. If you wish to change whether a staff is permanently included in the part, then follow the previous procedure.



4.3.6 Deleting a Part

In **Musician**, a part 155 displays the staves for one or more instruments or voices.

You may decide that you no longer need a part, even though you want to keep the staves that it displays.

To delete a part without deleting the staves that it displays:

1. Choose the Display or Define Part command in the Part menu.
2. In the Display or Define Part window, select the part you wish to delete.
3. Click the Delete Part button.

4.3.7 Printing Parts

Typically, a song has one part for each instrument and/or voice. To print each part, you can individually select each one and then use the Print command in the File menu 90.

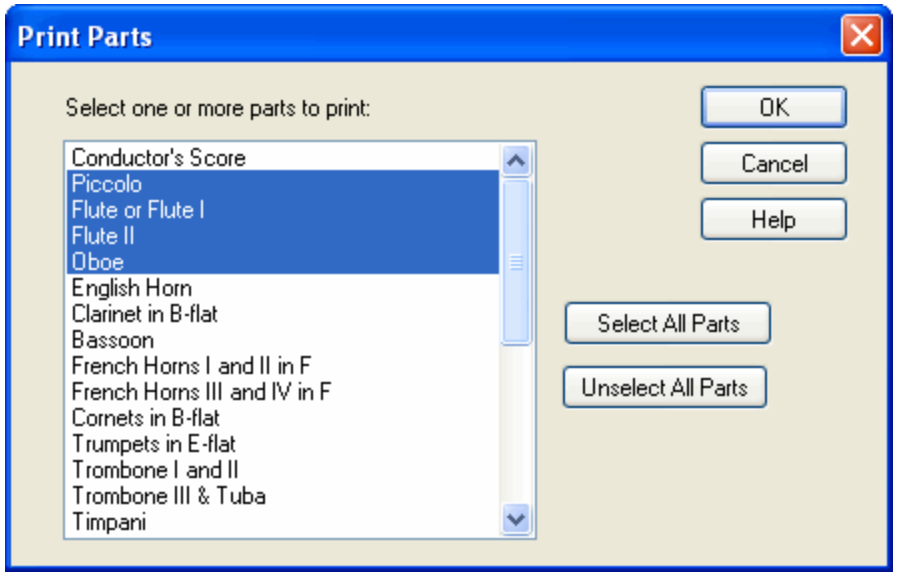
You can also print several parts at once.

To print several parts at one time.

1. Choose the Print Parts command in the File menu.

   Musician will display the simple Print Parts dialog box. Initially, all parts of the song will be pre-selected.

2. In the Print Parts dialog box, unselect any parts that you do not wish to print, by clicking the highlighted part name. Selected parts are highlighted, and unselected parts are not, as illustrated here:



3. Hit the OK button.

   Musician will display the Print dialog box.

4. In the Print dialog box, choose options the same way as you would if you were printing a single part 90.

   Note that the Print dialog box will not offer you the option to print a range of pages. The Print Parts command supports printing only of the entire range of pages of each part. For the same range of measures, each part can require a different number of printed pages. To print the parts for only a selected range of measures, use the View Measures command in the Measure menu 152.

4.3.8 Wizard for Preparing Part

In **Musician**, a part 155 displays the staves for one or more instruments or voices. A part can be formatted and paginated independently of other parts extracted from the conductor's score.

Musician 's Part Preparation Wizard offers a quick and easy way to create four standard parts with certain formatting options. These parts are named: the Sing-Along Part, the Easy Notes Part, Fake Book Lead Sheet Part, and the Chord Chart. The purpose of each of these three parts, and their formatting characteristics, are summarized in the following table:

	Sing-Along Part	**Easy Notes Part**	**Fake Book Lead Sheet Part**	**Chord Chart**
Purpose of a part.	Easy sight-reading of a Karaoke part (with notes) or vocal part	Easy sight-reading of an instrumental part, by beginner musicians.	"Short-hand" notation for the lead melody instrument of a small band, or for a keyboard	Mostly used by guitarists, to play chords while accompanying their own voice

	Sing-Along Part	Easy Notes Part	Fake Book Lead Sheet Part	Chord Chart
	from the screen from a distance of about 2 yards or meters.		instrument, where just the melody notes and chord names are displayed.	or while following the lyrics sung by another musician in the group.
Lyrics included in the part?	Yes.	Optional.	Yes.	Yes.
Just the melody notes displayed, and not the accompaniment notes?	Yes.	Yes.	Yes.	No notes are displayed.
Chord names included in the part?	No.	Yes. The chord style named "Easy Chords" is used.	Yes. The chord style named "Fake Book" is used.	Yes.
Notes displayed in a large font size?	No.	Yes.	No.	n/a
Lyrics displayed in a large font size?	Yes.	No.	No.	No.
"Easy Note" pitch letters displayed in the noteheads?	No.	Yes.	No.	n/a

The Part Preparation Wizard lets you override the default characteristics for any of these four types of parts. For example, you can include lyrics in an Easy Notes Part, or remove lyrics from a Fake Book Lead Sheet Part. The only exception is that easy notes are displayed only for the Easy Notes Part.

If you override a default setting for one of the part types, **Musician** will remember your override and use it as the default the next time you prepare a part of that type.

Musician defines another part type named the "Customized Part". You can choose whatever options you want for this part. The next time you prepare another Customized Part, **Musician** will offer the previous options you chose as defaults.

To prepare one of the special parts, or a customized part:

1. Choose the Part Preparation Wizard command in the Part menu.

   Musician will display Step 1 of the 5-step Part Preparation Wizard.

   After each step, click the Next button.

2. Select Type of Part (Step 1 of 5):
   - Choose which of the four types of parts you wish to create.
3. Lyrics Options (Step 2 of 5):
   - Optionally check the box for "Include lyrics in the newly prepared part".
   - If you have check marked lyrics, then select the staff that has the lyrics. **Musician** will pre-select the staff that has the most lyrics in it.
4. Melody Options (Step 3 of 5):
   - Select the staff that you know has the melody notes. If you selected a lyrics staff in Step 2, then **Musician** will pre-select a staff that has notes most closely matching the timing of the lyrics. **Musician**'s guess is not always correct. So, if you are certain about which staff has the melody notes, then select that staff.
   - If the melody staff has both melody notes and accompaniment notes, **Musician** will remove the accompaniment notes by default . Two other options are also available. You can keep the melody staff as it is, by not removing any melody notes. Or, you can split the melody staff into two staves, one staff having just the single line of melody notes, and a second staff with accompaniment notes. This last option is equivalent to separately using the Split Melody and Accompaniment command in the Staff menu 175.
   - This option is disabled for chord charts, which do not display melody notes.
5. Chord Names Options (Step 4 of 5):
   - Specify whether you want chord names in the part or not.
   - If you choose to include chord names, then specify how the chord names should be transcribed, and specify which staves should be used for analyzing the chord harmonies. These options are the same as for the Transcribe Chord Names command in the Format menu and Chord Name Menu. For details about the chord name transcription options, see Transcribing Chord Names 409.
6. Font Options (Step 5 of 5):
   - Select the various font sizes for notes, lyrics, and chord names.
   - Click the Finish button to complete the preparation of the part.

4.3.8.1 Sing-Along Part

You can quickly prepare a Sing-Along part, which is formatted for easy sight-reading of a Karaoke part (with notes) or vocal part off the screen from a distance of about 2 yards or meters. The Sing-Along Part includes the lyrics and melody notes, which are displayed in a large font size.

You can manually prepare a Sing-Along part in several steps, that include using: the Select Part 180 command, the Split Melody and Accompaniment 175 command; merging 168 a lyrics staff with a melody staff; the Transcribe Chord Names 409 command; and changing the font size 202 of the notes and lyrics. But it is a lot easier to do this with the Prepare Sing-Along Part command in the Part menu.

To prepare a Sing-Along part:

1. Choose the Prepare Sing-Along Part command in the Part menu.

   This will take you to Step 1 of 5 of the Part Preparation Wizard. The part type will be pre-selected to Sing-Along Part.

2. Follow the instructions for the wizard Steps 2 through 5 in the Part Preparation Wizard 183.

4.3.8.2 Easy Notes Part

You can quickly prepare an Easy Notes part for easy sight-reading of an instrumental part by beginner musicians. The Easy Notes Part displays notes in a large font size, and displays pitch letters in the middle of the notes. The Easy Notes Part displays chord names that are analyzed from the song using the "Easy Chords" chord style 409. By default, lyrics are not displayed, but have the option to include lyrics in the Easy Notes Part.

You can manually prepare an Easy Notes part in several steps, that include using: the Select Part 180 command; Display Easy Notes 211 command; and changing the font size of the notes 199. But it is a lot easier to do this with the Prepare Easy Notes Part command in the Part menu.

To prepare an Easy Notes part:

1. Choose the Prepare Easy-Notes Part command in the Part menu.

   This will take you to Step 1 of 5 of the Part Preparation Wizard. The part type will be pre-selected to Easy Notes Part.

2. Follow the instructions for the wizard Steps 2 through 5 in the Part Preparation Wizard 183.

4.3.8.3 Fake Book Lead Sheet Part

You can quickly prepare a Fake Book Lead Sheet part. A fake book lead sheet is "short-hand" notation for the lead melody instrument of a small band, or for a keyboard instrument, where just the melody notes and chord names are displayed. The actually performed, written-out notes may be different.

You can manually prepare a Fake Book Lead Sheet part in several steps, that include using: the Select Part 180 command; the Split Melody and Accompaniment 175 command; merging 168 a lyrics staff with a melody staff; and the Transcribe Chord Names 409 command. But it is a lot easier to do this with the Prepare Fake Book Lead Sheet command in the Part menu.

To prepare a Fake Book Lead Sheet:

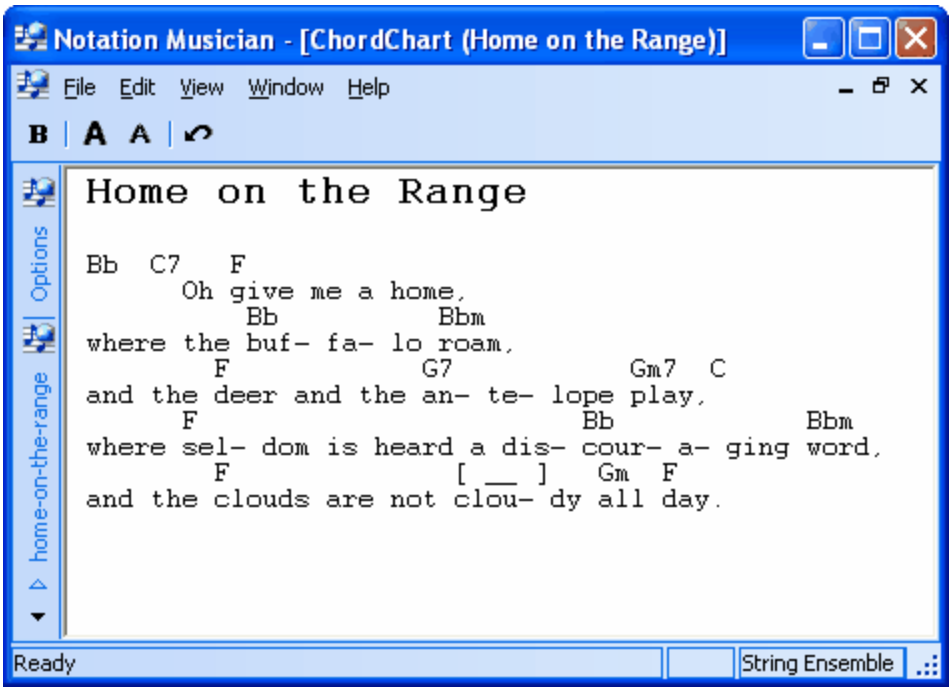
1. Choose the Prepare Fake Book Lead Sheet command in the Part menu.

   This will take you to Step 1 of 5 of the Part Preparation Wizard. The part type will be pre-selected to Fake Book Lead Sheet Part.

2. Follow the instructions for the wizard Steps 2 through 5 in the Part Preparation Wizard 183.

4.3.8.4 Chord Chart

Guitarists use chord charts to play chords as they sing lyrics, or accompany the singing of a vocalist in the group. You can quickly prepare a chord chart, such as the one illustrated here:



Musician arranges the chord names and lyrics according to standard conventions used among chord charts on the Internet, and in printed chord chart books. A chord name is vertically aligned with the corresponding lyric when the chord change and lyric occur at the same measure and beat in the song. Otherwise, the chord name is displayed before or after the lyric, depending on its relative timing.

To prepare a chord chart:

1. Choose the Prepare Chord Chart command in the Part menu.

   This will take you to Step 1 of 5 of the Part Preparation Wizard. The part type will be pre-selected to Chord Chart.

2. Follow the instructions for the wizard Steps 2 through 5 in the Part Preparation Wizard 183.

The chord chart is prepared using a fixed width font, so that the relative positions of chord names and lyrics are preserved when you use clipboard copy/paste to copy the chord chart to another text editor, and when you save the chord chord in a text file. You can edit the chord chart in its window, and change some simple formatting. However, please note that formatting changes are preserved only when you save the chord chart in the RTF (rich text format) file format, not in the text (.txt) file format.

To edit the prepared chord chart:

- Insert and delete characters as you would in a simple text editor, such as NotePad or WordPad. Please note that the Chord Chart editor in **Musician** is

only a text editor. Any changes that you make in this editor are NOT saved in the .not song file.

- Drag the mouse over characters, and choose commands in the Edit menu, or equivalent toolbar buttons, or command shortcuts, to make the font bold, or a larger or smaller size.
- Use the Edit Undo or Redo command, the toolbar button for Undo, or Ctrl+Z, to undo or redo the most recent command. Note, this simple text editor supports only one level of undo.

To copy the chord chart to another text editor:

1. Choose the Select All command in the Edit menu.
2. Choose the Copy to Clipboard command in the Edit menu, or type Ctrl+C.
3. In your text editor, such as NotePad or WordPad, choose the Past command in its Edit menu, or type Ctrl+V.

> **Note:**
> If the other text editor supports only text, not "rich text", then the formatting (bold, and font size) will not be carried over in the copy/paste.
>
> If the alignment of chord names and lyrics is disrupted when you paste the chord chart in the other text editor, then use an option in that text editor to change the font to a fixed-width style of font, such as Courier.

To save the chord chart in an RTF or text file:

1. Choose Save Chord Chart command in the File menu.
2. In the Save As dialog box, the default file type is RTF (rich text format), which is the file type necessary to preserve formatting (bold and font size). The file will be saved with an .rtf file extension. If you do not need to preserve formatting, you can choose the alternative, simpler text .txt file type.

To print the chord chart:

- Choose the Print Chord Chart command in the File menu.

Please note that the Chord Chart editor in **Musician** is only a text editor. Any changes that you make in this editor are NOT saved in the .not song file.

4.3.8.5 Customized Part

Musician offers options to prepare three specially formatted parts: the Sing-Along Part, Easy Note Part, and Fake Book Lead Sheet Part 183. These three standard types of parts specify certain combinations of options for:

- whether lyrics should be included in the part and merged with notes in a melody staff
- whether accompaniment notes in the melody staff should be sorted out into a separate accompaniment staff, or removed altogether
- whether chord names should be transcribed and included
- the font sizes for notes, lyrics, and chord names

You can override any of these options when preparing one of the three standard types of parts with the Part Preparation Wizard 183. If you do so, then the next time you run

the Part Preparation Wizard, it will offer the options you most recently selected as defaults for that type of part (eg, Sing-Along).

You might want to create a special part, with combinations of the above options, without disrupting the default values for the three standard types of parts. In this case, you can choose a fourth type of part, called the "Customized Part" in the Part Preparation Wizard.

To prepare a customized part:

1. Choose the Part Preparation Wizard command in the Part menu.
2. In Step 1 of the Part Preparation Wizard, choose the Custom part type.
3. Follow the instructions for the wizard Steps 2 through 5 in the Part Preparation Wizard 183.

4.3.9 Preparing Parts for Piano, Voirce, Drums, and Guitar

This section offers tips for preparing special instrument parts:

- piano or keyboard part 189
- piano reduction of a score
- vocal part
- drum part
- guitar part 194

4.3.9.1 Preparing a Keyboard Part

If you are preparing a part for the piano or keyboard, here are several tips that you should find useful.

If you have imported a MIDI file, and the left-hand and right-hand notes for the keyboard part are combined in one difficult-to-read staff:

- Use the Split Hands command 171 in the Staff menu to sort out the notes into right- and left-hand staves.
- If **Musician** does not do a perfect job of distributing the notes between the right- and left-hand staves, then select notes and type SHIFT+↑ or SHIFT+↓ to move the notes between the staves 177.

To instruct Musician to automatically recommend to you adjustments to keyboard tracks while importing a MIDI file:

- Use the Transcription Options 73 command in the Setup menu. Set check marks for these automatic recommendations:
  - Keyboard staff probably should be split into RH and LH staves.
  - The order of a pair of keyboard staves probably should be switched from LH/RH to RH/LH.
  - The keyboard RH/LH staves should be ordered before other instrument staves.

If the notes in a right-hand or left-hand staff are too far above or below the staff (there are too many ledger lines):

- If the notes are too high in the bass clef, then insert a treble clef 321 in front of the notes.

- If the notes are too low in the treble clef, then insert a bass clef 321 in front of the notes.
- If the notes are too high in the treble clef, then insert an 8va octave 261 notation across the span of high notes.
- If the notes are too low in the bass clef, then insert an 8va basso octave 261 notation across the span of low notes.

To prepare a simple piano part with a single line of notes with "easy note" pitch letters displayed in the noteheads in a large font size, such as for a beginner pianist :

- Use the Prepare Easy Notes 186 command in the Part menu.

If there are too many ties in the part because some notes overlap with different attacks or durations:

- Re-transcribe 78 the right- and/or left-hand piano staff, with the Split (Upper and Lower) Voice option turned *on*. This will result in some notes with upward stems, and some with downward stems, so that the independent note attacks and durations are more clearly distinguished without the use of ties.
- Re-transcribe 78 the right- and/or left-hand piano staff, with the Remove Overlaps of Notes option turned *on*.

To prepare a piano reduction of an instrument ensemble score (such as a string quartet or even orchestral score):

- Use the Prepare Piano Reduction 190 command in the Part menu.
- If **Musician** does not do a perfect job of distributing the notes between the right- and left-hand staves for the reduced score, then select notes and type SHIFT+ or SHIFT+ to move the notes between the staves 177.

To prepare a "third hand" staff, for passages in which the right or left hand is frequently jumping two octaves or more:

- Use the Add Staff 158 command to add the third hand adjacent to the right- or left-hand piano staff.
- Move extreme notes from the right- or left-hand staff to the new third hand staff, by selecting them and typing SHIFT+ or SHIFT+. See Shifting Notes Between Staves 177.
- Apply the Hide Resting Staves 209 command to this new third hand staff, so that it is displayed in the score only when there are notes in it.

4.3.9.2 Preparing a Piano Reduction of a Score

With **Musician**, you can quickly prepare a piano reduction of an instrument ensemble or choral score.

There are many uses for piano reductions of scores:

- For your own enjoyment, transcribe an instrumental or choral piece so that you can play it on your keyboard.
- If you lead an instrument or choral group and have piano skills, convey your musical ideas to your group by playing the score reduction on a piano or keyboard.
- If you compose, prepare the reduction as a "digest" of your score that a conductor can easily review.

To prepare a piano reduction of an instrumental or choral score:

- Use the Prepare Piano Reduction command in the Parts menu. Select the instrument and vocal parts you wish to merge into a piano reduction part.
- If this newly created piano reduction has too many notes, delete the extra, unnecessary notes.
- If you want to play a note in the right or left hand instead of the other, select it, and type SHIFT+↑ or SHIFT+↓.

4.3.9.3 Preparing a Vocal Part

If you are preparing a part for voice, here are several tips that you should find useful.

To prepare a chord chart such that below, see instructions for Chord Chart 187:

```
Home on the Range

Bb  C7   F
      Oh give me a home,
          Bb          Bbm
where the buf- fa- lo roam,
        F            G7          Gm7  C
and the deer and the an- te- lope play,
      F                          Bb            Bbm
where sel- dom is heard a dis- cour- a- ging word,
        F              [ __ ]   Gm  F
and the clouds are not clou- dy all day.
```

To display a Karaoke or voice part on the screen in a large font size for easy reading from a distance:

- Use the Prepare Sing-Along Part 185 command in the Part menu.

To add one or more verses of lyrics by typing them in, directly inside the Musician window:

- Follow the instructions in the beginning of General Procedures for Editing Lyrics 366.

To merge lyrics with notes, from an external text editor, or from the Window text clipboard:

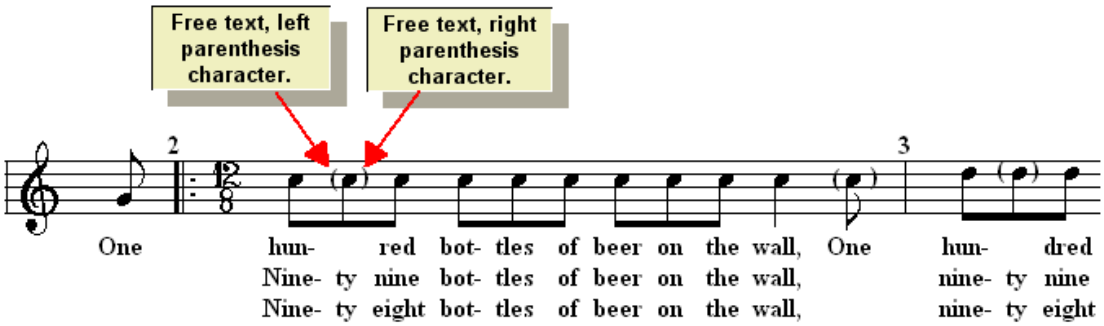
- Follow the instructions for Editing Lyrics Using an External Text Editor 384.

To extract the lyrics from a Musician score, for pasting into an external document:

- Follow the instructions in Copying and Pasting Lyrics 380.

To place a pair of parentheses around a note, to show that it is sung in some verses, and not others:

- Add the left and right parentheses as two separate free text objects, as shown below.



To instruct Musician to repeat a section during playback according to the number of verses:

- Follow the instructions for Repeat Instructions for Performances 334.

To display the first verse of lyrics under the vocal melody notes, but display remaining verses at the bottom of the page:

- Enter the first verse lyrics under the vocal melody notes, as described in the instructions in the beginning of General Procedures for Editing Lyrics 366.
- With the Page Layout 214 tool, reserve enough room at the bottom of each page for the additional lyric verses.
- Add the additional verses as page text 395 at the bottom of the page. You should add this as page text rather than as free text 391, because free text is anchored to specific beats in measures, which might shift around as you refine the score.

To open, edit, and save Karaoke (.kar) files:

- To open a Karaoke file, use the Open command in the File menu, and select a file that has the Karaoke .kar filename extension.
- To view Karaoke formatting, such as line breaks for phrases of lyrics, choose the Show Karaoke Line Breaks command in the Lyric Menu.

  -- OR --

  In the Lyrics Palette (SHIFT+L), click the Show Karaoke Line Breaks  button.
- To add or change Karaoke line breaks and paragraph breaks, add backward or forward slash characters ("\" or "/") at the end of the lyric in each verse for the line or paragraph break. For details, see Working with Karaoke (.kar) Files 387.
- To save a Karaoke file, use the Export as MIDI or Karaoke File command in the File menu, and choose Karaoke (.kar) as the file type.

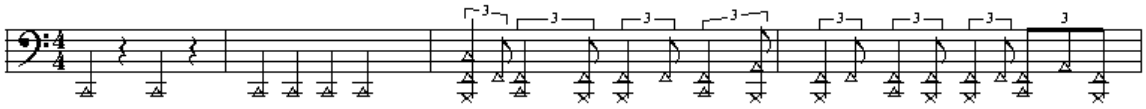
4.3.9.4 Preparing a Drum Part

If you are preparing a drum part, here are several tips that you should find useful.

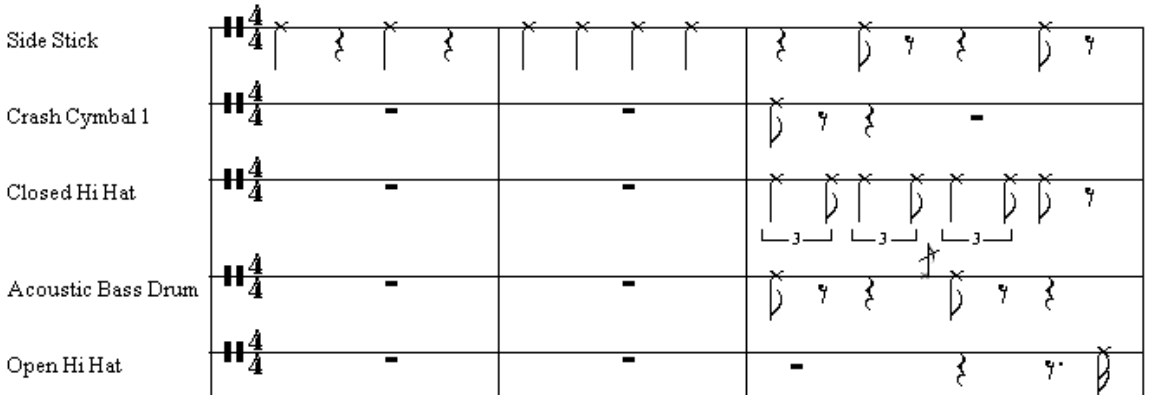
NOTE: Most drum sounds do not have pitches. However, in MIDI files, different types of drum sounds are distinguished by pseudo pitches. Instead of displaying sharps and flats in front of the drum notes, **Musician** uses a upward △ triangle to indicate that the pseudo drum pitch is to be raised by a sharp, and a

downward ▽ triangle to indicate that the pseudo drum pitch is to be lowered by a flat.

If a drum part shows different pitches and accidentals for different drum instruments, like this...



and you want the rearrange the drum part so that each drum instrument has its own separate staff line, like this:



- Follow the instructions for Splitting Drum Staff Into Individual Drum Staves 173.

To merge multiple single-line drum parts back into a combined drum part:

- Apply the Merge Staves 168 command to the multiple single-line drum staves.

To change the notehead shape for a single-line drum instrument to an ×, +, ▲, ■, or ◆:

- Click the Instrument Sound Selection 148 staff control.

  Musician will display the Staff Setup dialog box.

- In the bottom, left corner of the Staff Setup dialog box, turn off the check mark for Notehead Style / Use Default.
- In the selection box next to the Notehead Style / Use Default option, choose the notehead shape.

To change the notehead shape for individual notes:

- Follow the instructions in Editing Notehead Shapes 283.

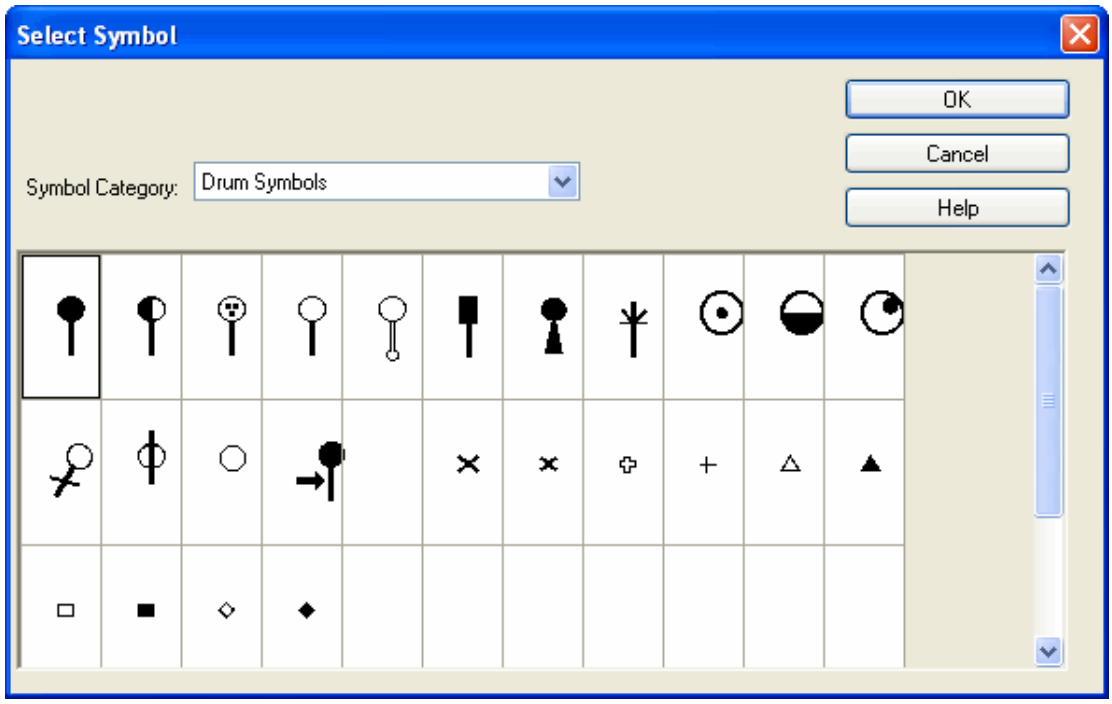
To change the volume levels and pan of drum instruments throughout the song:

- If your MIDI playback device is a General MIDI (GM) device, then it will require that all of the drum kit staves be assigned to channel 10. If you use the Split Drum Staves 173 command, the resulting individual drum instrument staves will each be assigned to the same channel 10, You should choose just one of the individual drum instrument staves to serve as a master staff for editing volume levels and pan levels throughout the song for the drum instruments. You will not be able to independently control the MIDI volume levels and pan levels for the individual drum instruments assigned to General MIDI channel 10.
- If your MIDI playback device is not General MIDI, and its drum kit allows you to use multiple MIDI channels, then assign the different drum instruments to

different MIDI channels if you want independent volume and pan graphs for the different drum instruments.

To add specific drum symbols to the score, such as rim hits::

- Use the Add Symbol command, and in the Select Symbol dialog box, choose "Drum Symbols" for the Symbol Category, and select among the drum symbols available in the Harmony font:



4.3.9.5 Preparing a Guitar Part

If you are preparing a guitar part, here are some tips that you should find useful.

To prepare a guitar chord such that below, see instructions for Chord Chart:

```
Home on the Range

Bb  C7   F
      Oh give me a home,
          Bb          Bbm
where the buf- fa- lo roam,
        F            G7          Gm7  C
and the deer and the an- te- lope play,
      F                          Bb            Bbm
where sel- dom is heard a dis- cour- a- ging word,
        F               [ __ ]   Gm  F
and the clouds are not clou- dy all day.
```

Note that **Musician** does not support display or editing of guitar fret diagrams, nor tablature notation.

If the guitar notes are displayed one octave too low, perhaps in the bass clef instead of treble clef:

- Follow the instructions in Transposing Key of an Instrument. Guitar notes are normally shown one octave higher than their actual pitch. In the Transpose

Instrument Key step of the Tranpose Wizard, set the transposition for the guitar staff to "Note read as 'C' actually sounds as 'C' below plus 1 octave".

- When you display the guitar part, make sure that there is no check mark by the Show Concert Pitches menu item in the Staff menu.
- If after transposing the guitar part, some bass clefs are left in the part, and you want to change them to treble clefs, add a treble clef 321 at the beginning of the measure for the guitar part, and delete any subsequent bass clef in the guitar part.
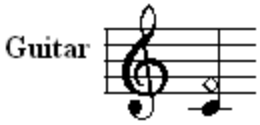
To display chord names above the melody notes:

- Determine which staves in the song have mostly notes that belong to the chord harmonies, as opposed to staves that have "passing notes" between chord notes, and other notes that do not belong to chord harmonies. Use the Transcribe Chord Names 409 command, and select these staves as the ones that **Musician** will use to analyze and display the chord names.

To display rolled out chords as vertical chords rather than written-out arpeggios:

- Follow the instructions in Editing Arpeggios 314.

To notate harmonics such as the following:



- Follow the instructions in Editing Notehead Shapes 283.

4.4 Formatting Parts

In **Musician**, a part 155 displays the staves for one or more instruments or voices. A part can be formatted and paginated independently of other parts and independently of the conductor's score.

The conductor's score is itself also a part, which typically shows all of the instrument and/or vocal staves. You can format and print the conductor's score with a different paper size or orientation (landscape versus portrait) than the paper size and orientation that you intend for the individual instrument or vocal parts.

If you are pleased with the formatting of a part and would like to apply the same formatting to other parts, you can quickly do this with the Copy Formatting to Other Parts 214 command in the Format menu. You can also save the formatting in a template file and later use the Format Part Using Template 212 command to apply the saved formatting to a current part.

The topics that follow describe how you can individually format the following details of each part:

- page setup 196: paper size and orientation; margins; and page numbering (determine the starting page number, and assignment of even or odd numbers to the left pages)
- page title, headers and footers 198: text that is displayed on the first page, or at the top or bottom of each subsequent page of the part or score
- overall font size 199: the point size used for notes and text, except where overridden for types of text or particular text objects

- horizontal and vertical spacing 201: the amount of horizontal stretch or compression, and the minimum amount of vertical spacing between staves and between systems
- font size for types of text 202: each category of text, such as lyrics and chord names, can have its own unique font size
- show or hide types of music annotations 206: optionally hide lyrics, chord names, rehearsal marks, ornaments, or instrument sound change marks
- show or hide instrument names 207: show long instrument names, or abbreviations, on every system of each page, or just the first system of each page, or not at all
- Hide Resting Staves 209: optionally hide any staves in the part that have no notes and lyrics
- "Easy Notes 211": display note letters (C, D, E, etc.) inside each notehead

4.4.1 Page Setup

Musician offers several familiar options for setting up the printed page, such as the paper size, orientation (portrait or landscape), and margins.

Musician saves the page setup settings in the Notation (.not) file 63, so that when you later reopen the file and prepare to print, you do not have to re-enter the page settings.

You can specify and save the page settings on a per-part 156 basis. For example, you might want the conductor's part to be printed on tall legal size paper, and print the individual instrument parts on normal letter size paper. You only have to prepare the page setup once for the conductor part, and once for the instrument parts. As you are working on your music project and switch back and forth between printing the conductor's part and instrument parts, you will not have to manually switch the page setup each time. **Musician** will remember the page setup for each part.

When you create a new song, or import a MIDI file, **Musician** will apply the most recent page setup settings that you have entered as a default .

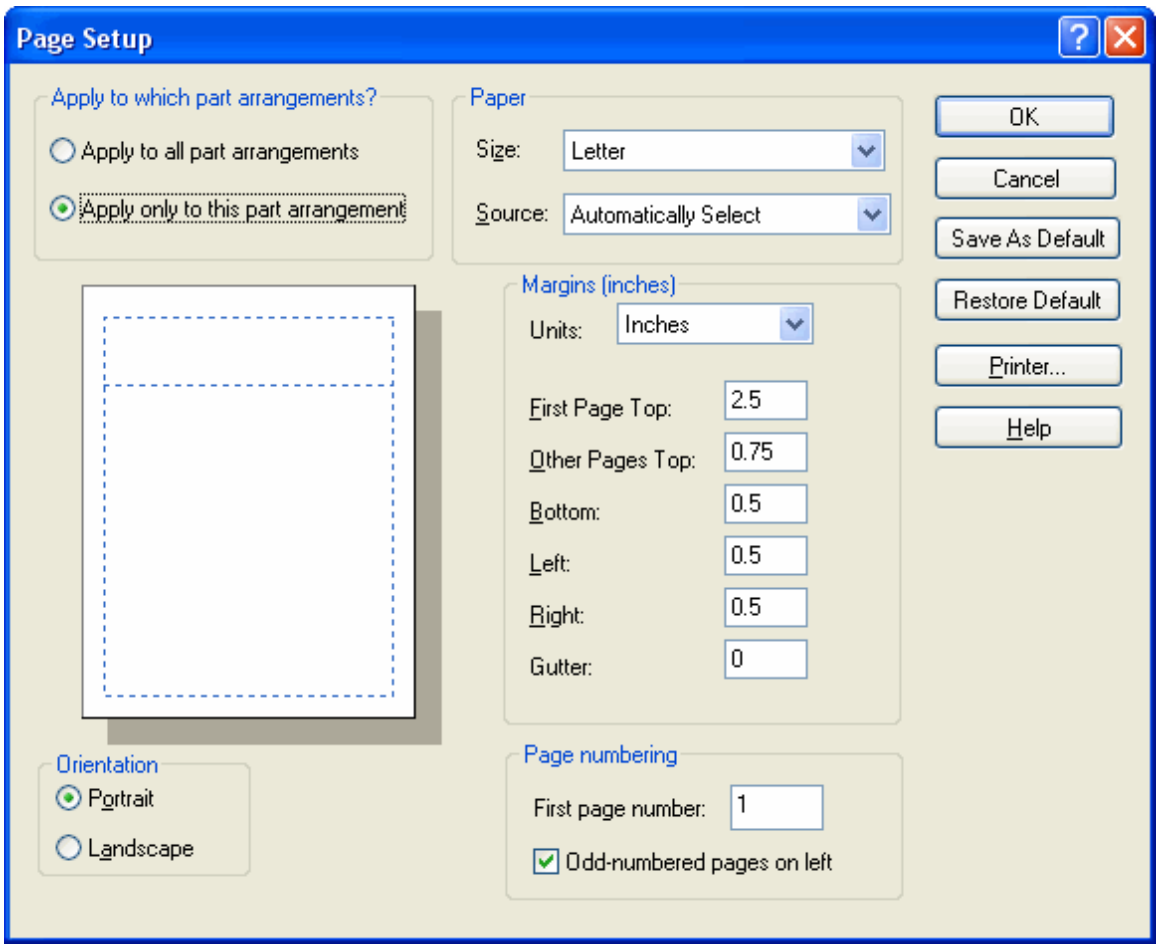
To choose page setup options:

1. Choose the Page Setup command in the Format menu.

   -- OR --

   Type "qpgs" for Quick Page Setup.

Musician will display the following Page Setup dialog box:



2. Choose the options as described below, and then click the OK button.

Apply to which part arrangements?

This option determines whether the page settings you entered will be applied only to the current part that you are viewing or, alternatively, to all parts of the song.

Paper

Size

Use this option to specify the size of the paper on which you intend to print the score. The paper sizes available are dependent, of course, on the type of printer you have.

Source

Some printers offer you the option to feed papers from different physical locations on the device. Use this option to specify, for example, "manual" versus "automatic" feeder.

Margins

The example page shown in the top-left corner of the dialog provides a preview of the various margin settings.

Units

Specify here whether you prefer to enter the margin values in inches or millimeters.

Top, Bottom, Left, Right

These margins are applied to every page, except as overridden by the Gutter setting.

Gutter

If you intend to staple or tape pages of the score together as right and left pages, then it is a good idea to allocate some extra space at the right side of the left pages, and at the left side of the right pages. This extra space is called the "gutter".

Page numbering

First page number

This option is useful if you split up a large score into multiple **Notation** .not files. Suppose the first .not file holds the first 60 pages of the part. Then for the same part in the second .not file, you would specify 61 for the first page number. Each part in the second .not file might start with a different first page number. Since the Page Setup settings apply on a per-part basis, you can set different first page numbers for each of the parts in the second .not file.

Odd-numbered pages on left

This setting is relevant only if you assign a Gutter value. If your pages are to be arranged as right and left pages with a gutter, then set the check mark if the first page is to be arranged as a left page in the score.

Orientation

The Portrait orientation arranges the page upright. The Landscape orientation arranges the page on its side. The preview picture of the page at the top-left corner of the dialog box illustrates the orientation.

4.4.2 Adding Page Title, Headers and Footers

The overall procedure for adding a page title, header, or footer has two steps. First, reserve an area on the page for text. Then add the text.

To reserve space for the page title, header and footer:

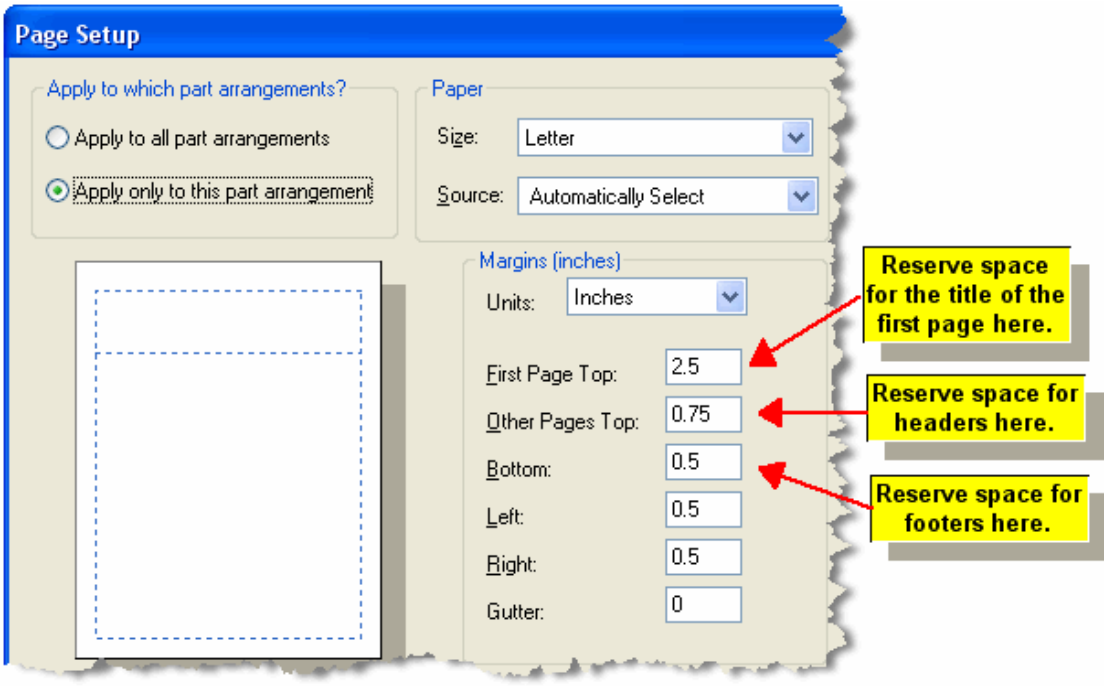
1. Choose the Page Setup command in the Format menu.

   -- OR --

   Type "qpgs" for Quick Page Setup.

Musician will display the Page Setup dialog box.

2. In the Page Setup dialog box, enter a value for the First Page Top margin, which will be a larger value than that for Other Pages Top.



To add a page title on the first page of the score:

1. Navigate to the Page Text Palette 395.

   -- OR --

   Type SHIFT+P. If the Page Layout Palette is displayed instead of the Page Text Palette, then type SHIFT+P a second time.

2. Follow instructions for adding Standard Page Text 399 for the standard page text type "song title".

To add page headers and footers:

1. Follow step #1 in the above procedure.
2. Follow the instructions for adding Standard Page Text 399 for the standard page text types: song title, part name, file name, and page number.

4.4.3 Overall Font Size

Musician enables you to change the overall font size for each score part 156. You can specify different font sizes for different parts. For example, if you are preparing a piano and flute duet, where the music teacher plays the piano part and a student plays the flute part, you might choose a normal font size for the piano part, but a larger, easier-to-read font size for the student's flute part.

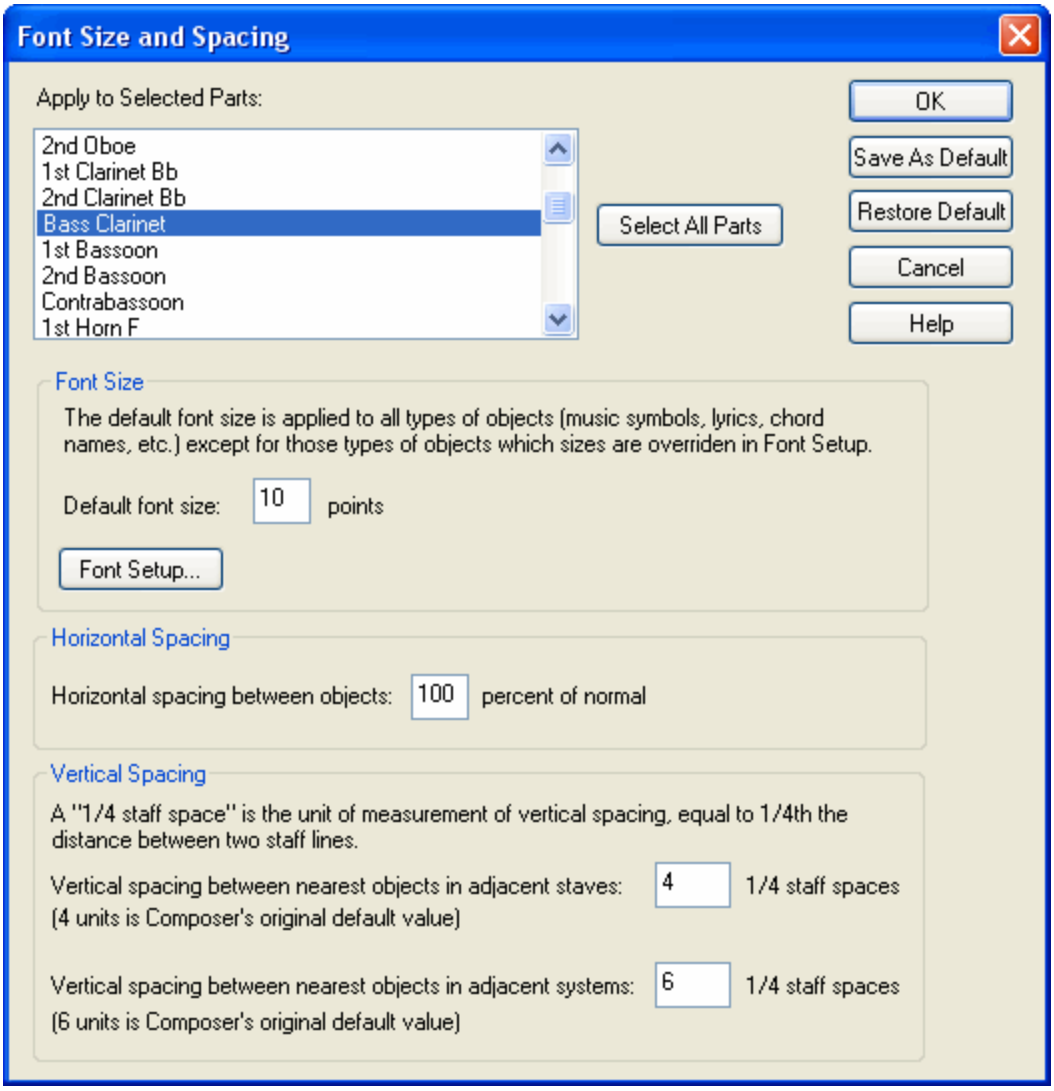
It is important to understand that changing the font size is different than zooming 151 in or out in the window. Zooming only temporarily changes the magnification of notes and other music symbols in the score as viewed on your monitor. Zooming does not affect the size of notes and music symbols for the printed score. In contrast, when you decrease the font size, notes and music symbols not only look smaller on the screen but also look smaller when printed. When you choose a smaller font size, more measures can be printed on each page.

This help topic describes how you can change the overall font size that applies to notes, music symbols and text in one or more selected parts. **Musician** also enables you to set different font sizes and faces for specific categories of music symbols and text, such as for lyrics and chord names. See Font Size for Types of Text 202.

You might find it more convenient to change the overall font size in Page Layout View 214, rather than follow the procedure below. In Page Layout View, you immediately see the effects of incrementally increasing or decreasing the font size as you click the Increase Font Size A button or Decrease Font Size A button. For details, see Changing the Font Size in Layout View 218.

To change the overall font size for one or more selected parts:

1. Choose the Font Size and Spacing command in the Format menu. **Musician** will display the following dialog box:



2. Select one or more parts for which you wish to apply the new font size. **Musician** will pre-select the part that you are currently viewing.
3. Enter a value for the default font size.

   The default font size is applied to any type of music or text object that is not otherwise specified.
4. To find out what types of objects (such as lyrics or chord names) might override the default font size, click the Font Setup button. **Musician** will then display the Fonts dialog box, as described in Font Size for Types of Text 202.

5. For an explanation of the remaining portion of the dialog box, see the next topic Horizontal and Vertical Spacing 201.

To set a default font size for any subsequently created song or imported MIDI file:

- After step #3 in the above procedure, click the Save As Default button.

4.4.4 Horizontal and Vertical Spacing

Musician enables you to change the overall horizontal and vertical spacing in each score part. You can apply the horizontal and vertical spacing values to one or more score parts in one step.

By default **Musician** applies spacing to the score part according to the following rules:

- Avoid overlapping music symbols and text, such as lyrics.
- Arrange the horizontal positions of notes within measures according to "engraving rules". The horizontal space occupied by a note or chord is not proportional to its duration in the measure. Rather, longer notes or chords are assigned relatively less horizontal space, and shorter notes or chords are assigned relatively more horizontal space. These "engraving rules" are designed to produce the most readable and pleasing layout of notes.
- Print as much music as possible on a page, subject to the above constraints.

You can instruct **Musician** to pack the notation more closely together to get more music on a page. In this case, **Musician** will compromise the normal music engraving rules, but it will always attempt to avoid overlapping of music symbols.

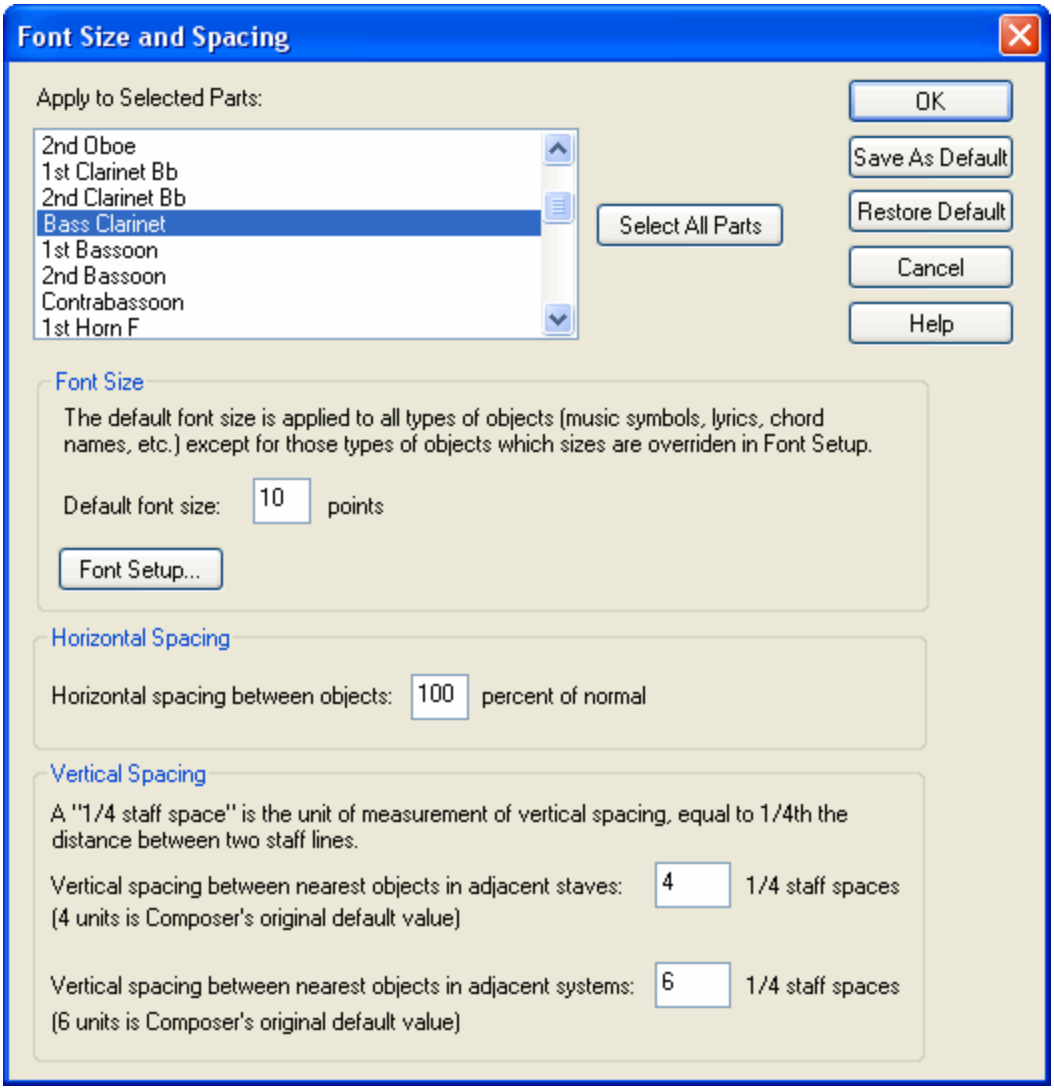
You can also instruct **Musician** to pack the notation less closely so that, for example, there is extra room on the printed page for you to add hand-written notes or text.

Note that you should not expect to be able to anticipate what change in the horizontal or vertical spacing value will be necessary to pack more or fewer measures on any given page. The purpose of the Font Size and Spacing command is to establish the overall spacing-- compressed or expanded-- for all pages of a part. For example, if there are 21 measures on a given page at 100% spacing, and you want to display 22 measures instead, it is difficult to predict whether 99% horizontal spacing will be necessary, or whether a smaller horizontal spacing percentage will be needed, such as 98% or 95% or 90%. You will need to try out different spacings, and see what happens. Also, changing the horizontal spacing percentage will affect the number of measures on each page differently, according to how much "slack" is currently distributed in any given page.

If you need to control exactly how many measures are on a specific page, then you will need to go to the Page Layout Palette 214, and use some combination of these Page Layout commands: System Break 221, Page Break 221, Keep Measure With Previous 223, and Keep System With Previous 225.

To change the overall horizontal and vertical spacing for one or more selected parts:

1. Choose the Font Size and Spacing command in the Format menu. **Musician** will display the following dialog box:



2. Select the part(s) for which you wish to apply the new font size. **Musician** will pre-select the part that you are currently viewing.
3. In the middle portion of the dialog box, enter a horizontal spacing percentage, where 100% is **Musician**'s default horizontal spacing. Smaller values will compress more measures per system (line) on the pages. Values larger than 100% will spread out fewer measures per system (line) on the page.
4. In the lower portion of the dialog box, you can enter different values for the Vertical Spacing between adjacent staves or adjacent systems if you would like more or less spacing between staves or systems.
5. For an explanation of the top portion of the dialog box, see the previous topic, Overall Font Size 199.

To set a default horizontal and vertical spacing for any subsequently created song or imported MIDI file:

- After step #3 in the above procedure, click the Save As Default button.

4.4.5 Font Type and Size for Types of Text and Score Annotations

Musician defines several categories of score annotations and types of text, such as rehearsal marks, lyrics, and chord names. You can specify a distinct font style, point

size (with optional digit after decimal point, as in 8.5), and styles (bold or italic) each type of text. You can also specify the point size (but not a different font style) for the music symbols (noteheads, clefs, etc.). For example, you can display lyrics using a bold Arial 9 point font, and instrument names (displayed along the left side of the staves) using a normal Times New Roman 8 point font.

Musician uses a default font for any type of text that is not specified elsewhere.

In addition to specifying font characteristics for various categories of text, you can also individually change the font size and styles (bold or italic) for individual text objects, such as a specific lyric, page text item, or chord name. See Editing Types of Text 365.

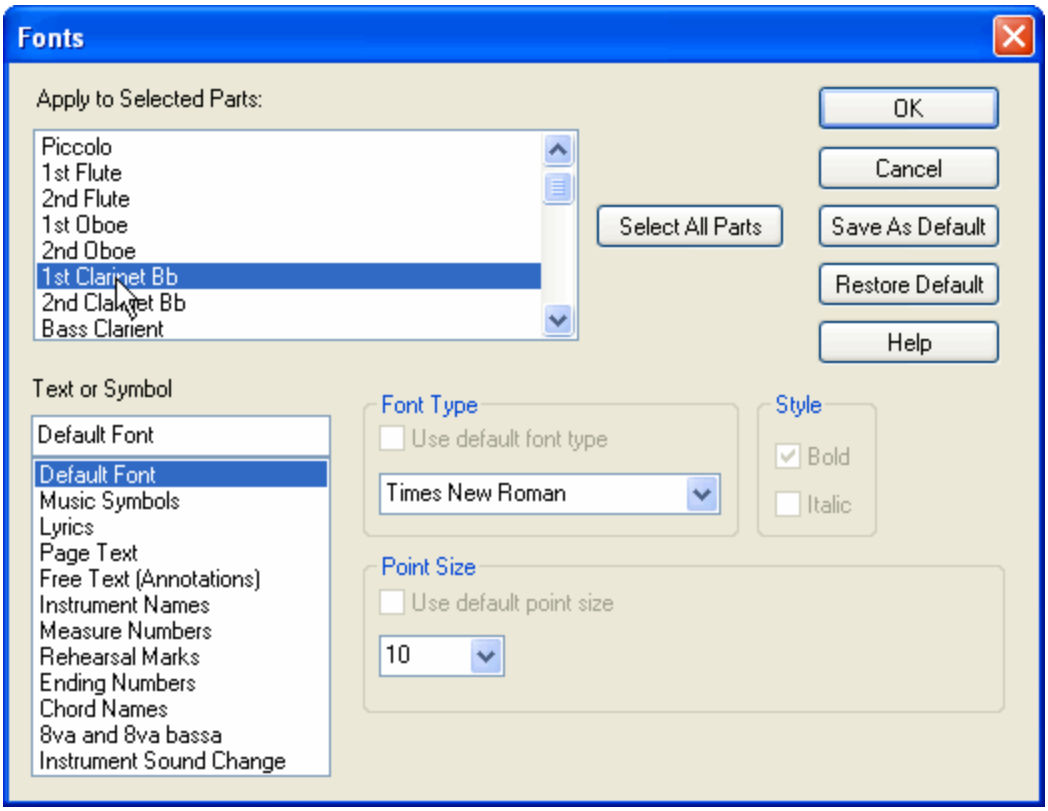
You can specify different font styles, sizes, and characteristics for different score parts. For example, suppose a voice teacher is preparing a piano and voice duet, where the teacher plays the piano part and a student sings the vocal part. The voice teacher's part might include both the piano accompaniment and the student's part, so that the teacher can follow the student's part as she plays the piano accompaniment. The teacher's part might have a normal font size and characteristics for the notes in the piano and vocal staves, as well as the lyrics in the student's staves. The student's part might have an overall larger font size, for easier reading, and also use a bold font characteristic for lyrics, for yet easier reading of the lyrics. This can be accomplished by applying different font styles to the two separate parts-- the teacher's part and the student's part.

If you only need to change the overall font size for certain parts, and do not need to change individual font characteristics for specific categories of text, then follow the procedure in Overall Font Size 199.

To view the font settings for the current part:

1. Choose the Text Fonts command in the Format menu.

   Musician will display the following Fonts dialog box:

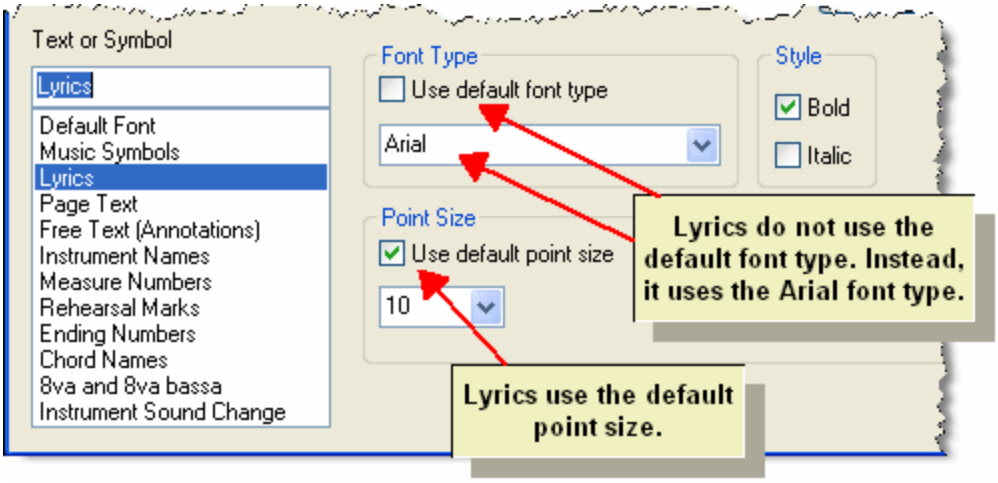


2. **Musician** will pre-select the part that you are currently viewing, as indicated under "Apply to Selected Parts".

   If you want to view the font attributes for another part, then Cancel this dialog box, use the Select Part command in the Part menu to select another part, and then use the Text Fonts command to reopen the dialog box for the newly selected part.

3. Click any entry in the Text or Symbol list to review the current font type, point size, and bold or italic style.

   The Fonts dialog box will indicate the Font Type, Point Size, and Style (bold and italic) for the category of text or music symbol you have selected. If there is a check mark by "Use default font type", then the selected category of text or music symbol will assume the font type that you see in the Font Type box. Similarly, if there is a check mark by "Use default point size", then the selected category of text or music symbol will assume the font size that you see in the Point Size box.



4. If you only intend to view the font styles and not change any, then click the Cancel button.

To set the default font type and point size that are shared by any types of music symbols and text that are not specified elsewhere:

1. Choose the Text Fonts command in the Format menu.

   Musician will display the Fonts dialog box, as illustrated above.

2. Under "Apply to Selected Parts", select one or more parts for which you wish to apply the new font size. **Musician** will pre-select the part that you are currently viewing.

3. Click "Default Font" at the top of the Text or Symbol Text list, as illustrated in the first of the two above pictures.

4. Select the desired Font Type and Point Size from the drop down lists.

   Note that the default font type does not define the Bold and Italic style.

   Note also that specifying the point size for the "Default Font" is equivalent to setting the overall font size 199 using the Font Size and Spacing command in the Format menu.

5. If you change the Point Size for the Default Font, then **Musician** will display an extra option for "Scale Non-Default Font Sizes Proportionally":



   Typically you will want to set a check mark for this option. As example, if the default point size were 10 and you change it to 12 (a 20% increase), and if the point size for lyrics were 9, then this option would increase the lyrics font size by 20% of 9, or 1.8, to point size 10.8. **Musician** maintains font sizes with 1/10th point size accuracy.

6. Select each entry in the Text or Symbol Type list, and review the settings for Font and Point Size. If you wish the type of music symbol or text to derive its font type or point size from the default font, then set a check mark for "Use default font type" or "Use default point size".
7. Click OK.

To override the default font characteristics for a type of music symbol or text:

1. Choose the Text Fonts command in the Format menu.

   -- OR --

   Type "qtr" for Quick Text Font.

   Musician will display the Fonts dialog box.

2. Under "Apply to Selected Parts", select the part(s) for which you wish to apply the new font size. **Musician** will pre-select the part that you are currently viewing.
3. Click an entry in the Text or Symbol Text list.
4. Specify the Font Type, Point Size, Bold, and Italic fields, as illustrated in the second of the two pictures above.
5. If you wish to override the default font characteristics for other types of music symbols or text, then repeat steps 3 and 4.
6. Click OK.

To specify the font attributes that will be applied to any newly opened MIDI file, or any newly created song:

1. Using the Select Part command in the Part menu, select a part that has the font attributes that you wish to establish as the default.
2. Choose the Text Fonts command in the Format menu.

   Musician will display the Fonts dialog box.

3. Click the Save As Default button.

   Any MIDI file that you subsequently open, or any song that you newly create with the File New command, will use the font styles that you saved here.

4. If you have changed any font styles while the Fonts dialog box was opened, then click OK to save the changes. Otherwise you can click Cancel to exit the dialog box.

To apply the most recently saved default font styles to selected parts:

1. Choose the Text Fonts command in the Format menu.

   Musician will display the Fonts dialog box.

2. Under "Apply to Selected Parts", select the part(s) for which you wish to apply the most recently saved default font styles. **Musician** will pre-select the part that you are currently viewing.

3. Click the Restore Default button, and then the OK button.

4.4.6 Showing and Hiding Types of Music Annotations

You can specify whether **Musician** should display (or print) versus hide any of the following types of music annotations:

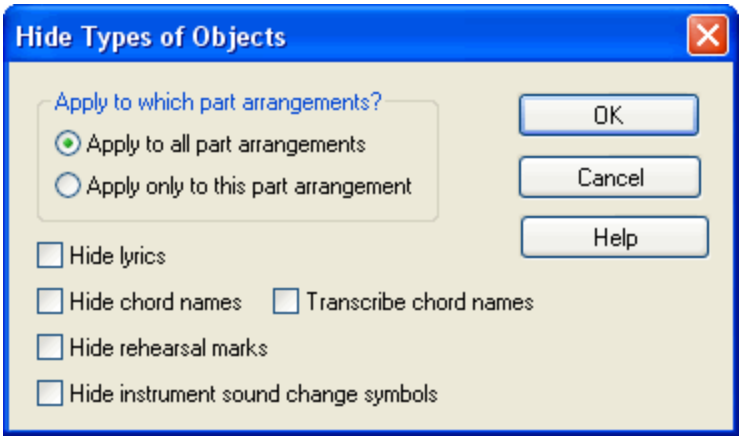
- lyrics
- chord names
- rehearsal marks
- instrument sound change symbols

Musician can show and hide different combinations of these types of music annotations for different parts 156. For example, you might want to show chord names only in a guitar part, but not in other parts.

To show or hide all occurrences of one of the above types of music annotations:

1. Choose the Show or Hide Types of Objects command in the Format menu.

   Musician will display the following Hide Types of Objects dialog box:



2. Under "Apply to which part arrangements?", choose whether the options will be applied to all parts or only to the currently selected part.

3. Set a check mark by the type of annotation(s) that you want to hide in the selected part(s).

4. If the part does not show chord names, and if you open the Hide Types of Objects dialog box and find that there is no check mark next to "Hide chord names", you might wonder why chord names are not displayed. This probably happens because **Musician** has not yet analyzed your song for chord names. If you want to analyze the chord names now, then set a check mark by "Transcribe chord names". When you click the OK button, **Musician** will close the Hide Types of Objects dialog box, and then take you to a second Chord

Name Transcription dialog box. Follow the instructions in Transcribing Chord Names 409 for selecting options in the Chord Name Transcription dialog box.

4.4.7 Showing and Hiding Instrument Names

Musician can display instrument (staff) names in the left margin of the window or printed page. Each staff has a long name and an abbreviation. Many MIDI files have staff names that are so long that too much of the printed page or viewing area of the screen would be wasted. Therefore, you may want to make the staff names shorter. In addition, you can specify a somewhat longer staff name for the beginning of the score, and a shorter staff name for subsequent pages of the score. This is a common practice in orchestral scores.

Musician allows you to specify whether a long name or an abbreviation is displayed after the first page of a part 156. Or, you can omit the display of instrument names altogether.

You can specify how instrument names are displayed on a per-part basis. For example, in a conductor's score you might want to display the instrument name abbreviations; whereas in individually printed parts, you might want to display no instrument name at all, except as page text 395 at the top of the first page of the instrument part.

To change the long name (or abbreviation) of an instrument name for a given staff:

- See the topic Editing Instrument (Staff) Names 159.

To show (or hide) instrument names in the current score part:

- Toggle the check mark for the Show or Hide Instrument Names command in the Format menu.

  -- OR --

  Type "qsin" for Quick Show Instrument Names.

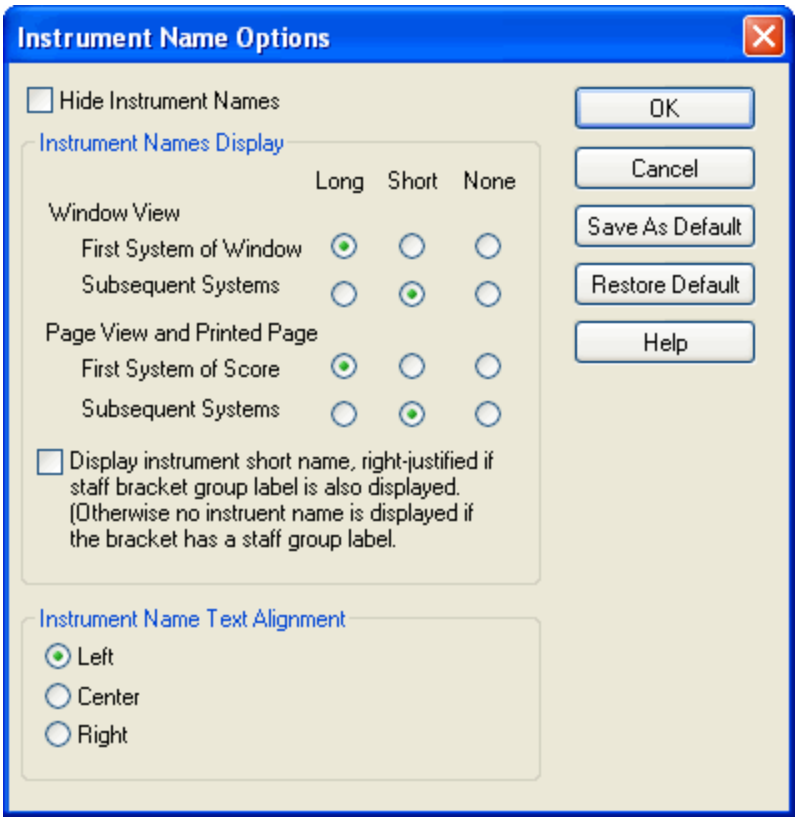
To specify whether short or long instrument names are displayed or printed in the current score part, and whether they should be left- or right-justified or centered:

1. In the Format menu choose the Show Instrument Names Options command.

   -- OR --

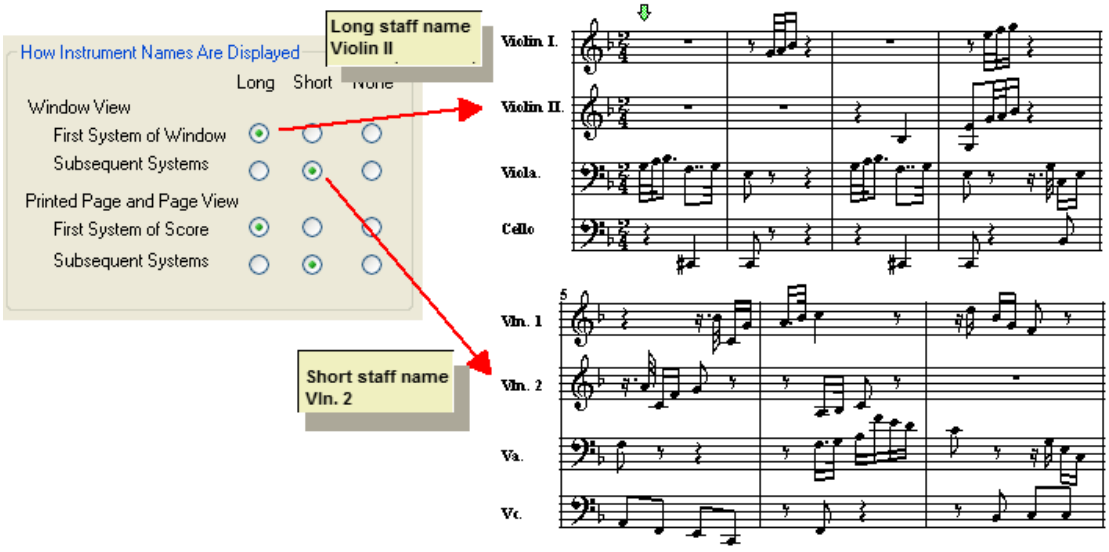
   Type "qin" for Quick Instrument Names.

Musician will display the following Instrument Name Options dialog box:



2. Set the check mark for Hide Instrument Names according to whether you wish instrument names to be shown or not. Setting a check mark here has exactly the same effect as turning off the check mark for Show Instrument Names in the Part menu.

3. Choose Options under "Show or Hide Instrument Names" to distinguish whether long or short (abbreviated) instrument names are displayed in Window View 143 versus Page View 143 and on the printed page. The following example, shows how the above settings are reflected in the first and second systems of a score:



Note that you can edit the long and short instrument names 159 for each individual staff using the Staff Setup command in the Staff menu.

4. Choose the option for Instrument Name Text Alignment: left-, center, or right-justification.
5. Click OK to save the changes.

To specify the instrument name display options that should be applied to any newly opened MIDI file or any newly created song:

1. In the Format menu choose the Instrument Names Display Options command.

   -- OR --

   Type "qin" for Quick Instrument Names.
2. In the Instrument Name Options dialog box, select the options that you wish to apply to subsequently opened MIDI files or newly created songs.
3. Click the Save As Default button.
4. If you have changed any settings while the Instrument Names Display Options dialog box was opened, then click OK to apply the changes to the currently viewed score part. Otherwise you can click Cancel to exit the dialog box.

To apply the most recently saved Instrument Name Options the current score part:

1. In the Format menu choose the Show or Hide Instrument Names ... Options command.

   -- OR --

   Type "qin" for Quick Instrument Names.
2. In the Instrument Names Display Options display box, click the Restore Default button, and then the OK button.

4.4.8 Hiding Resting (Empty) Staves

In a conductor's score, it is common practice to present staves only for those instruments that are playing. For example, if a system 158 in the score displays measures 10 through 14, and the flutes are not playing in these measures, then the conductor's part omits the flute staff in this system.

Musician offers an option to Hide Resting Staves, according to this common practice for a conductor's part. If a staff has lyrics, but no notes, **Musician** will still display the staff. If no staves in a system have notes or lyrics, then **Musician** displays only the first staff.

Musician's option for hiding empty staves works on a per-part basis. Usually, you will want to use the Hide Resting Staves options for the conductor's part, but not other parts 156.

To Hide Resting Staves in the current part.

- In the Staff or Format menu choose the Hide Resting Staves command.

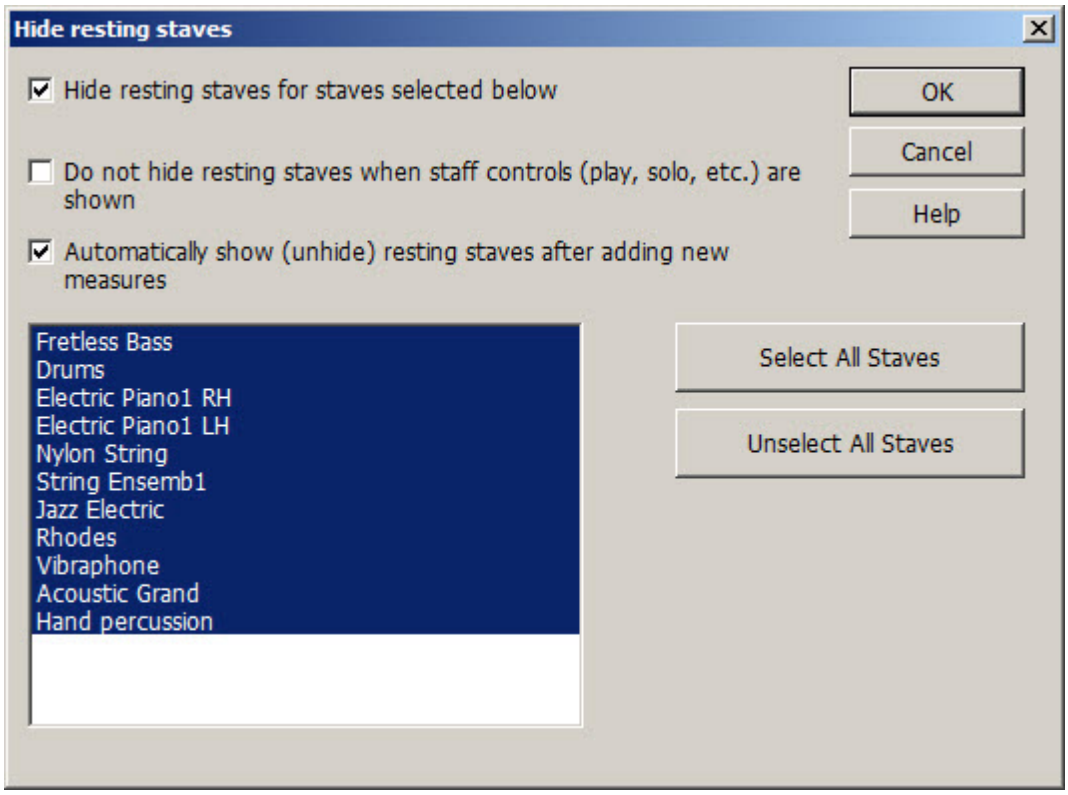
  -- OR --

  Type "qhrs" for Quick Hide Resting Staves.

To control which staves are hidden in the current part.

1. In the Staff or Format menu choose the Hide Resting Staves Options command.

   Musician will display the Hide Resting Staves dialog, filled out with a list of staves as illustrated below:



2. Turn on the first check mark for "Hide Resting Staves for staves selected below."
3. Select the staves for which you wish to Hide Resting Staves. You can individually select or unselect a staff by clicking its name in the list box. Empty staves will be hidden only for the staves you select.
4. Click OK to complete the operation.

In Window View 143, you have the option of showing or hiding staff controls 144, which include the Mute and Solo buttons. If you choose to show the staff controls, then you may want to set this check mark: "Do not Hide Resting Staves when staff controls (play, solo, etc.) are shown." If you do not set this check mark, on some pages the staff controls for some staves may be hidden along with the empty staves, so that you will then have no visible means of controlling (muting, etc.) the hidden staff.

The third option to automatically show resting staves after adding new measures keeps new (and thus empty) measures in view so that you can add notes to them right away without having to change the Show/Hide Empty Staves settings.

To change the behavior of hidden empty staves in Window View:

1. Turn off the second check mark if you want empty staves to always be hidden in Window View, the same way that they will be hidden in the printed score (as shown in Page View 143). By default, the check mark is off.
2. If you do not want empty staves to be hidden in Window View when the staff controls 144 are visible then turn on the second check mark.

   If the staff controls are not visible, then the first option determines the visibility of empty staves regardless of whether you set the second check mark in the

Hide Resting Staves dialog or not. For instructions on showing or hiding the staff controls, see Staff Control Buttons 144.

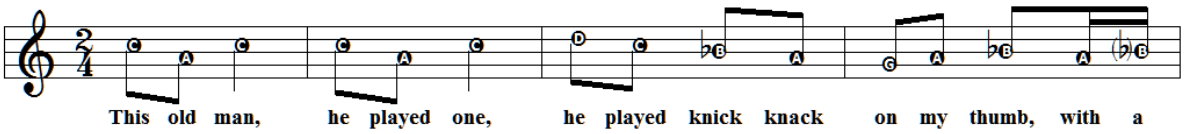
4.4.9 Displaying Pitch Name (Easy Note) Letters in Noteheads

Beginning music students may find **Musician**'s "easy note" notation a helpful way to associate pitch names with note positions in a staff. **Musician** gives you the flexibility to display these noteheads with or without a key signature, and with or without courtesy accidentals. This flexibility gives the aspiring musician just enough help at each stage of learning to encourage their musical growth.

There are two ways that you can prepare a part that displays the pitch names in the noteheads. The first method uses the Part Preparation Wizard, and creates an Easy Notes part that does not show a key signature, and shows all accidentals beside their notes. The second method can optionally show courtesy accidentals, and retains the key signature in either case.

To prepare an "Easy Notes" part with accidentals rather than a key signature:

- In the Part menu, select Prepare Easy Notes part. The Wizard for Preparing Parts 183 will then walk you through the steps for preparing a part containing a single staff with melody notes only, or a simple two-hand part with melody notes in one staff and accompaniment notes in a second staff. You can also select whether or not to include any lyrics that may be in the song file.



To display pitch names in the noteheads for selected staves in the current score and keep the key signature:

You can use this method to show pitch names in the noteheads for a single or for multiple staves. You can use this option at any time after you've prepared a part using other options, in a multi-instrument score, or after selecting a Part from the Part drop list in the main toolbar. This method does not create a new part, it just displays pitch names in the noteheads of an existing part.

1. In the Format menu, select "Display pitch names in noteheads..."

-- OR --
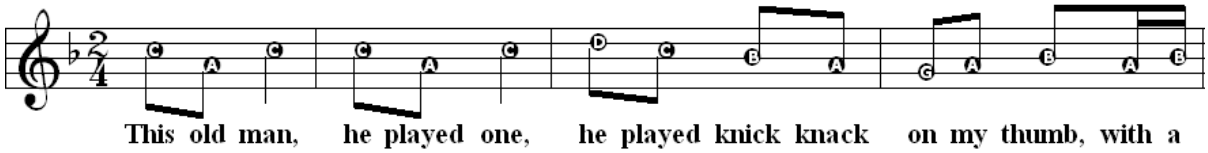
use the keyboard shortcut "qdpn".

2. In the "Pitch Names in Noteheads" dialog, select whether or not you want to show courtesy accidentals (to help with correctly playing key signatures in the early stages of learning).

3. Select the staff or staves for which you want to show pitch names in the noteheads.

4. Click "Ok."

The screen shot below displays the pitch names in the noteheads for a single staff, but without the courtesy accidentals.



4.4.10 Formatting a Part Using a Template

Using commands in the Part menu, you can specify many details about how a part 156 is formatted: the page setup, overall font size 199, horizontal and vertical spacing 201, font size for types of text 202, showing or hiding types of music annotations 206, showing or hiding instrument names 207, hiding empty staves 209 and displaying "easy notes" 211.

You can save this formatting as a template and then apply it to songs using the Format Part Using Template command in the Format menu.

TIP: When you import a MIDI file, Musician uses the template file C:\Users\Public\Documents\Notation_4\Templates\MidiFileDefault.not to format the transcribed score. You can customize the default formatting of MIDI scores by editing the MidiFileDefault.not file.

You might also want to modify some of **Musician**'s default templates to adopt the formatting you want. You can directly edit the formatting of **Musician**'s templates. You can also open one of **Musician**'s templates and copy the formatting from your own template.

To save the formatting of a currently viewed part as a template:

1. Use the Save As command in the File menu, and save the current song with a new name in the C:\Users\Public\Documents\Notation_4\Templates directory. Save the file with a .not filename extension, just like a normal Notation song file. This step assures that you will not alter your original file as you make a template file.
2. Any notes, lyrics, free text, and most of the content of the template file should be removed, since it will be ignored when the template is applied to a new song, or when it is used to format another song. It is not necessary for you to remove this extra content, but the template will open more quickly each time you use it, if you do the following:
   - Delete all of the measures except the first few measures.
   - Remove all of the notes, lyrics, and free text in these remaining measures.
   - Delete all parts except the one that has the formatting you wish to use as a template. You can do this by selecting each part, one at a time, using the Select Part command in the Part menu, and deleting the unwanted parts with the Delete Part command.
3. Use the Save command in the File menu to resave the template .not file that you prepared above. Now you can use this version of the file as a format template.

To apply the formatting of a template to a currently viewed part:

1. Choose the Format Part Using Template command in the Format menu.

   Musician will display a File Open dialog box, and will initially display the files in the C:\Users\Public\Documents\Notation_4\Templates directory.
2. Choose a template .not file in the template directly, and click the OK button.

   Musician will apply the formatting of the most recently opened part in the template to the part that you are currently viewing.

To apply the formatting of a template to multiple parts in a song:

1. Follow the above procedure to apply the formatting of a template to one part.
2. Follow the directions in the next topic, Copying the Format of a Part to Other Parts 214, to format all of the remaining parts in the current song.

To customize the formatting of one of Musician's default templates:

1. Open the template file, such as, Voice and Piano.not, in the C:\Users\Public\Documents\Notation_4\Templates directory.

To quickly customize the formatting of Musician's default templates:

1. Prepare your own template .not file as described above.
2. Open each of **Musician**'s template files in the C:\Users\Public\Documents\Notation_4\Templates directory, using the Format Part Using Template command to copy the formatting of your template to **Musician**'s default templates.

For example, if you use **Musician**'s "Voice and Piano" template when you create new songs, then apply this procedure to the file C:\Users\Public\Documents\Notation_4\Templates\Voice and Piano.not.

4.4.11 Copying the Format of a Part to Other Parts

Using commands in the Part menu, you can specify many details about how a part 156 is formatted: the page setup, overall font size 199, horizontal and vertical spacing 201, font size for types of text 202, showing or hiding of types of music annotations 206, showing or hiding of instrument names 207, hiding empty staves 209 and displaying "easy notes" 211.

Some of the Part menu commands let you apply formatting characteristics not only to the currently viewed part, but also to other parts that you specify in a dialog box. Some other Part menu commands let you apply formatting characteristics only to the currently viewed part.

If you have prepared a part with formatting characteristics that you would like to apply to other parts, there is an easy way to do that.

To copy the format of one part to other parts:

1. Select the part you want to copy, using the Part drop-down list on the menu bar.
2. In the Format menu choose the Copy Format to Other Parts command.

   Musician will display the Copy Formatting to Other Parts dialog box.
3. In the dialog box, select the parts to which you wish to copy the formatting, and click OK.

4.5 Laying out Pages of a Part

Musician offers you convenient options for controlling how a part or score is separated into pages, and how each page is separated into systems 156 (lines of measures). On each page, you can control the spacing between staves and between systems. You can also stretch or compress the horizontal spacing of individual measures within systems. All of these options are available in Page Layout View.

TIP: To get the best print-ready version of your score, save the Layout steps til last! 217

When you're done with all the other aspects of editing your score (notes, lyrics, etc.), then go ahead.

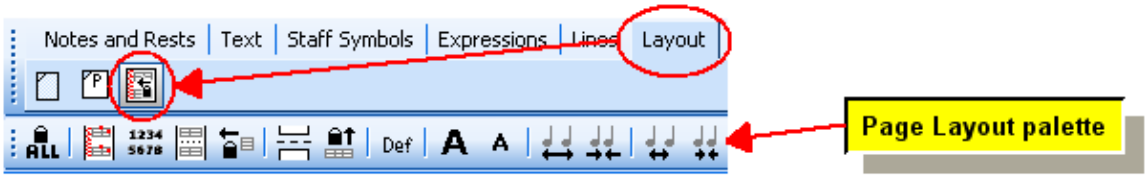
To enter Page Layout View:

1. If the palettes are not already shown, turn on the check marks for Show Main Palette and Show Detail Palette in the View menu.
2. Click the Layout tab in the main palette.
3. Click the Page Layout View  button.

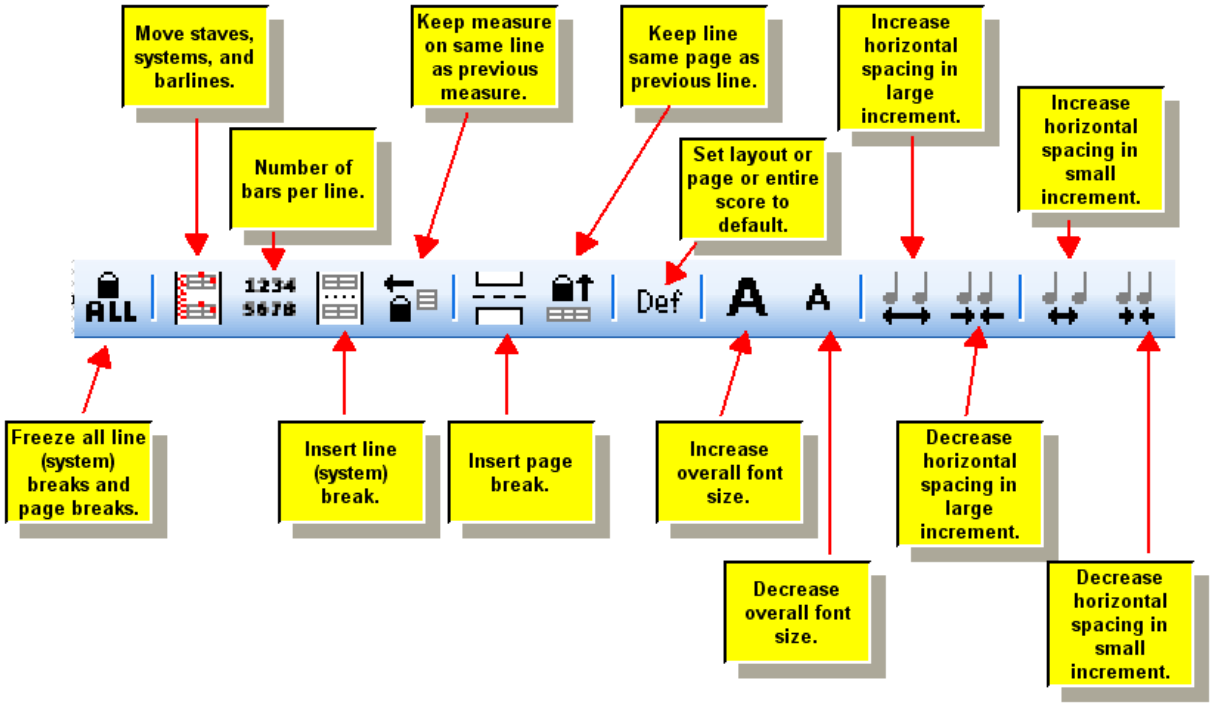
-- OR --

- Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

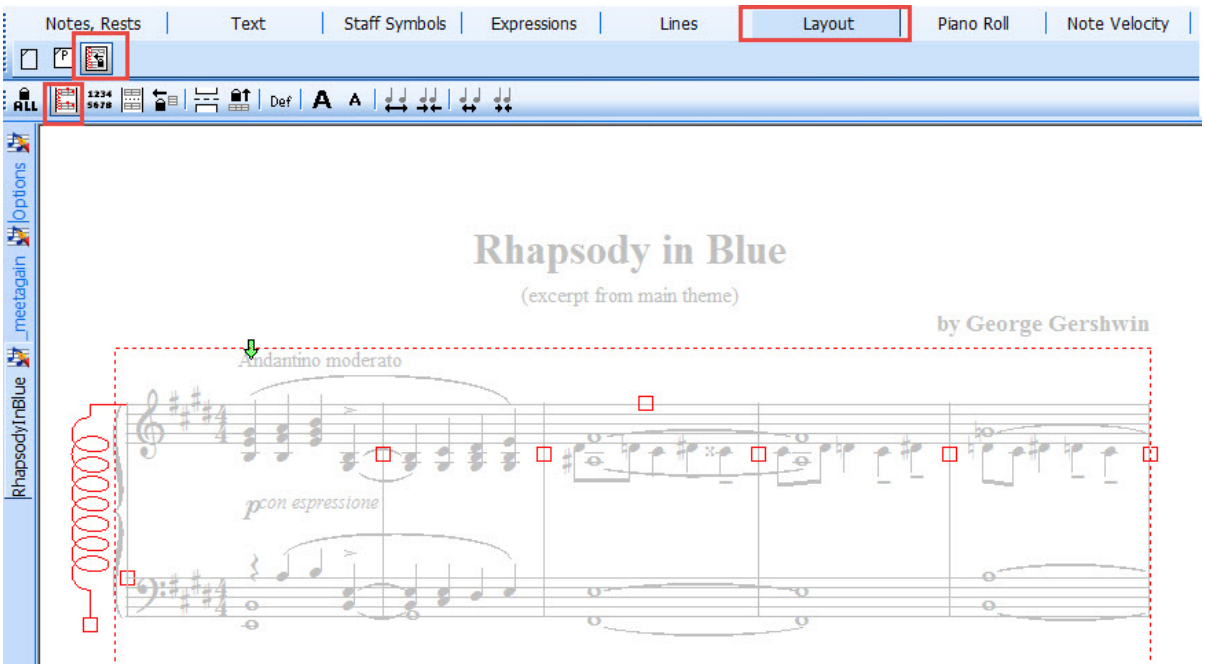
Musician will display the Page Layout palette:



The various options in the Page Layout palette are summarized here:



Musician will also display the score in Page Layout View, as shown below. The score will turn gray, and red "handles" (boxes for dragging staves and barlines) might be displayed.



To move systems, staves, and barlines using the Page Layout handles:

1. Click the Move Barlines and Staves button in the Page Layout Palette.
2. Follow the instructions in Changing Vertical Spacing Between Systems and Staves 228 and Moving Barlines Within a System 226.

To specify a fixed number of bars per line:

- Click the Fix Number of Bars Per Line 220 button in the Page Layout Palette, and then respond to the Fix Number of Bars Per Line dialog box.

To insert a system break or page break:

- Click the System Break button or Page Break button in the Page Layout Palette. Then click anywhere in the measure where you want the new system or page to begin. For further instructions, see Forcing a Page Break or System Break 221.

To move a measure at the beginning of one system to the end of the previous system:

- Click the Keep Measure With Previous button in the Page Layout. The click the measure you want to move to the previous system. For further instructions, see Moving a Measure to the Previous System 223.

To move a system at the top of one page to the bottom of the previous page:

- Click the Keep System With Previous button in the Page Layout Palette. Then click anywhere in the system that you want to move to the previous page. For further instructions, see Moving a System to the Previous Page 225.

To restore a page, or all pages of a score part, to the default pagination:

- Click the Default Pagination button in the Page Layout Palette. For further instructions, see Restoring Default Pagination 232.

To increase or decrease the overall font size:

- Click the Increase Font Size button or the Decrease Font Size button. For further instructions, see Changing Font Size in Layout View 218.

To compress or expand the overall horizontal spacing of notes and measures:

- Click the or button to increase or decrease the horizontal spacing in large increments, or the or button to increase or decrease the spacing in small increments. For further instructions, see Changing Horizontal Spacing in Layout View 218.

To freeze all of the line breaks and system breaks in a part or conductor's score:

- Click the Freeze All Page and Line Breaks button. For further instructions, see Freezing Line Breaks and System Breaks for Entire Score 230.

To increase or decrease the default vertical spacing between staves and systems:

- In the Part menu, choose the Font Size and Spacing command 201. Use the Vertical Spacing option in the Font Size and Spacing dialog box.

4.5.1 Tip: Postpone Doing Page Layout

It is a good idea to postpone work on page layout until you have completed all other tasks:

- compose or arrange the notes of the song
- add lyrics
- add annotations such as accent marks, dynamic marks, and phrase marks

After your are done writing and editing the music, then:

- set up the page 196 size, orientation, and margins for the various parts
- set the overall font size 218, and perhaps also font sizes for different types of text
- set the horizontal spacing 218 (percentage compression or expansion)
- add the page title and headers or footers 198

After you have completed all of the above tasks, and are fairly certain that you will not change the work, only then should you then work on the page layout: adding page and system breaks, rearranging measures of systems, changing the vertical spacing of staves and systems, etc. If you start working prematurely on the page layout, you may have to discard some of your page layout effort. For example, if you add some introduction measures at the beginning of the music, then this might disrupt the pagination of the entire score.

Nevertheless, **Musician**'s page layout mechanism can be forgiving about how changes you make to the music might impact pagination. Try using the Keep Measure With

Previous and Keep System With Previous options, instead of "hard" system and page breaks.

4.5.2 Changing Font Size in Layout View

Before you work on the details of laying out pages of a score part, you should choose the font size and overall horizontal spacing (compressed or expanded). This topic describes how to choose the font size for the score part. The next topic describes Changing Horizontal Spacing in Layout View 218.

By default, all music symbols and text share the same font size and style (such as Times New Roman). In Page Layout View, you can change the font size for all music symbols and text by simply clicking the Increase Font Size button or Decrease Font Size button.

You can specify different font sizes for different types of text. For example, the font size for notes and music symbols might be 9 points, but the font size for lyrics might be a larger 10 or 12 points. To assign different font sizes to different categories of text or symbols in **Musician**, follow the instructions in Font Size for Types of Text 202.

The procedure below describes how to change the default font size. The default font size applies to any category of text or music symbol when which you have not specified an overriding value via the Text Fonts command 202 in the Format menu.

Note that the procedure for changing the default font size, using Page Layout commands, has exactly the same effect as using the font size option in the Font Size and Spacing Command 201 in the Format menu. The font size option is provided redundantly in Page Layout View so that you can adjust the font size and other aspects of page layout all in one place in **Musician**.

To change the default font size:

1. Navigate the Page Layout palette 214.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.

2. In the Page Layout Palette, click Increase Font Size button or Decrease Font Size button.

   -- OR --

   Type F+ or F+ to increase or decrease the font size.

   -- OR --

   Choose the Increase Font Size or Decrease Font Size command in the Layout Menu.

4.5.3 Changing Horizontal Spacing in Layout View

Before you work on the details of laying out pages of a score part, you should choose the font size and overall horizontal spacing (percentage compression or expansion). This topic describes how to change the horizontal spacing. The previous topic describes how to change the font size 218.

By default, all music symbols and text share the same font size and style (such as Times New Roman). In Page Layout View, you can change the font size for all music symbols and text by simply clicking the Increase Font Size button or Decrease Font Size button.

You can specify different font sizes for different types of text. For example, the font size for notes and music symbols might be 9 points, but the font size for lyrics might be a larger 10 or 12 points. To assign different font sizes to different categories of text or symbols in **Musician**, follow the instructions in Font Size for Types of Text 202.

The procedure below describes how to change the *default* font size. The default font size applies to any category of text or music symbol which you have not specified using the Text Fonts command 202 in the Format menu.

Note that the procedure for changing the horizontal spacing, using Page Layout commands, has exactly the same effect on horizontal spacing as using the horizontal spacing option with the Font Size and Spacing Command 201 in the Format menu. The horizontal spacing option is provided redundantly in Page Layout View so that you can adjust the horizontal spacing and other aspects of page layout all in one place in **Musician**.

To change the horizontal space:

1. Navigate to the Page Layout palette 214.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.

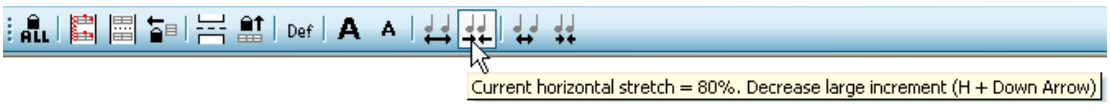
2. In the Page Layout Palette:

   - To increase the horizontal spacing in *large* increments, click the button, or type H + .
   - To decrease the horizontal spacing in *large* increments, click the button, or type H + .
   - To increase the horizontal spacing in *small* increments, click the button, or type H + .
   - To decrease the horizontal spacing in *small* increments, click the button, or type H + .

To find out what the current horizontal stretch percentage is:

- Hold the mouse over any of the four horizontal spacing buttons.

  Musician will report the horizontal stretch percentage in the button tip, as illustrated here:



Note that you should not expect to be able to anticipate what change in the horizontal or vertical spacing value will be necessary to place more or fewer measures on any

given page. For example, if there are 21 measures on a page at 100% spacing and you want to display 22 measures instead, it is difficult to predict whether 99% horizontal spacing will be necessary, or whether a smaller horizontal spacing percentage will be needed, such as 98% or 95% or 90%. You will need to try out different spacings, and see what happens. Also, changing the horizontal spacing percentage will affect the number of measures on each page differently, according to how much "slack" is currently distributed in any given page.

If you need to control exactly how many measures are on a given page, then you will need to use some combination of these Page Layout commands: System Break 221, Page Break 221, Keep Measure With Previous 223, and Keep System With Previous 225.

4.5.4 Specifying the Number of Bars Per Line

By default, **Musician** determines how many bars are displayed in each line of the score. The number of bars per line can vary among the different lines of the score. **Musician** offers you control over how many bars are in any given line so that, for example, you can arrange for convenient page breaks in an instrument part.

In some types of music, such as Broadway musicals and jazz, it is common practice that each line of the score has a fixed number of bars, typically four. With a single command, you can specify or change the number of bars per line at any time, for the entire score (or part) or any range of measures in the score.

If you try out **Musician**'s command for specifying a fixed number of bars per line, you will quickly see how you can also move the measure at the beginning of one line to the end of the previous line. **Musician**'s Number of Bars Per Line command is actually a short-cut for adding Keep Measure With Previous 223 locks on all of the measures of each line.

To specify a fixed number of bars per line for some range of measures in a score or page:

1. Navigate to the Page Layout palette 214.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.

2. In the Page Layout Palette, click the  button.

   -- OR --

   Type "bpl" for bars per line.

   Musician will display the Number of Bars Per Line dialog box.

3. In the Number of Bars Per Line dialog box, specify the number of bars per line, and the range of measures.

4.5.5 Forcing a System Break or Page Break

A system break forces a new system (line of measures) to start at a specified measure. A page break forces a new page to start at a specified measure.

To add a system break:

1. Navigate to the Page Layout palette.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.

2. Click the System Break  button in the Page Layout Palette.

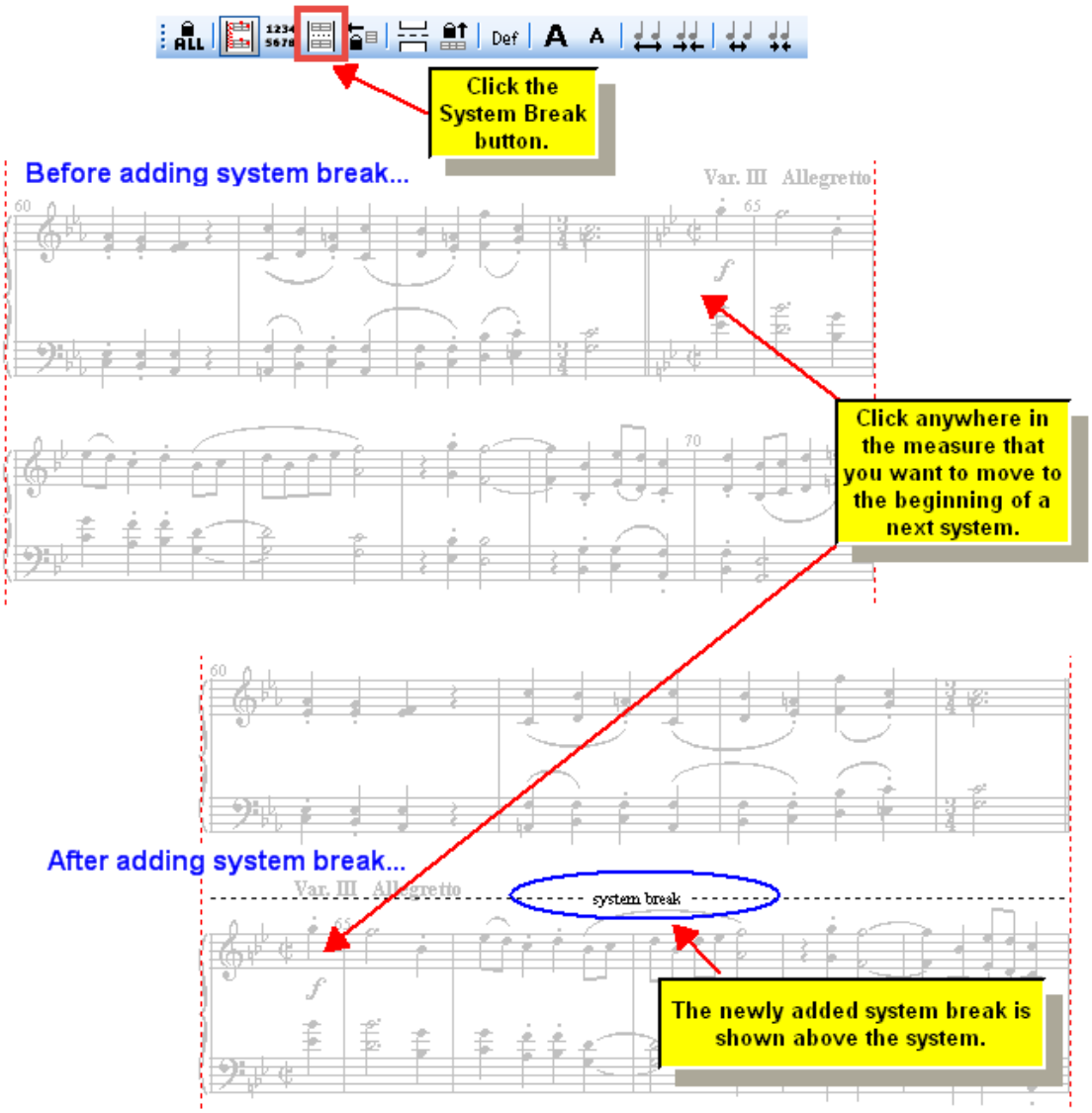
   -- OR --

   Choose the System Break command in the Layout Menu.

   -- OR --

   Type "sb" for System Break.

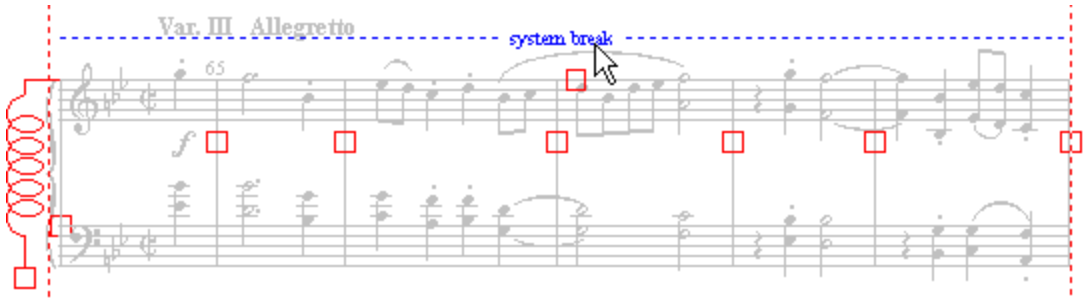
3. Click anywhere in the measure that you want to push to the beginning of a new system.



To remove a previously added system break:

1. Enter Page Layout view, as above.
2. You will automatically be in Select mode.
3. Click the mouse cursor somewhere on the "system break" text in Page Layout View.

The "system break" text will be displayed in the color blue, as shown:



4. Hit the DEL key.

   -- OR --

Click the Default Def button.

To add a page break:

- Follow the same procedure as the one above for adding a system break, except:

  Cick the Page Break button instead of the System Break button.

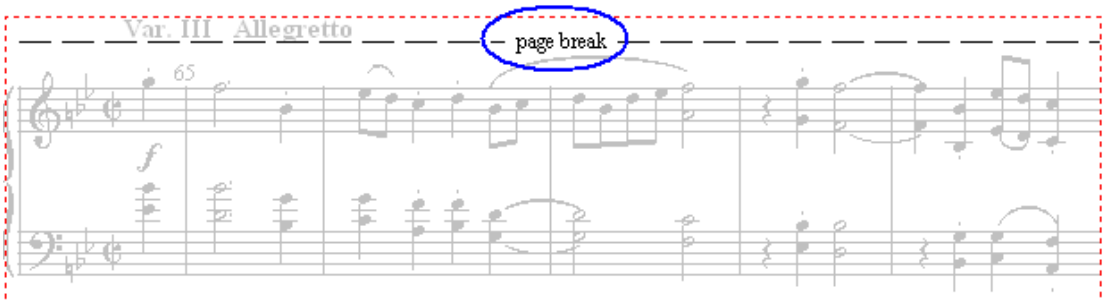
  -- OR --

  Choose the Page Break command in the Layout Menu.

  -- OR --

  Type "pb" for Page Break.

  The page break will look like this at the top of the new page:



4.5.6 Moving a Measure to the Previous System

In Page Layout View 214, the System Break option enables you to move one or more measures from one system to the next system. This results in fewer measures on the original system.

Sometimes you want to do the opposite. That is, you may want to place *more* measures on a system, thus packing them together more tightly You can do this with the Keep Measure with Previous command.

When you apply the Keep Measure with Previous command to a measure, **Musician** will keep that measure on the same system as the previous measure. If the previous measure is on the previous system, then it will shift to the next to last position on that system, and the last measure on that system will be the "keep with previous" measure.

If you keep two adjacent measures with the previous, then all three measures will be forced onto the same system, along with any other measures that would have been on the same system before the first of these three measures. In this way, it is possible to force the assignment of more measures to a system than can be spaced without overlapping of notes and symbols. **Musician** will obey your request to do so.

If a measure has been designated to be kept with the previous measure, and that previous measure is already on the same system, then the measures are left together on the same system without change.

To move the first measure of a system to the last measure position on the previous system:

1. Navigate to the Page Layout palette 214.

   -- OR --

Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

Musician will display the score in Page Layout View.

2. Click the Keep Measure With Previous button in the Page Layout Palette.

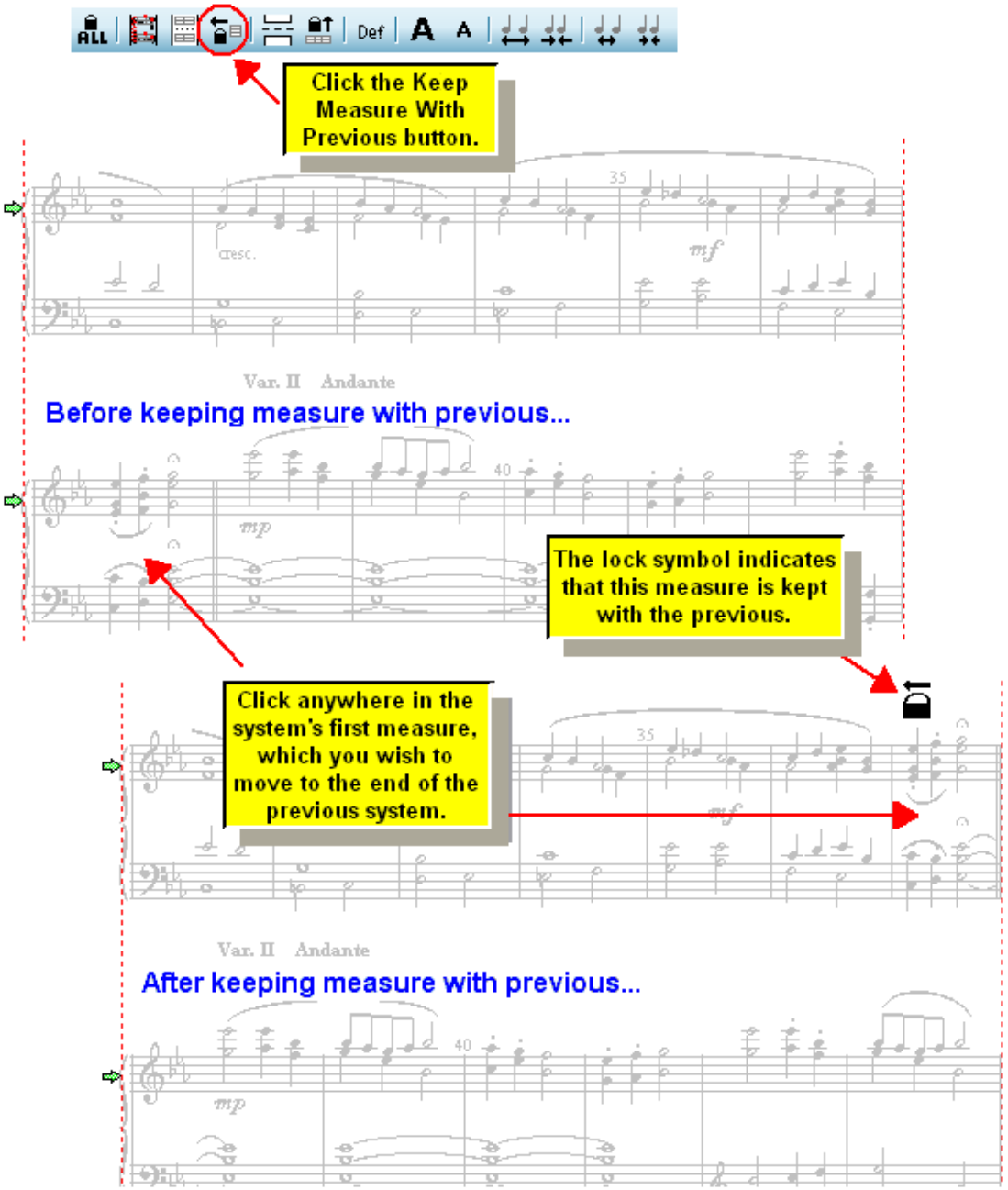
   -- OR --

   Choose the Keep Measure With Previous command in the Layout Menu.

   -- OR --

   Type "km" for Keep Measure With Previous.

3. Click the mouse cursor anywhere in the measure that you want to move to the previous system.



To remove the "keep measure with previous" control:

1. Enter Page Layout view, as above.
2. You will automatically be in Select Mode.
3. Click the "keep measure with previous" lock  symbol.

   The lock symbol will become highlighted in blue to show that it is selected.
4. Hit the DEL key.

   -- OR --

   Click the Default  button.

4.5.7 Moving a System to the Previous Page

In Page Layout View 214, the Page Break  option enables you to move a system from the bottom of one page to the top of the next.

Sometimes you may want to do the opposite. That is, you may want to move a system at the top of one page to the bottom of the previous page. You can do this with the Keep System with Previous command.

When you apply the Keep System with Previous command to a system, **Musician** will keep that system on the same page as the previous system. If the previous system is on the previous page, then it will shift to the next to last position on that page, and the last system on that page will be the "keep with previous" system.

If you keep two adjacent systems with the previous, then all three systems will be forced onto the same page, along with any other systems that would have been on the same page before the first of these three system. In this way, it is possible to force the assignment of more systems to a page than can be spaced without overlapping of systems and staves. **Musician** will obey your request to do so.

If a system has been designated to be kept with the previous system, and that previous system is already on the same page, then the systems are left together on the same page without change.

To move the top system of a page to the bottom of the previous page:

This procedure is quite analogous to the procedure for Moving a Measure to the Previous System 223. See that topic for more details.

1. Navigate to the Page Layout palette 214.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.
2. Click the Keep System With Previous  button in the Page Layout Palette.

   -- OR --

   Choose the Keep System With Previous command in the Layout menu.

   -- OR --

   Type "ks" for Keep System With Previous.

3. Click anywhere in the page's first system, which you want to move to the bottom of the previous page.

To remove the "keep system with previous" control:

1. Enter Page Layout view, as above.
2. You will automatically be in Select mode.
3. Click the "keep system with previous" lock  symbol.

   The lock symbol will become highlighted in blue to show that it is selected.
4. Hit the DEL key.

   -- OR --

   Click the Default  button.

4.5.8 Moving Barlines Within a System

In general, **Musician** does a good job of horizontally spacing measures, and systems with measures, to evenly distribute space according to standard music engraving practices. There may be reasons, however, that you will want to override **Musician**'s default horizontal spacing.

You can move a barline within a system to add more horizontal spacing to the measure on one side, and less horizontal spacing on the other side. For example, if one measure is too horizontally crowded, compared to other measures on the same system, you can move its left barline to the left, or its right barline to the right. This may, in turn, crowd the adjacent measure. So you may need to move the opposite barline of the adjacent measure to evenly space the system.

To move a barline:

This procedure is quite analogous to the procedure for Moving a Measure to the Previous System 223. See that topic for more details.

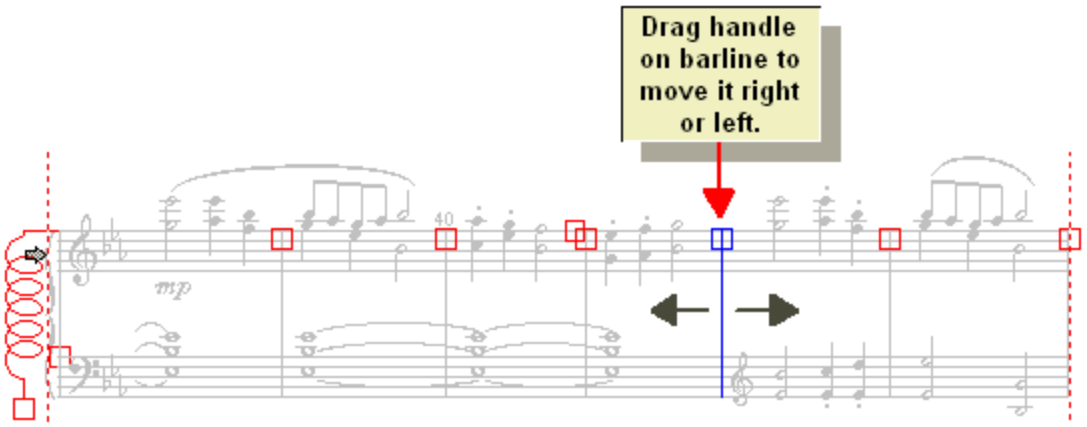
1. Navigate to the Page Layout palette 214.

   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

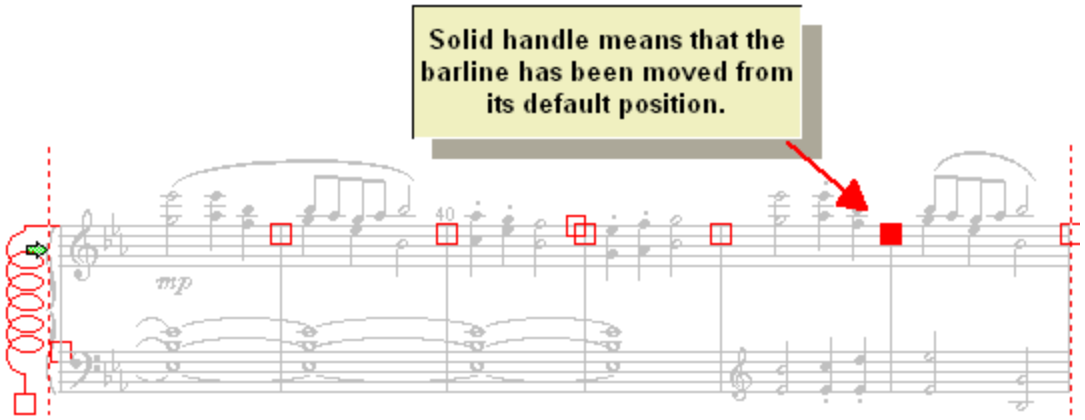
   Musician will display the score in Page Layout View.
2. Click the Move Barlines and Staves  button in the Page Layout Palette.
3. Click the red box handle on the barline you want to move. Keep the left mouse button down.

   The color of the handle and the barline will be highlighted as blue, to show that you have selected the barline.



4. While holding down the left mouse button, drag the barline to the left or right with the mouse. Then release the mouse button.

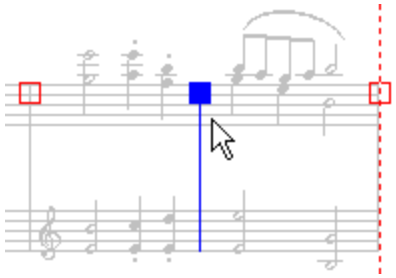
   The barline's handle will be filled solid red to indicate that the barline has been moved from its default position:



To restore a barline to its default horizontal position:

1. Enter Page Layout view, as above.
2. Select the barline's solid handle by clicking it.

   The barline and the handle will be highlighted in blue to indicate the selection:



3. Hit the DEL key.

   -- OR --

   Click the Default 

 button.

   This restores the barline to its default position.

4.5.9 Changing Vertical Spacing Between Staves and Systems

In general, **Musician** does a good job of vertically spacing staves within systems, and systems on a page, to evenly distribute space according to standard music engraving practices. There may be reasons, however, that you will want to override **Musician**'s default vertical spacing of staves and systems.

Musician offers the following ways to change the relative spacing of staves and systems on a page:

- Move a single staff up or down, relative to the position of the adjacent staves in the same system.
- Move an entire system up or down, relative to the position of adjacent systems on the same page.
- Stretch or compress the height of a system, so that staves within that system are evenly spread out or compressed together.

To change the vertical spacing between staves and systems:

1. Navigate to the Page Layout palette 214.

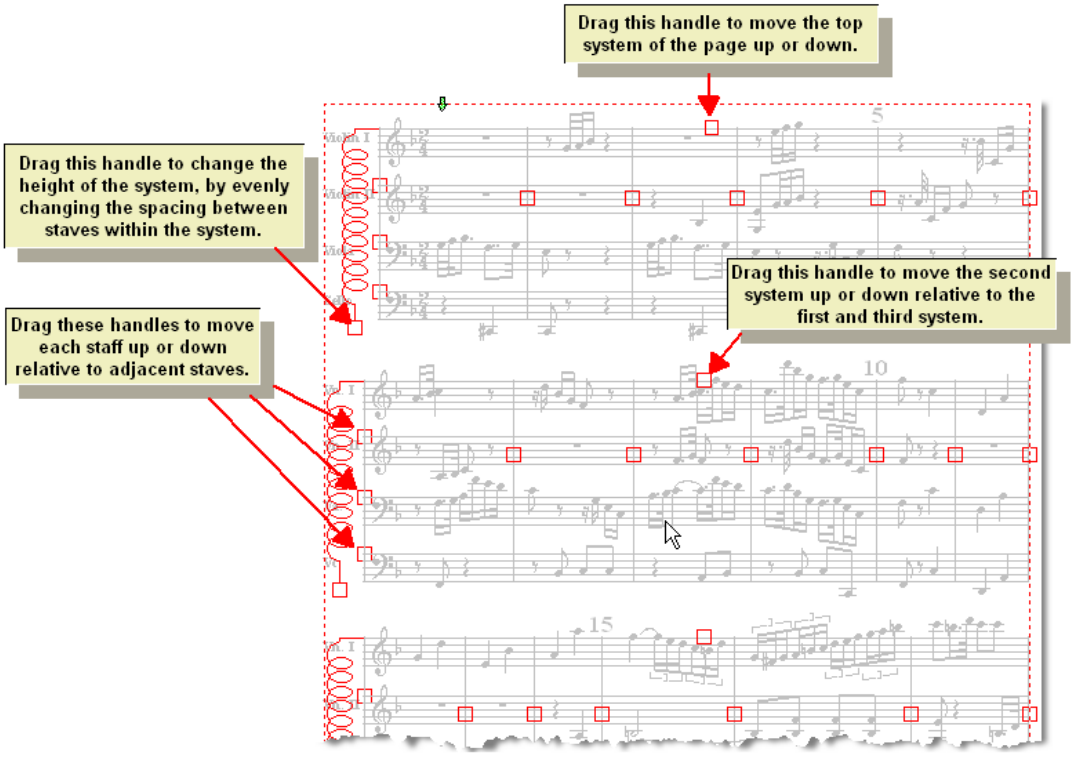
   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

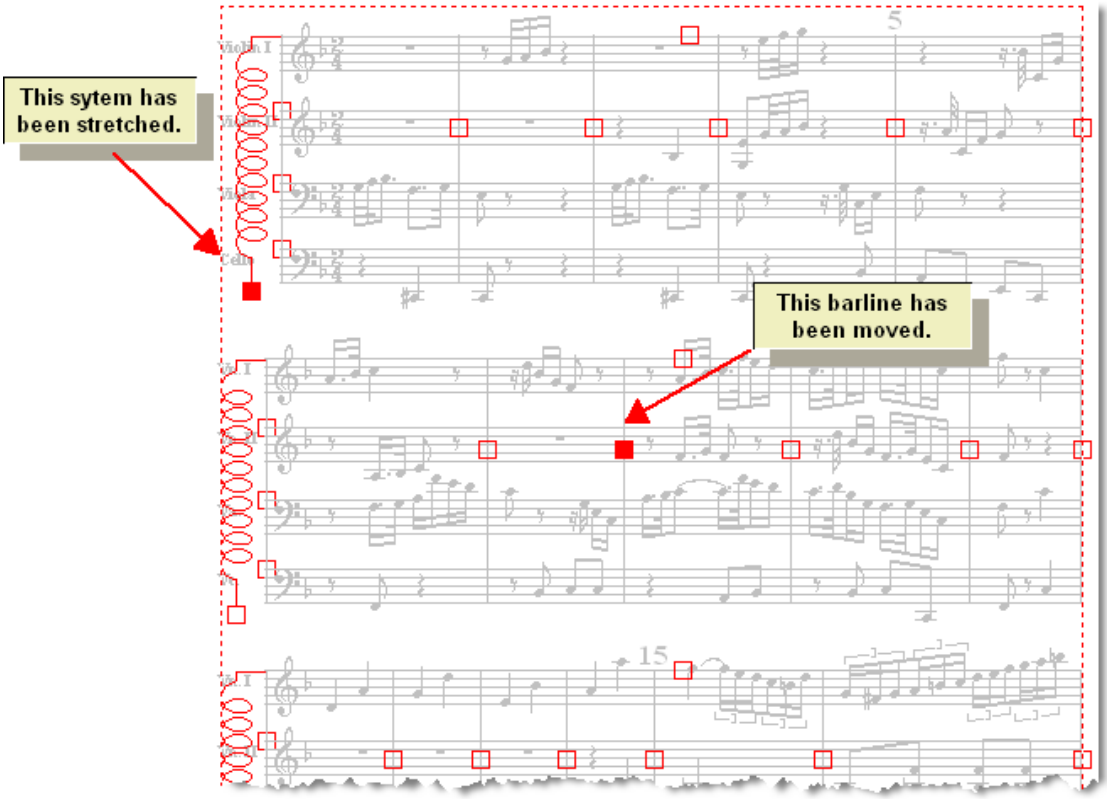
   Musician will display the score in Page Layout View.

2. Click the Move Barlines and Staves  button in the Page Layout Palette.

3. Click one of the system or staff handles, and while holding down the left mouse button, drag the handle of the system's or staff's vertical position, or the height of the system.
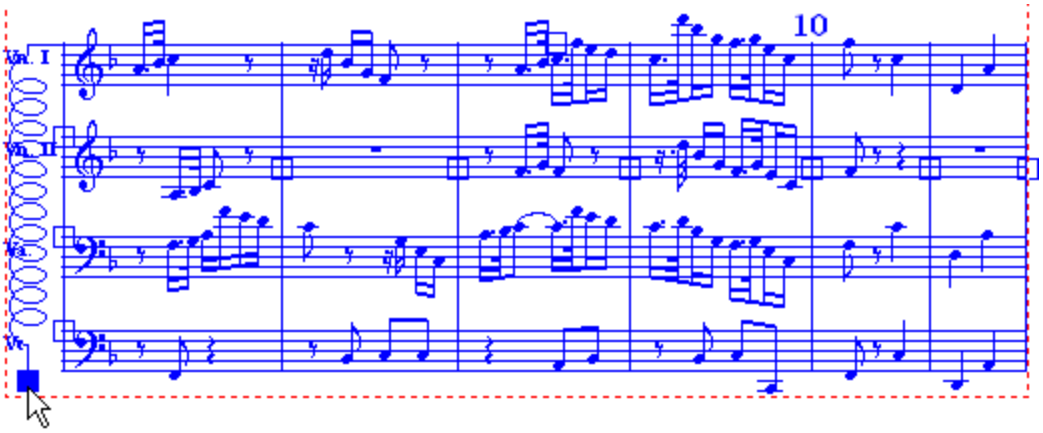


After you have moved a system or staff, or stretched a system, the handle will be filled with a solid color, as illustrated here:



To restore a staff's or system's vertical position, or a system's vertical stretch, to the default:

1. Enter Page Layout view, as above.
2. Select the staff's or system's handle by clicking it.

   The staff or system, and its handle, will be highlighted in blue:



3. Hit the DEL key.

   -- OR --

   Click the Default  button.

   This restores the staff or system to its default vertical position, or the system to its default vertical stretch.

4.5.10 Freezing Line Breaks and Page Breaks for Entire Part

After you have prepared the page layout of a part or conductor's score, there are some good reasons why you might want to "freeze" the line (system) breaks and page breaks:

- If you send your **Notation** .not file to someone else who has **Notation Musician**, or another **Notation** product, or the free **Notation Player**, but a *different printer* than yours, then you can ensure that the parts and conductor's score will look very similar when printed by a different printer using the same paper size.
- As you continue to make small changes to your score, there is the possibility that some changes may disrupt the line breaks and page breaks that you wish to preserve.

IT'S GOOD THAT... Any page layout changes you have made before you froze the part or score will be restored after you unfreeze it. That is, the freeze is just *temporary*. Also, you can make further page layout adjustments *after* you freeze the part or score, such as moving staves and systems and barlines. If you later unfreeze the part or score, any page layout changes you made after the freeze will also be preserved.

To freeze the line breaks and page breaks for an entire part or score:

1. Navigate to the Page Layout palette.

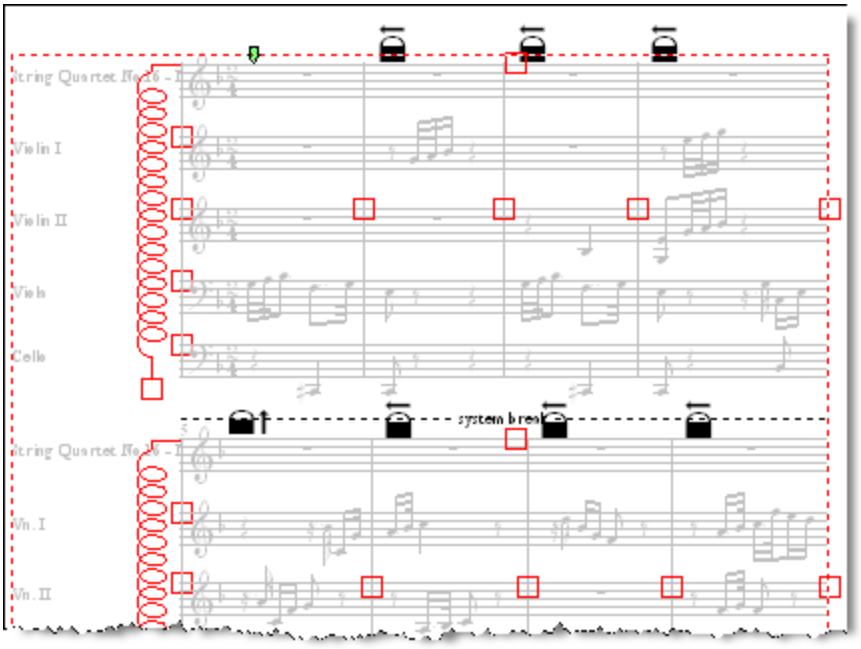
   -- OR --

Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

Musician will display the score in Page Layout View.

2. Click the Freeze Page Break and System Breaks button in the Page Layout palette.

   You will see that **Musician** adds a Keep Measure With Previous lock on every measure except the first in each line (system); and it adds a Keep System With Previous lock on every system (line) except the first one on each page:



Really, that's all that **Musician** does when it freezes pages. You could do the same thing by adding the locks to every measure; but, of course, that would be a lot of work.

IT'S GOOD THAT... This method of freezing the layout of pages offers an excellent balance by freezing the pages just enough to ensure that the overall pagination of the part or score doesn't change, and yet offering plenty of "breathing room" for you to add and edit music symbols and text within the pages, without causing the symbols to overlap. Even when a page is frozen, when you add, edit, and delete music symbols and text, **Musician** will continue to dynamically format the page so that symbols are evenly and aesthetically spread out on the page without collision or overlapping.

To unfreeze the line breaks and page breaks:

- Toggle of the Freeze Page Break and System Breaks button in the Page Layout palette.

4.5.11 Restoring Default Pagination

The previous topics describe how you can refine the layout of a page in many ways:

- force a page break or system break
- move a measure at the beginning of one system to the end of the previous system
- move a system from the top of one page to the bottom of the previous page
- move a barline 327 in a system to horizontally stretch the spacing of the measure on one side of the barline, and compress the spacing of the measure on the other side of the barline
- move a system 228 up or down on the page relative to other systems
- move a staff up or down 228 in a system relative to other staves in the system
- stretch or compress the total height of a system 228, evenly moving the staves in the system further apart or closer together

You can individually remove any of the adjustments, as explained in the topics for each of the above tasks, and summarized here.

In addition, you can restore the default page layout for an entire page in one step, or for an entire score part in one step, as described in the second procedure of this topic.

To remove specific page layout adjustments:

1. Navigate to the Page Layout Palette 214.

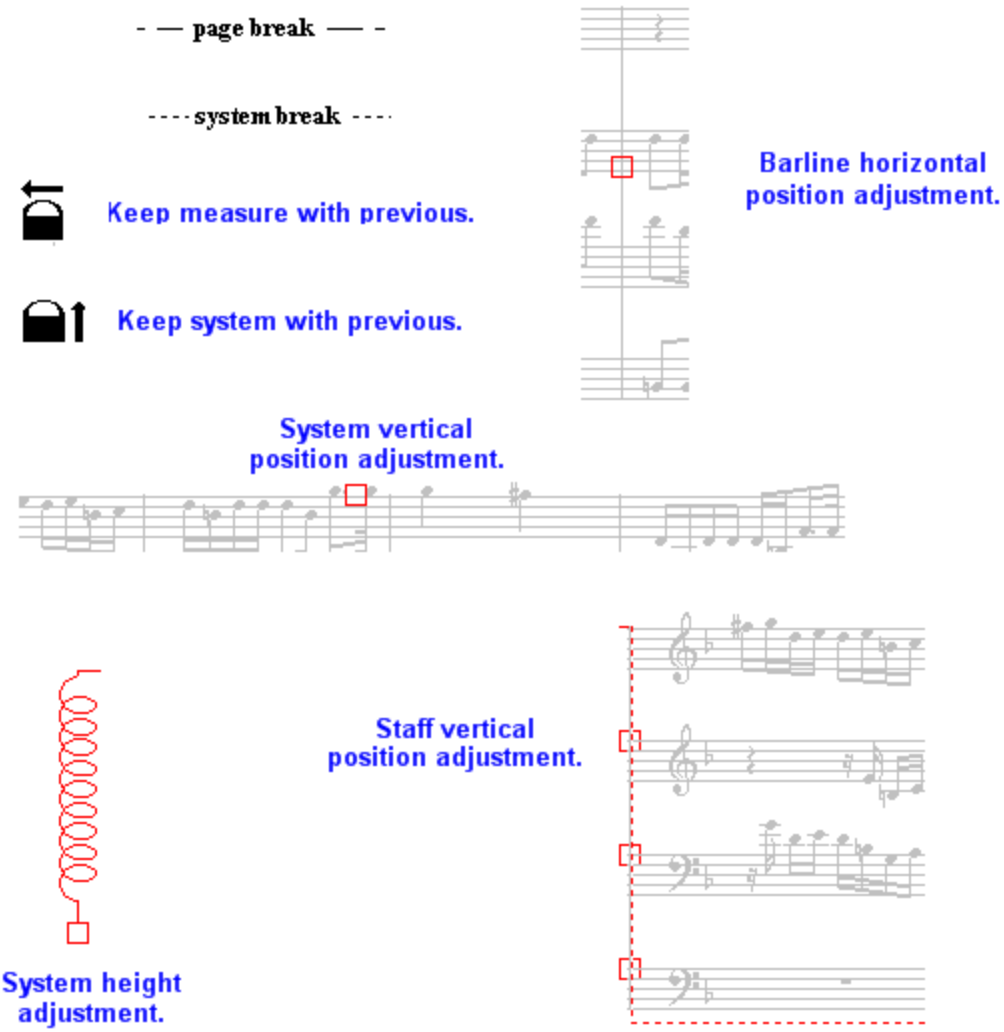
   -- OR --

   Type SHIFT+P. If this takes you to the Page Text Palette instead, type SHIFT+P a second time to go to the Page Layout Palette.

   Musician will display the score in Page Layout View.

2. Click the Move Barlines and Staves  button in the Page Layout Palette.

3. Select one or more of the following Page Layout objects by clicking on or dragging the mouse cursor over them. After you select the first object, **Musician** will subsequently select only additional objects of the same type.



4. Hit the DEL key.

   -- OR --

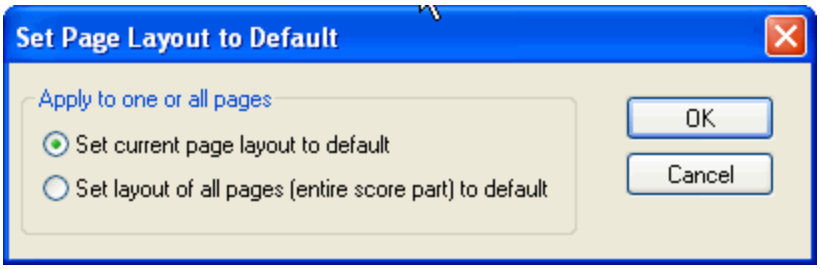
   Click the Default Def button.

   This removes the Page Layout object, thus removing its adjustment to the page layout.

▸ To remove the page layout adjustments for an entire page, or for all pages of the score.

1. Make sure that no Page Layout objects are selected. You can do this by clicking anywhere on the page except where a Page Layout object is located.
2. Click the Default Def button.

Musician will display the following dialog box:



3. Choose one of the two options to remove the page layout adjustments for either the currently viewed page or for the entire score part.

5 Editing the Music Notation

The previous major sections of this **Musician** documentation describe how to edit the largest units of music data: the song 63, staves 155, and parts 155. This section, Editing the Music Notation, describes how to edit the symbol symbols that are displayed in a score or part.

If you have imported a MIDI into **Musician**, you can then quickly correct any transcription errors it might have made in determining note rhythms and accidentals. You can rearrange the music by deleting notes. You can also add lyrics and a wide variety of annotations, such as accent marks, dynamic marks, slurs, ornaments, and free text.

If your style of learning is to read about it first, then it is suggested that you read the introductory section on Basic Editing Procedures 235. It offers an overview of how to add and edit music symbols, and alerts you to the ways that **Musician** might differ from other software applications with which you are familiar.

The remaining sub-sections describe how you can add and edit all of the music symbols supported by **Musician**:

- Editing Measures
- Selecting, Editing, and Deleting Notes
- Transposing Notes
- Editing Rests
- Editing Grace Notes
- Editing Ornaments 303
- Editing Staff Symbols 315

  brackets and braces, clefs, key signatures, meters, barlines, repetition marks, 8va octaves, and rehearsal marks
- Editing Music Annotations 339

  accents and articulations, dynamic marks, hairpin crescendo marks, special symbols, slurs, and sustain pedal marks

Separate major sections of this **Musician** documentation describe how to edit text 365.

5.1 Basic Editing Procedures

As you explore how to edit various types of music symbols and text, you might find it helpful to gain an understanding of the overall procedures for editing music symbols. Most of these procedures are consistent with other Windows applications, but **Musician** does have a few relatively unique user interface methods.

A central concept in **Musician**'s user interface is that of the "object". Examples of objects are noteheads, accent marks, dynamic marks, clefs, key signatures, lyrics, and free text. This documentation usually refers to objects as "music symbols", to describe them in musical terms rather than technical software terms. If you are a student of software user interfaces, **Musician**'s user interface is "object-oriented". This simply means that an object, or musical symbol, is something that you can individually select on the screen by clicking it with the mouse.

You select a music symbol by clicking it with the mouse. You also add a music symbol by clicking the mouse on the screen where you want to add it. How does **Musician**

know whether you are selecting a music symbol already on the screen, or adding a new one?

> With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode or vice versa to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do, depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

To select an object, you just mouse over it, see it turn red when you can select it, then click on it. The object will then turn blue to show that it is selected and ready to be edited.

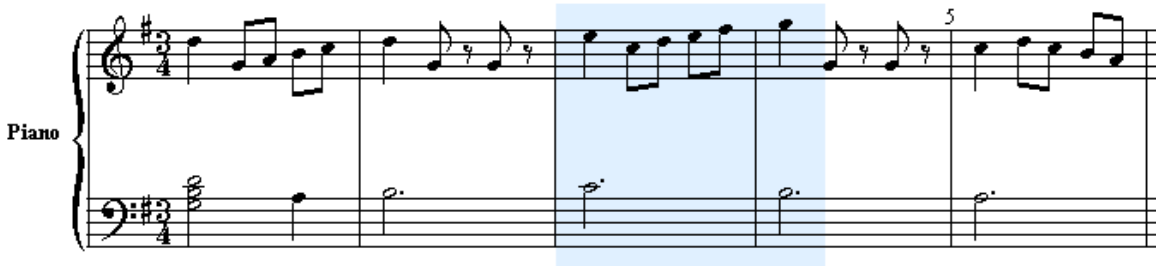
As in other software applications with "object-oriented" user interfaces, you can select multiple objects 239 by dragging the mouse over them, select additional objects by clicking them with the mouse while holding down the SHIFT key, and so on.

A major component in **Musician**'s window is the palette 136. A palette offers you a choice of music symbols that you can add or edit. **Musician**'s palettes are organized in a three-level hierarchy that offers you a good overview of where you are located within the overall **Musician** user interface.No palette is more than a couple of mouse clicks away. However, we recommend that you learn the shortcuts for the most common palettes. All palette shortcuts are Shift and some letter, such as SHIFT+N for the Note Palette and SHIFT+A for the Accent Mark Palette.

You have probably had experience using palettes in other software applications; but you should be aware that palettes in **Musician** take on a broader role than palettes do in some other software applications. Like other applications, you can use **Musician** 238 palettes to add objects 238. Unlike many other applications, however, you can also use **Musician** 240 palettes to change the properties of objects 240. For example, if you have selected a quarter note, you can click the eighth note  button in the Note Duration Palette to change the quarter note to an eighth note.

As in most Windows applications, you can, of course, use menu commands to add and edit objects. In general, however, menus do not offer the most convenient way to add and edit objects. You will find it easier to use either the palettes or keyboard shorts. You will nevertheless find menus useful for looking up keyboard shortcuts 127.

In addition to being able to select multiple objects by dragging the mouse over them, you can also select a 241 region of the score by holding down the CTRL key while you drag the mouse cursor over the region. The selected region then has a blue background, as shown here:



You can experiment with musical ideas and editing operations with the confidence that you can undo recent changes 243 in reverse order, to restore your previous work. Also, **Musician** periodically (by default, every 10 minutes) completely backs up a copy of

your work to a file 245, from which you can restore your work in the event of a system failure.

All of the basic editing procedures introduced above are described in detail in the topics that follow.

5.1.1 General Method for Adding, Changing, and Deleting Objects

> **TIP**: With version 4 and going forward **Musician** operates under **SmartMode**, which means that you will not typically have to bother with changing from "Add" mode to "Select" mode or vice versa to do your work. **Musician** will automatically switch to the proper mode for you to do what you need to do, depending on where the cursor is on the score and what tool palette is open. You don't have to do anything - **SmartMode** is on by default.

In general, there are three things you can do with any type of musical object or symbol, such as a note or dynamic mark. You can add, change, or delete it.

The general procedures for accomplishing each of these three tasks in **Musician** are outlined below.

Note that some editing operations, such as copy and paste, are based not on selected objects but on selected *regions* of the score such as a range of measures in one or more staves. For details, see Selecting and Editing Regions of a Score 241.

To add an object:

1. Choose the type of object you want to add from a palette 136. Use the mouse to navigate through the palettes 136, or type the SHIFT key plus the letter for the palette, such as SHIFT+D for the Dynamic Mark Palette. The cursor shape will change to  with a specific "dongle" to show you what you are adding.
2. Move the cursor to where you want to add the object and click the mouse.

This procedure for adding objects is described in more detail in the topic Adding Objects Using Palettes 238.

To change an object:

1. Click on the object you want to change.

   The palette 136 and the Object Menu 238 will be updated to offer you editing options specific to the type of object you have selected. A selected object is highlighted in blue.
2. Choose options in the palette or Object Menu to change the properties of the selected object.

The procedure for changing objects is described in more detail in the topic Changing Object Properties Using Palettes 240.

To delete an object:

1. Click the object you want to change. The selected object will be highlighted in blue.
2. Hit the 

key.

5.1.2 Adding Objects Using Palettes

The following general procedure for adding objects via palettes can be used for most types of objects.

To add music symbols:

1. Click on the Tab and then tool button for the object you want to add.

   For most types of objects, the mouse cursor will change to this shape: and will have a "dongle" attached to it which is similar to the tool button to show you what you are adding.

2. Make sure that the palettes are visible.

   - Turn on the check mark for Show Main Palette and Show Detail Palette in the View menu.

     -- OR --

   - Type "qspl" for Quick Show Palette.

3. Navigate through the palettes to the one that offers options for the type of musical object you wish to add.

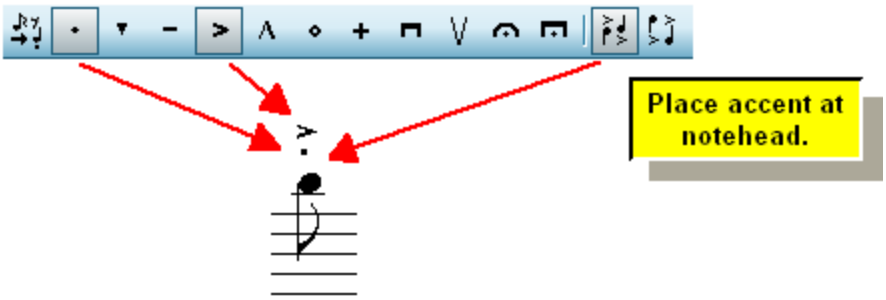
   For general instructions about navigating through palettes, see the introduction for Palettes 136. To learn about what palettes are available, explore through the palettes with the mouse.

   -- OR --

   While holding down the SHIFT key, type the letter for the type of palette you wish to display, such as SHIFT+N for the Note Palette.

4. In the palette, select the attributes of the particular type of object you wish to add. For example, if you wish to add a bass clef, click the bass clef button in the palette.

   In some palettes you can choose multiple options at the same time. For example, in the accent palette, you can choose any two accents to be displayed above or below a note at the same time:



5. Click the mouse where you want you the selected type of object.

   The type of object you just added will remain selected.

6. To delete the object you just added:

   - Hit the Del key.

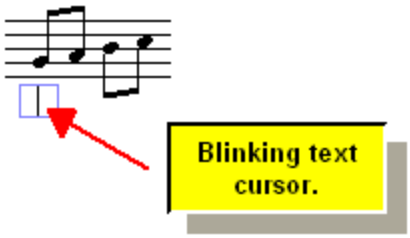
   -- OR --

   - Use the Undo command in the Edit menu, or type CTRL+Z.

To add lyrics or other types of text:

1. Follow the above steps 1 through 3, for selecting the type of text you wish to add.
2. Click the mouse where you want to add the text.

   If you have added a new text object (lyric, free text, rehearsal mark, etc.), **Musician** will display a text entry box and a blinking cursor at the location of the new lyric or chord name, such as illustrated below:



3. Type in the text. For lyrics or page text, use the ENTER key to start a second line of text.
4. Complete the entry of the text by hitting the ESC key, or by clicking the mouse somewhere else to start another new text object of the same type.
5. If you are adding lyrics or chord names, you do not have to click the mouse again to add the next lyric or chord name. Instead, hit the TAB key. Or in the case of lyrics, you can also press the SPACE key, to advance to the next note.

For more details, see Adding Text 367.

5.1.3 Selecting One or More Objects Before Editing Them

A score object must be selected before it can be edited or deleted. You can simultaneously select and edit multiple objects of the same type.

To select an object:

1. Place the mouse over the object - it will turn red to show it is selectable, and click the left mouse button. It will then turn blue to show that it has been selected and is ready to be edited.

To select multiple objects of the same type.

1. Click on an object, hold down the left mouse button and drag the mouse over the score. **Musician** will select objects of the same type during the drag. For example, if you start the mouse drag at a note, then only more notes will be selected, not other types of objects such as lyrics.
2. To select an additional object of the same type, hold down the SHIFT key and click the object.
3. To add several more objects to the list of already selected objects, hold down the SHIFT key and drag the mouse over the additional objects.
4. To remove some objects from the list of selected objects, hold down the SHIFT key and click them individually, or drag the mouse over them.

5.1.4 Changing Object Properties Using Palettes

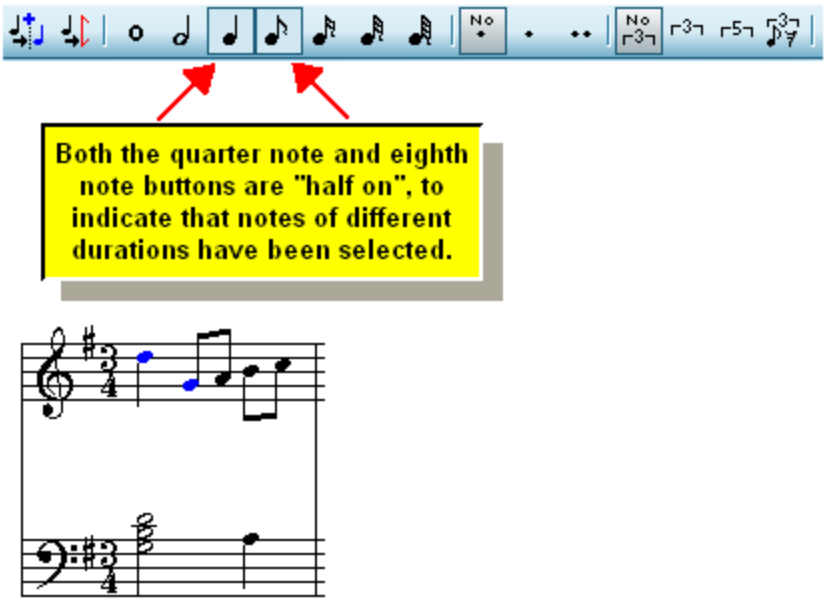
The following procedure applies to most types of objects.

To edit one or more selected objects (of the same type) using the palette:

1. Follow one of the two procedures described in the previous top for selecting one or more objects 239.

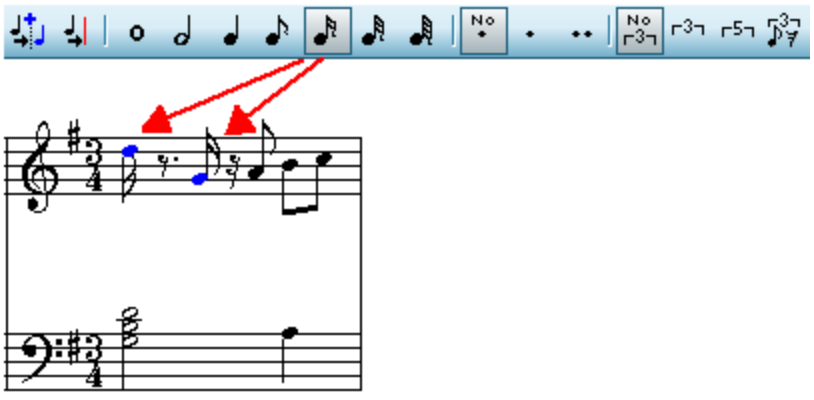
   Select two notes of different durations.

   The Note Palette palette shows buttons "half on" for the different note duration values. The color for "half on" will depend on your Color Theme 125.



2. Click buttons in the palette to change the attributes of the currently selected object(s).

   Continuing with the above select, click the sixteenth note button, both notes will change to sixteenth notes:

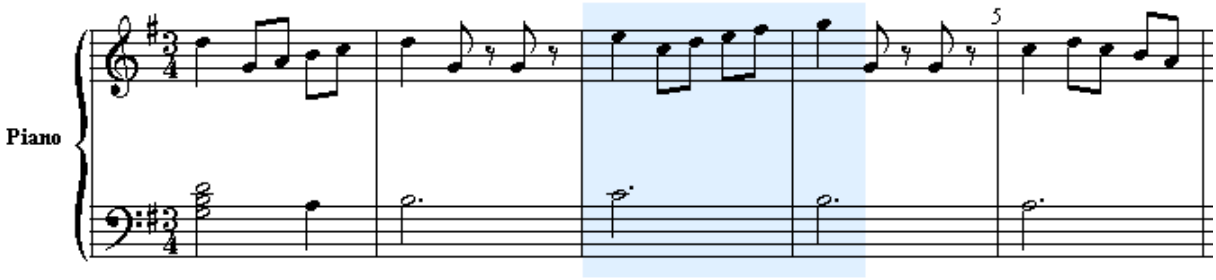


   Such changes affect only the notation - the underlying performance of the notes will remain the same, and the file will sound the same way it did before you made the change.

5.1.5 Selecting and Editing Regions of a Score

Editing a score usually involves adding, selecting, modifying, and deleting objects, such as notes and lyrics. However, some methods of editing a scoreare based on selecting a *region* of the score. A region may cover a range of measures and beats, and a range of one or more adjacent staves.

Musician displays a light blue background for the currently selected region, as illustrated below:



To select a region of the score:

Method 1

1. In the main toolbar, click the Region Select Mode 133 button.

   -- OR --

   Quikcly double right-click the mouse anywhere in the score.

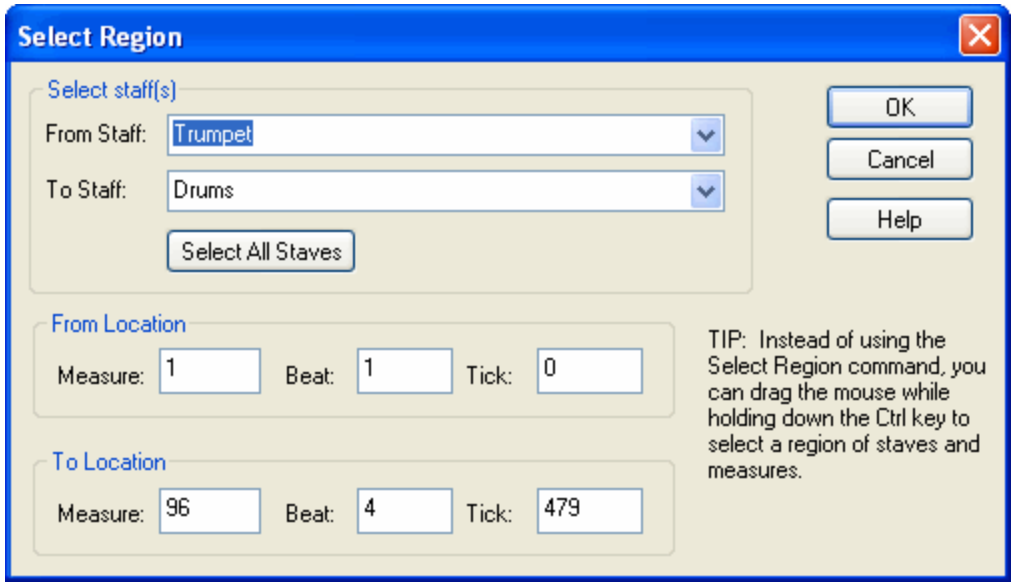
2. While holding down the mouse button, drag the mouse from the start to the end of the region you wish to select.

Method 2

1. Hold down the CTRL key.
2. While holding down the CTRL key, point the mouse at the beginning of the region, and press down on the left mouse button.
2. While holding down both the CTRL key and the mouse button, drag the mouse to the intended end of the region.
3. Release the mouse button and the CTRL key.

Method 3

- Choose the Select Region command in the Region menu. It will present the following dialog box, in which you can enter the range of measures and beats for the selection, and the range of staves:



To select the entire score (all of the measures in all of the staves):

- Choose the Select All command in the Edit menu.

-- OR --

- Type CTRL+A.

To remove the region selection:

- Hit the ESC key.

To extend the region selection:

1. If you wish to extend the region to another page of the score, use the Page Down key to go to that page.
2. If the Region Select Mode  button in the main toolbar is selected, then hold down the Shift key and click where you want the region to be extended to.

   -- OR --

   Hold down both the CTRL and Shift keys.

   -- OR --

   While holding down the mouse button and CTRL key, drag the mouse to the intended end of the region. Then release the mouse button and CTRL key.

To select the entire range of one or more adjacent staves:

- Click the Select Staff button among the staff controls to select one staff. While holding down the SHIFT key, click another staff to select it and all of the other staves between it and the first selected staff. For details, see Select Staff 148.

Once you have selected a region, many commands in the Region and Edit menus are available. For example, you can Remove Inaudible Notes in a Selected Region, or Remove Rests Smaller Than a rest duration that you specify.

5.1.6 Using the Clipboard

Similar to clipboards in other Windows programs, **Musician**'s clipboard is a place off the screen where you can temporarily save some region of a score. Later you can paste the temporarily saved region of the score into a new location in the same score,

or in another score. For Musician you can also use the clipboard to exchange lyrics between Musician and an external text editor 384.

Instructions for using the clipboard are described in the topics that follow.

5.1.6.1 Clearing a Region of the Score

Clearing a region of the score leaves the measures and staves in place, but removes all notes, performance data, and music annotations such as dynamic marks. If you also want to remove the measures or staves, follow the instructions in Deleting Measures 247 and Deleting Staves 158.

To clear a region of the score.

1. Select the region, as described in Selecting and Editing Regions of a Score 241.
2. Choose the Clear command in the Edit menu.

   -- OR --

   Type CTRL+D.

5.1.7 Undoing Editing Operations

Musician supports multiple level undo. For example, if you transpose the score up a whole step, then add a clef in some staff, and then delete some notes, you can undo all of these editing operations, called *transactions*, one by one in reverse order. Further, you can undo several transactions at once. Also, once you have undone a transaction, you can change your mind and redo it again.

Note that if you make some change to the score after undoing a transaction, then the undo of that transaction is committed. That is, you can no longer redo that undone transaction.

Musician's multiple level undo feature requires the allocation of additional memory for each transaction that is saved. Eventually, if little memory is available on your system, **Musician** will display the following message in the status bar:



When you see this message, you should use the Clear Undo History command in the Edit menu. If you need to undo any recent editing operations, you should undo them first before using the Clear Undo History command. After you use the Clear Undo History command, the "memory is low" message will usually go away. If the message is still displayed, then you may need to exit other programs that are running at the same time as **Musician**. If that does not work, then save your work with the Save or Save As command in the File menu; exit **Musician**; then run **Musician** again and reopen the file.

To undo one or more of the most recent editing operations (transactions):

1. Click the Edit menu in the main menu bar. Beneath the Edit menu label, a command name for undoing the most recent transactions will be listed, such as "Undo Set Key Signature." The undo command for the first most recent transaction will be listed first; the undo command for next most recent transaction will be listed second; and so on.
2. Click the first Undo transaction command listed to undo the most recent transaction.

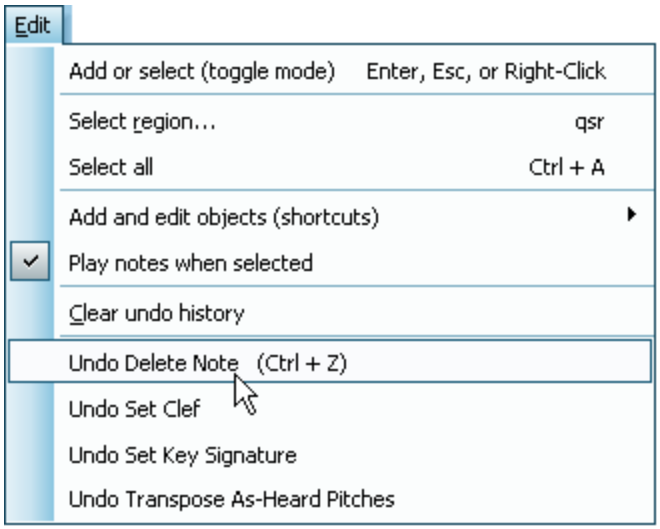
-- OR --

Click some other Undo transaction command further down the list. All of the transactions from that point through the most recent will be undone.

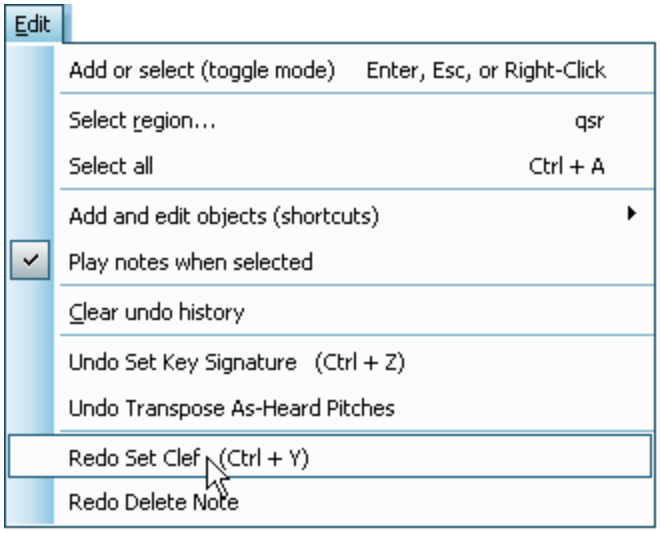
-- OR --

Type CTRL+Z. This is a standard keystroke combination for the Undo command in most Windows software applications.

After you undo one or more transactions, the next time you view the Edit menu, it will display Redo transaction names for each of the most recently undone transactions. The following example shows four transactions that can be undone, the most recent being a "Delete Note" transaction:



In the above example, suppose you undo the two most recent transactions, by undoing them one at a time, or by clicking "Undo Set Clef" below "Undo Delete Note". That action will undo those two transactions. The next time you view the Edit menu, it will display the following:



The first transaction that can be redone is "Set Clef", and the second "Delete Note".

To redo one or more of the most recent undone operations (transactions):

1. Click the Edit menu in the main menu bar. Beneath the Edit menu label, review the list of Redo command names, such as "Redo Set Clef" and "Redo Delete Note" in the above example.
2. Click the first Redo transaction command listed to redo the most recently undone transaction.

   -- OR --

   Click some other Redo transaction command further down the list. All of the transactions from the first up to the one you clicked will be redone.

   -- OR --

   Type CTRL+Y. This a standard keystroke combination for the Redo command in most Windows software applications.

To free memory used to support the undo of transactions:

1. Make sure that you do not want to undo any previous transactions, because once you follow this procedure, you will no longer be able to undo them.
2. Choose the Clear Undo History command in the Edit menu.

5.1.8 Recovering Interrupted Song File Editing

If you are editing a song and your computer system or **Musician** program is abnormally terminated for any reason, you can still recover most of the work in progress on the song.

Musician completely backs up your work periodically, which is every 10 minutes by default. You can set the backup frequency to a shorter or longer period, according to instructions described later in this topic. **Musician** backs up your work with a minimal interruption to your keyboard or mouse activity. You will probably never notice that the back up is in progress. **Musician** will display "Auto-save <filename>..." in the status bar at the bottom of **Musician**'s window, probably faster than you will be able to read it.

Musician stores backup files in the C:\Users\Public\Documents\Notation_4\Musician_4\Recover directory. The backup file will have the same name as the file you are working on, except that "-Recover", plus a number (eg, -Recover-2) will be added to the end of the file name. For example, if you are working on MySong.not, the backup file will be named MySong-Recover-1.not. The recovery files are renumbered upon each backup, so that the most recent is always the one numbered 1.

Note that this backup and recovery system is not intended as a solution for normal backup of your music work in progress. If you are composing and arranging a song, and are about to make some major changes to the song that you are not sure you want to keep, then you should explicitly save a backup copy of the song using the File / Save As.

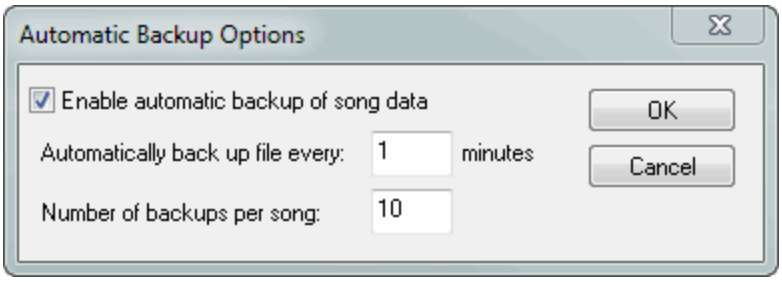
The Undo 243 command is useful for reversing recent changes you have made to the song. Manually saving and restoring a backup copy using the File menu Save As and Open commands is the appropriate procedure for saving and returning to a major earlier juncture in your song composing or arranging project. **Musician**'s file recovery feature is useful in the case that your system or **Musician** abnormally terminates.

The Auto Save Recovery option is enabled by default when you first install **Musician**.

To enable Musician's file recovery feature or change the frequency or number of backup copies kept:

1. Use the File/ Open files from automatic backup... Options command.

   Musician will display the following dialog box:



2. Turn on the check mark for "Enable auto-save (backup) of song data."
3. Edit the settings for frequency and number of backups you want to keep per song.
4. Click 'Ok' to save your changes.

To recover a file after your computer system or Musician has abnormally terminated:

1. Click "Files / Open files from automatic backup".

   Musician will display a File Open dialog box, and will pre-select your C:\Users\Public\Documents\Notation_4\Musician_4\Recover directory.

2. In the Recover subdirectory, search for the files that match the name of the file you were working on when **Musician** was interrupted. Open the recovery file with the same name, with "-Recover-1" at the end of the name, as that usually will be the most recently backed up copy of your file.
3. Review the opened recovered file. Compare it with the original file. Do not replace the original file if the recovered file is not newer. You can determine this by recalling what changes to the song you recently made, or by checking the date/time stamp of the file.
4. Optionally, rename the original file, or make a backup copy of it, just in case you have made a mistake in assessing that the recovered file is more recent.
5. While viewing the recovered file, use the Save As command in the File menu to rename it to the original file name, and to save it in the original file's directory.

IMPORTANT: Do not forget step 5! If you skip this step, and later use the File Save command, your work will be saved in the MySong-Recover.not file instead of the original file.

5.2 Editing Measures

Musician defines a *measure* as all the music that is played from one barline to the next, across all staves. **Musician** enables you edit measures as a whole in the following ways:

- Delete measures 247.
- Split a measure 247 with a new barline into two smaller measures.

- Join two measures 249 by removing the barline that separates them.
- Create an upbeat measure 249, which has less that the full count of beats for the following meter.
- Specify the periodic numbering of measures 255, such as showing the measure number of every fifth measure.
- Use multiple measure rests 295 to collapse two or more measures that are rests only.

5.2.1 Deleting Measures

You can delete one or more measures with the Remove Measures command in the Measure menu.

Beat zero of the first measure of a MIDI file typically contains MIDI data that must be transmitted at the start of the song. If you delete the first measure, or a range of measures starting at the first measure, **Musician** will move this data to the new first measure of the score.

To delete one or more measures:

1. Optionally, select a range of measures 241 that you wish to delete. Select the measures by holding down the CTRL key and dragging the mouse across them.
2. In the Measure menu, choose the Remove Measures command.

   -- OR --

   Type "qrm" or "qdm" for Quick Remove Measures or Quick Delete Measures.

   Musician will present a Remove Measures dialog box.
3. In the Remove Measures dialog box, specify the measure number of the first measure to be deleted, and the number of measures to be removed. If you selected a range of measures in step #1, the values in the dialog box will be pre-selected.
4. Click the OK button to commit the deletion of the measures.

5.2.2 Splitting Measures

Musician enables you to insert a barline into the middle of a measure, thus splitting the measure either into two parts divided by a dotted barline, or into two smaller measures. Some reasons that you might want to split a measure are:

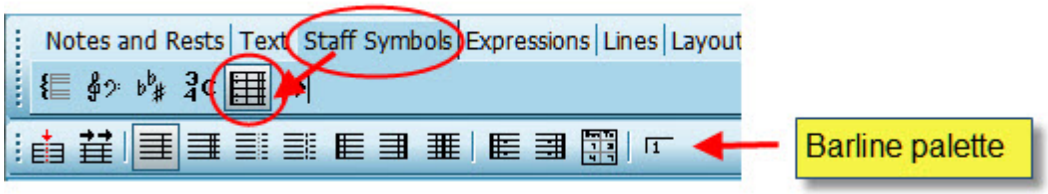
- Insert a dotted barline in the middle of a measure to emphasize the rhythmic structure of the measure. This just splits the measure in half: it does not divide the measure into two new measures.
- If the first measure of the song is an upbeat, you can split the first measure exactly at the first upbeat note, and then delete the left measure 247 of the two newly created split measures.
- If an upbeat at the beginning of a section of the song is paired with a partial measure at the end of the section, then you may need to split a measure at the end of the section in order to create the partial measure. The procedure for Creating Upbeat Measures 249 includes the procedure described in this topic for splitting a measure.

The barline can be inserted at any beat within the measure such that the newly created smaller measures do not necessarily have equal lengths. If the barline is inserted at a minor beat in the measure, **Musician** arranges the beams for the second

of two smaller measures according to the same pattern as in the original measure. For example, if you split a 4:4 measure into 5:8 and 3:8 measures, the last two eighth notes of the second 3:8 measure will remain beamed together, and the first of the three eighth notes in the 3:8 measure will not be beamed.

To split a measure by inserting a barline in the middle of the measure:

1. With the mouse, navigate to the Barline Palette.



-- OR --

Type the vertical line character "|", which suggests the shape of a barline. This is the upper-case for the backward slash "\" character on many keyboards.

2. In the Barline Palette, select the type of barline you wish to insert in the middle of some measure.

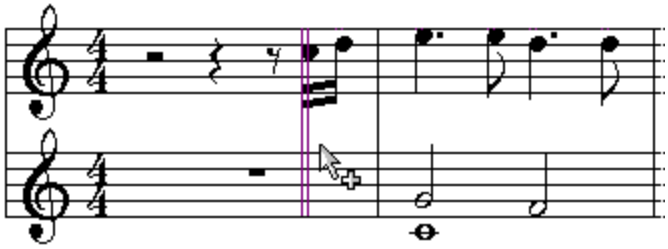
3. Click the Insert Barline  button.

-- OR --

Type "ib" for Insert Barline.
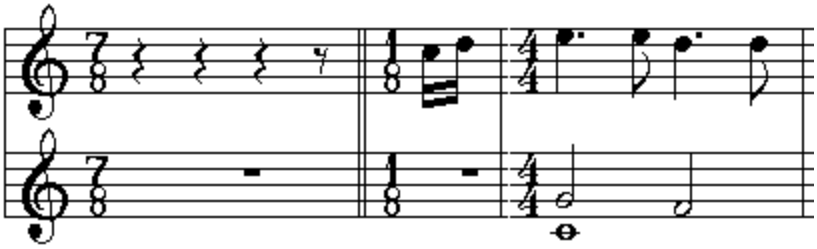
4. The mouse cursor will change to  .

As you move the cursor around on the score, a dark red barline of the type you have selected will indicate where the new barline will be inserted if you click the mouse:



4. Click the mouse where you want the new barline to be inserted.

Musician will add a new double barline where you clicked the mouse, and will indicate the meters (time signatures) of the newly created left and right measure, as illustrated using the above example:
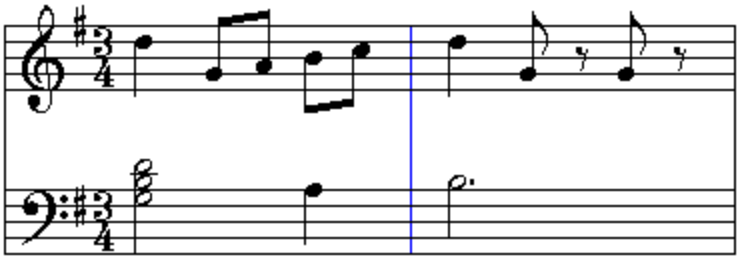


In this example, if you want to convert the 1/8 measure into an upbeat measure, and delete the 7/8 measure, then follow the instructions in Creating Upbeat Measures 249.
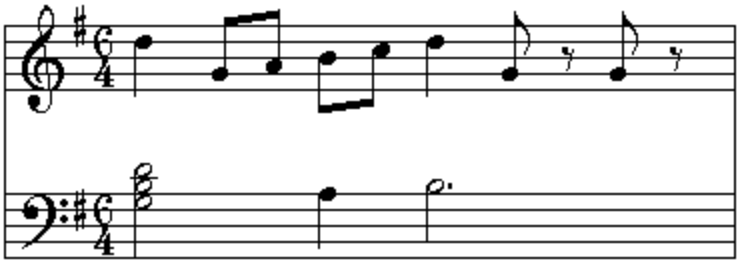
5.2.3 Joining Measures

By removing a barline, you can join two measures. The meter of the resulting new measure will have a total number of beats equal to the sum of the beats of the two measures.

For example, the barline between these two measures will be removed:



This is the result after the barline is removed:



The meter of the two measures before the barline was removed was 3:4. The meter of the resulting joined measure is 6:4, which is the sum of the 3:4 and 3:4 meters.

To join two measures:

1. Mouse over the bar line and click it to select it when it turns red.

   OR enter Select Mode 133 then select the barline between the two measures by dragging the mouse across it horizontally.

   Musician will highlight the selected barline in the color blue.

2. Hit the Del key to remove the barline.

   -- OR --

   Choose the Remove Barline command in the Barline Menu.
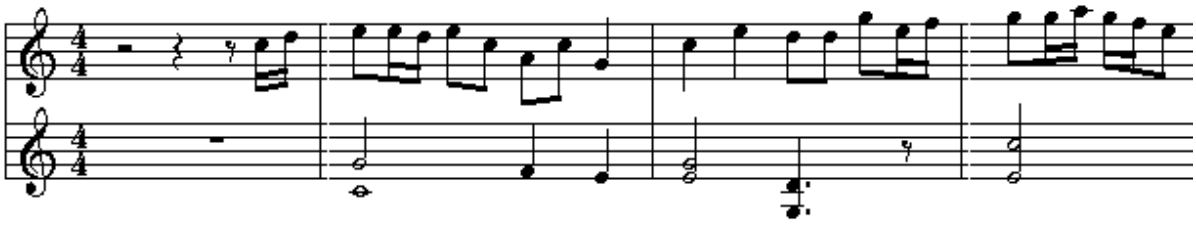
5.2.4 Creating Upbeat Measures

An upbeat measure begins a section of a song with fewer beats than the full count of beats in the meter.

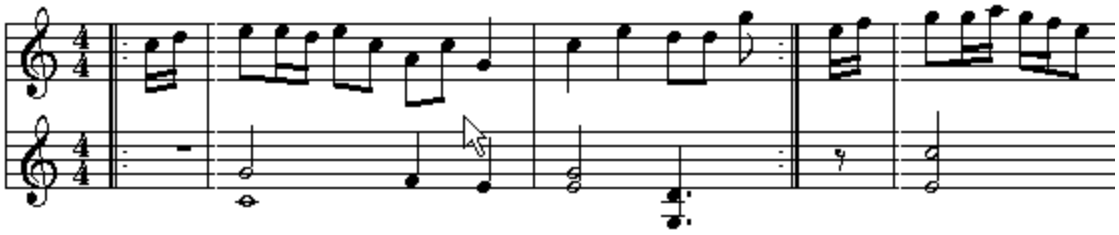
This topic describes how to create an upbeat measure if the barlines in your song are already correctly aligned with the downbeat of measures. If you have imported a MIDI file, or recorded MIDI, such that the barlines are misaligned with the downbeat of measures, then you can shift the barlines, as described in the separate topic, Shifting Barlines 253.

If a section of a song begins with an upbeat measure, and that section has repeats, then the section normally ends with a partial measure. The total number of beats in the upbeat measure and the last measure of the section equals the total number of beats in the meter of the section.

The procedure in this topic shows how you can create an upbeat measure, and corresponding last measure of the section, with repeat marks. In the example, we will start with the following score:
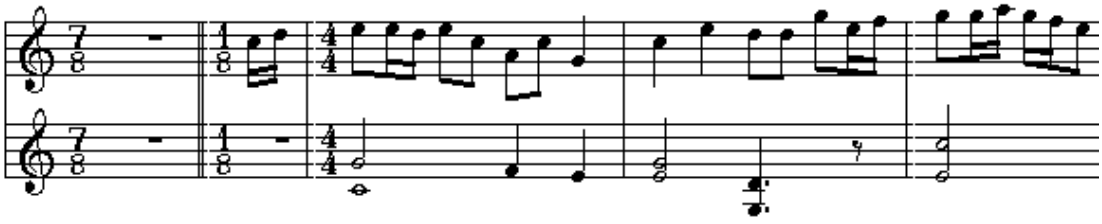


We will change the first measure to an upbeat measure; split the third measure to create the section's last measure, which complements the first measure; and add repeat marks.
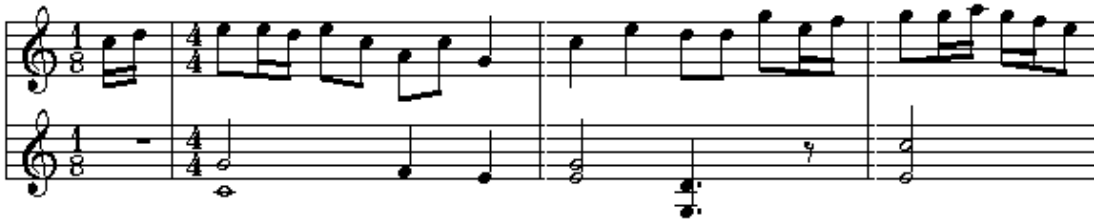


If you need only to create an upbeat measure, you need only follow the first few steps in the following procedure.

▸ To create an upbeat measure and a corresponding trailer measure with repeat marks:

1. Split the first measure where you want the upbeat to start. Usually you will want to split the measure where the first note follows preceding rests. See Splitting Measures 247 for instructions.



2. Delete the left half of the split measure. See Deleting Measures 247 for instructions.



3. Hide the meter of the upbeat measure, as follows:

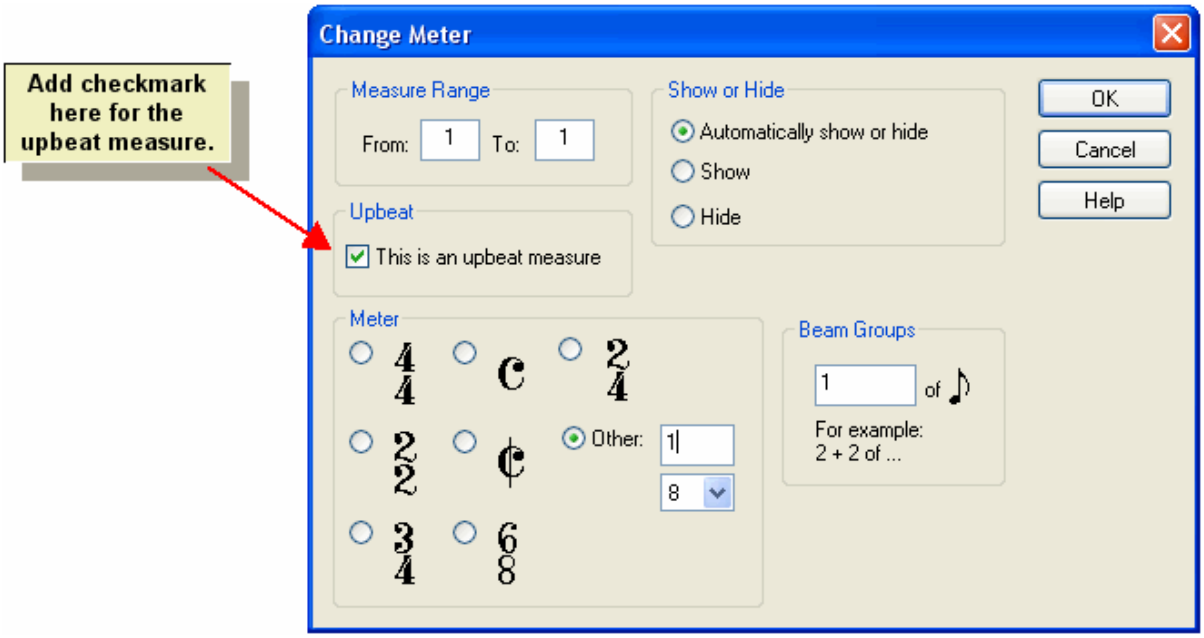
   (a) Type SHIFT+M to display the Meter Palette.

   (b) Click the meter  button in the palette.
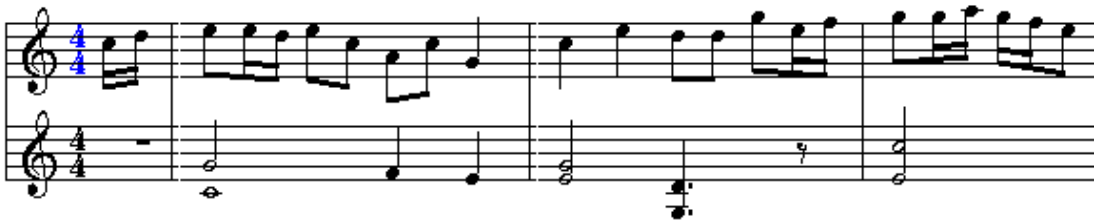
   The mouse cursor will turn into this shape: 

   (c) Click the upbeat measure.

   Musician will display the Change Meter dialog, as shown here:

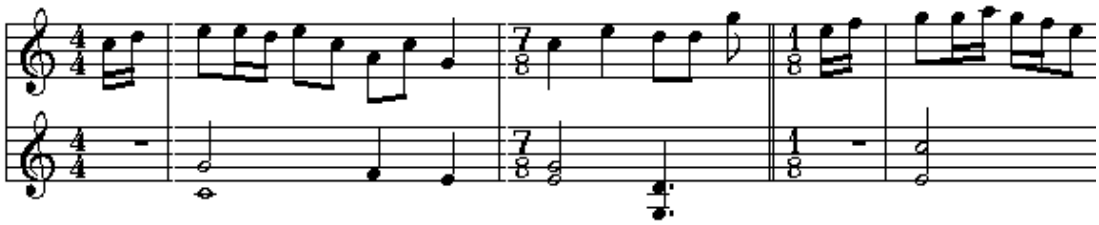


   (d) Add a check mark for "This is an upbeat Measure". Then click the OK button.
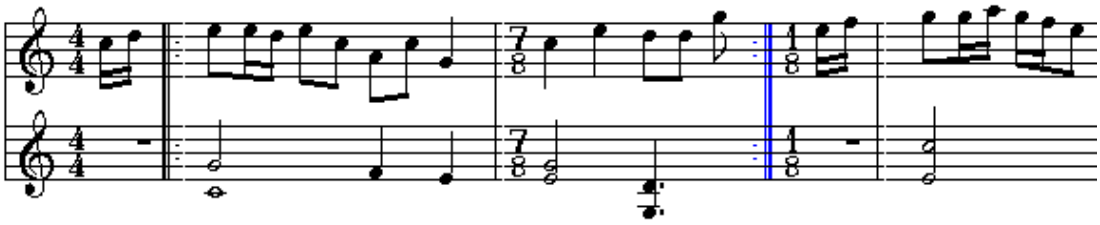


4. Skip the remaining steps of this procedure if your goal is only to create the upbeat measure.

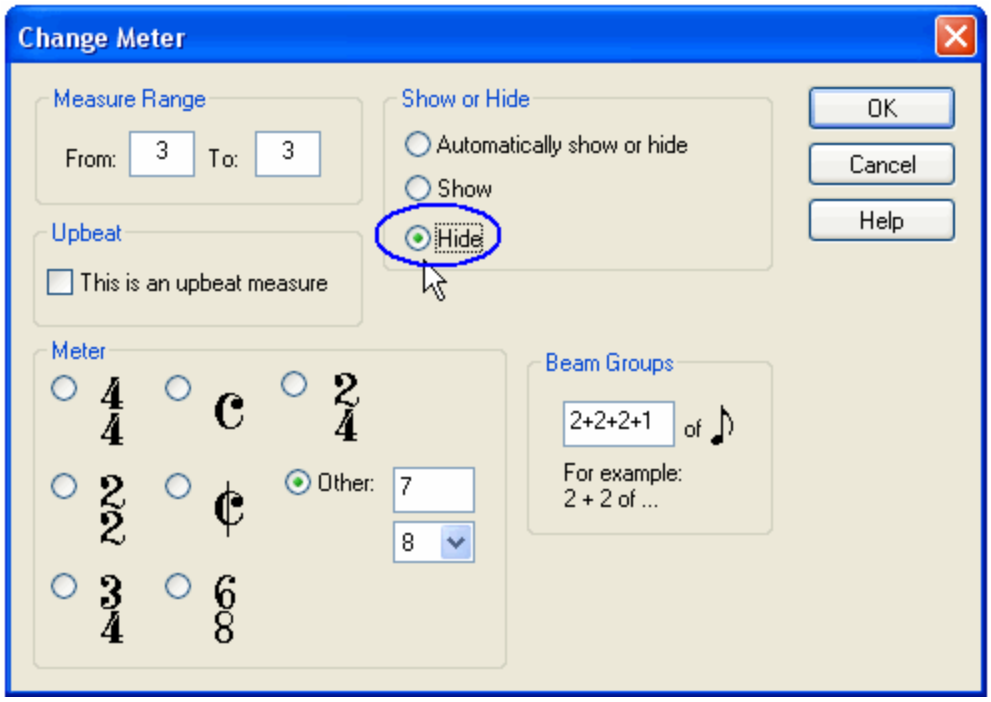
5. Split the last complete measure of the section so that the right half has the same number of beats as the upbeat measure. See Splitting Measures 247 for instructions.
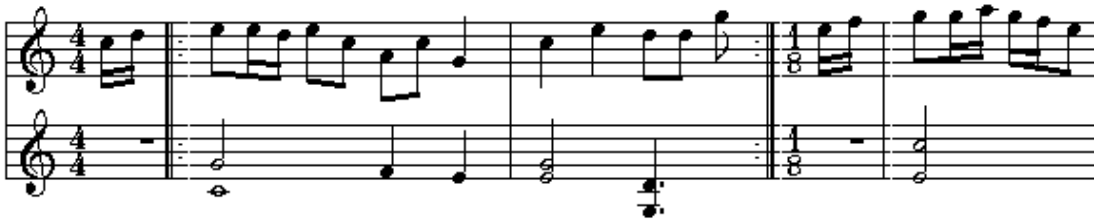


6. Select the barline after the upbeat measure, and change its type to a start-repeat. Select the barline at the end of the repeated section, and change its type to an end-repeat. See Barlines 327 for instructions in changing the barline type.



7. Hide the meter in the newly split measure at the end of the repeated section. Follow the instructions in step #3 to display the Change Meter dialog for the section's last measure, which is the 7:8 measure in this example. Set a check mark by the hide button:



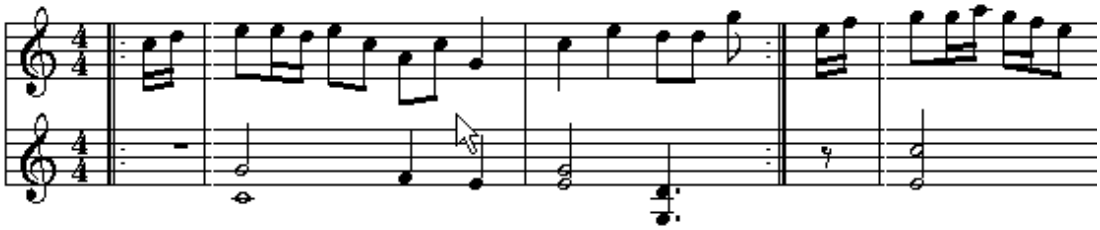
The result of this step is:



8. Hide the meter in the newly split measure that follows the end of the repeated section, following the same instructions as Step 7 above.

NOTE: Do not attempt to hide the meters in both measures with one visit to the Change Meter dialog, because that will incorrectly make the meter for both measures the same.

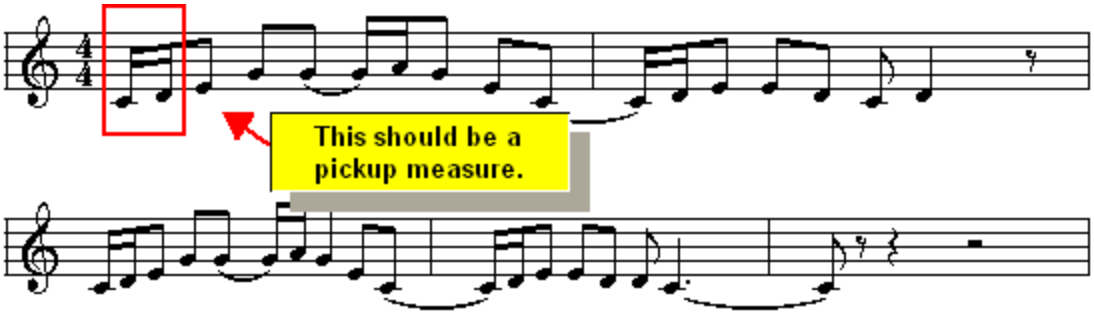
The result of this step completes the overall task:
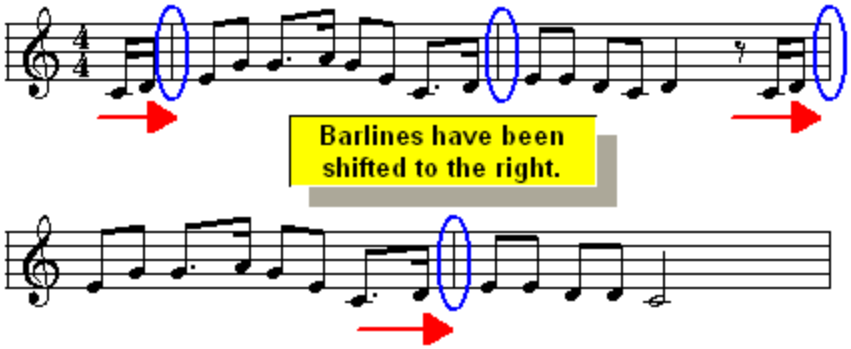


5.2.5 Shifting Barlines

It is common that a MIDI file prepared by another MIDI program will have barlines that are misaligned with the downbeat of measures. This problem particularly happens if the song has an upbeat measure, which has a duration less than the meter of the song. This problem arises not because **Musician** cannot correctly interpret the barlines in the MIDI file, but because the barlines are misplaced in the MIDI file itself. **Musician** can, however, help you fix this issue quickly and painlessly.

Here is an example of misaligned barlines:



You can readily fix this problem by using the Shift Barlines command. The result will be this:



To shift multiple barlines to the right:
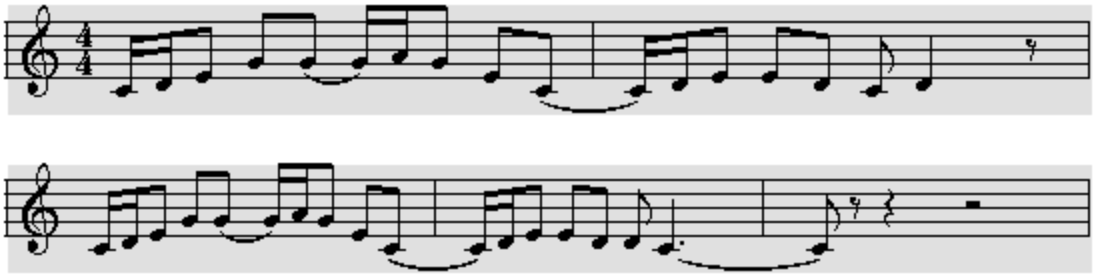
1. While holding down the CTRL key, drag the mouse over the range of measures for which you wish to shift the barlines. It does not matter which staff you select.

   -- OR --

   Use the Select Region command in the Region menu to select a range of measures.

   -- OR --

   Select the entire range of measures by clicking the Select Staff button among the staff control buttons 144. (Please note that the actual selection color will be light blue.)



2. Navigate to the Barline Palette 327 with the mouse.

   -- OR --

   Type '|' (which is probably Shift + '\' on your keyboard).

3. In the Barline Palette, click the Move Barlines button.
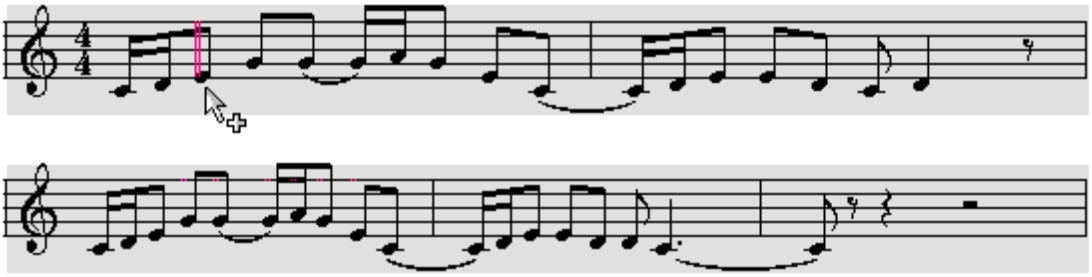
   -- OR --

   Choose the Shift Barlines command in the Barline menu.

   The mouse cursor will change to show a red double-barline, which you can move around on the score:
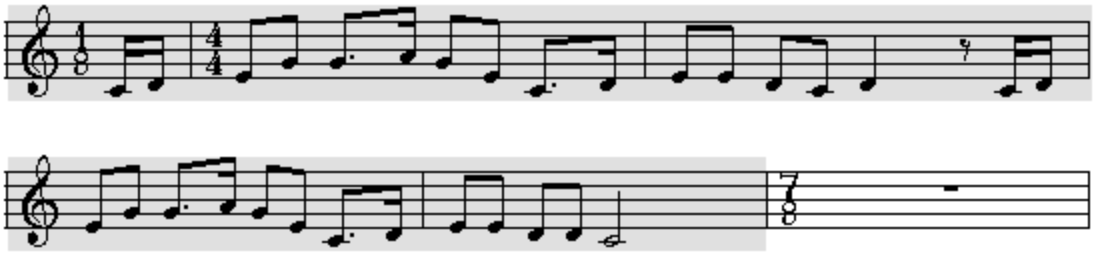


4. Move the red double-barline to where you what the first barline to be shifted:



5. Click the mouse button.

   A barline will be inserted where you clicked the mouse, and all of the remaining barlines in the selected region will be shifted by the same number of beats as those in the first partial measure that you have created:



   This will create a partial measure at the beginning of the selected region. If this is at the beginning of the song, you probably want this to be an upbeat measure, and do not want to see the partial meter, which is the 1:8 meter in this example. Also, this will create a corresponding partial measure at the end of the selected region, which is the 7:8 meter in this example.

6. To correctly display the meter in the upbeat measure 249, double-click it. That will bring up the Change Meter dialog box. Set a check mark for "This is an upbeat measure."

7. Optionally delete the trailing partial measure, which is the 7:8 meter in this example.

   -- OR --

   Change the meter 325 value for that partial measure.

The final result of the above procedure is as displayed at the top of this topic.

5.2.6 Editing Measure Numbers

Musician offers several options for displaying measure numbers, such as at every 5th measure, or at the first measure of every system.

If you break up a large musical work into more than one Notation .not file, then you might want the measure number of the second .not file to follow the last measure number of the previous .not file. You can do this as described below.

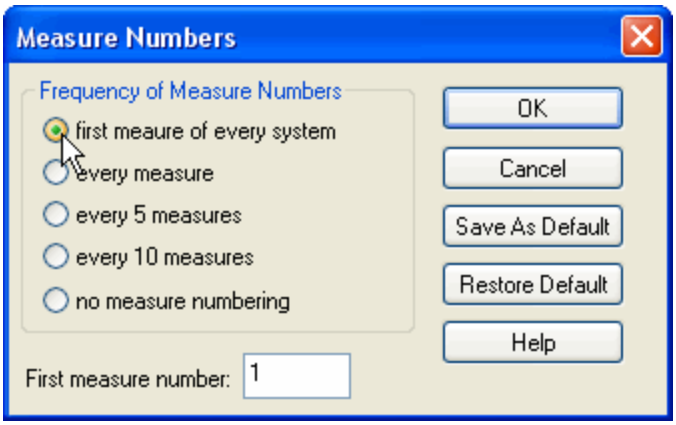
To choose a measure numbering option:

1. In the Measure menu choose the Measure Numbers command.

   -- OR --

   Type "qmn" for Quick Measure Numbers.

Musician will display the Measure Numbers dialog:



2. Choose one of the options in the dialog, and click OK.

   All of the options are self-explanatory except perhaps for the first one: "first measure of every system". A system is one line of measures on a page. The line of measures includes the staves for all of the instruments or voices that are playing. Thus, this option displays a measure number at the first measure of each line (system) on each page of the score.

▸ To specify some starting measure number, other than 1, for the continuation of a song in a second Notation .not file:

- Follow the same procedure as above. Enter the starting measure of the second .not file in the "First measure number" field of the Measure Numbers dialog box. Please note that this number cannot be negative.

5.3 Adding Notes

The overall purpose of **Musician** is to convert MIDI files to sheet music. **Musician** supports certain song-wide editing of the music, such as transposing pitches. **Musician** does not support detailed editing of the MIDI file, such as adding notes and changing their pitches.

If you would like to create music from scratch, or more extensively modify (rearrange) existing MIDI files, then we encourage you to try out **Notation Composer**. With **Notation Composer**, you can:

- Create music from scratch.
- Add instrument staves to existing song (MIDI) files.
- Add notes and change their pitches.
- Change the exact timing and loudness of individual notes, or groups of notes.
- Fully edit any of the music performance (MIDI) with musician-friendly tools that work together with score editing.

For more information about **Notation Composer** , see Comparison Between Notation Composer and Notation Musician 27 or visit www.notation.com/NotationComposer.php.

5.4 Selecting, Editing and Deleting Notes

Musician offers convenient tools for editing the many details of notes in a score.

This section is organized as follows:

- Alternative Methods for Selecting Notes
- Selecting Notes and Advancing to the Next (or Previous) Note
- Automatically Playing Notes When Selected
- Deleting Notes
- Removing Silent Notes
- Editing Note Pitch
- 8va Octaves
- Editing Accidentals (Sharp, Flat, etc.)
- Editing the Rhythms of Notes 265
  - Editing Note Location (Attack) 265
  - Editing Note Duration 266
  - Editing Triplets and Quintuplets 267
  - Editing Swing Notation
- Editing Accent Marks
- Editing Beams
- Editing Ties
- Editing Note Voice (Stem Direction)
- Editing Drum Notes
- Editing Notehead Shape 283

5.4.1 Alternative Methods for Selecting Notes

Notes are the most important element in a music score. Much of your work on a score will involve selecting and editing notes. **Musician** offers several ways that you can select notes.

On first opening **Musician** you will be in SmartMode, and typically will not need to worry with being in Select Mode. You can move your mouse around and when you mouse over an object, it will pre-select red. Simply click your mouse to fully select the object and it will display blue (selected) and the palette tools will automatically change to the tool set for that object. In this section, that object will be a note or notes.

To select a single note:

- Mouse over the note and then click the note with the mouse, or drag over it with the mouse.

To select several adjacent notes:

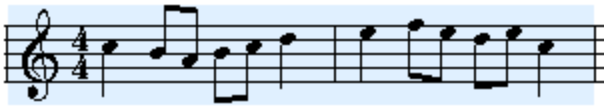
- Drag the mouse over the notes.

-- OR --

- Add one or more new notes to the group of selected notes by holding down the SHIFT key and clicking that note, or dragging the mouse over that note.
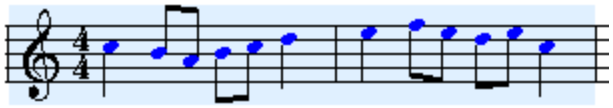
To select all of the notes across a range of locations in one or more adjacent staves, using CTRL+drag:

1. While holding down the CTRL key, drag the mouse over the range of locations and staves. The selected region 241 will be highlighted with a blue background, as illustrated here:



(a)

If the Note Palette is already active, the notes will be automatically selected and highlighted in blue, as illustrated here:



(b)

2. If the Note Palette is not already active, then click the Notes and Rest palette tab. The notes will then be automatically selected and highlighted in blue, as illustrated in (b) above.

To select all of the notes in a staff (or multiple staves):

1. Make sure you are in Window View 143 and the staff control buttons 144 are visible.
2. Among the four staff control buttons 144, click the Select Staff button.

   The entire staff will be highlighted with a blue background to indicate the selection of staff as a region.

   To select additional staves, hold down the Shift button while clicking the Select Staff button. This action selects all of the staves from the previous selection down (or up) through the staff you just selected.
3. If the Note Palette is not already active, then click the Notes and Rest palette tab.

To select all of the notes in the entire song:

1. Choose the Select All command in the Region menu.

   All of the measures in all of the staves ill be highlighted with a blue background.
2. If the Note Palette is not already active, then click the Notes and Rest palette tab.

To select a range of notes in one or more adjacent staves, by specifying the range and staves in a dialog box:

1. Choose the Select Region command in the Region menu.

   Musician will present the Select Region dialog.
2. In the Select Region dialog box, specify the start and end measures and beats of the range, and specify the first and last of the adjacent staves.
3. Click the OK button in the Select Region dialog.

   The selected range of locations and staves will be highlighted with a gray background.

4. If the Note Palette is not already active, then click the Notes and Rest palette tab.

You can also select notes in a range of measures and beats, and range of staves, according to these selection criteria:

- all of the top melody notes in the selected staff
- the accompaniment notes in the selected staff, that is, all of notes except the top melody notes
- upper or lower voice notes
- notes with specified accent marks, such as staccato or tenuto

5.4.2 Selecting Notes and Advancing to the Next or Previous Note

Once you have selected a note, chord, or rest, you can advance the selection to the next (or previous) note, chord, or rest in the same staff by using a keystroke instead of a mouse click. Or, you can select another note above or below in the same chord.

To advance the selection to the note, chord or rest at the next or previous measure-beat location:

- Use the  key to advance to the next note, chord or rest. Use the  key to go back to the previous note, chord or rest.

  Musician automatically turns pages as necessary to advance to the next or previous chord or rest.

To advance the selection to the next higher or lower pitched note in the same chord:

- Use the  or  to select the next higher or lower pitched note in the same chord.

  If there are upper and lower voice chords at the same location in the staff, **Musician** advances forward from the upper voice to the lower voice, and backward from the lower voice to the upper voice.

By default, **Musician** plays the newly selected note or chord, using the instrument sound and loudness (MIDI velocity) that would be used for the note or chord during normal song playback. You can optionally turn off the automatic playing of notes when selected 259.

5.4.3 Automatically Playing Notes When Selected

As you change notes, you may find it useful to hear the note pitches. By default, **Musician** plays a newly selected note or chord, using the instrument sound and loudness (MIDI velocity) that would be used for the note or chord during normal song playback. You can turn off this option so that newly selected notes and chords are not automatically played.

To turn on or off the option to automatically play notes when they are selected:

- Toggle the Play Notes When Selected option in the "Perform" or "Edit" menu.

5.4.4 Deleting Notes

The procedure for deleting notes is natural.

To delete one or more selected notes:

1. Select the note(s), as described in Alternative Methods for Selecting Notes 257.
2. Hit the Del key.

5.4.5 Removing Silent Notes

You can select and delete specific notes 260. Also, if you have recorded a performance at your music keyboard and accidentally played some extra notes very softly, or with very short durations, you can readily remove all of them with one command.

To remove very soft or short notes:

1. Select a group of notes with the mouse. The group may include both notes that will be removed and notes that will not be removed.

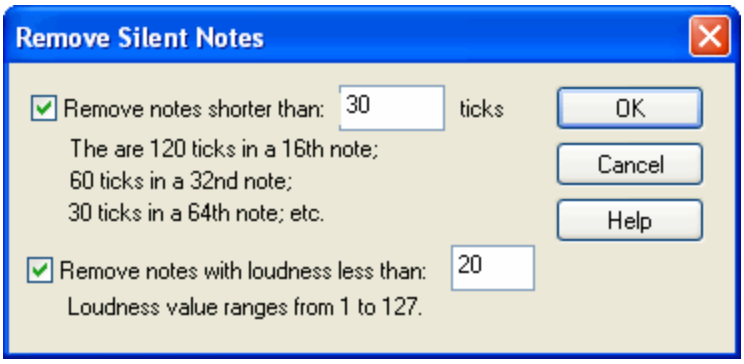
   -- OR --

   Select a region of the score 241.
2. In the Note or Region menu, choose the "Remove Silent Notes" command.

   -- OR --

   Type "rsn" for Remove Silent Notes.

   Musician will display the Remove Silent Notes dialog box:



3. You can remove silent notes based on whether they are very short and/or very soft. Set a check mark for either or both of the options. Specify the threshold values for note length and loudness. By default, **Musician** will initially offer the values you most recently specified in this dialog box.
4. Click the OK button.
5. If **Musician** removes either fewer or more notes than you desire, then use the Undo command 243 and try the Remove Silent Notes command again with a different threshold note duration and/or loudness.

5.4.6 Editing Note Pitch

The overall purpose of **Musician** is to convert MIDI files to sheet music. **Musician** supports certain song-wide editing of the music, such as transposing pitches. **Musician** does not support, however, detailed editing of the MIDI file, such as adding notes and changing their pitches.

If you would like to create music from scratch, or modify (rearrange) existing MIDI files, then Notation Software encourages you to try out **Notation Composer**. With **Notation Composer**, you can:

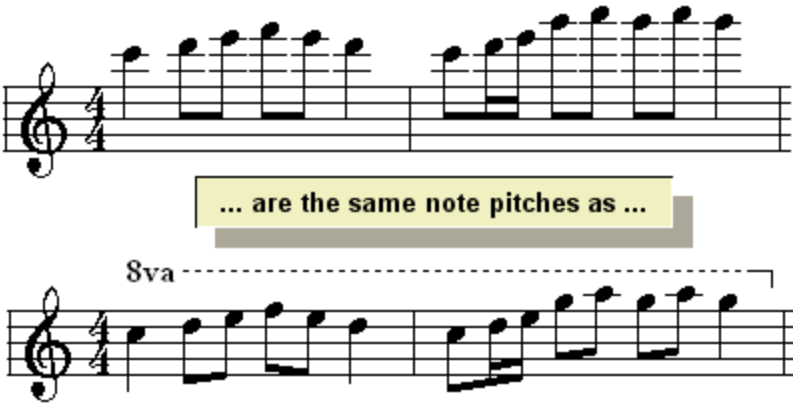
- Create music from scratch.
- Add instrument staves to existing song (MIDI) files.
- Add notes and change their pitches.
- Change the exact timing and loudness of individual notes, or groups of notes.
- Fully edit any of the music performance (MIDI) with musician-friendly tools that work together with score editing.

For more information about **Notation Composer** , see Comparison Between Notation Composer and Notation Musician 27 or visit www.notation.com/NotationComposer.htm.

5.4.7 8va Octaves

When a series of notes are too far above the top staff line, or far below the bottom staff line, they are difficult for a performing musician to read. The 8va, 8va bassa, and 15ma symbols shift the as-notated pitches by one or two octaves, to bring the notes into the easier reading range of the staff lines:

- The 8va symbol transposes the notes down one octave. The notes you see in the score will be performed and heard an octave higher, as illustrated below:



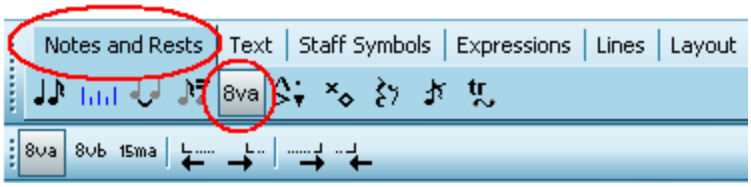
- The 8va bassa symbol transposes the notes up one octave. It is usually used in the bass clef to bring very low notes up an octave higher in the staff.
- The 15ma symbol transposes the notes down two octaves. It is used for extremely high notes.

The following procedures describe how to:

- Add an , 8va bassa, or 15ma symbol.
- Change the range of measures and beats over which the symbol spans.
- Delete the symbol.
- Add notes within the span of the 8va, 8va bassa, or 15ma symbol.

To add an 8va, 8va bassa, or 15ma symbol:

1. With the mouse, navigate to the Octave Palette, in either of the two ways shown below:



-- OR --

Type SHIFT+O. If **Musician** displays the Ornament Palette first, then type SHIFT+O a second time for the Octave Palette.

Musician will be ready to add the 8va symbol, and the mouse cursor will change to this shape: 

2. In the Octave Palette or menu, or with a keyboard shortcut, select the type of octave transposition you want:

   - Click the 

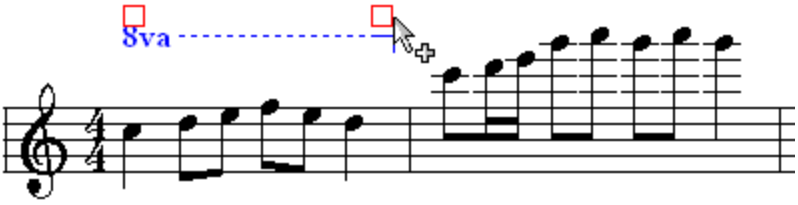
button, or type "8va", to add the 8va symbol and transpose the as-notated notes down an octave.
   - Click the 

button, or type "8vb", to add the 8va bassa symbol and transpose the as-notated notes up an octave.
   - Click the 
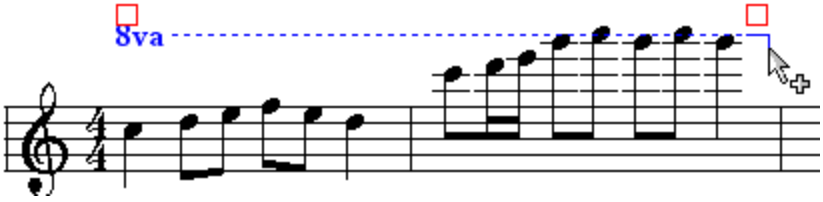
button, or type "15ma", to add the 15ma symbol and transpose the as-notated notes up two octaves.

3. Click the mouse, but do not yet release the button, and point the mouse at the first to-be transposed note.

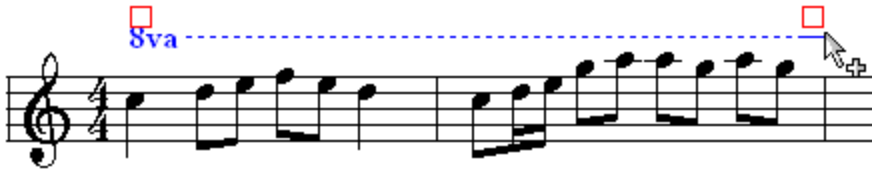
   Musician will initially add the symbol, starting at the location where you clicked the mouse, and ending at the barline for that measure. Notice how the notes up to the end of the current measure are already transposed. The octave symbol will be highlighted in blue. You can use the red handles at the start and end of the symbol to change the starting and ending locations of the symbol.



4. While still holding down the mouse button, drag the handle to the end of the range of notes that you wish to transpose. The newly selected notes will not be transposed until you release the mouse button.



5. Release the mouse button. This completes the adding of the octave symbol and the as-notated transposition of the underlying notes. The as-heard playback pitches will remain unchanged.



To change the range of measures and beats over which the symbol spans.

1. Click anywhere on the octave symbol to select it.

   Musician will highlight the selected symbol in the color blue, and will display a pair of red handles at the start and end of the symbol, as illustrated in the above examples.

2. Click one of the two red handles while holding down the mouse button, and drag it to the right or left, to change the starting or ending location of the octave symbol. Release the mouse button.

   -- OR --

   To move the start or end of the symbol one measure to the right or left, click one of the following buttons, or type one of the keyboard shortcuts:

   - Click the button, or type S+←, to move the start of the octave symbol one measure to the left.
   - Click the button, or type S+→, to move the start of the octave symbol one measure to the right.
   - Click the button, or type E+→, to move the end of the octave symbol one measure to the right.
   - Click the button, or type E+←, to move the end of the octave symbol one measure to the left.

To delete an octave symbol:

1. Click anywhere on the octave symbol to select it.
2. Hit the Del key.

   Musician will remove the symbol, and the underlying notes will return to their original un-transposed locations in the staff.

5.4.8 Editing Note Accidental (Sharp, Flat, etc.)

Musician automatically determines the spellings of notes, based on the key signature and surrounding harmony. **Musician** usually makes the correct decision about spelling a note as, for example, Db versus C#. In some cases, however, **Musician** may make a mistake, or you may have a different opinion about the correct spelling. In such cases, you can change the enharmonic spelling of a note, which raises or lowers the position of the note on the staff by a half-space, but leaves the pitch unchanged.

To change the enharmonic spelling of a note:

1. Select the note 239 by clicking it with the mouse.
2. In the Enharmonic Spelling submenu of the Note menu, choose the Raise or Lower command.
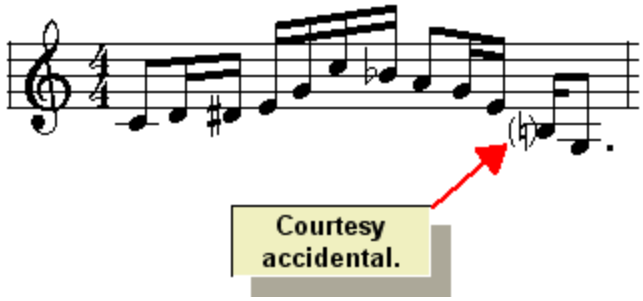
   -- OR --

   Type E+↑ (or E+↓) to raise (or lower) the enharmonic ("E") spelling. To "raise" the enharmonic spelling means to "move the note up one step on the staff". For example, Db is the raised enharmonic spelling for C#, because D is one step higher on the staff than C.

   The following table illustrates the Raise and Lower Enharmonic Spelling commands:

Original Spelling	Raise Enharmonic Spelling	Lower Enharmonic Spelling
C	Dbb	B#
C#	Db	B##
Db	not available	C#
D#	Eb	not available
F	Gbb	E#

A "courtesy accidental" is an accidental that does not need to be displayed because it is already implied by the key signature or a preceding identical accidental in the same measure. The courtesy accidental is displayed to help the performer avoid possibly overlooking the accidental, or to assure the performer that the accidental is intended by the composer. A courtesy accidental is displayed in parentheses, as illustrated below:



To add a courtesy accidental:

1. Select the note for which you wish to add the courtesy accidental.
2. Type the parenthesis character '('.

   -- OR --

   Type "ca" for courtesy accidental.

   Musician will add the implied accidental with parentheses around it, as illustrated above.

To remove a courtesy accidental:

1. Select the note that has a courtesy accidental (with parentheses around it).

2. Type "rc" for remove courtesy accidental.

5.4.9 Editing the Rhythms of Notes

With **Musician**, you can edit the rhythms of notes, as displayed in the score, without changing how they are actually performed during playback. Thus, the "feeling" of the originally imported MIDI file is completely preserved.
In fact, with **Musician**, you can only change how the rhythms are displayed, not how they are performed. The purpose of **Notation Musician** is to transcribe existing MIDI files into sheet music. If you wish to edit actual musical performance of MIDI files, then we encourage you to review **Notation Composer** at www.notation.com/NotationComposer.htm.

The topics that follow describe procedures for editing the location and duration of notes:

- Editing Note Location (Attack)
- Editing Note Duration
- Editing Triplets and Quintuplets
- Editing Swing Notation
- Combining Separate Notes into Chords 270
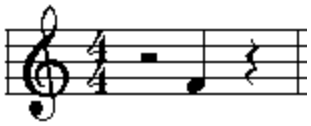
5.4.9.1 Editing Note Location (Attack)

You can move the location of a note to the right or left. When you move the note, you can preserve the note's duration ("note value"), or you can move the attack of the note independently of its release (where the note ends). You can also move the attack location of multiple selected notes with a single command.
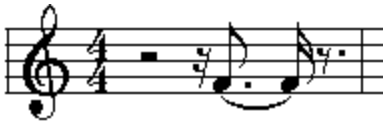
To move (shift) a note to the right or left without changing its duration:

1. Select the note 239 by clicking it with the mouse.
2. While holding down the SHIFT key (for "shifting" the note), press the ← or → key to shift the note to the left or right.

For example, here is a quarter note before it is shifted to the right:



Here is the quarter note after it is shifted to the right:
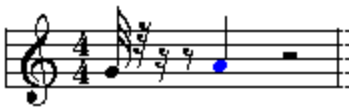


To move the attack of the note, while leaving the release of the note unchanged:

- Type A+→ to move the note attack to the right, and A+← key to move the note attack to the left.
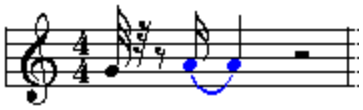
The amount that **Musician** moves the note attack to the right or left depends on the context of the note. If there are no other notes nearby in the same staff, nor any other
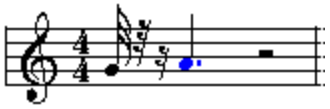
staff, then the attack will be moved by a sixteenth note beat. If the note is a member of a triplet or quintuplet, then the attack will be moved to an adjacent tuplet member position. If there is another note or rest, in the same staff or other staves, that lies closer than one sixteenth away from the current note's location, then the note's location will be moved to the same location of that other note or rest. This is illustrated in the following example.
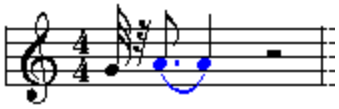
The quarter note in the middle of the measure is selected with a mouse click:
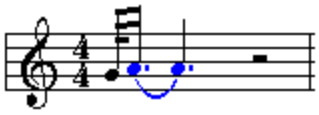


In each of the subsequent pictures, the keys A+  have been used to move the attack one position at a time. The attack position moves 16th beat at a time until the note is adjacent to the 32nd rest. Then it moves by just a 32nd beat rather than a 16th beat:









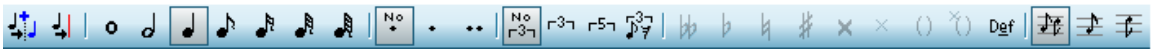
5.4.9.2 Editing Note Duration

The procedures below describe how to change the duration of a note by directly editing the note. You can also change the duration of a note by deleting the rest after it. See Deleting Rests to Extend the Durations of Previous Notes 294.

To change the duration of a note:

1. Select the note 239 by clicking it with the mouse.

   Musician will display the Note Palette:
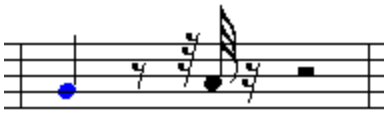
2. Use the buttons in the Note Palette to change the duration of the selected note.

   -- OR --
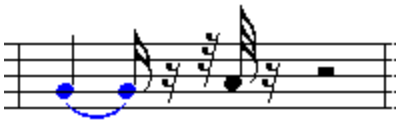
   Type D+  or D+  key one or more times to increase or decrease the duration of the note.
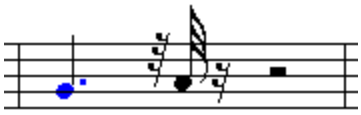
The procedure for changing the duration with D+→ and D+← is similar to that for changing the attack location of a note 265 with A+→ and A+←. The amount by which **Musician**increases or decreases the duration depends on the context of the note. If there are no other notes nearby in the same staff, nor any other staff, then the duration will be increased or decreased by one sixteenth (of a whole note). If the note is not a member of a triplet or quintuplet, and if the original duration is not a multiple of a sixteenth note, then the duration will be rounded up or down to the nearest multiple of a sixteenth note. If the note is a member of a triplet or quintuplet, then the duration will be changed so that it aligns with an adjacent tuplet member position. If in the same staff or other staves there is another note or rest which lies closer than one sixteenth away from the current note's as-notated release (end of note), then the note's duration will be changed so that it ends where the nearby note or rest begins. This is illustrated in the following example. It is not really necessary for you to know all of these details. Try using D+→ and D+← and you will quickly get a feel for how it works.
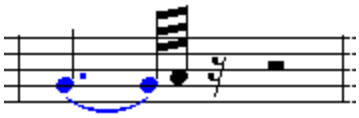
The quarter note is selected with a mouse click:



In each of the subsequent pictures below, the keys D+→ have been used to increase the duration. The duration increases by one sixteenth at a time until the note ends at the 32nd note. Then the next D+→ command extends the duration by only a 32nd beat rather than the normal sixteenth beat, so that the duration ends at the start of the next 32nd note.







5.4.9.3 Editing Triplets and Quintuplets

Musician automatically recognizes triplets and quintuplets as it transcribes a MIDI file to notation. **Musician** also recognizes irregular triplets, such as with missing members. If **Musician** incorrectly detects a triplet or quintuplet, you can convert regular notes to the tuplet, or convert the tuplet notes to regular notes.

▸ **To change the duration of a note in a triplet or quintuplet:**

Follow the same procedure as for that for changing the duration of a non-tuplet note 266, as summarized here.

1. Select the note by clicking it.
2. Type SHIFT+N to display the note duration palette.
3. Click a duration and/or dotted note value in the Note Palette.

   -- OR --
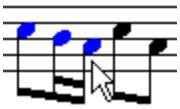
   Type an equivalent keyboard command, such as "16" to change the note to a sixteenth duration in the tuplet.

   -- OR --

   While holding down the "D" key, hit the → or ← key to increase or decrease the duration.

To convert non-tuplet notes to triplets or quintuplets:

1. Select the notes and rests that should be converted to a triplet or quintuplet group, as illustrated. The easiest way is to click-drag the mouse across the notes:
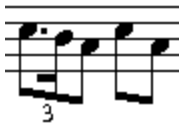


2. Type SHIFT+N to display the note duration palette.
3. Click the triplet or quintuplet button in the note duration palette.
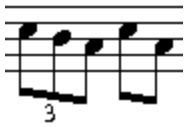
   -- OR --

   Type "33" for triplet, or "55" for quintuplet.

   Using the above example, if you convert the selected notes to a triplet, the result will be:



   If the underlying performance of the notes is closer to an even triplet, **Musician** will convert the non-triplet members to this:



You can also convert the rhythm the other way, from a triplet or quintuplet to non-tuplet rhythm, as described next.

To convert a triplet or quintuplet to non-tuplet note durations:

1. Select at least one note or rest, but not necessarily all members, of the tuplet.
2. Type SHIFT+N to display the note duration palette.
3. Click the no-tuplet button.
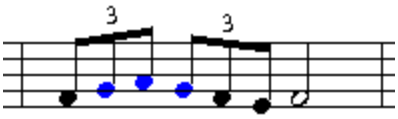
   -- OR --

   Type "00" for no tuplet.

Musician will convert all of the members of the tuplet to the simplest rhythm of non-tuplet durations that most closely matches the tuplet rhythm.

To combine adjacent tuplets of the same size into one larger tuplet:

1. Drag the mouse over some, but not necessarily all, of the notes or rests in both tuplets, to select them. For example:
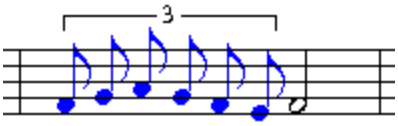


   Note that the two sets of tuplets to be joined must span across a natural beat or sub-beat in the meter of the measure, rather than straddle a beat or sub-beat.

2. Choose the Join Pair of Triplets or Quintuplets command in the Triplets and Quintuplets submenu Note menu.

   -- OR --

   Type "jt" for join tuplet.

   In this example, the result will be:

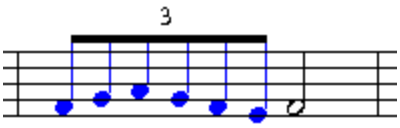


3. To beam the notes 274 together, type SHIFT+B to display the Beam Palette, and choose the Beam Left and Right option.

   -- OR --
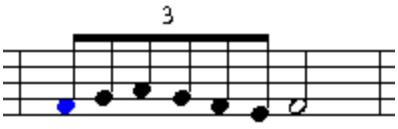
   Type "==".

   The result will be:



To split a tuplet into two smaller, equal sized tuplets:

1. Select at least one member of the tuplet, but not necessarily all members of the tuplet. For example:
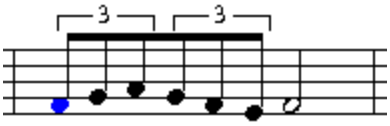


2. Choose the Divide Triplet or Quintuplet In Two command in the note menu.

   -- OR --

   Type "dt" for divide tuplet.
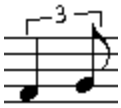
In this example, the result will be:
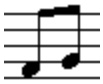


A beam is left between the two tuplets. You can easily remove it, as described in Beams 274.

5.4.9.4 Editing Swing Notation

A swing rhythm, when literally written out as two unequal members of a triplet, looks like this:



In a jazz or "big band" music style, swing rhythms are typically not written out using triplets, such as in the above example. Instead, to simplify the notation, the swing rhythm is notated as though the notes are evenly played, with equal durations. The above as-performed notes are usually notated like this:



You can prepare a "swing score" that will be heard with a triplet swing, but displayed with paired notes of equal durations.

If you are importing a MIDI file for a jazz or "big band" piece with a swing rhythm, then choose the "Swing Rhythm" transcription option 73. **Musician** will automatically notate the swing rhythms as illustrated in the above second example.

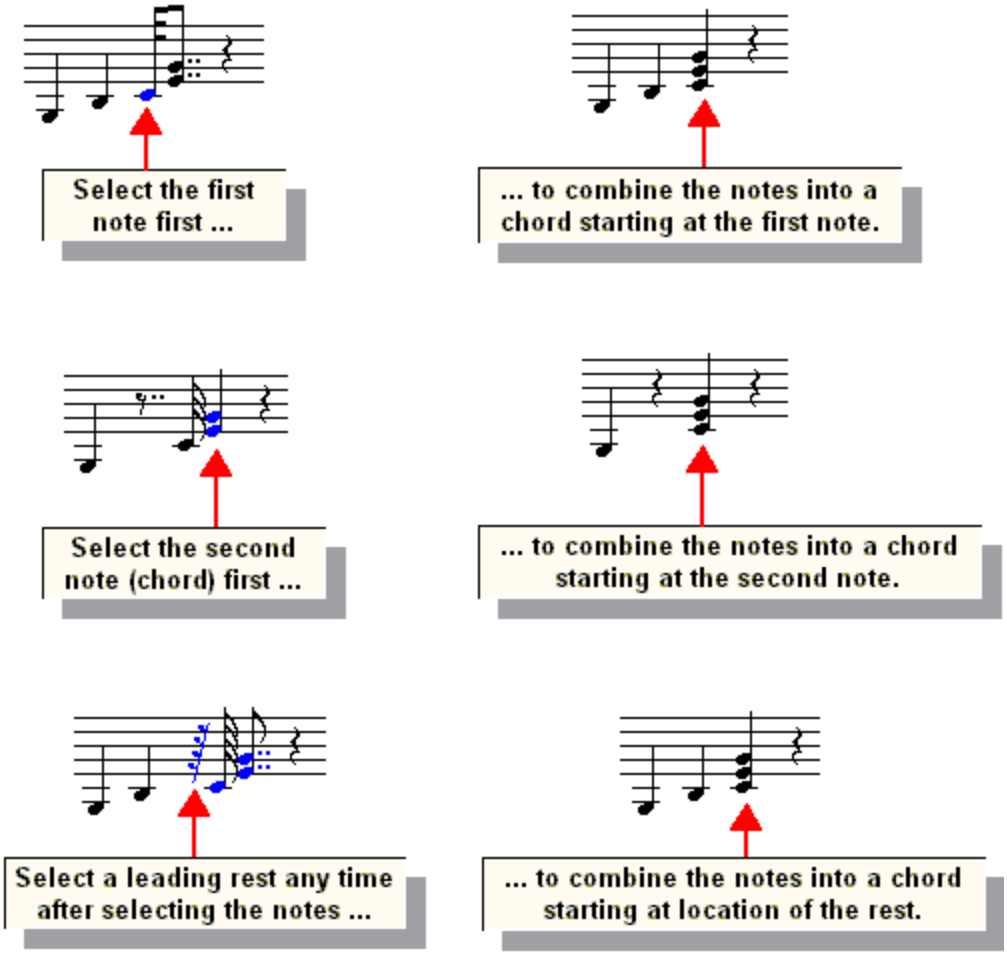
5.4.9.5 Combining Separate Notes into Chords

A MIDI file, or a recording of your performance at a MIDI keyboard, will finely specify the exact time at which each note is played. If the notes are played closely together, then **Musician** will display the notes as a single chord. If one note is played some significant amount of time before another note, then **Musician** will display that note as a grace note or as a normal note with a short duration, such as a 32nd or 64th note. It is challenging for **Musician** to determine with 100% accuracy whether notes played nearly together should be notated as separate notes or, alternatively, as a chord. **Musician**'s rate of accuracy is high, but sometimes it will make a mistake that you will want to correct.

If **Musician** has displayed notes with two or more separate attacks, which you want to combine into a single chord, then you can very quickly make the correctly. You could manually move the attacks of notes, and adjust the durations of the notes, but an even quicker way to make the correction is to use the Combine Chord command.

To combine separate notes into a chord:

1. Select the notes to be combined into a single chord. The order in which you select the notes is important. The first note you select determines where the location (attack) of the combined chord will be. You can also select a rest, to move the notes to the location of that rest.



2. After selecting the notes (and optional rest), choose the Combine Chord command in the Note menu.

   -- OR --

   Type "cc" for "combine chord".

5.4.10 Editing Accent Marks

With **Musician** you can add a variety of accent marks and other music symbols at noteheads, or at the ends of note stems. You can assign two accents to a single note or chord. You can add accent marks for several selected notes with a single command.

In **Musician**, the term "accent mark" is defined more generally than the musical definition of accent mark. **Musician**'s term "accent mark" includes other types of annotations that are placed directly above or below notes and chords. These extra annotations include string bowings (up, down) and fermatas..

Musician offers a special option that converts a written-out staccato into a note or chord with a staccato accent mark. For example, this option will convert an eighth note followed by an eighth rest to a quarter note with a staccato mark, or a sixteenth note followed by a dotted eighth rest to a quarter note with a staccato mark. See the procedure at the end of this topic.

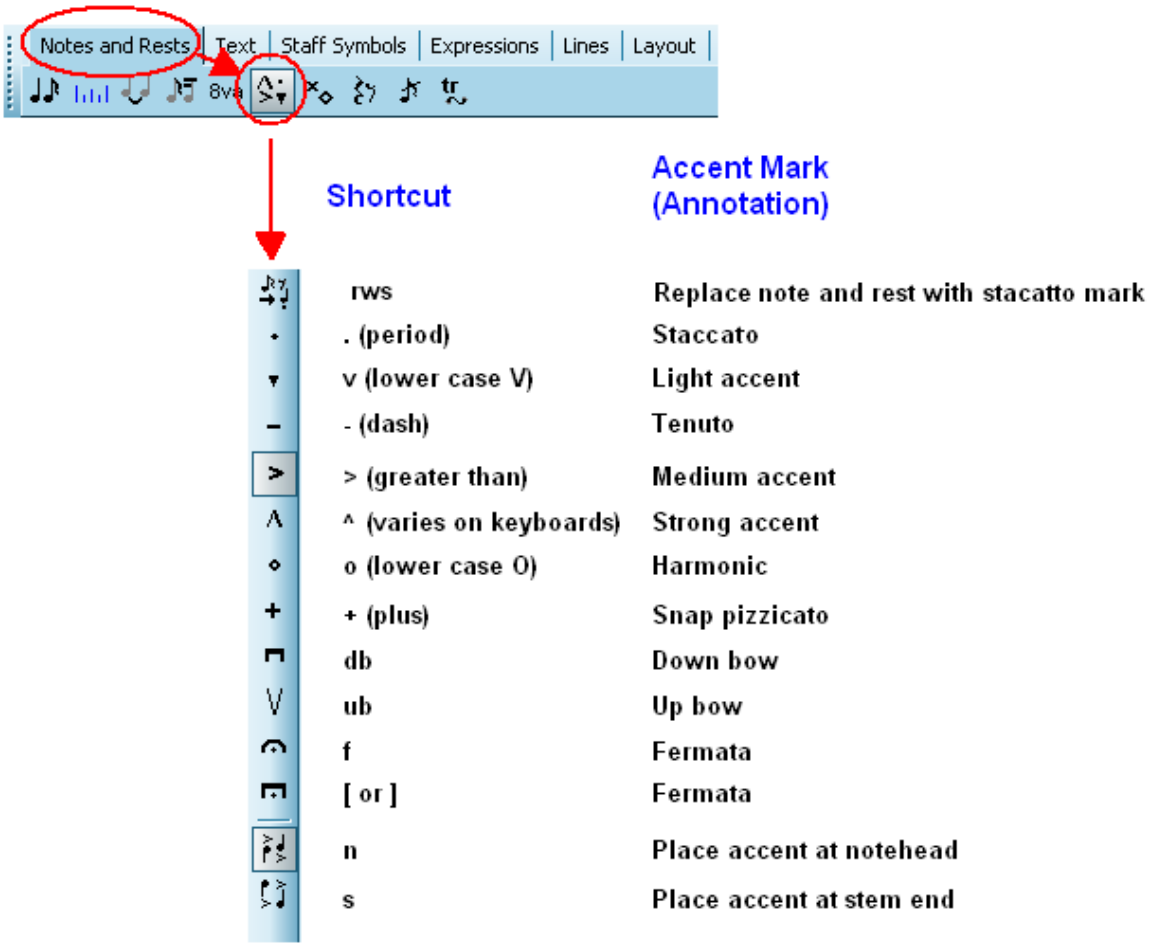
To add one accent mark, or two accents, to one or more notes:

1. Select one or more notes 239 by clicking or dragging the mouse.

2. Type SHIFT+A to show the Accent Palette.

   -- OR --

   Navigate to the Accent Palette from the top palette as shown:



3. Click one or two of the accent mark buttons.

   -- OR --

   Type one or two of the equivalent keyboard commands shown above.

   -- OR --

   Select one or two of the accent mark types in the Accent Menu.

   Musician will add the accent mark(s) to all of the selected notes.

To force the accent mark to be placed at the notehead or at the stem end:

1. Select the note. Type SHIFT+A to display the accent palette.
2. Choose the Place At Notehead or Place at Stem End command in the Accent Menu.

   -- OR --

   Click the Place At Notehead or Place at Stem End button in the accent palette.

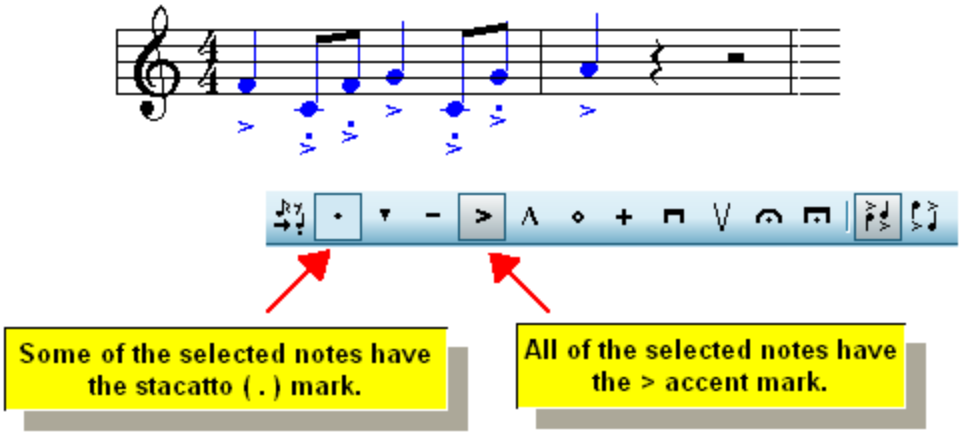
   -- OR --

   Type "n" for placement at the notehead, or "s" for placement at the stem end.

To remove an accent mark from one or more selected notes:

1. Select one or more notes 239 by clicking or dragging the mouse. Then type SHIFT+A to display the accent palette.

   The accent palette will show what accent, if any, is associated with the selected notes. If all of the notes have the same accent mark, then the accent mark button shown in a "full on" color. If some, but not all, of the notes have the same accent mark, then the button will be displayed in a "half on" color. The colors will depend on your Color Theme 125. This is illustrated below:
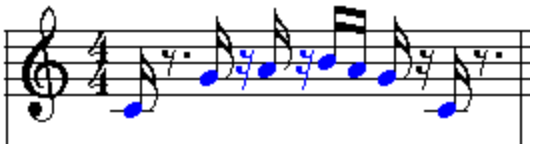


2. If all of the notes have the accent mark, then click the button once, or type its equivalent keyboard command once. That will toggle the palette button to off, and the accent mark will be removed from all of the notes.

   If some, but not all, of the notes have the accent mark, then click the button once. That will add the accent mark to all of the notes. Then click the button a second time. That will remove the accent mark from all of the notes.

To convert a "note plus rest" (staccato performance) to a note or chord with a staccato mark:

1. Select the notes that you want to convert. It does not matter if you also select adjacent rests. Also, it does not matter if you select some notes that should not be converted to staccato notes, because **Musician** will intelligently determine which notes are staccato notes.

   In the following, some notes that will be converted to staccato marks are selected, and some notes that will not be converted are selected. Also, some rests are selected, and some rests are not selected.



2. With the mouse, navigate to the Accent Palette, as described in the first procedure in this topic.

   -- OR --

   Type SHIFT+A.

3. Click the Replace Notes and Rests with staccato  button in the Accent palette.
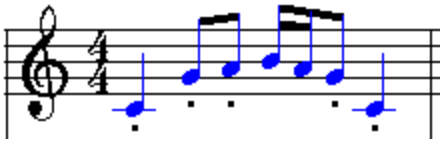
   -- OR --

   Type "r." (the letter "r" followed by a dot/period) for replace with staccato (dot).

   -- OR --

   Choose the Replace Notes and Rests with staccato command in the Accent Menu.

   The result of the command for the above example is:



   Notice how a pair of sixteenth notes did not need staccato marks.

5.4.11 Editing Beams

Musician automatically determines how notes are beamed together, but you can change the beams if you disagree with any of **Musician**'s decisions.

You can add or remove a beam, or change the secondary beam. An example of changing a secondary beam is:



You can specify the beaming pattern for many measures at a time, if they share a common meter. For example, in a 4:4: meter, eighth notes are normally beamed together as four pairs of two eighth notes each. You can change this so that for every measure, eighth notes are beamed together in two groups of four eighth notes each. Instead of individually changing the beaming of eighth notes in every measure, you can change the beaming of notes in all of the measures in one step. The procedure for doing this is described at the end of this topic.

To add a beam from one note to the next:

1. Select the first of the two notes by clicking it with the mouse. For example:

2. Type SHIFT+B to show the Beam Palette:



3. Click the Beam Right and Left button in the Beam Palette: 
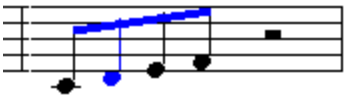
   -- OR --

   Choose the Beam Right and Left command in the Beam Menu.

   -- OR --

   Type "==". The two equal sign characters (==) are intended to look like beams on the left and right side of a note stem.

In this example, the result is:



To remove a beam between two notes:

1. Select one of the notes; and type SHIFT+B to display the Beam Palette.
2. Select the first of the two notes, and click the Beam Right button, or type "r" for "right only".

   -- OR --

   Select the second of the two notes, and click the Beam Left button, or type "l" for "left only".

To remove beams on both sides of a note, so that it is left with only a flag:

1. Select the note; and type SHIFT+B to display the Beam Palette.
2. Click the Flag button to replace the beam(s) with a flag.

To change the secondary beam between two notes:

1. Select the note; and type SHIFT+B to display the Beam Palette.
2. To remove a secondary beam that extends from the selected note to the next note:
   - Click the button.

   -- OR --

   - Type "=-". The first "=" character suggests two beams; and the second dash "-" suggests one beam.
3. To remove a secondary beam that extends from a previous note to the selected note:
   - Click the button.

   -- OR --

   - Type "-=".
4. To add a secondary beam among one or more selected notes:
   - Click the button.

   -- OR --

   - Type "==".
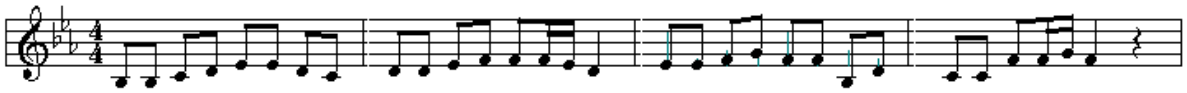
To restore Musician's default choice for beams:

1. Select the note; and type SHIFT+B to display the Beam Palette.
2. Drag the mouse over all of the notes for which you wish to reset the beams.
3. In the Beam Palette, click the Def ("default") button.

   -- OR --

Choose the Default Beams command in the Beam Menu.

Suppose your song has a 4:4 meter. By default, **Musician** beams eighth notes in the 4:4 meter as four pairs of two eighth notes each, as illustrated below:



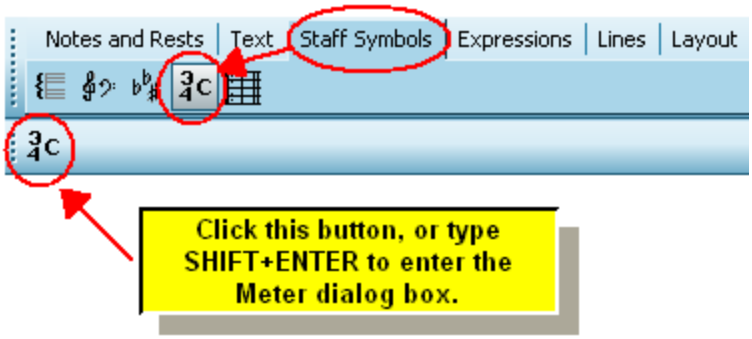
If you want to change the beaming to two groups of four eighth notes per measure, follow the next procedure.

To change the beaming pattern of notes for several measures at a time:

1. Navigate to the Meter Palette.

   -- OR --

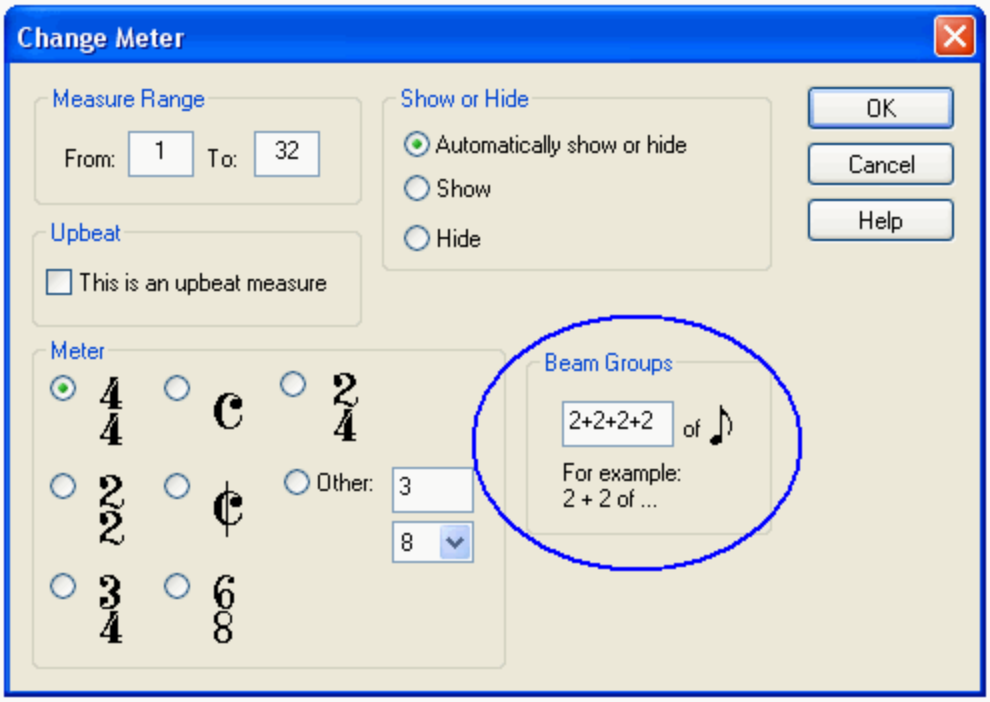
   Type SHIFT+M.



2. Select a range of measures for which you wish to change the pattern of beaming. All of these measures must have the same meter. You can select the measures using the Select Region command in the Region menu. Or, select the range of measures by holding down the CTRL key and dragging the mouse over them. You can extend the range by holding down both the Shift and CTRL keys and clicking in some further measure in the score. It does not matter which staff you choose.
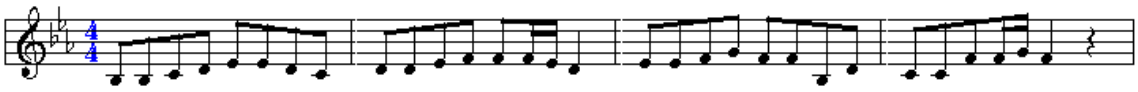
3. Click the meter button in the palette.

Musician will display the Meter dialog box, such as shown here:



4. In the dialog box, change the "From" and "To" measures if the pre-selected measures are not what you want.
5. In the Beam Groups section of the dialog box, enter the pattern for beaming notes in the meter of the selected measures. Enter one to four numbers, each separated by a plus "+" sign. The total of these numbers should add up to the total number of sub-beats in the selected meter. The sub-beat value initially displayed by **Musician** shows the beam group pattern for the first of the pre-selected measures.

   In the above example, the Beam Group pattern "2+2+2+2" of eighth notes indicates that there are four pairs of two eighth notes each, such as was illustrated in the score example before the beginning of this procedure. In this example, if the beaming pattern is changed to "4+4", that is, two groups of four eighth notes each, the notes will be re-beamed as shown here:



5.4.12 Editing Ties

Musician lets you add or remove ties between notes. **Musician** automatically determines the arc direction, up or down, for ties. However, you can change the tie arc direction if you wish. Please note that ties are different than slurs. Ties connect two notes to increase the duration of the sounded note, for example tying two quarter notes together gives a half note duration. Slurs 351 are annotations to tell the musician to play the two notes "legato", or without any distinguishing break between them.

Musician also offers a command, Remove Overlaps of Notes, that can eliminate or simplify ties in a selected region of the score.

To add a tie between adjacent notes:

1. Select the first note, as described in Selecting Objects 239. The end of this first note must coincide with the beginning of the note to which it will be tied.
2. Choose the Tie to Next Note command in the Note menu.

   -- OR --

   Type "ti" for tie.

   -- OR --

   Type a dash "-", which suggests the role of a tie.

After the tie has been added, **Musician** will display the following Tie Palette:

	Shortcut	Tie Palette Command
	ti or - (dash)	Add tie
	Del	Delete tie
	ct	Collapse tie
	u	Set tie arc up
	d	Set tie arc down
	a	Set tie to automatic (default) arc

You can then use the Tie Palette to change the arc direction of the tie, or delete the tie.
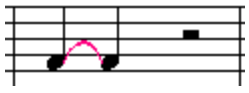
There is also a second way to add a tie.

To add a tie with the "point and click" method:

1. Type SHIFT+T to display the Tie Palette. If the Text Palette is displayed first, type SHIFT+T a second time.
2. Click the Add Tie  button.

   The mouse cursor will change to this: 

   However, when you move the mouse to a note that can be tied to another note, the cursor will temporarily disappear, and a red tie will be displayed between the candidate notes to be tied:

   
3. Click the mouse to add the tie.

To remove a tie between two notes:

1. Click the mouse on the tie. The tie will be highlighted in blue, and the Tie Palette will be displayed.
2. Click the  button in the Tie Palette to delete the tie.

   -- OR --

Choose Delete Tie in the Tie Menu.

-- OR --

Hit the Del key.

To change the arc of a tie to upward or downward:

1. Click the mouse on the tie.
2. In the Tie Palette, click the  or  button to change the arc of the tie.

   -- OR --

   Choose the Set Tie Arc Up or Set Tie Arc Down command in the Tie Menu.

   -- OR --

   Type "u" for an upward tie, or "d" for a downward tie.

To restore Musician's default for tie arc directions:

1. Drag the mouse over all of the ties for which you wish to reset the arc directions. The drag must start on some tie object.
2. In the Tie Palette, click the  ("automatic") button.

   -- OR --

   Choose the Set Automatic Tie Arc Direction command in the Tie Menu.

To eliminate and simplify ties in a selected region of a score by removing overlaps of notes:

1. Select a region 241 of the score by holding down the CTRL key and the left mouse button, and dragging the mouse.

   -- OR --

   Select a group of notes 239 by holding down the left mouse button and dragging the mouse.
2. Choose the Remove Overlaps of Notes command in the Region menu or Note menu.

   -- OR --

   Type "qro" for Quick Remove Overlaps of Notes.
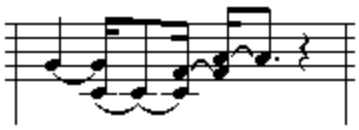
Another method of accomplishing this "clean up" procedure is the following:

1. Select some tied notes.
2. In the Clean Up Rests and Overlapping Notes sub-menu of the Notes menu, choose the Remove Overlaps of Notes command.
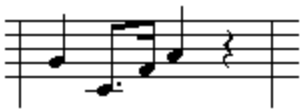
   -- OR --

   Type "ro" for Remove Overlaps of Notes.

Before removing overlaps of notes:



After removing overlaps of notes:



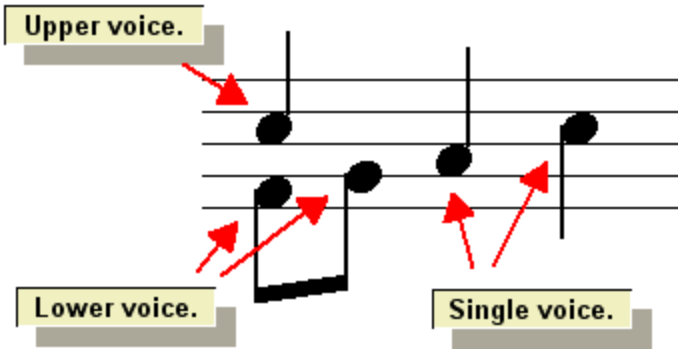
5.4.13 Editing the Note Voice (Stem Direction)

With **Musician**, the direction of stems attached to notes is determined by the *voice* of the notes. The term *voice* has musical meaning. The stem direction indicates the voice according to common music notation practice, as described below.

If a part in the score is for a single instrument or human voice, which can only play or sing one note at a time, then all of the notes in that part are said to have a *single voice*. If the part is played or sung by two or more individuals, but they all play the same notes, and only one note at a time, then that part is also said to have a single voice. The stem directions for notes in a single voice maybe upward or downward. If a note is above the middle staff line, the stem direction is downward; if the note is below the middle staff line, the stem direction is upward.

If a part is for two players, and if the notes they play have different rhythms, then the part is said to be split with *upper and lower voices*. Upper voice notes always have upward stems, and lower voice notes always have downward stems.

Piano and keyboard parts also indicate upper and lower voices to clarify and simplify the notation of notes simultaneously played with different rhythms. When all of the notes have the same rhythms, they typically use stem direction rules for single voice. These rules for keyboard voice notation are illustrated below:



In **Musician**, you do not directly edit stem directions. Instead, you indirectly edit them by specifying the voice of notes.

To change the voice (stem direction) of one or more notes:

1. Select one or more notes 239 with the mouse cursor.
2. Type SHIFT+N to display the Note Palette.

The bottom part of the Note Palette has three buttons for voices:

	Shortcut	Note Palette Command
	sv	Single voice
	uv	Upper voice
	lv	Lower voice

Musician will indicate the voice(s) of the notes currently selected. If all of the notes have the same voice, then one of the buttons will be displayed in the down position. If the notes have two or more voices, then corresponding buttons will be shown in a half-down position.

3. Click one of the three buttons in the palette to choose the voice.

   -- OR --
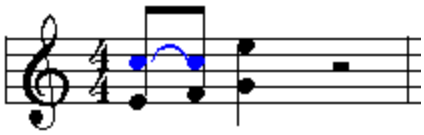
   Type "sv", "uv" or "lv" for single, upper or lower voice.

   -- OR --
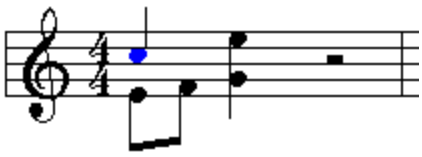
   In the Voice submenu of the Note menu, choose the Single Voice, Upper Voice, or Lower Voice command.

   Musician will change the voice of the selected notes. If you choose upper voice, and some of the selected notes were in a single voice, then **Musician** will change to lower voice any notes that were not selected but which had pitches below the newly assigned upper voice notes. It will also change to upper voice any notes that were not selected but which had pitches above the newly assigned upper voice notes. **Musician** will similarly change the voices of adjacent notes if you choose lower voice, and some of the selected notes were in the single voice.
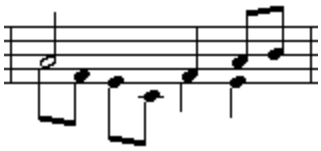
   In the following example, a quarter note is accompanied by two eighth notes. In a piano or keyboard part, the quarter note and eighth notes should be separated into upper and lower voices. In preparation, select the quarter note:



   Use the Upper Voice command to change the selected quarter note to upper voice. This step will automatically change the accompanying eighth notes to lower voice:



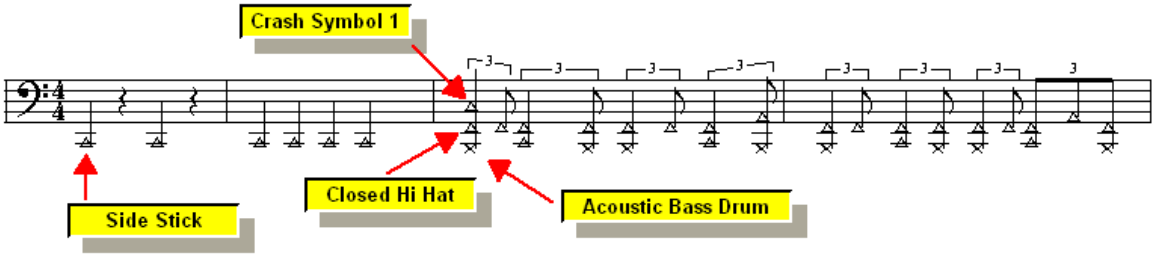
If an upper and lower voice note share the same pitch and attack location, then **Musician** will automatically share the same notehead for the two voices, provided that there would be no ambiguity in the interpretation of the duration of either the upper or lower voice note. For example:



5.4.14 Editing Drum Notes

Most types of percussion instruments do not have discrete pitches. However, in **Musician** they have pseudo pitches.

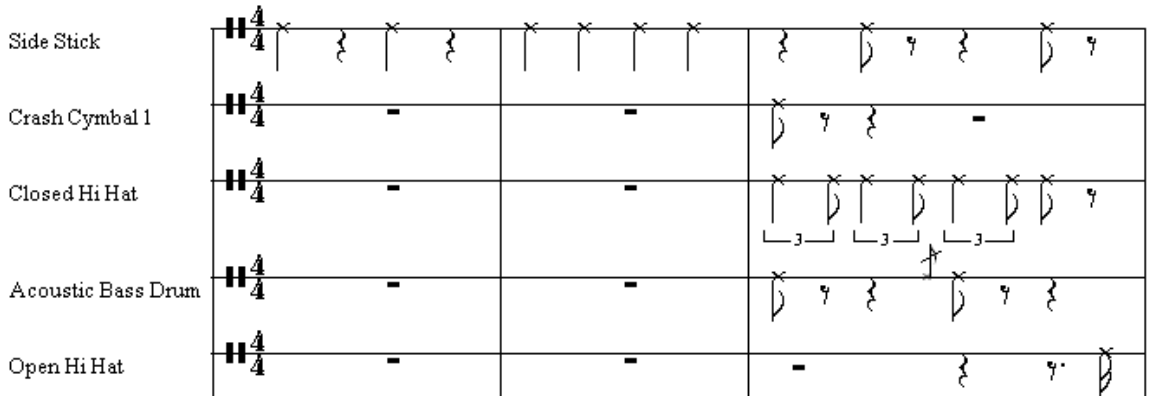
If a staff is specified as a 5-line drum staff, then note drum notes might look something like this:



Each drum instrument has a distinct pseudo pitch.

> **NOTE**: Starting in **Notation Musician** version 2.0, accidentals for pseudo drum pitches are now represented with distinct drum noteheads. The ✕ notehead is for no accidental; the upward pointing triangle △ notehead indicates a sharp; and the downward pointing triangle ▽ notehead indicates a flat. For example, the General MIDI pitch for Side Stick is C#, indicated in the above example with the upward pointing triangle △ notehead.

Usually, you will not want give a percussionist a drum part with such pseudo pitches. If you have imported a MIDI file with such a percussion staff, then you can use the Split Drums 173 command, to produce individual 1-line staves for each distinct drum instrument, as illustrated here:



You can associate various drum instruments with different keys on your music keyboard, independently of the pseudo pitches. This enables you to play the drum

notes on your music keyboard using keys that are most convenient for you to play while recording a drum part. For more information, see Managing Drum Note Lists 492.

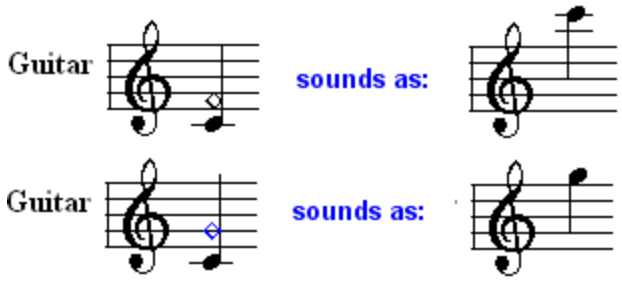
For a given 5-line or 1-line drum staff, you can specify what notehead shape will be used for the notes in the staff. By default, the notehead shape is an ×. You can assign a different notehead shape among these choices: ×, +, ▲, ■, or ◆. You can also change the notehead shape of individual notes, as described in Editing Notehead Shape 283.

5.4.15 Editing Notehead Shape

For any single-line drum staff, you can specify one of several percussion notehead shapes. The notehead shape is applied to every note in the particular single-line drum staff, except those notes for which you specify a different notehead shape.

You can also assign special note head shapes to individual notes for other instruments.

The most common example of a special notehead shape is the diamond that is used to indicate a harmonic, which is produced by placing a second finger lightly on a string, a fourth or fifth above another fingered note on the same string. If the finger is placed a fourth above the lower note, then the harmonic tone is two octaves above the lower note on the string. If the finger is placed a fifth above the lower note, then the harmonic tone is an octave and a fifth above the lower note on the string.



To change the notehead shape for a single-line drum instrument to an ×, +, ▲, ■, or ◆:

- Click the Instrument Sound Selection 148 staff control button.

  Musician will display the Staff Setup dialog box.
- In the bottom left corner of the Staff Setup dialog box, turn off the check mark for Notehead Style / Use Default.
- In the selection box next to the Notehead Style / Use Default option, choose the notehead shape.

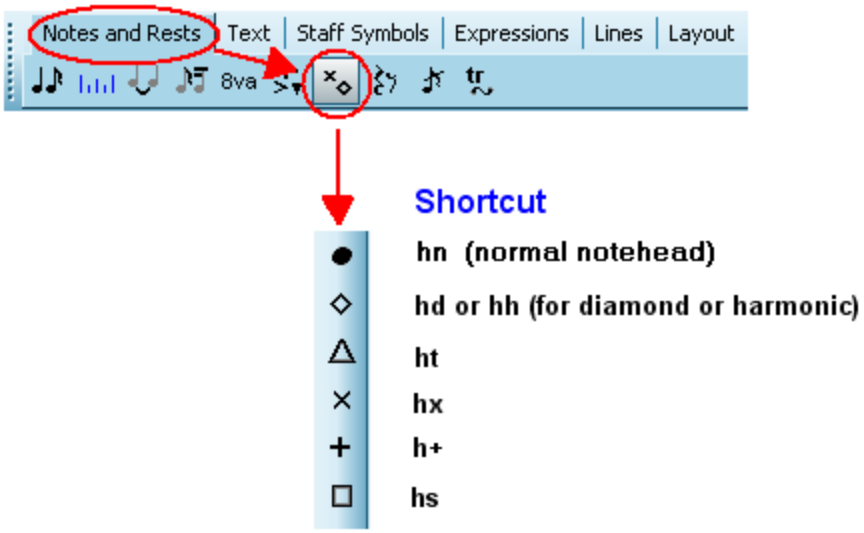
To change the notehead shape for any note:

1. Select the note 239 by clicking it with the mouse.
2. Navigate to the Notehead Shape Palette, as shown below.

   -- OR --

   Type SHIFT+H.
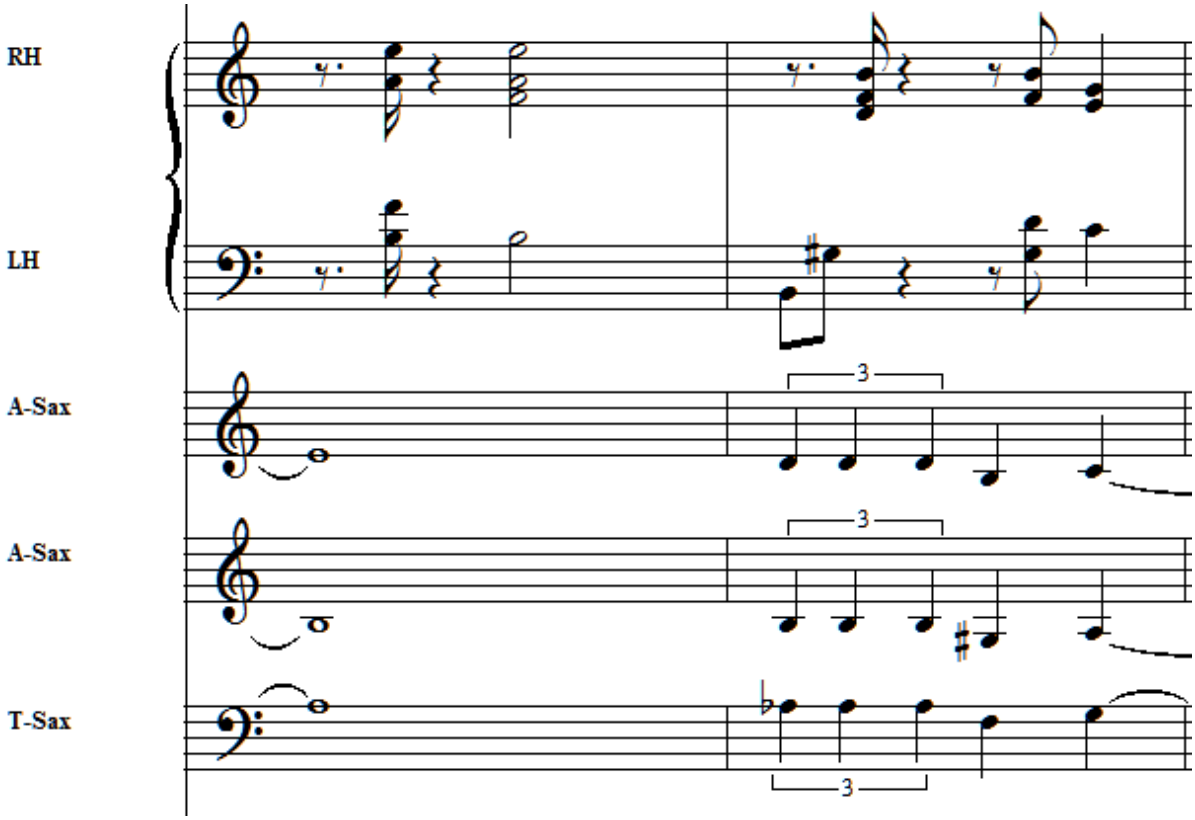
3. Choose one of the notehead shapes in the palette, or type one of the shortcuts:
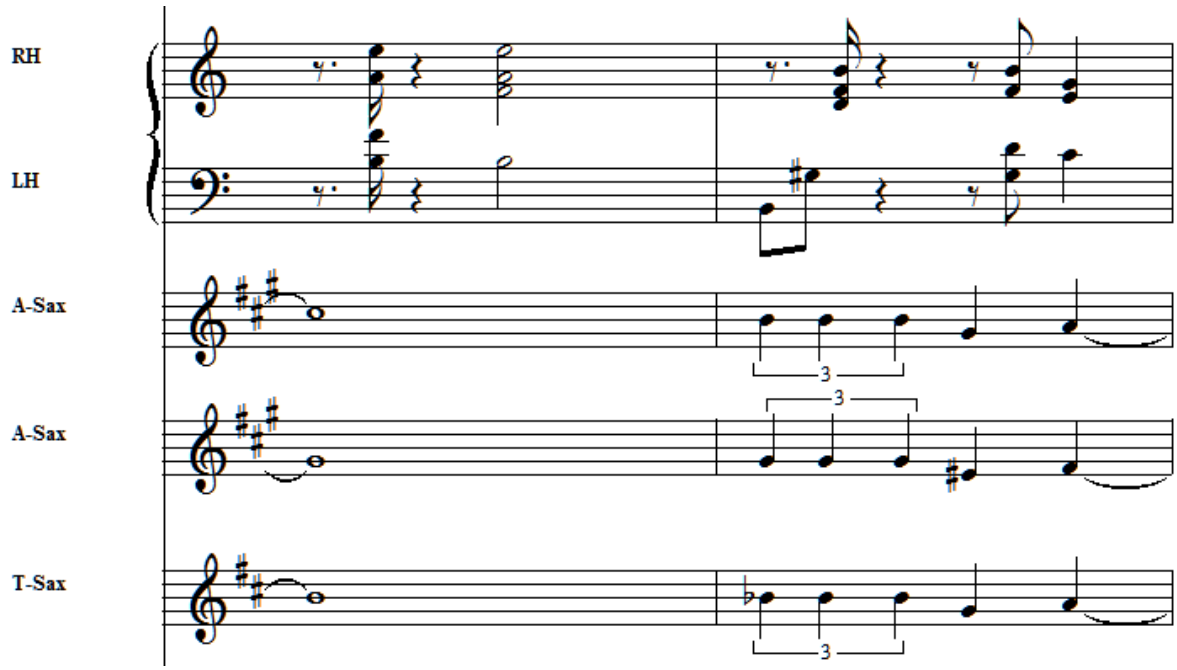


5.5 Transposing Notes

Musician offers commands for two kinds of transpositions. It is important that you understand the difference between the two types of transposition so that you choose the correct command in **Musician**.

If we begin with a file that has the following staves in the concert key of C, with Piano (a non-transposing instrument), Alto Saxes (Eb transposing instrument), and Tenor Sax (Bb, minus 1 octave transposing instrument), this is what the score looks like in "heard" key of C, which is the actual pitches that you hear when the instruments all play:
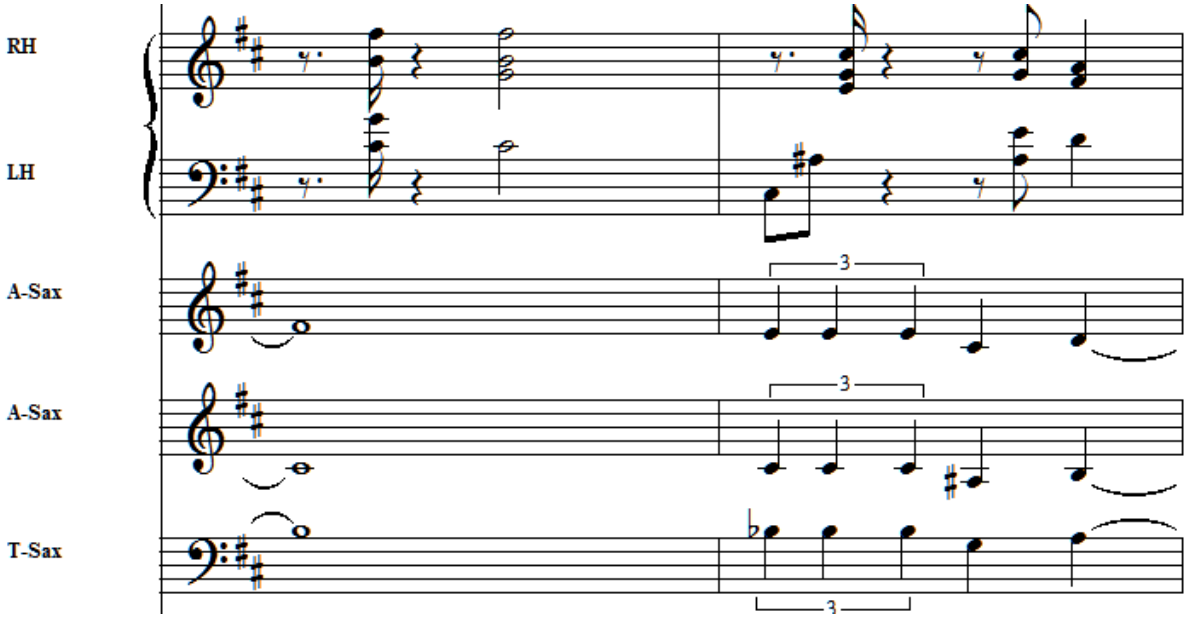


However, for each musician to play the correct heard notes, the saxes must have sheet music that is transposed for their particular instruments. For this type of transposition, you use **Staff / Transpose to each instrument's key**. Transposing to the Key of an Instrument 289 shows each instrument's notation as the musician would need it to play the piece on their particular instrument,, and is shown here:
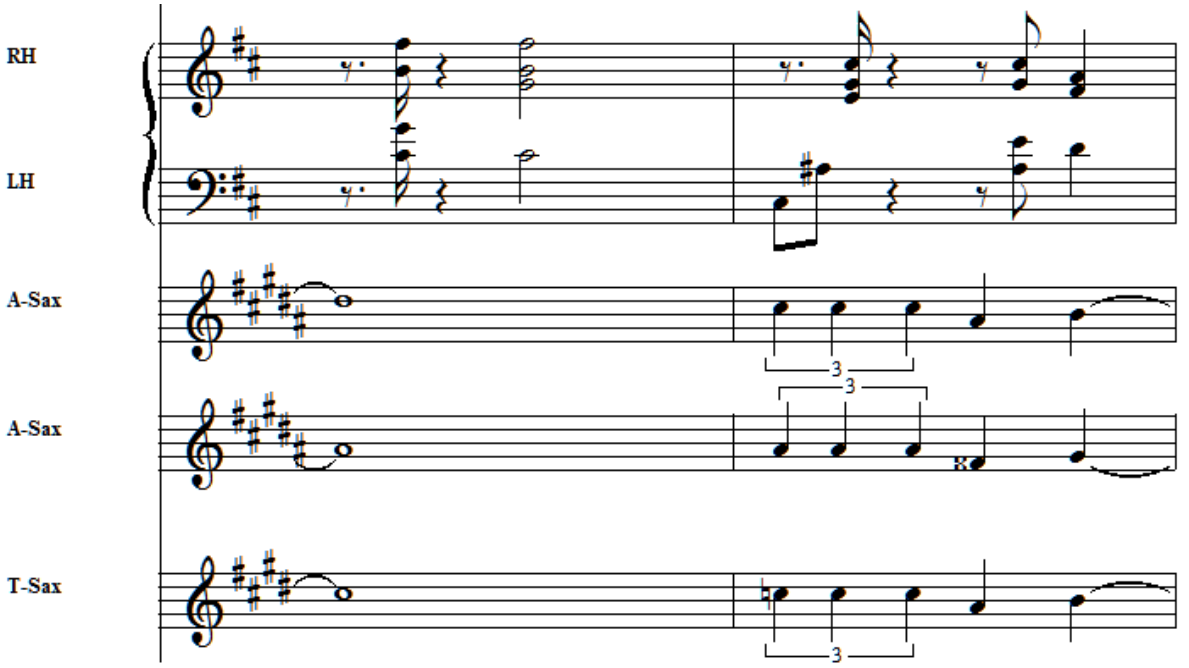


Notice the key signature of C (no accidentals) for the RH and LH piano "hands" stays the same because the piano is not a transposing instrument. However, the Alto Sax parts and the Tenor sax have been transposed to reflect their notation requirements for their respective "natural tone".

The other kind of transposing changes the concert, or "heard", key of the entire song. Transposing Actual Pitches 287 shifts the actual heard pitches of the notes. Thus, if we start with the same song which is in concert key of C, and use Staff / Transpose Actual Pitches to the concert key of D (two half-steps up, or one whole-step), we would see the concert pitches as shown here:



Notice how - when viewed in "Concert pitch", all staves have the key of D accidentals and the notated (and heard) pitches are raised two-half steps (a whole step) up from the original file (see the first screen shot above).

We can then Transpose the Instrument Keys 289 for this new key-of-D file to give the following Instrument Transpositions for this song file which is now in the "heard" (concert) key of D:



5.5.1 Transposing Actual Pitches

Musician handles two kinds of transpositions. This topic describes how to transpose actual as-performed pitches in a song, otherwise known as the concert key. If you do not want to change the actual as-performed pitches but, just want to change the key in which the pitches are notated, in order to match the key of an instrument, see Transposing to the Key of an Instrument 289.

When **Musician** transposes a song, it shifts the pitches of all of the notes in all the measures in all of the staves up or down by some number of half-steps that you specify (except for "drum staff" notes).

Most MIDI files adhere to the General MIDI 482 specification. In the General MIDI specification, channel 10 is reserved for percussion ("drum staff") sounds. Different pitches on MIDI channel 10 produce different types of percussion sounds. To shift the pseudo pitch of a drum sound will entirely change the sound, such as from a Side Stick to an Acoustic Snare. Normally you do not have to specify which MIDI channels produce drum sounds, because **Musician** by default assumes that a device adheres to the General MIDI specification, but you can always make changes to the channel assignments in the Staff Setup 148 dialog if needed.

When **Musician** transposes pitches, it also transposes the pitches of chord names 401. For example, if you transpose pitches up two half steps, **Musician** will change a "C7" chord to "D7". In the case of ambiguous chord root spellings, such as "F#7" versus "Gb7", **Musician** makes its best guess based on the surrounding harmony. Wherever **Musician** makes the wrong guess, you can quickly correct the error, as described in Editing Chord Names 401.

The procedure for transposing pitches is simple.

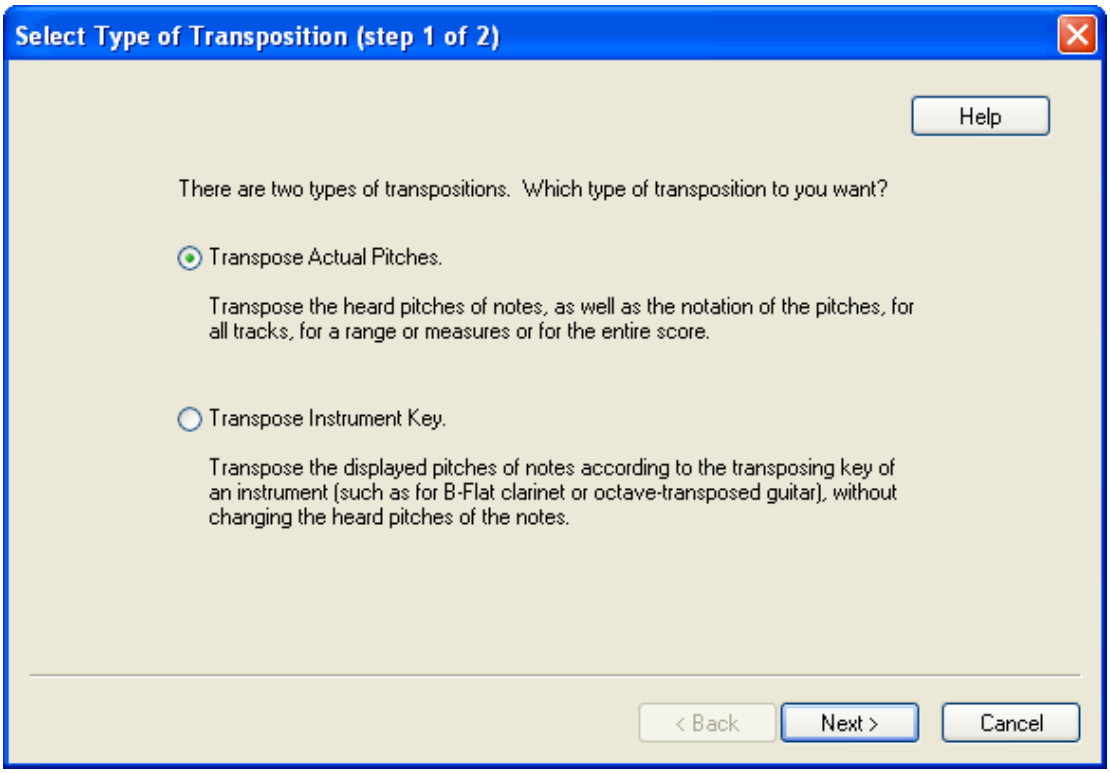
To transpose pitches for an entire song, or a range of measures in the song:

1. Optionally, select a region 241 with the measures you wish to transpose by dragging the mouse over them while holding down the CTRL key. This will pre-select the measure range in Step 2 of the Transposition Wizard, as described below.
2. Choose the Transpose Actual Pitches command in the Staff menu.

   -- OR --

   Type "qtp" for Quick Transpose Pitches.

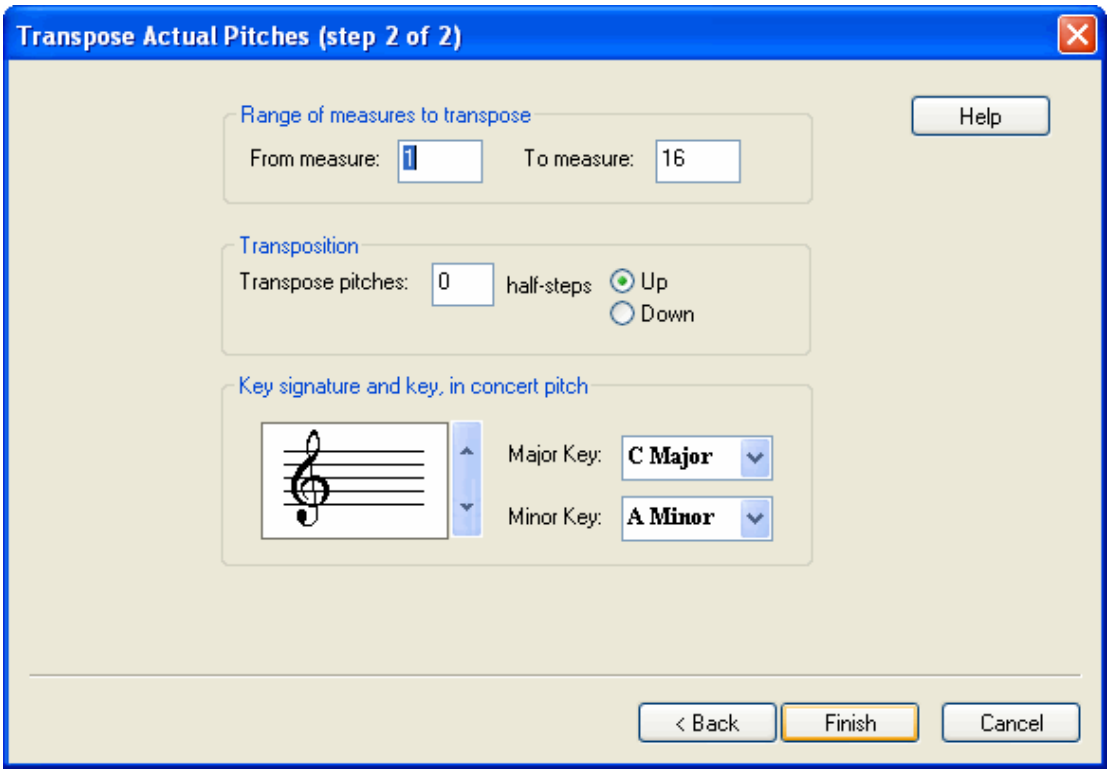
Musician will display Step 1 of a two-step Transposition Wizard:



The first step of this two-step wizard is intended to help you make sure that you understand the distinction between the two types of transposition, and have chosen the correct type.

3. Confirm that you intend to transpose actual pitches, and hit the Next button.

Musician will display Step 2 of the Transposition Wizard:



If you selected a range of the score in step #1 of this procedure, then the Range of Measures to Transpose will be pre-selected in the wizard step above.

5. Enter the range of measures for which you wish to transpose notes, if you did not pre-select the range.
6. Enter the number of half steps you wish to shift pitches up or down. There are 12 half steps in an octave. Choose "Up" or "Down".

   -- OR --

   Use the up and down arrows to choose a different number of flats or sharps in the key signature.

   -- OR --

   Choose the new major or minor key for the beginning of the song.

   The key signature initially shown in the dialog box will be that at the beginning of the selected range, or at the beginning of the song if you did not pre-select the measures.
7. Click the Finish button.

5.5.2 Transposing to the Key of an Instrument

Musician handles two kinds of transpositions. This topic describes how to change the key in which pitches are notated, in order to match the key of a transposing instrument so that your musicians can play their transposing instruments. This "instrument key" transposition changes the musicians parts for printing *without* changing the actual as-performed (heard) pitches (concert key). If you want to change the actual as-performed pitches (concert key), then see Transposing Actual Pitches 287.

You can switch at any time between showing the conductor score or selected parts in either concert (actual as-heard) pitches or transposed pitches.

In addition to transposing parts, you can independently change key signatures 322 and clefs 321 anywhere within any staff.

When **Musician** transposes instrument key, it also transposes the pitches of chord names 401 for the separately viewed or printed instrument part 156. It does this if, but only if: (1) the part has only one staff for the transposing instrument, or (2) all of the staves in the part have the same instrument transposition. For more information, see Transposing Chord Names 415.

Note that transposing to an instrument key does not affect the pitch of displayed chord names 401. Chord names almost always are read only by non-transposing instruments, such as the piano, guitar, and autoharp. Therefore, this is not a significant limitation. The reason that **Musician** does not transpose chord names for instrument transpositions has to do with the complications of ambiguous enharmonic spellings.

▸ To review and change whether the score is currently notated in concert pitch or transposed pitch:

- Open the Staff or Format menu. If there is a check mark by the Show Concert Pitches menu item, then this means that the score is *not* currently notated using transposed pitches.
- If instead there is a check mark by the Show Instrument Transposed Pitches menu item, then the score *is* currently notated using as-heard concert pitches, *provided that the transposition for each instrument has been previously specified.* If you set the check mark for the Show Instrument Transposed Pitches menu item, then you should expect to see different key signatures for transposing instruments. If you do not see the different key signatures, then

this means that you will need to specify the transpositions for the instruments, as described in the next procedure.

- To switch between showing concert (non-transposed) pitches and transposed pitches, set a check mark for Show Concert Pitches or Show Instrument Transposed Pitches.

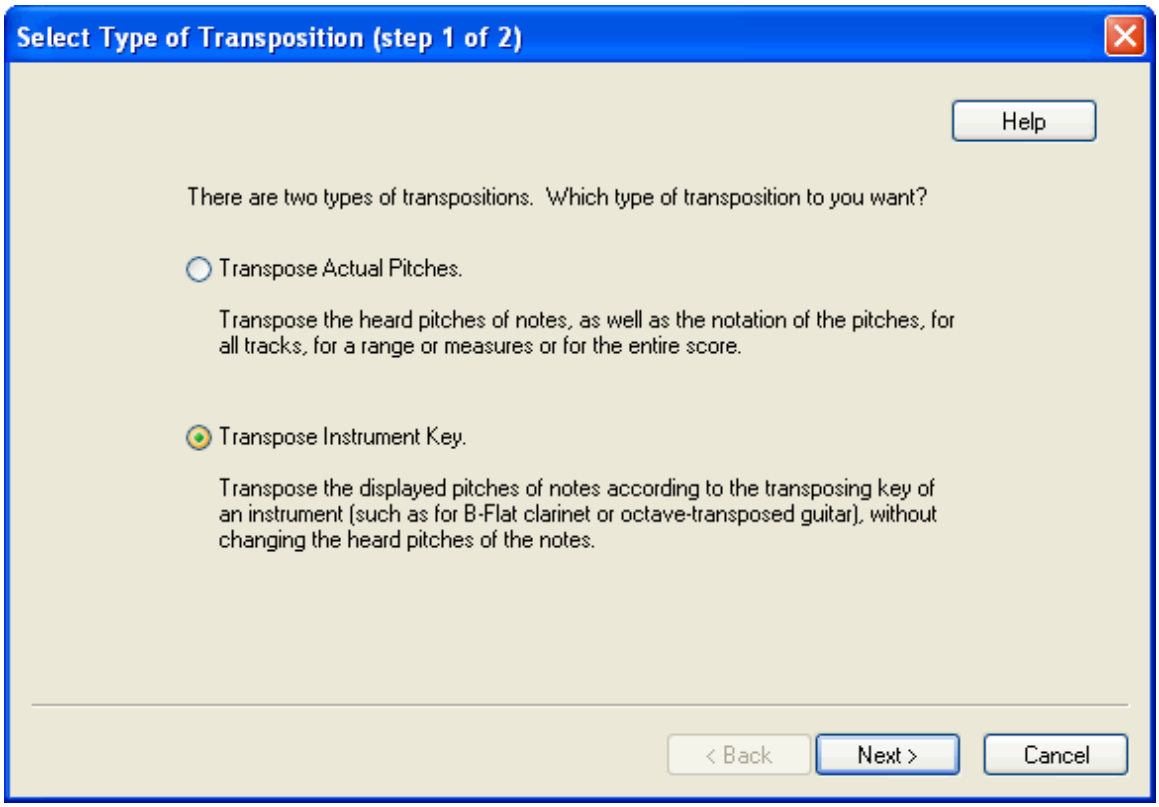
To change the transposition of a staff (instrument part):

1. Choose Transpose Instrument Key command in the Staff menu.

   -- OR --

   Type "qti" for Quick Transpose Instrument.

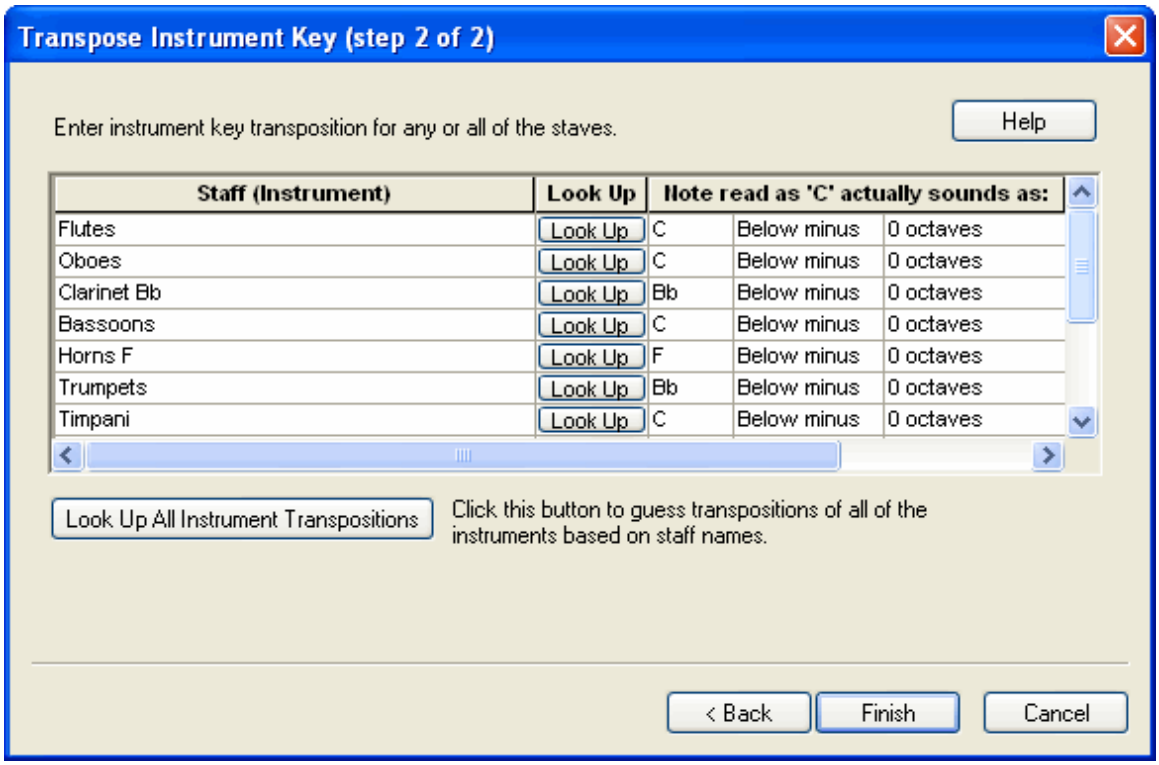
Musician will display Step 1 of a two-step Transposition Wizard:



The first step of this two-step wizard is intended to help you make sure that you understand the distinction between the two types of transposition, and have chosen the correct type.

2. Confirm that you intend to transpose instruments and hit the Next button.

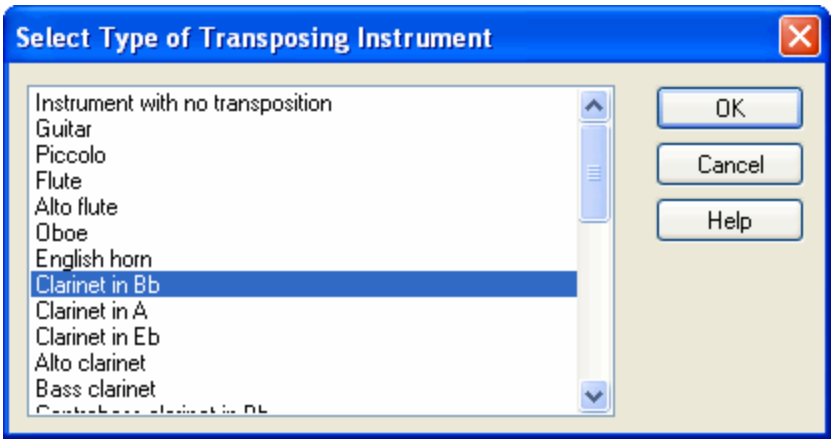
Musician will display Step 2 of the Transposition Wizard:



3. In the row for the staff you wish to transpose, choose values under the column header "Note read as 'C' actually sounds as." For example, consider a Bb clarinet. When the musician sees a note written as a 'C' in the Bb clarinet part, and plays that note, it will actually sound two half-steps lower, as a Bb. Therefore, the correct entry for the Bb clarinet is "Bb Below plus 0 octaves".

4. If you are not sure what the transposition for a given type of instrument should be, click the Look Up button in the row for its staff.

   Musician will display a list of orchestra and band instruments that you can select from, as illustrated below:



   Musician will pre-select one of the instrument types based on the staff name, but it might make a wrong guess. Confirm or change the instrument type. Then hit the OK button. **Musician** will then automatically set the values for "Note read as 'C' actually sounds as."

5. Follow the above procedure for one or more instruments.

6. **Musician** will pre-select the Show Instrument Transposed Pitches option, which is usually what you want if you are specifying instrument transpositions. However, you can optionally toggle this to the Show Concert Pitches option. The option in the dialog box is fully equivalent to the Show Concert Pitches menu item in the Staff menu
7. Click the Finish button when you are done, or Cancel if you decide not to keep the new transpositions.

To automatically set the instrument transpositions for all of the staves:
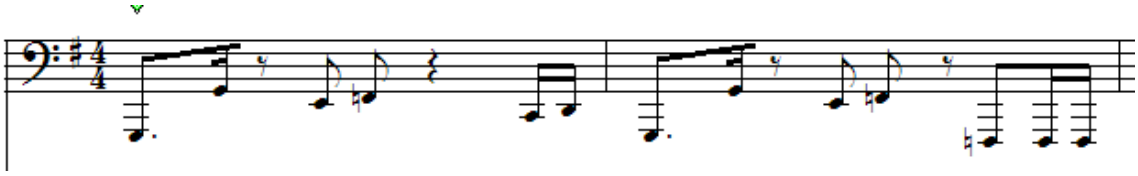
1. Follow the same steps #1 through #3 in the previous procedure.
2. Click the Look Up All Instrument Transpositions button.

   Musician will examine each of the staff names to guess the type of instrument, and will accordingly assign the transposition for each staff. Using the Look Up All Instrument Transposition option is equivalent to accepting the pre-selected Look Up instrument type for each staff
3. You should review the assigned instrument transpositions, because **Musician** can make mistakes if the staff names do not correctly match the instrument types. Make corrections to any of the transpositions according the previous procedure.
4. Click the Finish button when you are done, or Cancel if you decide not to keep the new transpositions.
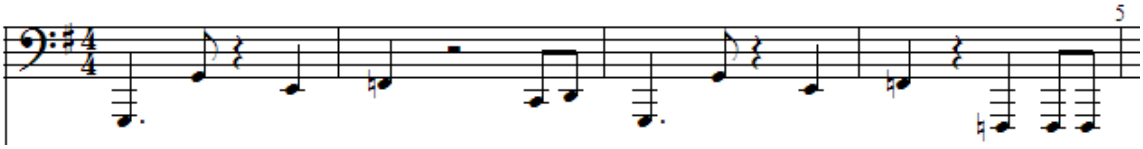
5.6 Doubling and Scaling Note Durations

Sometimes you might open a MIDI file in which the tempo is correct, but the note durations are too short, too difficult to read. You might want to double all of the durations.

For example, you might want to double all of the note durations here:



The result will be:

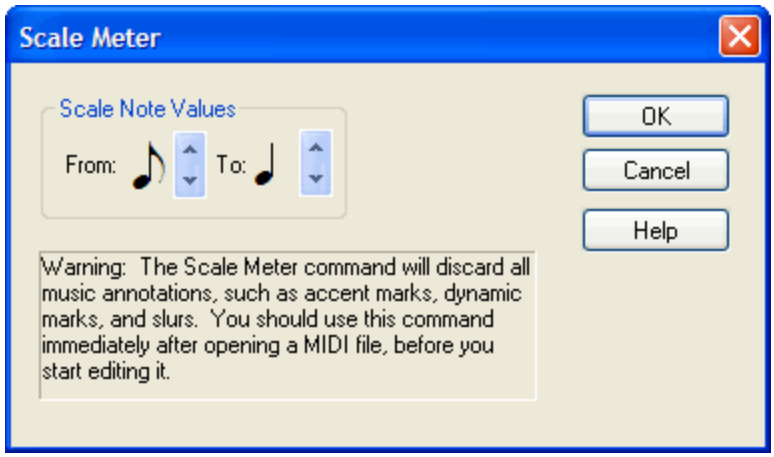


Musician's Scale Meter command supports that. More generally, you can scale note values by any common ratio, such as 2-to-1, 1-to-2, 3-to-1, and 1-to-3, or even 3-to-2 and 2-to-3.

TIP: As with Re-transcribing 73 the score, do this step BEFORE you do any annotations to the score, because all annotations will be discarded.

To scale note durations:

1. Navigate to the Meter palette 325, either by clicking its tab, or by typing SHIFT + M.
2. Choose the Scale Meter command in the Meter menu. It will display a dialog box such as the following:



3. In the Scale Meter dialog, choose an example 'from' note duration that will be scaled to the 'to' note duration. The above dialog box illustrates the selection you would make for the example at the beginning of this topic.

   Note that all note durations will be scaled proportionally. The meter will not be changed. Therefore, half as many or twice as many(or other ratio of) notes will be displayed in resulting measures.
4. Click the OK button.
5. **Musician** will open a new copy of your song, without destroying the old copy. The new copy of the song will be saved in a temporary directory on your system. There will be a temporary file name for the song, based on the song title, plus some arbitrary numbers at end of the file name.

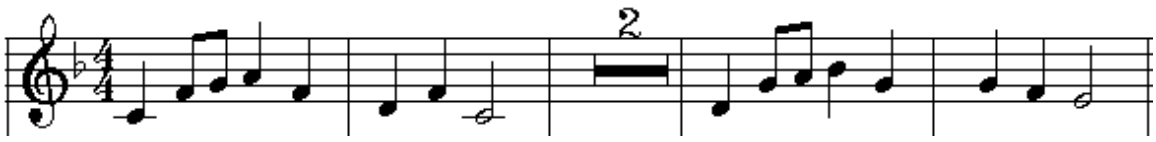
   If you are satisfied with the newly scaled song, then save with a new name in a directory of your choose, using the File Save 81 command. If you wish to save the file with the same name as the original file, then you will first need to close the original file.

5.7 Editing Rests

With **Musician**, you do not have to do much work to include rests in the score. **Musician** automatically adds rests wherever there are no notes.

After importing and transcribing a MIDI, or transcribing a recording, you might want to use **Musician's** Clean Up Rests and Overlapping Notes command as a quick way to remove small unwanted rests that "over-notate" the score in too much detail. For details, see Eliminating Small Rests 295.

See Using Multiple Measure Rests 295 for instructions in preparing multiple measure rests which look like this:

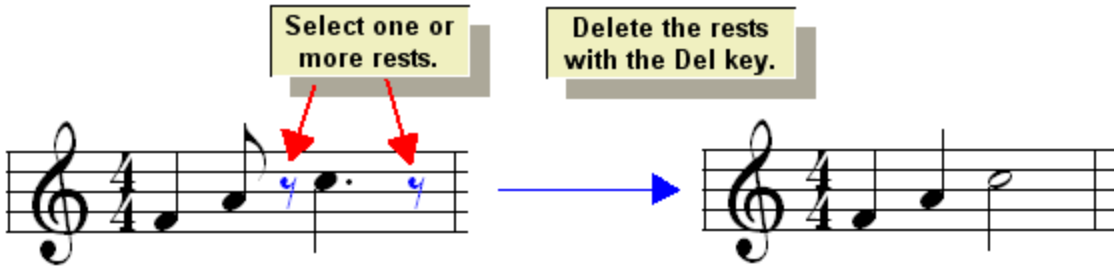


5.7.1 Deleting Rests to Extend the Duration of Previous Notes

If you delete a rest that follows a note or a chord, then the duration of that previous note or chord will be extended to fill in the place of the rest.

To extend the duration of a note or chord by deleting the rest after it:

1. Select the rest.
2. Hit the Del key.



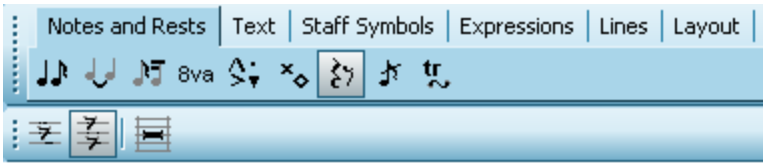
5.7.2 Changing the Voice of a Rest

If you open a MIDI file with the Split Voice option on for Transcription Options (in the Setup menu), then **Musician** will sometimes create upper and lower voice rests as well as upper and lower voice notes. Usually Musician will make the right decisions about whether to use single voice versus split voice for both notes and rests. However, it might make an error, or you might have a difference preference about splitting the voices or not at some particular location in the song.
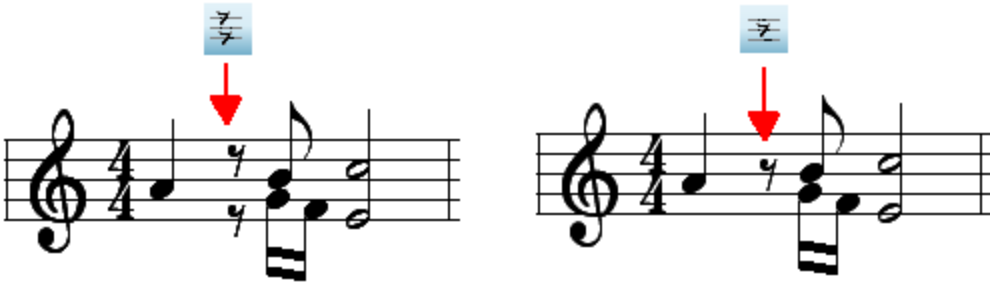
To change a single voice rest to a split voice rest, or vice versa:

1. Select a rest.

   Musician will display the Rest Palette:



2. Select one or the other of the single voice or split voice rest buttons, as illustrated here:

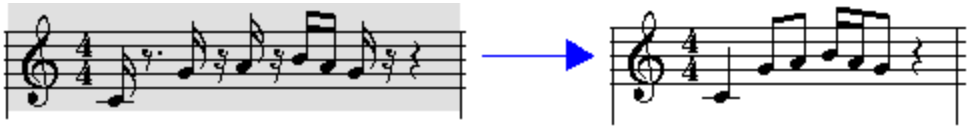


5.7.3 Eliminating Small Rests

If you have imported a MIDI file, or recorded a performance at your music keyboard, and you find that **Musician** has transcribed the performance to notation using too many small rests, there are a couple of options you have to eliminate the small rests.

One option is to re-transcribe the entire song or specified staves. The Re-Transcribe 78 command in the Format menu lets you specify the minimum rest duration that will be notated. Rests smaller than the specified minimum duration will be eliminated by extending the duration of preceding notes.

A second option enables you to select the region of the score, or group of notes, among which the small rests will be removed. In this example, rests smaller than quarter rests are removed:



To eliminate small rests for a selected region of the score:

1. First, select a region 241 of the score by holding down the CTRL key and the left mouse button, and dragging the mouse.

   -- OR --

   Select a group of notes 239.

2. In the Region menu, open the submenu named Clean Up Rests and Overlapping Notes. In the submenu, open a second submenu name Remove Rests Smaller Than. In that second submenu, choose 16th Rest, 8th Rest, or Quarter Rest, to determine the size of rests that will be removed.

   -- OR --
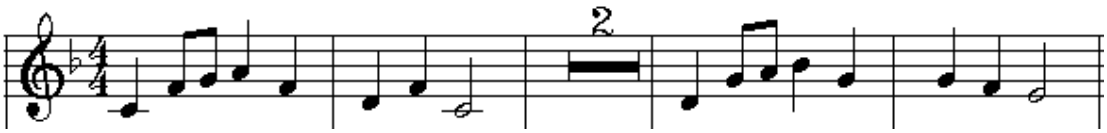
   Type "r16r", "r8r" or "r4r" to remove rests smaller than a sixteenth, eighth, or quarter rest.

   -- OR --

   Type "rr" to remove rests smaller than the size you most recently specified in this or any previous session of **Musician**.

5.7.4 Using Multiple Measure Rests

Throughout a score, wherever there are two or more measures with only rests for all of the staves, you can specify whether each measure will be displayed with a whole measure rest, or whether all measures are collapsed into a multiple measure rest. The following is an example of a two-measure rest:



To display multiple measure rests:

- In the Format menu, turn on the check mark for Collapse Multiple Measure Rests.

  -- OR --
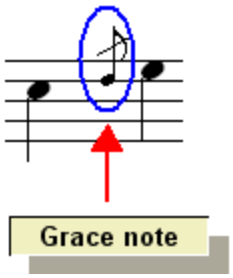
  Type "qcmr" for Quick Collapse Multiple Rests.

To display each measure with its own whole measure rest:

- Turn off the check mark for Collapse Multiple Measure Rests in the Format menu.

5.8 Editing Grace Notes

A grace note is displayed in a relatively small font size, and is performed by borrowing time from a longer note before or after it. A grace note looks like this:

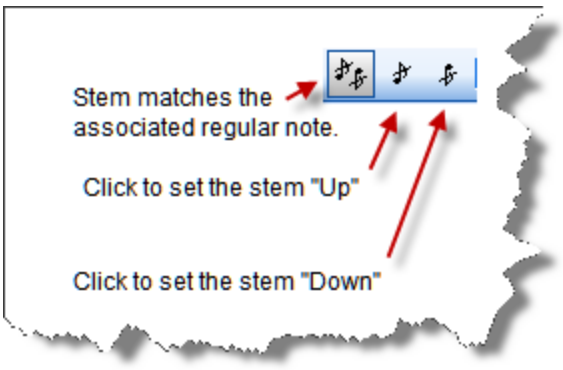


You can specify whether a grace note has a slash through the stem 298 or not.

When you import a MIDI file, or record MIDI from your music keyboard, you can request **Musician** to automatically detect and display grace notes 73.
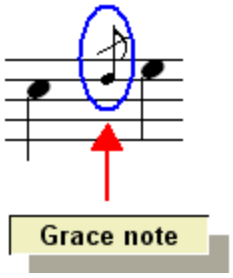
You can convert written-out short notes to displayed grace notes 299, such as changing a leading 32nd note to a grace note. Going the other way, you can convert a displayed grace note back to a written-out short note 301.

Procedures for all of the above tasks are described in the topics that follow. Additionally, to change the stem direction of a grace note, simply click the grace note to select it, then click the stem direction button you want:

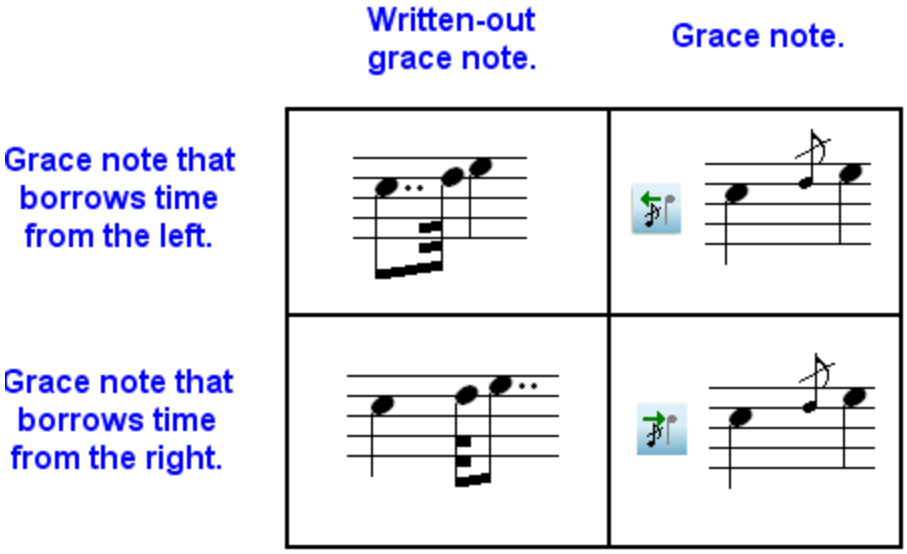


5.8.1 Understanding the Two Types of Grace Notes

A grace note is displayed in a relatively small font size, and is performed by borrowing time from a longer note before or after it. A grace note looks like this:



Musician distinguishes two types of grace notes according to whether the grace note borrows time from the longer note before or after it.



In formal music language, different terms are sometimes used to distinguish these two types of graces notes that borrow time from the left or right. Other music terms related to grace notes include *appoggiatura* and *accacciatura*. These other terms often carry more meaning than just whether the note borrows time from the left or right. These terms are sometimes also used differently in different countries, and for different periods (styles) of music. Much controversy surrounds the use of these terms. **Musician** intentionally avoids confusion and controversy by not using the terms *appoggiatura* and *accacciatura*. Instead, **Musician** uses a single term *grace note* to describe any note that is (1) displayed in a smaller font size and (2) borrows time from either the left or right.

When you add a grace note, you must specify whether this is the type of grace note that borrows time from a note to its right, or borrows time from a note (or rest) to its left. That will determine how **Musician** performs the grace note during playback. The above chart indicates which buttons in the Grace Note Palette (SHIFT+G) create the two types of grace notes. The button for a grace note that borrows time from the left draws a leftward arrow above the grace note, in order to suggest that the grace note borrows time from the left; and similarly for the grace note that borrows time from the right.

5.8.2 Viewing Grace Notes as Written-Out Notes

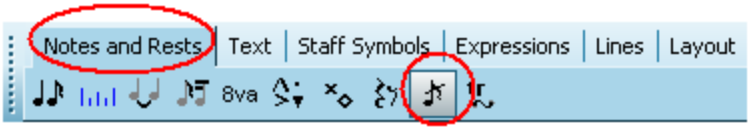
You can view the written-out performance of grace notes at any time. You might want to do this in conjunction with viewing the Piano Roll Notation for the grace notes so that you can finely edit the performed timing of the notes.

To view the written-out performance of a grace note:

1. Navigate to the Grace Note Palette.

   -- OR --

   Type SHIFT+G.

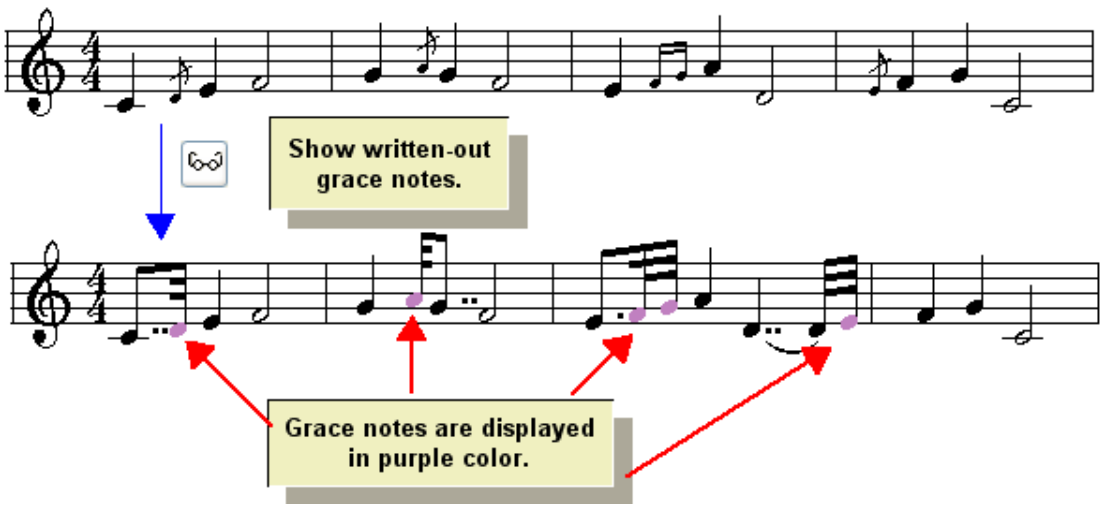


2. Toggle off the Show Ornaments and Grace Notes button in the Grace Note Palette.

   -- OR --

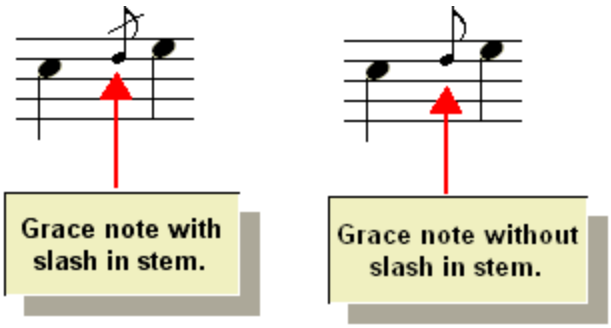
   Type "gsor" to toggle off Show Ornaments.

   Musician will show the grace notes written out, highlighted in the color purple so that you can easily identify them.



5.8.3 Editing the Slash on Grace Note Stems

A grace note can be displayed with or without a slash through the stem:



Usually grace notes are displayed with a slash through the stem, which is the default for **Musician**. You can remove the slash on any grace note 298, or for many grace notes at a time. For some periods (styles) of music, and for some interpretations of the performance of grace notes, the presence or absence of a slash in the stem may have significance. There are different opinions among musicians and sheet music publishers about the use of grace note stem slashes. **Musician** does not attempt to musically interpret the presence or absence of a slash in the grace note stem. Rather, **Musician**simply offers you the option to include (by default) or not include the slash, as you prefer.

To add or remove a slash from the stem of an existing grace note:

1. Select the grace note.
2. Click the slash or no slash button in the Grace Note Palette.

   -- OR --

Type "g/" or "gn/" for slash or no slash.

5.8.4 Converting Short Notes to Grace Notes

There are several ways that you can convert written-out short notes to displayed grace notes:

- Before you import a MIDI file, you can instruct **Musician** to automatically detect and convert written-out short notes into grace notes, as described in Transcribing MIDI Files and Recordings to Notation. 70 If **Musician** does not detect all of the grace notes in the MIDI file, then you can individually convert the remaining ones using the procedure below. ■ Use the Transcribe Grace Notes command in the Grace Note Menu, as described in the first procedure below. This is a convenient way to convert several grace notes at one time. For a range of measures and staves that you specify, **Musician** will automatically detect and convert written-out short notes to displayed grace notes.
- Individually select the written-out short notes and use the Grace Note Palette buttons or keyboard shortcuts to convert them to displayed grace notes. This method is described in the second procedure below.
- You can also convert a series of two or more written-out short notes to grace notes, as described in the last procedure below.

To automatically detect and convert written-out short notes to displayed grace notes:

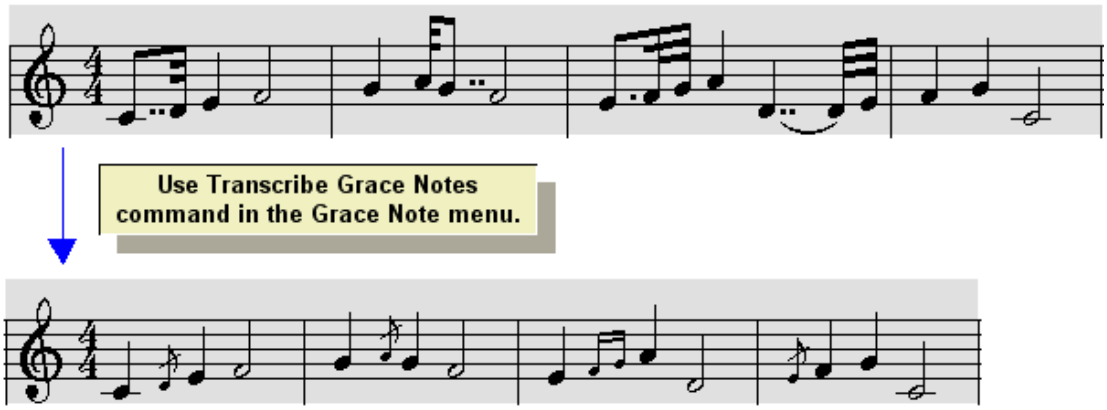
In detecting grace notes, **Musician** uses the same analysis for the Transcribe Grace Notes command as it does if you choose the grace note transcription option when you are importing a MIDI file, recording from your MIDI keyboard, or using the Re-Transcribe 78 command.

1. Navigate to the Grace Note Palette, as described in Palettes 136.

   -- OR --

   Type SHIFT+G.

2. Select a region by holding down the CTRL key while you drag the mouse. The region should be the range of measures and beats, and one or more staves, for which you wish to convert the grace notes. For example:



   -- OR --

   Instead of step #2, follow the remaining steps #3 and #4.

3. Choose the Transcribe Grace Notes command in the Grace Note Menu.

   Musician will display the Transcribe Grace Note dialog box.

4. In the Transcribe Grace Notes dialog box, select the range of measures and beats, and the range of staves, for which you wish to convert the grace notes.

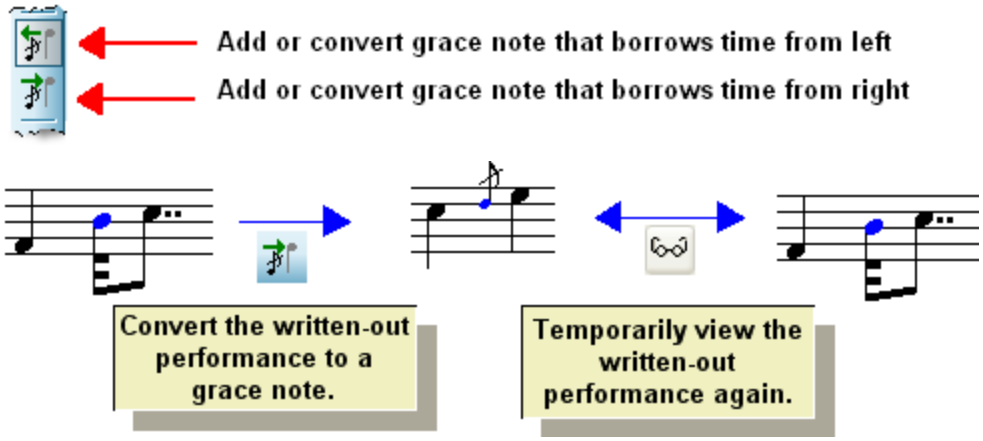
To convert a written-out short note to a displayed grace note:

It is suggested that you use the Transcribe Grace Notes command, as described in the previous procedure, instead of the following procedure, unless you have a good reason. The above Transcribe Grace Notes command lets you convert many grace notes at once, very quickly.

1. Select the written-out short note.
2. Navigate to the Grace Note Palette, as described in Palettes 136.

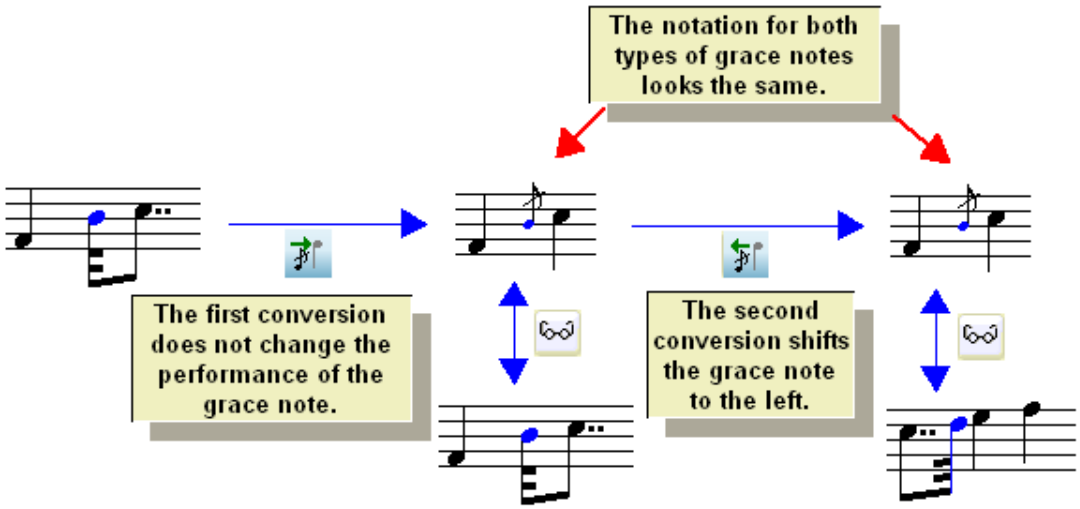
   -- OR --

   Type SHIFT+G.
3. In the Grace Note Palette, select one of the following buttons to convert the written-out short note to a grace note, and to optionally add a slur at the same time:



Note that if the written-out version of the grace note borrows time from the long note that follows, then **Musician** will convert the written-out short note to that type of grace note, even if you choose the option for the opposite type of grace note, which borrows time from the left.

4. If the written-out version of the grace note borrows time from the right or left, and you wish to change the direction from which the time is borrowed, then you can do so for the now selected grace note. Click the button for the desired option, as illustrated here:



To convert a series of two or more written-out short notes to a grace note group:

1. Select the multiple written-out short notes.
2. In the Grace Note Palette, click the Grace Note Borrow From Right button (or Borrow From Left button).

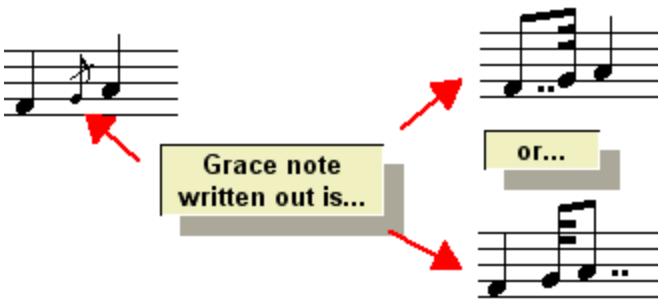
   -- OR --

   Type "gr" for grace note borrowing from right (or "gl" for grace note borrowing from left).



5.8.5 Reverting Grace Notes to Written-Out Notes

A grace note is a short-hand way of writing a brief note that precedes a longer note, as illustrated here:



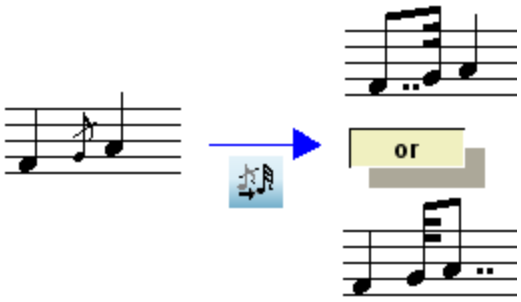
You can convert a written-out short note to a displayed grace note, as described in Converting Short Notes to Grace Notes 299. You can also do the reverse, that is, convert a displayed grace note to a written-out short note.

To convert one or more displayed grace notes to written-out short notes:

1. Select the grace notes.
2. Click the Convert Grace Note Back to Normal Note button.

   -- OR --

   Hit the BACKSPACE key.



To completely delete a grace note and its performance:

1. Select the grace note.
2. Click the Delete Grace Note button.

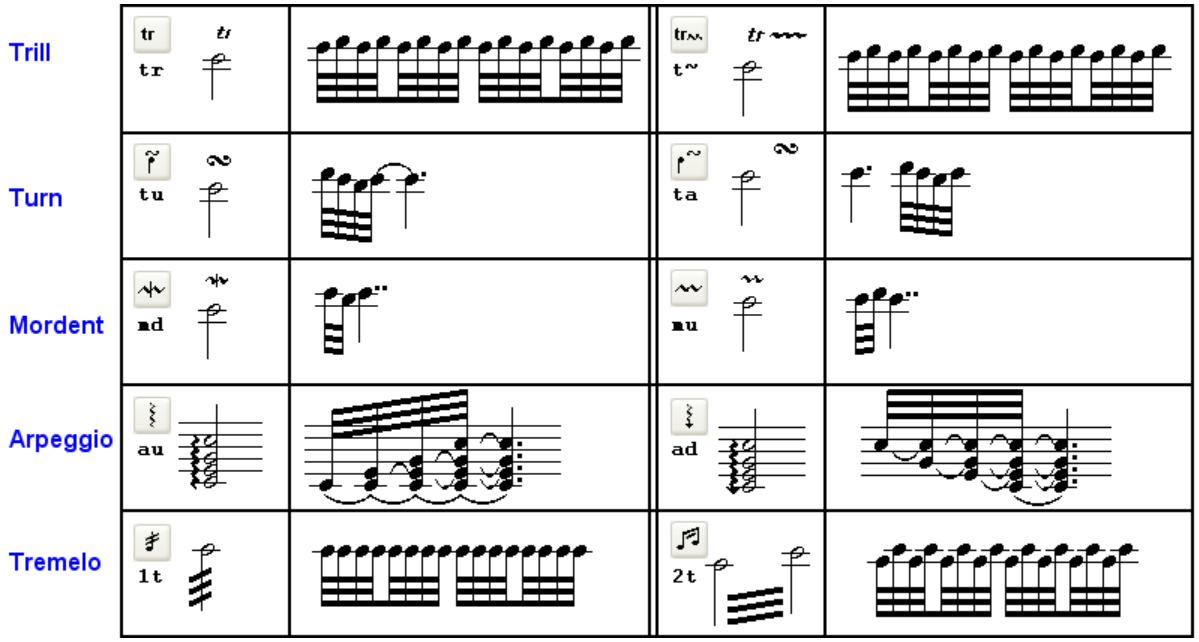


   -- OR --

   Hit the Del key.

5.9 Editing Ornaments

In addition to grace notes 296, **Musician** supports the following types of ornaments:



Musician enables you to convert written-out ornaments to the short-hand ornament notation. The above chart shows examples of how the various types of ornaments might be performed. In an imported MIDI file, the rhythm of a given ornament might be faster or slower than illustrated above. Also, the individual notes of an ornament might not have exactly the same short durations. When you convert a written-out ornament to the short-hand ornament notation, **Musician** preserves the exactly timing of the individual performance notes.
Musician also includes an option for automatically detecting an transcribing two of the most common types of ornaments: trills and mordents.

In most books and literature on music notation, you will find that grace notes are classified as ornaments, among the other types that are named "ornaments" in **Musician**. We agree that grace notes are ornaments. But because the procedures for editing grace notes are inherently different that these other types of ornaments, **Musician** provides a separate Grace Note Palette and Grace Note Menu, as described in Editing Grace Notes 296.

The procedures for editing ornaments are generally the same for all types of ornaments. Once you learn how to edit one type of ornament, you will be able to quickly learn how to edit the other types of ornaments. The following topics describe procedures that are shared in common by all types of ornaments:

- Converting Written-Out Performances to Ornaments
- Reverting Ornaments to Written-Out Notes
- Deleting an Ornament
- Viewing and the Written-Out Performance of Ornaments 307

Remaining topics in this section provide procedures for editing special characteristics of each type of ornament:

- Editing and Transcribing Trills
- Editing Turns

- Editing Mordents
- Editing Arpeggios
- Editing and Transcribing Tremolos 315

5.9.1 Adding Ornaments

The general procedures for adding an ornament are the same for all types of ornaments: trills, turns, mordents, arpeggios, and tremolos. Once you have added a few ornaments of a given type, you will know how to add ornaments of any type.

There are three alternative procedures for adding ornaments:

- Use the "point and click" method. Select a type of ornament, and click the mouse where you want to add it.
- First select the note to which you wish to add the ornament. Then select the ornament you wish to add. Using this method, you can add the same type of ornament to several notes in a single step.
- If the ornament is already written out as notes, then select those notes and convert them to a displayed ornament. This procedure is described in Converting Written-Out Performances to Ornaments 305.

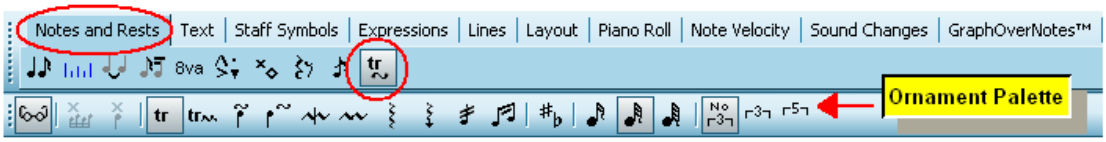
The two different procedures are described below.

To add an ornament with the "point and click" method:

1. Navigate to the Ornament Palette with the mouse.

   -- OR --

   Type SHIFT+O. If **Musician** displays the Octave Palette, then type SHIFT+O a second time for the Ornament Palette.



2. In the Ornament Palette, select the type of ornament you wish to add. See the chart of ornament types in Editing Ornaments 303 for an explanation of each of the ornament type buttons in the palette.
3. Specify the duration of the ornament members by clicking one of the buttons for 16th, 32nd, or 64th duration, and one of the buttons for no tuplet, triplet or quintuplet.

   -- OR --

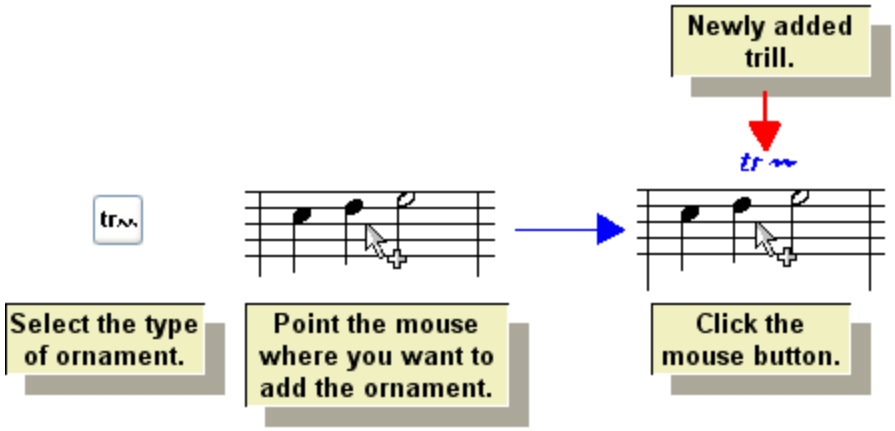
   Type "16", "32", or "64" for the base duration, and optionally "33" or "55" for triplet or quintuplet.

   For example, if you choose the combination of  and  , each member of the ornament will be a 16th triplet. A 16th triplet member has one third of the duration of an eighth note. A 16th quintuplet member has one fifth of the duration of a quarter note.

4. Move the mouse cursor (it will look like this  with an extra "dongle" that will show what ornament you're adding) to the note where you want to add the ornament. The mouse does not need to be vertically positioned exactly on the

pitch of the note. It need only be positioned horizontally at the exact measure and beat where the ornament should be added.

5. Click the mouse button.



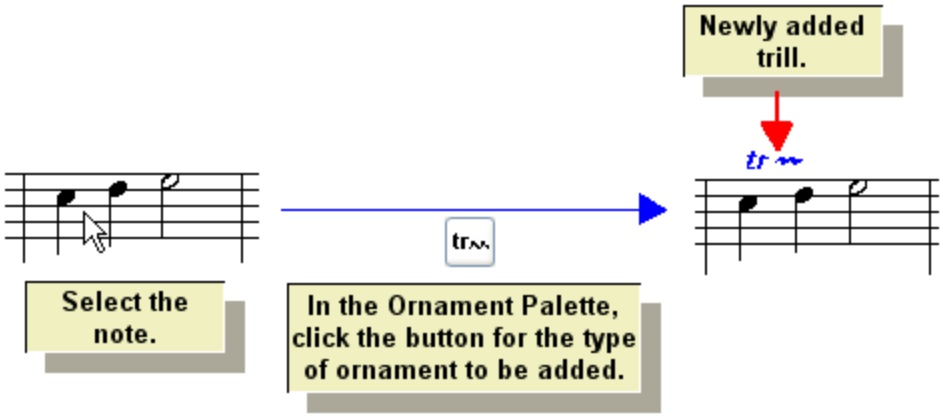
6. After adding the ornament, you can optionally change its accidental. Click the Edit Accidental button, or type "ac" for accidental. **Musician** will display a dialog box in which you can specify the accidental. The details for this option depend on the type of ornament, and are described in the specific topics for trills 308, turns 310, and mordents 312.

To add an ornament to one or more selected notes:

1. Select the note(s) to which you wish to add the ornament.
2. With the mouse, navigate to the Ornament Palette as described in the first procedure above.

   -- OR --

   Type SHIFT+O. If **Musician** displays the Octave Palette, then type SHIFT+O a second time for the Ornament Palette.
3. In the Ornament Palette, select the type of ornament that you wish to add to the selected note(s).



5.9.2 Converting Written-Out Performances to Ornaments

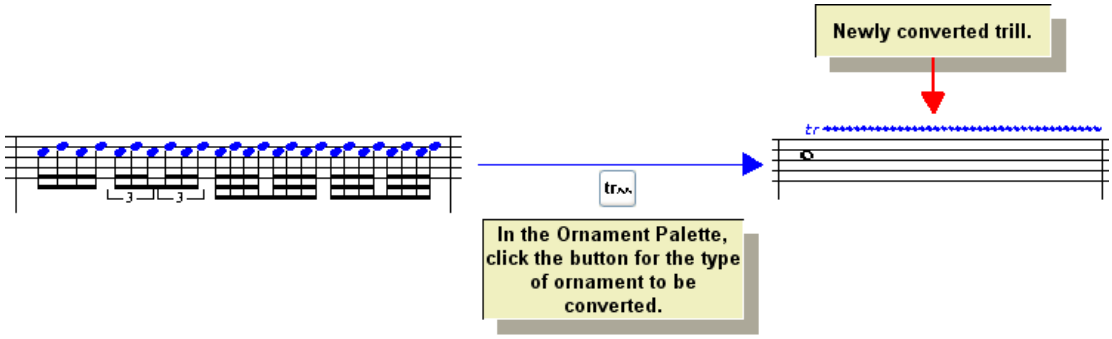
When you import a MIDI file, you can instruct **Musician** to automatically detect and transcribe trills 308 and tremolos 315. You can also individually select written-out ornaments and convert them to notated ornaments.

To convert a written-out performance of an ornament to its symbol:

1. Select the notes that you wish to convert.
2. With the mouse, navigate to the Ornament Palette as described in the first procedure above.

   -- OR --

   Type SHIFT+O. If **Musician** displays the Octave Palette, then type SHIFT+O a second time for the Ornament Palette.
3. In the Ornament Palette, select the ornament symbol that will replace the performance of the notes.



5.9.3 Reverting Ornaments to Written-Out Notes

An ornament symbol is a short-hand way of writing out a performance of several short notes, such as illustrated for all of types of ornaments supported by **Musician** in the chart of ornament types 303.

You can convert a written-out (as-performed) ornament to a displayed ornament, as described in Converting Written-Out Performances to Ornaments 305. You can also do the reverse, that is, convert a displayed ornament to a written-out ornament, as described in this topic.

If you want to just temporarily view the written-out performance of an ornament, then turn off the View Ornaments and Grace Notes button in the Ornament Palette, as described in Viewing and the Written-Out Performance of Ornaments 307.

To convert one or more displayed ornaments to written-out performances:

1. Select the ornament.
2. Click the Convert Ornament to Written-Out Performance button.

   -- OR --

   Hit the BACKSPACE key.



5.9.4 Deleting an Ornament

Deleting an ornament removes the performance of the ornament, but preserves the note that was ornamented. This is illustrated in the procedure below.

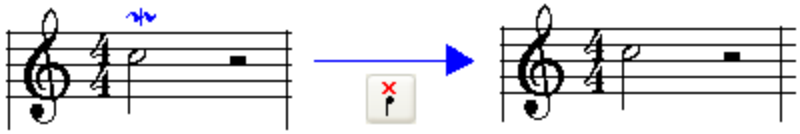
If you want to remove the ornament symbol, but preserve the performance of the ornament, then use the Convert Ornament to Written-Out Performance command with the  button or BACKSPACE key, as described in the previous topic, Reverting Ornaments to Written Out Notes 306.

To delete an ornament:

1. Select the ornament.
2. Click the Delete Ornament  button.

   -- OR --

   Hit the  key.



5.9.5 Viewing and Editing the Written-Out Performance of Ornaments

You can view the written-out performance of ornaments at any time.

To view the written-out performance of an ornament:

1. Navigate to the Ornament Palette, as described inPalettes 136.

   -- OR --

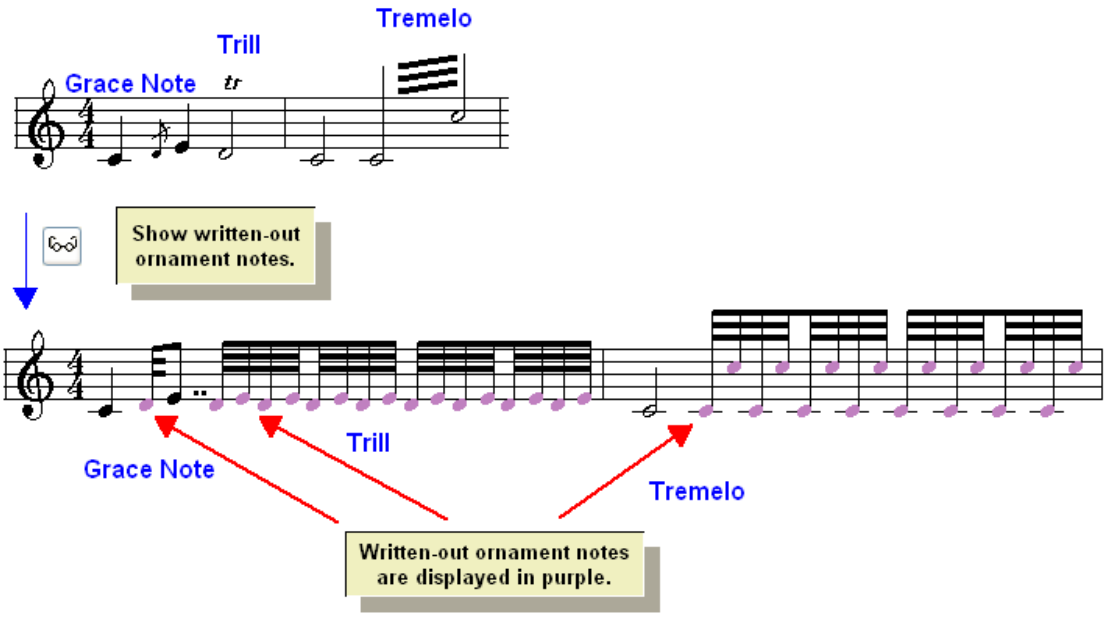
   Type SHIFT+O. If **Musician** displays the Octave Palette, then type SHIFT+O a second time for the Ornament Palette.

2. Toggle off the Show Ornaments and Grace Notes  button in the Ornament Palette.

   -- OR --

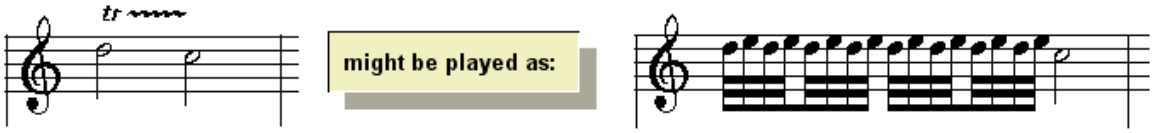
   Type "qsgo" to toggle off Show Ornaments.

   Musician will show the ornaments written out, highlighted in the color purple so that you can easily identify them.



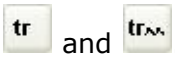
5.9.6 Editing and Transcribing Trills

A trill is performed as a rapid alternating between two pitches that are a whole step or half step apart.



The trill *tr* symbol can be displayed with or without the squiggle ~~~~ line. The squiggle line has no extra musical meaning. In general, the squiggle ~~~~ line is used when the trill spans over a relatively long duration, or when it spans across a shorter time when accompanied by several other relatively short notes.

In the Ornament Palette, the buttons for the two types of trills look like this:



and .

The following general procedures apply to the editing of trills:

- Adding Ornaments 304. The Adding Ornaments procedure explains how you can specify the duration of the trill members, such as 32nd notes or 16th triplets.
- Converting Written-Out Performances to Ornaments 305.
- Reverting Ornaments to Written-Out Performances 306.
- Deleting an Ornament 307.

The following procedures, unique to trills, are described in this topic:

- Add or remove the ~~~~ line extension of the *tr* symbol.
- Add an accidental to the trill.
- Automatically transcribe trills when importing a MIDI file, or after recording a performance from your MIDI keyboard.

To add or remove the ~~~~ line extension of the *tr* symbol:

1. Select the trill symbol in the score.

2. Click the tr or trw button in the Ornament Palette to change the trill symbol.

   -- OR --

   Type "tr" or "t~".

A trill can optionally have an accidental. The accidental is displayed between the *tr* symbol and ~~~~ line, or if there is no ~~~~ line, then above the *tr* symbol. The accidental is necessary only if the upper note of the trill does not fall within the key signature, or if in the same measure there is a previous note that would change the inherited accidental for the upper note of the trill. The procedure for adding an accidental to a trill is described in this topic.

To add an accidental for the upper note of a trill:

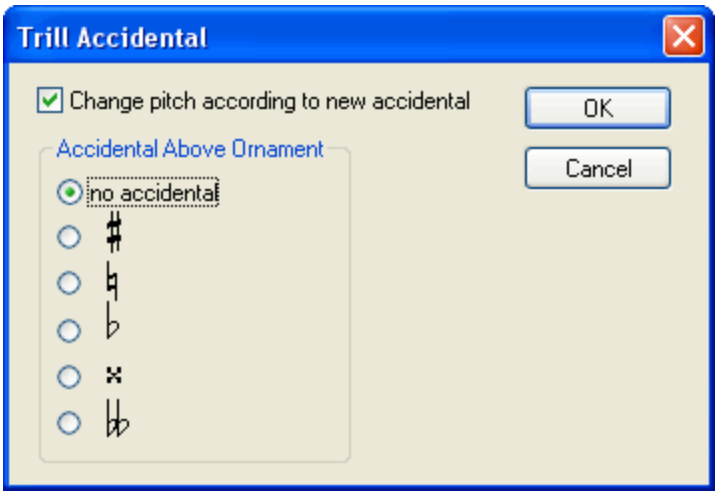
1. If the trill has not already been added, then add it, as described in Adding Ornaments 304. You always add an accidental to an ornament *after* the ornament has been added.

2. In the Ornament Palette, click the Edit Accidental ♯♭ button.

   -- OR --

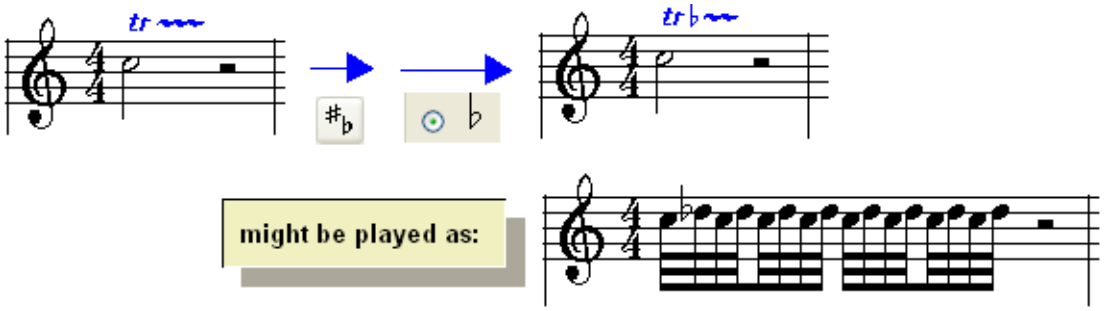
   Type "ac" for accidental.

   Musician will display the Trill Accidental dialog box:



3. Select the an accidental, or perhaps "no accidental" to remove an already existing accidental.

4. If you want the accidental to apply to the actual performance-- which you usually will want to do-- then leave a check mark by "Change pitch according to new accidental."



Musician can automatically transcribe trills when it imports a MIDI file or transcribes your performance at the music keyboard.

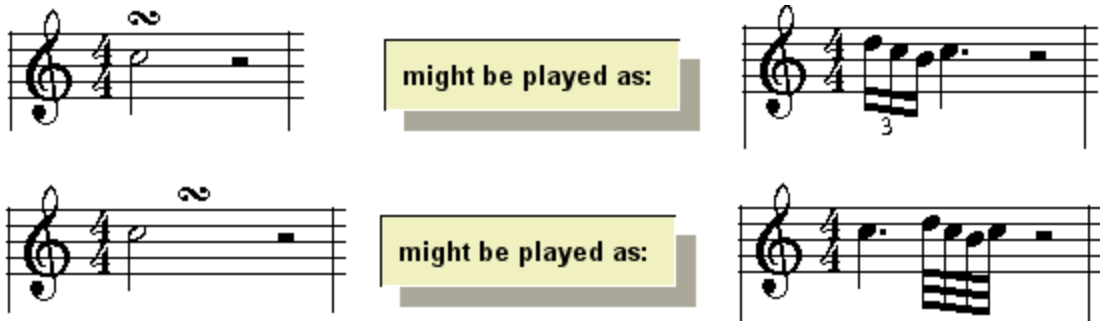
To automatically transcribe trills in an imported MIDI file:

- Before you open the MIDI file, click the Transcription Options button in the File Open dialog box. **Musician** will present the Transcriptions Options dialog box. In the Transcription Options dialog box, turn on the check mark for Transcribe Ornaments / Trills. For further details, see Transcribing MIDI Files to Notation 70.

5.9.7 Editing Turns

A turn, indicated with the ∾ symbol above the ornamented note, is performed as three notes preceding the final performance of the ornamented note The first note of the turn starts a whole step or half step above the ornamented note. The second note has the same pitch as the ornamented note. The third note is one whole step or half step below the ornamented note.

In a delayed turn, the three notes follow some time after the ornamented note is first played, and are followed by the final performance of the ornamented note. For a delayed turn, the ∾ is displayed after the ornamented note rather than immediately above the ornamented note.



In the Ornament Palette, the buttons for the two types of turns look like this:

 and  .

The following general procedures apply to the editing of turns:

- Converting Written-Out Performances to Ornaments 305.
- Reverting Ornaments to Written-Out Performances 306.
- Deleting an Ornament 307.
- Viewing and the Written-Out Performance of Ornaments 307.

The following procedures, unique to turns, are described in this topic:

- Change the type of turn, that is, whether the turn starts at the beginning of the ornamented note or after a delay.
- Add an accidental for the note above and/or below the ornamented note.

To change the type of turn.

1. Select the turn symbol in the score.
2. Click the  or  button in the Ornament Palette to change the turn symbol.

   -- OR --

Type "tu" or "td" for turn or delayed turn.

Musician will change not only the symbol but also the performance of the turn.

A turn can optionally have one or two accidentals for the two notes above and below the ornamented note. These accidentals are displayed above and below the turn symbol. The ornament accidental is necessary only if the upper or lower note of the turn does not fall within the key signature, or if in the same measure there is a previous note that would change the inherited accidental for the upper or lower note of the turn.

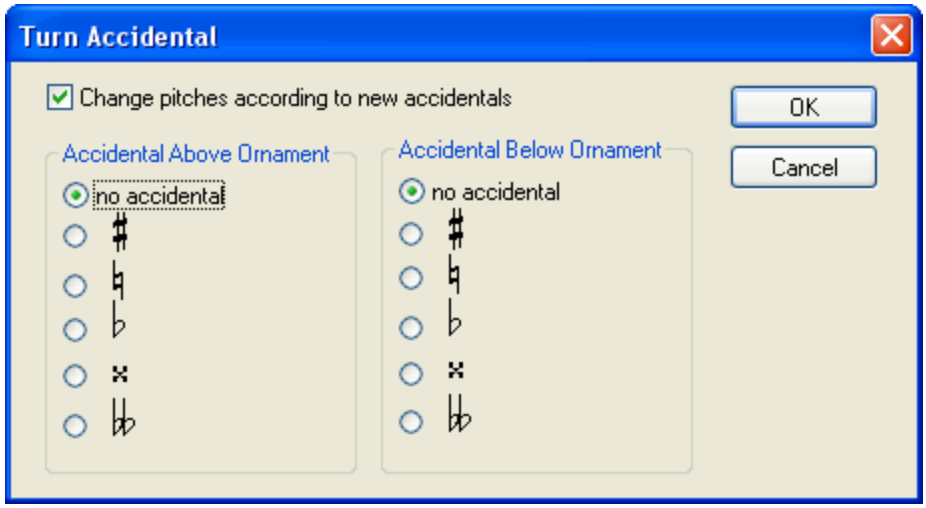
To add an accidental for the upper and/or lower note of a turn:

1. In the Ornament Palette, click the Edit Accidental button.

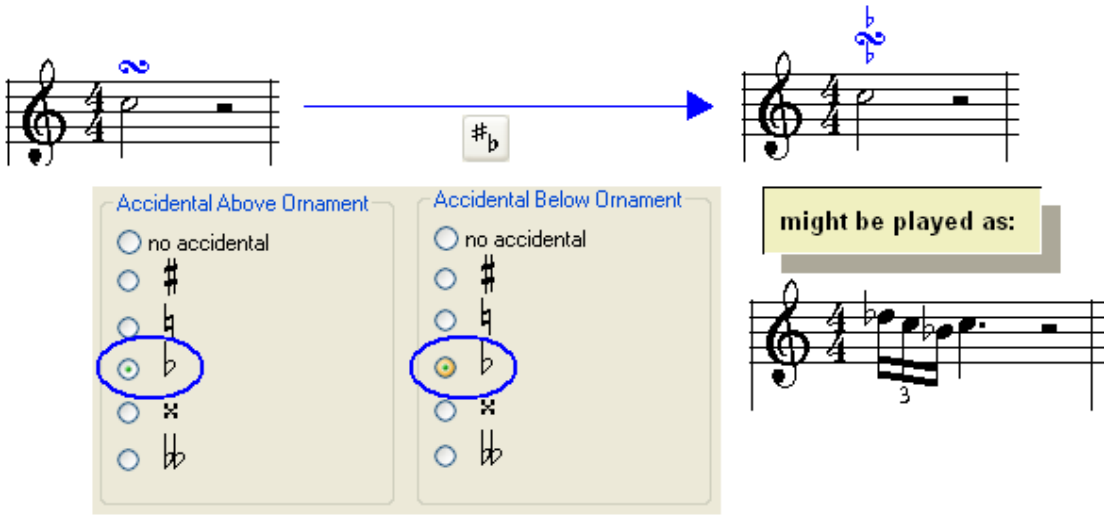
   -- OR --

   Type "ac" for accidental.

   Musician will display the Turn Accidental dialog box:

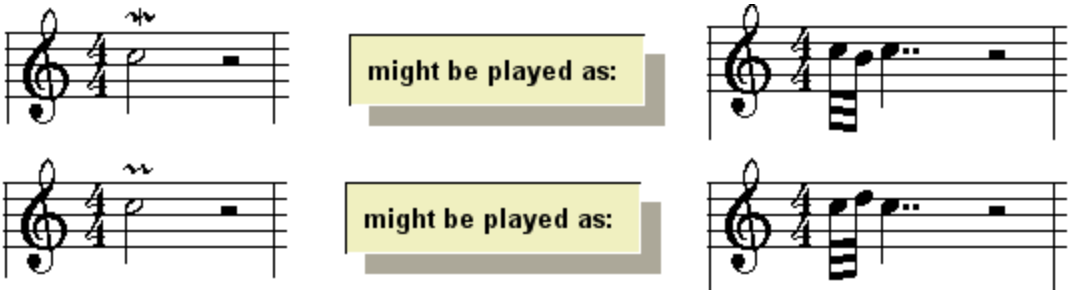


2. For the note above, and/or the note below the ornamented note, select an accidental, or perhaps "no accidental" to remove an already existing accidental.
3. If you want the accidental to apply to the actual performance-- which you usually will want to do-- then leave a check mark by "Change pitches according to new accidentals."



5.9.8 Editing Mordents

A mordent, indicated with the or symbol above the ornamented note, is performed as two notes preceding the final performance of the ornamented note The first note of the mordent has the pitch of the ornamented note. The second note is a half step or whole step above or below the note. The more common mordent, represented with the symbol, plays the second note below the ornamented note. The mordent represented with the symbol plays the second note above the ornamented note.



In the Ornament Palette, the buttons for the two types of mordents look like this:

and

The following general procedures apply to the editing of mordents:

- Converting Written-Out Performances to Ornaments 305.
- Reverting Ornaments to Written-Out Performances 306.
- Deleting an Ornament 307.
- Viewing and the Written-Out Performance of Ornaments 307.

The following procedures, unique to mordents, are described in this topic:

- Change the type of mordent, that is, whether the mordent plays a note below or above the ornamented note.
- Add an accidental for the note above or below the ornamented note.

To change the type of mordent.

1. Select the mordent symbol in the score.

2. Click the  or  button in the Ornament Palette to change the mordent symbol.

   -- OR --

   Type "md" or "mu" for downward or upward mordent.

   Musician will change not only the symbol but also the performance of the mordent.

A mordent can optionally have an accidental for the note above or below the ornamented note. This accidental is displayed below the  symbol or above the  symbol. The ornament accidental is necessary only if the upper or lower note of the mordent does not fall within the key signature, or if in the same measure there is a previous note that would change the inherited accidental for the upper or lower note of the mordent.

▸ **To add an accidental for the upper and/or lower note of a mordent:**

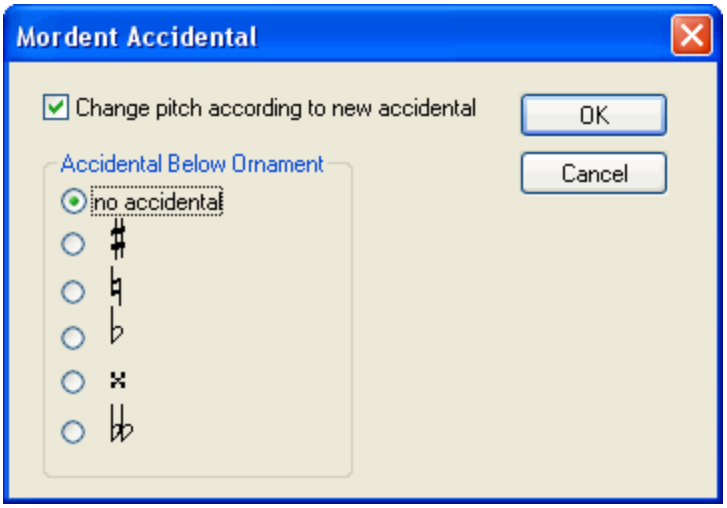
If the mordent has not already been added, then add it, as described in Adding Ornaments 304. You always add an accidental to an ornament after the ornament has been added.

1. In the Ornament Palette, click the Edit Accidental  button.

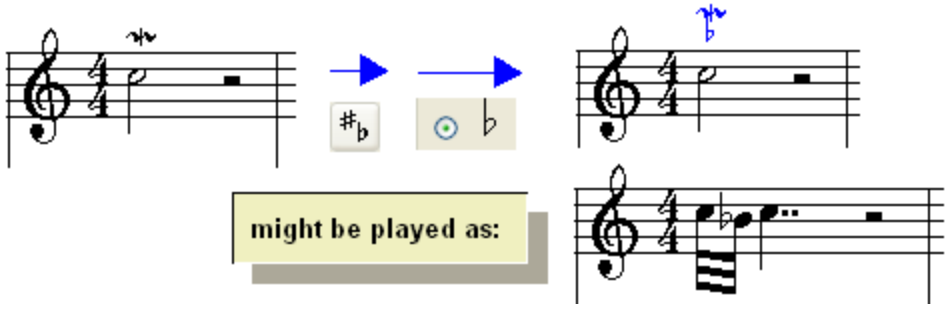
   -- OR --

   Type "ac" for accidental.

   Musician will display the Mordent Accidental dialog box:

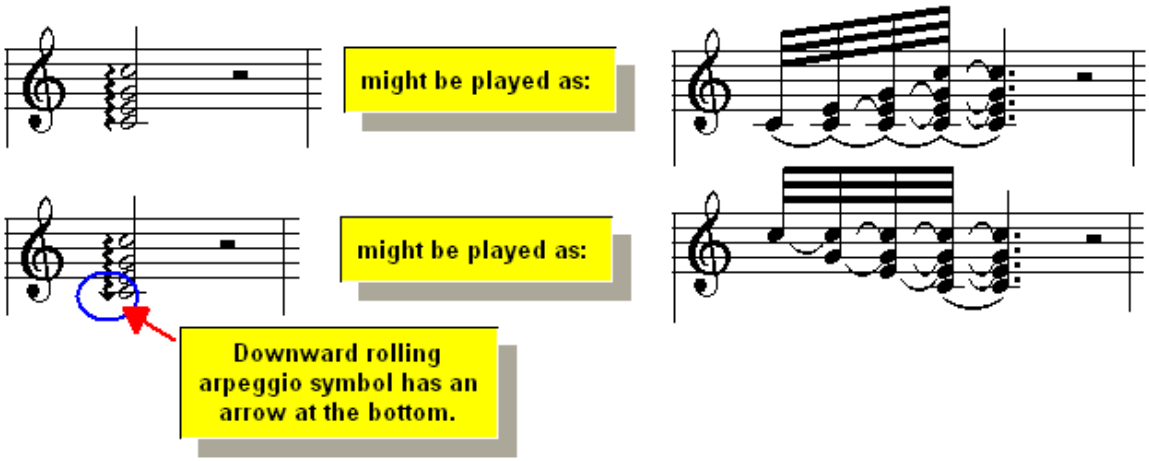


2. Enter the accidental for the note below or above the ornamented note, depending on whether the mordent symbol is or .
3. If you want the accidental to apply to the actual performance-- which you usually will want to do-- then leave a check mark by "Change pitch according to new accidental."



5.9.9 Editing Arpeggios

An arpeggio is a chord whose notes are played in rapid succession rather than together. An arpeggio symbol is a short-hand notation for indicating that the succession of notes accumulate as tied notes to form a chord held for some duration. The arpeggio chord notes are usually played starting at the lowest note and ending at the highest note. But the notes can be played in the reverse direction, starting at the highest note. Two different arpeggio symbols distinguish the direction of the "rolled" chord.



In the Ornament Palette, the buttons for the two types of arpeggios look like this:

 and  .

The following general procedures apply to the editing of arpeggios:

- Converting Written-Out Performances to Ornaments 305.
- Reverting Ornaments to Written-Out Performances 306.
- Deleting an Ornament 307.
- Viewing and the Written-Out Performance of Ornaments 307.

To change the type of arpeggio.

1. Select the arpeggio symbol in the score.
2. Click the  or  button in the Ornament Palette to change the arpeggio symbol.
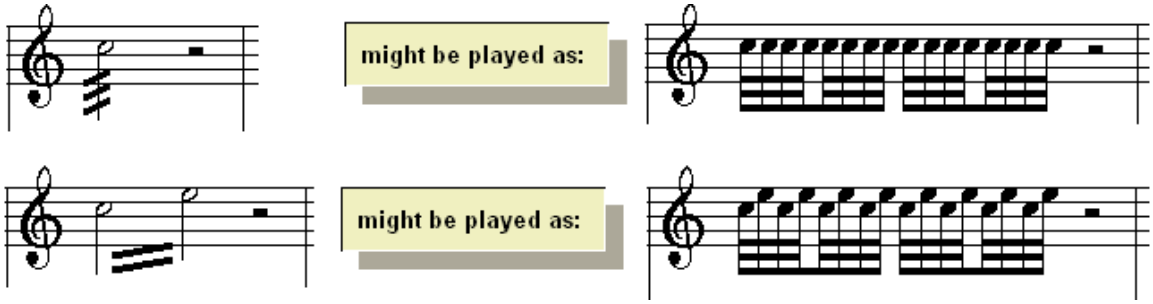
   -- OR --

   Type "au" or "ad" for upward or downward arpeggio.

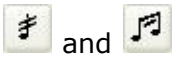
Musician will change not only the symbol but also the performance of the arpeggio.

5.9.10 Editing and Transcribing Tremolos

A tremolo is the rapid repeating of notes. The tremolo can repeat a single note or chord. Or, it can repeat back and forth between two different notes, or between two different chords. If the tremolo repeats for a single note or chord, then it is notated with angular slashes through the stem. If the tremolo alternates between two notes or chords, then broken beams are displayed between the notes or chords, as shown below.



In the Ornament Palette, the buttons for the two types of tremolos look like this:

 and

The following general procedures apply to the editing of tremolos:

- Converting Written-Out Performances to Ornaments 305.
- Reverting Ornaments to Written-Out Performances 306.
- Deleting an Ornament 307.
- Viewing and the Written-Out Performance of Ornaments 307.

Musician can automatically transcribe tremolos when it imports a MIDI file, or transcribes your performance at the music keyboard.
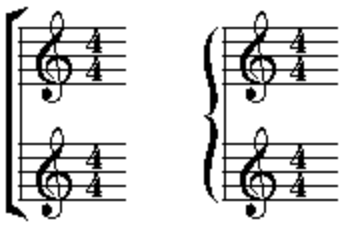
To automatically transcribe tremolos in an imported MIDI file:

- Before you open the MIDI file, click the Transcription Options button in the File Open dialog box. **Musician** will present the Transcription Options dialog box, In the Transcription Options dialog box, turn on the check mark for Transcribe Ornaments / Tremelos. For further details, see Transcribing MIDI Files to Notation 70.
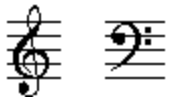
5.10 Editing Staff Symbols

In **Musician**, the following symbols are grouped together in the Staff Palette:
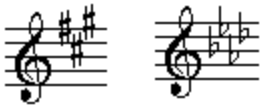
- Brackets and braces
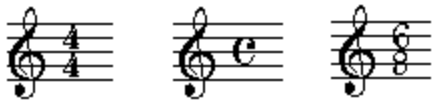


- Clefs
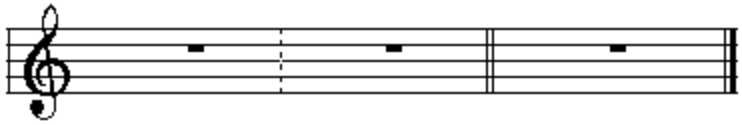


- Key signatures



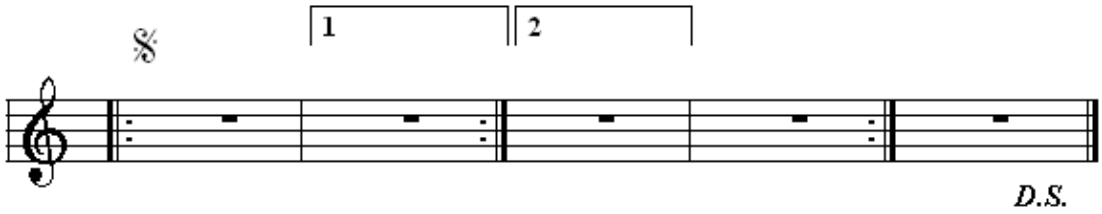
- Meters (time signatures)
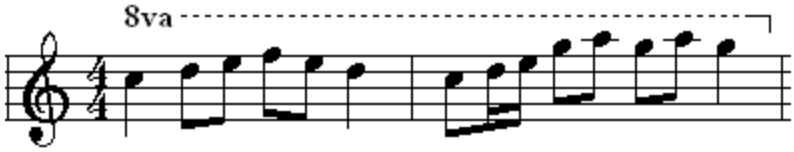


- Barlines
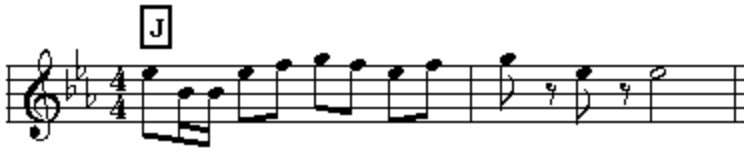


- Repetition marks



- 8va octaves

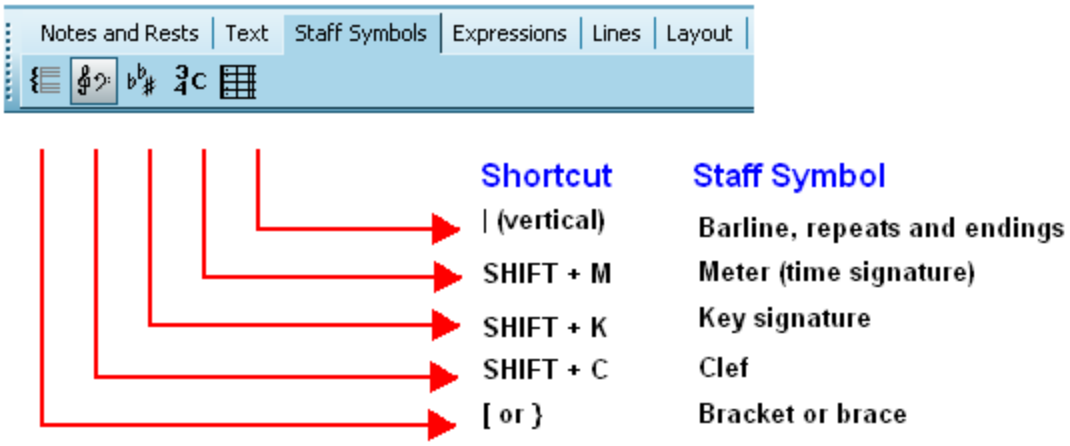


- Rehearsal Marks



These staff symbols all have the general property that they affect the interpretation or organization of notes that are within their relatively large scope. The scope of their effect is generally larger than, for example, the effect of an accidental or ornament on an adjacent notehead.

To add a staff symbol, first navigate to the Staff Symbol Palette, or type one of the SHIFT+Letter shortcuts, as shown below:



Procedures for adding and editing each of these types of staff symbols are described in the topics that follow.

5.10.1 Brackets and Braces

You can add brackets or braces to one or more adjacent staves. The bracket or brace will be applied to every system (line of music) throughout the score. You can add secondary brackets or braces to group together instrument sections, choirs, or keyboard staves within the overall conductor score.

The brackets and braces that you add to the conductor's score will also be used for parts that you manually extract. For example, if the conductor's score includes braces for the right- and left-hand staves of a piano part, then the manually extracted piano part will also have braces.

You can specify an instrument or instrument/vocal group name that is displayed to the left of the brace or bracket.

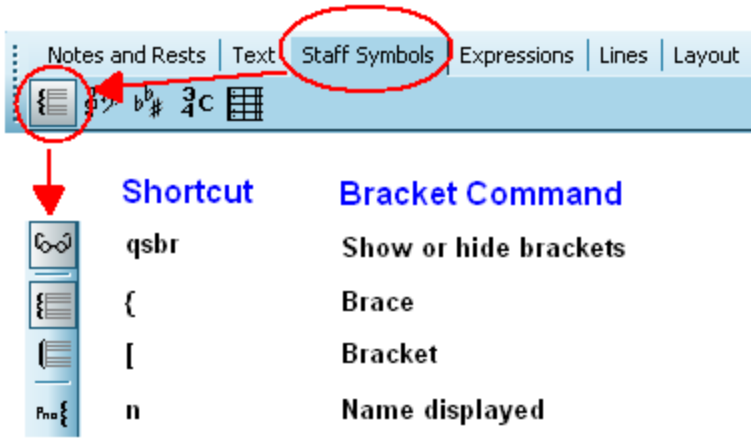
For any given part, you can hide the brackets and braces. This is particularly desirable for extracted parts for single-staff instruments.

To add a bracket or brace:

1. With the mouse, navigate to the Bracket Palette.

   -- OR --

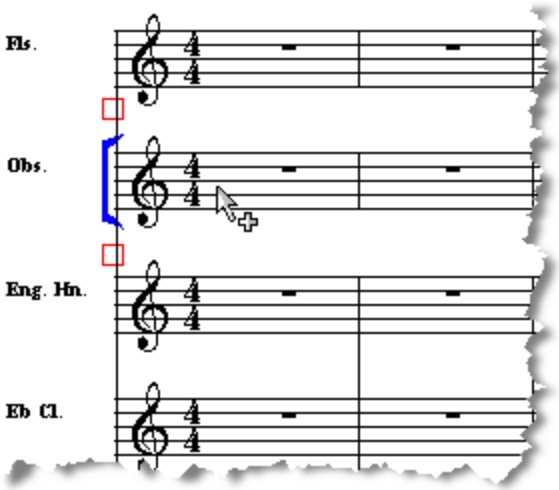
Type the bracket character ([ ) or brace character ({) to display the bracket palette:



The mouse cursor will change to:  for a brace or  for a bracket.

2. Click the mouse somewhere on the first staff where you wish the new bracket or brace to begin. You must click inside the staff, rather than to the left of the staff.

   Musician will display a new brace or bracket that initially extends only for the height of this first staff:



4. At this point the newly added bracket is selected for further editing. You can extend the bracket across additional staves, or change the bracket to a brace, by following one of the procedures below.

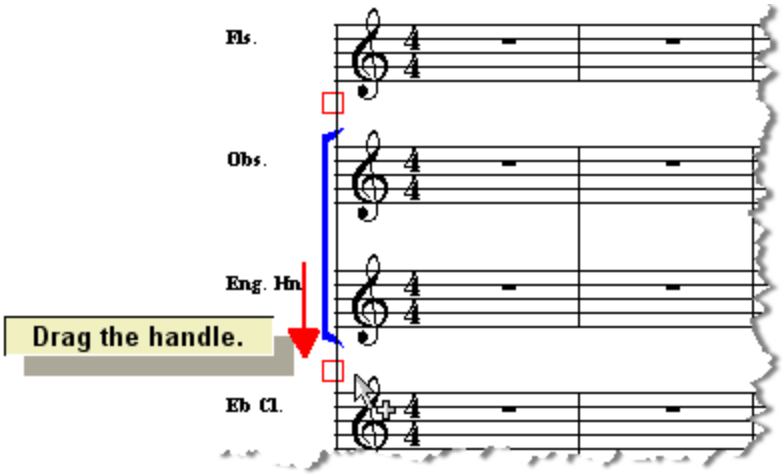
To change the extent of a bracket or brace to more or fewer staves:

1. (If the bracket or brace is already selected because you have most recently added it, then skip this step.

   Otherwise, click somewhere on the bracket or brace, or click-drag across it to select it.)

Musician will highlight the selected bracket or brace in blue, as illustrated in the above example. The blue square boxes above and below the bracket are called *handles*, which are used for changing the vertical extent of the bracket.

2. To change the vertical extent of the bracket or brace, move the mouse cursor to a handle, and press down on the left mouse button. While holding the left mouse button down, drag the bottom edge of the bracket to somewhere in the final staff where you wish the bracket to start or end.
3. hit the ENTER key to complete the editing and to unselect the newly added brace or bracket.



To change a bracket to a brace, or a brace to a bracket:

1. Click somewhere on the bracket or brace, or click-drag across it to select it.

   The  or  button in the Bracket Palette will indicate whether the currently selected object is a brace or bracket.
2. Click the other brace or bracket button to change the shape of the object.
3. hit the ENTER key to complete the editing and to unselect the brace or bracket.

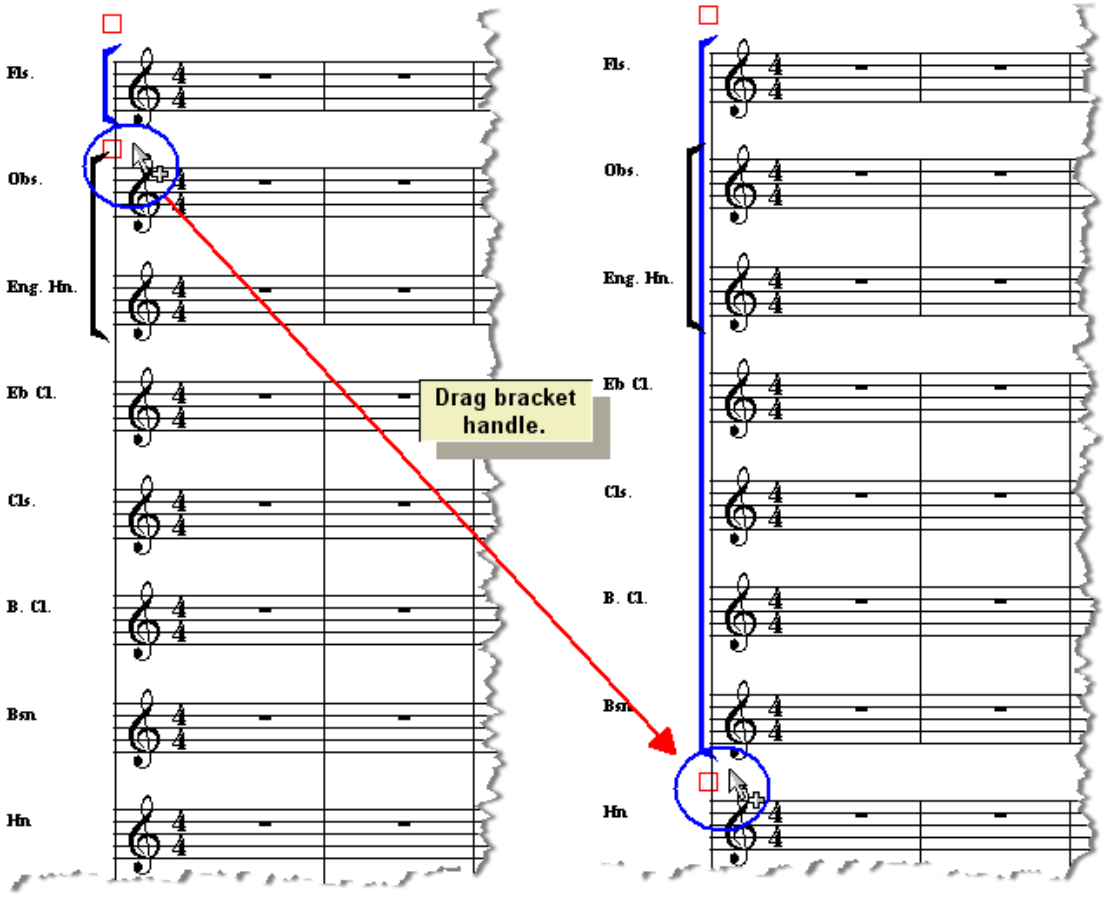
To delete a bracket or brace:

1. Click the bracket or brace, or click-drag across it, to select it.
2. Hit the 

key.
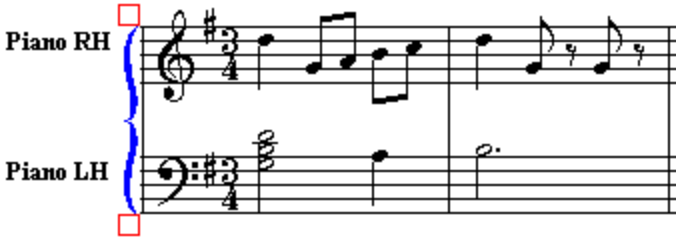
To create a conductor's bracket across instrument or voice groups:

1. First add the brackets and braces for each instrument group, choir, or keyboard part. Change the extent of each brace to include the desired staves.
2. Add another bracket and change its extent to include all of the staves, so that it becomes the conductor's score bracket. The instrument and voice group brackets and braces will automatically be moved to the left of the conductor's score bracket.



To add an instrument name or instrument group name to the left of a brace or bracket for multiple staves:

1. Add the brace or bracket, and extend it vertically across all of the staves it belongs to.
2. If the brace or bracket is not already selected, then click it or click-drag across it to select it.
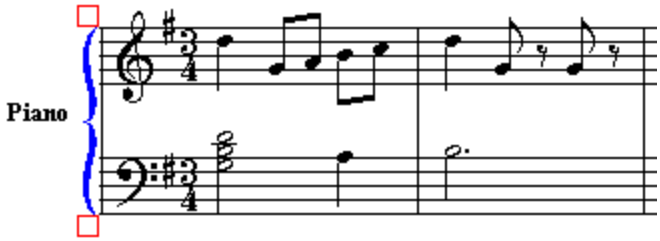


3. In the Bracket Palette, click the  Bracket Group Name button.

   Musician will display the Bracket Staff Group Name dialog box.
4. In Bracket Staff Group Name dialog, enter the "long" name and the abbreviation for the instrument or instrument group.

   In determining whether to display the long or abbreviated name at the left of the bracket or brace, Musician applies the same rules as it does for determining

whether the long or abbreviated name of individual staves are displayed, as described in Showing and Hiding Instrument Names 207.



5.10.2 Clefs

You can add clef changes anywhere within the score, including in the middle of measures.

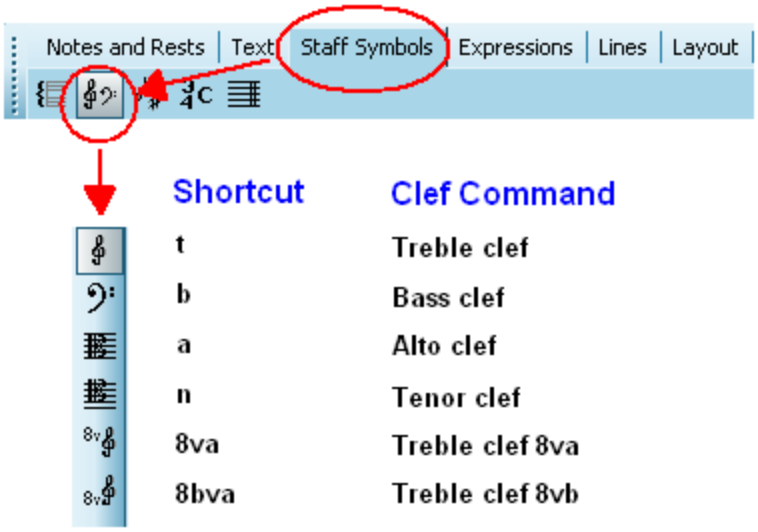
If you import a MIDI file, **Musician** automatically determines the clefs for staves, because MIDI files do not include clef information. If you find that **Musician** has incorrectly determined any clefs, you can easily change them.

To insert a clef:

1. With the mouse, navigate to the Clef Palette.

   -- OR --

   Type the SHIFT+C. This is also the keyboard short for the Chord Name Palette. If **Musician** displays the Chord Name Palette, then type SHIFT+C a second time to display the Clef Palette, as shown below:



   The mouse cursor will turn into this shape: and will have the corresponding "dongle" to show the type of Staff symbol you are currently working with.

2. Click at a position in the measure of a staff where you want the new clef to be inserted.

   Musician will add the clef where you clicked the mouse. **Musician** will also apply that clef to additional measures in the same staff, up to the next measure where there is a different clef, or to the end of the song if there are no other clef changes.

To change a clef:

1. Click the mouse cursor on a clef symbol.

   Musician will indicate that the clef has been selected by highlighting in blue. **Musician** will also indicate the type of clef you have selected in the clef palette.

2. Click of the buttons in the clef palette to change the type of clef.

   -- OR --

   Choose one of the clefs listed in the Clef Menu.

   -- OR --

   Use one of the keyboard short-cuts, such as "t" for treble clef, or "b" for bass clef.

   -- OR --

   Click the clef selection  button in the palette. **Musician** will display a dialog box where you can select the type of clef.

To set the clef for a range of measures (such as the entire staff):

1. Navigate to the Clef Palette, as in step #1 of the first procedure above.
2. In the Clef menu, choose the command Set Clef in Range of Measures.
3. In the Set Clef in Range dialog box, choose a staff, measure range, and clef.

5.10.3 Key Signatures

You can add key signature changes at the beginning of any measure of any staff in the score. Please note that simply changing the key signature does NOT change the concert key of the song. To change the concert key of the song, please see Transposing Actual Pitches (concert key). 287

In transcribing a MIDI file, **Musician** examines whether the file includes key signatures. If it does, then **Musician** uses the key signatures saved in the file. Otherwise, **Musician** analyzes the harmony of the song to determine the key signature. This analysis does not account for possible mid-song key signature changes. **Musician** determines a single key signature for the whole song.

Musician optionally transposes instrument parts according to their native keys. For more information, see Transposing to the Key of an Instrument 289.

After **Musician** transcribes a song, you can update the key signature at the beginning of the song, as well as at the beginning of any measure. **Musician**applies the key signature to all staves, or to a single selected staff, according to your specification.

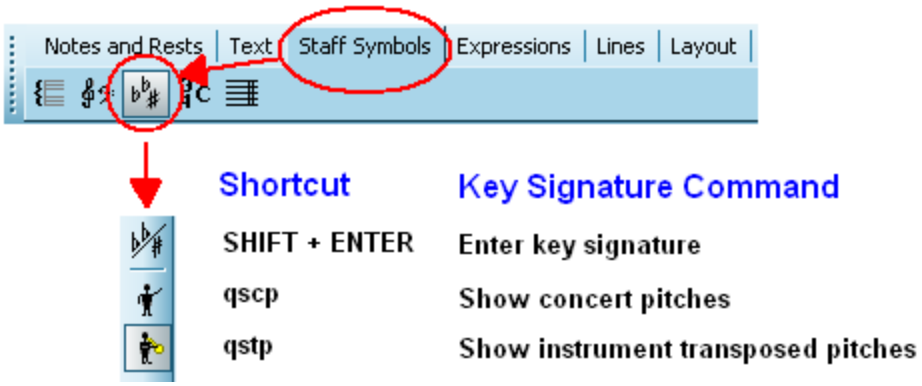
If you want to add a key signature change in the middle of a measure, you should insert a double barline or dotted barline at the beginning of the new key signature. The procedure for doing this is described at the end of this topic.

To insert a key signature at the beginning of a measure:

1. With the mouse, navigate to the Key Signature Palette.

   -- OR --

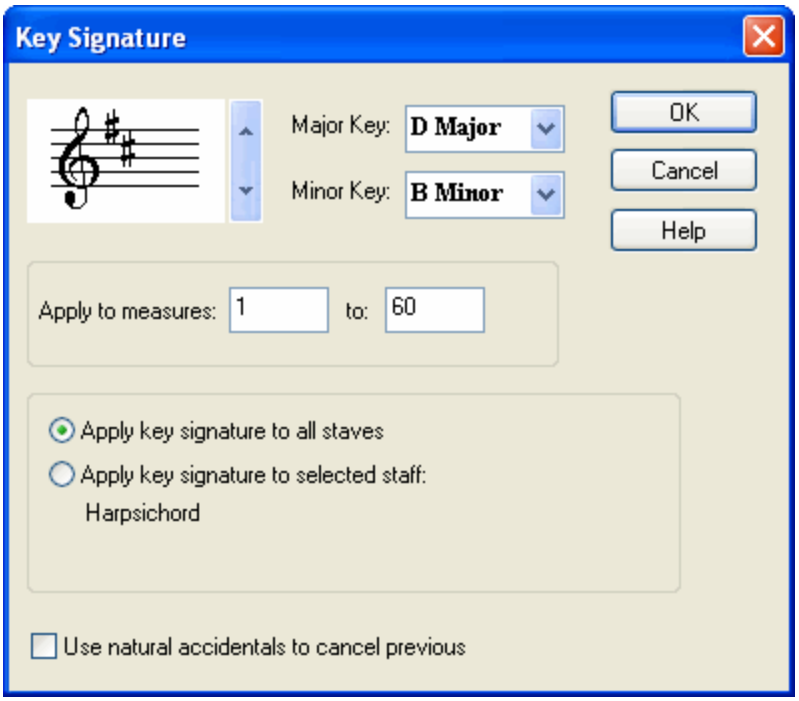
   Type SHIFT+K.



When you navigate to the Key Signature Palette, **Musician** will change the mouse cursor to 
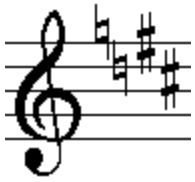
2. Click the mouse anywhere in the measure where you want the key signature to be added or changed. Double-clicking on an existing key signature will also bring up the next dialog box.

   Musician will present you with the following dialog box:



3. Choose the key signature from the dialog box by using the up and down arrows to spin through 0 to 7 flats or sharps, or select the key signature by major or minor key name.
4. If you wish the key signature change to be applied to all parts, rather than to just the part where you clicked the mouse, then choose "Apply key signature to all parts".

5. Add or remove a check mark in the last box, according to whether you want the new key signature to be preceded with natural accidentals for each accidental removed in the new key signature. For example, if the previous measure has a key signature of four sharps, and the new key signature is two sharps, then this option produces the following key signature with two cancellation natural accidentals:



6. By default, the key signature will be applied to the entire range of measures in the song. Choose a smaller range of measures, if desired.
7. Click the OK to complete the change.

   Musician will apply the new key signature from your selected measure up to the next measure where there is a different key signature, or to the end of the song if there are no other key signature changes.
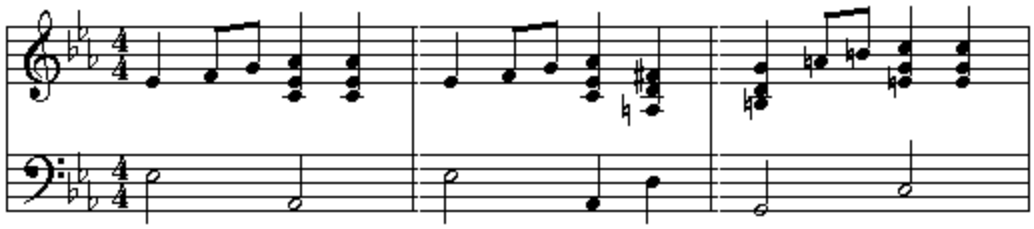
To change a key signature:

1. Double-click the mouse on a key signature object.

   Musician will indicate that the key signature has been selected by highlighting it with the color blue**,** and will also display the Key Signature Dialog as show above.
2. Continue with step #3 in the first procedure, to select the new key signature and options for applying the new key signature to the score.
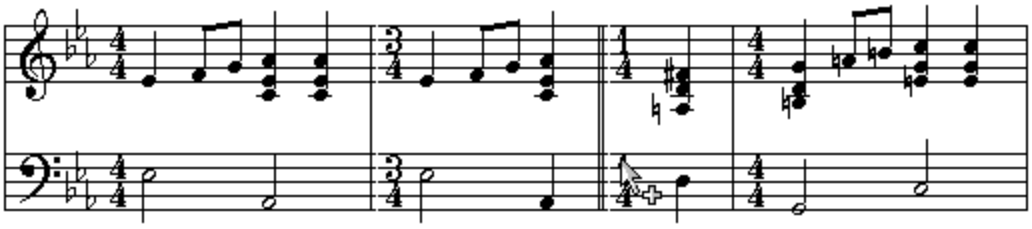
To insert a key signature in the middle of a measure:

In this example, the key signature will be changed from three flats (E-flat major) to one sharp (G major) in the last beat of the second measure:
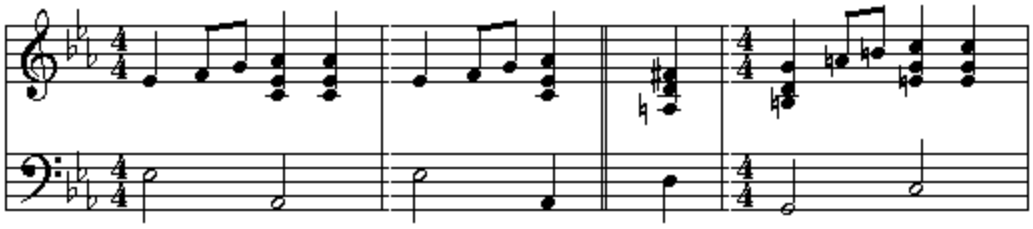


Note that we do not necessarily advocate the practice of inserting key signatures in the middle of measures. In this example, the harmony change from the second to the third measure might be just as clearly, or even more clearly, represented by postponing the key signature change until the beginning of the third measure.

1. Insert a barline in the middle of the measure, as described in the topic Editing Barlines 327:
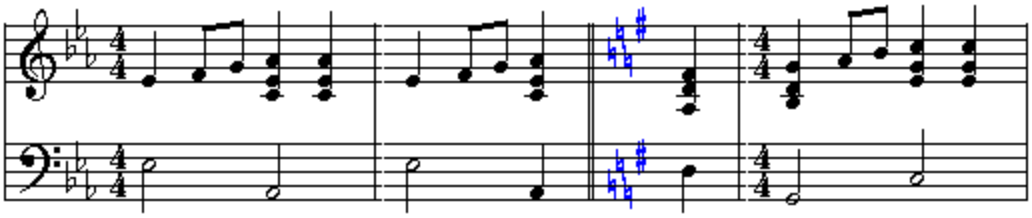


Optionally, change the barline style from double barline to a dotted or dash style, as described in the topic Editing Barlines 327.

2. Hide the meters in the newly divided measure, as described in the topic Editing Meters (Time Signatures) 325:



3. Insert a new key signature after the newly added barline:



5.10.4 Meters (Time Signatures)

You can insert meter changes anywhere within a score. **Musician** will replace barlines to match the new length of measures, according to the meter you choose. You can change the meter for measures even if the measures already have notes, lyrics, and music annotations. You can also show or hide meters at specific measures in the score.

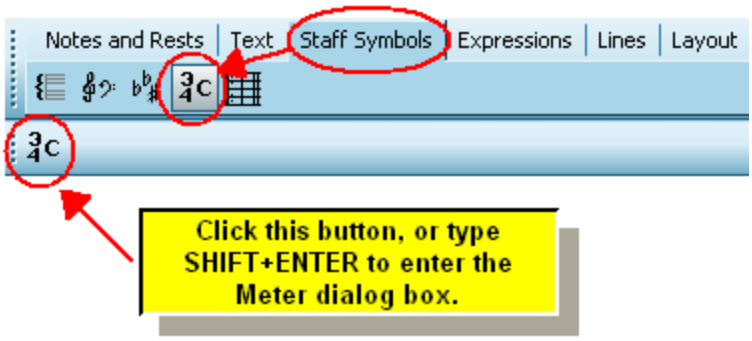
Musician will not change the meter in any series of measures if a newly placed barline would divide a triplet or quintuplet. If **Musician** informs you that it cannot change the meter for this reason, convert the triplets or quintuplets to regular notes 267 before attempting again to change the meter.

To change the meter in one or more measures:

1. With the mouse, navigate to the Meter Palette.

   -- OR --

   Type the SHIFT+M.

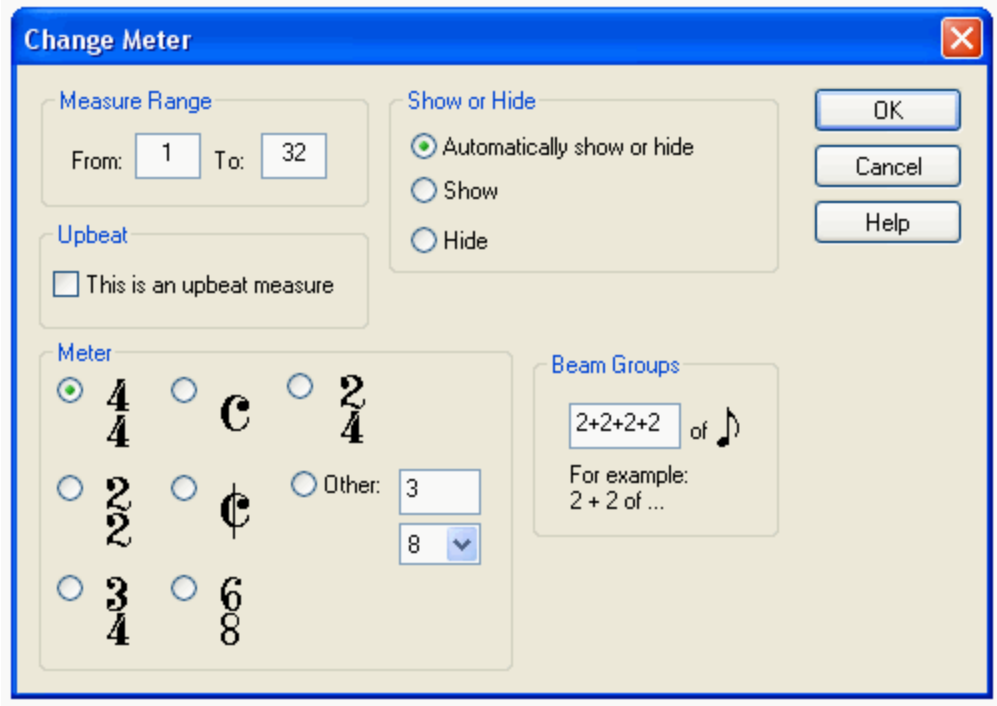


2. Optionally select a range of measures for which you wish to change the meter by holding down the CTRL key and dragging the mouse over them. You can extend the range by holding down both the Shift and CTRL keys and clicking in some further measure in the score. It does not matter which staff you choose.

3. Click the meter button in the palette.

   If you selected a range of measures in step #2, **Musician** will display the Meter dialog box, as illustrated below. Otherwise, the mouse cursor will turn into this shape: In that case, click the mouse somewhere in the first measure where you want to change the meter.

   Musician will display the Meter dialog box, such as shown here:



   If you pre-selected a range of measures in step #2, then the Measure Range in the dialog box will reflect your selection. If you clicked some measure, then **Musician** will search for the first measure after the one you clicked where there is a change in meter; for the Measure Range, **Musician** will assign the measure you clicked as the "From" measure; and **Musician** will assign the last measure before a change in meter, or the last measure of the score, as the "To" measure.

4. In the dialog box, change the "From" and "To" measures if the pre-selected measures are not what you want. The numbers of these measures are those for the current measures in the score, as counted before applying the meter change rather than afterwards.
5. Choose the new meter. If it is not one of the standard meters offered, then click the "Other" button, and enter the numerator and denominator of the meter.
6. Normally, you can accept the default Beam Group pattern that **Musician** proposes. For instructions in overriding **Musician**'s default beaming of notes, see the topic Editing Beams 274.
7. Click the OK button to commit the change in meter for the selected measures.

Musician automatically shows or hides meters (time signatures) according to the following rules:

- Always show the meter for the first measure of the score.
- Always show the meter in a measure when the meter has changed from that of the previous measures.
- Otherwise, do not show the meter.

For any specific measure or range of measures, you can override the above rules for automatic showing or hiding of meters.

▸ To force the showing or hiding of the meter, or to set automatic showing of the meter, in one or more measures:

1. Follow steps #1 through #4 in the first procedure, selecting the measures for which you wish to show or hide the meters.
2. In the Change Meter dialog box, choose one of the three options for Show or Hide. The default option is "Automatically show or hide".

5.10.5 Barlines

This topic describes how you can change the style of a barline to a double, dotted, or dashed barline, or start-of-section or end-of-section barline.

For instructions in adding repeat marks to barlines, see Editing Repeats 329.

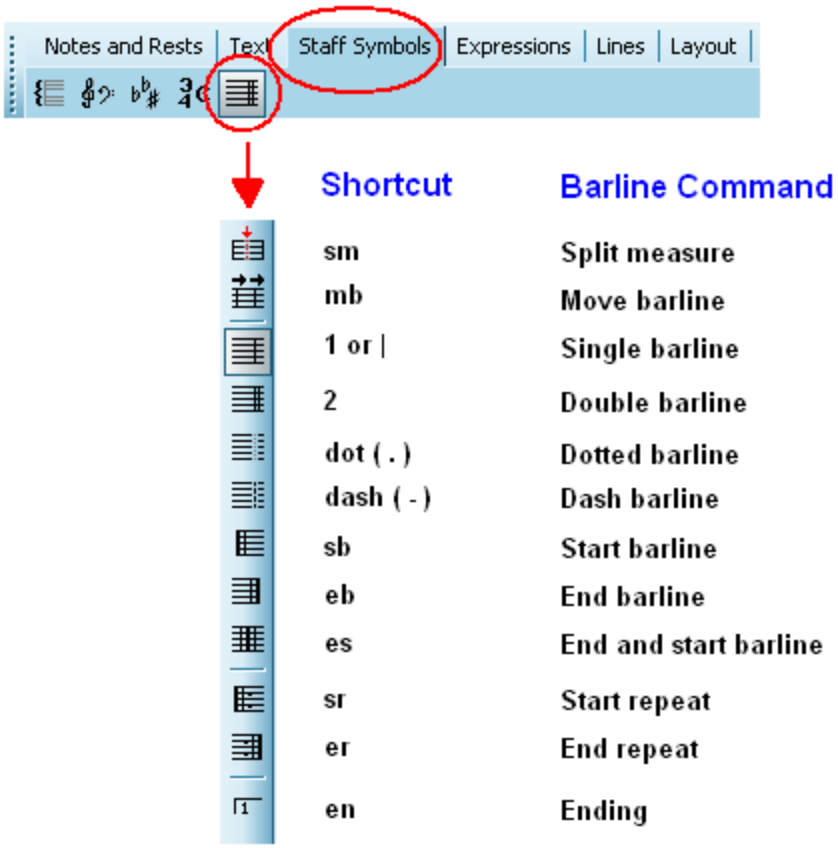
If you have imported a MIDI file, or made a MIDI recording, in which the barlines are out of alignment with the downbeat of measures, then you can shift the barlines, as described in Shifting Barlines 253.

You can split a measure by inserting a barline in the middle of it, as described in Splitting Measures 247.

▸ To change the style of a barline:

1. Select a barline by dragging the mouse cursor over it. A barline is usually so narrow that it is difficult to select it by directly clicking it. So, dragging the mouse over the barline is an easier way to select it.

   Musician will highlight the newly selected barline in blue, and will display the Barline Palette:



The Barline Palette will indicate the type of barline you have selected.

2. Click one of the barline types in the palette, or type the keyboard short-cut.

   Musician will change the style of the selected barline(s) according to your palette (or shortcut) selection.

For explanations of other buttons in the Barline Palette, see Splitting Measures 247, Joining Measures 249, Shifting Barlines 253, Editing Repeat Marks 329, and Editing Endings 330.

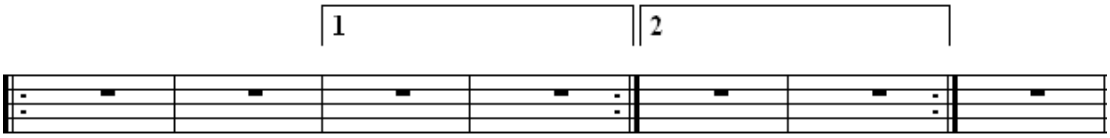
5.10.6 Repetition Marks

Musician supports a variety of ways indicating that a section should be repeated, or that the performance should continue at another place in the score:
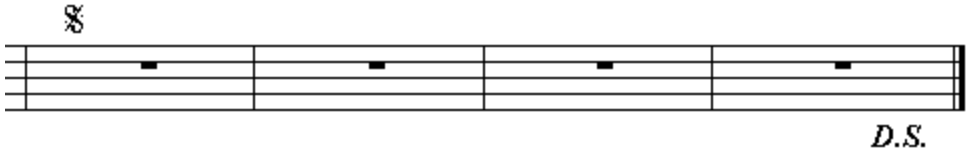
- Barline repeat marks



- Endings



- D.S. and other "go to" marks



Musician automatically plays any repeat marks and endings as displayed in the score, unless you disable them with the Ignore Repeats and Endings command 101.

Musician does not automatically interpret "go to" performance marks such as "D.S." (*Dal Segno*) or "D.C." (*Da Capo*). However, you can instruct **Musician** exactly how to play such "go to" marks using the Repeat Instructions 334 command in the Measure and Barline Menus.

5.10.6.1 Barline Repeat Marks

You can add start- and end-repeat marks to barlines. A barline for the end of a repeat can also mark the beginning of a second repeat section.

By default **Musician** performs a single repeat of a repeat mark during playback.

If a pair of start- and end-repeat marks span across a vocal part with three or more verses, then **Musician** does not automatically count the verses to determine how many times it should repeat the section. However, you can instruct **Musician** to repeat the section for as many times as there are verses, using the Repeat Instructions command in the Measure and Barline Menus. For details, see Repeat Instructions for Performances 334.

You can instruct **Musician** to ignore repeats during playback 101.

The MIDI file format does not provide for repeats. Therefore, authors of MIDI files must write out repeats. For example, if measures 16 to 31 of a score are repeated, then the MIDI file actually writes out the same notes again in measures 32 to 45. Although this works fine for playback purposes, written-out repeats are usually undesirable for printed scores. **Musician** enables you to replace the written-out repeated measures with repeat marks. First, you can delete the written-out repeat measures, as described in Deleting Measures 247. Then you can add repeat marks following the instructions below.

In some cases, repeats start in the middle of a measure. Even in this case, **Musician** enables you to replace the written-out repeated measures with repeat marks. First, you must split the starting and ending measures 247 where the repeat marks are to be added. Then delete the written-out repeat measures. Finally, add the repeat marks following the instructions below.

To add a repeat mark to a barline:

1. Select a barline by dragging the mouse cursor over it.

   Musician will display the Barline Palette.



2. Click the Start Repeat  or End Repeat  button.

   -- OR --

   Or type "sr" for Start Repeat, or "er" for End Repeat.

3. If the barline serves as both the end of one repeated section and the start of a second repeated section, then select the barline once and set the Start Repeat  . Then select the barline a second time and set the End Repeat  . The Barline Palette will indicate that the barline has both a Start Repeat  and an End Repeat  mark:



To remove a repeat mark from a barline:

- Follow the same instructions as for adding a repeat mark. If the repeat mark is already present, you can:

  Toggle the palette button for the repeat mark.

  -- OR --

  Toggle the Start Repeat or End Repeat check mark in the Barline Menu.

  -- OR --

  Type the "sr" or "er" keyboard command to toggle whether the repeat mark is displayed or not.

5.10.6.2 Endings

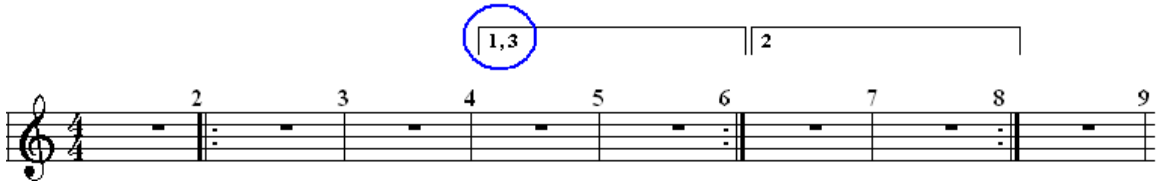
Musician enables you to specify alternative endings (1, 2, etc.) for repeats, such as this "closed" ending:



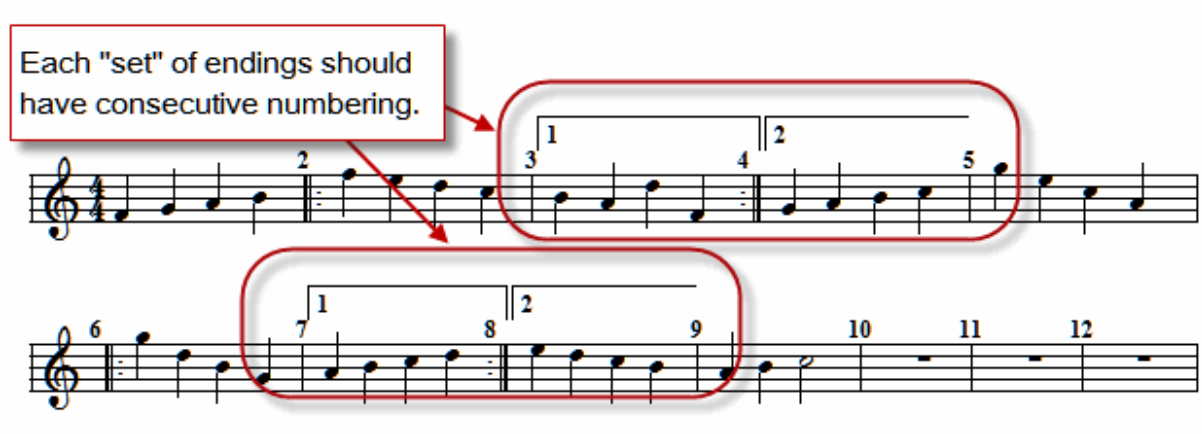
or this "open" ending:



Musician supports alternating or non-sequential endings. In the following example, the sequence of performed measures is 2 through 5, 2 through 3, 6 through 7, 2 through 5, and then continuing with 8:



Please note that for later sets of endings, those endings need to also have a beginning "1" and then consecutive ending numbers. This is good practice for "real" musicians who you may be printing a score, as well as ensuring proper playback of the song file. For example:



By default **Musician** performs repeats and endings during playback. However, you can instruct **Musician** to ignore them.

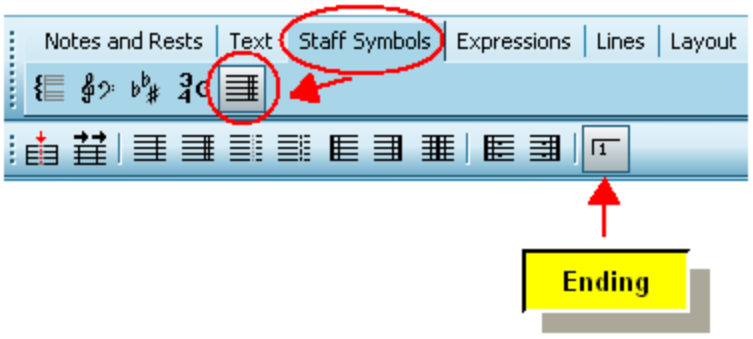
- **To add an ending:**

1. With the mouse, navigate to the Barline Palette.

   -- OR --

   Type the vertical line character "|", which suggests the shape of a barline.

   Musician will display the following Barline Palette:



   Musician will change the cursor to 

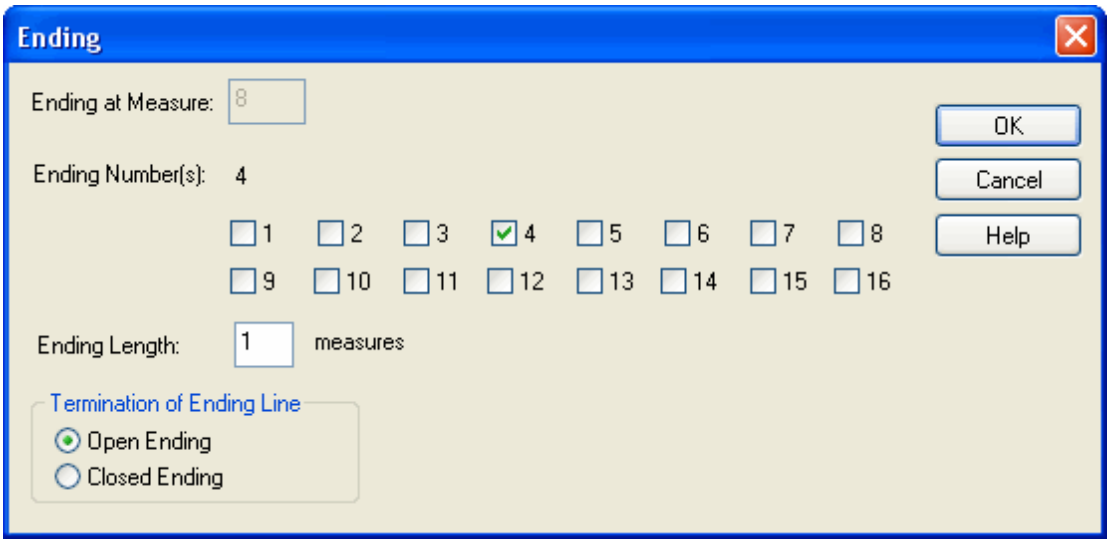
3. Click the Ending button.

   -- OR --

   Type "en" for ending.

4. Click anywhere in the measure where you want to add the ending.

Musician will display the Ending dialog box:



In the dialog, the Ending at Measure indicates the measure you clicked to add the ending.

5. In the Ending dialog, specify the following:
   - One or more Ending Numbers. In this example, it is the fourth ending. For the non-sequential ending example near the beginning of this topic, ending numbers 1 and 3 would be selected.
   - The Ending Length, counted in measures.
   - Open Ending or Closed Ending, as illustrated in the first two examples at the beginning of this topic.

To remove an ending:

1. In the score, select the ending object above the measure.

   Musician will highlight the selected ending object in the color blue.

2. Hit the Del key.

To change the ending number(s), measure length, or style (open or closed) of an ending:

1. In the score, select the ending object above the measure.
2. Choose the Ending Properties command in the Barline Menu.

   -- OR --

   Type SHIFT+Enter. That is, while holding down the SHIFT key, hit the ENTER key.

   This will bring up the Ending dialog, as illustrated above.

3. Enter new values for the Ending Number, Ending Length, or style (Open Ending or Closed Ending). Then hit the OK button.

5.10.6.3 D.S. and Other Go-To Marks

Formal music notation includes a rich vocabulary of Italian words and abbreviations to indicate that the musician should continue the performance at another location in the

score, such as at the beginning of the score, or at some a *segno* (sign), usually 𝄋 or 𝄌 .

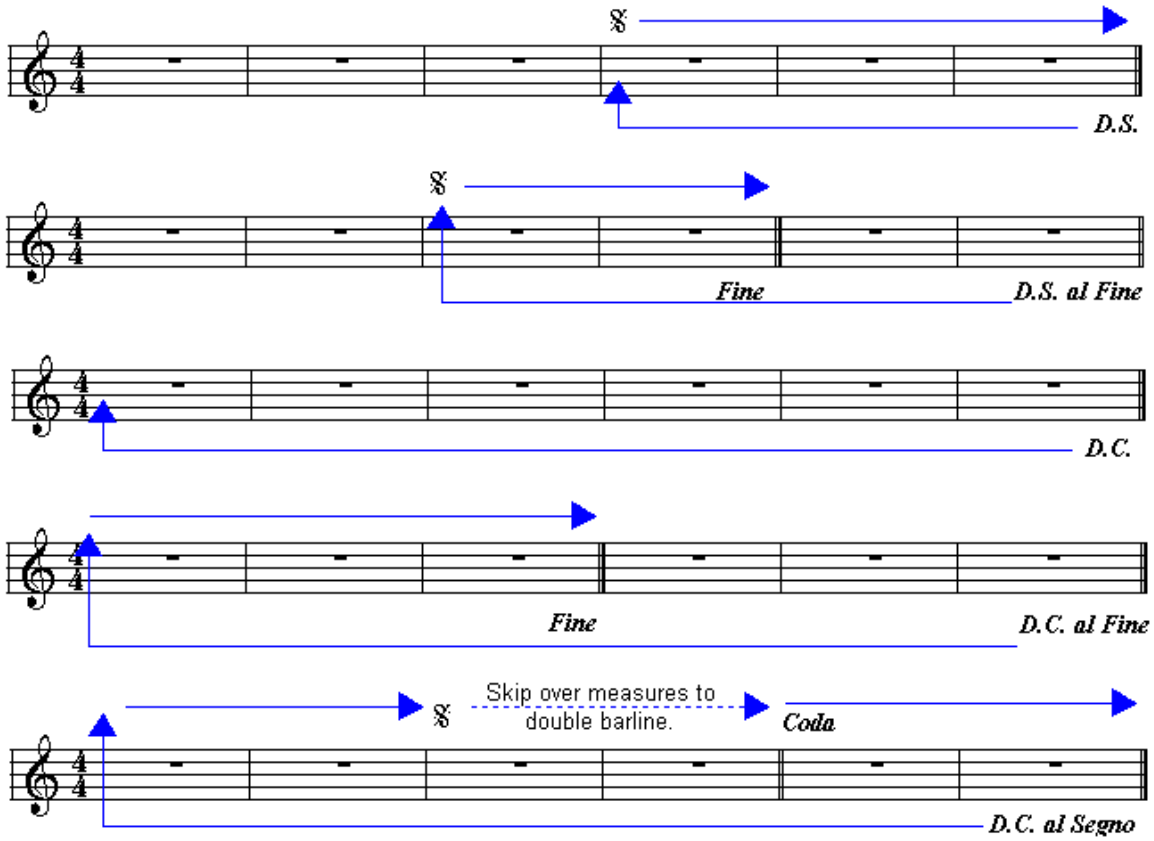
Musician supports the notation and playback of such "go to" instructions in the following ways:

- Enter *segno* marks 𝄋 or 𝄌 using the Symbol Palette, as described in Special Symbols 348.
- Use the free text 391 feature to enter instructions that include Italian terms such as *Dal Segno* (*D.S.*), *Da Capo* (*D.C.*) and *Fine*.
- Use the Repeat Instructions 334 command in the Measure and Barline Menus to specify exactly how the "go to" instructions should be performed during playback.

Even in contemporary music, the *segno* marks and Italian instructions are sometimes used, but you can certainly write out instructions in your preferred language, or mix it with symbols, such as "Return to 𝄋".

For your reference, here are some of the most common Italian "go to" instructions:

- *D.S. (dal segno)* means "to the sign".
- *D.C. (Da Capo)* means "to the beginning (head)" of the song.
- *Fine* means "end" of the song, even if this mark is not at the last measure of the song.
- *al* means "then to". For example, *D.S. al Fine* means "to the sign and then to the end" of the song.
- *Coda* means "ending" of the song. The start of the *Coda* is usually indicated with double barlines, and the ending extends to the last measure of the score.



5.10.6.4 Repeat Instructions for Performances

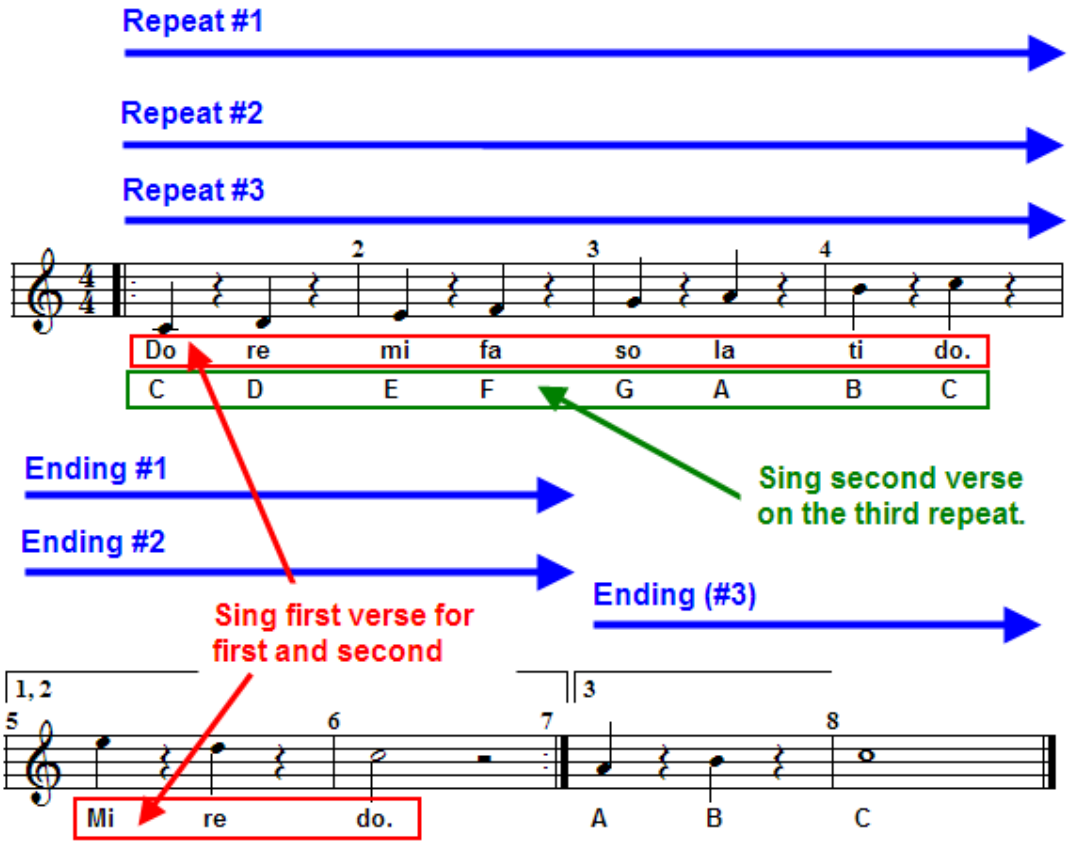
Musician will automatically play repeats and endings as notated. If the measures (bars) between a pair of start- and end-repeat barlines includes more than two verses, then the repeat will be played as many times as there are verses.

Although **Musician** does automatically interpret repeats, verses, and endings , **Musician** does not automatically interpret other more complex "go to" instructions, such as *D.C. al Segno*.. But **Musician** offers you complete control over the repeats, and which verse of lyrics is played during each repeat.

To control how **Musician** plays repeats and verses, use the Repeat Instructions command in the Measure menu or Perform menu.

- **To specify which verse of lyrics is to be sung in each repeat:**

  Consider the following example where the first verse is supposed to be sung twice, and the third verse the last time:

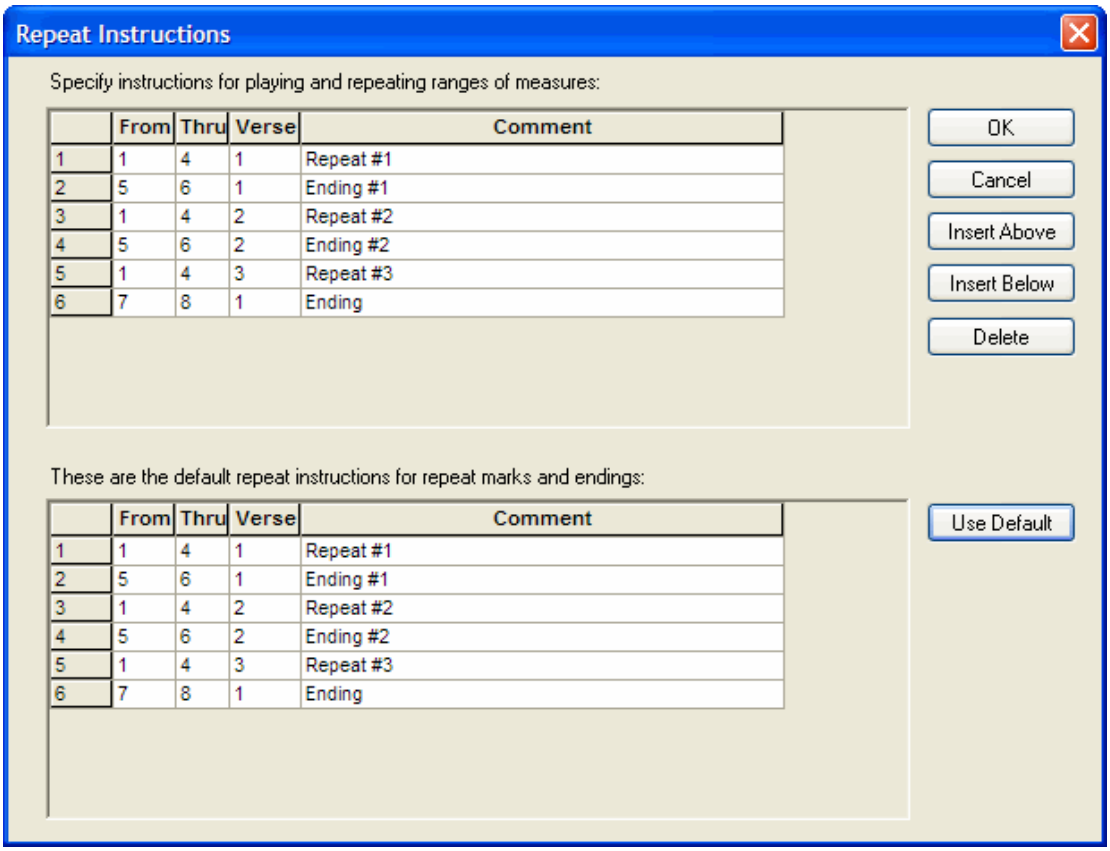


1. Choose the Repeat Instructions command in the Measure or Barline Menu.

   -- OR --

   Type "qri" for Quick Repeat Instructions.

Musician will display the following Repeat Instructions dialog box:

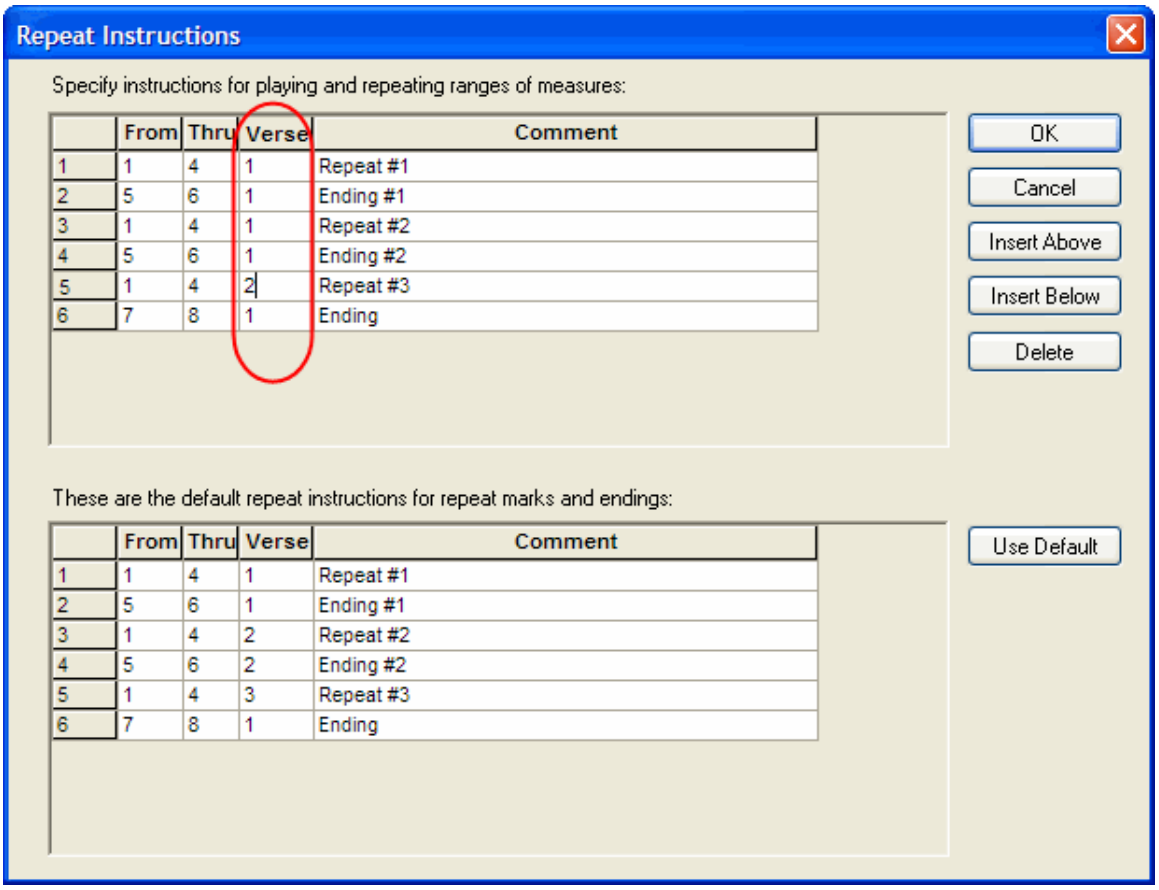


	From	Thru	Verse	Comment
1	1	4	1	Repeat #1
2	5	6	1	Ending #1
3	1	4	2	Repeat #2
4	5	6	2	Ending #2
5	1	4	3	Repeat #3
6	7	8	1	Ending

	From	Thru	Verse	Comment
1	1	4	1	Repeat #1
2	5	6	1	Ending #1
3	1	4	2	Repeat #2
4	5	6	2	Ending #2
5	1	4	3	Repeat #3
6	7	8	1	Ending

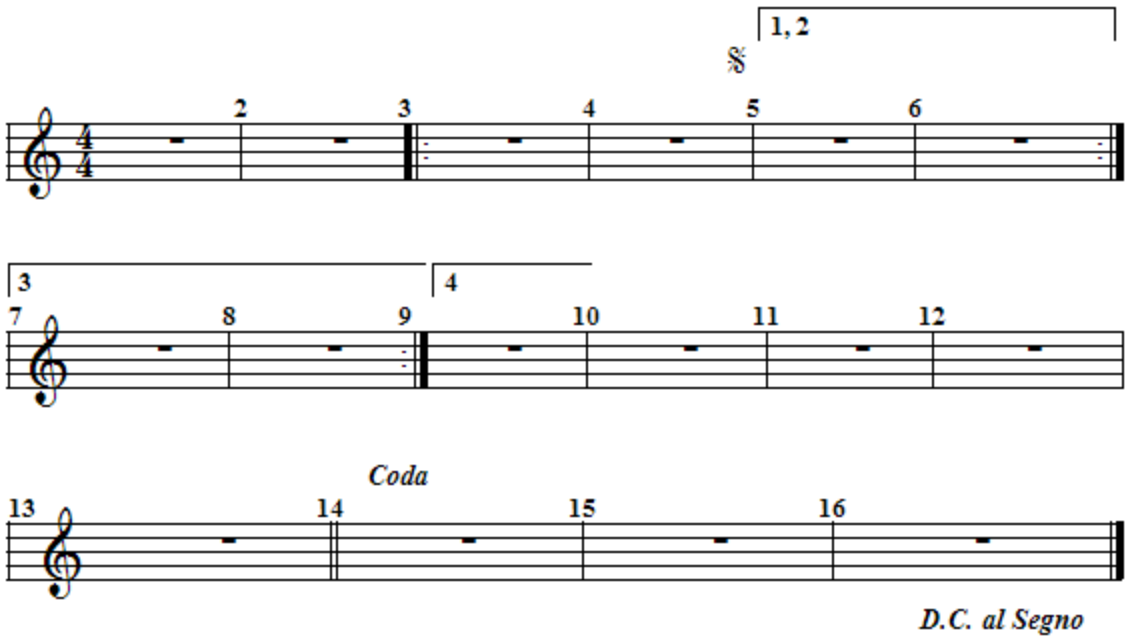
Notice that in row 5, for Repeat #3, the Repeat Instructions indicates that verse #3 is sung for the third repeat, even though there is not a third verse. You can correct this, and also assign the second repeat to the first verse rather than the second.

2. Change the verse assignments in the Repeat Instructions dialog box, as illustrated below:



- **To specify relatively complex "go to" instructions in the score:**

  Consider the following example with four endings, a *segno* 𝄋 mark, a *D.C. al Segno* instruction, and a *Coda*:

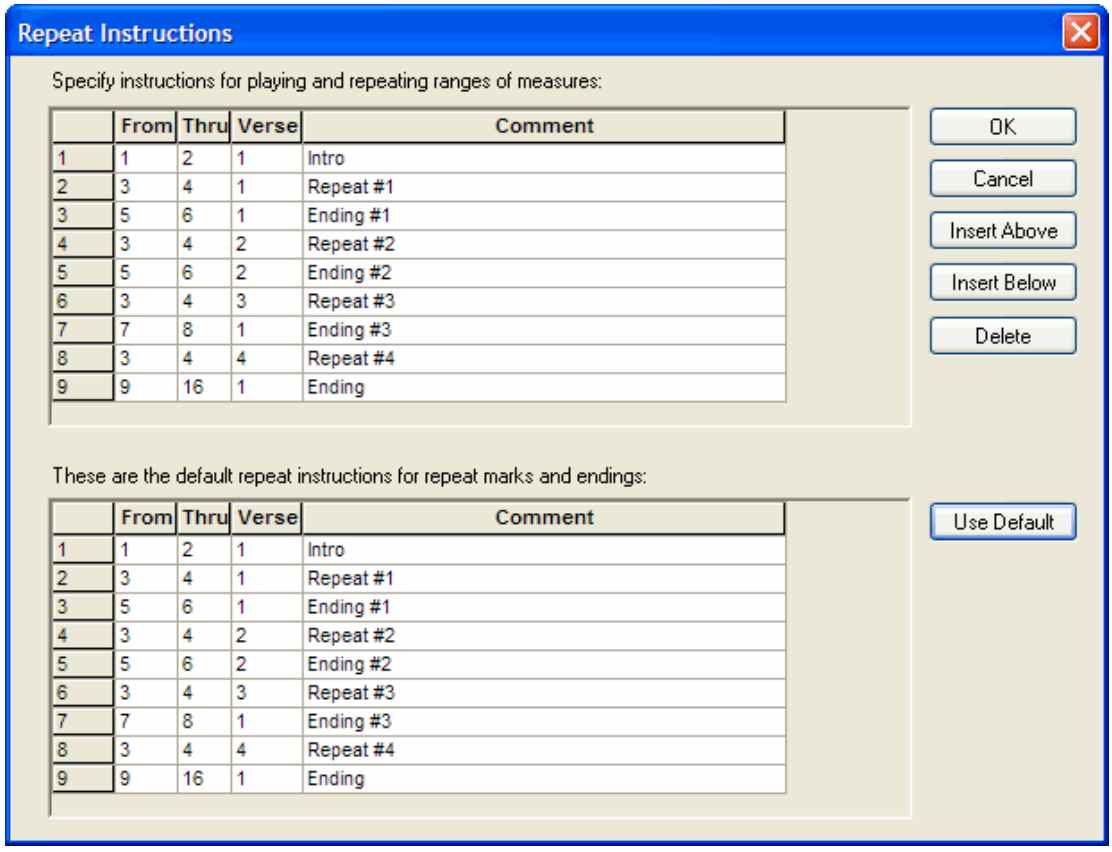


1. Choose the Repeat Instructions command in the Measure or Barline Menu.

   -- OR --

   Type "qri" for Quick Repeat Instructions.

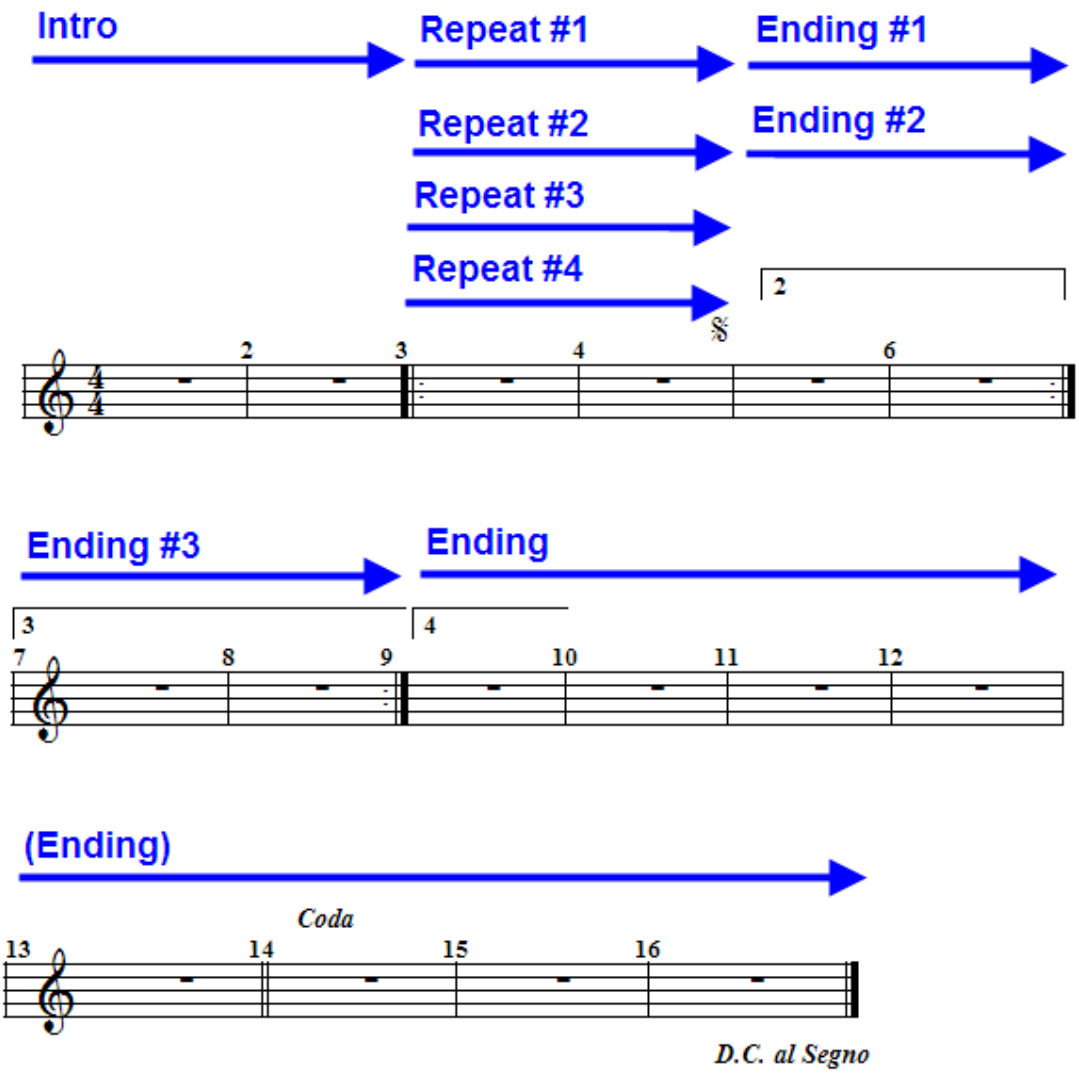
   Musician will display the following Repeat Instructions dialog box:



	From	Thru	Verse	Comment
1	1	2	1	Intro
2	3	4	1	Repeat #1
3	5	6	1	Ending #1
4	3	4	2	Repeat #2
5	5	6	2	Ending #2
6	3	4	3	Repeat #3
7	7	8	1	Ending #3
8	3	4	4	Repeat #4
9	9	16	1	Ending

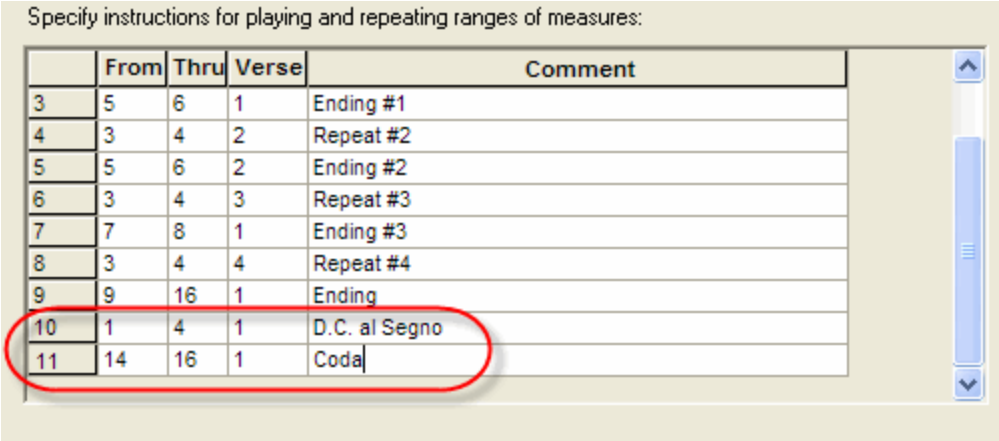
	From	Thru	Verse	Comment
1	1	2	1	Intro
2	3	4	1	Repeat #1
3	5	6	1	Ending #1
4	3	4	2	Repeat #2
5	5	6	2	Ending #2
6	3	4	3	Repeat #3
7	7	8	1	Ending #3
8	3	4	4	Repeat #4
9	9	16	1	Ending

Musician has correctly prepared the repeat instructions for the endings and repeats, as illustrated here:



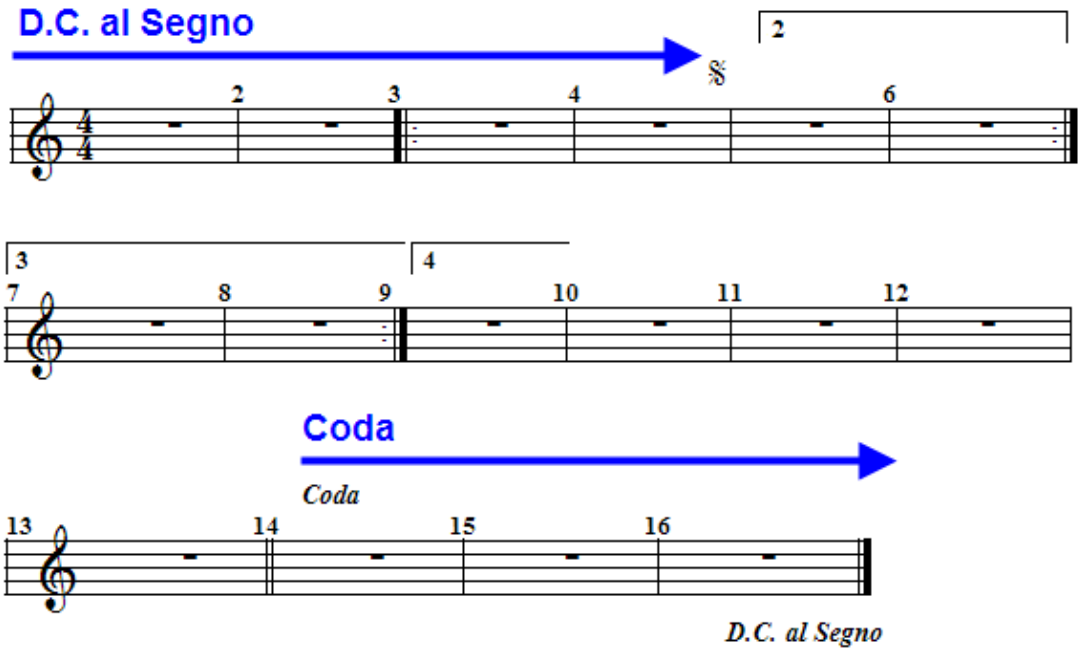
However, **Musician** did not interpret the *segno* 𝄋 mark, *D.C. al Segno* and *Coda*:.

2. Add instructions in the Repeat Instructions dialog box for the interpretation of the other "go to" marks, as illustrated in rows #10 and #11 below:


Specify instructions for playing and repeating ranges of measures:

	From	Thru	Verse	Comment
3	5	6	1	Ending #1
4	3	4	2	Repeat #2
5	5	6	2	Ending #2
6	3	4	3	Repeat #3
7	7	8	1	Ending #3
8	3	4	4	Repeat #4
9	9	16	1	Ending
10	1	4	1	D.C. al Segno
11	14	16	1	Coda
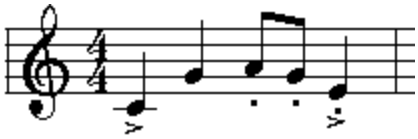
The last two instructions for the *D.C. al Segno* and *Coda*: are performed as follows:



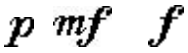
5.11 Editing Music Annotations

Musician supports the following types of annotations:
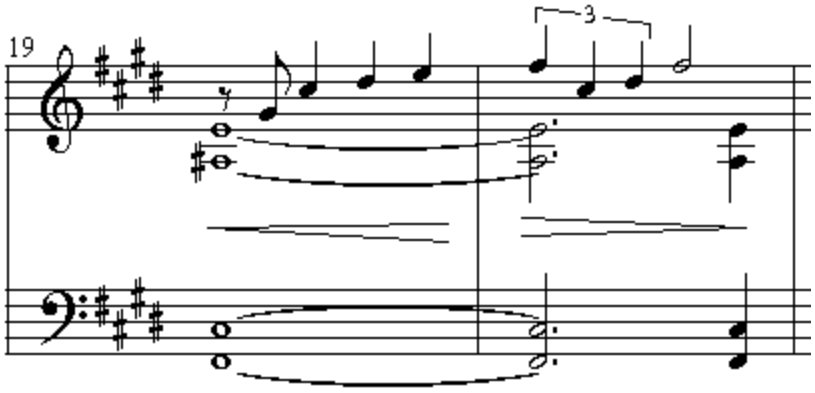
- Accents and articulations



- Dynamic marks 341



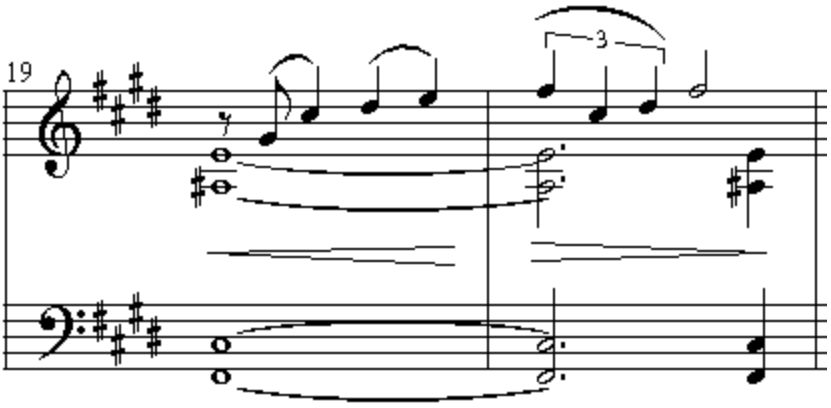
- Hairpin crescendo marks
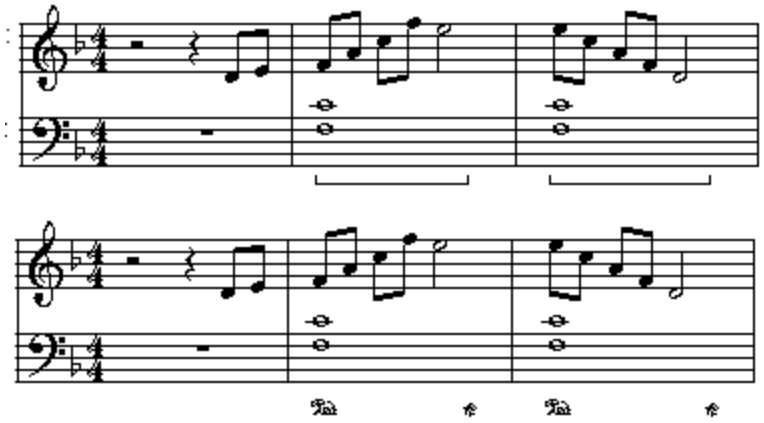


- Special music symbols 348 in **Musician**'s own Harmony font, or in another music font.



- Slurs (phrase marks)
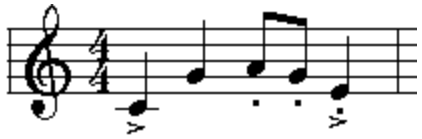


- Sustain pedal marks
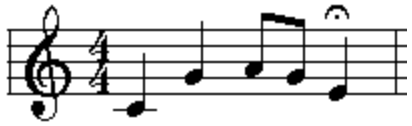


Procedures for adding and editing each of these types of annotations are described in the topics that follow.

5.11.1 Accents and Articulations

One of the most common annotations in a score is the accent mark, such as the following:



Other types of annotations, such as the fermata, are technically neither accent marks nor articulations. However, for editing purposes, they are handled the same way in **Musician**. Such "accents" all have their symbols displayed immediately above or below notes.



The procedures for adding and editing accent marks, articulations and fermata symbols are described in the topic Editing Accent Marks 271

5.11.2 Dynamic Marks

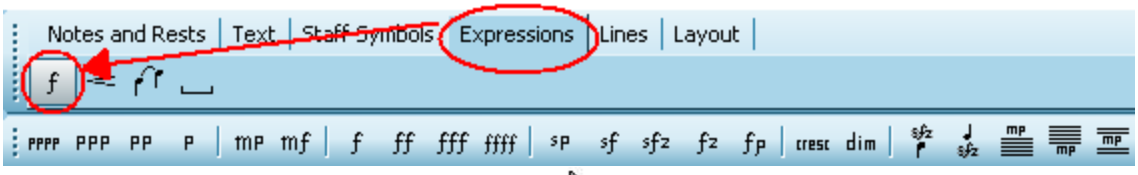
With **Musician**, you can add a variety of dynamic marks to a score, such as *f* and *p*. You can specify the placement of a dynamic mark above or below a staff, or immediately above or below a note or chord. **Musician** will automatically align the dynamics vertically in each staff. However, you can also enter dynamic marks as free text, which you can move anywhere you want.

To add a dynamic mark:

1. With the mouse, navigate to the Dynamic Mark Palette.

   -- OR --

   Type SHIFT+D.



Musician will change the cursor to look like with an additional "dongle" that looks like the expression you will be entering.

2. Click one of the dynamic mark buttons, such as *mf* or *pp*.
3. Click one of the five buttons at the bottom of the palette to determine the placement of the dynamic mark above or below the staff, or immediately above or below an adjacent note or chord.

   A dynamic mark is placed closer to the notes or chord if you choose Above Chord or Below Chord rather than Above Staff or Below Staff.
4. Click the mouse where you want to add the dynamic mark.

To change the type of dynamic mark, such as from *mf* to *pp*:

1. With the mouse, click the dynamic mark you wish to change.
2. In the Dynamic Mark Palette, click the new dynamic mark.

-- OR --

Type the short-cut for the dynamic mark you want:

Dynamic Mark	Keyboard Short-Cut	Dynamic Mark	Keyboard Short-Cut
f	f1	*p*	p1
ff	f2	*pp*	p2
fff	f3	*ppp*	p3
ffff	f4	*pppp*	p4
mf	mf	*mp*	mp
fz	fz	*sp*	sp
fp	fp		
sf	sf		
sfz	sfz		

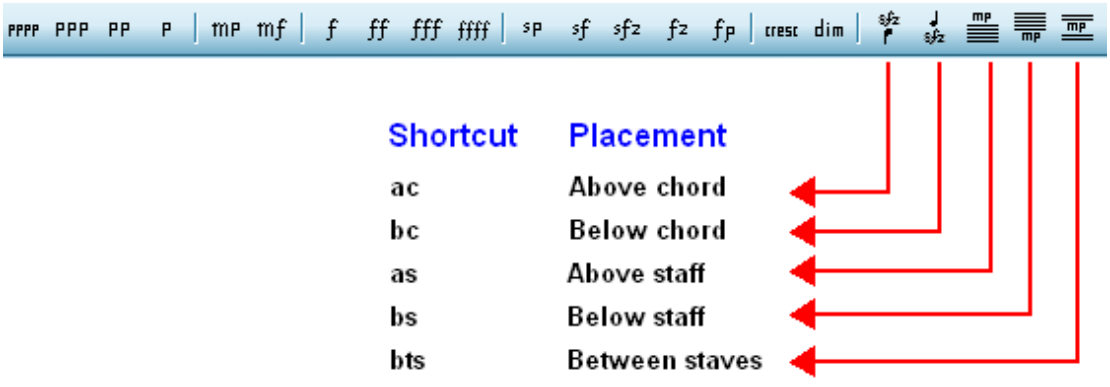
Once you have selected of the the *piano* or *forte* marks, you can cycle through values by typing "P" or "F" one or more times. For example, to go from *pp* to *ppp*, just type "P" once.

To change the placement of the dynamic mark:

1. With the mouse, click the dynamic mark you wish to change.

   Musician will display one of the Dynamic Mark Palettes, depending on the first letter of the dynamic mark you selected.

2. Choose one of the placement options listed in the first procedure in this topic, such as Above Staff or Above Chord. Choose the option by either clicking the palette button or by typing one of the keyboard short-cuts:



When one of the placement options Above Staff, Below Staff, or Between Staves is applied to multiple dynamic marks in the same staff, then they will be aligned vertically, which is easier for musicians to read. The Above Chord and Below Chord options result in placement of the dynamic marks immediately above or below chords.

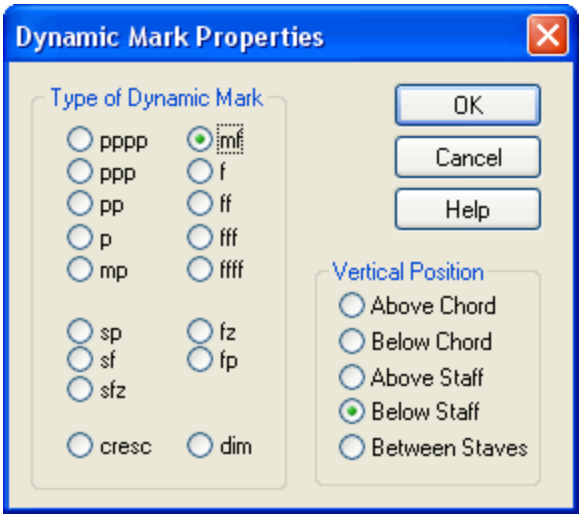
For all five of these options, the placement of the objects is automatic. **Musician** does not offer you a way to finely adjust the positions of the dynamic marks. If you wish to finely control the placement of a dynamic mark, then add the dynamic mark as free text, as described in the last procedure in this topic.

To delete a dynamic mark:

1. With the mouse, click the dynamic mark you wish to delete.
2. Hit the Del key.

To add or change a dynamic mark using a dialog box:

1. Type SHIFT+D to get to dynamic marks.
2. Click the mouse where you want to add the dynamic mark, or select an existing dynamic mark that you want to change.
3. Type SHIFT+Enter to display the Dynamic Mark Properties dialog box:



4. In the dialog box, select the type of dynamic mark that you wish to add or change, and its relative vertical position.
5. Click the OK button to complete the adding or changing of the dynamic mark.

To add a dynamic mark as free text, so that you can freely move it anywhere in the score:

1. Follow the instructions in General Procedures for Editing Free Text 391, to add a new free text object.
2. Click the Free Text Properties button in the Free Text Palette.

   -- OR --

   Type SHIFT+Enter.

   Musician will display a dialog box entitled Add Mix of Ordinary Text and Symbols.

3. In the dialog box, choose one or more symbols, such as *m*, followed by *f*, for *mezzo forte* *mf*.
4. Click OK in the dialog box.
5. Using the mouse, drag the dynamic mark to the exact position you desire.

To draw a dotted line between "cresc" or "dim" and a dynamic mark:
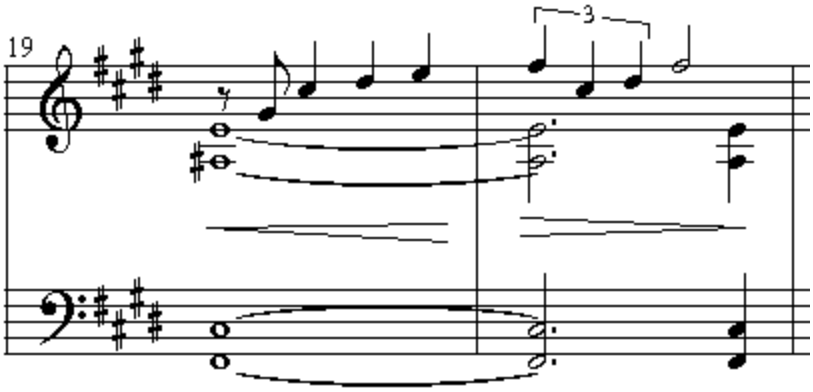
1. Add the starting "cresc" or "dim", and add the ending dynamic mark, such as *f*.
2. Assign the "cresc" or "dim" mark, and the ending dynamic mark, to "above staff", "below staff", or "between staves", by clicking one of the buttons:  ,  , or  .

   -- OR --

   Type "as", "bs", or "bts" for above staff, below staff, or between staves.
3. Add a dotted line between the starting "cresc" or "dim" mark and the ending dynamic, as described in Adding Lines and Glissandos.
4. In adding the dotted line, choose the line option for "line between dynamic marks above staff", "line between dynamic marks below staff", or "line between dynamic marks centered between staves". In the Line Palette, buttons are similar to the corresponding Dynamic Palette buttons:  ,  , and  .
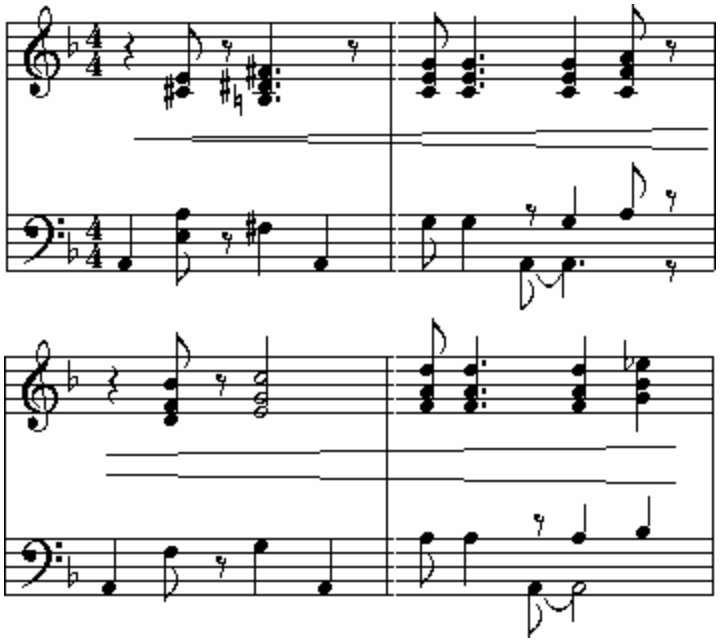
5.11.3 Hairpin Crescendo Marks

With **Musician**, you can add to a hairpin crescendo or decrescendo mark to a score such as in the following example:



The word "hairpin" is commonly used in the vocabulary of music notation to suggest the shape of the symbol.

If a hairpin crescendo mark crosses a barline into a measure that is on a subsequent staff, **Musician** automatically divides the hairpin mark, as illustrated below:



Musician does not directly interpret hairpin crescendo marks or dynamic marks during playback.

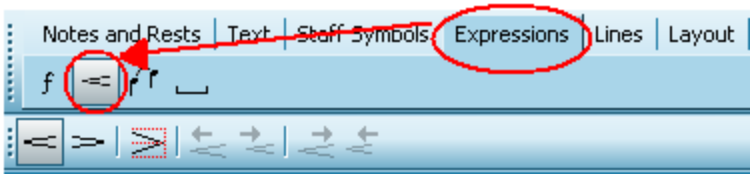
To add a hairpin crescendo or decrescendo mark:

1. With the mouse, navigate to the Crescendo Palette.

   -- OR --

   Type the less-than sign "<" or greater-than sign ">" character on your keyboard for crescendo or decrescendo.

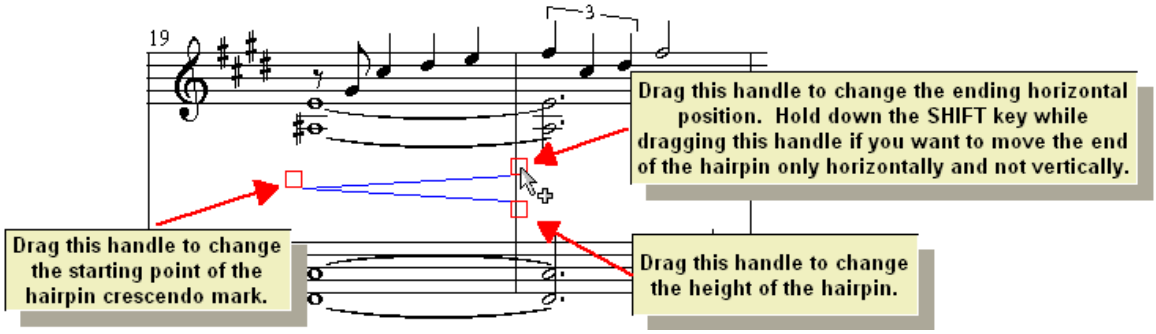
   Musician will display the Crescendo Palette:



   Musician will change the mouse cursor to  for a crescendo

2. Click the mouse in the score where you want the crescendo or decrescendo to begin.

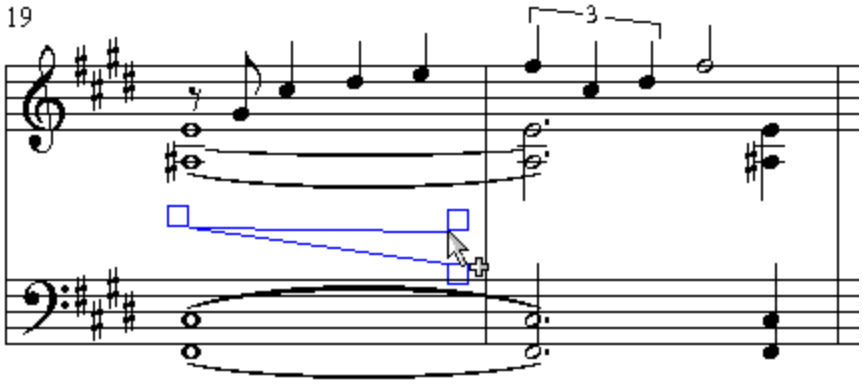
   Musician will insert the crescendo or decrescendo in the score. It will extend horizontally from the point where you clicked the mouse to slightly past the end of that measure. **Musician** highlights the newly added crescendo mark to indicate that it is selected so that you can immediately edit it:



3. To change the position, length, or height of the hairpin crescendo mark, click one of the three □ handles illustrated in the above picture, and hold down the left mouse button. Now drag the handle to its new position. Then release the left mouse button.

   If you wish to move the end of the hairpin right or left without changing the angle of the hairpin, then hold down the SHIFT key while you drag the top of the two handles.

   The following example shows the result of dragging the top, right handle down and to the left:



4. Optionally center the start of the hairpin mark by choosing Vertically Center in Middle command in the Hairpin Menu.

   -- OR --

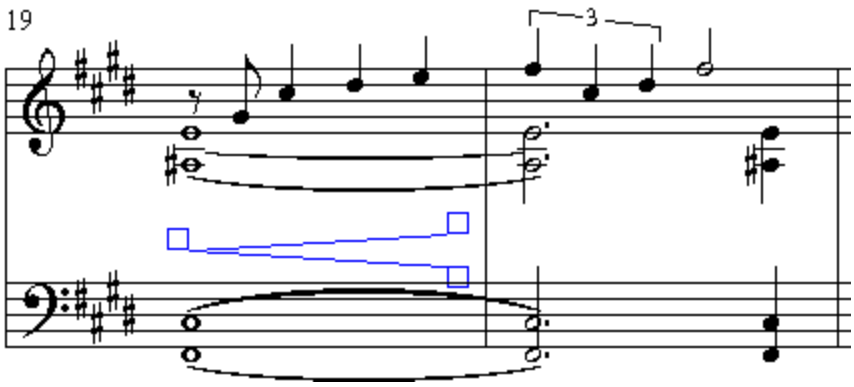
   Click the Vertically Center in Middle button in the Crescendo Palette:



   -- OR --
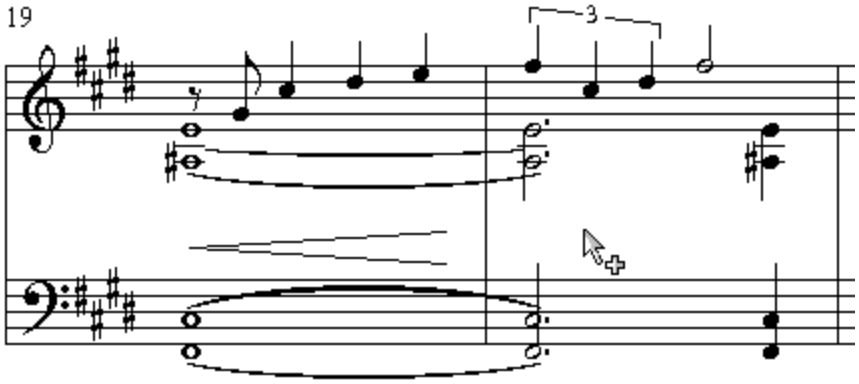
   Type "c" for center.

   The following example shows the result of the Middle command:



5. Before attempting to add another crescendo mark, press the ENTER key to complete the editing of the newly added crescendo mark.

   The following example shows the result of unselecting the newly added crescendo mark:



To change the position, length, or height of a crescendo or decrescendo mark:

1. With the mouse, click the crescendo or decrescendo mark you wish to edit.
2. Drag any of the three handles, as explained in the previous procedure.

   -- OR --

   Move the start or end of the crescendo mark using one of the following palette buttons or keyboard short-cuts:

	Shortcut	Command
	S + Left Arrow	Move start to previous measure
	S + Right Arrow	Move start to next measure
	E + Right Arrow	Move end to next measure
	E + Left Arrow	Move end to previous measure

3. Optionally, vertically center the start or end of the crescendo or decrescendo mark using the Vertically Center in the Middle button.
4. Press the ESC or ENTER key to complete the editing of the selected object.

To change a crescendo mark to a decrescendo mark or vice versa:

1. Using the mouse, click the crescendo or decrescendo mark you wish to edit.

The mark will be highlighted in blue, and **Musician** will display the crescendo palette, as shown before.

2. Click the crescendo or decrescendo button.

   -- OR --

   Type the less-than "<" or greater-than ">" key.

3. Press the ESC or ENTER key to complete the editing of the selected object.

5.11.4 Special Symbols

You can insert any symbol in **Musician**'s True Type font, named Harmony, anywhere in the score.

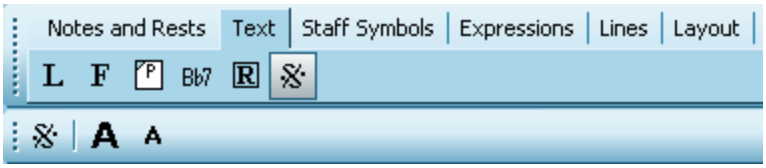
You may have another music software product that has a music font with symbols you like, or it may have symbols missing in **Musician**'s Harmony font. You can also insert symbols from another music font set anywhere in the **Musician** score.

To insert a music symbol from Musician's Harmony font anywhere in the score:

1. With the mouse, navigate to the Symbol Palette.

   -- OR --

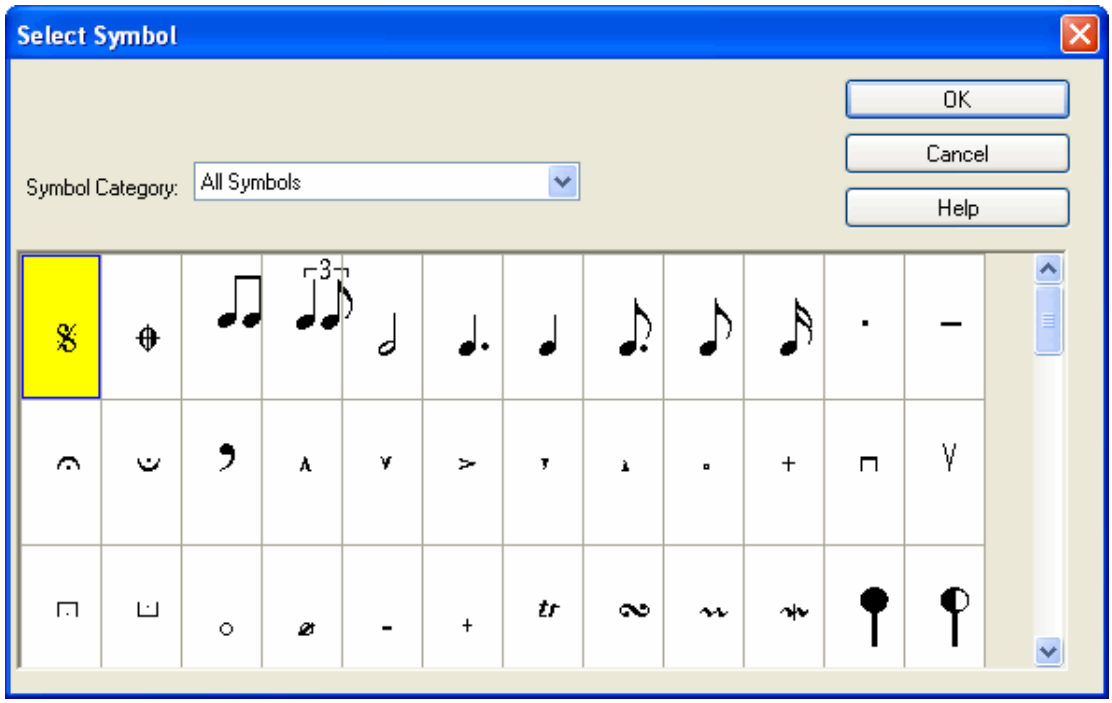
   Type "%" (percent symbol) or "$" (the dollar sign), which are intended to suggest the idea of symbol.



Musician will change the mouse cursor to 

2. Click the mouse where you want to add the symbol.

Musician will display the Select Symbol dialog box:



Initially, the Select Symbol dialog box shows all of the symbols available in **Musician**'s Harmony font. You can look through all of the symbols for the one you want, but it is easier to narrow down search by selecting a Symbol Category.

3. In the Symbol Category list, select the type of symbol you are looking for, such as "Rhythms and Tempo Units" or "Ornaments".

   The dialog box will then display only symbols for the category you have selected.

4. Among the displayed symbols, select one, and then click the OK button.

   The symbol will be added where you had clicked the mouse in the score.

5. Optionally, adjust the location of the symbol in the score by dragging it with the mouse.

This procedure is just a different way of adding free text. 390 In a free text object, you can mix ordinary text with one or more music symbols from **Musician**'s Harmony font. The above procedure is somewhat faster, but is limited to adding one music symbol at a time, and that symbol must be in **Musician**'s Harmony font. To add a symbol from another music font, you will need to add it as free text, as described below.

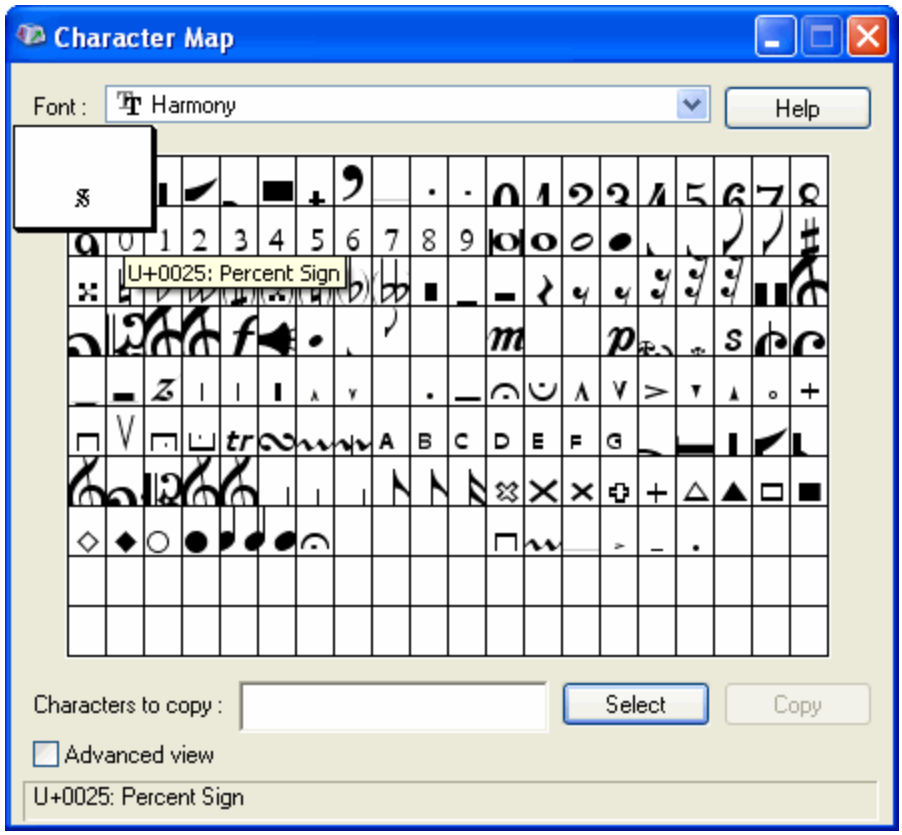
To insert a music symbol from a music font other than Musician's Harmony font:

We will illustrate this procedure using **Musician**'s own Harmony font, as though it were some other music font.

1. Follow the procedure for Adding International Characters in Text 373. Instead of adding an international character from a text font, you will be adding a music symbol character from some music font.

- Start the Windows Character Map utility in the Accessories / System Tools folder.
  - Select the music font you want to use.

- Find the symbol in the music font by clicking different symbols. In many music fonts, the symbols are difficult to find. Some are even difficult to find in **Musician**'s Harmony font, such as the segno 𝄋 character. Click different symbols to get a full view, as illustrated below, until you find the one you need.



- Double-click the symbol you want to use.

Now the character is in the Windows clipboard, ready for insertion into the score.

2. Navigate with the mouse to the Free Text Palette.
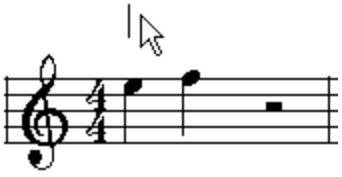
   -- OR --

   Type SHIFT+F.

   Musician will change the cursor to 
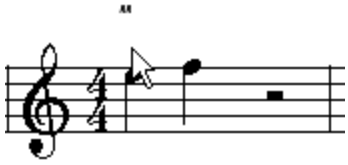
3. Click the mouse where you wish to add the symbol.

   Musician will display a blinking text cursor.



4. Type CTRL+V to paste the music symbol at the text cursor position.

At this point, it may not look like this works, because the symbol does not look correct.
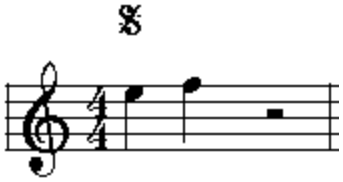


5. Click the Font  button in the Free Text Palette.

   -- OR --

   Type CTRL+F.

   Musician will display the Select Font for Free Text dialog box.

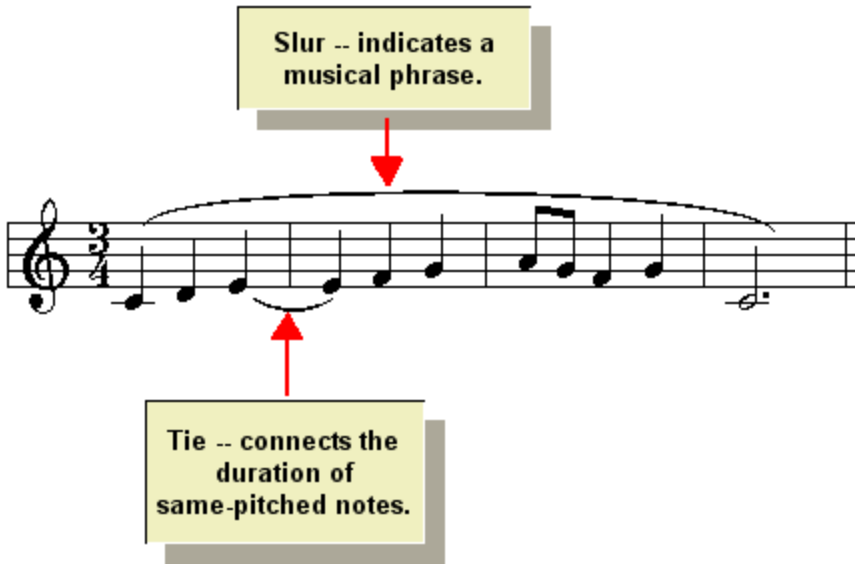
6. In the dialog box, select the music font that you referred to in step #1 with the Windows Character Map utility. Then click the OK button. The symbols should now display correctly.



5.11.5 Slurs (Phrase Marks)

The terms "slur" and "phrase mark" refer to a music symbol that is a curved line extending over two or more notes. The slur indicates a musical phrase, similar to a spoken sentence. In vocal music, the singer takes a breath at the end of the phrase. Wind instruments similarly take a breath at the end of the phrase. Performers of other instruments simulate taking a breath by briefly disconnecting the last note of the phrase from any notes that follow.

A slur is ***not*** a tie. A tie is ***not*** a slur. They may look similar, because they are both curved lines. But a slur and a tie are two different things. A *tie joins the durations of two notes of the same pitch*, so that the first note is heard for the total duration of the two tied notes. A slur does not tie notes together. A *slur groups the notes together into a musical phrase* that is interpreted, to some degree subjectively, by the performer.



It is important that you understand the difference between a tie and slur in **Musician**. If you attempt to draw a slur between two notes, hoping that this will tie the durations of the two notes together, the two notes will not really be tied, even though there is a curved line between them as though they have been tied. The two notes will still sound separately rather than as one continuously played note. To tie two same-pitched notes together, you should use commands in the Note Palette or Tie Palette, or corresponding menus, as described in Editing Ties 368. To add a slur, you should use commands in the Slur Palette or Slur Menu.

The remaining topics in this subsection describe how to:

- Add a slur 352.
- Delete a slur 355.
- Change the shape and extent of a slur 355.

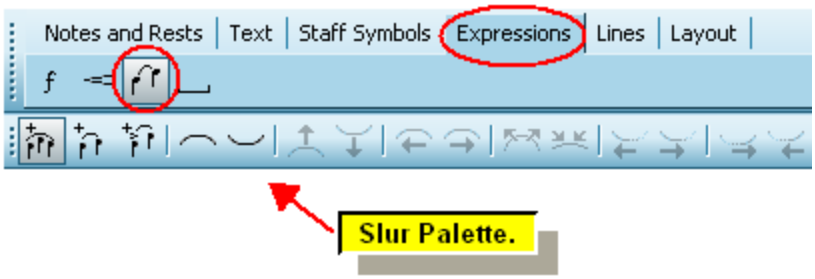
5.11.5.1 Adding Slurs

Musician offers a convenient method for initially drawing a slur across notes. All you have to do is drag the new slur across the notes, and **Musician** will automatically fit the curve above or below the notes so as to avoid crossing through them. The result is almost always a visually pleasing curve. You can refine the shape of the curve afterwards, if desired.

Musician also offers a convenient "point and click" method for adding a slur between two notes. Just click the mouse near the first of the two notes, and **Musician** will automatically place the slur. An option lets you add a ">" accent mark at the first of the two notes, at the same time you add the slur between the two notes.

To add a slur across multiple notes using the mouse drag method:

1. With the mouse, navigate to the Slur Palette:



-- OR --

Type SHIFT+S. If **Musician** displays the Sustain Pedal Palette first, then type SHIFT+S a second time for the Slur Palette.

Musician will change the mouse cursor to 

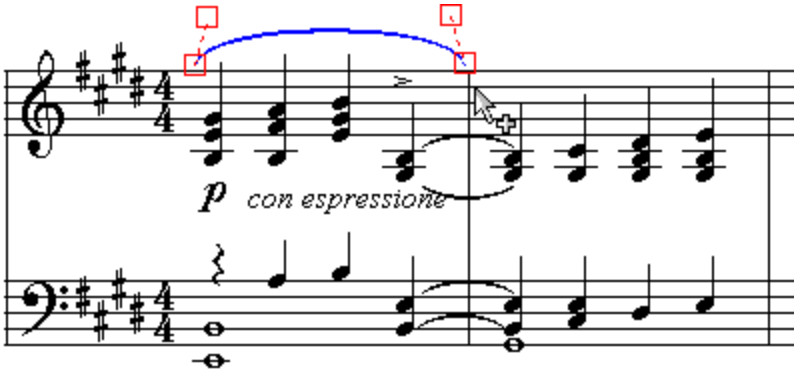
2. Click the  button to choose the mouse dragging method for adding a slur across multiple notes.

-- OR --

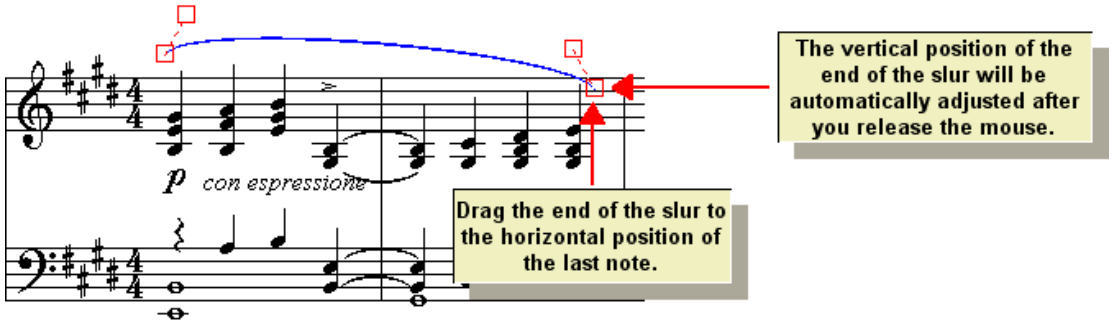
Type "m" for the multiple note method of adding a slur.

3. Start the multiple-note slur by clicking the mouse, above or below the starting note of the slur, and hold down the button. Click above the note to add a slur above the notes, or click below the note to add a slur below the notes.

Initially, **Musician** will extend the newly added slur to the end of the measure, as illustrated below. You will be able to drag the end of the slur to the right or left until you release the mouse button.
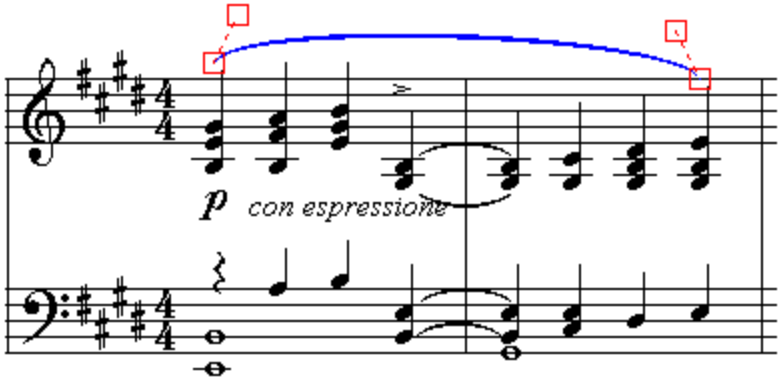


4. While holding down the mouse button, drag the slur to the right across the tops or bottoms of the notes. It does not matter where you position the end of the slur vertically, because **Musician** will automatically adjust the vertical position and shape of the curve according to the underlying notes. You just need to position the end of the slur horizontally at the note where you wish the slur to end.



5. Release the mouse button where you want to end the slur. If you want the slur to continue to the next system, then initially drag the slur just to the end of the first staff. Then follow the procedure later in this topic for extending the slur to additional measures.

   As you drag the new slur, it might not initially have the correct shape, and might incorrectly cross through notes. However, as soon as you release the mouse button, **Musician** will automatically fit the newly added slur above or below the notes. Most likely you will not need to adjust its position. However, you can finely tune the position and curvature of the slur, as described later in this topic.

   This is what the example above looks like after the mouse is released:



   Notice how **Musician** automatically adjusts the end position of the slur so that it pleasingly spans across the notes.

To add a slur between a pair of notes using the point and click method:
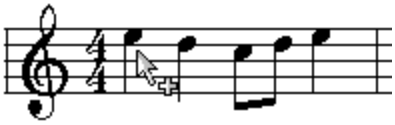
1. Follow step #1 in the above procedure.

2. Click the Slur Between Pair of Notes  button to choose the point-and-click method for adding a slur between a pair of notes.

   -- OR --

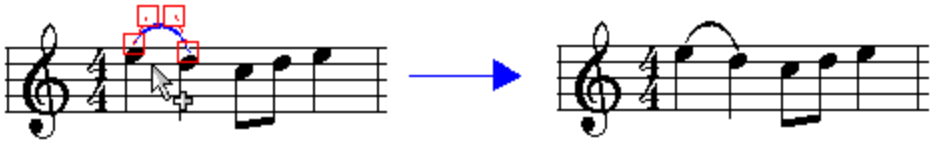
   Type "p" for adding a slur between a pair of notes.

3. Move the mouse  cursor to the first of the two notes:



4. Click the mouse button.
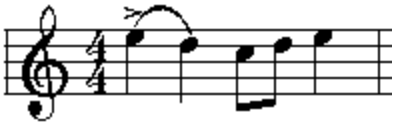
   Musician will add the slur between the two notes and automatically adjust the shape of the slur.



5. Hit the ESC key to unselect the newly added slur, unless you wish to adjust its position by dragging its handles.

To add a phrase mark between a pair of notes, including an ">" accent mark on the first note:

- Follow the same steps as in the above procedure, except click the Slur and Accent button instead of the Slur Between Pair of Notes button.



5.11.5.2 Deleting a Slur

To delete a slur:

1. Move the cursore over the slur to pre-select it (it will turn red) and click anywhere on the phrase mark curve.

   Musician will highlight the phrase mark in blue to indicate that it is selected.

2. Hit the Del key.

5.11.5.3 Changing the Shape and Extent of a Slur

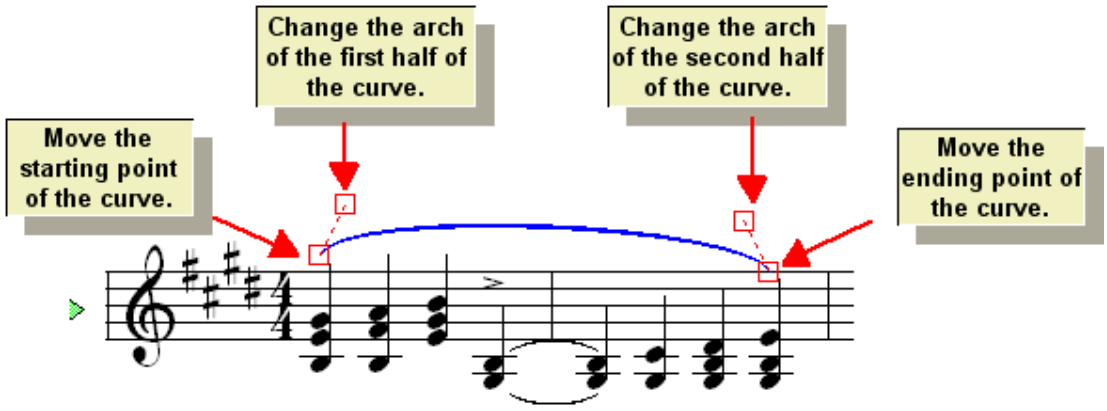
Musician offers several options for adjusting the extent and shape of a slur. For the finest control over the extent and shape of the slur's curve, you can drag its four handles with the mouse. For most adjustments, however, you can use one-click or one-letter shortcut commands to do the following:

- Move the slur from above the note(s) to below the note(s), or the vice versa.
- Automatically refit the slur to the contour of notes beneath or above it.
- Move the entire slur up, down, right or left.
- Increase or decrease the amount of bow in the slur mark.
- Move the start or end of the curve to another measure, even on a separate system or page.
- Adjust the position of a slur that spans across multiple systems.

To finely adjust the position and shape of the slur's curve:

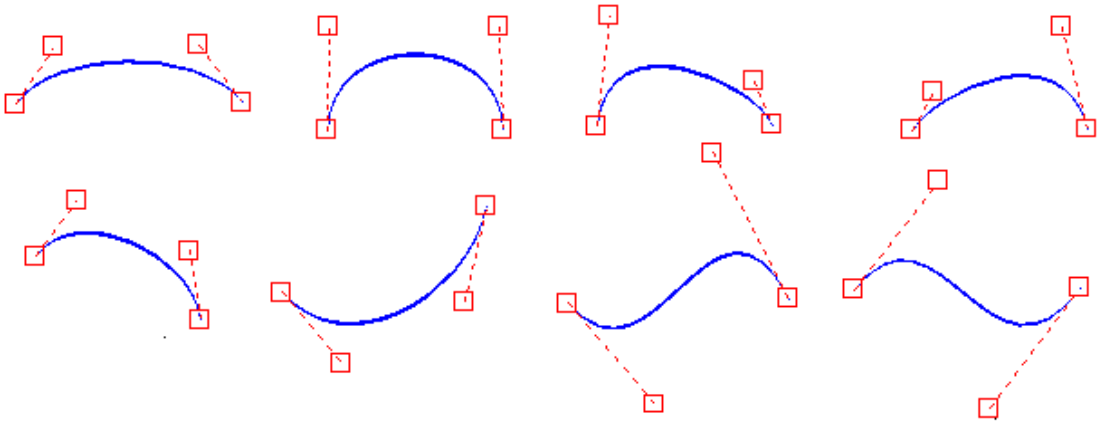
1. Select the slur by clicking on it.

Musician will highlight the selected slur in the color blue, and will display four red handles that you can drag with the mouse to adjust the position and shape of the slur.



2. Drag any of the four handles of the slur's curve to change its starting and ending points and shape. When you drag the starting or ending point of the slur, the adjacent "control" handle, which determines the shape of the curve at the start or end, will move along with the starting or ending point. Release the mouse button when you are done with a particular handle.

   The following chart shows some examples of different curve shapes that you can make by arranging the handles in different relative positions. You can even draw a curve that turns up, then down, and then back up.



To move the slur from above the note(s) to below the note(s), or vice versa:

1. Select the slur.
2. Click the Fit Slur Above Notes button or Fit Slur Below Notes button.

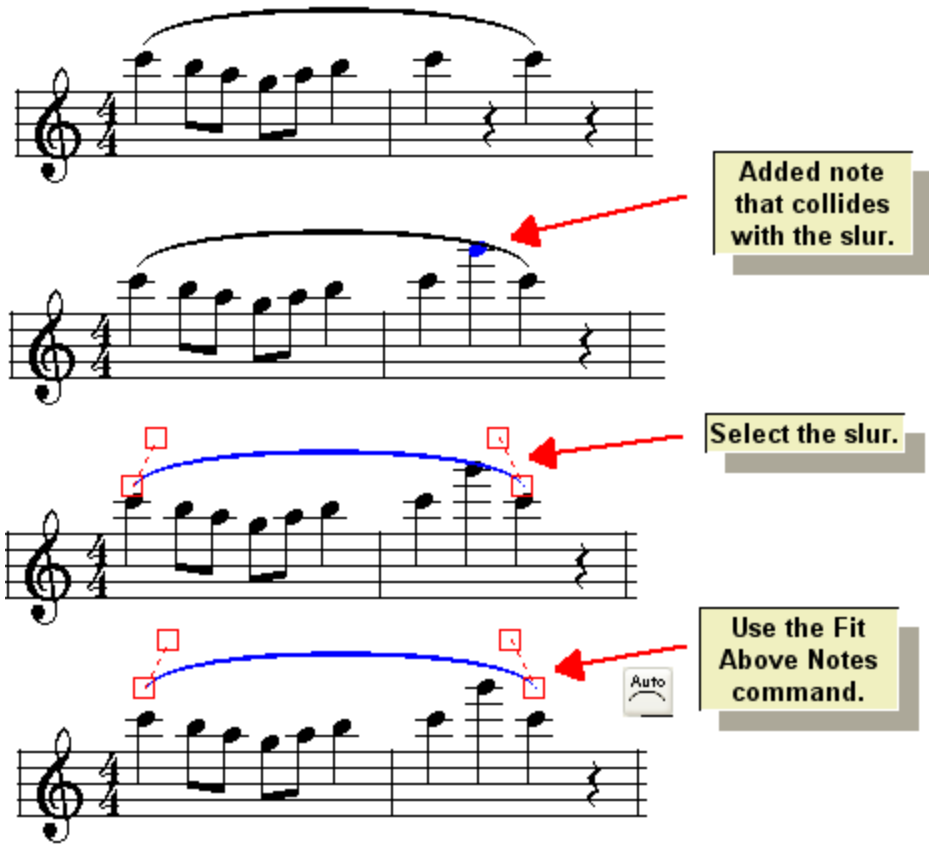
   -- OR --

   Type "a" for above notes, or "b" for below notes.

   Musician will adjust the start and end positions of the slur so that they start at appropriate locations relative to the notes at the start and end of the slur. Also, **Musician** will adjust the arc of the slur so that it clears all of the notes without crossing through any noteheads or stems.

To automatically refit the slur to the contour of notes beneath or above it.

- Follow exactly the same procedure as the one above. For example, if you have added a note in the middle of a slur, such that the slur now crosses through the note or its stem, you can select the slur and click the  or  button to refit the slur to the new contour of notes, as illustrated here:



Note that if you do anything to a note at the start or end of a slur, **Musician** will automatically refit the curve to accommodate the change. Only if you change the notes in the middle of the slur might it be necessary for you to follow the above refit procedure.

If you transpose the pitches of notes, so that they are raised or lowered on the staff, **Musician** will also automatically recalculate the position of slurs over or under those notes.

To move the entire slur up, down, right or left:

1. Select the slur.
2. Click the  ,  ,  , or  button one or more times.

   -- OR --

   Hit the Up, Down, Left or  key one or more times.

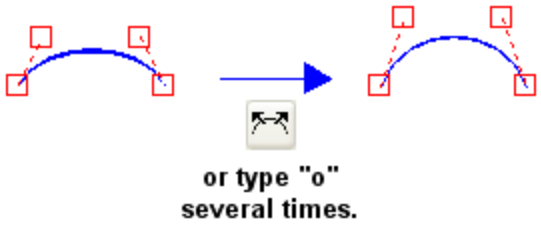
To increase the bowing of the slur's curve in an outward direction, or decrease the bowing of the curve in an inward direction:

1. Select the slur.

2. Click the Bow Curve Out button or Bow Curve In button one or more times.

   -- OR --

   Type "o" or "i" for bow out or bow in one or more times.
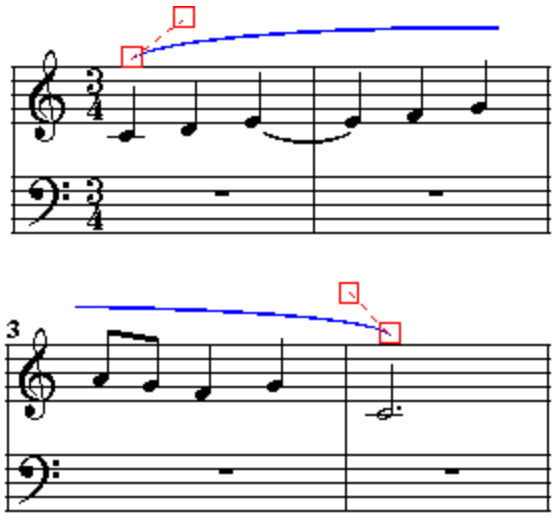


To move the start or end of the curve to another measure, even on a separate system or page:

1. Select the slur.
2. Click one of the following buttons, or type one of the keyboard shortcuts:
   - Click the button, or type S, to move the start of the slur one measure to the left.
   - Click the button, or type S+, to move the start of the slur one measure to the right.
   - Click the button, or type E+, to move the end of the slur one measure to the right.
   - Click the button, or type E+, to move the end of the slur one measure to the left.

To adjust the position of a slur that spans across multiple systems:

1. Adjust the handles at the start of the slur, on the first system, to influence the position of the slur across not only that system but also the next system(s).
2. Adjust the handles at the end of the slur, on the last system, to influence the position of the slur across not only that system but also the previous system(s).
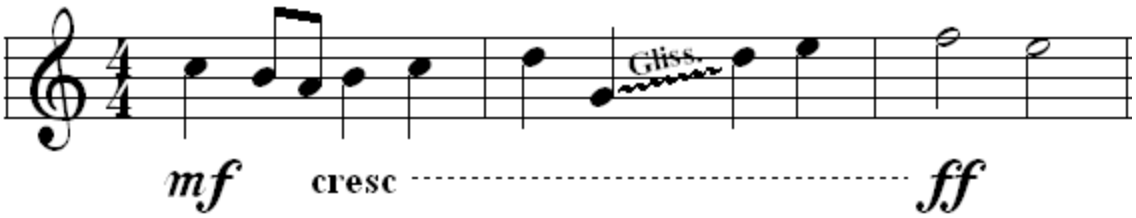


5.11.6 Lines and Glissandos

Musician supports the drawing of:

- solid lines
- dotted lines
- dashed lines
- wavy lines for glissandos and portanmento, with optional "Gliss." or "Port." text written above the line

Here is an example of a dotted line and a glissando:



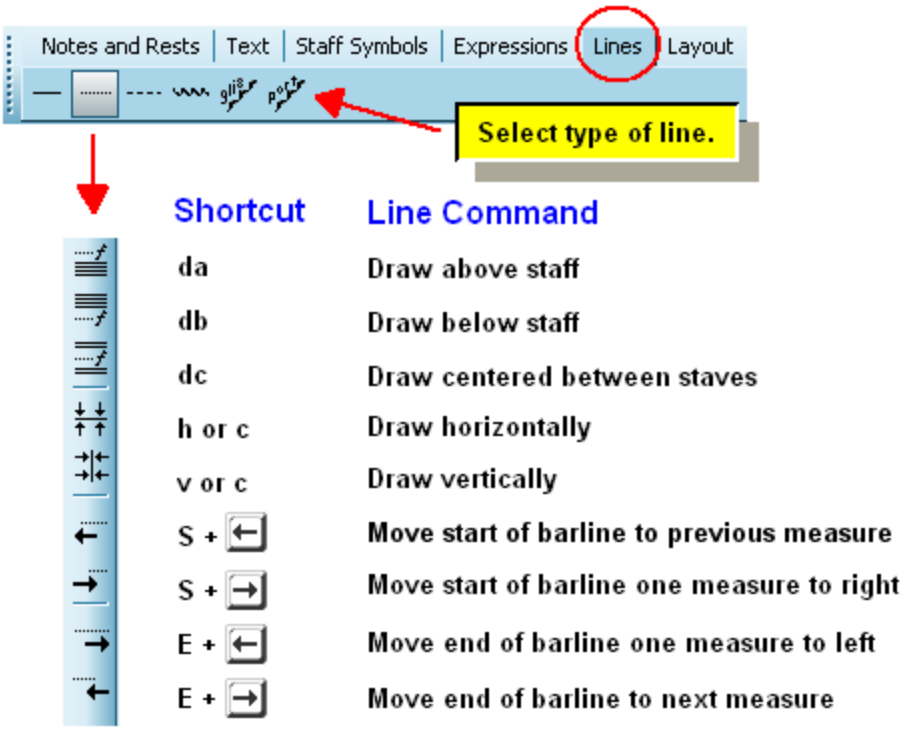
The topics in this subsection describe how to:

- add lines and glissandos
- delete a line or glissando
- change the extent or angle of a line or glissando 361

5.11.6.1 Adding Lines and Glissandos

To add a line or glissando:

1. With the mouse, navigate to the Lines and Shapes Palette:



   -- OR --

   Type the underline ('_') character (Shift + dash).

   Musician will change the mouse cursor to with an extra "dongle" for the shape of the line that you are adding.

2. From the palette, choose one of the types of lines you wish to draw, such as a solid line or dotted line.
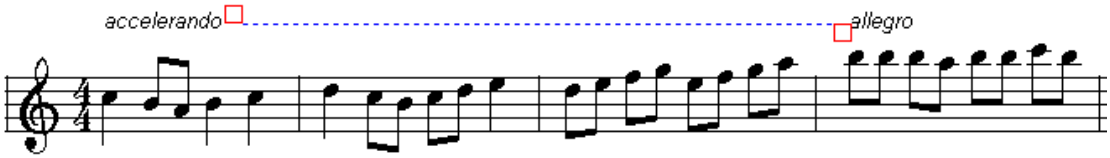
   -- OR --

   Type the shortcut for the line type, as shown in the above diagram.

3. To draw a horizontal line, typically a dotted line, between two dynamic marks, as in "cresc ..... mf", click one of the three buttons for "draw line between dynamic marks", depending on whether the dynamic marks have been previously added with one of the corresponding three options: above staff, below staff, or between staves. This option offers the advantage that if the vertical positions of the dynamic marks change when you added other music symbols between them and the adjacent staff, then the dotted line between the dynamic marks will move by the same amount.

4. Click the mouse where you wish to start the line. While holding down the mouse button, drag the mouse where you wish to end the line. Then release the mouse button.

   To force the line to be drawn horizontally or vertically, hold down the SHIFT key while you drag the mouse.



:

5. Adjust the placement of the line by dragging the start or end ☐ handle.

5.11.6.2 Deleting a Line or Glissando

To delete a line or glissando:

1. Click anywhere on the line or glissando to select it.

   Musician will highlight the line in blue to indicate that it is selected.

2. Hit the Del key.

5.11.6.3 Changing the Extent or Angle of a Line or Glissando

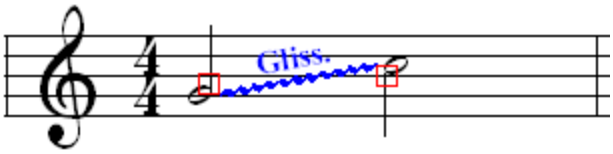
Musician offers the following options for adjusting the extent and angle of a slur:

- Change the position of the start or end of the line.
- Horizontally or vertically align the line.
- Move the start or end of the line to another measure, even on a separate system or page.

To change the position of the start or end of the line:

1. Click anywhere on, or click-drag across, the line.

   Musician will highlight the selected line in the color blue, and will display two red handles that you can drag with the mouse to adjust the position and shape of the line.



2. Drag either of the two handles to move the starting or ending location of the line or glissando.

To horizontally or vertically align the line:

1. Select the line.
2. Click the Center Horizontally button or Center Vertically button.

   -- OR --
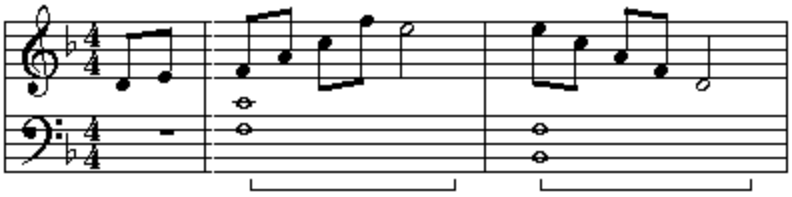
   Type "h" for horizontal alignment, "v" for vertical alignment, or "c" to center (align) horizontally or vertically, whichever is already closest.

To move the start or end of the line to another measure, even on a separate system or page:
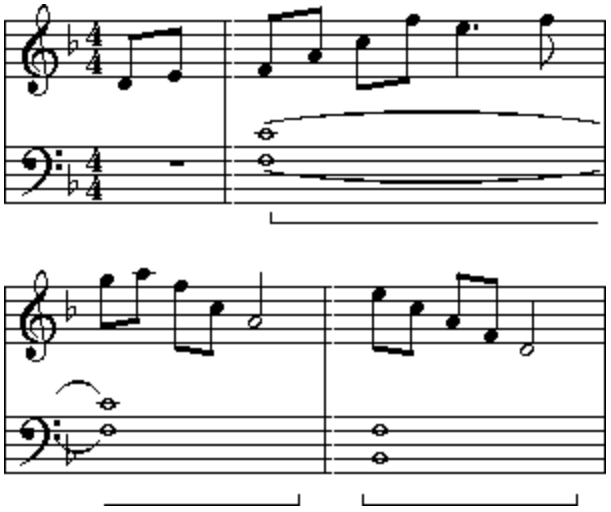
1. Select the line or glissando.
2. Click one of the following buttons, or type one of the keyboard shortcuts:
   - Click the button, or type S, to move the start of the line one measure to the left.
   - Click the button, or type S+, to move the start of the line one measure to the right.
   - Click the button, or type E+, to move the end of the line one measure to the right.
   - Click the button, or type E+, to move the end of the line one measure to the left.

5.11.7 Sustain Pedal Marks

With **Musician**, you can add a pedal mark to a score, drawn as a line, typically below the left-hand staff of a keyboard part, as in the following example:



If a pedal mark crosses a barline into a measure that is on a subsequent staff, **Musician** automatically divides the pedal mark, as illustrated below:

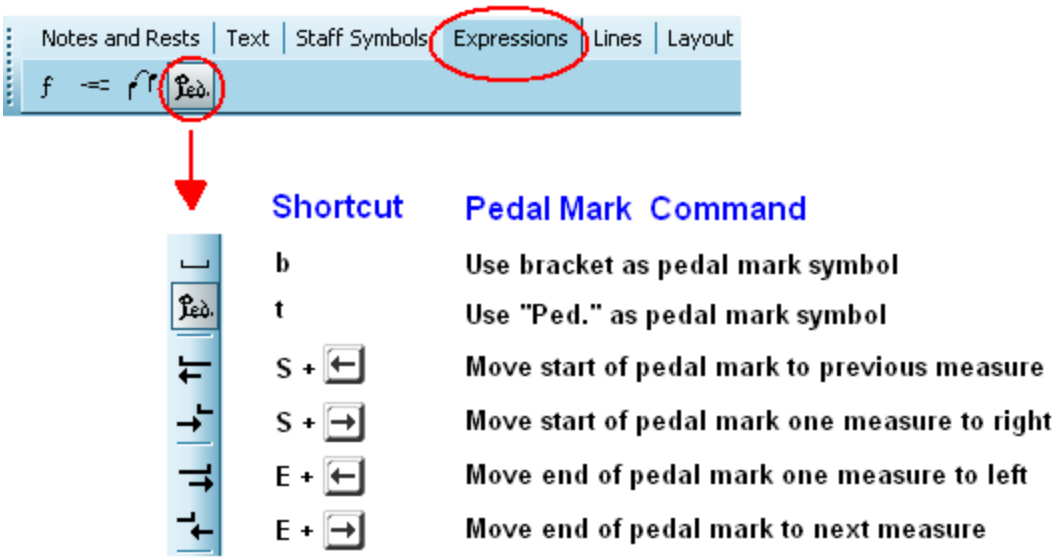


To add a pedal mark:

1. With the mouse, navigate to the Sustain Pedal Palette.

   -- OR --

Type SHIFT+S to display the Sustain Pedal Palette. SHIFT+S also displays Slur Palette. If the Slur Palette is displayed first, then type SHIFT+S a second time to display the Sustain Pedal Palette.



Musician will change the mouse cursor to with an additional "dongle" to indicate which style of pedal mark.

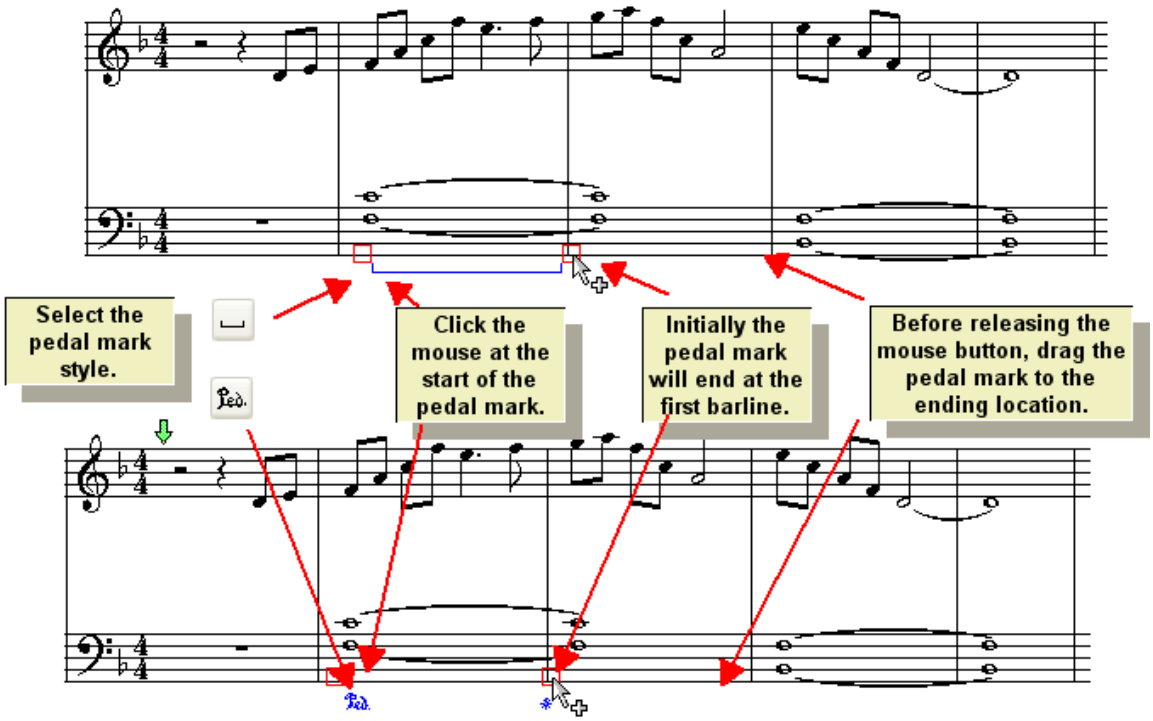
2. Choose the style of pedal by clicking the Bracket Style button or the Text Style button.

   -- OR --

   Type "b" or "t" for the bracket or text style of button.

3. Click and hold the mouse in the score where you want the pedal mark to begin.

   Musician will insert the pedal mark in the score. It will extend horizontally from the point where you clicked the mouse to slightly past the end of that measure. **Musician** highlights the newly added pedal mark in blue to indicate that it is selected so that you can immediately edit it:



3. While holding down the mouse button, drag the end of the pedal mark to where you want it to end. Then release the mouse button.
4. Before attempting to add another pedal mark, press the ESC key to complete the editing of the newly added pedal mark.

To change the starting or ending position of a pedal mark:

1. With the mouse, click the pedal mark you wish to edit.
2. Drag one of the two handles at the start or end of the pedal mark, as explained in the previous procedure.

   -- OR --

   Move the start or end of the pedal mark using one of the following palette buttons or keyboard short-cuts:

Shortcut	Command
S + Left Arrow	Move start to previous measure
S + Right Arrow	Move start to next measure
E + Right Arrow	Move end to next measure
E + Left Arrow	Move end to previous measure
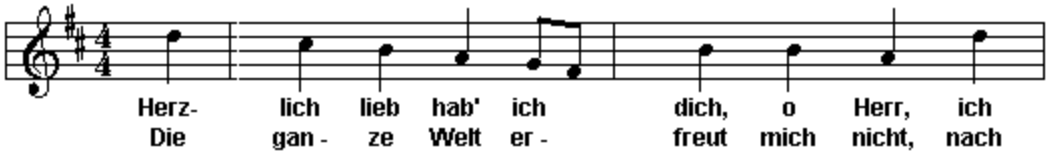
3. Press the ESC key to complete the editing of the selected object.

6 Editing Types of Text

Musician distinguishes between the following types of text, which have different roles in a score, and different methods for placement and formatting in the score:

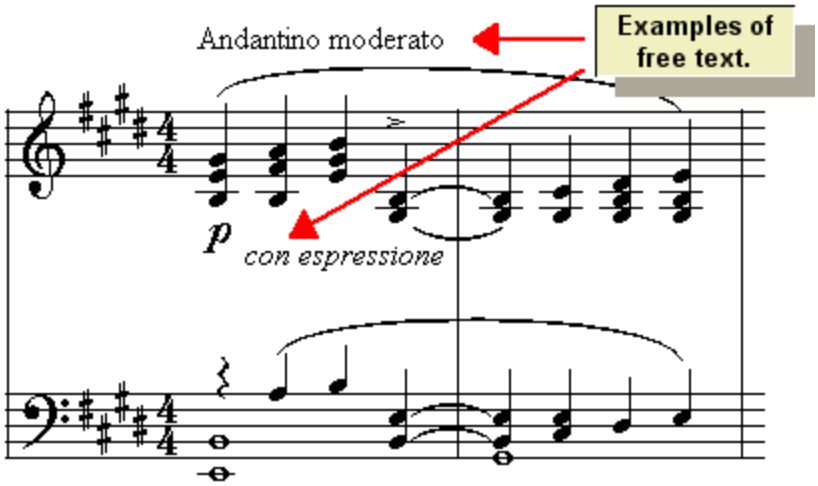
- Lyrics 377

  Lyrics line up underneath the notes to which they belong. **Musician** supports an unlimited number of verses. The lyrics in each verse are centered underneath each corresponding sung note, such as illustrated here:



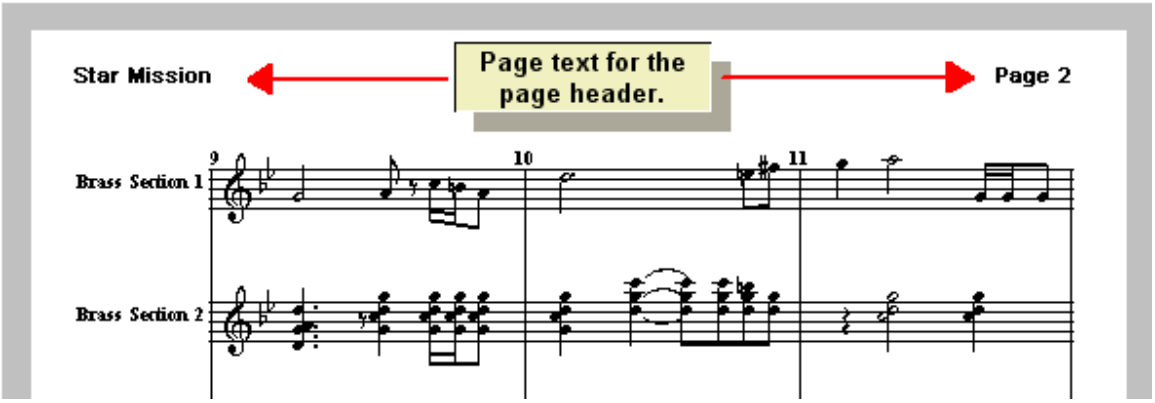
- Free Text 391

  Free text can be freely placed anywhere within the body of the score. Examples of free text include tempo markings and expressive directives, such as illustrated here:
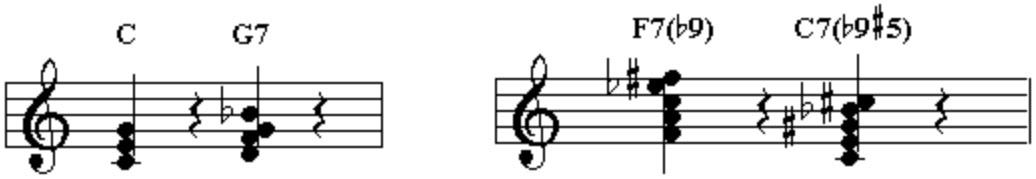


- Page Text 395

  Page text appears at the header or footer of every printed page, or every left or right page, or just the first page of the score. Some common examples of page text are the song title and composer name on the first page, and page numbers displayed in headers or footers, such as illustrated here:
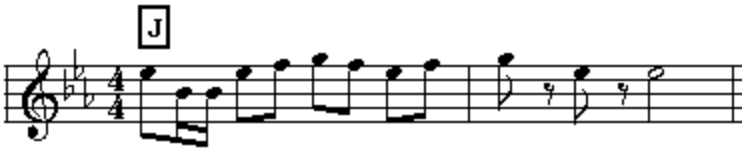


- Chord Names 401

  Chord names are displayed above the top staff of each system of the score. **Musician** offers an option to automatically analyze an imported MIDI file to determine and display chord names. You can edit chord names just as you do other text, except some special characters such as "b" and "#" are interpreted as flat and sharp. Here are some examples of chord names:



- Rehearsal Marks 416

  Rehearsal marks help to quickly direct ensemble musicians to important locations in the score during their practice sessions. In **Musician**, rehearsal marks can similarly be used to define the start and end locations of practice loop 115 sessions, in which you can sing or practice your solo instrument while reading notes from the screen with accompaniment from **Musician**. Rehearsal marks are always presented in boxes. You can enter any number of letters or numbers for the rehearsal mark text. In this example, an upper-case letter is used:



6.1 General Procedures for Editing Text

The procedures by which you add and edit text are similar for each of the types of text supported by **Musician**. The common procedures are briefly described in the these topics:

- Adding Text

- Editing Text
- Deleting Text
- Selecting Font Type, Size and Properties
- Showing and Hiding Types of Text
- Adding International Characters in Text 373

Detailed procedures for editing each type of text are described in separate sections for each:

- lyrics
- free text
- page text
- chord names
- rehearsal marks 416

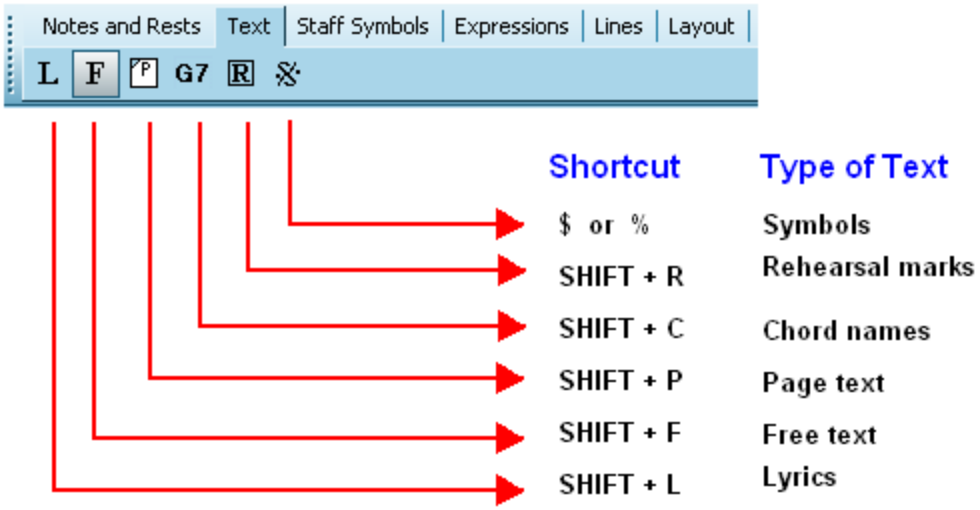
6.1.1 Adding Text

To add text:

1. With the mouse, navigate to the Text Palette. You can also simply click on a text element that is already present in the score.

   -- OR --

   Type SHIFT+T. If **Musician** displays the Tie Palette first, then type SHIFT+T a second time to display the Text Palette.



2. Click one of the buttons in the text type palette to display a specific palette for that type of text.

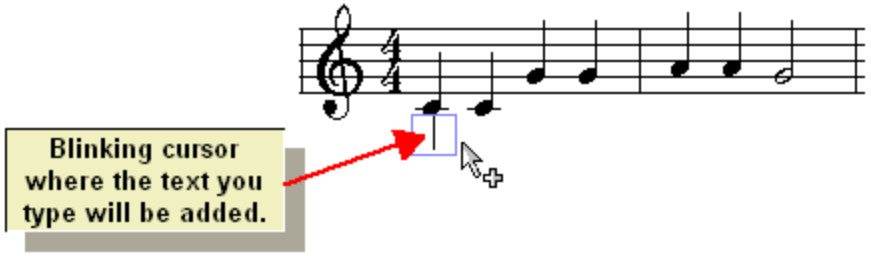
   -- OR --

   Skip step #1, and go directly to one of the text palettes by typing one of the short-cuts, such as SHIFT+L for the Lyrics Palette.
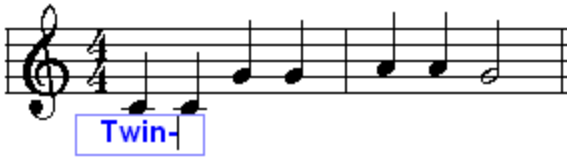
   <%PROD%> changes the mouse cursor to with an additional "dongle" to indicate the type of text.

3. Click the mouse approximately where you want to add the text.

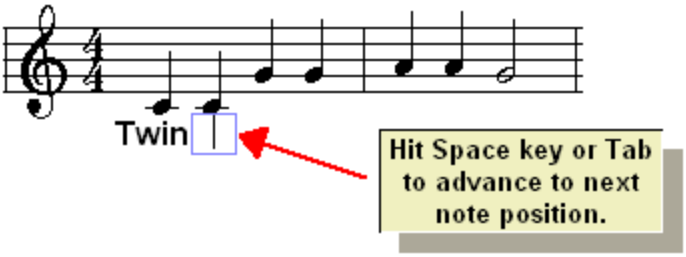
Musician will display a blue box surrounding the area in which you will type in text, and will display a blinking cursor where you can start adding the text.



4. Type in the text, which will be inserted at the location of the blinking cursor. If you make any errors typing in the text, you can correct them before completing the entry of the text, following the procedures described in the next topic Editing Text 368.



5. If you are adding lyrics or chord names, hit theTAB key to advance to the next note to prepare to enter the next word or syllable of the lyric or next chord name. Or, if you are adding lyrics, you can also use the SPACE key instead of the TAB key to advance to the next note.



6. For free text 390 and page text 394 objects, you can enter multiple lines of text. Press the ENTER key to begin a new line of text.
7. Hit the ESC key when you are done entering the text.

   The ESC key tells **Musician** that you are no longer entering text. **Musician** will then interpret your subsequent keyboard input as **Musician** commands rather than as text to be added.

6.1.2 Editing Text

The techniques for editing text in **Musician** are the same as for other typical Windows programs that support text editing.

One difference in editing text in **Musician** is that text is organized into objects. For example, a chord name is an object, just like a notehead or clef is an object. To edit a text object you must first select it, typically by clicking it, just as you must select a notehead before changing the pitch of the note, or a clef object before changing it from a treble clef to a bass clef.

When you are done editing a text object, then you must hit the ESC key, or select another text or non-text object. If you forget to unselect a text object, and then type in a command, such as SHIFT+N for the Note Palette, you will add the letter 'N' to the text you have been editing. You can quickly correct this mistake, which you may make

a few times before you get used to the procedure. Just hit the BACKSPACE key to remove the characters you mistakenly entered. Then hit the ESC key to complete the text entry.

To change text:

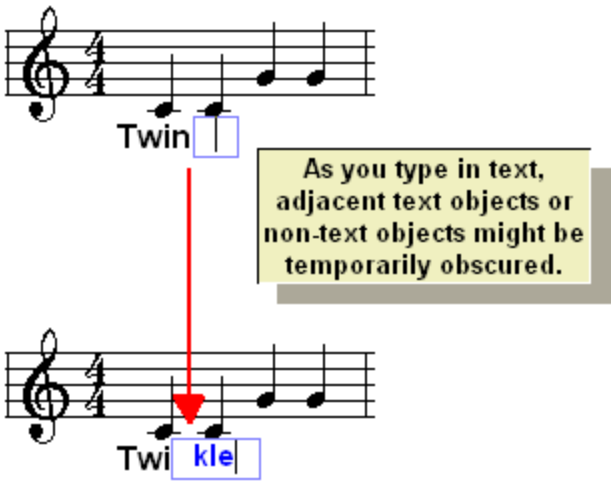
1. Click a text object: lyric, free text, page text, chord name, or rehearsal mark.

   Musician will highlight the selected text in blue. A blinking cursor will indicate the current insertion point for characters you want to type.

2. Edit the text in the same way that you would edit text in other Windows applications. Here are some of the most common text editing techniques:

   - Click the mouse to move the blinking cursor within the text object, to determine where characters that you type will be inserted.
   - Hit the BACKSPACE key to delete the character to the left of the cursor. Hit the Del key to delete the character to the right of the cursor.
   - Hit the ENTER key to start a new line of text. This works only for lyrics (to add more verses), and for free text and page text. The other types of text (chord names and rehearsal marks) are limited to one line only.
   - Use the arrow keys to move the cursor right and left, and up and down, within the text object.
   - While holding down the mouse button, drag the mouse to select text. Hit the Del key to delete the selected text. Or drag the text to another position in the text object. Type CTRL+C to copy the selected text to the clipboard.
   - Type CTRL+V to paste previously copied text from the clipboard. The text might have been added to the clipboard by **Musician**, or by another program such as the Windows NotePad text editor.

3. You might notice that **Musician** does not immediately adjust the spacing of surrounding notation and other text as you enter new text.



   This happens only temporarily. As soon as you complete the entry of the text, **Musician** will automatically reformat the area around the newly edited text to make room for it.

4. To complete the editing of the text, hit the ESC key.

   -- OR --

   Select another text item to work on it.

-- OR --

Select another non-text item to work on.

-- OR --

In Select Mode 133, click the mouse in an empty space in the score.

-- OR --

In Add Mode 133, click the mouse at another location to start a new text object there, thus completing the editing of the currently selected text object.

6.1.3 Deleting Text

To delete text:

1. Click a text object. Or select multiple objects by dragging the mouse over them.
2. Hit the Del key.

If you are already "inside" the text object, that is, editing text within it, then the Del key will only remove the character immediately after the text cursor. If you are already editing text inside the object and decide to delete the entire text object, then unselect the text object first. Then follow the above procedure for deleting the text object.

6.1.4 Selecting Font Type, Size, and Properties

You can edit the font type, size and properties for any of the types of text supported by **Musician** (lyrics, free text, page text, chord names, and rehearsal marks), in the following ways:

- Change the default font type (such as Arial), size (such as 10 point), and properties (such as bold) that are applied to each object. You can specify a separate default font for each of the categories of text (lyrics, free text, etc.).

  Further, for a given type of text, such as lyrics, you can specify a different font size for different score parts 178.
- For any given text object, override the default font assignment using a Font dialog.
- For any given text object, override the default font assignment using palette buttons or keyboard shortcuts.

To specify the default font style and point size for one of the five types of text objects, and for a given part or all parts of the score:

1. Choose the Text Fonts command in the Format menu.

   Musician will display the Fonts dialog.
2. Follow the instructions in the topic Font Size for Types of Text 202.

To override the default font type, size, and bold or italic property for individual text objects using a font dialog:

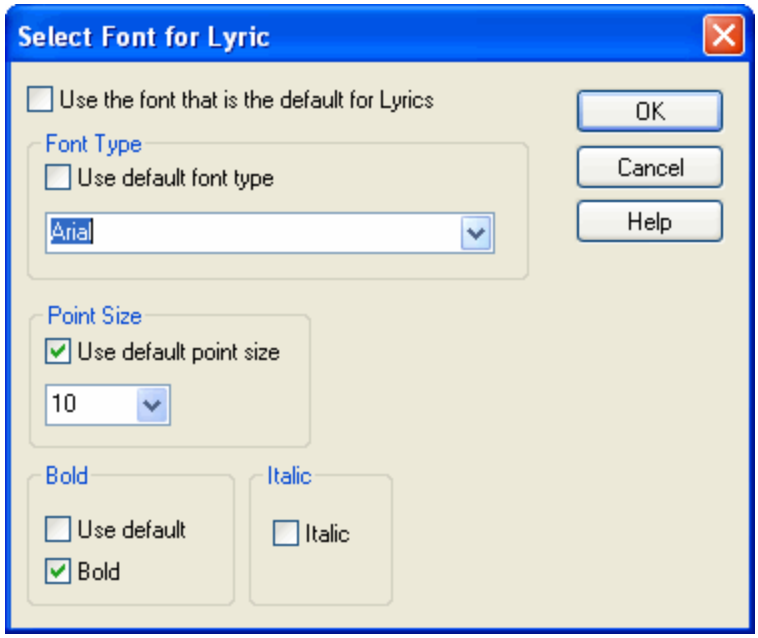
1. Click on the text object as in step 2.
2. Select one or more text objects of the same type (lyrics, free text, etc.)

   Musician will highlight the selected text objects in the color blue, and will display the palette for that type of object, such as the Lyrics Palette.
3. In the text palette, click the format text F button.

-- OR --

Type CTRL+F.

Musician will display a font dialog, such as the following one for lyrics:



4. Choose options in the dialog box as follows:
   - Set a check mark for "Use the font that is the default for (type of text you are editing)", to use the default font for that type of text. To specify the default font for a type of text (lyrics, free text, page text, etc.), following the procedure in Font Type and Size for Types of Text 202.
   - Set a check mark for "Use default font type", "Use default point size", or "Use default bold"), to use the default property for the category of text, as determined by the Text Fonts command in the Format menu. (See the first procedure above.)
   - Turn off the check mark for "Use default" for any of the characteristics to enter an overriding value.

     The point size can have an optional single digit after decimal point, such as 8.5.

▸ To override the default font type, size, and bold or italic property for individual text objects using palette buttons or keyboard shortcuts:

1. Select one or more text objects of the same type (lyrics, free text, etc.).

   Musician will highlight the selected text objects in blue, and will display the palette for that type of object, such as the Lyrics Palette.

2. Use one of the following text palette buttons or corresponding keyboard shortcuts:

	Shortcut	Command
A	Ctrl + NumPad + (plus)	Increase size
A	Ctrl + NumPad - (minus)	Decrease size
B	Ctrl + B	Bold
I	Ctrl + I	Italic

6.1.5 Moving a Text Object

Two of **Musician**'s five types of text objects can be freely moved around on the page: free text and page text.
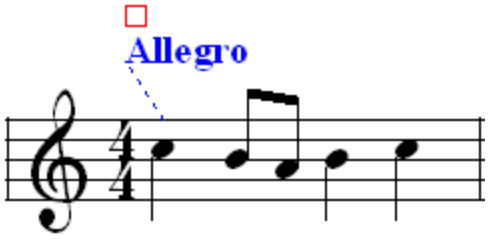
The positions for the other three types of text-- lyrics, chord names, and rehearsal marks, are automatically determined by **Musician** in order, for example, to vertically align multiple objects of the same type. If you find it too confining that a given lyric, chord name, or rehearsal mark cannot be freely moved, then you might want to replace it with a free text object that can be freely moved.

You can move a free text or page text object either by dragging it with the mouse, or by selecting it and using the arrow keys on your keyboard.

To move a free text or page text object by dragging it with the mouse:

1. Click the text object you want to move.

   The text will be highlighted in blue to show that it is selected. A red ☐ handle will be displayed at the top left corner of the text:



2. Click the mouse on the ☐ handle, and while holding down the mouse button, drag the text to a new position.

To move a free text or page text object by using the arrow keys on your keyboard:

1. Click the text object you want to move.
2. Type the Up, Down, Left, or → keys one or more times to move the text.

6.1.6 Copying and Pasting Text

You can use the Windows clipboard to copy text from one text object in **Musician** to another, or to copy text between a text object in **Musician** and text that you edit in an external text editor, such as Windows NotePad.

For lyrics, you can copy multiple lyrics and verses at a time, as described in Copying and Pasting Lyrics 380. You can also use an external editor to prepare lyrics and then paste them into a score, as described in Editing Lyrics Using an External Text Editor 384.

To copy text from one object to another:

1. Click the text object you want to copy.

   The text will be highlighted in blue. Do not click the text object a second time to "open" it for editing.

2. Copy the text to the Windows clipboard by using the Copy command in the Edit menu.

   -- OR --

   Type CTRL + C.

3. Enter Add Mode 133.

4. Click the mouse where you want to add the new text object.

   In the score, a blue box and a blinking caret inside it will be displayed, indicating where you could start typing text.

5. Paste text from the Windows clipboard into the new text object by using the Paste command in the Edit menu.

   -- OR --

   Type CTRL + V.

6.1.7 Showing and Hiding Types of Text

For a given score part 156, you can hide any of the following types of objects: lyrics, chord names, and rehearsal marks. For example, you might want to remove the chord names from the top of staves except for piano and guitar parts. Another reason you might want to hide these text objects is to temporarily create more room in the **Musician** window to view and edit other types of objects.

To toggle whether a type of object is hidden or shown in the currently viewed part:

1. With the mouse, navigate to the palette for the type of text.

   -- OR --

   Type SHIFT+L, SHIFT+C, or SHIFT+R for the Lyrics, Chord Names, or Rehearsal Mark Palette.

2. In the text palette, toggle the Show/Hide Type of Object  button.

   -- OR --

   Type "qsl", "qscn", or "qsrm" for Quick Show (or Hide) Lyric, Chord Name, or Rehearsal Mark.

6.1.8 Adding International Characters in Text

If you are preparing scores in a language other than English, then you may need to include international characters in lyrics or other text. For example:

è ã

If your keyboard supports the international characters you need, then you can simply type them. Or, if you already have developed your own techniques for entering

international characters, then you will not need to follow the procedure described below.

The procedure described here uses the Character Map utility which is included in the Windows Accessories folder.
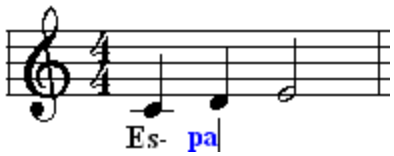
This procedure has on the limitation that a given text object in **Musician** can use only one font. The exception is that free text objects can mix ordinary text with **Musician's** Harmony font music symbols. There are a number of fonts have international characters, so this limitation should not present a problem.

To insert an international character in lyrics or text:

1. Follow the usual procedure for adding text, such as for a lyric or free text object.
2. Specify the font name for the text.

   You can specify a font name for all text objects of a given type, such as all lyrics, or all free. For instructions, see Font Type and Size for Types of Text.

   You can also specify the font name for a specific text object, as described in Selecting Font Type, Size, and Properties.
3. Type normal text up to the point where you want to add the international character.



4. If you know the numeric code for the character in the font, then while holding down the ALT key, type the 3-digit number of the character. If the character has only two digits, then type a leading zero '0' character, such as in ALT+060.

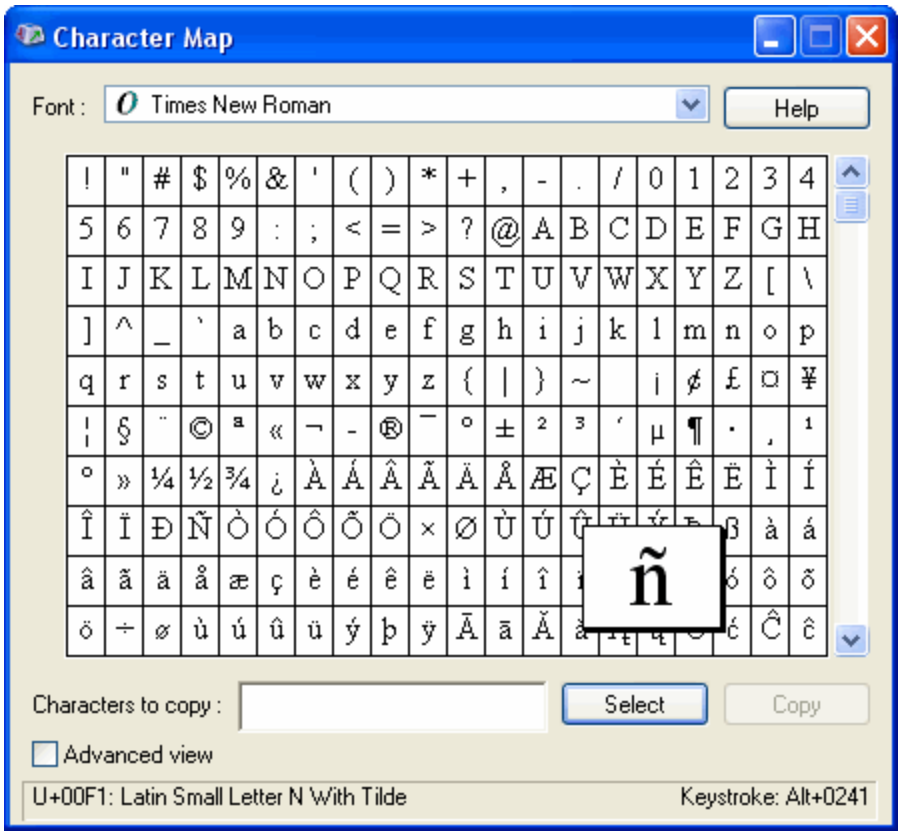
   If you choose this method of entering the numeric code for the character, then skip the remaining steps of this procedure.
5. If it is not already running, start the Windows Character Map utility, as follows:

   ■ Click the start or button in the left bottom corner of the screen.

   Windows will display a pop up menu.

   ■ In the pop-up menu, choose All Programs / Accessories / System Tools / Character Map.

The Character Map utility window will be displayed, as shown here:



6. In the Character Map utility, select the same font that you are using for the text in **Musician**. If you are not sure what the font is in Musician, then while you are adding the text, click the Font Style button. A simple dialog box will display the current font face name, such as Times New Roman.

7. In the Character Map utility, preview the letter you wish add to the text in **Musician**, by clicking its box.

   The character that you click will be displayed in a larger size, as illustrated for the **ñ** character, illustrated above.
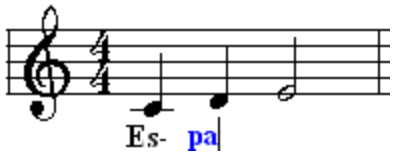
8. Click the Select button in the Character Map window.

   Character Map will show the character you have selected:
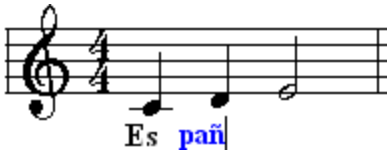
9. Switch back to **Musician** by clicking the top of its window, or by using ALT+Tab. Do not click the mouse inside the score, because that will start a new text object.
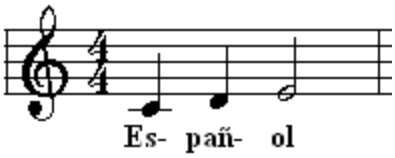
   The text cursor should still be blinking, as you had temporarily left it to use the Character Map utility:

10. Type CTRL+V to paste the international character (**ñ** in this example) at the current text cursor position:
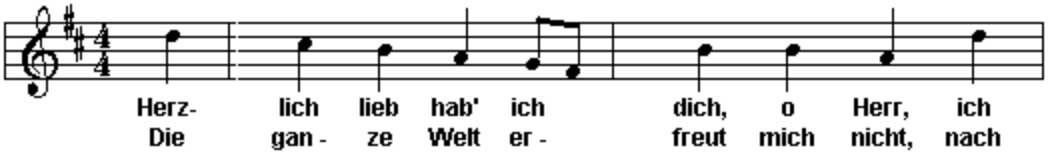


11. Continue adding normal characters. Repeat steps #3 through #8 to add other international characters, as needed.



6.2 Lyrics

With **Musician**, you can add lyrics to a song, with multiple verses 378 (lines of text), such as illustrated below:



Musician automatically centers each word or syllable under the note to which it belongs.

Musician imports lyrics from MIDI and Karaoke files 63. You can quickly create a vocal part that combines lyrics with a melody, if the melody has its own staff. For more information, see Sing-Along Part 185. You can also quickly create a "fake book" lead sheet that includes the melody, chord names, and lyrics. See Fake Book Lead Sheet Part 186.

For several useful tips related to lyrics, see Preparing a Vocal Part 191.

The topics that follow describe various procedures for editing lyrics:

- Adding and Editing Lyrics
- Advancing to the Next or Previous Lyric
- Adding and Editing Multiple Verses
- Lyric Hyphen and Melisma Characters
- Copying and Pasting Lyrics
- Correcting the Misalignment of Lyrics with Notes
- Editing Lyrics Using an External Text Editor
- Working with Karaoke (.kar) Files
- Hiding Lyrics 389

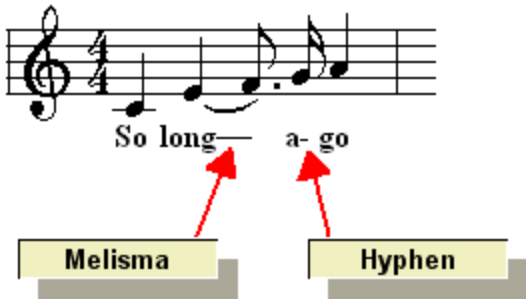
6.2.1 Adding and Editing Lyrics

The procedures for adding and editing lyrics are generally the same as for all types of text supported by **Musician**. See the preceding General Procedures for Editing Text 366 :

- Adding Text
- Editing Text
- Deleting Text
- Selecting Font Type, Size, and Properties
- Showing and Hiding Types of Text
- Adding International Characters in Text 373

Here are some special details about adding and editing lyrics that differ from other types of text:

- The keyboard shortcut for the Lyrics Palette is SHIFT+L.
- Use the SPACE key or TAB key to readily advance to the next note while you are adding lyrics 378. In other words, you add lyrics just like regular typing to advance to the next note.
- To add a space character inside a lyric (eg. "My love"), hold the "Shift" key while typing the space.
- For a given staff, lyric text will be automatically centered under their respective notes. It is not possible to move individual lyric objects in the way that you can move free text and page text objects 372.
- To enter a second verse of lyrics 378, select the first word in the line; move the text cursor to the end of that word; and hit the ENTER key to begin the second line (verse). You can enter the second verse word and advance in the same manner as entering and advancing in the first verse of the lyrics.
- Type two or more dash "-" characters in sequence to produce a lyric melisma 379 symbol that looks like this:

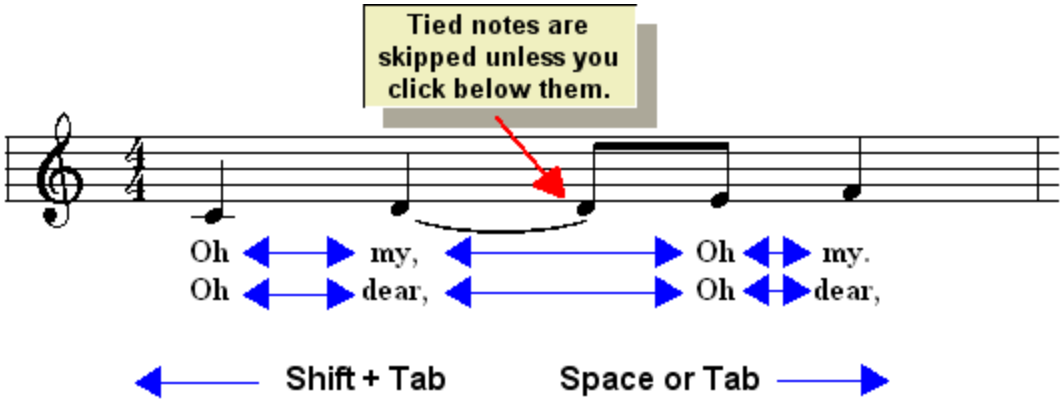


- You can use an external text editor, such as Windows Notepad, to quickly type the text for lyrics. Copy the text to the Windows clipboard. Then in **Musician**, use the Paste Lyrics command to insert the lyrics across a range of notes. This works even for multiple verses. Before you try this, make sure you understand how the text needs to be formatted in the text editor. See Editing Lyrics Using an External Text Editor 384.
- You can prepare lyrics for especially formatted Karaoke 387 .kar files 387, so that a Karaoke player program reading the file will be able to correctly display one phrase of lyrics per line.

6.2.2 Advancing to the Next (or Previous) Lyric

As you are adding or editing lyrics, you can advance to the next note or previous note or lyric in the following ways:

- Type the Space or TAB key to advance to the next note or lyric, which ever comes first.
- Type SHIFT+Tab to go back to the previous note or lyric, which ever comes first.
- If you are adding lyrics and advance to a next or previous note that does not already have a lyric, then you can start typing in the new lyric at that note.
- As you advance to the next or previous lyric, the text cursor will remain positioned in the current verse that you are editing.
- If a note is tied from the previous note, then the cursor will skip over that tied note as you advance. However, if you want to add a lyric at a tied note, just click the mouse below that note.
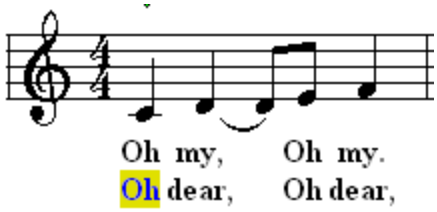


6.2.3 Adding and Editing Multiple Verses

To add a new verse in a line of lyrics below a staff:
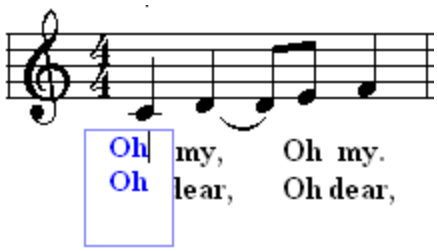
1. Select the first lyric in the line.

   Whichever verse of the lyric you clicked will be highlighted:
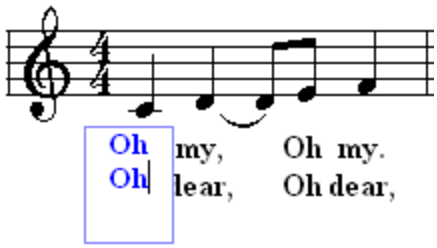


2. With a second mouse click, click any verse of the lyrics for the first note.
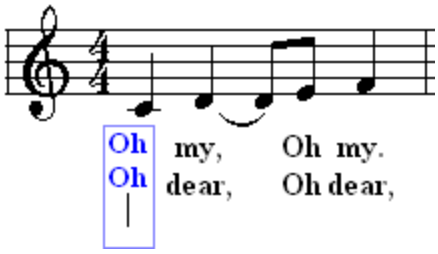
   This will open a text editing area, and a blinking text caret will be display, as shown here:



3. Hit the key until the text cursor is located in the last verse.



4. Hit the ENTER key to start the new verse.

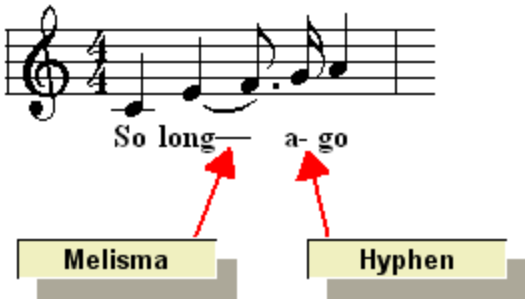


5. Type in the text for the new lyric.

   After you start the new verse on the first lyric of the line, you can continue adding the lyrics for the same verse below subsequent notes by hitting the Space or TAB key between each lyric. **Musician** will keep the text cursor in the same verse.

6.2.4 Lyric Hyphen and Melisma Characters

In **Musician**, you can enter a long extended line at the end of a lyric word or syllable, which looks like this:



The purpose of the extended line, sometimes called a melisma, is to show that a word or syllable is sung across two or more different pitches, as in the above example.

The purpose of the hyphen is to separate two syllables of a lyric word.

To add a hyphen at the end of a lyric syllable:

1. Add the lyric syllable.
2. Type a single dash "-" character at the end of the syllable.
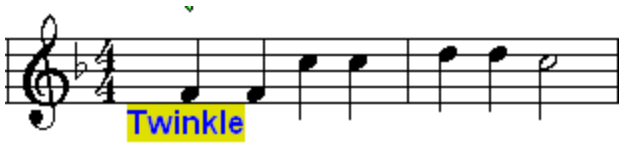
To add a long dash (melisma) after a lyric:

1. Add the text portion of the lyric.
2. Before advancing with the SPACE or TAB key to enter the next lyric, type two or more dash "-" characters. The number of dash characters you enter will determine the length of the melisma. As you type in the dash characters, you will initially just see the dash characters.
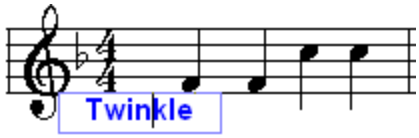
3. Complete the entry of the lyric by hitting the ESC key, or by typing SPACE or TAB to advance to the next note. At that point, the separate dash characters will turn into a continuous line.
4. You will not be able to rely on the length of the multiple dash characters as being the same as the resulting continuous line. It will take a little practice on a couple of these before you will get a feel for how many dash characters you need to enter to achieve a certain line length. The number of dashes needed may also vary with the font style.

To insert a hyphen in the middle of a lyric and shift the second syllable to the next note:

1. Select the lyric:



2. Click the mouse in the lyric, and move the text cursor to the position where you want to insert the hyphen:
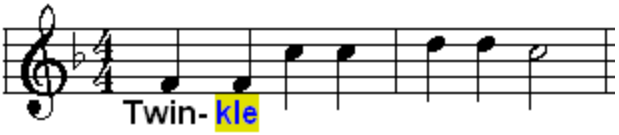


3. In the Lyric menu, choose the command Add Hyphen And Move Second Syllable To Next Note.

   -- OR --

   Type Ctrl + dash(-)

   -- OR --

   Click the Add Hyphen And Move Second Syllable To Next Note button in the Lyric Palette.

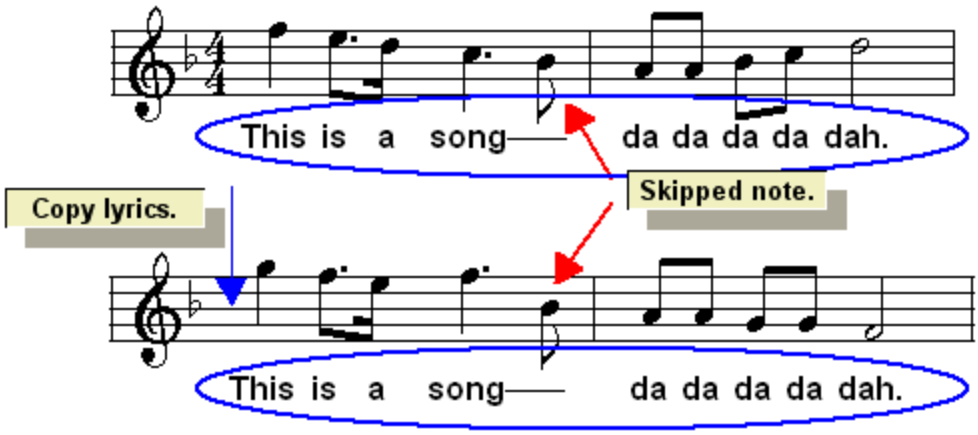


6.2.5 Copying and Pasting Lyrics

Sometimes you can save time entering lyrics that are repetitive by copying them from one part of the score to another. Two alternative procedures for copying lyrics are described below.

When you copy lyrics from one part of a song to another, it is important that the rhythms of the sung notes are basically the same, or more specifically, that the number of notes are the same in the two regions. If the number of notes do not match, then the copied lyrics might not be aligned correctly with the destination melody notes. If this happens, there is a convenient way for you to correct the problem. You can shift one or more lyrics to the right or left 382, as described in the next topic.

When **Musician** copies lyrics, it recognizes if some of the "from" notes do not have corresponding lyrics. If so, then **Musician** will skip over corresponding "to" notes, as illustrated here:

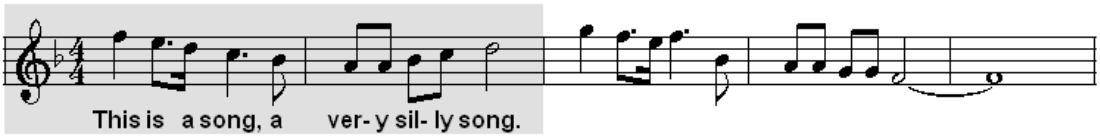


In matching notes in the "from" and "to" regions, **Musician** ignores the right note of any pair of tied notes. This limitation is rarely a problem, because it does not make sense that a distinct lyric can be sung at the division of a tied note. A distinct lyric (or syllable) requires a distinct note, even if that note is of the same pitch.

To copy lyrics from one section of a song to another location, using the clipboard:

1. Select an entire staff 148, or select some region 241 of a staff, that contains the lyrics you wish to copy.

   Here is an example of what the selected region looks like:

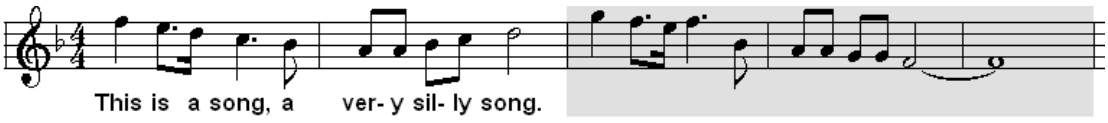
   

2. Copy the region to the clipboard using the Copy command in the Edit menu. This copies everything in the selected region to the clipboard, including the lyrics.

   -- OR --

   Type CTRL+C, which is the standard Windows keyboard shortcut for Copy to Clipboard.

3. Select the new region to where you wish to copy the lyrics.
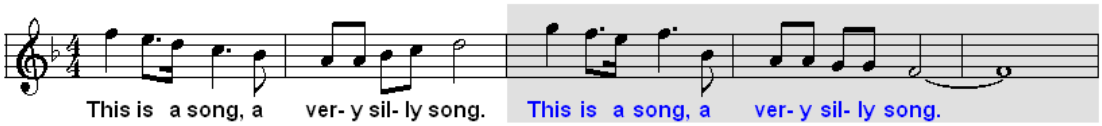
4. Type SHIFT+L to display the Lyrics Palette. In the Lyric Menu, choose the Paste Lyrics command.

   -- OR --

   Choose the Paste Lyrics command in the Edit menu.

   -- OR --

   Type "qpl" for Quick Paste Lyrics.



To copy lyrics from one section of a song to another location, using a dialog box:

1. Select an entire staff 148, or select some region 241 of one staff, that contains the lyrics you wish to copy.
2. Type SHIFT+L to display the Lyrics Palette and menu.
3. In the Lyric Menu, choose the Copy Lyrics Between Staves command.

   -- OR --

   Type "qcl" for Quick Copy Lyrics.

   Musician will display the Copy Lyrics Between Staves dialog box, such as illustrated below.



   The region (staff and range of locations) that you selected in step #1 will be pre-selected in the above dialog box.

3. In the dialog box, select the staff *to* which you wish to copy the lyrics.
4. Click the OK button to complete the task.

6.2.6 Correcting the Misalignment of Lyrics with Notes

You can quickly enter lyrics by typing one word or syllable at a time, and hitting the Space or TAB key to advance to the next note. If you are in a hurry to enter the lyrics, you may find that at some point the lyrics you have entered fall out of alignment with the melody notes. Fortunately, you do not have to erase the misaligned lyrics and re-enter them. Instead, you can select the misaligned lyrics and shift all of them one note to the right or left, with a single command.

Another example where shifting lyrics to the right or left is handy is when copying and pasting lyrics 380 from one section of a song to another. If the rhythms and number of notes do not match in the "from" and "to" regions, then the lyrics might become misaligned with the notes in the destination "to" region.

Yet another example where shifting lyrics to the right or left is handy is when you are importing lyrics that you have entered in an external text editor 384. If you do not count

the notes exactly (and remember to skip over tied portions of notes), then the imported lyrics might become misaligned with the notes.

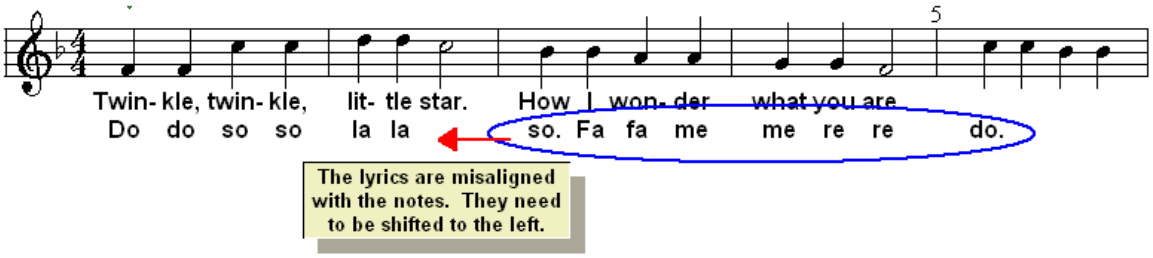
In all of these cases, you can easily correct the situation. The first procedure below shifts to the right or left a lyric and all of the lyrics that follow it. That procedure is particularly useful for the case where you entered lyrics in a text editor, such as NotePad, and then copy the lyrics via the Windows clipboard 384 into the score, but the lyrics are misaligned by one or more notes.

The second procedure below shifts to the right or left one or more selected lyrics. That procedure is particularly useful for the case where you were rapidly typing in lyrics and did not notice that the lyrics had become misaligned with the notes.

Finally, the third procedure below describes a global Align Lyrics with Notes command that moves all lyrics to the closest notes.
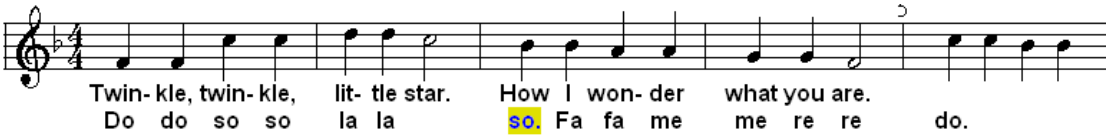
To shift a lyric and all following lyrics to the right or left:

Consider the following example, where the lyrics are misaligned with the notes, starting in the second measure, and they need to be shifted to the left:



1. Select the lyrics that you wish to shift.

   If there are multiple verses, then click the lyric of the verse that you wish to shift. The verse of the lyric you selected will be indicated with a yellow-brown background:
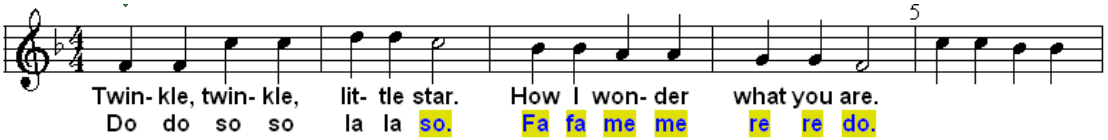


2. Choose the Shift Lyrics And Following Lyrics Right (or Left) command in the Lyric Menu.

   -- OR --

   Click the Shift Lyrics and Following Lyrics Right →LL or Left LL← button in the Lyrics Palette.
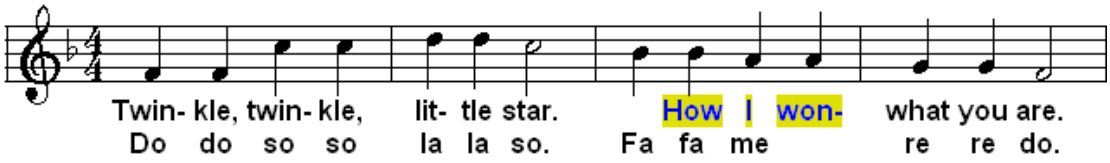
   -- OR --

   Type SHIFT+CTRL+→ or SHIFT+CTRL+←.



To shift one or more selected lyrics to the right or left:

1. Select the lyrics that you wish to shift. To select multiple lyrics in a verse, click the mouse on the first lyric in the desired verse, and then drag the mouse across beats and measures, up to the last lyric you wish to select in that verse.



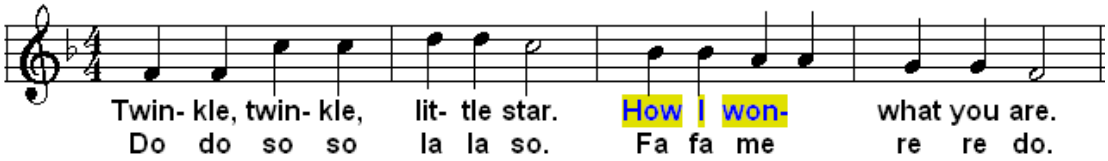
2. Choose the Shift Lyrics Right (or Left) command in the Lyric Menu.

   -- OR --

   Click the Shift Lyrics Right or Left button in the Lyrics Palette.

   -- OR --

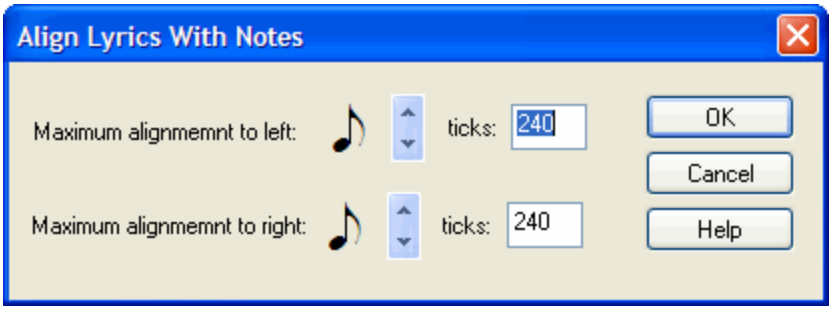
   Type SHIFT+→ or SHIFT+←.



To globally align all lyrics with nearby notes:

1. Navigate to the Lyrics Palette, such as by typing SHIFT+ L.
2. In the Lyrics menu, choose the Align Lyrics with Notes command.

   The command will display this dialog box:

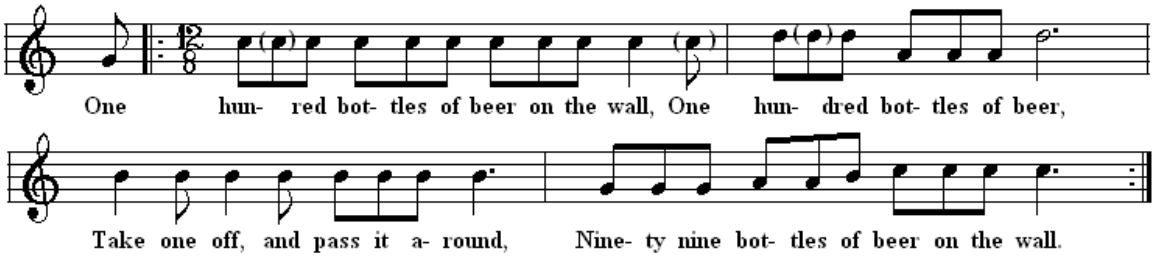


3. Choose the maximum horizontal distance (in ticks) that **Musician** will move the lyrics. There 480 ticks in a quarter note.
4. Choose the OK button.

6.2.7 Editing Lyrics Using an External Text Editor

Although it is easy to enter lyrics in **Musician** by typing in each word and advancing to the next note with the Space or TAB key, you might find it even easier to enter lyrics by first typing them into an external text editor. You can use the Windows clipboard to copy the text from the external text editor, and then paste the text into the score as lyrics.

Consider the following pub song:



The second verse of the song continues with "Ninety-nine bottles of beer on the wall". The third verse continues with "Ninety-eight bottles of beer".

You can use an external editor, such as Windows Notepad, to quickly enter the additional verses. In this example, two more verses instead of 99 more verses should be sufficient for illustration purposes.

We will start by copying the first verse of the song to the Windows clipboard, and then view the lyrics in a text editor. By viewing the lyrics in the external text editor, you will be able to quickly understand how you need to format the text so that it can be transferred via the clipboard back into **Musician**. In the external text editor, we will add the extra two verses to the song. Then, returning to **Musician**, we will replace the single verse with the three verses transferred via the clipboard from the external text editor.

To copy lyrics from Musician to the Windows clipboard and view the lyrics in an external text editor:

1. Select a region 241 of the song that has the lyrics you wish to view and later edit in the external text editor. In this step, be sure to select a *region,* such as by dragging the mouse over the measures while holding down the CTRL key. The selected region will be highlighted with a gray background. This step will not work if you select the lyrics, highlighted in blue.
2. Choose the Copy Lyrics command in the Lyric Menu.

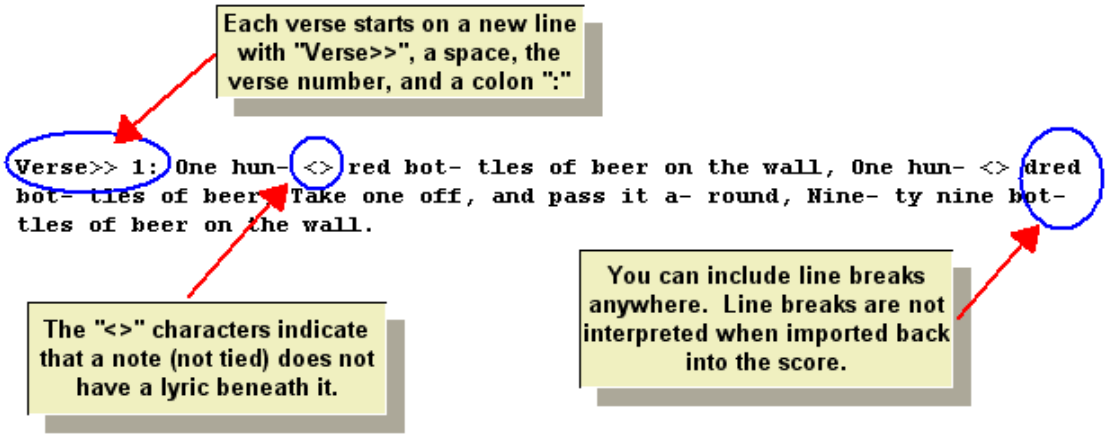
   -- OR --

   Type "qcl" for Quick Copy Lyrics.

   -- OR --

   Type CTRL+C, which is the standard Windows keyboard shortcut for Copy to Clipboard.
3. Open a text editing program, such as Windows Notepad. Use its File New command to create an empty text document. Then use the Edit Paste command, or CTRL+P, to paste the lyrics from the Windows text clipboard into the text document.

In this example, the text will look like this:

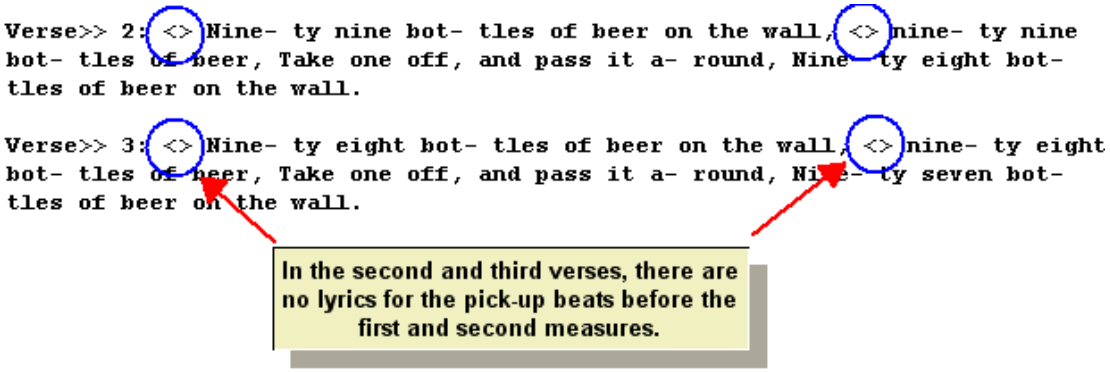


To prepare lyrics in an external text editor, for transfer back into Musician:

- The above illustration explains how **Musician** formats the lyrics as text in the Windows text clipboard. This simple format is expected by **Musician**when you transfer lyrics via the Windows text clipboard back into **Musician**.

  Continuing with the example, you can use the external editor's own Copy and Paste commands to clone the next two verses of the song, and the "One hun-dred" to "nine-ty nine" and "nine-ty eight". But notice that the syllables for "One hun-dred" and "nine-ty nine" are sung with different notes. This example offers you a good illustration about how you can use the special "<>" characters to indicate where no lyric is assigned to a note.

  Here is what the text should look like in the external text editor, ready for transfer back to **Musician**:



  If you do not include the first verse in the text that you copy to the clipboard, then you can append the two new verses after the already existing first verse in the song in **Musician**. On the other hand, if you *do* include the first verse in the text that you copy to the clipboard, then in **Musician** you will first need to remove the existing lyrics (first verse in this example) before you copy all of the verses from the clipboard.

To import lyrics from the external text editor into Musician:

1. In the external text editor, select all of the text, and use the Copy command in the text editor's Edit menu; or type CTRL+C, the standard Windows shortcut for Copy to Clipboard.
2. In **Musician**, select the region to which you wish to copy the lyrics. You might find that the region is already selected, by the first step in the first procedure in which you originally copied the lyrics to the Windows clipboard.

3. In the Lyric Menu, choose the Paste Lyrics command.

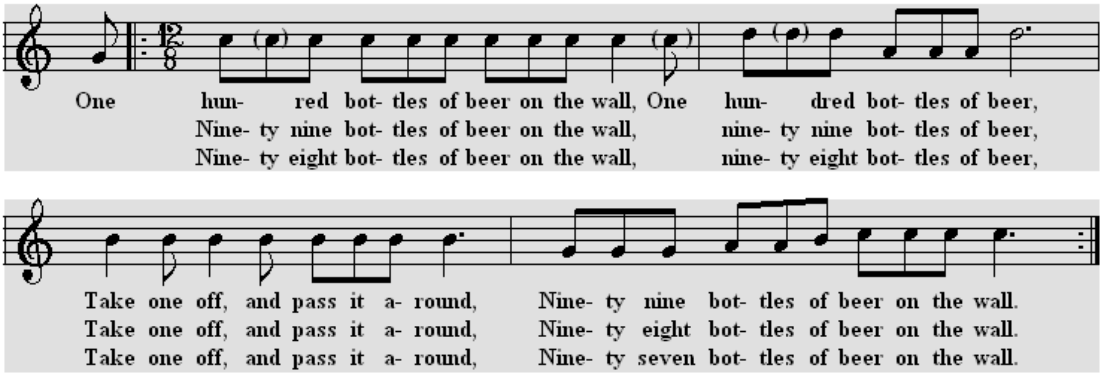
   -- OR --

   In the Edit menu, choose the Paste Lyrics command.

   -- OR --

   Type "qpl" for Quick Paste Lyrics.

   The final result in this example is:



TIP: If after pasting the lyrics from the clipboard you find that some portion of them are misaligned under notes, then you can correct the problem in one of two ways. First, you can use the Edit / Undo command to remove the newly added lyrics; go back to your text editor and correct the text editing error there; and repeat the above procedure for copying and pasting the lyrics.

Alternatively, you can more quickly correct the problem by using lyrics shifting commands. For details, see Correcting the Misalignment of Lyrics with Notes 382.

6.2.8 Working with Karaoke (.kar) Files

With **Musician**, you can create Karaoke (.kar) files that can be played and viewed by third party Karaoke player programs, such as VanBasco's Karaoke Player[tm].

A Karaoke (.kar) file is almost exactly the same as a MIDI file. The only differences between a Karaoke and MIDI file are:

- Karaoke files always include lyrics.
- There are a few special formatting characters used in Karaoke lyrics:
  - -- A back slash "\" character marks the end of a line of lyrics, as displayed by a Karaoke viewer/player program.
  - -- A forward slash "/" character marks the end of a "paragraph" of lyrics. Some Karaoke viewer/player programs interpret this to mean that the screen should be refreshed starting with the next line of lyrics at the top.
  - -- Dash characters at the end of syllables are removed by the Karaoke viewer/player program, and the syllables are joined together.

- A Karaoke file has a .kar filename extension; whereas a MIDI file has a .mid filename extension.

To open a Karaoke file:

- In the File menu, use the Open command. Open a Karaoke file, which must have a .kar filename extension.

To edit the lyrics for a Karaoke file:

1. With the mouse, navigate to the Lyrics Palette.

   -- OR --

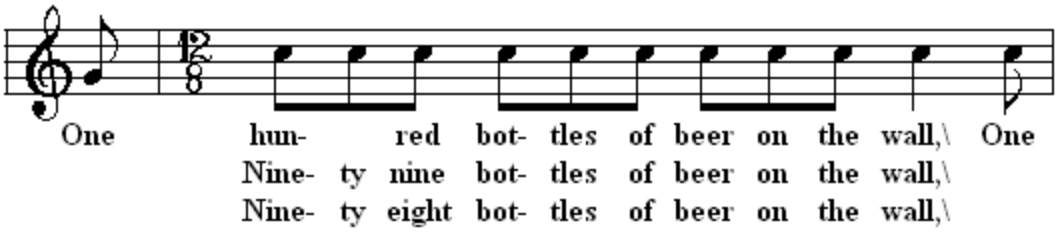
   Type SHIFT+L.

2. To view Karaoke formatting, such as line breaks for phrases of lyrics, choose the Show Karaoke Line Breaks command in the Lyric Menu.

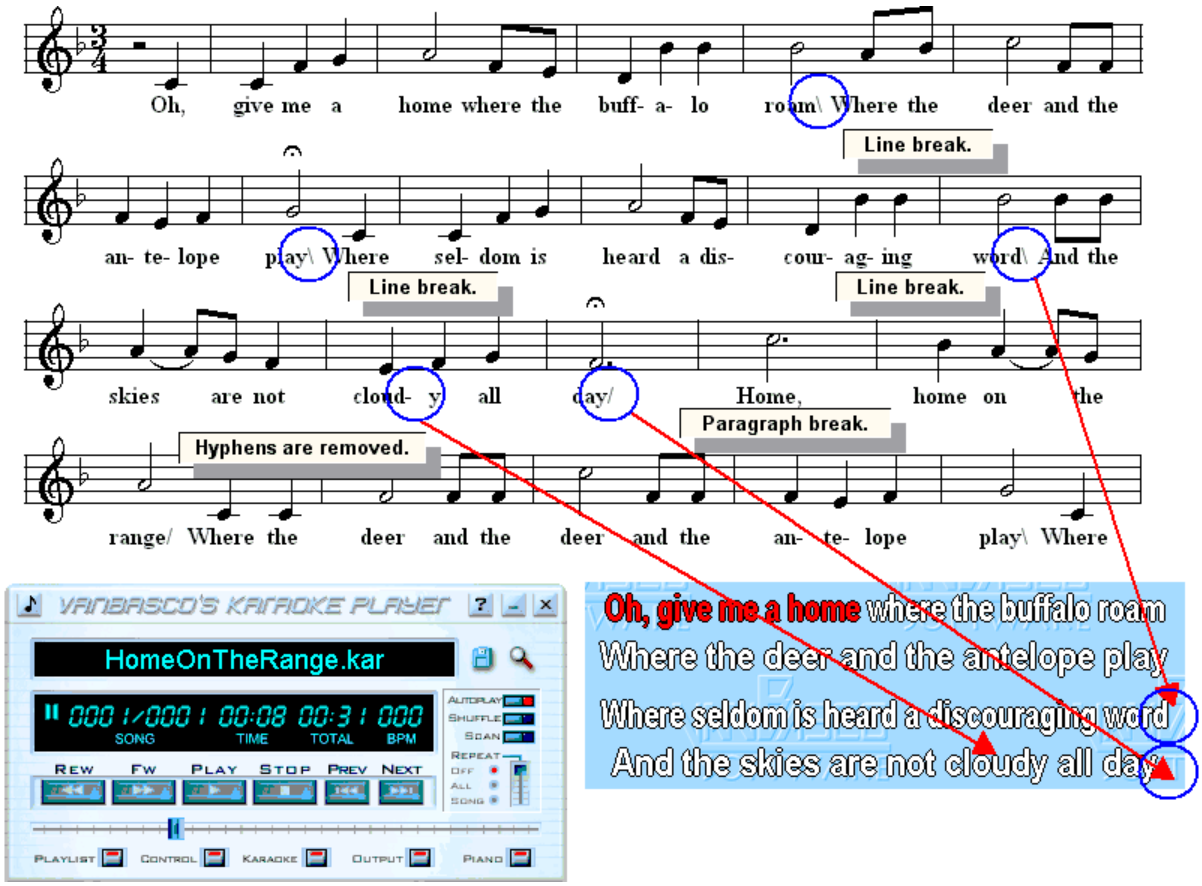
   -- OR --

   In the Lyrics Palette (SHIFT+L), click the Show Karaoke Line Breaks  button.

3. Follow the normal procedures for Adding and Editing Lyrics 377.
4. Add the back slash "\" character for Karaoke line breaks, and the forward slash "/" character for paragraph breaks. Add these characters at the end of the last lyric in the line, or at the beginning of the first lyric in the next line. If the song has multiple verses, then include the "\" and "/" characters at the end of each verse, as illustrated here:



The following example shows how the special Karaoke line formatting characters are interpreted by the popular VanBasco's Karaoke Player (tm).



To export a Karaoke file:

- Use the Export as MIDI or Karaoke File command in the File menu. Export the file as a Karaoke file type, which has a .kar filename extension.
- If the lyrics in the song have multiple verses, then set a check mark by the File Save dialog option "Write out repeats and separate lyric verses in saved MIDI file"

6.2.9 Hiding Lyrics

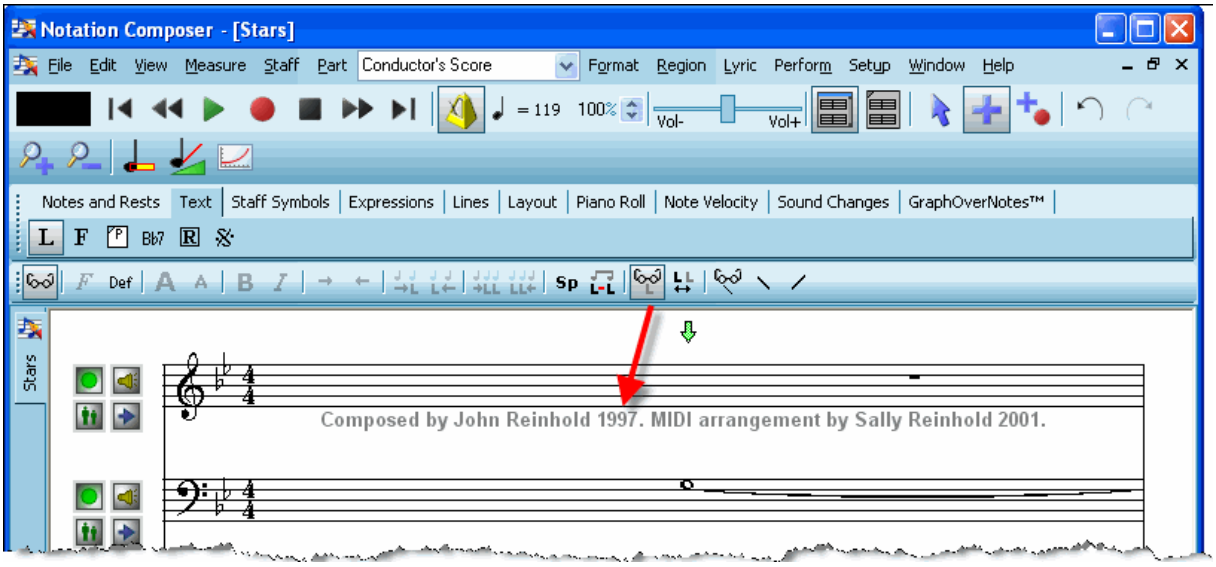
In **Musician**, you can temporarily hide all of the lyrics in the song 373.

You can also select individual lyrics and hide them. But why would you want to hide just one or a few lyrics? The main reason is that many MIDI files add lyrics at the beginning of one or more empty tracks (staves) for the purpose of displaying song titles, composer and arranger information, and copyright notices. Although it's a good idea to preserve this information in the MIDI file, you may not want to display or print it.

Because this need is so common, **Musician** offers an option to automatically hide individual lyrics which are longer than a certain number of characters. The default is 12 characters. That is, any lyric that is longer than 12 characters is probably not actually a lyric but, rather an informational notice displayed in the MIDI track. In the Setup

menu's Transcription Options 73 dialog, you can specify the minimum lyric length that will be automatically hidden.

To view the hidden lyrics in a song, you can turn on the Reveal Hidden Lyrics button in the Lyrics palette, as illustrated here:



If you wish to manually rather than automatically hide lyrics, then follow the procedure below.

To hide or unhide a specific lyric:

1. Navigate to the Lyric palette, as shown above.

   -- OR --

   Type SHIFT + L.

2. Select the lyric you wish to hide or unhide.

3. Toggle the Hide Lyric button.

   -- OR --

   Type "h".

   -- OR --

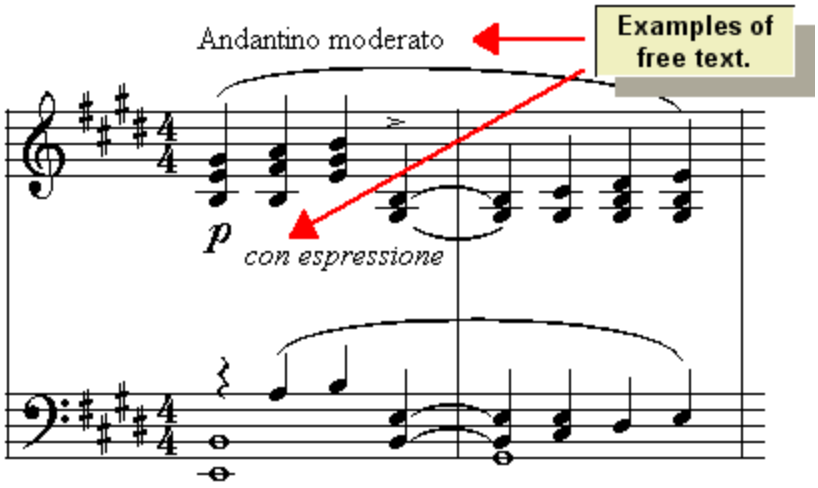
6.3 Free Text

With **Musician**, you can add "free" text anywhere in the score. The term "free" refers to the fact that you can freely determine the exact position of the text, in contrast to some other types of text. Lyrics 377 are always lined up across a staff; and so are chord names 401. Free text does not have to line up with any other text or symbols in the score.

You can use free text for several types of annotations in a score, including:

- Tempo markings, such as *Adagio* or *rallentando.*
- Expression directives, such as "with feeling" or "*con espressione*".
- Playing directives, such as "R.H." for right hand.

The following example, from the main theme of George Gershwin's *Rhapsody in Blue*, illustrates the use of free text:



Musician formats a score so that free text objects belonging to one staff do not overlap any objects in an adjacent staff. However, within a given staff, **Musician** does not attempt to avoid the overlapping of a text object with other objects. Thus, when you place a free text object in the score, you may need to find a free space for it. However, if you place the object above or below other objects in the staff, **Musician** will always move the adjacent staves to make room.

6.3.1 Adding and Editing Free Text

The procedures for adding and editing free text are generally the same as for all types of text supported by **Musician**. See the preceding topic, General Procedures for Editing Text 366:

- Adding Text
- Editing Text
- Deleting Text
- Selecting Font Type, Size, and Properties
- Showing and Hiding Types of Text
- Adding International Characters in Text 373

Here are some special details about adding and editing free text that differ from other types of text:

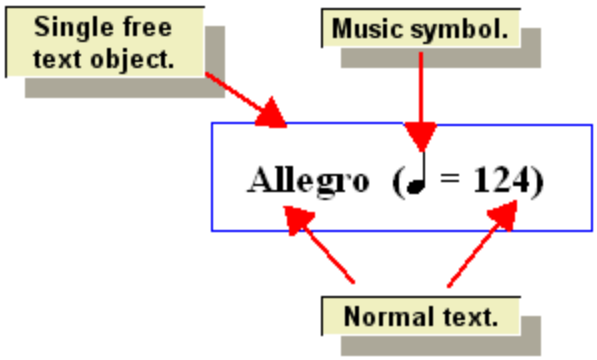
- The keyboard shortcut for the Free Text Palette is SHIFT+F.
- A free text object can have multiple lines. While adding or editing the free text, hit the ENTER key to begin a new line.
- In a single free text object, you can mix ordinary text with music symbols 392, such as the following tempo mark:

  Allegro (♩ = 124)

- You can vertically align a selection of multiple free text objects 394.

6.3.2 Mixing Music Symbols and Normal Text

In a single free text object, you can mix ordinary text and music symbols, such as the following tempo mark:



To create a mixed free text object:

1. With the mouse, navigate to the Free Text Palette.

   -- OR --

   Type SHIFT+F.

2. Click in the score where you wish to add the free text object.

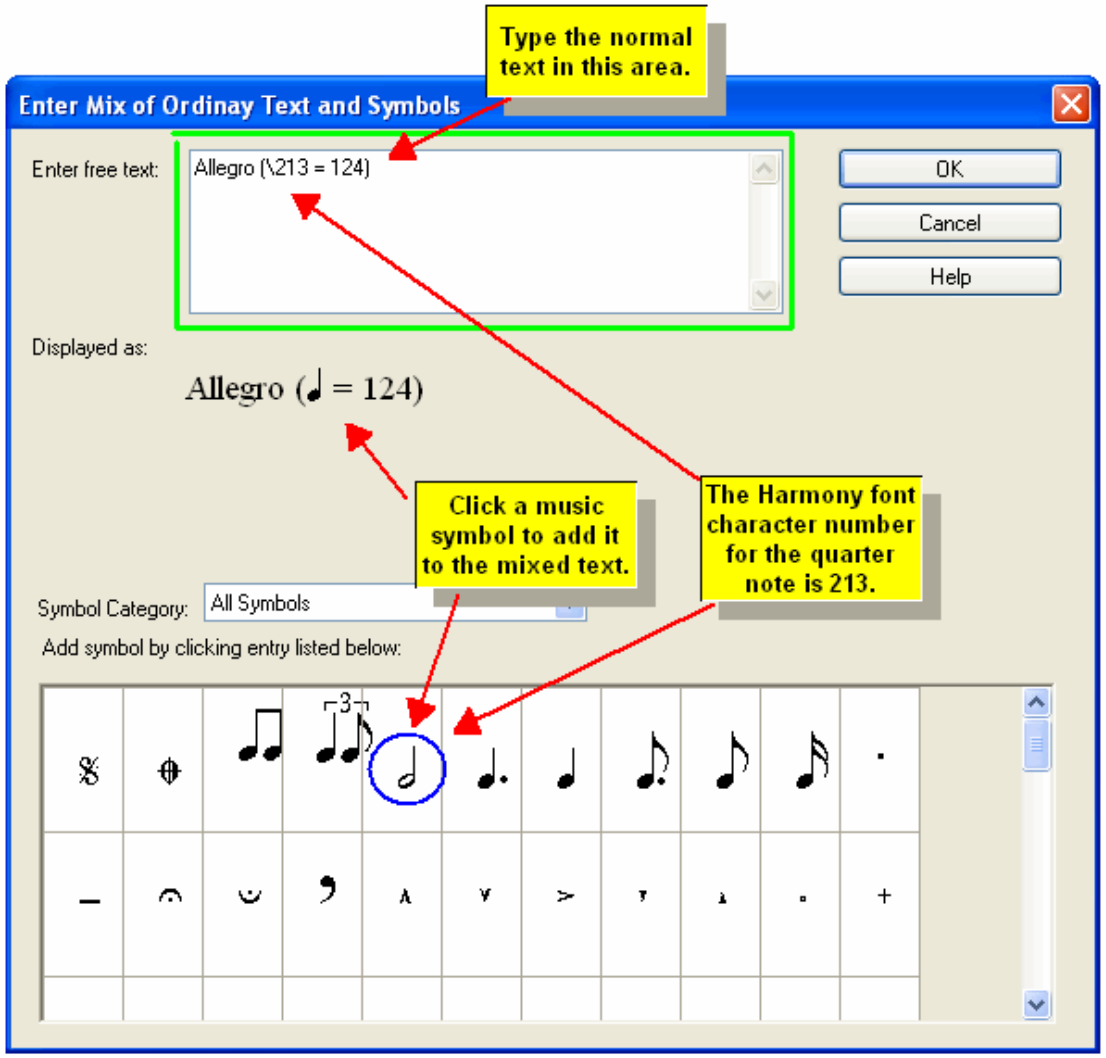
   Musician will display a blinking text cursor.

3. Click the Free Text Properties  button.

   -- OR --

   Type SHIFT+Enter.

Musician will display the Enter Mix of Ordinary Text and Symbols dialog:



The "Displayed as" portion of the dialog box shows what the mixed text looks like as you type in the ordinary text and add music symbols. The mixed text might be shown in a larger font size than what will actually be used in the score so that you can clearly see what you are entering.

4. In the "Enter free text" area of the dialog box, type in the ordinary text. As you type in the text, you will see it displayed in the "Displayed as" portion of the dialog box.
5. To insert a music symbol, find it in the symbol list and click. When you add the symbol, you will see it displayed in the "Displayed as" portion of the dialog box. In the "Enter free text area", you will see the Harmony music font character number for that symbol, preceded by a slash "\" character.

To edit a free text object:

1. Select the free text object with the mouse.
2. Click the Free Text Properties button.

   -- OR --

   Type SHIFT+ENTER.

Musician will present the Enter Mix of Ordinary Text and Symbols dialog box, as illustrated above.

3. In the "Enter free text" area of the dialog box, edit the ordinary text as usual.

   To remove a music symbol, delete all four characters of the symbol's font character number. For example, to delete the quarter note symbol in the above example, delete the characters "\213".

   To insert a music symbol, click the mouse at the text position, in the "Enter free text" area, where you wish to insert the symbol. Then click the symbol in the list in the bottom area of the dialog box.

6.3.3 Vertically Aligning Free Text
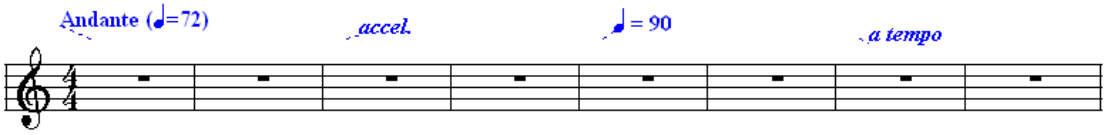
Musician always vertically aligns chord names and rehearsal marks, thus saving you the effort of manually aligning them. The basic nature of free text objects is that you can freely place them anywhere in the score. Sometimes, however, you may want to vertically align multiple free text objects in a staff. For example, you might want to align tempo markings.

To vertically align free text objects:

1. Select the multiple free text objects by dragging the mouse over them.

   -- OR --

   Select the first free text object with a mouse click, and select additional free text objects by holding down the SHIFT key as you select them.
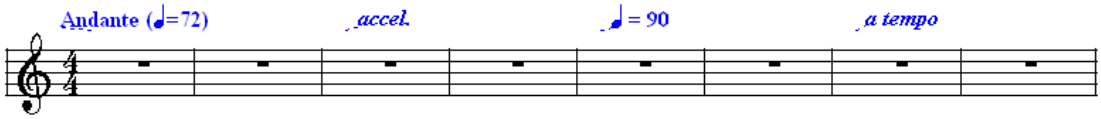


   Musician will automatically display the Free Text Palette.

2. In the Free Text Palette, click the Align Top Edges  or Align Bottom Edges  button.

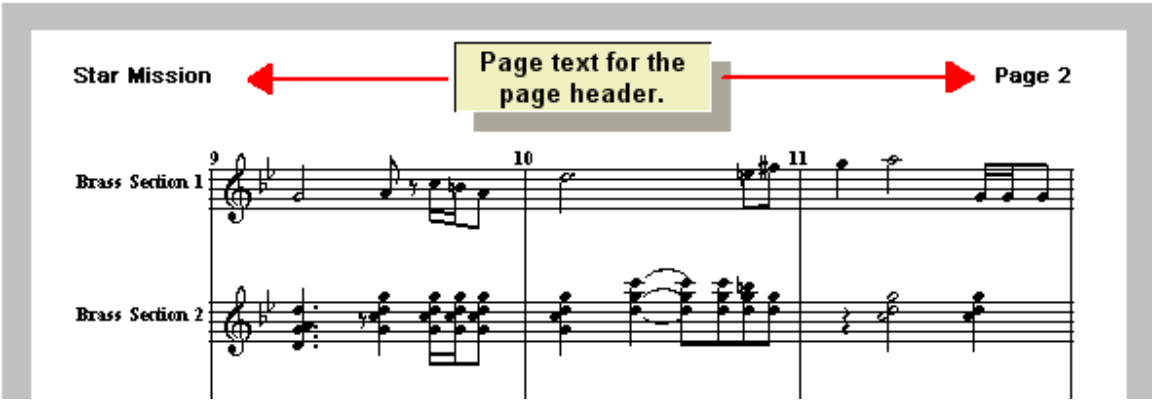
   -- OR --

   Type CTRL+  or CTRL+  to align the top or bottom edges.



6.4 Page Text

Page text appears at the header or footer of every printed page, or every left or right page, or just the first page of the score. Some common examples of page text are the song title and composer name on the first page, and page numbers displayed in headers or footers, such as illustrated here:



The above example shows the use of two standard page text items 399: the song title and page number. You can also add any other text that you type in, instead of these standard page text items.

Page text is displayed only in Page View 143, not in Window View. This is because page text is intended for the printed page. Page View shows on the screen what the printed page looks like.

Page text is different from free text 391. Free text is located within the score, and is placed relative to a staff and measure and beat within the measure. A given piece of free text is displayed only once in the score. In contrast, the page text may appear multiple times, at the same place on each page of the score, or optionally, on just the right or left pages of the score, or on just the first page of the score.

IMPORTANT: To reserve space for a title, page header or footer, specify top and bottom margins with the Page Setup 196 command in the Format menu. To reserve space for the page title on the first page only, there is a special option in the Page Setup dialog box for Margin / First

Musician offers convenient options for horizontally aligning page text 398 at the left, right, or center of a page, and for vertically aligning 394 multiple selected page text objects.

Standard page text objects 399 are defined for the song title, part name, file name, and page number.

Page text is applied to every score part 156. Thus, when you set up a page title or page header, it will be applied to each extracted part. Each part can have a unique part name, which you can enter with the Edit Part Name 181 command in the Part menu. To display the unique part name in each separately printed part, use the standard page text 399 for "part name".

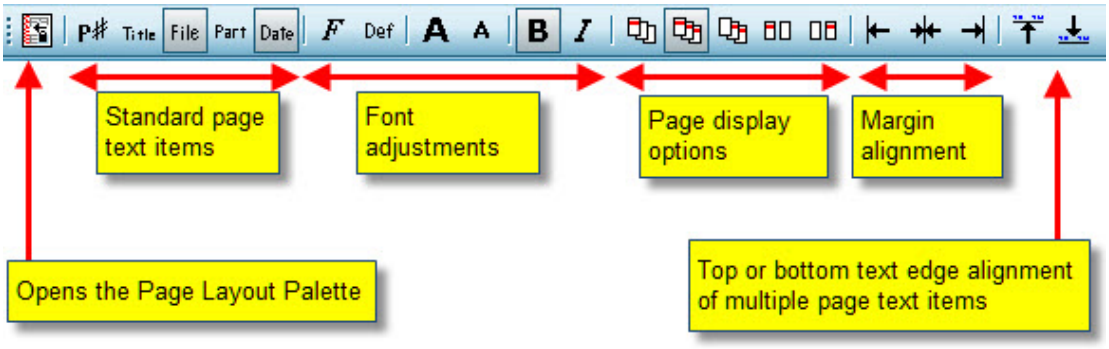
6.4.1 Adding and Editing Page Text

The procedures for adding and editing free text are generally the same as for all types of text supported by **Musician**. See the preceding topic, General Procedures for Editing Text 366:

- Adding Text
- Editing Text
- Deleting Text
- Selecting Font Type, Size, and Properties

- Showing and Hiding Types of Text
- Adding International Characters in Text 373

The Page Text Detail Palette



Here are some special details about adding and editing page text that differ from other types of text:

IMPORTANT: To reserve space for a title, page header or footer, specify top and bottom margins with the Page Setup 196 command in the Format menu. To reserve space for the page title on the first page only, there is a special option in the Page Setup dialog box for Margin / First Page Top.

- Page text is shown only in Page View 143 and on the printed page. Page text is not shown in Window View 143.
- When you navigate with the mouse to the Page Text Palette, or type SHIFT+P, **Musician** will automatically switch to Page View.
- SHIFT+P is also the shortcut for the Page Layout Palette. If you type SHIFT+P once and the Page Layout Palette is displayed, then type SHIFT+P a second time for the Page Text Palette.
- A page text object can have multiple lines. While adding or editing the free text, hit the ENTER key to begin a new line.
- You can specify which pages show the page text 396: all pages, the first page only, left pages only, right pages only, or all pages except the first page. These options are convenient for distinguishing title text on the first page, and header and footer text on subsequent pages.
- **Musician** defines the following standard page text items 399: page number, song title, file name, and part name. The text displayed in these objects will vary according to, for example, what the page number is on a given page of the score. Note, however, that you can enter any text you want as page text, if you do not want to use one of the standard page text objects.

6.4.2 Determining What Pages Show the Page Text

You can specify which of the following pages show the page text: all pages, the first page only, right pages only, left pages only, or all pages except the first page. These options are convenient for distinguishing title text on the first page, and header and footer text on subsequent pages.

NOTE: The options described here refer to "left" and "right" pages. You can determine whether the first page of the score part starts on a left or right page with the Page Setup 196 command in the Format menu. In the Page Setup dialog box, set a check mark or not for "Odd-numbered pages on left".

To specify which pages of the score should show a given page text object:

1. If **Musician** is not already in Page View 143, then choose the Page View command in the View menu.

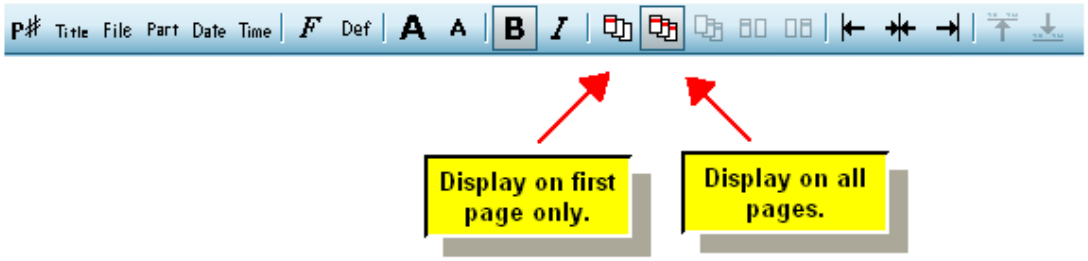
   -- OR --

   Type "qpv" for Quick Page View.

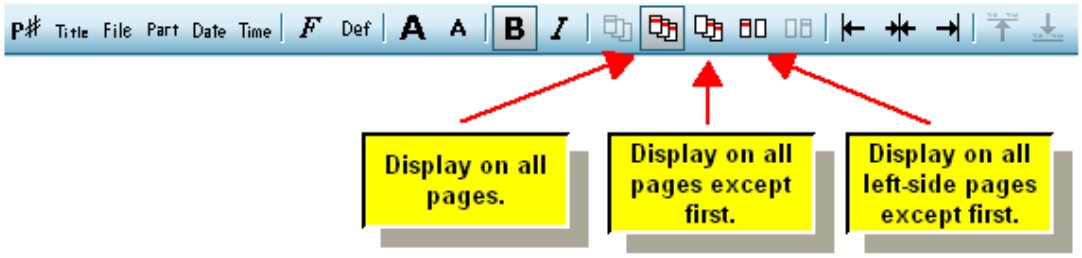
2. Select the page text object.

   Musician will display the Page Text Palette. Depending on whether you are viewing the first page, a left page, or a right page of the score part, the Page Text Palette will offer these options:

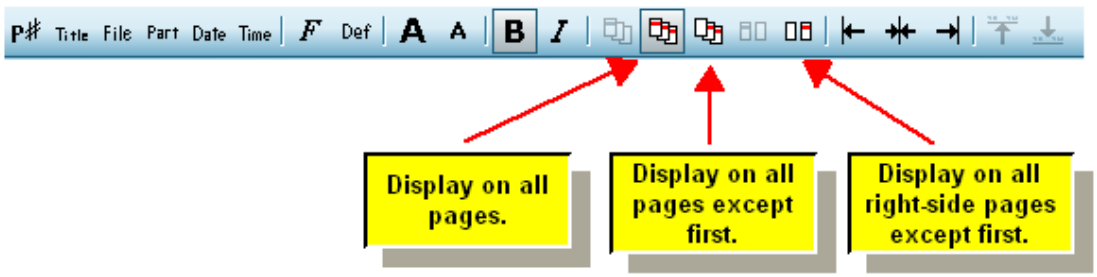
Options available if you are viewing the first page:



Options available if you are viewing left-side page:



Options available if you are viewing a right-side page:



3. Click one of the Page Text Palette buttons, as shown above.

   -- OR --

- Type CTRL+1 for first page only.
- Type CTRL+A for all pages.
- Type CTRL+2 for all pages except the first page.
- Type CTRL+L for all left pages except the first.
- Type CTRL+R for all right pages except the first.

After you change the page side option,**Musician** might change the currently viewed page. For example, if you change the setting for some page text from "display on left pages only" to "display on right pages only", **Musician** will automatically turn to the next or previous page so that you will still see the same page text, but now on its newly assigned page.

The page side options do not include an option to display the page text on every left-only or right-only page, *including the first page*. There is a presumption here that the first page is formatted differently with a page title. If that presumption is incorrect, then you can add a duplicate page text item for the first page.

6.4.3 Aligning Page Text

You can align a page text object horizontally with the left or right margin of the page, or the center of the page. You can also align multiple page text objects vertically at their top or bottom edges.

To align a page text object horizontally at the right, left, or center of the page:

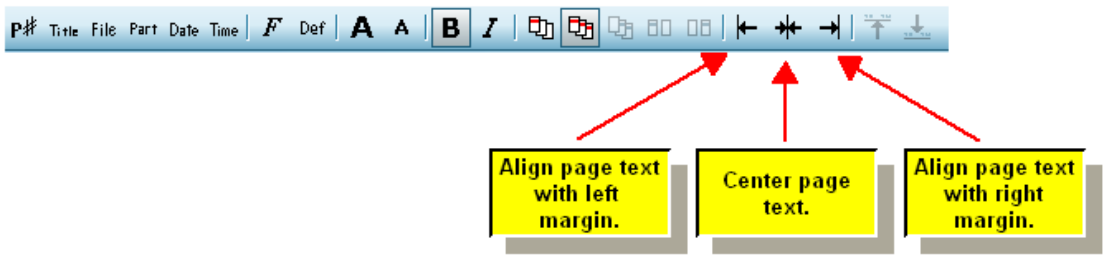
1. In the View menu, select the Page View command so that you can view the page text.

   -- OR --

   Type "qpv" for Quick Page View.

2. Select a page text object.

   Musician will display the Page Text Palette.



3. Click one of the page alignment buttons in the Page Text Palette.

   -- OR --

   Type CTRL+, CTRL+M (middle), or CTRL+ to align the page text object with the left, center, or right side of the page.

To align two or more page text objects vertically:

1. Select the two or more page text objects you wish to align by click-dragging across them to select them.

2. In the Page Text Palette, click the Align Top Edge or Align Bottom Edge button.

-- OR --

Type CTRL+ or CTRL+ to align the top or bottom edges.

6.4.4 Standard Page Text Such as Page Number

A page text object can include any of the following four standard page text references:

- **Song title** -- the song title that you specify with the Edit Song Title and Authors 80 command in the Score menu.
- **Part name** -- the part name that you specify for each part in the Edit Part Name 181 command in the Part menu. When a particular part is printed, its own part name will be shown.
- **File name** -- the full hard drive path of the song, except that the file name extension (.not, .mid, or .kar) is removed.
- **Page number** -- the page number (incremented) for each page of the printed part. You can specify a page number other than 1 for the first page of the part using the Page Setup 196 command in the Format menu.

To add a standard page text item on a page:

1. With the mouse, navigate to the Page Text Palette.

   -- OR --

   Type SHIFT+P. If the Page Layout Palette is displayed instead of the Page Text Palette, then type SHIFT+P a second time.

   Musician will change the cursor to 

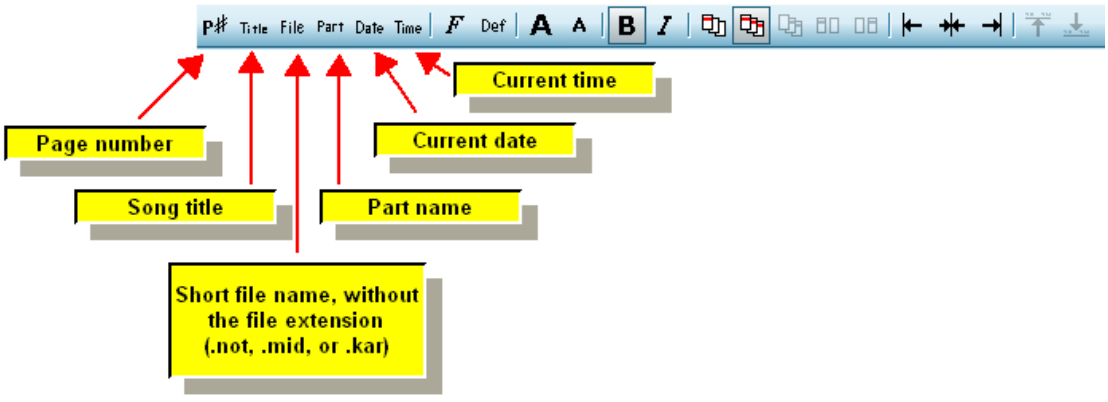
2. Click the mouse where you want to add the standard page text.

   Musician will display a blinking text cursor where you can type in the new page text or add a standard page text reference.

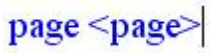
3. Type any unvarying text that you want to include with the standard page text reference. For example, if you want the page text object to be "page 1" for the first page, and "page 2" for the second page, etc., then first type the text "page" at the cursor:

   page

4. In the Page Text Palette, click the button for the type of standard page text item you wish to insert at the text cursor.

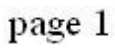


Musician will then insert a placeholder reference for the type of standard text item you selected, such as "<page>" for page number:



5. Hit the ESC key to complete the entry of the page text.

   Musician will then replace the placeholder reference with the page number for the current page, or the song title, part name, or file path.



6.4.5 Specifying Page Text in Templates

When you import a MIDI file, **Musician** copies page text from a special template named MidiFileDefault.not, which by default resides in the C:\Users\Public\Documents\Notation_4\Templates directory on your system. The initially installed version of the MidiFileDefault.not template automatically inserts the following page text in the score transcribed from your newly imported MIDI file:

- Song title, in point size 20, at the top of the first page.
- Song title, using the default page text font and size, at the left top corner of every page except the first page.
- Page number, using the default page text font and size, at the right top corner of every page except the first page.

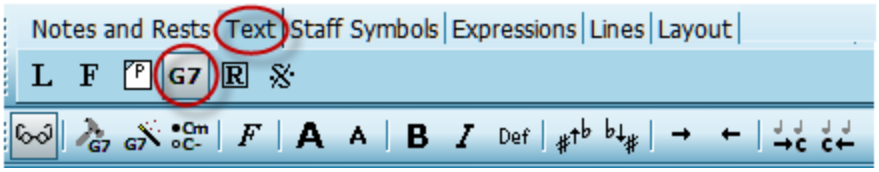
You can change the page text in any template. When you subsequently create a new file using a template, or import a MIDI file using the MidiFileDefault.not template, the page text will automatically be copied from the template to your new song or newly opened MIDI score.

To add page text to a template:

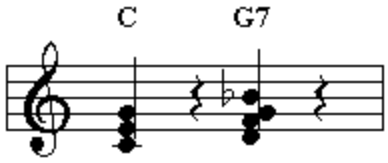
1. Use the Open command in the File menu, and choose a .not file in the C:\Users\Public\Documents\Notation_4\Templates directory.
2. Edit the page text in the template file, just as though you were editing the page text in a normal song. Follow the instructions in Adding and Editing Page Text. 395
3. Save the template file using the Save command in the File menu.

6.5 Chord Names
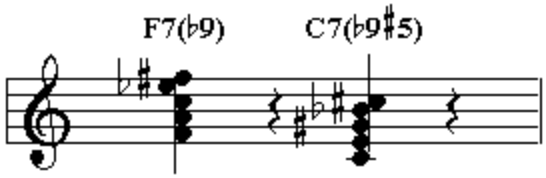
Notation Musician's offers many tools for adding and editing chord names. The Chord Name Palette is included in the Text tab palette.



With **Musician**, you can add chord names as simple as:



or as complex as:



Musician can also analyze the harmony in a song and automatically display chord names (transcribe chord names).

Musician will also show you any problems with chord names that may not be compatible with certain types of MIDI export.

The topics that follow provide detailed descriptions of various procedures for adding and editing chord names:

- Adding and Editing Chord Names
- Analyzing (transcribing) Chord Names
- Advancing to the Next (or Previous Beat) While Editing Chord Names
- Shifting Chord Names to the Right or Left
- Formatting Chord Names
- Temporarily Hiding or Permanently Removing Chord Names

6.5.1 Adding and Editing Chord Names

The procedures for adding and editing chord names are generally the same as for all types of text supported by **Musician**.

You can add chord names to your score using a variety of methods:

- Have **Musician** analyze and automatically add chord names for you

- Open a .mid file you have saved from your Yamaha keyboard (or other device) which contains the XF format chord names. **Musician** will automatically display those chord names for you.
- Manually type in chord names
- Use the Chord Builder to add chord names
- Copy chord names from another part of your score or another song file, and paste them into your current song file. 405

Many of the editing features for chord names are covered in the preceding General Procedures for Editing Text 366:

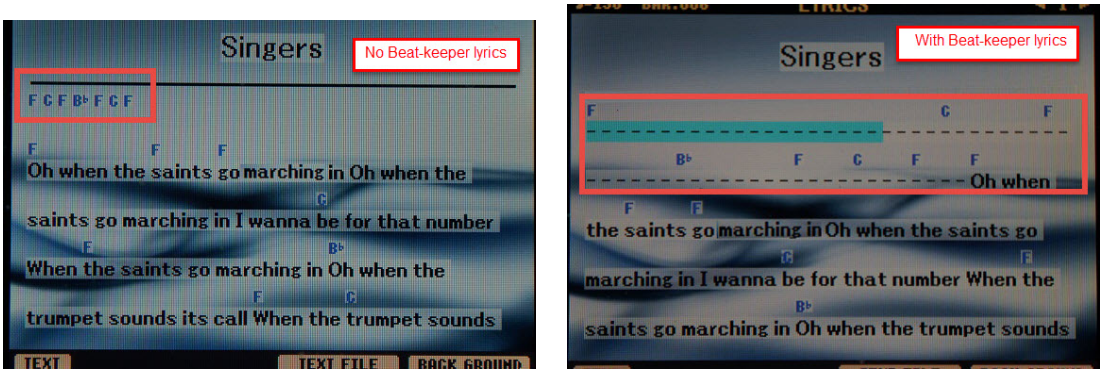
- Adding Text
- Editing Text
- Deleting Text
- Selecting Font Type, Size, and Properties
- Showing and Hiding Types of Text 373

There are some special details about adding and editing chord names that differ from other types of text:

- The keyboard shortcut for the Chord Name Palette is SHIFT+C. If the Clef Palette is displayed, type SHIFT+C a second time for the Chord Name Palette.
- When you type certain special characters, such as "#" and "b", **Musician** will redisplay them as music symbols, such as the sharp ♯ and flat ♭ accidentals.
- When you are manually typing in chord names, hit the TAB key to advance to the next major beat 413, in the measure, or the first beat of the next measure, where you can enter the next chord name.
- If a chord name is not lined up with the desired chord, you can shift it to the next or previous chord 413.
- If you want to add a chord name manually "between notes", you can use your mouse to click on the location where you want to add the chord name.
- Copying and pasting chord names 405 works a bit differently than other text objects.
- You can re-transcribe the chord names 409 in a file at any time.
- Chord names when transposing song note pitches or an instrument key 415: If you transpose the actual pitches of a song (ie. change the key of the song), then the chord names also transpose to reflect the correct key of the newly transposed song.
- If the song file has transposing instruments and you select to display the part for a transposing instrument from the drop list, the chord names for that part will show in the instrument key's transposition. In other words, if you have a song in C, and have selected to show Instrument Transposed Pitches for your score, then if you choose to display a Bb clarinet part, an "Ab" chord in the Conductor's Score (concert pitch) will display as a "Bb" chord in the Clarinet part (instrument transposed pitch).
- When you click on a chord name, the chord notes will sound just as when you click on a note in the score.
- You can change the enharmonic spelling of chord names 408, for example from a Db to a C#.

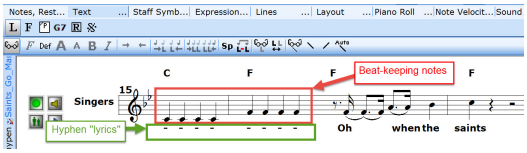
- You can select the Chord Name Styles 414 you would like to have displayed in your score.
- **Notation Musician** can export chord names in Yamaha XF format in the .mid filetype, to use with Yamaha keyboards and other devices that use the XF chord name format. Depending on how you wish the display to appear on your Yamaha machine, you may need to do some editing to the lyrics and chord names.

  Below are two example pictures of .mid files exported from **Musician** as displayed on a Yamaha keyboard.



The image on the left shows how a file that has lyrics and chord names but no "beat keeper" lyrics at the beginning appears on the Yamaha keyboard screen. The image on the right shows what the display looks like after the addition of "beat keeper" lyrics, in this case a simple hyphen character "-". The file on the left does not keep proper time with the chord names at the beginning on the Yamaha. The file on the right does keep proper time.

To edit your song file to have the Yamaha display keep the proper time, you can add some beat-keeping notes (this is only available for **Composer**) and then add some lyrics 377 (hyphens) as shown below:



You can then set the note velocities ("loudness") to "0" for the beat-keeper notes so that they will not sound when playing the file (available only in **Composer**). You can do this by selecting the notes and then using Note Velocity tools to set the velocity to "0".

Now when you use File/Export - MIDI, the chord names and lyrics in the exported .mid file will "move" properly with the song as it plays on your Yamaha keyboard.

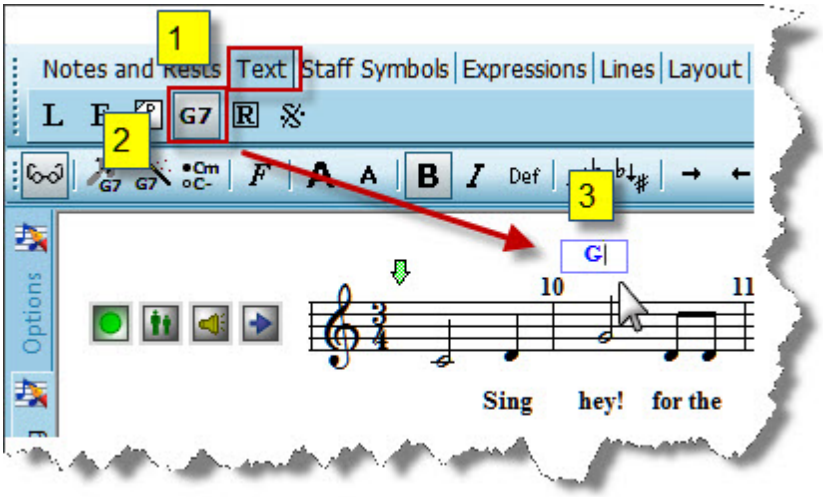
- When saving your song file, **Notation Musician** will analyze the song file and compare the notes in the score with the chord names. If there is a discrepancy

or any implausible situation with the chord names, those names will be highlighted with brackets (eg. [B/G]) so that you can quickly find them and fix them using the Chord Name tools. You can turn off this feature in the Chord Name Styles 414 dialog.

Manually typing chord names into a score.

If you are creating a score and want to manually enter the chord names before adding notes and other score elements, then you can type in the chord names first. To use this method of entering chord names, you can do the following:

1. Click on the Text palette
2. Then click the Chord Names button (or you can use the keyboard shortcut "Shift + C"; if you get the Clef palette, press "Shift + C" again)
3. Click in the score where you want to add chord names, and start typing.

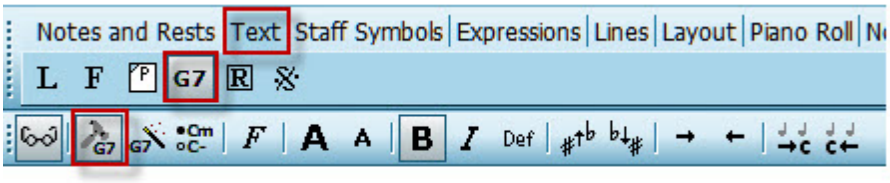


4. Hit the TAB key to advance to the next major beat 413, in the measure, or the first beat of the next measure, where you can enter the next chord name.

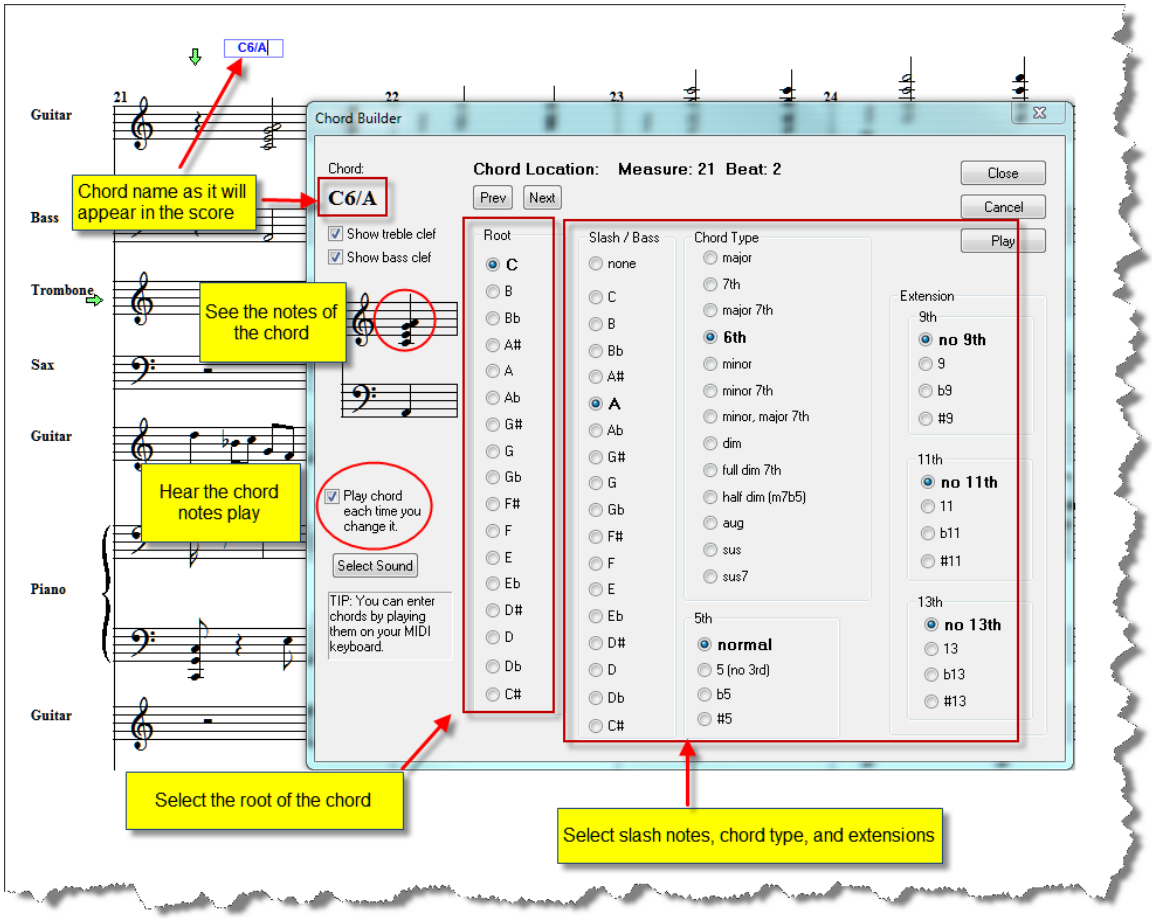
Adding chord names using the Chord Builder:

Musician's Chord Builder lets you see and hear the notes of a chord before adding the chord name to the score.

The Chord Builder can be found in the Text -> Chord Names palette



Clicking the Chord Builder button  (or using the keyboard shortcut "Shift + Enter") will open the Chord Builder dialog, as shown here (well, without all the annotations):

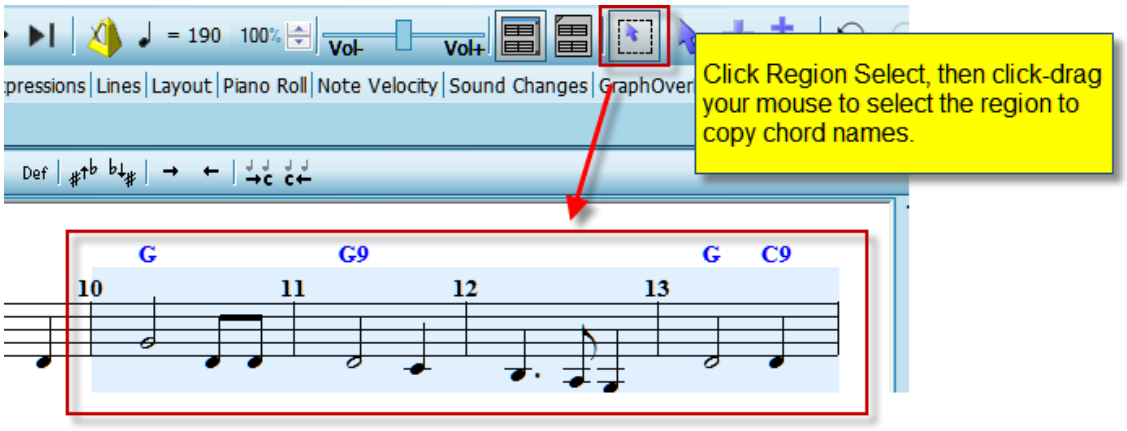


- **Location of chord names in the score:** You can click anywhere in the score either before or after opening the Chord Builder to choose a location for a chord name. Also, after entering a chord name, you can click the "Next" button to move the chord name entry box to the next beat location for a new chord name. Clicking the "Previous" button will likewise move the chord name entry box to the previous beat location.
- **Chord name options:** Select the Root of the chord, the type of chord, or extensions for your chord name by using the radio buttons to mark your selection. In the screenshot above, the "C6" chord has a slash bass note "A", which gives a C6/A chord name.
- **Hearing the chord:** If you check the "Play chord each time you change it" box, then each time you click on a radio button, the chord will sound with the new change. Otherwise, you can click the "Play" button at any time to hear how the current chord sounds. You can also click on a chord name in the score to hear it played.
- **Changing the instrument sound of the chord**: To change the instrument that plays the chord, click the "Select sound" button and choose the instrument you prefer to hear. The device will initially show your Default MIDI Playback Device. You can select from any of your available devices and instruments.

Copying and pasting chord names:

Musician allows you to copy and paste chord names between sections of your score, so you don't have to spend time separately entering repeating chord progressions.

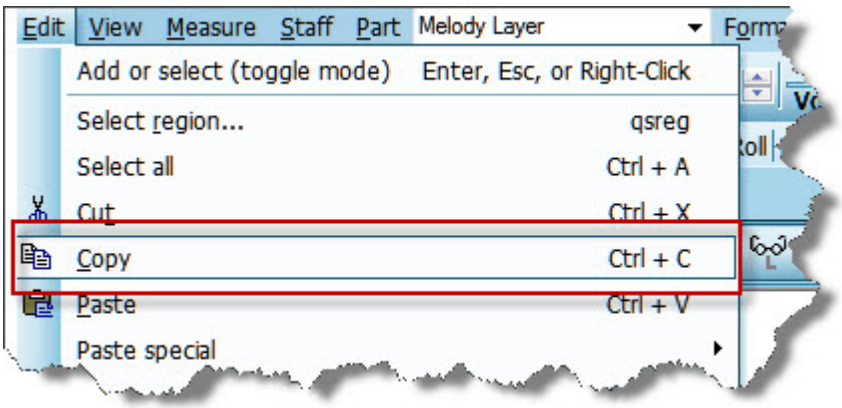
1. Using Region select click-drag your mouse to select the range of measures with the chord names you wish to copy.



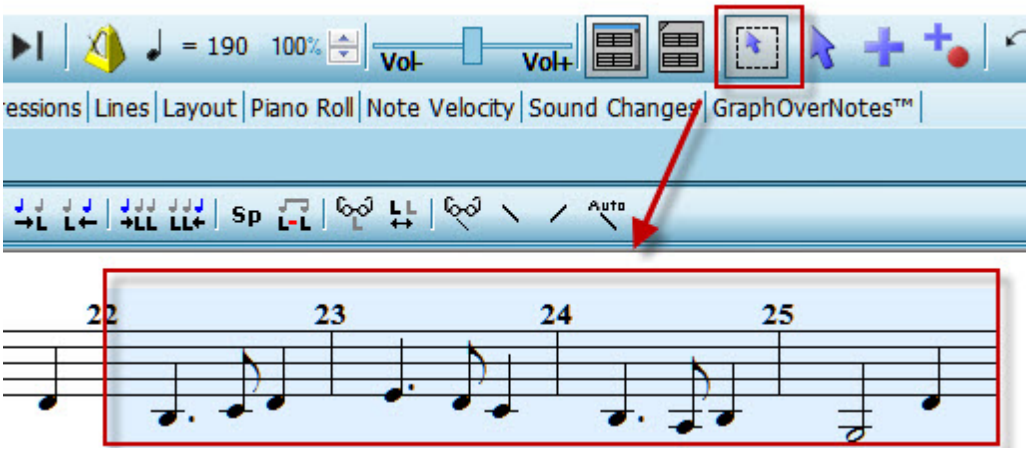
2. Now click Edit -> Copy

   -- OR --

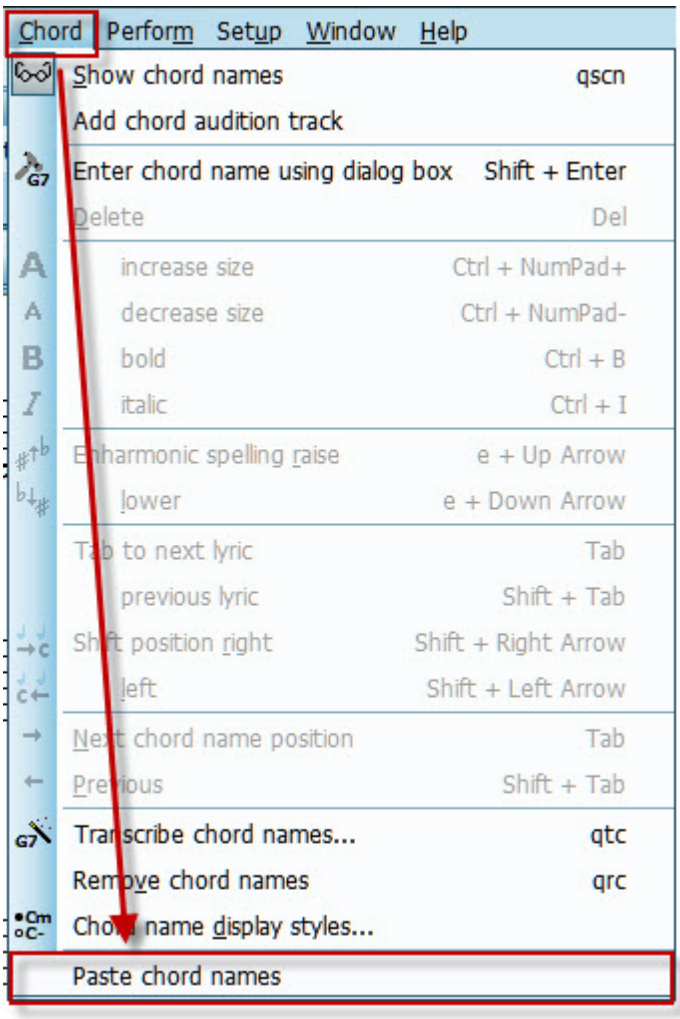
   type "Ctrl + C" (the Windows "copy to clipboard" keyboard shortcut)



3. Use Region select and click-drag your mouse to select the range of measures where you wish to paste in the chord names.

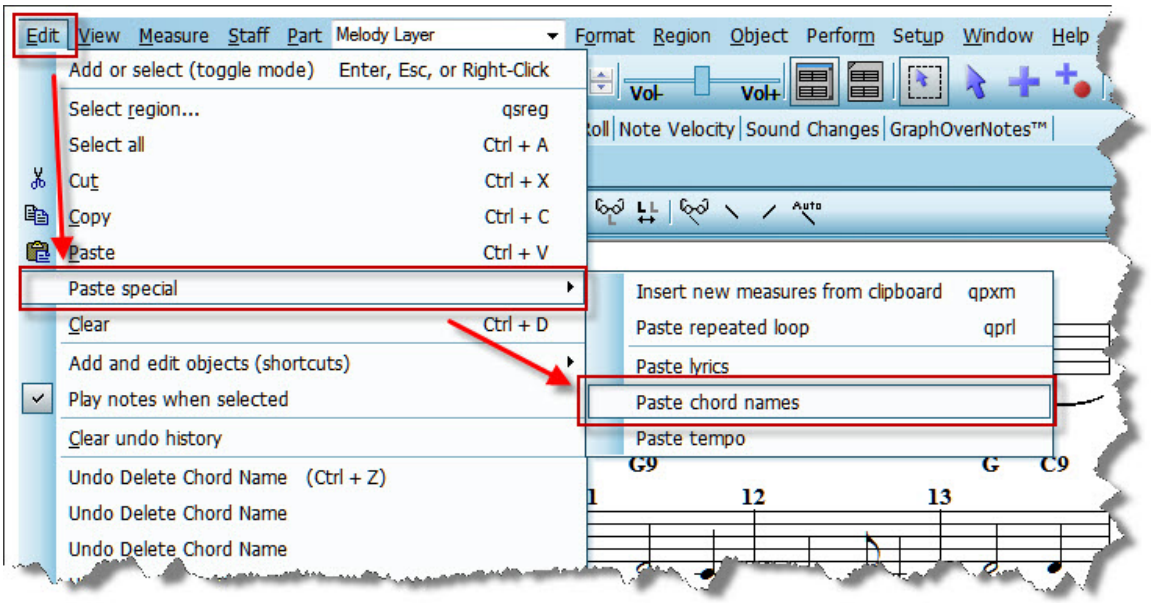


4. Now click in the Chord menu, Chord -> Paste chord names
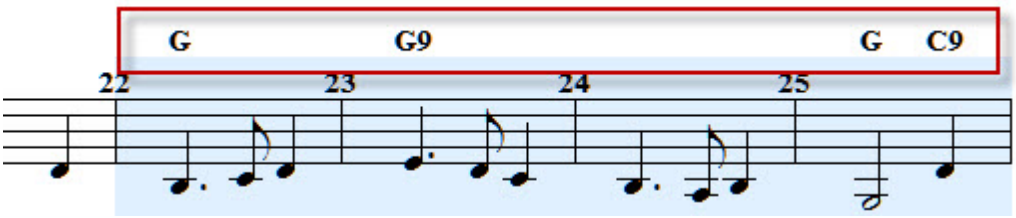


-- OR --

Edit -> Paste special -> Paste chord names



Now the chord names that you copied and pasted will appear in the target region of your score.

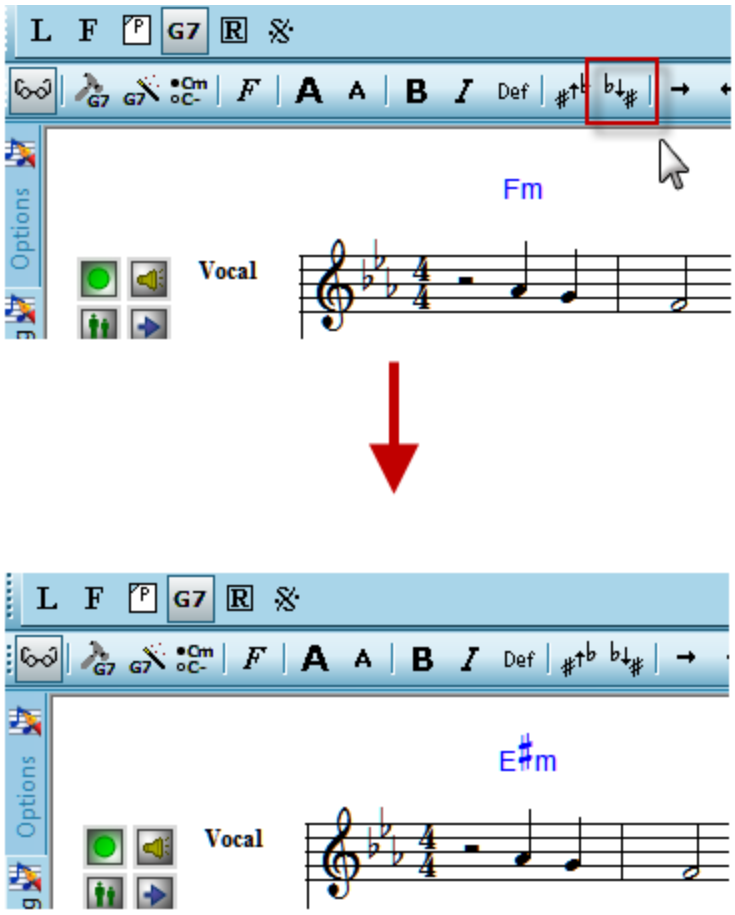


Enharmonic spelling of chord names:

Musician allows you to change the enharmonic spelling of chord names**.** This allows you to raise the enharmonic spelling, for example, of a Bb chord to an A#, or other varieties of enharmonic spelling differences. A different enharmonic spelling may be more familiar to you or your band members, so you can change the enharmonic spelling of such chord names when printing out a score, fake sheet, or chord chart. For example, you may want to change an Fm to an E#m if you use barre chords for guitar, as the Em chord shape is a common minor chord barre shape.

1. In the score, click on the chord name for which you wish to change the enharmonic spelling.

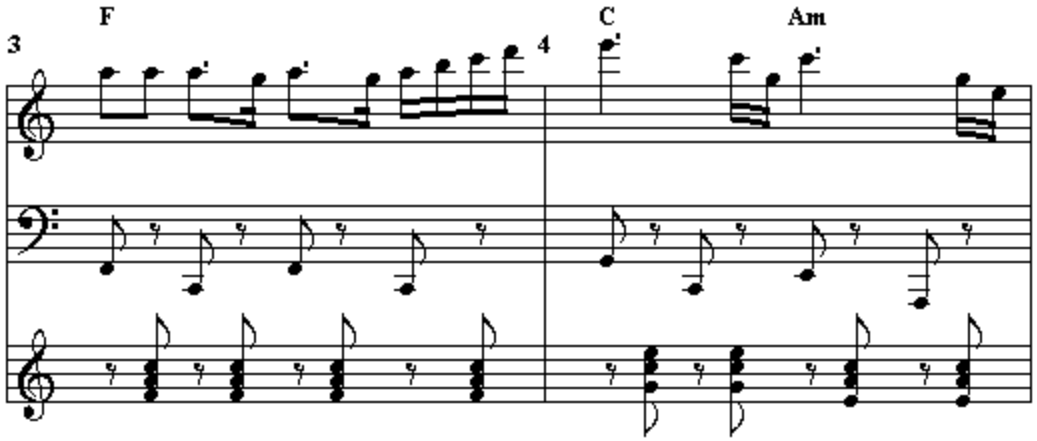
2. Click the "Lower enharmonic spelling"  button.



6.5.2 Analyzing (Transcribing) Chord Names

Musician can analyze a song to determine what chords are used, and then display the chord names, such as C7 and Dm, above the staff. **Musician** also lets you add, remove, or change chord names.

Here is an example of the chord names automatically analyzed by **Musician** for the country tune "Dixie":



MIDI files do not generally include chord name information. Sometimes the author of a MIDI file will enter chord names where lyrics are normally displayed. In this case, **Musician** will display the chord names as though they are lyrics.

In most cases, however, MIDI files do not include chord names at all. You are still in luck, though. **Musician** can analyze the harmonies in the song and automatically display chord names. This is a difficult task, and **Musician** cannot promise 100 percent accuracy. But **Musician** transcribes chord names remarkably well, considering the complexity of the task. In addition, since **Musician** lets you edit chord names, you can easily correct any mistakes **Musician** might make in its analysis.

To have Musician analyze the song for chord names and display them:

1. Decide which staves you want to analyze for harmonies. If you are not sure, you can just use all of the staves. However, if you notice that a few of the staves contain the notes that define "vertical" harmonies of the song, and other staves are more melodic or "horizontal", then you should instruct **Musician** to analyze chord names only using those staves that contain the vertical harmonies of the song. If the MIDI file happens to include a chord staff, typically with the staff name "Chords", then use just that staff. Note that **Musician** always ignores channel 10 drum staves, since the pitches in a MIDI drum staff have nothing to do with the real harmonies of the song.
2. Choose the Transcribe Chord Names command in the Format menu or Chord menu.

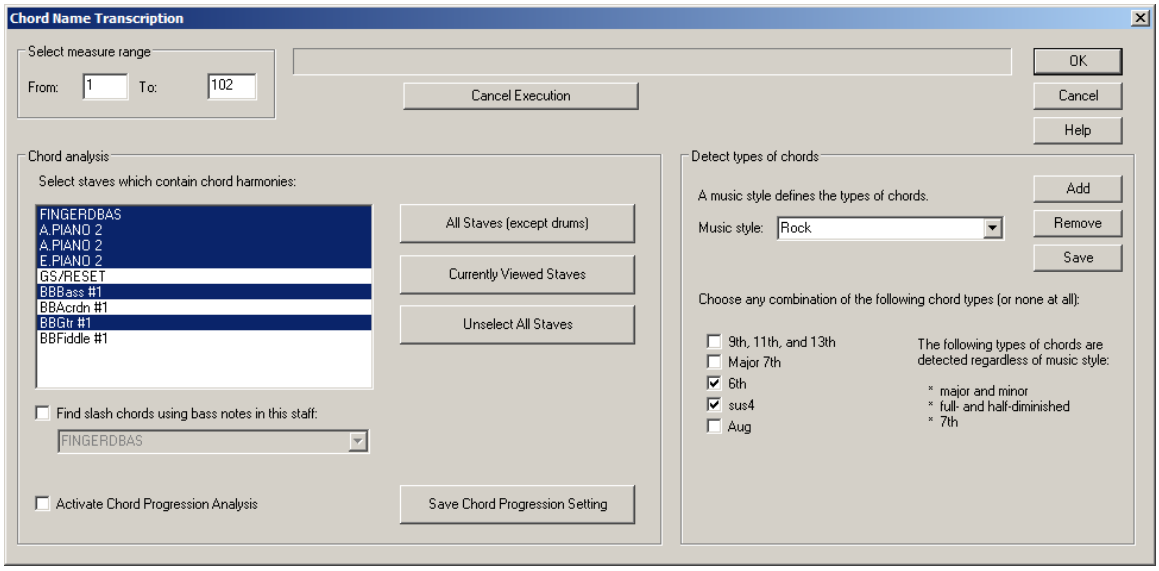
   -- OR --

   Type "qtc" for Quick Transcribe Chords.

   -- OR --

   Click the "Analyze chord names" button  in the Chord Names palette.

   Musician will display a Chord Name Transcription dialog box;

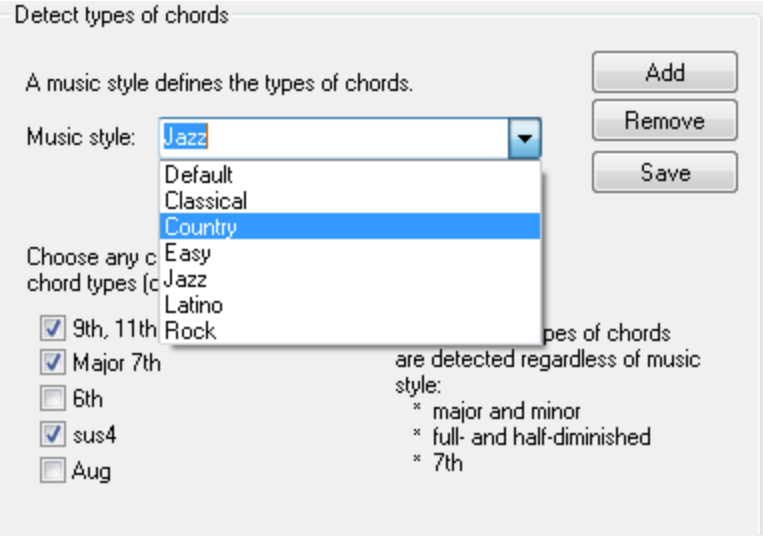


   The bottom half of this window shows the chord types **Musician** will detect. Depending on the style of music, you may want to either include or exclude a certain type of chord. For example, a C7(#9) chord (C chord with a 7th and

raised 9th) is unlikely to be used in a classical piece, so you would want to turn off the check mark for "9th, 11th, and 13th" if you are working with a classical piece.

Different music styles tend to use different chords. To make it easy for you to choose the right kinds of chords for the music style of your song, **Musician** defines various chord styles, such as Rock, Classical, and Jazz. You can also define your styles, or change **Musician**'s definition of a given chord style, as explained later in this topic.

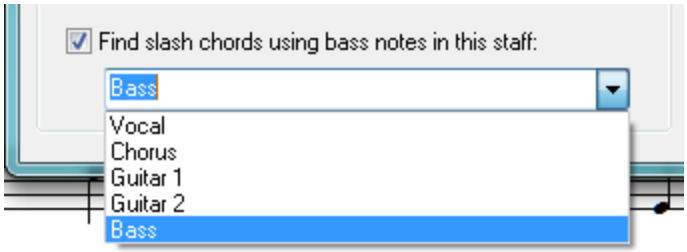
3. In the "Select staves" section of the dialog box, select the staves that you identified in step #1, and unselect all other staves.
4. **Musician** analyzes and displays chord names on a per-beat basis, such as every quarter note, half note, or dotted quarter note. **Musician** uses the meter (time signature) of the song to determine what beat value is used.
5. To choose one of **Musician**'s predefined chord styles, or one that you have previously defined, select it from the Music Style dropdown list box:



Musician will then update the check marks for the various chord types in the bottom half of the window.

6. To specify whether a certain type of chord (such as Cmaj7) is to be detected or not, add or remove a check mark by the type (eg. Major 7th) name. Some types of chord names are always detected, such as major and minor, full- and half-diminished and 7th chords.

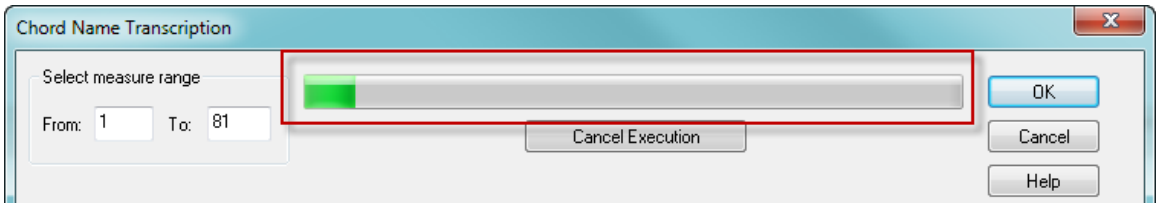
7. You can select to have slash bass notes analyzed along with the chord names (eg. G/B). Simply check the "Find slash chords using bass notes in this staff:" and select the staff you want to use from the drop list.



8. By default, **Musician** will analyze the entire score for chord names, and will replace any chord names previously analyzed or those manually entered or edited by you. If you want to analyze the score only for a range of measures, then specify them at the top of the Chord Name Transcription window.



9. Click the OK button when you are ready for **Musician** to analyze the score for chord names. Note that this is a fairly time-consuming task for **Musician,** which will show you the progress in the progress bar**.**



If the chord name transcription seems "stuck" or if you change your mind about the types of chord names you want, then just click the "Cancel Execution" button and change your selections.

▸ To change the type of chords associated with a "chord style", or to define your own custom chord style:

1. To add a new style, in the "Detect types of chords" section of the dialog box, hit the Add button. **Musician** will display a simple Add Chord Style dialog box. Enter a name for the new chord style.
2. Add or remove check marks next to the types of chords that you want **Musician** to include or not include it in the analysis of chord types for this style.
3. After editing the types of chords for this chord style, hit the Save button.

▸ If you are not happy with the results of Musician's chord analysis, there are a couple of things you can try:

- **Musician** might display chord names that seem overly complex. For example, it might display Csus4 and Fsus4 everywhere that you expected just C and F to be displayed. In this case, use the Transcribe Chord Names command again. This time, uncheck the chord type "sus4".
- **Musician** might display chord names that seem unrelated to the harmonies you hear. This can happen when **Musician** places too much weight on a staff that tends to have relatively few notes landing on the chord harmonies and relatively more "passing" notes between chords. In this case, use the Transcribe Chord Names command again, and do not include in the staves that have a large percentage of notes outside of the chord harmonies.
- You can try checking (or unchecking if it's checked first) the "Activate Chord Progression Analysis" option to see which setting gives you the chord names that sound better to you. To change the setting, (1) click the "Activate Chord

Progression Analysis" box then (2) click the "Save Chord Progression Setting" button to save the change. Then try your chord name analysis again to see if you like the results better. You can change this setting back as often as you like in the same session.



- If there are only a few specific chord names you would like to change, add, or remove, then follow the instructions for Editing Chord Names 401.

As you do more Chord Name Transcriptions, you will have a better understanding of which types of staves and options give you the best Chord Names for you or your band's needs.

6.5.3 Advancing to the Next (or Previous) Beat While Editing Chord Names

As you are adding or editing chord names, you can advance to the next (or previous) note or chord name in the following ways:

- When manually typing in Chord Names, hit the TAB key to advance to the next major beat in the meter or chord name, whichever comes first. The location of major beats in a measure is determined by the meter. For example, the major beat in a 4:4 meter is a quarter note; and the major beat in a 6:8 meter is a dotted quarter note.
- Type SHIFT+TAB to go back to the previous major beat or chord name, which ever comes first.
- If you are using the Chord Builder, you can simply click the "Next" or "Previous" button to advance forward or backward to the next major beat.
- If you are adding chord names and advance to a next or previous major beat that does not already have a chord name, then you can type in a new chord name at that location. If there is already a chord name present, you can then edit it.
- You do not have to add a chord name at every major beat, of course. If you do not want to add a chord name at a beat, skip over it by hitting the TAB key (when manually typing) or the "Next" button (when using the Chord Builder) to advance to the next beat.

6.5.4 Shifting Chord Names to the Right or Left

If a chord name is not located above the note you intend, you can shift the chord name to the right or left, to the next nearest note or chord.

To shift a chord name to the right or left to the next nearest note or chord:

1. Select the chord name by clicking it.
2. In the Chord Name Palette, click the Shift Chord to Right button or Shift Chord to Left button.

-- OR --

Type SHIFT+→ or SHIFT+←.

6.5.5 Formatting Chord Names

You can change font style, size, and bold and italic attributes of chord names. You can also specify how certain types of chord names should be displayed, such as Cdim versus C-.

To change the font type, size of the text, or to change it to bold or italics:

- In the General Procedures for Editing Text 366, see the procedure for Selecting Font Type, Size, and Properties 370.

To specify how diminished, augmented, and other types of chords are displayed:

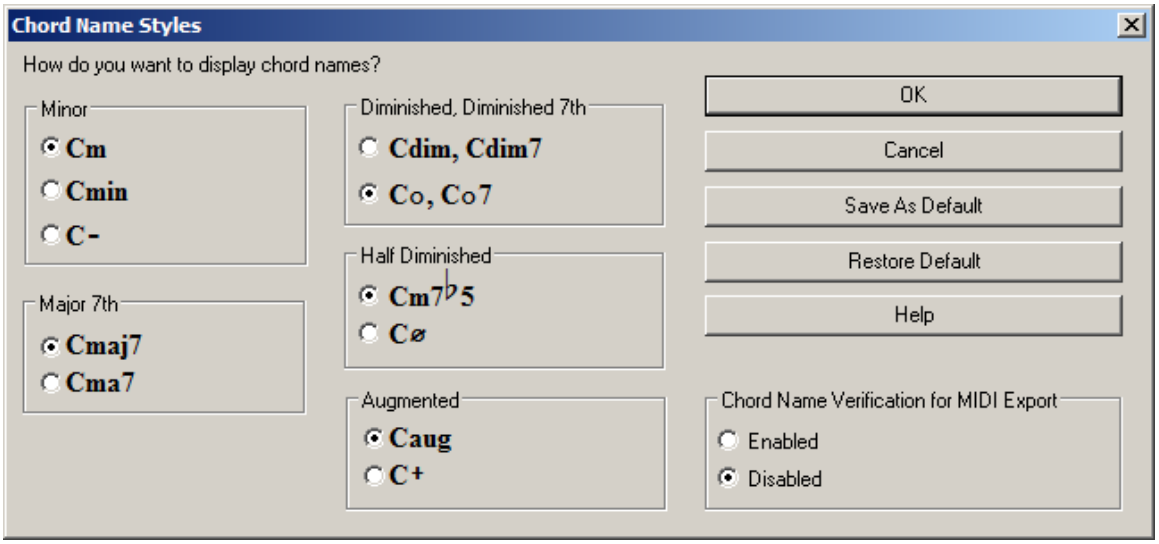
1. With the mouse, navigate to the Chord Name Palette.

   -- OR --

   Type SHIFT+C. If the Clef Palette is displayed, type SHIFT+C a second time for the Chord Name Palette.

2. In the Chord Name Menu, choose the Chord Name Display Styles command.

   Musician will display the Chord Name Styles dialog box, as illustrated below:



3. For each of the types of chords, choose the way you want the chord to be displayed.
4. Click the Save As Default button if you wish the styles to be applied to all songs that you later create or import as MIDI files.
5. Click OK to apply the changes to the currently viewed score.

Chord Name Verification

When saving a file, **Musician** can verify that chord names are valid for MIDI export. If it is not, then the chord name will be displayed with brackets around like this "[Abm7912]". You can either use the Chord Builder 404 to fix such chord names, or you can turn off the feature by selecting "Disabled" as illustrated in the above screen shot if you do not need this verification for your work.

6.5.6 Temporarily Hiding or Permanently Removing Chord Names

You can temporarily hide chord names so that they are not displayed. **Musician** shows or hides chord names independently in each score part 156. For example, you can show chord names in a keyboard or piano part and hide them in a vocal part.

You can also permanently remove chord names from the song.

To hide chord names in the current score part:

1. With the mouse, navigate to the Chord Palette.

   -- OR --

   Type SHIFT+C. If the Clef Palette is displayed, type SHIFT+C a second time for the Chord Palette.

2. In the Chord Name menu, turn off the check mark by the Show Chord menu item.

   -- OR --

   Click to toggle off the Show Chord Names  button in the Chord Name Palette.

   -- OR --

   Type "qscn" for Quick Show (or Hide) Chord Name.

To show chord names that have been hidden:

- Repeat the above procedure to toggle on the Show Chord Names check mark in the Chord menu, or click to toggle on the Show Chord Names  button.

To permanently remove all chord names from the song.

- Choose the Remove Chord Names command in the Chord menu.

6.5.7 Transposing Chord Names
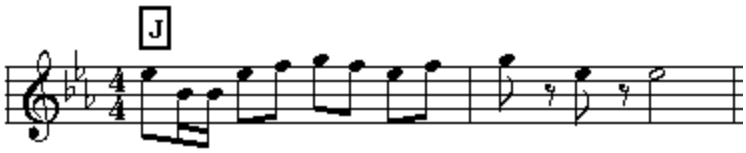
Musician automatically transposes chord names in these two circumstances:

1. When you transpose the pitch of the entire song or some range of measures in the song 287, **Musician** automatically transposes the chord names to the new song key for the selected song or range of measures.
2. For an instrument part 178 which has a transposed instrument key 289, **Musician** automatically transposes the chord names for all of the measures for that part. This is done if, and only if: (a) the part 156 displays only one staff, or (b) the multiple staves in the part all share the same instrument key transposition.

   The transpositions of chord name keys is automatic. This is generally good. However, in rare cases where the spelling of a chord name is ambiguous, such as F#7 versus Gb7, and **Musician** makes a choice opposite of the one you would choose, **Musician** you can change the enharmonic spelling of the chord name 408.

6.6 Rehearsal Marks

Rehearsal marks are used by ensemble musicians to refer to a natural starting point for rehearsing some section of the score. A rehearsal mark looks like this:



You might also find rehearsal marks useful for your own purposes:

- To specify the start and end of practice loops.
- As a temporary bookmark 416 when you are working on a section of the score. You can then quickly return to it using the Go To Rehearsal Mark 154 command (shortcut "qgr") in the View menu.

6.6.1 Adding and Editing Rehearsal Marks
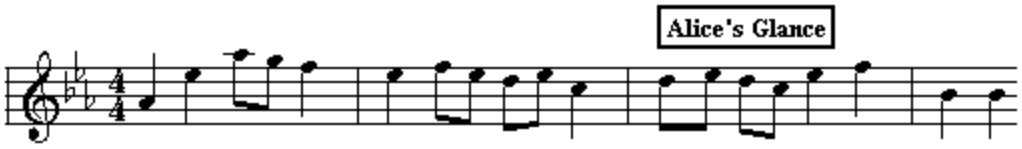
The procedures for adding and editing rehearsal marks are generally the same as for all types of text supported by **Musician**. See preceding General Procedures for Editing Text 366:

- Adding Text
- Editing Text
- Deleting Text
- Selecting Font Type, Size, and Properties
- Showing and Hiding Types of Text 373

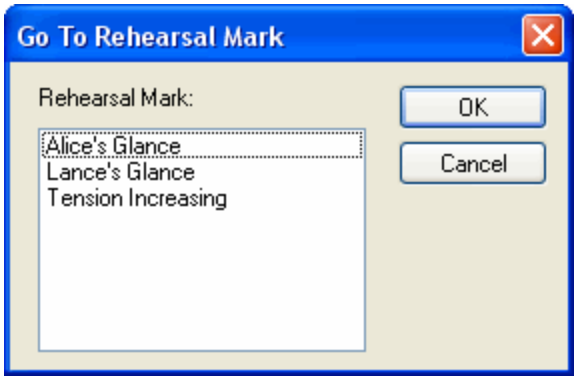
6.6.2 Using Rehearsal Marks as Editing Bookmarks

One normally thinks of rehearsal marks as a notation to help ensemble musicians refer to the same score location while rehearsing together. You can also use rehearsal marks, however, as your own private aid when you are preparing the score. You can use rehearsal marks as bookmarks for locations in the score that you are currently editing.

Add any number of bookmarks at different locations in the score where you are currently working. You can give relatively long names, to help you later recall the location. For example, if you are working on a musical, you might enter "Alice's Glance":



Later, to quickly return to the "Alice's Glance" bookmark in the score, type "qgr" for Quick Go to Rehearsal Mark, or choose that command in the View menu. **Musician** will display the Go To Rehearsal Mark dialog box as shown below. Select the rehearsal mark that you previously added as a bookmark.

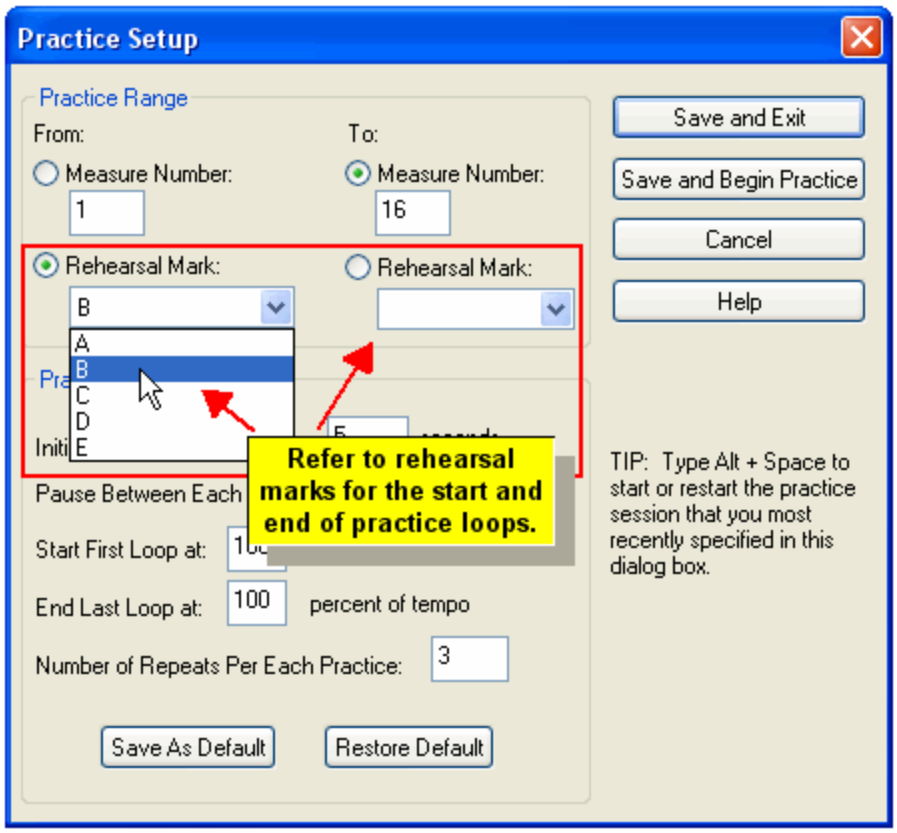


Before you finalize your score, you can quickly go through it to remove your bookmarks.

6.6.3 Using Rehearsal Marks for Practicing Music

Rehearsal marks are used routinely by ensemble musicians. You can also use rehearsal marks for your own private practicing sessions. If you are a music teacher, you can create rehearsal marks that will be used by your students, who can use the practice loop feature in **Notation Musician. Musician** can display, play, and print the Notation .not files that you create with **Musician**.

Add any number of rehearsal marks in the score, following the general procedure for Adding Text 367. Once you have added the rehearsal marks, you can refer to them in the Practice Setup dialog, as described in Setting Up Practice Loops 115.



7 Configuring Your Sound Card and MIDI Equipment

When **Musician** runs for the first time after installation, the default Notation Software Synth 419 allows you to immediately start playing MIDI files that you have opened. You should hear sound through the speakers connected to your sound card.

If you do not hear sound, then use the Quick MIDI Device Setup 422 command in the Setup menu. Use it to test the playback of alternative MIDI playback devices on your system, and choose a device for which you do hear sound. If that does not work, then follow the advice in What To Do If You Do Not Hear Sound 427.

If your sound card is connected via a cable to a MIDI keyboard, then you should also be able to play at your keyboard and hear sound through the speakers connected to your sound card. If you do not, then follow the advice in What To Do If Play-Along Does Not Work 431.

If the MIDI playback and recording capabilities of your system are simple, **Musician** makes it very easy for you to set up your MIDI devices. See Procedures for Common MIDI Configuration Tasks 434. The topics in that section are:

- Assigning Device Names That Make Better Sense to You
- Changing the Default Playback Device
- Installing a MIDI Cable Between Your sound card and Keyboard
- Adding a New MIDI Keyboard to Your Configuration
- Deciding Whether or Not Your Keyboard Should Directly Produce Sound 444

Musician has been carefully designed to avoid overwhelming music enthusiasts with many of the underlying technical details of MIDI. However, if you have a sophisticated MIDI studio, **Musician** provides a powerful, but intuitive MIDI Device Configuration Window 455, in which you can describe to **Musician** exactly how your MIDI studio is arranged. Common tasks for managing MIDI studios that are more complicated than a single sound card and keyboard are described in the section Procedures for Advanced MIDI Configuration Tasks 444, which includes these sub-topics:

- Installing a Software Synthesizer
- Anticipating the Delay on Some MIDI Output Devices
- Configuring a New External MIDI Sound Module
- How to Handle Devices Connected with MIDI Thru Cables
- How to Save Effort If You Rearrange Your MIDI Equipment Often 455

The final section of this chapter provides a detailed guide to using all of the features in the MIDI Device Configuration Window. Again, if your music equipment consists of no more than a sound card and a keyboard, then you will find it easier to use the Quick MIDI Device Setup 422 window. However, if you want to utilize the full performance capabilities of **Musician** on your computer, then these topics will be interest to you.

The topics in this chapter's final section, Using the MIDI Device Configuration Window 455, are:

- Understanding the Details of the MIDI Device Configuration Window
- Testing Playback and Recording Devices
- Managing MIDI Ports
- Managing MIDI Devices
- Assigning Bank and Patch Names to a MIDI Device

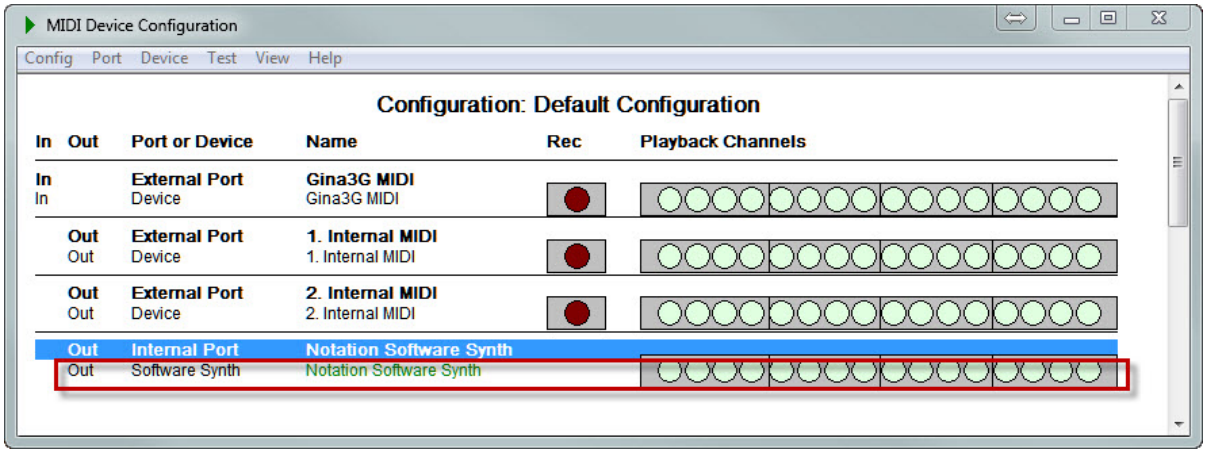
- Managing Alternative MIDI Device Configurations 498

Please note that the release of Version 3 of Notation Musician made it necessary to change the format of the older MIDI Device Configuration files (MidiDev.cfg). If you are installing **Notation Musician** after having used a previous version, you will need to reimport any INS (Cakewalk filetype) device descriptions that you may have had previously.

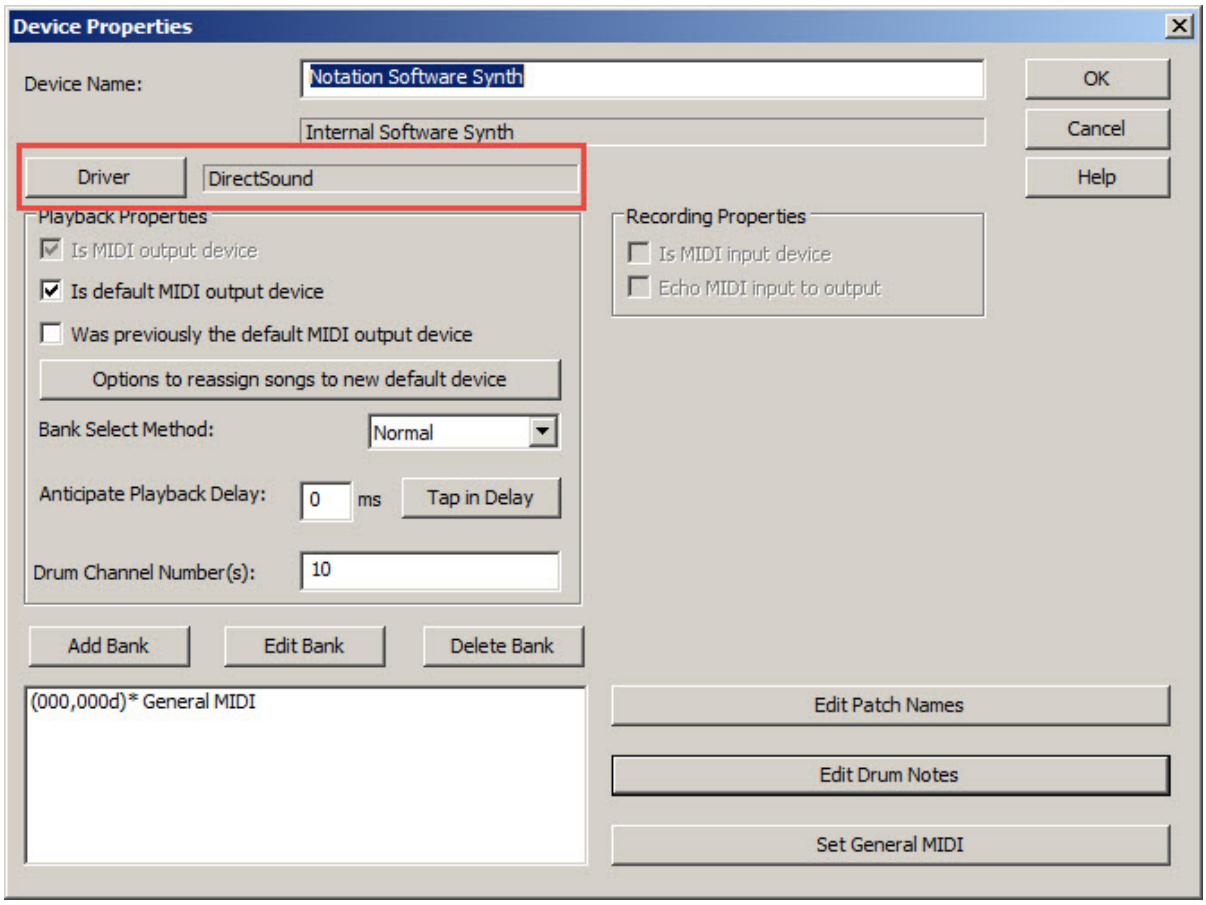
7.1 Notation Software Internal Synthesizer

With version 3.0.3 **Notation Software** introduced it's own **Notation Software Synth**, an internal synthesizer that uses soundfont technology and eliminates the need for any external or installed MIDI playback device(s). The **Notation Software Synth** is based on the FluidSynth soundfont synth, and is used under the appropriate license 513.

To select which options you wish to use for the Notation Software Synth, you will need to access it's Device Properties 422 dialog. You can do this by clicking "Setup -> MIDI Devices...Configuration" to see the MIDI Devices that are on your machine. Notice that the **Notation Software Synth** is highlighted in green, indicating that it is the current default playback device:



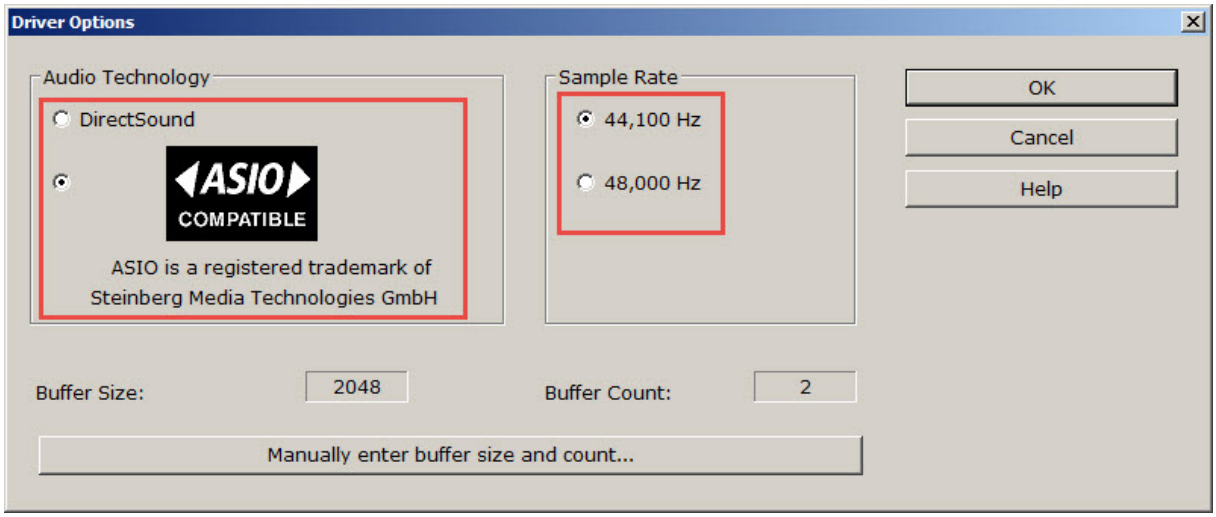
By double-clicking the **Notation Software Synth** device listing, you can access it's Properties dialog:


Device Properties
Device Name:
Notation Software Synth
Internal Software Synth
OK
Cancel
Help
Driver
DirectSound
Playback Properties
Is MIDI output device
Is default MIDI output device
Was previously the default MIDI output device
Options to reassign songs to new default device
Bank Select Method:
Normal
Anticipate Playback Delay:
0
ms
Tap in Delay
Drum Channel Number(s):
10
Recording Properties
Is MIDI input device
Echo MIDI input to output
Add Bank
Edit Bank
Delete Bank
(000,000d)* General MIDI
Edit Patch Names
Edit Drum Notes
Set General MIDI

Selecting the audio driver

The **Notation Software Synth** has the flexibility to offer excellent sound and superior real-time playalong capability. It supports the ASIO 514 Driver Technology by Steinberg Media Technologies as well as standard Windows DirectSound. For most playback situations DirectSound will be sufficient for good quality sound. If you wish to playalong with **Notation Musician** in real-time without latency issues, though, you should probably select to use the ASIO 514 driver

To change the selection of the sound driver, click the "Driver" button in the Device Properties dialog above to get the following Dialog:



Click the radio button for the Audio Technology you wish to use, then click "Ok" to save the change.

Selecting the Sample Rate

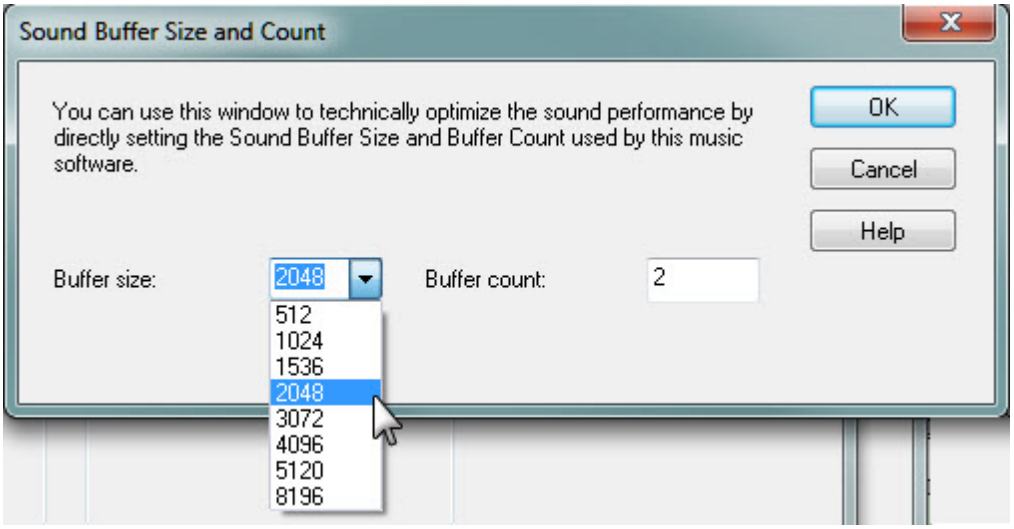
Most CD and other digital recording media is recorded at 44,100 Hz rate, and this is the default setting for the Sample Rate in the **Notation Software Synth**. You should be fine to leave it at that.

Selecting the Buffer Size and Buffer Count

The default Buffer settings represent a moderate setting that should work on most machines. However, due to various factors you may need to change the Buffer settings. For example, if you hear static, crackling, "echoes," or other audio distortions when playing back a file in **Musician** then you may want to try changing the buffer settings.

Briefly, to keep the latency low, the buffer settings should be such that the multiplied number (size x count) is kept as small as possible while still yielding good sound. If you are experiencing static, crackling, or other audio artifacts, try changing the Buffer Size first to a higher number and see if that fixes the problem.

1. Click the "Manually enter buffer size and count..." button in the Driver Options dialog.
2. Click the drop list for the Buffer size and select the next "size" larger than the current setting:



3. Click "Ok" to save the change.
4. Test the playback of your song file to see if the new setting fixes the problem.
5. Alternatively you can enter a higher number in the Buffer count field, click "Ok" to save the change, and then test the playback of your file.

7.2 Quick MIDI Device Setup

Most computer systems include MIDI sound cards and alternative *synthesizers* (which we call *MIDI devices*) for creating instrument sounds for MIDI playback. You might find it helpful to think of a synthesizer (MIDI device) as an orchestra ready to play various kinds of instrument sounds at your request. Your system most likely has a couple of MIDI devices, which are like different orchestras with different personalities or sound qualities.

The Quick MIDI Device Setup command in the Setup menu lets you quickly select and test the alternative MIDI devices. You should use the Quick MIDI Devce Setup command especially if you do not hear any sound when you first run **Musician**, or after you have installed a new sound card.

The MIDI playback device that you select in the Quick MIDI Device Setup window will be the default playback device assigned to any new song you subsequently create, or any song you import as a MIDI file.

If your sound card is externally connected via a MIDI cable to a MIDI keyboard (or MIDI guitar or other input device), then the Quick MIDI Device Setup command also lets you quickly test whether the connection to your MIDI keyboard is working.

Most MIDI devices offer a list of 128 different instrument sounds, and certain drum sounds, which together are called the "General MIDI" sounds. Many MIDI devices also offer one or more additional "banks" of sounds, where each bank can have up to 128 sounds. If your MIDI device has additional banks of sounds besides General MIDI sounds, you can also use the Quick MIDI Device Setup command to inform **Musician** about what particular MIDI device manufacturer and model you are using. With that information, **Musician** lets you select instrument sounds by meaningful names, such as "pizzicata violin" instead of MIDI "patch" numbers.

The Quick MIDI Device Setup command also provides a way for you to change difficult-to-read device names to ones that make sense to you. For example, if you have a Casio[tm] keyboard connected via a MIDI cable to a SoundBlaster Live![tm] sound card in your computer, the Casio keyboard will be identified as "SB Live! MIDI UART". It is not possible for **Musician** (nor any other MIDI program) to detect the name of the keyboard connected via the MIDI cable to the sound card. However, you can quickly tell **Musician** the name of the external device. For example, you can change the name from "SB Live! MIDI UART" to "Casio" or simply "Keyboard". Once you rename a device this way, you will find it easier to refer to it later in other parts of the **Musician** program.

Please note: If you are setting up your external device and are either not hearing sound from it when you play a song in **Musician** the most likely issue is that the "In" and "Out" MIDI cables are switched. Please first try swapping those two cables around and then re-test playback.

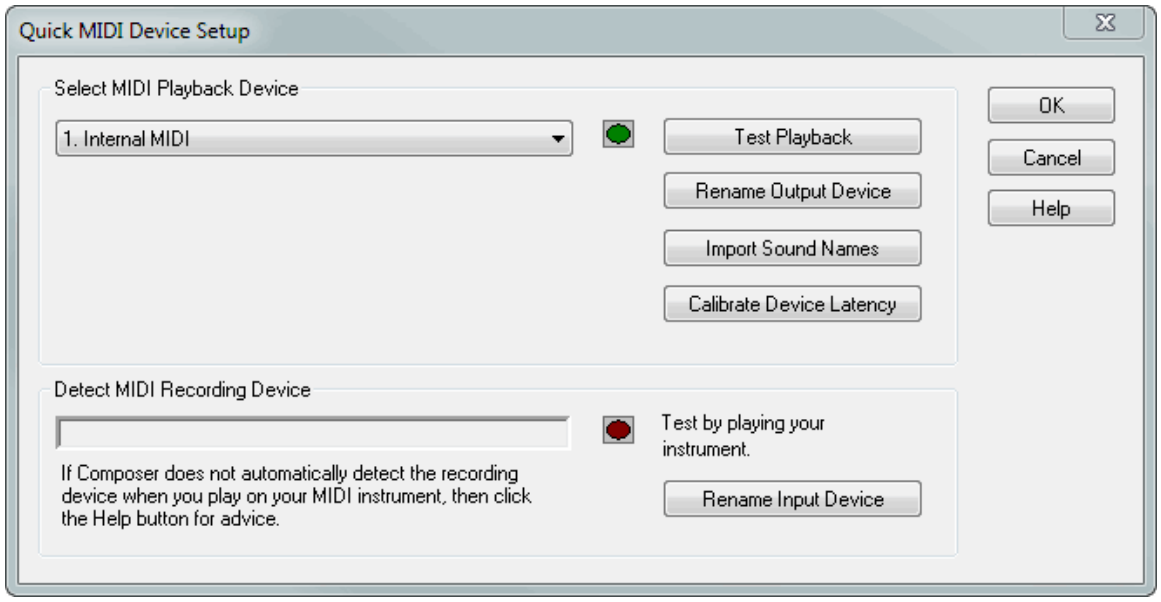
To test and select a MIDI playback device on your system:

1. Choose the Quick MIDI Device Setup command in the Setup menu.

   -- OR --

   Type "qqds" for "Quick Quick Device Setup".

   Musician will display the Quick MIDI Device Setup window, as illustrated here:



2. To test the sound for a playback device, select one in the dropdown list, and then click the Test Playback button.

   Musician will display and play a 12-note chromatic scale. The notes will be highlighted as they play. Also, the green playback indicator in the Quick MIDI Device Setup window will display a bright green color as the notes are played. Upon completion of the playback, **Musician** will close the window that displays the notes.

   If the device is an "internal" device on your Windows system, then you should hear sound through the speakers connected to your sound card. If the device is "external", such as a MIDI keyboard capable of producing its own sound, then you should hear that device play the sound.

3. If you do not hear sound for a device when you choose the Test Playback option, then some possible explanations and remedies are discussed in What To Do If You Do Not Hear Any Sound 427.

4. If you wish to rename the playback device, click the Rename Device button next to the playback device name.

   Musician will present a Rename MIDI Device dialog box, in which you can specify the new name.

5. Click the OK button when you have selected the desired playback device.

6. After you click OK, if you have already opened a song,

   Musician will display a simple dialog box that offers you the option to reassign all of the staves of that song to the newly assigned default device.

   If you have more than one song already opened, and you want to reassign staves for the other songs, follow the instructions for Changing the Instrument Sound of a Staff 161.

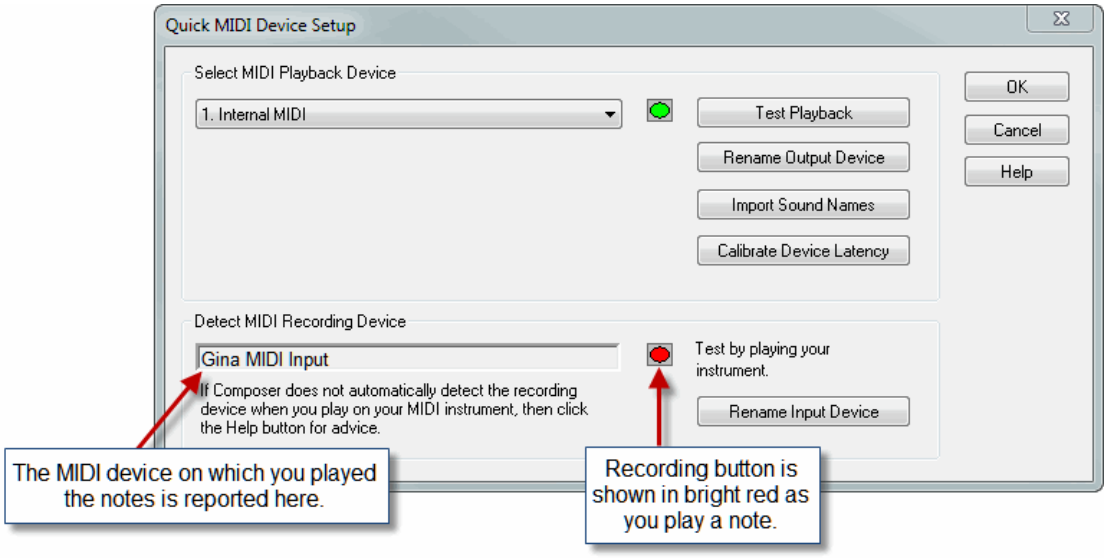
To test and select a MIDI recording device on your system:

1. Choose the Quick MIDI Device Setup command in the Setup menu.

   Musician will display the Quick MIDI Device Setup window, as shown earlier.

2. To test whether **Musician** is detecting notes that you play at your MIDI keyboard, simply play on some of its keys.

   The Quick MIDI Device Setup window will automatically display the name of the MIDI recording device:



   Also, as you play on your MIDI keyboard, the red recording indicator in the Quick MIDI Device Setup window will light up in a bright red color. Further, if your recording device is configured with "Echo MIDI Input to Output", then as you play on your MIDI keyboard, your selected MIDI Playback Device will produce sound for the notes as you play them, and the green light will indicate so. **Musician** always initially configures recording devices with "Echo MIDI Input to Output". To review or change the echo option, see Specifying Properties of a Device 477.

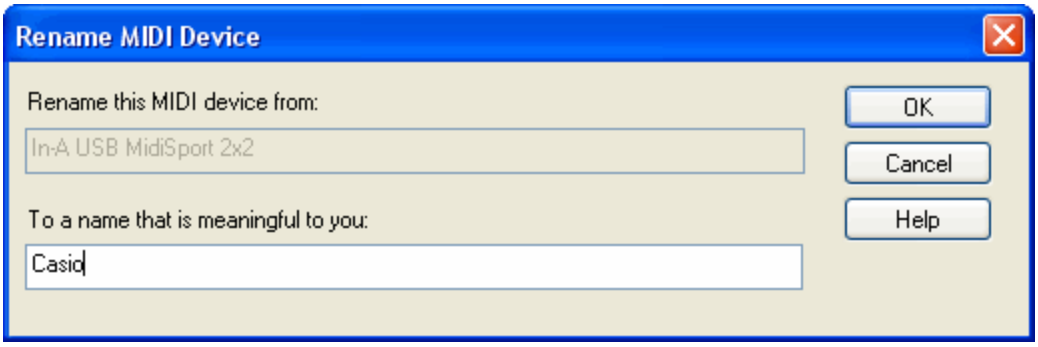
   If you experience a problem where the keyboard produces its own sound at the same time that you also hear sound through your sound card, then there are

some alternative ways you can turn off sound for one or the other. See Determining Whether or Not Your MIDI Keyboard Should Produce Sound 444.

3. If you wish to rename the playback device, click the Rename Device button next to the playback device name.

   Musician will present a Rename MIDI Device dialog box, in which you can specify the new name.

   For example, if you have a Casio[tm] keyboard connected to your computer, you are unlikely to think of it as the "In-A USB MidiSport 2x2", illustrated in the above example. The "In-A USB MidiSport 2x2" name unattractively identifies a "MIDI port" inside of Windows. Since this Windows MIDI port is uniquely associated with, or essentially connected to, your Casio keyboard, it would make a lot more sense to you if this recording device were instead named "Casio". You can do that in the Rename MIDI Device dialog box:



4. In the Quick MIDI Device Setup dialog box, click the OK button when you have selected the desired recording device.

If your MIDI device has additional MIDI sound banks besides the General MIDI sounds, then it is a good idea to import the sound names, as described in the next procedure. Once you have done this, you can refer to instrument sounds according to names, such as "pizzicata violin", rather than MIDI patch numbers.

You can import instrument sound names from either of two types of files: (1) a Cakewalk(tm) Instrument Description (.ins) file, or (2) a Notation Software(tm) MIDI Device Description (.mdd) file. INS and MDD files are available at the web site of, respectively, Cakewalk and Notation Software, as described in the procedure below. An INS or MDD file usually is named according to a MIDI device manufacturer's name, as in *yamaha.ins* or roland.ins. The file typically has descriptions for several MIDI device models offered by the manufacturer.

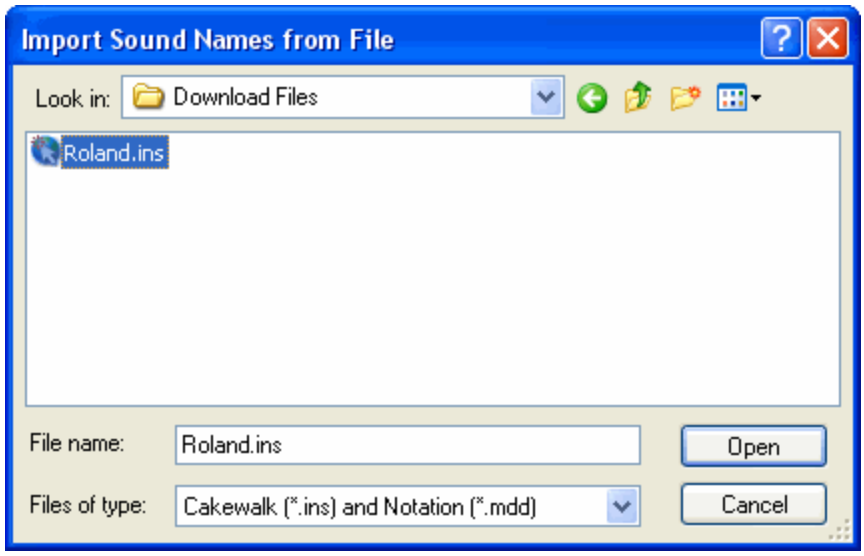
To set up sound names for a device that has additional MIDI sound banks besides the General MIDI sounds:

1. Find a Cakewalk INS file for the manufacturer of your MIDI keyboard or device. This is most easily accomplished by using your favorite search engine to search the internet for .ins files for your keyboard or device.
2. In your Internet browser, download the INS file to a directory that you should remember.
3. In the Quick MIDI Device Setup dialog, select a MIDI output port under Select MIDI Playback Device.

   A MIDI output port will include "MIDI Out" or "Out" in its name. If your device is connected via a USB cable, then the MIDI output port will also have "USB" in its name.

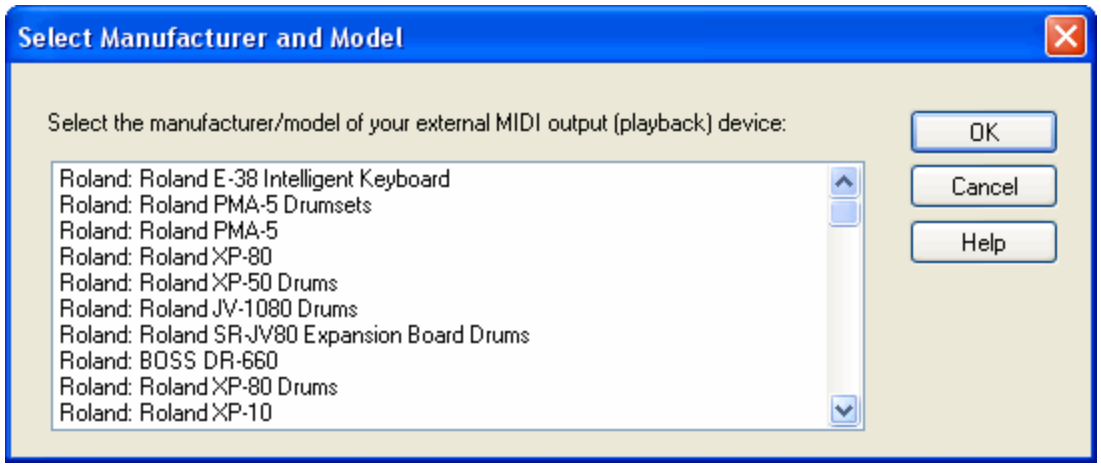
4. Click the Import Sound Names button.

Musician will display the Import Sound Names from File dialog box:



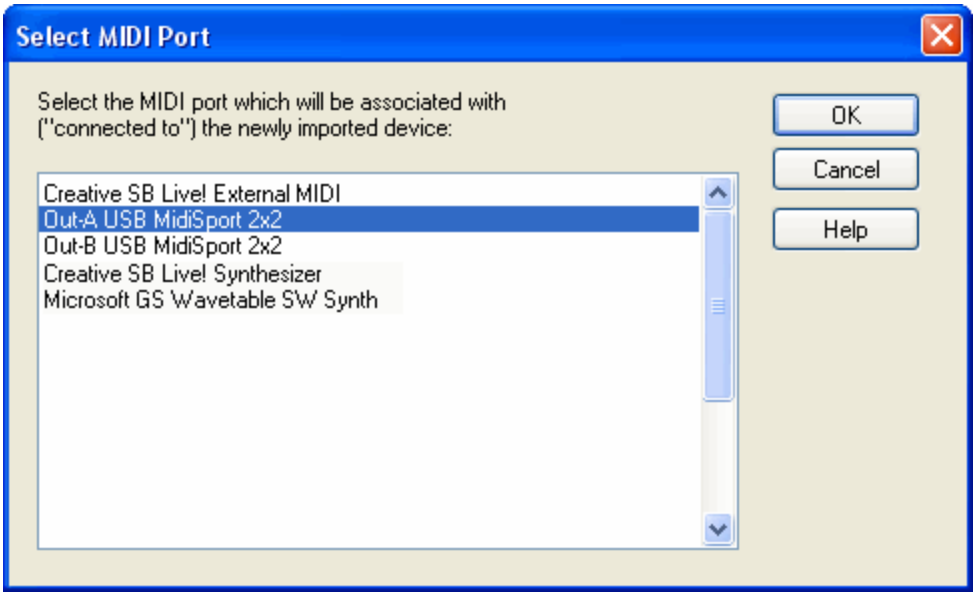
5. In the dialog box, navigate to the directory where you downloaded the INS or MDD file, and select the file. Click the Open button.

   Musician will display the Select Manufacturer and Model dialog box:



6. Select your particular manfacturer / model in the list, and click the OK button.

   Musician will then display the Select MIDI Port dialog box:



Make sure that the newly imported device is associated with ("connected to") the correct MIDI output port. The MIDI output port will probably have "Out" or "External" in its name.

7. Click the OK button in the Select MIDI Port dialog box.
8. Click the OK button in the Quick MIDI Device Setup dialog box.

For additional information about setting up instrument sound names, see Preparing Bank, Patch, and Drum Note Names for a MIDI Device 445.

7.3 What To Do If You Hear Static or Crackling

If you hear static, crackling, or other audio artifacts and are using the Notation Software Synth 419, please see the section on adjusting the buffer settings 421 for tips on correcting this problem.

If you are using a different MIDI playback device, you will need to consult the user's manual for your device and/or the manual for your sound card. You can typically find these by visiting the manufacturer's website and searching for "user's manual" and the model or name of your device or sound card.

7.4 What To Do If You Do Not Hear Any Sound

If you do not hear any sound during playback of a song, you should use the Quick MIDI Device Setup 422 to try out alternative MIDI playback devices that are available on your system.

NOTE: Selecting the Notation Software Synth 419 as your playback device should automatically allow you to hear your song files on any system as long as the system volume is "on".

If you are hearing static or crackling during playback using the Notation Software Synth 419, please see the section on adjusting the buffer settings 421.

However, if you prefer to use a different MIDI device, this topic offers several possible explanations and remedies for the problem of no sound. Some explanations and remedies are not specific to **Musician**. It is quite possible that you will not hear MIDI

playback in any MIDI program, not just **Musician**. If you have explored several possible explanations and remedies within **Musician**, and still do not hear sound, it is a good idea to determine whether the problem is just with using **Musician**, or whether the problem is common to any MIDI program on your system. A good way to do this is to try playing a MIDI file using another MIDI program. We recommend using the Windows Multimedia Player, which is almost always installed on a Windows system. For detailed instructions on testing MIDI playback using the Windows Multimedia Player, see the procedure at the end of this topic.

The first test you should do within **Musician** is to try the Test Playback option in the Quick MIDI Device Setup 422 window. If you unexpectedly do not hear sound for a particular device, then several possible explanations and remedies are offered below. The most common explanations, and the easiest ones to solve, are listed first:

- Another application is using the MIDI output device.

  In this case, exit the other application and try the MIDI device again in **Musician**. It may be necessary to also exit **Musician** and then start **Musician** again.

- The volume level in **Musician** is set to zero.

  In this case, increase **Musician**'s volume level 105.

- The Windows sound volume level is set to zero, or is muted. In this case, click the following icon in the Windows taskbar at the bottom of the screen:

   on Windows 10, 8 or 7.

  Windows will then display something like the following sound volume level control:

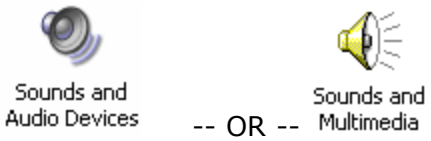
  

  Make sure that the volume level is above the lowest setting, and that there is no "X" over the speaker icon.

- The specific volume level for MIDI playback is muted or set to an inaudible level.

  On some versions of Windows, the volume level for playback of MIDI can be controlled separately from the volume level for playback of other types of audio. Make sure that the volume level for MIDI playback is not zero and not muted, as follows.

Click the Windows Start menu at the bottom, left corner of the screen. Windows will display a pop-up menu. Choose the Settings / Control Panel option. In the Control Panel folder, choose the option named "Sounds and Audio Devices" or "Sounds and Multimedia":



Depending on your soundcard and operating system, you will need to explore the options available to you. Most of these also have testing capability so that you can test your settings immediately.

- You selected an external playback device, but there is no external MIDI device, such as a MIDI keyboard, connected via a MIDI cable to the MIDI Out connector of your sound card.

  In this case, choose an internal playback device instead of an external device. The MIDI Device Configuration Window 455 indicates whether a device is internal or external. The internal Notation Software Synth 419 is always a good choice.

- There is a problem with the external MIDI device or cable connecting it to your computer.

  If the output device is an external MIDI synthesizer or sound module connected via a MIDI cable to the MIDI output connector of your sound card, then there are a couple of reasons why you may not hear any sound.

  -- Make sure that the output device power is turned on.

  -- Make sure that the cable is connected to the MIDI connector of the sound card. The other end of the cable should be connected to the MIDI In connector of the external MIDI device. Having the "In" and "Out" connectors swapped incorrectly is the typical issue here. Please try swapping them around and then checking again for sound.

  -- Make sure that the volume level of the external device is at an audible level.

- The device driver for the MIDI device is not installed correctly.

  To determine if this is the case, explore whether this MIDI device can be used by another MIDI application, such as the Windows Multimedia Player, as described in the last procedure of this topic.

  If the device cannot be used in other MIDI applications, then try re-installing the device drivers for your MIDI sound card.

  Sometimes problems with non-responsive MIDI devices can be resolved by updating the driver to the most recent one available from its manufacturer. Search the Internet for the manufacturer's web site. Look for the "download" or "drivers" section of its web site. Find and download the driver that matches the model of your MIDI device and the version of the operating system that you are using (eg. Mac Catalina, or Windows 7, 8, 10, etc.)

▸ To test the playback of MIDI files using another MIDI program on your system, and using a specific MIDI playback device:

NOTE: Although the names of the Windows options, folders, and dialog boxes vary among different versions of Windows, the following instructions are still basically the same.

1. Review the default MIDI playback device that Windows chooses for playing MIDI files:

   (a) With the left mouse button, click the Start button in the lower, left corner of the screen.

   Windows will display the Start menu.

   (b) Choose Settings in the Start menu, and Control Panel in the Settings submenu.

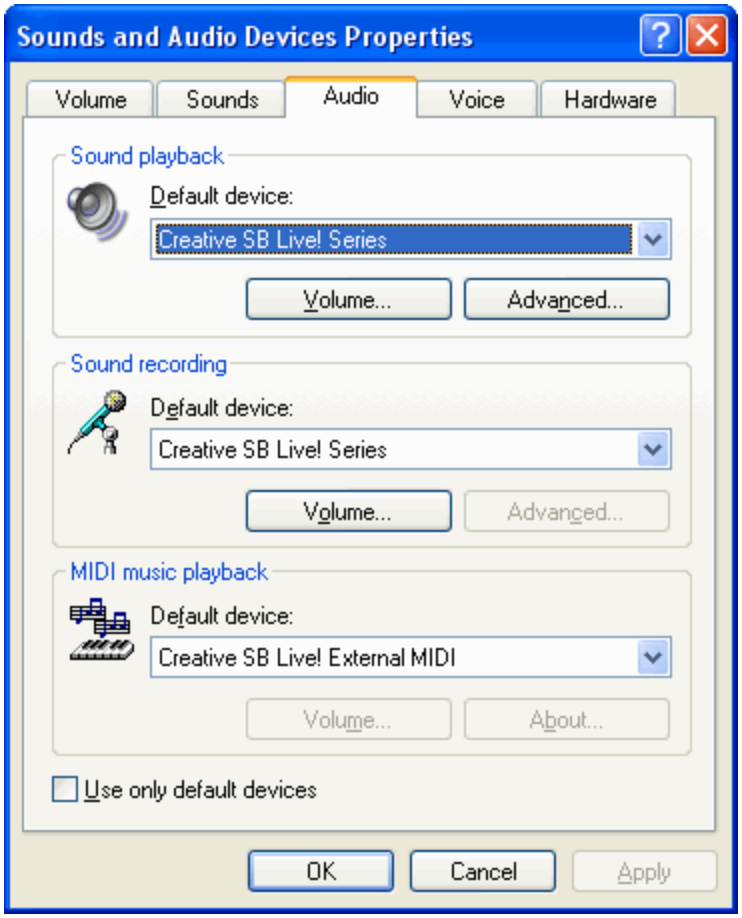
   Windows will display the Control Panel folder.

   (c) In the Control Panel folder, choose Sounds and Multimedia.

   Windows will display the Sounds and Multimedia Properties window.

   (d) In the Sounds and Multimedia Properties window, choose the Audio tab.

   The window will look something like this:



   (e) Make note of the MIDI Music Playback default device.

2. Run the Windows Multimedia player, as follows:

   (a) With the left mouse button, click the Start button in the lower, left corner of the screen. Move the cursor to the "All Programs" listing.

   Windows will display a menu.

   (b) In the menu, choose Accessories.

   (c) In the Accessories submenu, choose Entertainment.

(d) In the Entertainment submenu, choose Windows Media Player.

This will start the Windows Media Player program.

3. In the Windows Media Player, play the minuet.mid MIDI file that is installed with **<%PRODCOLON%>**

   (a) In the File menu of the Windows Media Player, choose the Open command.

   (b) In the File Open dialog box, navigate to this directory, if it is not already opened as the default directory:

   C:\Users\Public\Documents\Notation_4\Songs

   (c) Double-click the file name minuet.mid.

4. Play the MIDI file by pressing the play control in the Windows Media Player, or by choosing the Play command in the Play menu.

5. If you do not hear sound from Windows Media Player, then repeat the following steps until you find an available MIDI device by which you can hear sound in the Windows Media Player:

   (a) Exit the Windows Media Player.

   (b) Repeat all of the steps in this procedure, starting at step #1, except as noted next.

   (c) After step 1(d), select another available MIDI playback device.

6. Once you have found a MIDI device that works with the Windows Media Player, select that device in the Quick MIDI Device Seutp 422.

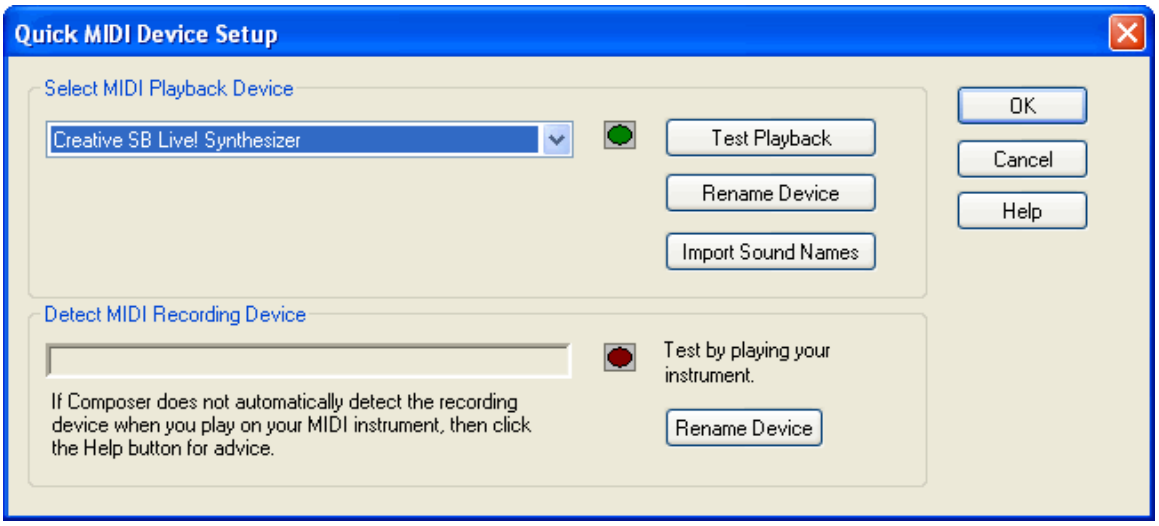
7. If you do not find a MIDI device that works with the Windows Media Player, then there may be a problem with the installation of the sound card and/or its drivers on your system.

7.5 What To Do If Play-Along Does Not Work

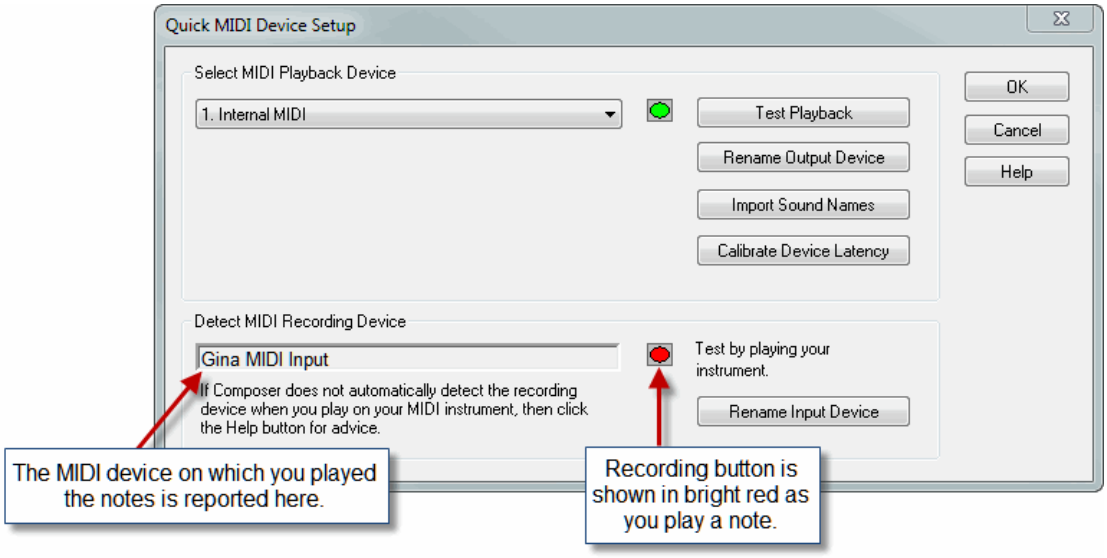
▸ If you do not hear any notes as you play on your music keyboard, then set up Musician to recognize it:

1. Choose the Quick MIDI Device Setup command in the Setup menu.

   Musician displays the Quick MIDI Device Setup dialog:



2. Play a note on your music keyboard. You should see the red recording button light up. Also, the name of your MIDI recording device should be reported, as shown here:



3. If the red recording button does not light up in the Quick MIDI Device Setup window, then make sure that the MIDI keyboard is included in **Musician**'s MIDI Device Configuration. (The device might be awkwardly named unless you have specifically changed its name.) Choose the MIDI Device Configuration command in the Setup menu, and confirm that the MIDI keyboard is listed as a MIDI input device. If you do not find the MIDI keyboard device listed, then add it to **Musician**'s MIDI Device Configuration, following the instructions for Adding a New MIDI Keyboard to Your Configuration 443.

4. If the red recording button *does* light up, and the green light for the playback device also lights up as you play on the keyboard, but you do not hear sound, then the problem is not with recording but, rather, with the playback device. Try selecting a different playback device in the Quick MIDI Device Setup window. Choose a playback device for which you know you can hear sound. Create a new song, and assign that working playback device 161 to the first staff. Enter a few notes in the staff. Then play the song. If you do not hear sound, then you should explore this problem further as a playback problem rather than as a recording problem. See What To Do If You Do Not Hear Any Sound 427.

▸ If the red light in the Quick MIDI Device Setup window does not light up when you play the keyboard after correctly setting up up your MIDI keyboard in Musician, then you should explore some possible external problems:

1. If you have another music software program capable of recording MIDI, see if you can successfully record with it. If recording does not work in other MIDI programs either, check the connection of your MIDI keyboard to your computer. Also check the installation of the MIDI drivers for your MIDI sound card device, or perhaps MIDI USB hub, that handles the MIDI input. If the problem is only with **Musician**, then you should focus your efforts in **Musician**'s MIDI Device Configuration 418.

2. Make sure that your MIDI keyboard is connected via a MIDI cable or USB cable to your sound card, a USB MIDI hub, or USB port.

3. Make sure that the device driver for the MIDI input device is correctly installed.

   Sometimes problems with non-responsive MIDI devices can be resolved by updating the driver to the most recent one available from the manufacturer.

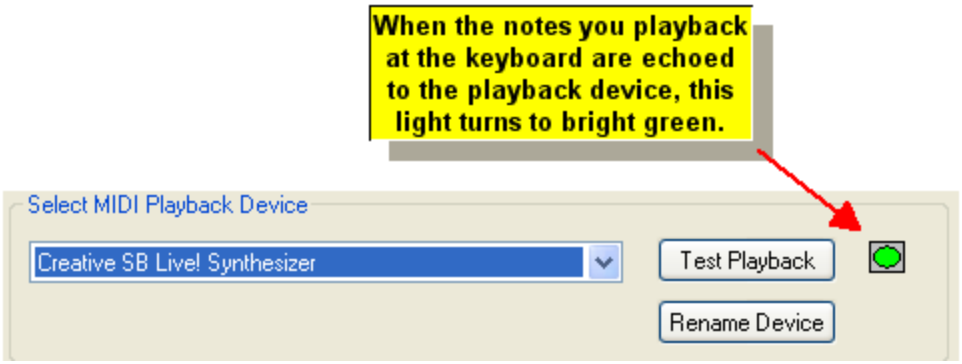
Search the Internet for the manufacturer's web site, and look for the "download" or "drivers" section. Find and download the driver that matches the model of your MIDI device and the version of Windows you are using (Windows 98, Me, 2000, XP, etc.) You might also be able to find the driver at the Microsoft Windows Update web site.

4. Make sure that another MIDI application is not attempting to simultaneously use the same MIDI recording device (Windows MIDI input port). If so, then exit the other application and try recording again in **Musician**. It may be necessary to also exit **Musician** and then start **Musician** again.

If the red light in the Quick MIDI Device Setup window *does* light up when you play at the keyboard, then turn on the *echo* option for your MIDI input device:

When "echo" is enabled for a MIDI keyboard device, then whatever you play on the keyboard is routed to some MIDI output device for simultaneous playback. The notes you play on your keyboard are immediately "echoed" on the MIDI output device.

1. Play some notes on your keyboard and observe whether the green playback light in the Quick MIDI Device Setup window lights up brightly:

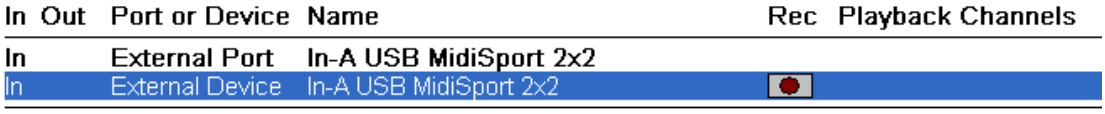


If the green light does not light up, that means that "echo" is not enabled for your MIDI keyboard device.

Note that it is not necessary that you enable echo for your MIDI keyboard device. If you do not enable echo for your MIDI keyboard device, then your MIDI keyboard should be responsible for producing the sound as you play. If your keyboard is just a MIDI controller", which means that it does not itself produce sound, then you must enable echo in order to hear what you are recording.

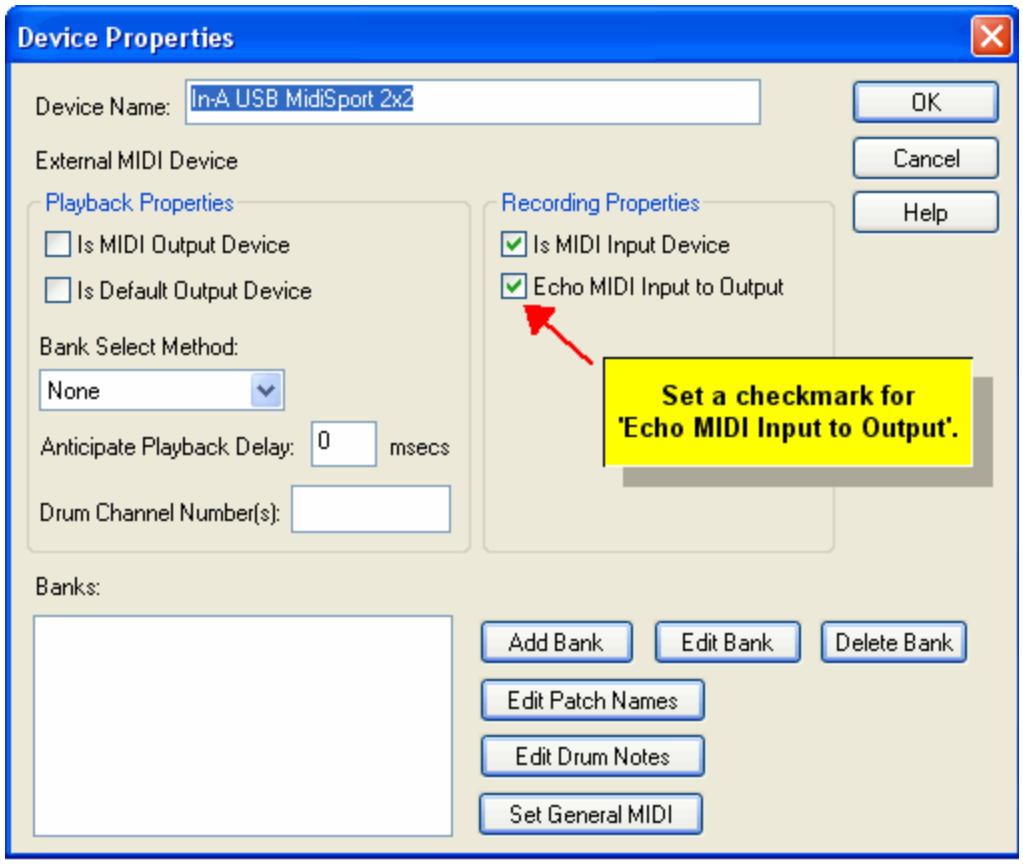
However, even if you normally want your MIDI keyboard to assume responsibility for producing sound as you play, it is a good idea to temporarily enable echo while you trouble-shoot the recording problem in the steps that follow.

2. In the Setup menu, choose the MIDI Device Configuration command.
3. In the Port or Device column of the MIDI Device Configuration Window, find the name of the MIDI *input* device, such as "In-A USB MidiSport 2x2" in an above example of the Quick MIDI Device Setup window. For a MIDI input device, the MIDI Device Configuration Window reports "In" in the left-most column, and displays a Record  light in the "Rec" column.



4. Double-click on "External Device" (not "External Port") or the name of the external device.

   Musician will display the Device Properties dialog for the external device.



5. In the Device Properties dialog box, set a check mark for "Echo MIDI Input to Output". Click the OK button.
6. Repeat the second procedure in this topic, to confirm whether the notes you play on the keyboard are now echoed to the MIDI playback device.

7.6 Procedures for Common MIDI Configuration Tasks

This section of the chapter, Configuring Your sound card and MIDI Equipment 418, describes simple procedures for the most common MIDI configuration tasks:

- Assigning Device Names That Make Better Sense to You
- Changing the Default Playback Device
- Installing a MIDI Cable Between Your sound card and Keyboard
- Adding a New MIDI Keyboard to Your Configuration
- Deciding Whether or Not Your Keyboard Shoud Directly Produce Sound 444

If the task you need to accomplish is not in the above list, then see also Procedures for Advanced MIDI Configuration Tasks 444.

7.6.1 Assigning Device Names That Make Better Sense to You

You will probably often refer to MIDI device names as you assign instrument sounds to staves of songs 161. In choosing whether the instrument sound is, for example, a flute

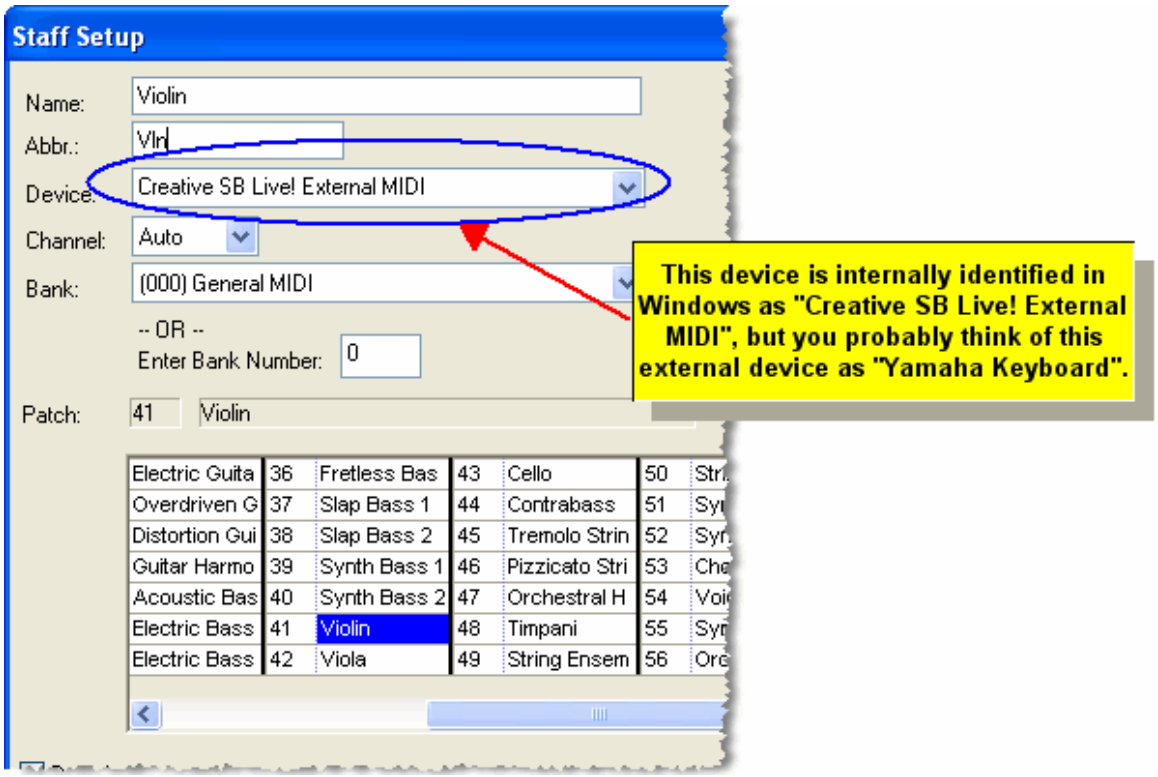
or clarinet, you must also specify which MIDI device in your configuration produces that sound. Because you might need to refer to MIDI device names often, **Musician** offers you a way to assign devices names that make sense to you.

When **Musician** runs for the first time, it detects the various MIDI "ports" on your system. A MIDI port is a somewhat abstract entity defined by Windows to identify choices for MIDI sound output and input. MIDI ports have names that are defined by the manufacturer of your sound card or MIDI keyboard or other MIDI device. The names are usually long and somewhat difficult to understand. If you have a music keyboard connected to the computer, you are likely to think of it as "Keyboard" or "Yamaha[tm] Keyboard" or "Yamaha", rather than as "the device that is connected to my Soundblaster Live! MIDI UART port". This would be especially true if you do not know (very few people do know) what "UART" means (universal asynchronous receiver/transmitter). Recent versions of Creative Lab's sound cards have a more friendly name for the external MIDI port, such as "Creative SB Live! External MIDI".

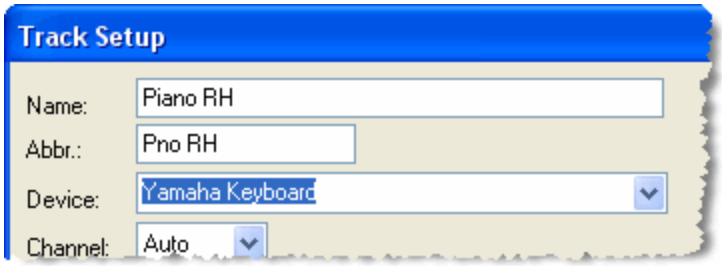
Musician lets you assign device names that make sense to you. You cannot change the name of the Windows MIDI ports. But you can change the names of the devices that are connected to them. It is a particularly good idea to rename *external* devices. An external device is one that is physically located outside of your computer and is connected via a MIDI cable to your sound card (or perhaps a special MIDI port card).

By default, **Musician** assigns a "placeholder" external device to any MIDI external port that it detects. It gives the device the same name as that of the corresponding Windows MIDI port.

The following example illustrates how you would specify that a staff should be played back on an external device, such as a Yamaha[tm] keyboard, which is connected to the "Creative SB Live! External MIDI" port. The Yamaha keyboard would be connected to your computer via a USB or perhaps MIDI cable.



When you use the Staff Setup command to assign a MIDI device and instrument sound to a staff 161, you will probably find it easier to refer to the name of your keyboard, such as "Yamaha keyboard" rather than "Creative SB Live! External MIDI", as illustrated here:



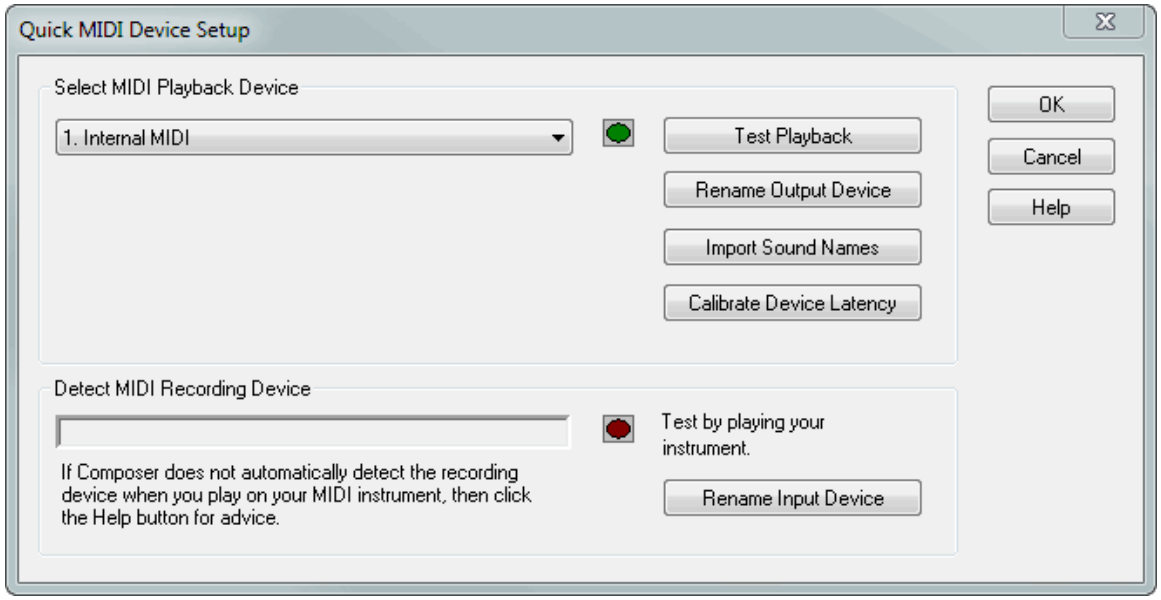
With one short procedure, described below, you can rename the device from "Creative SB Live! External MIDI" to "Yamaha Keyboard". Thereafter, you can always refer to the external device as "Yamaha Keyboard", when assigning staves to any song.

The procedure for changing the name of a MIDI device is the same whether it is external or internal, but the procedure is slightly different for an output (playback) device versus input (recording) device.

To change the name of a MIDI output (playback) device:

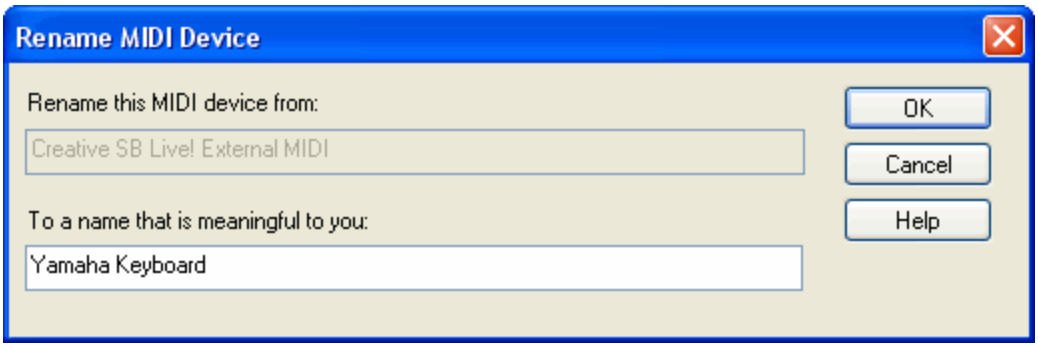
1. Choose the Quick MIDI Device Setup command in the Setup menu OR type the shortcut "qqds."

   Musician will display the Quick MIDI Device Setup window, as illustrated here:



2. In the list, select the MIDI playback device you wish to rename.
3. Click the Rename Device button next to the playback device name.

Musician will present you with the Rename MIDI Device dialog box.



4. In the Rename MIDI Device dialog box, enter the new name for the playback device, and click the OK button.

To change the name of a MIDI input (recording) device:

1. Choose the Quick MIDI Device Setup command in the Setup menu.

   Musician will display the above Quick MIDI Device Setup window.

2. Play a few notes on the recording device. The name of the recording device will be reported in the Quick MIDI Device window. If it is not, then see the procedure "To test and select a MIDI recording device" in the topic Quick MIDI Device Setup 422.

3. Click the Rename Device button next to the recording device name.

   Musician will present you with the Rename MIDI Device dialog box.

4. In the Rename MIDI Device dialog box, enter the new name for the recording device, and click the OK button.

7.6.2 Changing the Default Playback Device

Even if your computer has only one sound card, there are likely at least a couple of alternative internal playback devices available. The internal playback devices actually correspond to MIDI device drivers that are installed with your sound card. There might be additional internal playback devices available if, for example, you have downloaded from the Internet and installed a MIDI "software synthesizer".

The alternative internal playback devices are distinguished by the different types of engineering techniques they use for simulating instrumental sounds. For example, some internal playback devices play back actual sampled sounds of recorded instruments. Other internal playback devices simulate instrument sounds via sound wave formulas designed by engineers. It probably will not matter to you how the instrument sounds are created. You probably just care about how they sound to you.

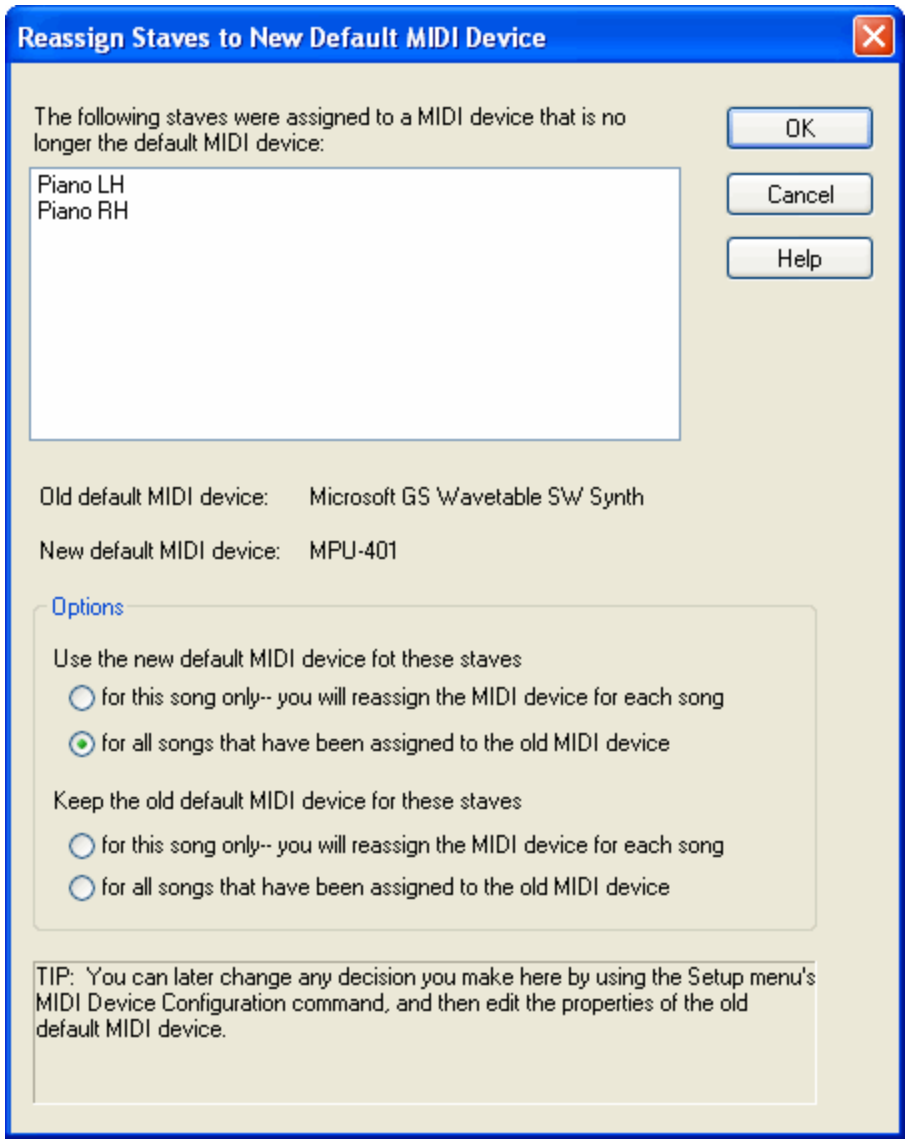
It is a good idea for you to try out the various internal playback devices that are available on your computer. Choose the playback device that sounds best to you as a default. Then, whenever you open a new MIDI file, or create a new song, your chosen default playback device will be assigned to the staves of the song.

To change the default playback device:

- Follow the procedure "To test and select a MIDI playback device on your system" in the topic Quick MIDI Device Setup 422.

What happens if you have previously saved a Notation .not file, in which some or all of the staves were assigned to the MIDI playback device that has been replaced by your new default playback device? If the old MIDI device is no longer available on your system, **Musician** will automatically reassign the staves to your new default MIDI playback device.

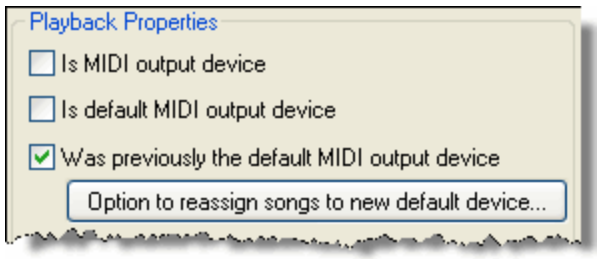
But what happens if your old default MIDI device is still available on your system? For example, perhaps you have installed a new MIDI software synthesizer that you prefer, but you still want to keep the old MIDI device on your system. In this case, do you want to reassign the staves in the song from the old MIDI device to the new one, or do you want to leave them unchanged? There is no way that **Musician** can read your mind to determine what you want. Instead, **Musician** will ask you what you want to do, as illustrated here:



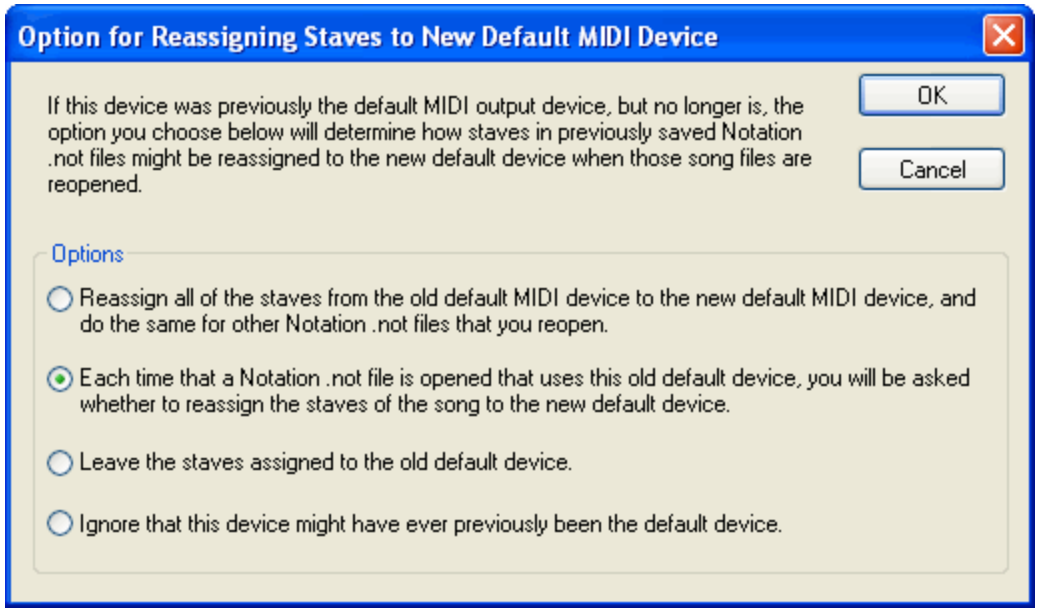
Once you instruct **Musician** to automatically update the MIDI device assignments for previously saved songs, the above dialog box will no longer be displayed. But what if you want to change your preference? In that case, follow the next procedure.

To change Musician's rule for reassigning staves from an old MIDI device to the new default MIDI device:

1. Choose the MIDI Device Configuration (not the Quick MIDI Device Setup) command in the Setup menu.
2. Open the Device Properties 477 dialog box for the *old* MIDI device.
3. In the Device Properties dialog box, add a checkmark for "Was Previously the Default MIDI Output Device" it you wish **Musician** to review the assignment of staves to that old MIDI device when you open Notation .not files. Remove the checkmark if you wish **Musician** to no longer do that.
4. If you do wish **Musician** to either automatically reassign staves to the new MIDI playback device, or ask you for each reopened Notation .not file whether you wish to reassign the staves, then click the Option To Reassign Songs to New Default Device button in the Device Properties dialog box:



Musician will then display the following dialog box:



5. Choose one of the options in the above dialog box.

7.6.3 Installing a USB or MIDI Cable Between Your Soundcard and Keyboard

Your external MIDI keyboard needs to be connected to your MIDI sound card via one of these two types of cables:

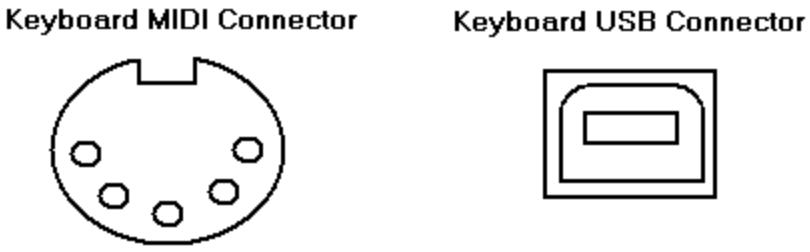
- USB (Universal Serial Bus) cable (by far the most common)

- MIDI cable with joystick connector (only on older models)

You might also need to connect a *USB MIDI interface device* between your computer and keyboard. To determine which kind of cable you need, and whether you will also need to add a USB MIDI interface between your computer and keyboard, you should examine what kind of cable connectors are available on your keyboard and computer's sound card.

Determine what kind of connector your MIDI keyboard has:

- Examine the back side of your MIDI keyboard for one or possibly both of the following two types of connectors:

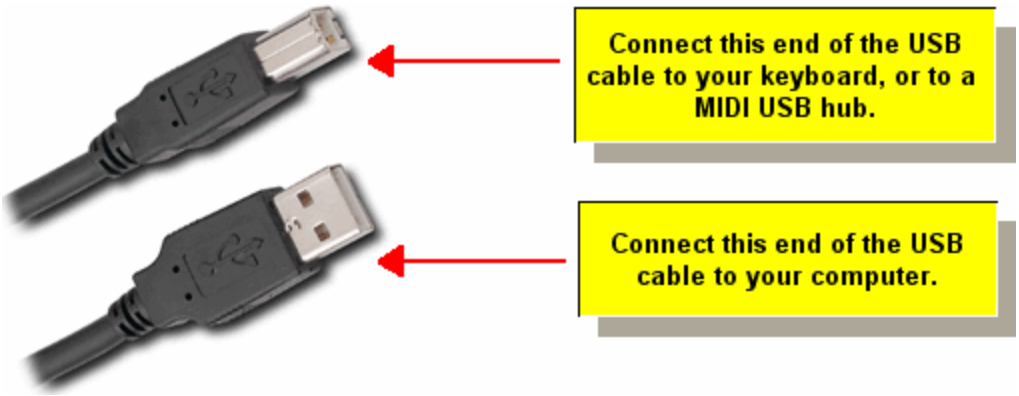


If your MIDI keyboard has a USB connector and no MIDI connector(s), then connect a USB cable between it and your computer:

1. Find an available USB female connector on the back side of your computer. It will look like this:



2. Find the USB cable that came with your USB MIDI keyboard, or else purchase one. The two ends of the USB cable look like this:



3. Connect the first of the above two ends of the USB cable to the USB connector on your MIDI keyboard.
4. Connect the second of the above two ends of the USB cable to the USB connector on your computer.

If your MIDI keyboard has one or two MIDI connectors and no USB connector, and if your sound card has no joystick connector, then add a physical MIDI USB interface between your computer and keyboard:

The following diagram shows how you would connect an E-MU Xmidi unit between your computer and your MIDI keyboard:



1. Connect a USB cable between your computer and the MIDI USB interface.
2. If your MIDI USB interface has female MIDI connectors rather than cables (as illustrated for the above E-MU midiX), then follow this step.

   Connect one or two MIDI cables between the MIDI USB interface and your MIDI keyboard. The MIDI cable will have male connectors on both ends, and look like this:

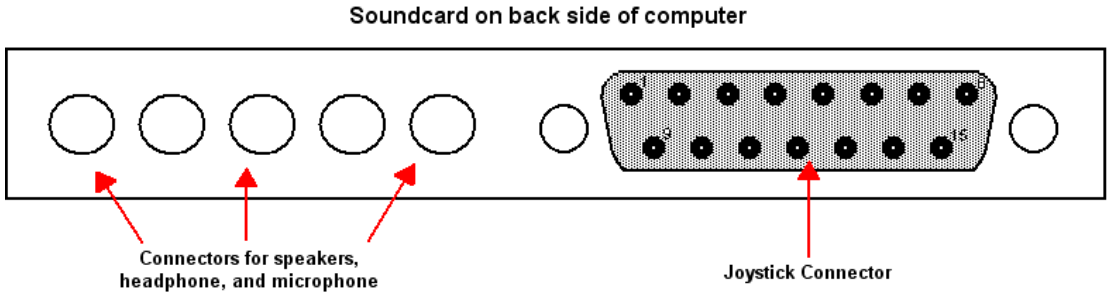


3. If you have not done so already, install the MIDI device driver for the MIDI USB interface on your Windows system.

Please note that the following section deals with very old computers and most likely will not be the case for you if you are using version 4 of our software.

Determine whether your computer's sound card has a joystick connector *(Please note that this is for older systems)* :

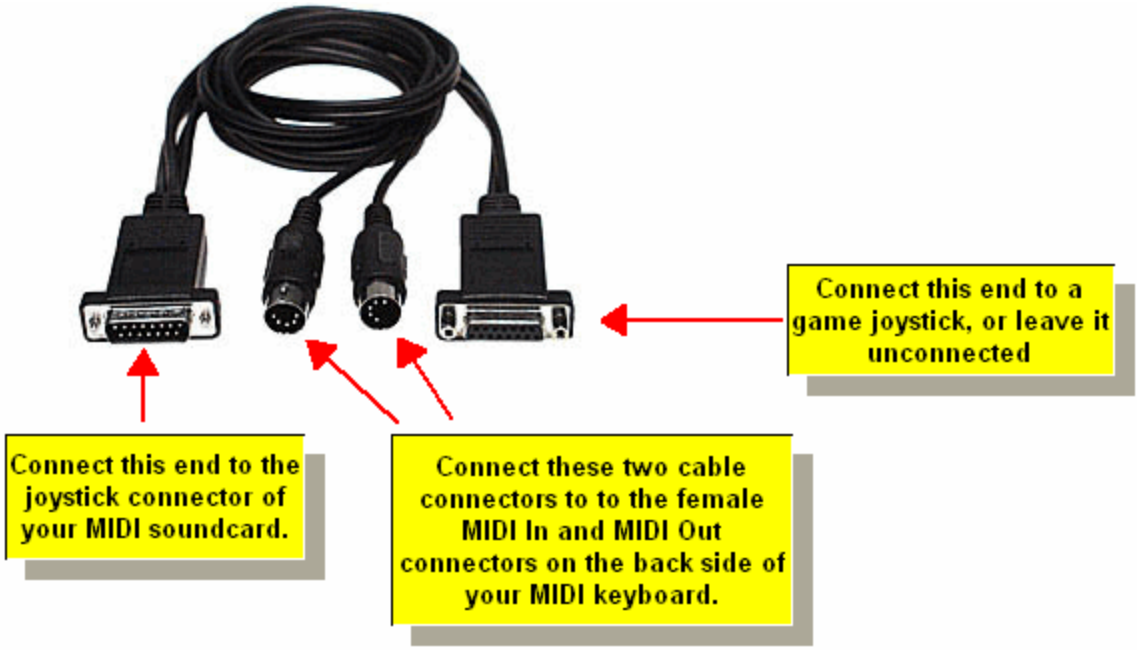
- Find the sound card on the backside of your computer. It might have a joystick connector and look like this:



However, your sound card might have only the connectors for speakers, headphone, and microphone, and no joystick connector.

If your MIDI keyboard has one or two MIDI connectors and no USB connector, and if your sound card has a joystick connector, then connect your keyboard to your sound card with MIDI cables:

1. If you do not already have one, obtain a MIDI joystick cable, which looks like this:



The above picture probably seems confusing because it has two joystick connectors, and two MIDI connectors. This is really just one cable. The second joystick connector is included in the cable so that a game joystick can share the same joystick connector on the sound card with the external MIDI device. The two MIDI connectors at the other end are for MIDI In and MIDI Out, but there might not be labels indicating which connector is for MIDI In versus MIDI Out. In that case you will need to figure out which cable connector is for MIDI In versus MIDI Out experimentally.

2. Attach the cable's joystick male connector to the sound card's female joystick connector. At the other end of the cable, connect the round 5-pin male

connector labeled MIDI In to the keyboard's round 5-pin female connector labeled MIDI Out. If the cable has two unlabeled 5-pin MIDI connectors, then you will have to experiment, by trying one, and if it does not work, then try the other.

3. If your keyboard is capable of playing back MIDI sent to it from the computer, then connect the cable's other round 5-pin male connector to the keyboard round 5-pin female connector labeled MIDI In.
4. If the MIDI joystick cable is not long enough to reach your keyboard, you may need to add one or a pair of MIDI extension cables, with a female connector on one end and a male connector on the other.

7.6.4 Adding a New MIDI Instrument to Your Configuration

If you have purchased a MIDI keyboard or other MIDI instrument so that you can record notes into **Musician**, then congratulations on a good decision! You will enjoy **Musician** even more.

If you have not done so already, then connect your computer to your new MIDI keyboard via a USB or MIDI cable, as described in Installing a USB or MIDI Cable Between Your sound card and Keyboard 439.

If your MIDI keyboard is a USB device, then install the MIDI device driver for your MIDI keyboard, according to the keyboard's installation instructions.

Once you have connected your keyboard to the sound card with the MIDI cable, and have installed its MIDI device driver (if it is a USB device), then it is a good idea to immediately test it using the Quick MIDI Device Setup 422 command.

If the recording test is successful, then you should consider renaming the keyboard device. By default, **Musician** gives it the name of the external Windows port. This is usually a complicated name, such as "SB Live! MIDI UART". Since the device name is referred to in various parts of the **Musician** program, you will probably be happier if you rename the device to something that makes better sense to you. You might just rename it to "Keyboard". Or, you might rename it to the manufacturer of the keyboard, such as "Casio" or "Yamaha". For instructions in renaming the recording device, use the Rename Device button in the Quick MIDI Device Setup 422 window.

If, while running **Musician**, you do not hear sound as you play your keyboard, then explore the possible explanations and remedies described in What To Do If You Do Not Hear Any Sound 427.

If your keyboard is capable of not only recording but also producing sound, then you might hear sound simultaneously coming out of both your keyboard and your computer speakers as you record or play at the keyboard. That is probably not what you want. To fix that problem, follow the instructions in Deciding Whether or Not Your Keyboard Should Directly Produce Sound 444.

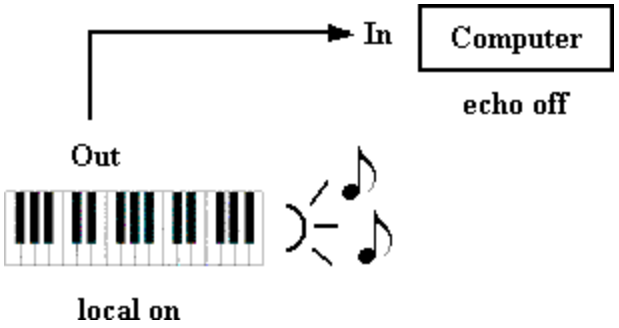
If your keyboard is capable of producing sound, then you might want to assign staves of your song to that device for playback. If your keyboard has standard General MIDI 482 (GM) sounds, then you will be able to take advantage of the fact that, by default, **Musician** assigns General MIDI sound (patch) names to a newly identified external device. For example, the first three sounds are "Acoustic Piano", "Bright Acoustic Piano", and "Electric Grand Piano." If your keyboard does not offer the General MIDI sounds, then you will want to inform **Musician** about the names of the various sounds available on your keyboard. The instructions for doing this are the same as for configuring an external MIDI sound module that only plays MIDI and does not record.

For these instructions, see Preparing Bank, Patch, and Drum Note Names for a MIDI Device 445.

7.6.5 Deciding Whether or Not Your Keyboard Should Directly Produce Sound

Letting Your Keyboard Locally Produce Sound As You Play

You can set up your keyboard to directly produce sound to play along with **Musician** :



In this case, your keyboard directly produces the sound for notes as you perform them. You do not activate the "local off" option on your keyboard. Also, you turn off the "echo on" option for your keyboard device. If you do not turn off the "echo on" option, then you will hear each note you perform twice: the note will be played back by your keyboard as well as the other device to which the note is echoed. Worse, if your keyboard is set up as the output device for the echoed notes, then it will be forced to play the notes twice, with unpredictable results.

7.7 Procedures for Advanced MIDI Configuration Tasks

This section describes some of the most common MIDI configuration tasks for MIDI equipment arrangements that include more than one external MIDI device, or which include an extra software synthesizer that you might install to supplement the sounds normally provided with your sound card. For instructions in more common MIDI configuration tasks, see Procedures for Common MIDI Configuration Tasks 434.

The procedures described in this section are:

- Installing a Software Synthesizer
- Adjusting for the Delay of Some MIDI Output Devices
- Preparing Bank, Patch, and Drum Note Names for a MIDI Device
- Configuring a New External MIDI Sound Module
- How to Handle Devices Connected With MIDI Thru Cables
- How to Save Effort if You Rearrange Your MIDI Equipment Often 455

7.7.1 Installing a Software Synthesizer pr Sound Library

A software synthesizer is a MIDI device driver that produces sound using your computer, as opposed to using specialized sound-creation circuitry in a sound card or external device. Sound cards that are pre-installed on computers and sound cards that you can purchase and install yourself usually include multiple MIDI device drivers. Some of these MIDI device drivers are for the sound card's internal sound-creation circuitry. One or more software synthesizers, provided as additional MIDI device drivers, might be included with the sound card.

Software synthesizers are also available as software products that can be purchased, or in some cases freely downloaded from the Internet, independently of which sound card you have.

After you install a software synthesizer, **Musician** will automatically detect it as a new Windows MIDI output port the next time you run the program. The software synthesizer will automatically become available as a new device.

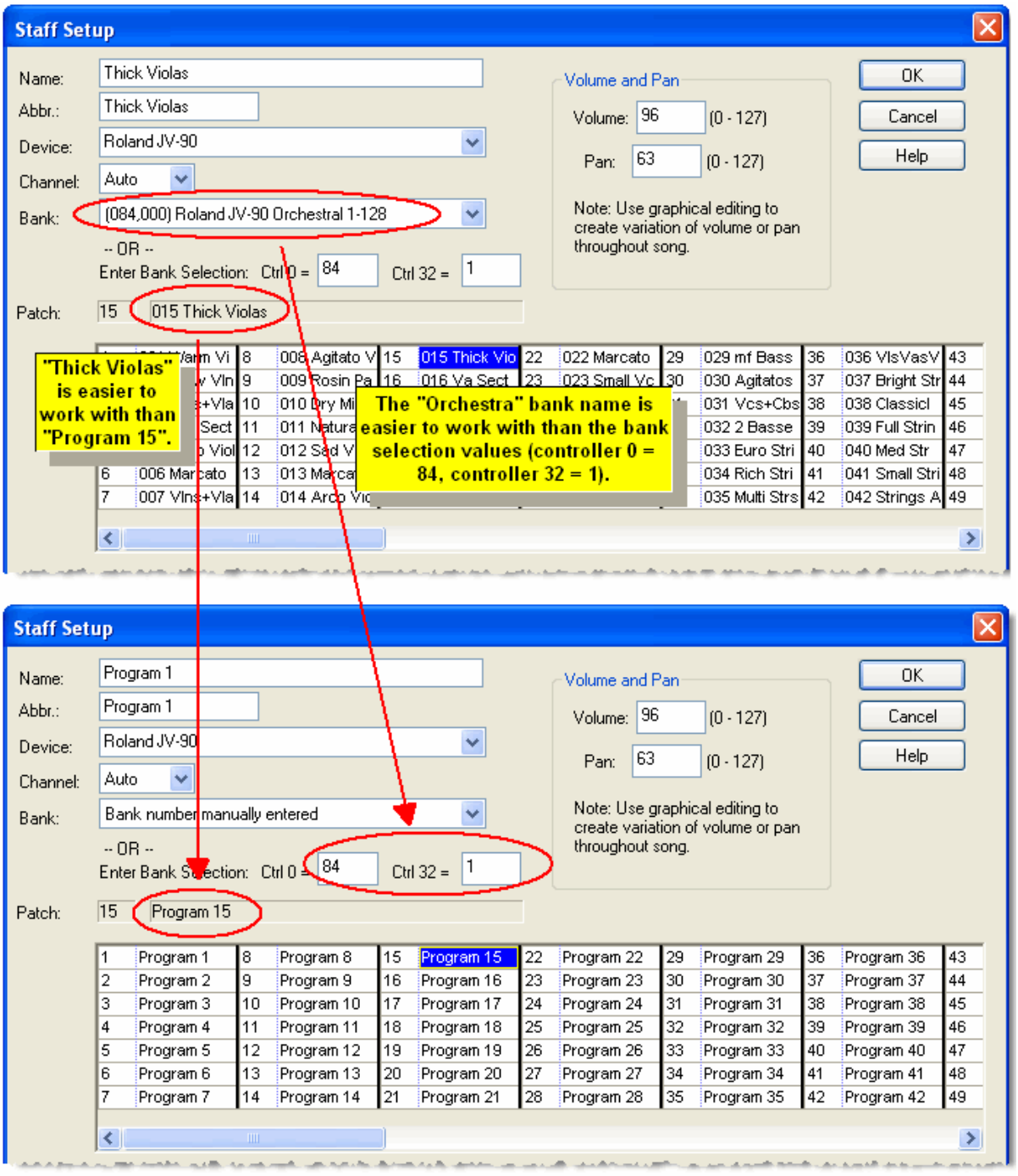
Many software synthesizers have a built-in delay between the time a software program (such as **Musician**) requests a note to be played, and the time that the sound is actually produced. This requires special attention on your part. See the next topic, Adjusting for the Delay of Some MIDI Output Devices 447.

For sound libraries that you may use for your instrument sounds, you will need to refer to the Users Manual for those libraries to see how to set up each instrument for the device and channel, and then enter those values in the Staff Setup 166 of **Musician**.

7.7.2 Preparing Bank, Patch, and Drum Note Names for a MIDI Device

Some MIDI devices-- software synthesizers, sound libraries, or physical devices such as a sound-producing MIDI keyboard-- offer a standard set of *General MIDI* (GM) instrument sounds. More capable MIDI devices also, or instead, offer an extended set of instrument sounds in one or more MIDI banks. A MIDI bank is a collection of up to 128 different instrument sounds, commonly called MIDI *patches*. Also, a given patch in a MIDI bank may provide a "drum kit" of up to 128 different drum instrument sounds, each associated with a pseudo drum pitch.

MIDI banks and patches are identified with bank and patch numbers by default. Drum instruments are identified by pseudo drum pitch numbers by default. These numbers would generally be difficult for you to use when assigning instrument sounds to staves, because you would have to know that, for example, on your Roland JV-90 keyboard, the bank for MIDI controller 0 value 84 and controller 32 value 1, patch 12 is the "Thick Violas" sound. It will be much easier for you to assign an instrument sound to a staff by referring to the names of the banks and patches, such as the "Thick Violas" patch in the "Orchestral" bank of your Roland JV-90 keyboard.



In order to offer you instrument names instead of bank, patch, and drum note pitches, **Musician** needs to learn what the instrument names are. There are two ways it can do this. The easiest way is for you find a Cakewalk(tm) Instrument Definition (.ins) file or Notation Software MIDI Device Description (.mdd) file for your particular MIDI device. That INS or MDD file will have the various instrument names for your device. You can quickly "import" the INS MDD file into **Musician**. The other, more difficult way, is for you to manually enter the instrument names yourself.

To import instrument names for your MIDI device:

- Follow the instructions in the topic Quick MIDI Device Seutp 422 for "setting up sound names for a device that has additional MIDI sound banks besides the General MIDI sounds."

To manually enter instrument names for your MIDI device:

- Follow the instructions in the topic Assigning Bank, Patch, and Drum Note Names to a MIDI Device 489.

7.7.2.1 Adjusting for the Delay of Some MIDI Output Devices

An important aspect of many software synthesizers 444 and sound libraries 444 is that they have a fixed built-in delay between the time a software program (such as **Musician**) requests a note to be played, and the time that the sound is actually produced. This delay is necessary because of the many calculations that a software synthesizer makes to simulate instrument sounds.

If your software synthesizer or library player has such a delay, then you will not be able to use it to echo 444 your performance on a MIDI keyboard. If you use such a device, then as you hit keys on your music keyboard, you will hear them played only after some annoying delay. We recommend that you use some other device such as the internal Notation Software Synthesizer 419 to echo your performance on the keyboard. See Deciding Whether or Not Your Keyboard Should Directly Produce Sound 444 for instructions on setting the playback device that echoes your performance at the keyboard. Note that after you have recorded using "echo" on another device, you can then reassign the staves to your software synthesizer device for playback.

If you want to play back songs that have staves that are assigned to both the delayed software synthesizer and other non-delayed devices, then it is important that you tell **Musician** exactly what the delay time is in milliseconds for the software synthesizer, or that you use the "Tap in Device Delay" feature described below so that **Musician** can automatically enter that value. **Musician** needs this information in order to synchronize the output to the delayed and non-delayed devices. If you do not do this, you will hear the notes for the delayed software synthesizer lag behind those notes assigned to other devices.

Some acoustic pianos, such as the Yamaha Disklavier, and pianos retrofitted with a PianoDisc system, have a MIDI playback mechanism. Such acoustic MIDI pianos also have a built-in delay between the time that the software program requests a note to be played, and the time that the note sounds. The reason for this is that it takes several milliseconds for the hammer to travel from its resting position to the time it hits the string; and that travel time varies according to how soft or loud the note is. (Pianists subconsciously account for this in their playing.) In order to produce accurate timing of note attacks, independently of the softness or loudness of the notes, an acoustic MIDI piano must employ a minimum delay that is at least as long as that for the most softly played note. Some acoustic MIDI pianos offer you at least two choices for the delay it uses: (1) the minimum necessary delay, or (2) some much larger but "round number" delay, such as 500 milliseconds (one half second).

You may find the delay information in your device's product documentation. If you do not find it there, you might find that information through good searching on the Internet. Otherwise, you can use the "Tap in Device Delay" feature as explained below.

To specify the numerical millisecond delay for an output device when you know the number:

1. In the Setup menu, choose the MIDI Device Configuration command.

   -- OR --

   Type or "qdc" for "Quick Device Configuration".

   Musician will display the MIDI Device Configuration Window.

2. In the MIDI Device Configuration Window, click the name of the output device to select it. Then in the Device menu choose Properties.

   -- OR --

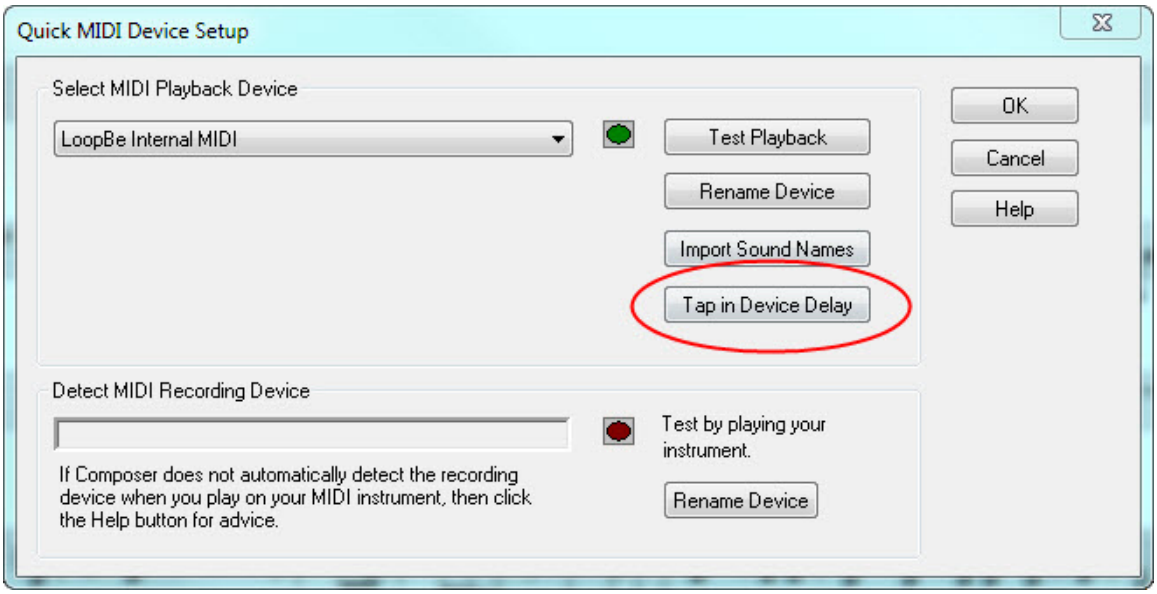
   With the mouse, right-click the name of the output device.

   Musician will present you with the Device Properties dialog.

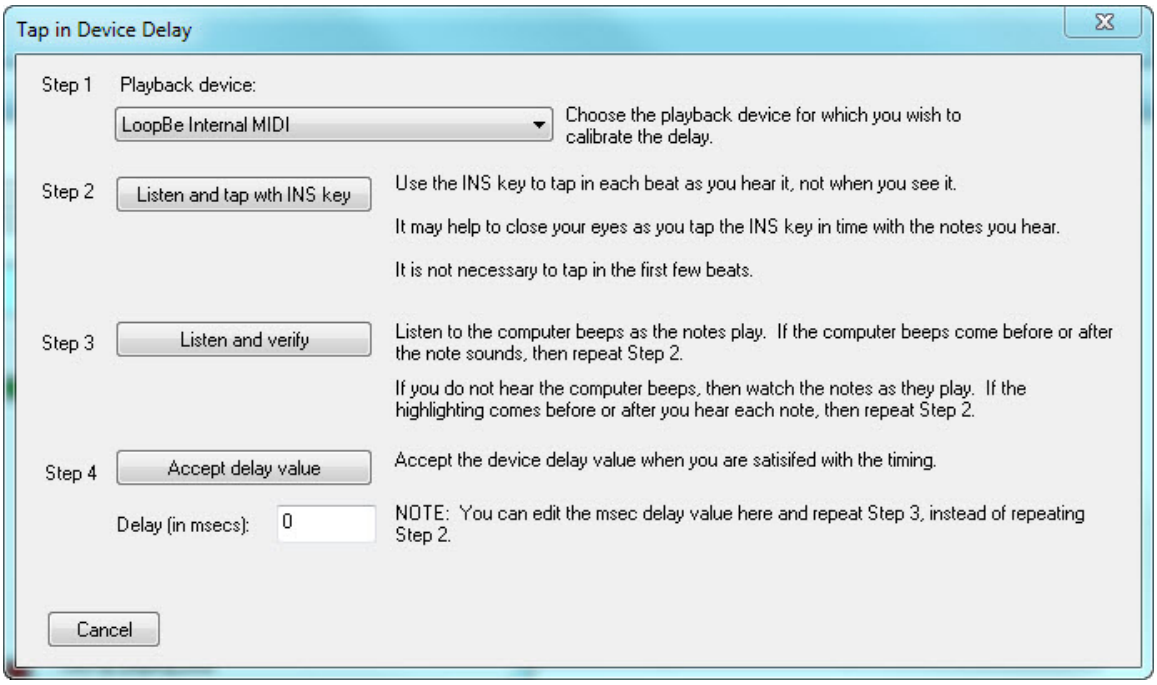
3. In the Device Properties dialog box, enter the millisecond delay value in the Playback Properties section.
4. Click the OK button in the dialog box to commit the newly assigned delay value.

To "Tap in" the Device Delay using the "Insert" (INS) key on your computer keyboard:

1. In the Setup menu, choose "MIDI Devices Quick Setup", and the following dialog will appear:



2. Click the "Tap in Device Delay" button and the following dialog will appear:



3. Select the Playback Device from the drop list of Step 1 (all available MIDI playback devices will be listed there) that you want to calibrate.

4. Now click the Step 2 "Listen and tap with INS key" (it may be labeled "Insert" key on your keyboard). A test track will then appear, and playback will begin. As you hear the notes, tap your Insert (Ins) key on your computer keyboard. It is ok if you miss the first few notes - **Musician** makes an allowance for a "getting in rhythm" time. It may help to close your eyes during this step, and just tap when you hear the notes play. When you are done with this step, you will see the calculated latency value in the "Delay (in msecs):" box. Alternatively, you can manually enter the number value here if you know it.
5. Now you can click the Step 3 "Listen and verify" button. The same scale will play again, and now you should watch and listen to verify that the notes highlight precisely when the notes sound. If they do not, you may want to repeat Step 2 for a more accurate measurement.
6. When you are satisfied that the notes highlight at the same time they sound, you can click the Step 4 button to "Accept delay value". The dialog will close, and **Musician** will then save the delay time (latency) value for that MIDI playback device.

7.7.3 Configuring a New External MIDI Output Device

The most common example of an external MIDI output device is a MIDI keyboard. You might think of a MIDI keyboard as just an input device for recording; but many MIDI keyboards can also serve as output devices, playing back MIDI sent to it from the computer. This topic describes how you can set up your MIDI keyboard as an output device if it has extended sounds or "instrument patches" available in multiple or extended banks.

Another type of external MIDI output device is called a "sound module", which is hardware that specializes in playing back MIDI that is sent to it.

When you install a new external MIDI sound module, you will need to help **Musician** learn the names of the instrument sounds that this device can produce. The procedure below, for configuring a new external MIDI device, applies equally to MIDI keyboards and MIDI sound modules.

To configure a new external MIDI sound module:

1. Determine whether your MIDI device offers only the General MIDI (GM) sounds, or whether it offers a different set of sounds.

   A fairly good way to determine whether your device offers the GM sounds is to explore sound options using the front panel of the device, or refer to its documentation. Note whether these arbitrarily listed GM sounds match those of your instrument:

   Patch #1 (or 0) -- Acoustic Grand Piano

   Patch #7 (or 6) -- Harpsichord

   Patch #23 (or 22) -- Harmonica

   Patch #41 (or 40) -- Violin

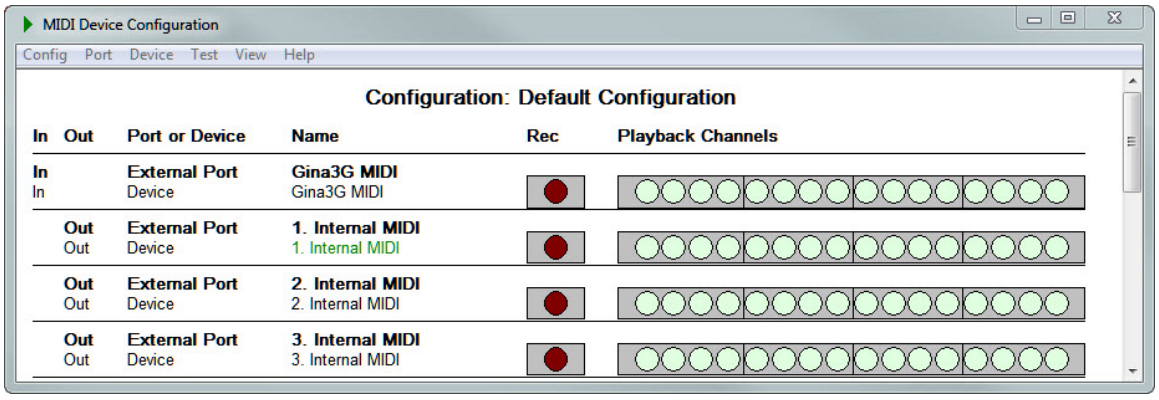
   Patch #57 (or 56) -- Trumpet

   If your MIDI device has the standard GM sounds, then you can just refer to the Quick MIDI Device Setup 422 to set up your device and you're done!

   If your MIDI device does not have the standard GM sounds, or it has extended sounds that you wish to use, then you'll want to continue.

2. Choose the MIDI Device Configuration command in the Setup menu.

   Musician will display the MIDI Device Configuration Window, such as illustrated here:



3. Identify the external output port to which you wish to connect the external device. All of the external output ports on your Windows system are indicated with the combination of "Out" and "External Port" in the second and third columns of the window. In the above example, there is an external output port, named "1. Internal MIDI" that is the current default MIDI output device.

4. Note whether there is already an external output device listed below the external output port. In the above example, the external output device "1. Internal MIDI" is listed below the external output port with the same name.

When **Musician** first initializes a MIDI device configuration, it assigns placeholder devices to each external port. A placeholder device initially as the same name as the corresponding port. It is a good idea to rename the device to that of the MIDI keyboard or external MIDI sound module that you are connecting, such as "Yamaha Keyboard".

5. If you noted in step #4 that there is already an external device listed below the external output port, then do one of the following:

   (a) If you determined in step #1 that your device uses the General MIDI sounds, then rename the device to something meaningful to you, such as the manufacturer and model of the keyboard or sound module. To rename the device, select it in the window, then choose Device Properties in the Device menu. In the Device Properties window, enter the new name for the device. After that you do not need to follow any additional steps in this procedure.

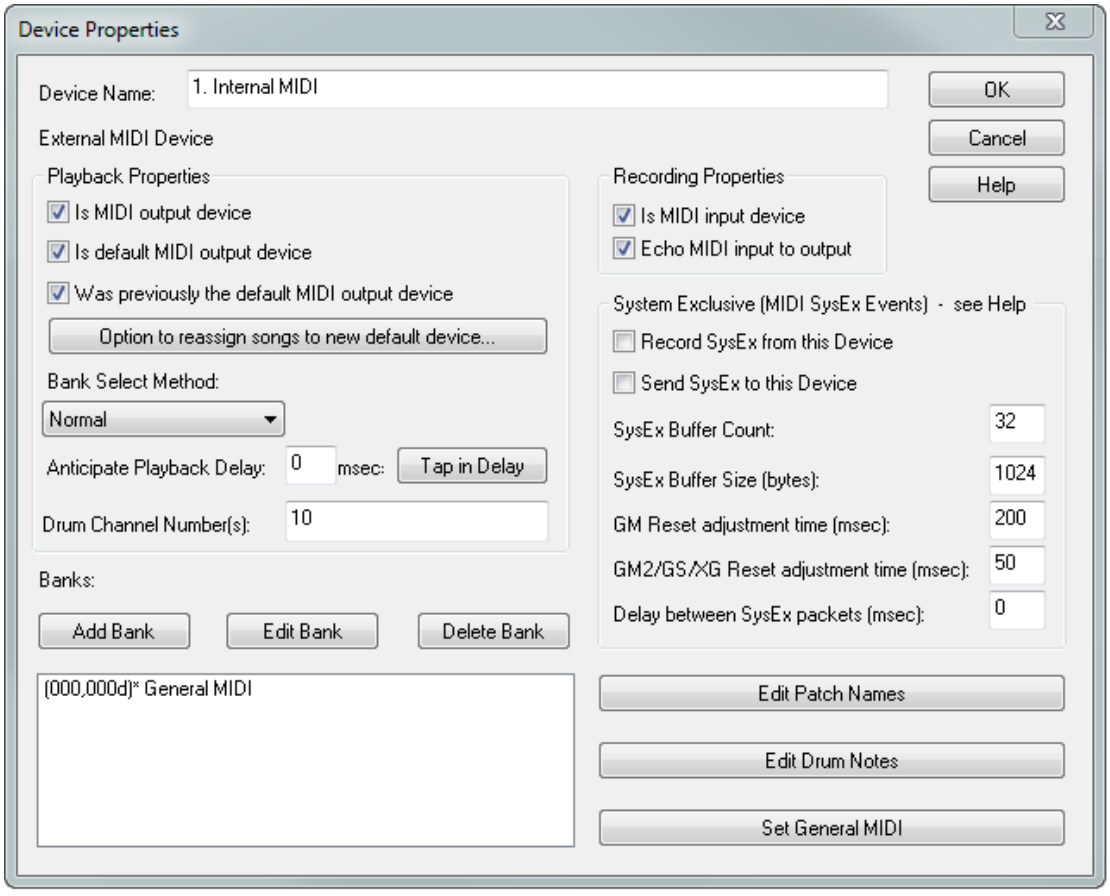
   -- OTHERWISE --

   (b) Remove the device listed below the external output port by selecting it and choosing Remove from the Device menu. Skip to step #7 and then connect the device to the external output port, as described in step #8.

6. If you noted in step #1 that the device you are adding uses the General MIDI set of sounds, then do the following:

   (a) Choose the New External Device command in the Device menu.

   Musician will display the Device Properties dialog:



(b) In the Device Properties dialog, enter a name for the device, such as the manufacturer and model of your MIDI keyboard or sound module.

(c) For almost all external (hardware) General MIDI devices, the default values for the rest of the options in the dialog box are appropriate. You can review the purpose of each option in Specifying Properties of a Device 477.

(d) If "General MIDI" is not listed under Banks, then click the Set General MIDI button.

Musician will display "(000)* = General MIDI" in the Banks list., and will display 10 in the Drum Channel Number(s) field.

(e) Click the OK button in the Device Properties dialog.

Musician will add the new device at the bottom of the MIDI Device Configuration Window, under the heading Unassigned Device(s).

(f) Skip step #7 and continue with step #8.

7. If you noted in in step # that the device you are adding does not use the General MIDI set of sounds, then do the following:

(a) Attempt to import the device description from a Cakewalk Instrument Definition (.ins) file 471, or from a Notation Software MIDI Device Description (.mdd) file 469. This will save you a lot of effort that you will otherwise spend manually entering the names of the sounds for your device. If you are able to import the device description, then skip the rest of this step.

(b) Follow the instructions in step #6, except skip step #6(d), since your device is not a General MIDI device.

(c) If your MIDI device has multiple banks, then use the Add Bank button in the Device Properties dialog to add each bank.

(d) If your device has only one bank, then use the Add Bank button just once. You can give that bank any name you want, such as "Instruments". Leave the bank value as 0.

(e) For each bank, you can enter the MIDI patch names, that is, up to 128 instrument sound names. Click the name of the bank in the list, and then click the Edit Patch Names. **Musician** will display the Patch Names dialog. Read the names of the instrument sounds off the front panel of your device, or from the manufacturer's manual for the device, and enter them into the Patch Names dialog.

For further instructions, see Assigning Bank and Patch Names to a MIDI Device 491.

Also, for each bank, optionally enter drum note names, as described in Assigning Drum Note Names for a MIDI Device or Bank of a Device 489.

8. To connect the newly added device to the external output port:

(a) At the bottom of the MIDI Device Configuration Window, under the heading "Unassigned Devices", click the name of the newly imported or added device to select it.

(b) Choose the Connect to External Port command in the Device menu.

Musician will display the Connect External Device to Port dialog box.

(c) In that dialog box, choose the external port to which you wish to connect the external device.

For further instructions, see Connecting and Disconnecting Devices from an External Port 466.

9. If your device relies on System Exclusive Events, you can check the appropriate box to "Send SysEx to this Device". Checking this box will also make sure that any MIDI files that you export contain the proper Sys Ex events as well.

10. If your device relies on SysEx Events, then for optimal performance of sounds for your device you should check and possibly edit the following parameter values, which you will need to get from your device manual:

    SysEx Buffer Count

    SysEx Buffer Size (bytes)

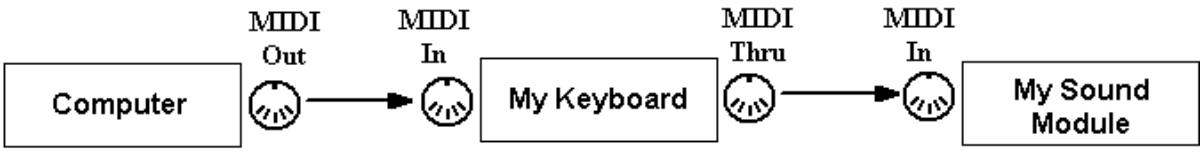
    GM Reset adjustment time (msec)

    GM2/GS/XG Reset adjustment time (msec)

    Delay between SysEx packets (msec)

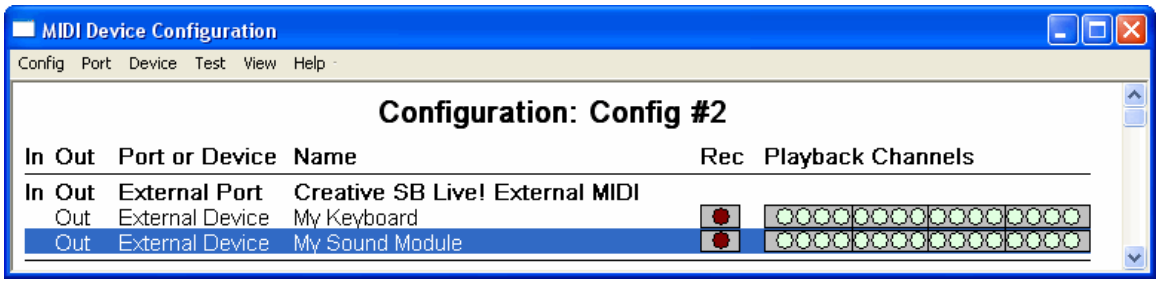
7.7.4 How to Handle Devices Connected with MIDI Thru Cables

The physical MIDI Thru connector of a MIDI device enables that device to forward MIDI performance data on to a second device, as illustrated here:



If you have physically configured your devices with MIDI Thru, then you probably want one device to play back MIDI received on certain channels, and the second device to play back MIDI received on other channels.

You will need to inform **Musician** about such a MIDI Thru configuration, so that **Musician** can correctly play back MIDI on the two devices. The following screenshot shows the part of **Musician**'s MIDI Device Configuration Window that represents the above configuration:



The physical MIDI Out connector at the computer will be associated with an external output port, such as a "Creative SB Live! External MIDI".

To configure external devices that are connected via MIDI Thru:

1. Choose the MIDI Device Configuration command in the Setup menu.

   Musician will display the MIDI Device Configuration Window.

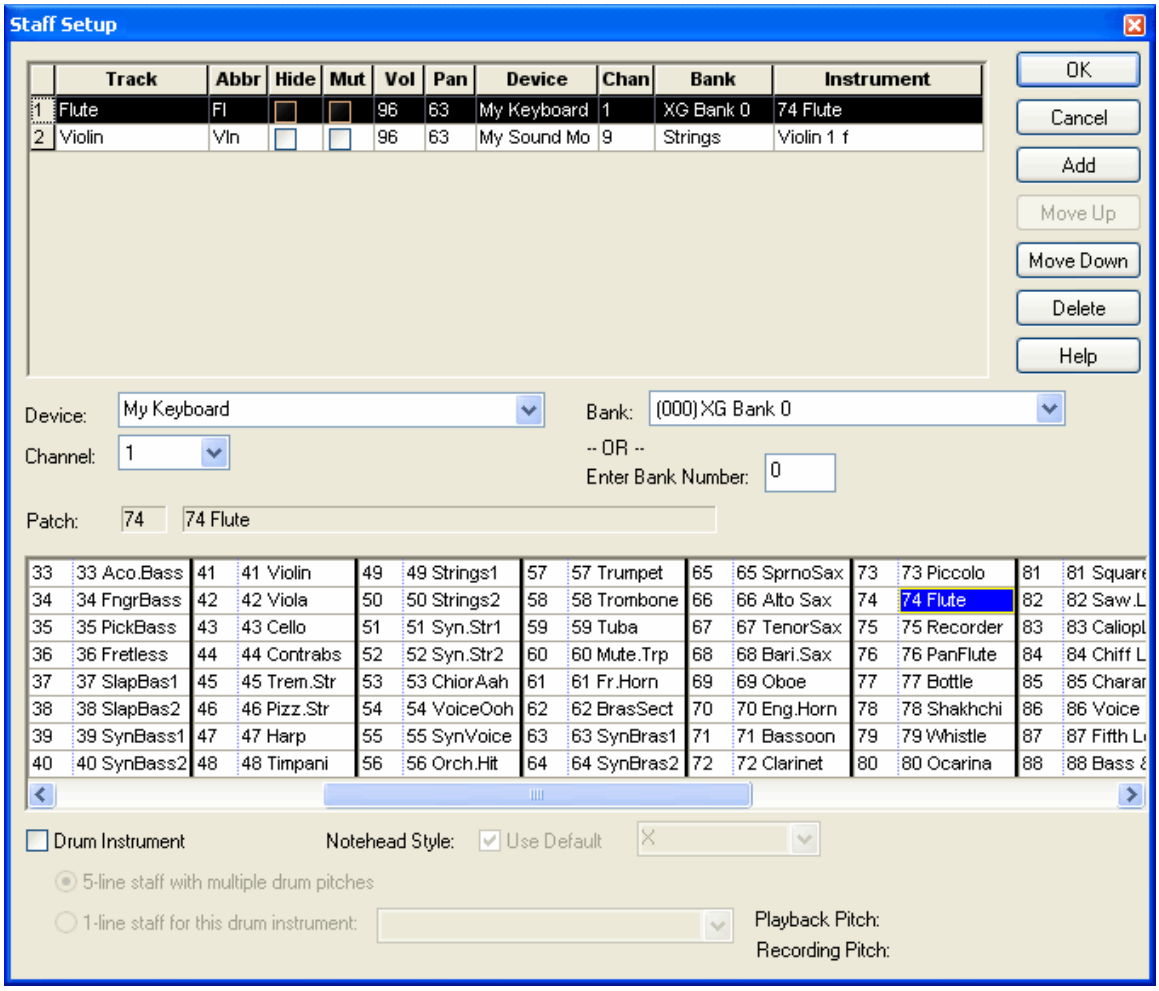
2. If the devices are not already included in the configuration, then add them using the New External Device command in the Device menu. For an introduction to adding a new device, see Configuring a New External MIDI Sound Module 449.

The new devices will be listed under a heading "Unassigned Device" at the bottom of the MIDI Device Configuration Window.

3. In the MIDI Device Configuration Window, identify the external output port that corresponds to the physical MIDI Out connector, to which you have physically connected the first device. An external output port is listed in bold text, and has "Out" and "External Port" in the second and third columns.
4. If a placeholder device is already connected to that external output port, then disconnect it. A placeholder device has the same name as the MIDI output port to which it is connected. To disconnect the placeholder device, click its name to select it. Then choose the Disconnect From External Port command in the Device menu.
5. Click the name of the first device to be connected, in order to select it. (The order in which the two devices are connected or listed does not need to reflect how they are physically ordered with MIDI cables.) Then choose the Connect to External Port command in the Device menu. In the Connect External Device to Port dialog, select the external output port that you identified in step #3. For further details, see Connecting and Disconnecting Devices from an External Port 466.
6. Repeat step #5 for the second device.

Normally, when you connect two devices using MIDI Thru, you will want one device to play notes received on only certain MIDI channels, and the second device to play notes received on other MIDI channels. To do this, you will probably need to use either the front panel controls, or some software tool that accompanies your device, to "tune" the device to certain channels, and to have it ignore other channels.

For a given song, you can assign specific channels to each staff. For example, suppose you have tuned My Keyboard to channels 1 through 8, and My Sound Module to channels 9 through 16, using manual controls available on the two physical devices. Using the Staff Setup 161 command in the Staff menu, you will need to assign channel numbers to the staves that are consistent with the devices to which they are assigned, as illustrated below:



7.7.5 How to Save Effort if You Rearrange Your MIDI Equipment Often

If you have two or more external input and output MIDI devices, then there are a variety of ways that you might physically configure them. Each different way that you physically configure your MIDI devices usually requires a different setup in **Musician**. Or, more specifically, each different physical configuration requires a different arrangement of MIDI ports and devices in the MIDI Device Configuration Window 455.

To spare you the inconvenience of rearranging your configuration every time you rearrange your equipment, **Musician** enables you to save alternative configurations in the MIDI Device Configuration Window.

The options available to you for managing alternative MIDI device configurations are all offered in the Config menu of the MIDI Device Configuration Window. Commands in the Config menu include: Initialize, New, Clone To, and Select. For details, see Managing Alternative MIDI Device Configurations 498.

7.8 Using the MIDI Device Configuration Window

The MIDI Device Configuration Window shows you how Windows MIDI ports and devices are configured in **Musician**.

For simple MIDI configurations that consist of no more than a sound card and MIDI keyboard, you can use the Quick MIDI Device Setup 422 window to quickly test MIDI playback and recording, and to inform **Musician** which MIDI output device you wish to use. In this case, you may not need to use the MIDI Device Configuration Window.

You will probably want to use the MIDI Device Configuration Window if your MIDI studio consists of more than one external MIDI device-- such as a MIDI keyboard plus one or more MIDI sound modules. In this case, the extra complexity of your MIDI studio will require some corresponding extra complexity in informing **Musician** about the physical arrangement of your MIDI equipment. **Musician**'s MIDI Device Configuration Window offers you an intutitive way to provide **Musician** this information.

To use the MIDI Device Configuration Window effectively, you will need to understand the distinction between *MIDI port* and *device*. The term MIDI *port* is something that is defined by Windows, and something that you find references to in most other MIDI programs. In contrast, the term MIDI *device* has a special definition in **Musician**, even though the word device is also used in many ways by other programs. It is important that you understand how **Musician** defines the term *device*, and the relationship between a port and a device. This is discussed in the topic Understanding the Difference Between a Port and a Device 457. We highly recommend that you review that topic before using the MIDI Device Configuration Window.

To open the MIDI Device Configuration Window:

- Select the MIDI Device Config command from the Setup menu.

When you open the MIDI Device Configuration, you may find that the text in the MIDI Device Configuration Window 455 is too small to read. You can change the text size, as described below.

To increase (or decrease) the font size of text in the MIDI Device Configuration Window:

- Increase (decrease) the size of the window by dragging one of the corners of the window outward (inward) with the mouse. The size of the text will expand to fit the new size of the window if you make the window larger.

-- OR --

- Choose Zoom In (Out) from the View menu.

-- OR --

- Type Z+  or Z+  for Zoom Out or Zoom In

If you decrease the size of the window, the same text size will be preserved, and scrollbars will be added to the window. You can zoom back out by choosing Zoom Out from the View menu, or by typing Z+  .

Another option is also available:

To change the font size of the text in the MIDI Device Configuration Window to fit the current size of the window:

- Choose Scale to Fit from the View menu.

-- OR --

- While holding down the 'Z' key, hit the ENTER key.

The remainder of this chapter is organized as follows:

- Understanding the Details of the MIDI Device Configuration Window

- Testing Playback and Recording Devices
- Managing MIDI Ports
- Managing MIDI Devices
- Assigning Bank, Patch, and Drum Note Names to a MIDI Device
- Managing Alternative MIDI Device Configurations 498

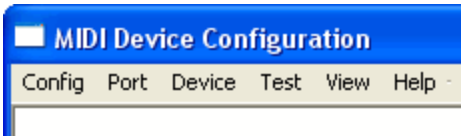
7.8.1 Understanding the Details of the MIDI Device Configuration Window

The topics below provide an overview of the details that you see in the MIDI Device Configuration Window:

- Understanding Ports and Devices in the MIDI Device Configuration Window 457 -- Before you attempt to change any of your MIDI configurations in **Musician**, it is essential that you understand the distinction between Windows MIDI ports versus **Musician**-defined devices.
- Common MIDI Device Configurations 460 -- There is a good chance that one of the typical device configurations in this topic can serve as a very close example of how you can set up your MIDI configuration in **Musician**.
- Play-Along Indicator in the MIDI Device Configuration Window 464 -- This topic explains the play-along indicator that looks like this:



- Menus in the MIDI Device Configuration Window 465 -- This topic explains the menus in the window:



7.8.1.1 Understanding Ports and Devices in the MIDI Device Configuration Window

To use the MIDI Device Configuration Window effectively, you will need to understand the distinction between *MIDI port* and *device*, both of which refer to software or hardware that produces instrument sounds. The term MIDI *port* is something that is defined by Windows, and something that you find references to in most other MIDI programs. In contrast, the term MIDI *device* has a special definition in **Musician**, even though the word *device* is also used in many ways by other programs. It is important that you understand how **Musician** defines the term *device*, and the relationship between a port and a device.

A MIDI *port* is something that Microsoft Windows abstractly defines. Basically, a MIDI port identifies the "place" where a MIDI application, such as **Musician**, "talks" to a particular MIDI sound-producing device. A *device* is some mixture of MIDI driver software and hardware circuity residing on your computer and on your sound card or external physical MIDI device.

Musician defines a device to represent something generally more physically concrete than a Windows MIDI port. There are external and internal devices. *External devices* are particularly easy to understand, because they are things you can see, such as a MIDI keyboard or a rack-mount MIDI sound module.

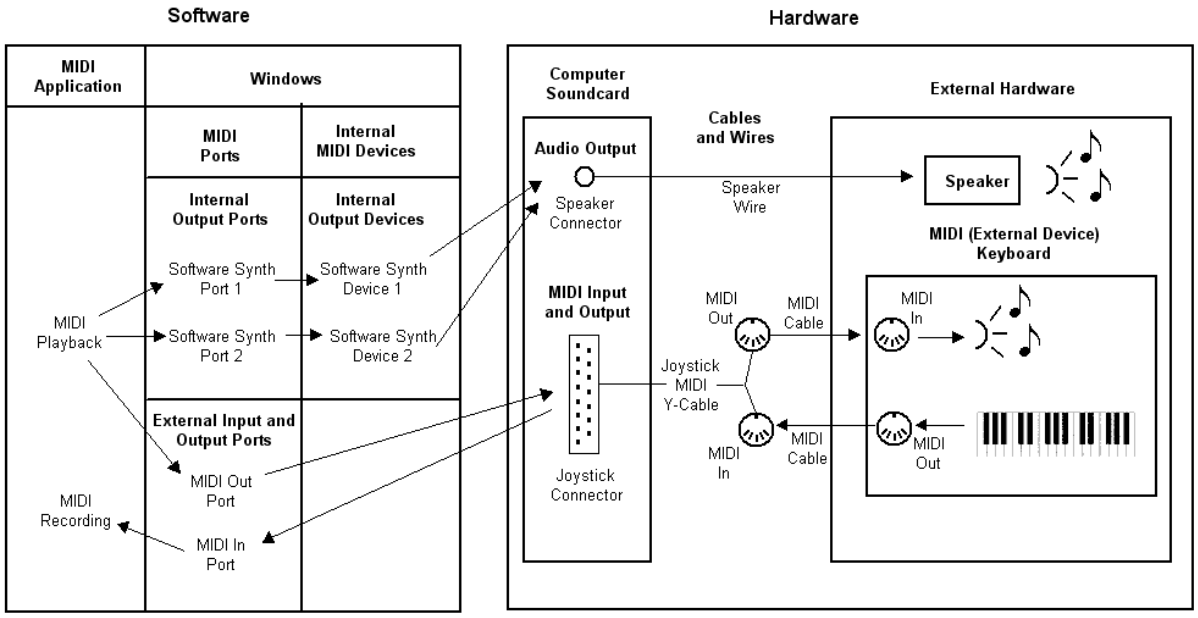
Internal devices are somewhat more difficult to visualize than external devices, because they reside somewhere inside your computer, where you do not really see them. A good way to think about an internal MIDI device is to realize that it basically

does the same thing as an external MIDI device-- it makes instrument sounds, through some combination of software and hardware (sound card) computations.

There are two types of internal devices: hardware-based and software-based. An *internal hardware-based device* is sound card circuitry that simulates instrument sounds. An *internal software-based device* is software that uses the general computing powers of your computer to calculate the sound waves that are then played through your sound card. Such an internal software-based device is usually called a *software synthesizer* or a *sound library*. Many sound libraries have their own player, which can be connected via

If you think about a **Musician**-defined MIDI device as something that makes instrument sounds, then it should be easier for you to understand a *device* than a Windows MIDI *port*. Except for when you are configuring MIDI devices in **Musician**, you will not have to think about the abstract Windows MIDI ports. Whereas you cannot change the usually difficult-to-understand names of Windows MIDI ports, you can give whatever name you want to a corresponding device, such as, "Keyboard" or "Casio".

The following diagram provides a general illustration of the relationship between Windows MIDI ports and devices:



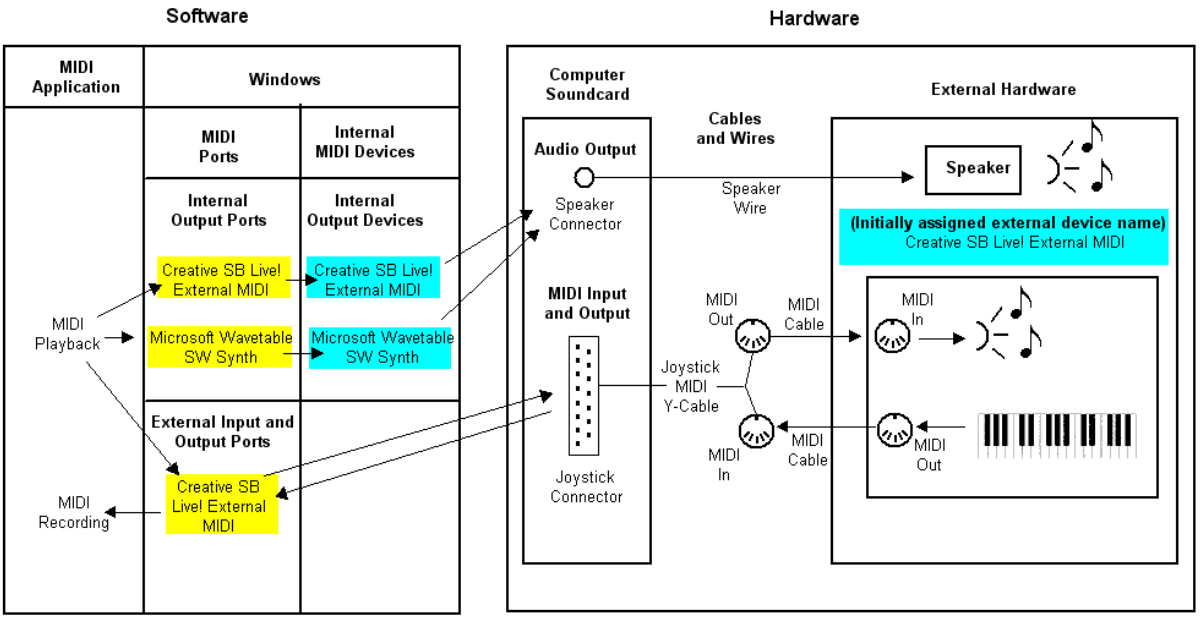
The above diagram illustrates these important relationships:

- A Windows *internal output port* is always associated with a **Musician**-defined *internal output device*.
- A Windows *external output port* is always associated with a physical connector. In this example, the physical connector is the joystick connector, to which a joystick MIDI cable is connected. In other examples, the physical connector might be one of the computer's USB connectors.

The next diagram is almost the same diagram as the above, except it shows the names of MIDI ports and devices that are initially assigned by **Musician** when it detects the MIDI ports on your system. The port names are highlighted in yellow, and the device names in light blue.

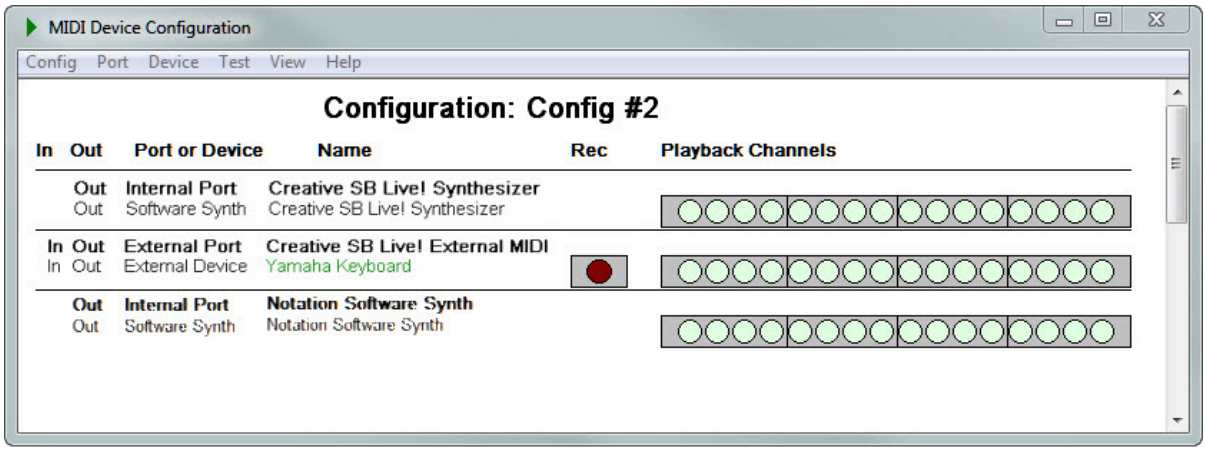
The next diagram also differs from the one above because a single external port, named "SB Live! External", handles both MIDI input and output.

NOTE: For some Soundblaster sound cards, the name of the external MIDI port is "SB Live! External UART" instead of "SB Live! External MIDI". Some older versions of Soundblaster sound cards have separate external MIDI input and output ports, named "SB Live! MIDI In" and "SB Live! MIDI Out", or "AWE32 MIDI In" and "AWE32 MIDI Out".



The above diagram illustrates that **Musician** initially assigns the placeholder device the same name as the corresponding port. You can rename the devices, as described in Assigning Device Names That Make Better Sense to You 434.

The following MIDI Device Configuration Window shows how the above configuration is represented in **Musician**'s MIDI Device Configuration Window, after you have renamed the external device "Create SB Live! External MIDI" to "Yamaha Keyboard":



Some important details in this window are explained here:

- Windows MIDI ports are indicated in bold text.
- **Musician**-defined devices are listed in normal text.
- The default device is indicated by green text.
- The first two colums indicate whether a port or device provides MIDI input or output. In this example, the external port serves both MIDI input and output;

and the external device, a MIDI keyboard, is both a playback (output) and recording (input) device

- An external device is listed below an external port, when that external device is physically connected via a MIDI cable to the MIDI connector corresponding to the port.
- An internal device is listed below the internal port with which it is associated.

7.8.1.2 Common MIDI Device Configurations

Most modern MIDI devices are "plug and play" using USB connections that do not require any manual manipulations or much attention on the part of the user. If you have older devices, however, you may need to check out this section.

This topic shows diagrams and corresponding MIDI Device Configuration Windows for some common MIDI device configurations. Your configuration might exactly or closely match one of these configurations. If not, you may find similarities that will help you correctly inform **Musician** about your MIDI equipment in the MIDI Device Configuration Window 455.

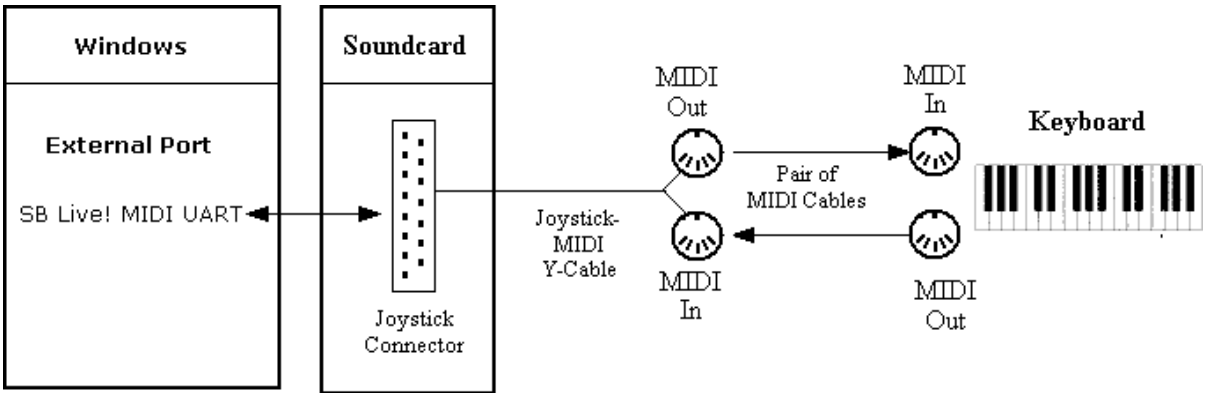
All of the examples illustrate two versions of MIDI drivers for Soundblaster sound cards. Recent Soundblaster sound cards define a single "SB Live! External MIDI" or "SB Live! MIDI UART" external port that handles both MIDI In and MIDI Out. Somewhat older Soundblaster sound cards define two separate external ports, one for MIDI In and one for MIDI Out. sound cards by other manufacturers similarly have either a single external port for MIDI In and MIDI Out, or else separate MIDI In and MIDI Out ports.

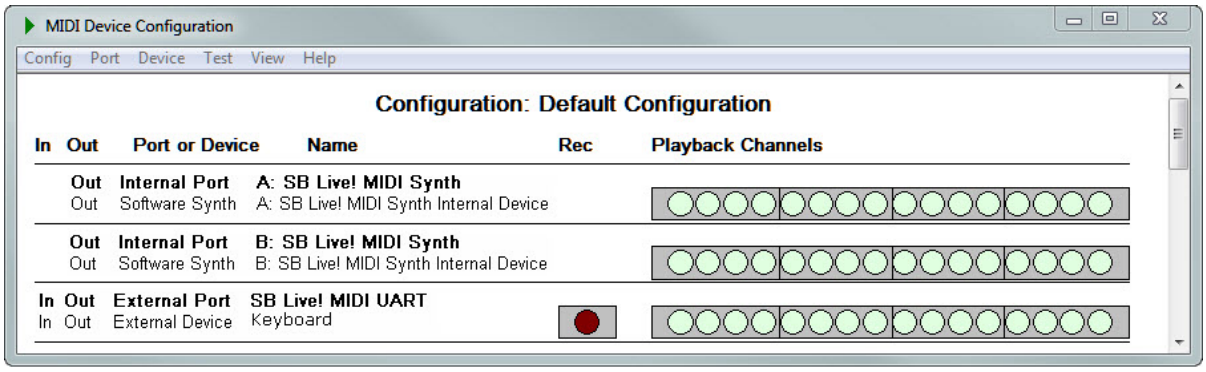
Most of the examples illustrate the connection of a joystick-MIDI Y-cable to the sound card joystick connector. The last example illustrates a USB MIDI connector box, which connects to a USB connector of the computer. In that case, the MIDI drivers for the USB MIDI connector box provide the MIDI input and output ports; and the external input and output ports of the sound card remain unused.

All of the examples of MIDI Device Configuration Windows show two internal output ports, named "A: SB Live! MIDI Synth" and "B: SB Live! MIDI Synth". Through these two *internal* output ports, the Soundblaster sound card offers a total of 32 MIDI channels for playback through its software synthesizer 444. The diagrams in this topic do not show these internal ports; they show only the external ports and connected external devices. For a diagram of internal ports, see Understanding Ports and Devices in the MIDI Device Configuration Window 457.

1. Single sound card external port for MIDI In and MIDI Out; joystick-MIDI Y-cable; and MIDI keyboard that can play back MIDI.

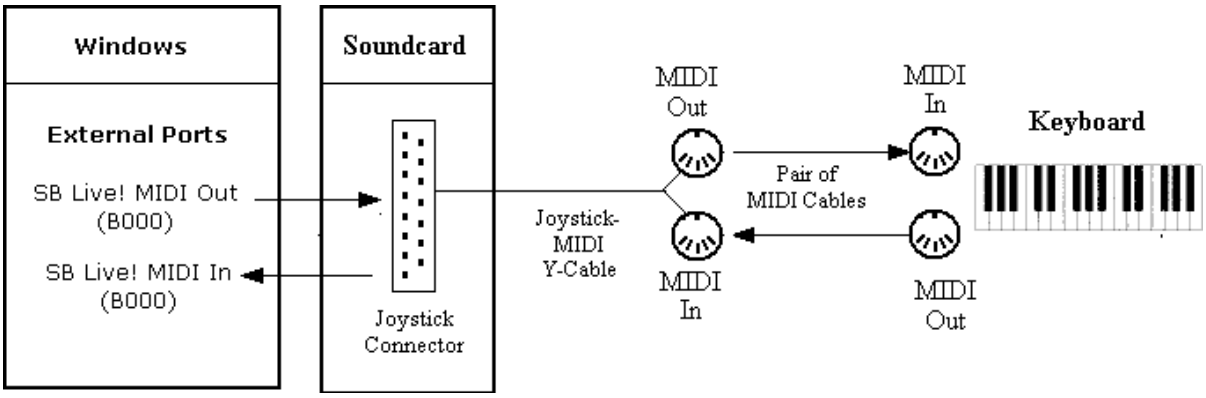
This diagram is the same as part of the diagram shown in Understanding Ports and Devices in the MIDI Device Configuration Window 457.

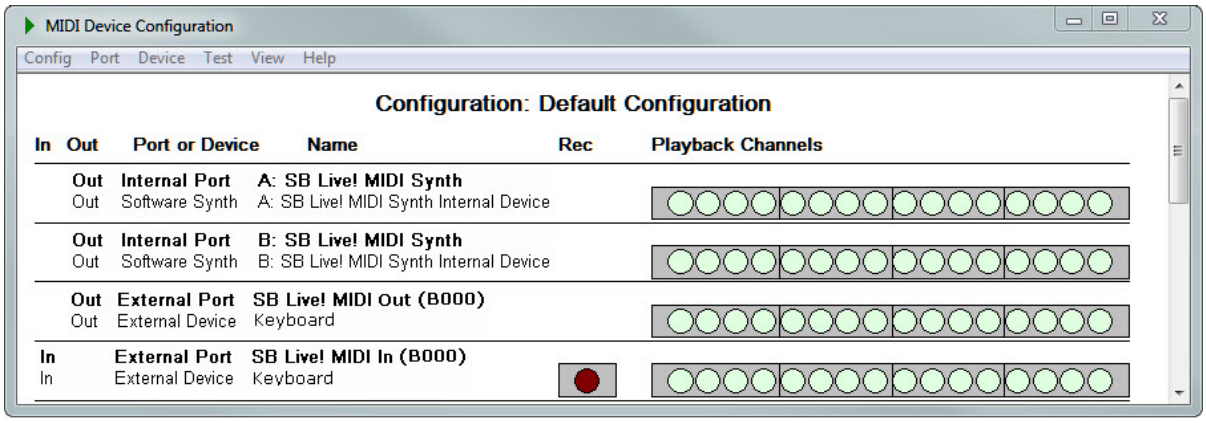




2. Two separate sound card external ports for MIDI In and MIDI Out; joystick-MIDI Y-cable; and MIDI keyboard that can play back MIDI.

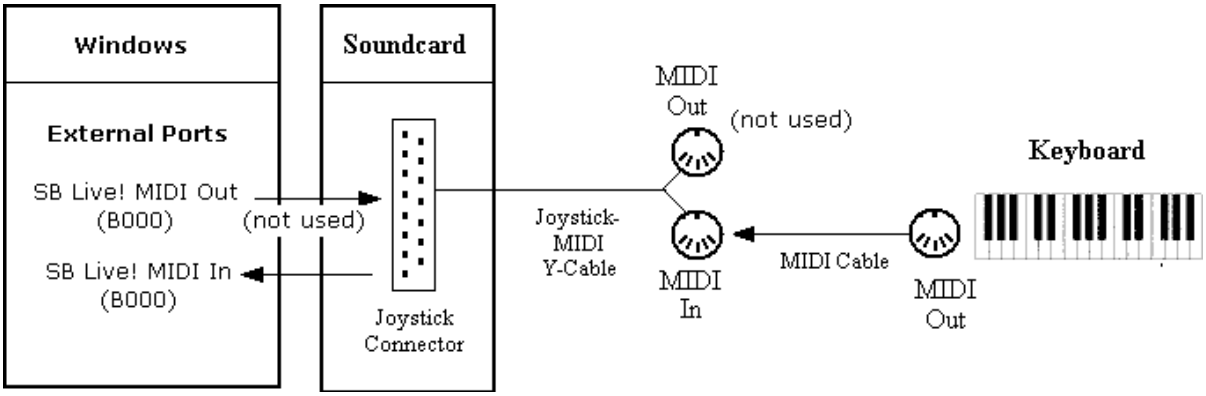
In this example, "B000" is the Windows port address, which is not information you would normally need to know.

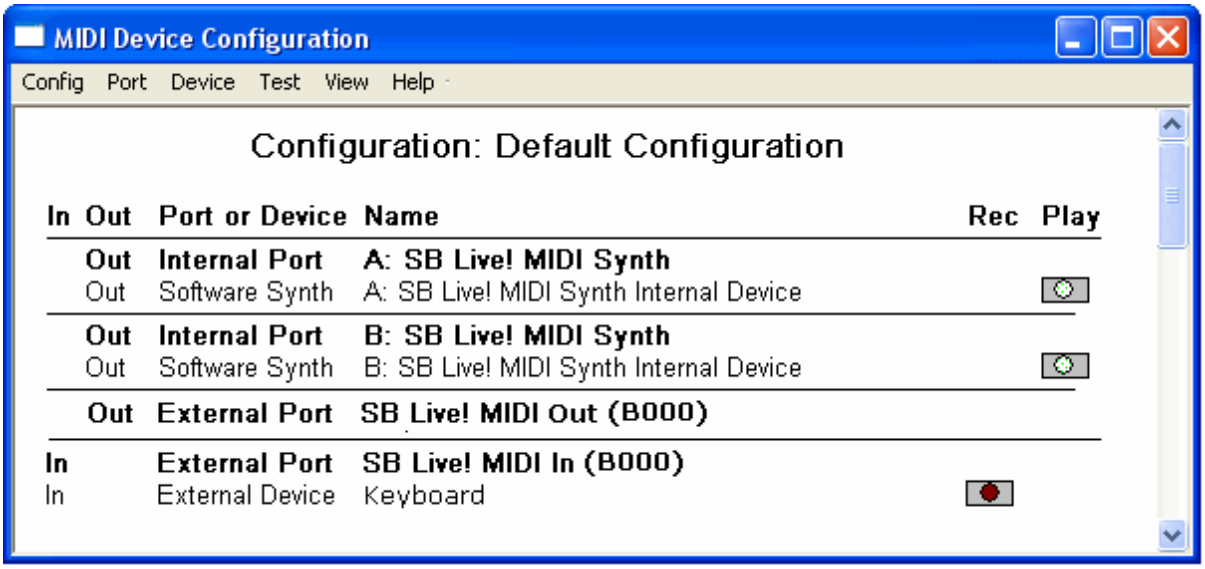




3. Two separate sound card external ports for MIDI In and MIDI Out; joystick-MIDI Y-cable; MIDI controller keyboard that can produce sound only through the computer

In this example, the external output port is not used. **Musician** initially assigns a placeholder external device to the external port, with a name that starts with the words "External Device Connected to", followed by the name of the external port. In this example, the placeholder external output device woud be named "External Device Connected to SB Live! IMIDI Out (B000)". If your MIDI contoller keyboard is not capable of playing back MIDI, then it is a good idea to delete this placeholder external output device. Then you will not see it listed as an option for assignments of output devices to the staff 161. For instructions in deleting a device, see Removing a Device 476.

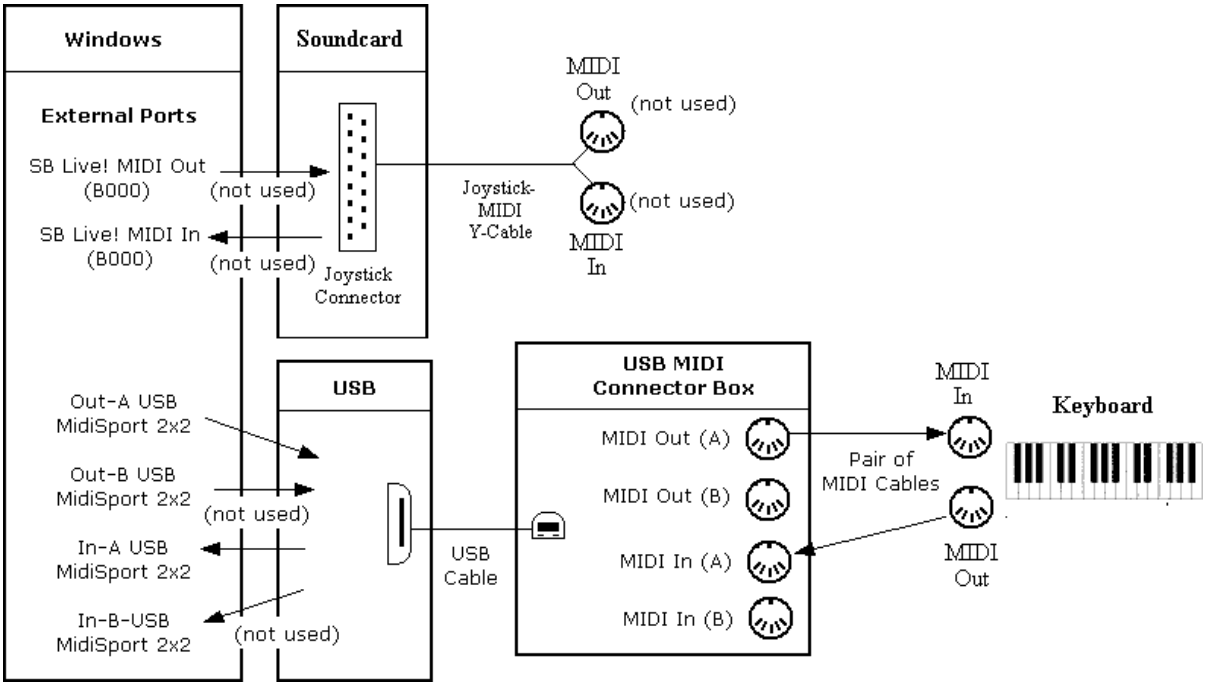


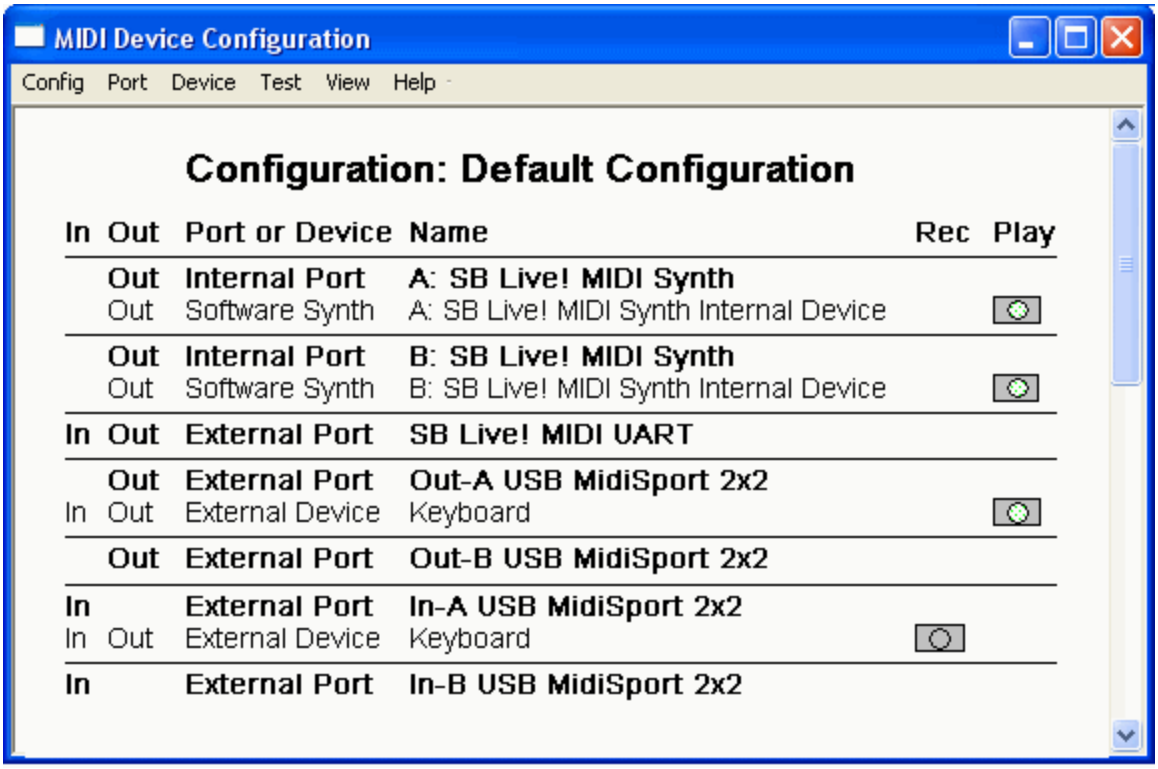


4. USB MIDI connector; MIDI keyboard that can play back MIDI

In this example configuration, the sound card's external MIDI In and MIDI Out ports are not used. The MidiSport(tm) 2x2 USB MIDI connector box provides two MIDI In connectors and two MIDI Out connectors, but in this example, only one MIDI In and one MIDI Out connector are used.

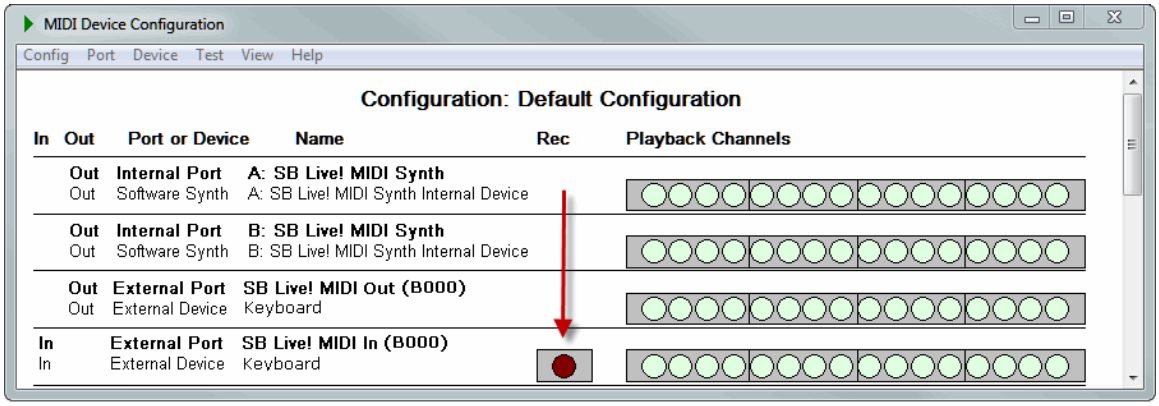
In this example, placeholder devices have been deleted for the ports "SB Live! MIDI UART", "Out-B USB MidiSport 2x2" and "In-B USB MIdiSport 2x2". See the explanation for deleting placeholder devices in the previous example.





7.8.1.3 Play-along or Recording Indicator in the MIDI Device Configuration Window

An external MIDI input device has a red recording indicator in the MIDI Device Configuration Window, as shown here:

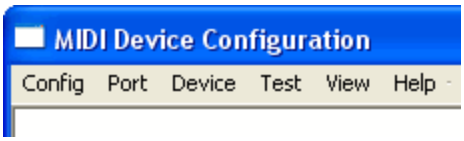


The MIDI Device Configuration Window displays a recording indicator for a given device if there is a check mark for "Is MIDI Input Device" in the Device Properties dialog box for that device. See Specifying Properties of a Device 477.

When you are actively playing on the MIDI recording device (typically a MIDI keyboard), you will see the recording indicator light up with a bright red color. This is a good way to confirm if **Musician** is detecting your performance. Note that you can also monitor device recording activity in the Quick MIDI Device Configuration Window 455.

7.8.1.4 Menus in the MIDI Device Configuration Window

The purpose of each menu in the MIDI Device Configuration Window is summarized below:



Config -- Options for managing multiple alternative configurations. These options are useful if you have two or more external MIDI devices, and find that you frequently rearrange their physical connections or settings. You can use the "*Configuration to clipboard command*" to copy a text report of your configuration to paste into a text editor or email for review or help. Also see Managing Alternative MIDI Device Configurations 498.

Port -- Options for hiding or showing Windows MIDI ports in a configuration, and for connecting or disconnecting external ports from external devices. See Managing MIDI Ports 466.

Device -- Options for adding or removing devices from a configuration; setting the properties of devices, including MIDI bank and patch names; and connecting or disconnecting external devices from external ports. See Managing MIDI Devices 468.

Test -- For a currently selected output device, this command plays back a 12-note chromatic scale, so that you can monitor the device activity shown by the playback channel indicators. See Testing Playback and Recording Devices 465.

View -- Options for zooming in or out, to increase or decrease the font size used in the window. See Using the MIDI Device Configuration Window 455.

7.8.2 Testing Playback and Play-along Devices

If a staff is assigned to a device, and you hear no sound for that staff during playback, then it is a good idea to directly test the playback for the device.

To test the playback for a MIDI output device:

1. Choose the MIDI Device Configuration command in the Setup menu.

   -- OR --

   Type "gds" or "gdc" for Quick Device Setup or Quick Device Configuration.

2. In the MIDI Device Configuration Window, select a MIDI device by clicking its name. MIDI device names are displayed in normal text, whereas MIDI port names are displayed in bold text.
3. Choose the Test command in the main menu of the MIDI Device Configuration Window.
4. **Musician** will display and play back a 12-note chromatic scale.
5. If you do not hear sound for a device when you choose the Test command, then some possible explanations and remedies are suggested in What To Do If You Do Not Hear Any Sound 427.

To test play-along of a MIDI input device:

1. Choose the MIDI Device Configuration command in the Setup menu.

   -- OR --

Type "gds" or "gdc" for Quick Device Setup or Quick Device Configuration.

2. Perform some notes on your MIDI input device (typically a MIDI keyboard). Observe whether the play-along indicator lights up in a bright red color.
3. If you do not observe play-along activity for that input device, then some possible explanations and remedies are suggested in What To Do If Play-Along Does Not Work 431.

7.8.3 Managing MIDI Ports

Before reading this topic, you should review Understanding Ports and Devices in the MIDI Device Configuration Window 457.

A MIDI port is something that Microsoft Windows abstractly defines. Basically, a MIDI port identifies the "place" where a MIDI application, such as **Musician**, "talks" to a particular MIDI sound-producing device. Except in the MIDI Device Configuration Window, **Musician** always refers to devices, not ports. The MIDI Device Configuration Window is the place where you inform **Musician** how external devices are connected to ports.

When **Musician** runs for the first time, or whenever it detects the presence of a MIDI port, it detects whether each MIDI port is an internal or external port. For an explanation of internal versus external, see Understanding Ports and Devices in the MIDI Device Configuration Window 457. This detection is based on information provided by the MIDI driver for the port. A few MIDI drivers incorrectly report this information. Therefore, **Musician** offers you the option to correct the specification of whether a port is internal or external. See Specifying Whether a Port is Internal Or External 467.

Musician enforces a rule that an internal MIDI port must always be associated with a corresponding internal device.

An external input or output port can be connected to one or more external devices. You can use the Connect to External Device command in the Port menu to establish the connection between an external port and an external device. See Connecting and Disconnecting Devices from an External Device. 466

7.8.3.1 Connecting and Disconnecting Devices from an External Port

It is important that you understand the information in Understanding Ports and Devices in the MIDI Device Configuration Window 457 before you attempt to connect or disconnect external devices from an external port.

There is a good chance that your MIDI configuration will exactly or closely match one of the configurations described in Common MIDI Device Configurations 460. It is highly recommended that you review those common configurations. They will probably help you determine how you will want to connect external devices to external ports, as described here.

Most times **Musician** will correctly identify and connect with your external devices if you have installed the proper drivers for your device and operating system (eg. the Windows 10 version of the driver(s) if your computer has Windows 10).

To connect an external device to an external port.

1. In the MIDI Device Configuration Window 455, select the external device by clicking its name. It must be an external device, as indicated by the word "External" in the Port or Device column. If the port is an input port, then the device must not already be assigned to another input port. If the port is an output port, then the device must not already be assigned to another output

port. If the port is an input port, the device already may be assigned to an output port, and conversely. That is, an external device (eg, MIDI keyboard) that supports both recording and playback can be assigned to two different ports-- one that is an input port, and another that is an output port.

2. Choose the Connect To External Port command in the Device menu.

   Musician will display the Connect External Device to Port dialog box, such as the following:



   The external device that you selected in the MIDI Device Configuration Window will already be selected as the External Device.

3. In the dialog box, select the external port to which you wish to connect the external device.
4. Click the Connect button.

To disconnect an external device from an external port.

1. In the MIDI Device Configuration Window 455, select the external device by clicking its name.
2. In the Device menu, choose the Disconnect From External Port command.

7.8.3.2 Specifying Whether a Port Is Internal or External

For most MIDI sound cards and devices, **Musician** is able to correctly detect whether any corresponding Windows MIDI port is for an internal MIDI device or an external MIDI device. However, for a few MIDI sound cards or devices**, Musician** cannot correctly detect the device status when the MIDI device driver reports incorrect information. For such unusual cases, **Musician** provides a way to correct the inaccurate determination of whether the port is internal or external.

If you know that a listed Windows MIDI port is for an external port, but **Musician** reports it as an internal port, then you will find that you are not able to assign an external MIDI device, such as a MIDI keyboard, to the listed port. This is because **Musician** only allows external MIDI devices to be connected to external ports.

Conversely, you might find that **Musician** incorrectly reports an an internal port as an external port.

The way to correct either of these problems is to follow the procedure below for changing the property of the Windows MIDI port from internal to external.

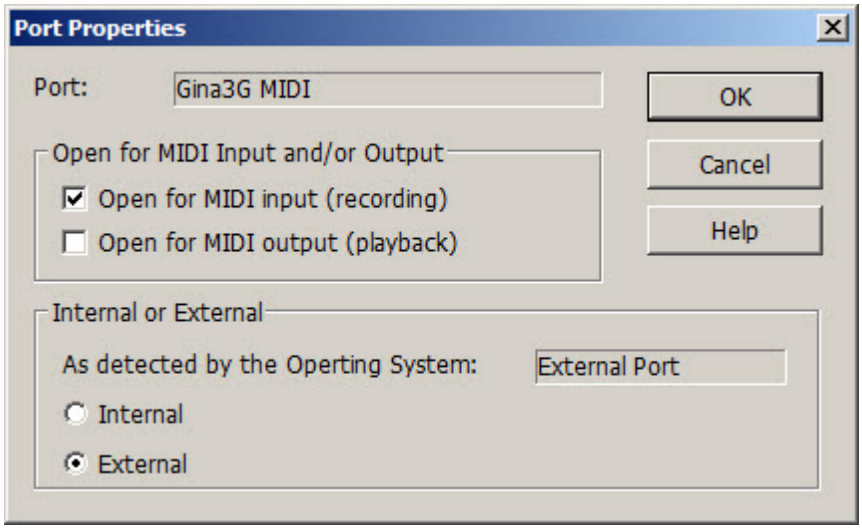
To change whether a Windows MIDI port is internal or external:

1. In the MIDI Device Configuration Window 455, select the MIDI port by clicking its name with the mouse.
2. In the Port menu, choose the Properties command.

   -- OR --

   Instead of selecting the port and choosing the Port Properties command, double-click or right-click the port name.

   Musician will display the Port Properties dialog, such as the following:



3. If the operating system has incorrectly detected the port as Internal, you can click to select "External" (or vice versa).
4. **Musician** will warn you if "Your assignment" for Internal or External differs from **Musician's** detection for the port. In the confirmation dialog, choose "Yes" if you are certain that you have correctly specified whether the port is internal or external. Note, however, that you can later change the specification again if you have made the wrong choice.

7.8.4 Managing MIDI Devices

Before reading this topic, you should review Understanding Ports and Devices in the MIDI Device Configuration Window 457.

MIDI devices play a central role in the assignment of sounds to staves 161 in a song. Specifically, for any particular staff, you can specify which MIDI device the staff will be played back on. For the same song, you can assign some staves to one device, and other staves to another device. If you hear a discrepancy between when notes are sounding for such differently assigned staves, be sure that each device has been calibrated for latency 447. This will allow **Musician** to sound all the notes for each instrument at the proper times.

Each MIDI device has a unique set of properties that you can specify in **Musician** . Some of the properties of a device answer the following questions:

- Is the device an output device and/or an input device?

- Is the output device the default device to which staves for a newly opened MIDI file are assigned?
- Does the device have multiple banks of sounds available; and how are these defined?
- What are the MIDI patch (instrument) names for the device?
- If the device has drum kits, what are the names of the drum notes?

The following topics describe procedures for adding, removing, and renaming devices, and editing the properties of devices:

- Importing from a MIDI Device Description (.mdd) File
- Importing from a Cakewalk Instrument Description (.ins) File
- Adding an External Device
- Removing a Device
- Renaming a Device
- Specifying Properties of a Device
- Specifying the Default MIDI Output Device
- Specifying a General MIDI (GM) Device
- Exporting to a MIDI Device Description (MDD) File 486

7.8.4.1 Importing from a MIDI Device Description (.mdd) File

A quick way to specify the patch names for your MIDI device, and other properties of the device, is to import this information from a MIDI Device Description (.mdd) file, which has a format defined by Notation Software. Notation Software offers MDD files at its web site that have been contributed by users of its products.

There are two ways to import the patch names for your MIDI device from a Notation Software MDD file. The easier of the two ways is to use the Quick MIDI Device Setup command in the Setup menu. Use the Import Sound Names option in the Quick MIDI Device Setup dialog box. For details, see the topic Quick MIDI Device Setup 422.

Another less convenient way to import the patch names from your MIDI device from an MDD file is described below. There are two minor advantages to using this method. First, you can preview the list of MIDI bank names and patches for a device that you are about to import. Second, this method offers an option that you can import a single bank of patches for a device rather than all of the banks.

To import a device description from a MDD file:

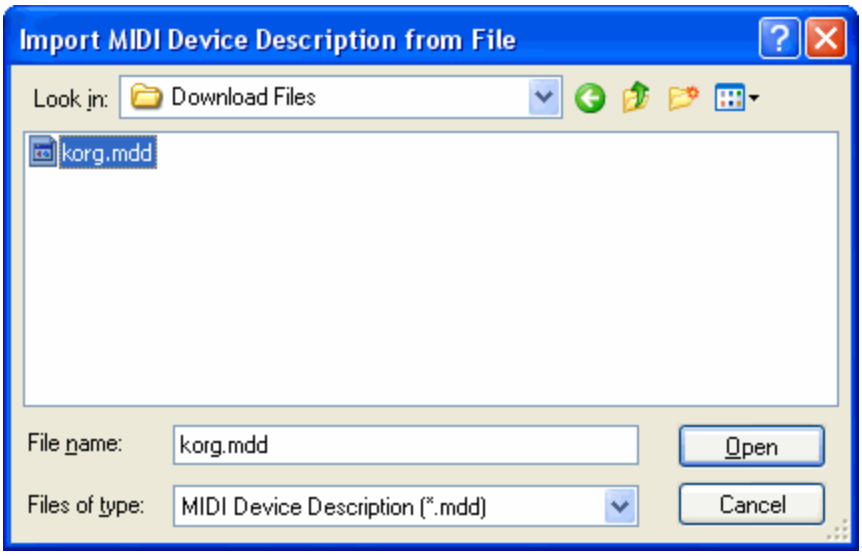
1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type"qdc" for Quick Device Configuration.

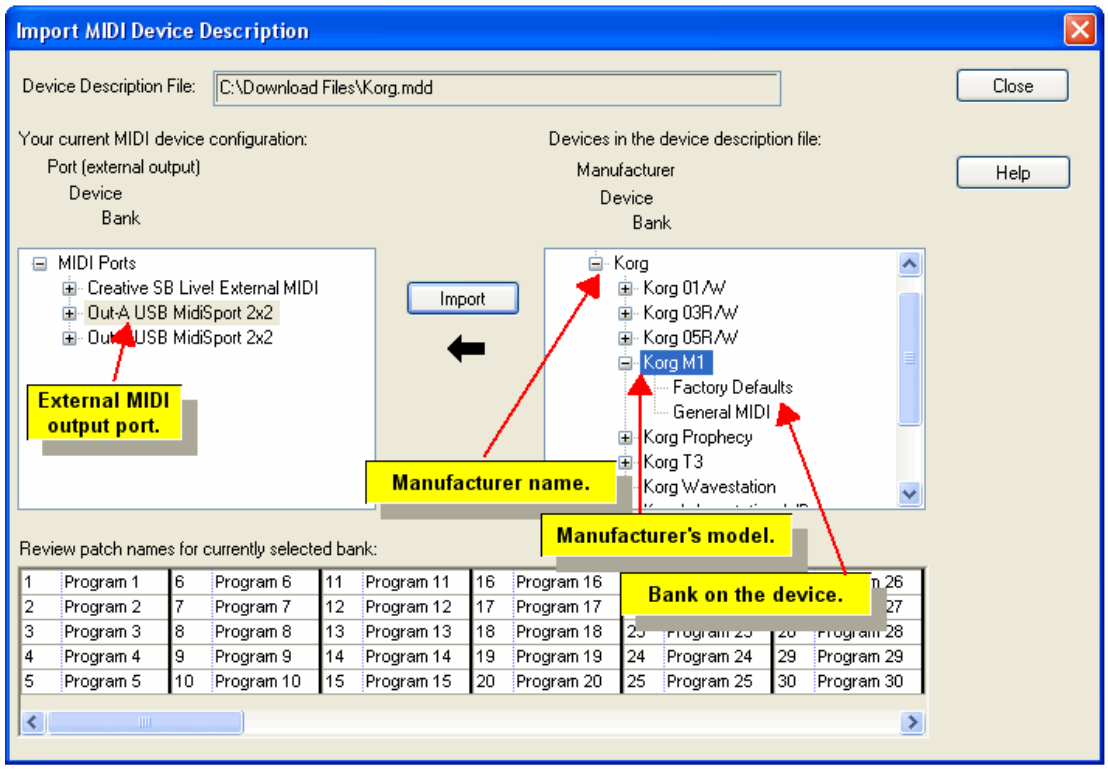
2. In the MIDI Device Configuration Window, choose the Import command from the Device menu.

Musician will present the Import MIDI Device Description from File dialog box:



3. In the above dialog box, navigate to the directory to which you downloaded the MDD file, or to the directory where you saved the MDD file that you have exported from another computer running **Musician** .
4. In the dialog box, select the MDD file, and click the Open button.

Musician will display the Import MIDI Device Description window, as illustrated here:



5. In the panel at the right side of the window, click the model number (the name, not the '+' symbol) of the device description you want to import.
6. To optionally review the list of MIDI banks and patch names for a device, click the '+' symbol next to the device name.

Musician will display a list of the MIDI banks for that device. If you click the "+" symbol next to one of the MIDI bank names, then **Musician** will display the patch names for that bank in the lower half of the window. You can selectively import patch names for a specific bank of a device, but there is usually no need to do this.

You can optionally preview the patch names for a given bank of a device by selecting the bank in the right panel.

7. In the left panel, select the MIDI output port that sends the MIDI output to the MIDI output device.
8. Click the Import button.

   Musician will list the newly imported device below the MIDI output port to which it is "connected":



   When you assign a staff to the external output device connected to an output port, you can refer to each the name of the port, or the name of the external device. In this example, you can refer to either "Out-A USB MidiSport 2x2" or "Korg M1". You will find it preferable to refer to the device name because then you can assign a sound to the staff by referring to the name of a MIDI bank and patch (instrument) rather than refer to the bank and patch numbers.

8. Click the Exit button.

   Musician will add the newly imported device in the MIDI Device Configuration Window.

To import a single MIDI bank from an MDD file into a previously added device:

- Follow the same procedure as above, except select a MIDI bank in the right panel, and a device in the left panel.

7.8.4.2 Importing from a Cakewalk Instrument Description (.ins) File

A Cakewalk(tm) Instrument Description (.ins) file contains most of the information needed for a MIDI device description in **Musician**. The information is the list of MIDI bank and patch names for that device. If you own a Cakewalk software product, then you can borrow instrument descriptions that Cakewalk maintains in INS files installed on your computer. If you do not own a Cakewalk software product, you can download an INS file from Cakewalk's web site, as described below.

The procedure for importing a device description from a Cakewalk INS file is similar to the procedure for importing a device description from a Notation Software MDD file 469.

There are two ways to import the patch names for your MIDI device from a Cakewalk INS file. The easier of the two ways is to use the Quick MIDI Device Setup command in the Setup menu. Use the Import Sound Names option in the Quick MIDI Device Setup dialog box. For details, see the topic Quick MIDI Device Setup 422.

Another less convenient way to import the patch names for your MIDI device from a Cakewalk INS file is described below. There are two minor advantages to using this method. First, you can preview the list of MIDI bank names and patches for a device that you are about to import. Second, this method offers an option that you can import a single bank of patches for a device rather than all of the banks.

To download an INS file:

1. Some of our users have collected and shared INS files which can be found on our User Forum at http://www.notation.com/vb-forum/showthread.php?t=3891 or by searching the User Forum for "Cakewalk INS". If you do not see your device listed there, you can use your favorite browser to search the internet for "cakewalk INS" and list your device name in the search.
2. However you find it, download the INS file(s) for your device(s).
3. Make note of the directory to which the file(s) has been downloaded.
4. Once you have downloaded the .ins file, follow the instructions below for importing the .ins file into **Musician** .

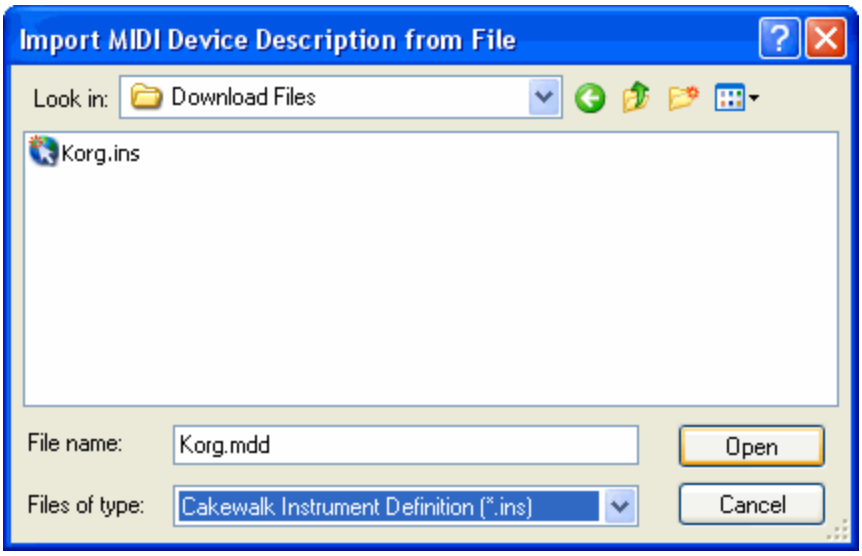
To import a device description from a Cakewalk INS file:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

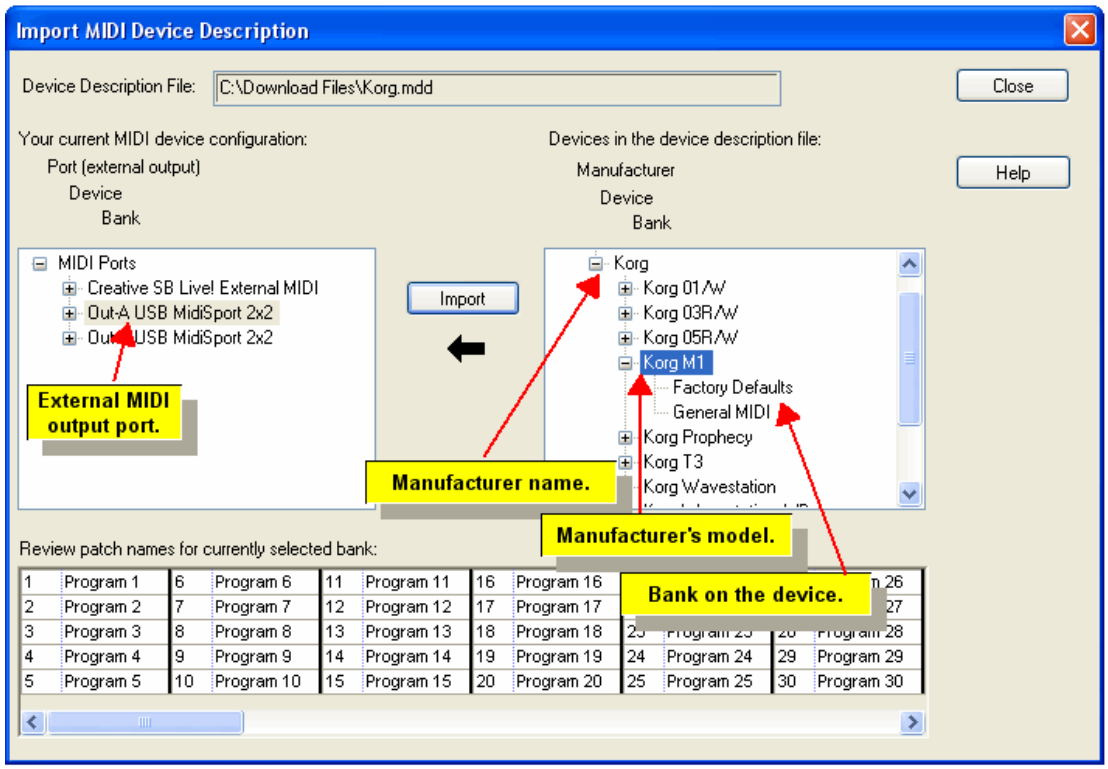
   Type "qdc" for Quick Device Configuration.
2. In the MIDI Device Configuration Window, choose the Import command from the Device menu.

   Musician will present the Import MIDI Device Description from File dialog box:



3. In the above dialog box, navigate to the directory to which you downloaded the INS file.
4. In the dialog box, select the INS file, and click the Open button.

Musician will display the Import MIDI Device Description window, as illustrated here:



5. In the panel at the right side of the window, click the model number (the name, not the '+' symbol) of the device description you want to import.
6. To optionally review the list of MIDI banks and patch names for a device, click the '+' symbol next to the device name.

   Musician will display a list of the MIDI banks for that device. If you click the "+" symbol next to one of the MIDI bank names, then **Musician** will display the patch names for that bank in the lower half of the window. You can selectively import patch names for a specific bank of a device, but there is usually no need to do this.

   You can optionally preview the patch names for a given bank of a device by selecting the bank in the right panel.
7. In the left panel, select the MIDI output port that sends the MIDI output to the MIDI output device.
8. Click the Import button.

Musician will list the newly imported device below the MIDI output port to which it is "connected":



When you assign a staff to the external output device connected to an output port, you can refer to each the name of the port, or the name of the external device. In this example, you can refer to either "Out-A USB MidiSport 2x2" or "Korg M1". You will find it preferable to refer to the device name because then you can assign a sound to the staff by referring to the name of a MIDI bank and patch (instrument) rather than refer to the bank and patch numbers.

8. Click the Exit button.

   Musician will add the newly imported device in the MIDI Device Configuration Window.

To import a single MIDI bank from an MDD file into a previously added device:

- Follow the same procedure as above, except select a MIDI bank in the right panel, and a device in the left panel.

7.8.4.3 Adding an External Device

In the MIDI Device Configuration Window 455, you can add only external devices, not internal devices. This is because **Musician** automatically adds and connects an internal device to any internal Windows MIDI port that it detects. For a description of the difference between *internal device* and *external device*, see Understanding Ports and Devices in the MIDI Device Configuration Window 457.

If you intend to identify a new external device not previously defined in any configuration, you should first explore whether you can import the device description. See Importing from a MIDI Device Description (.mdd) File 469 and Importing from a Cakewalk Instrument Description (.ins) File 471.

To add a device to a MIDI device configuration:

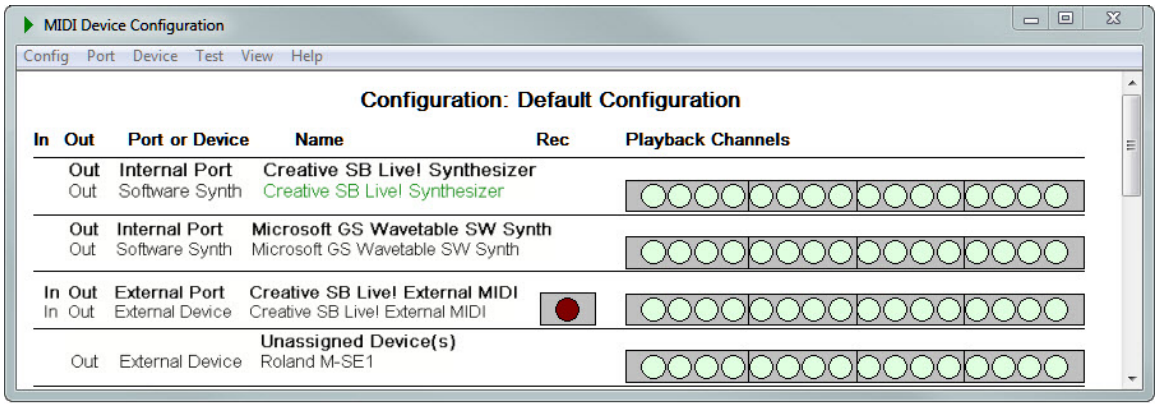
1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

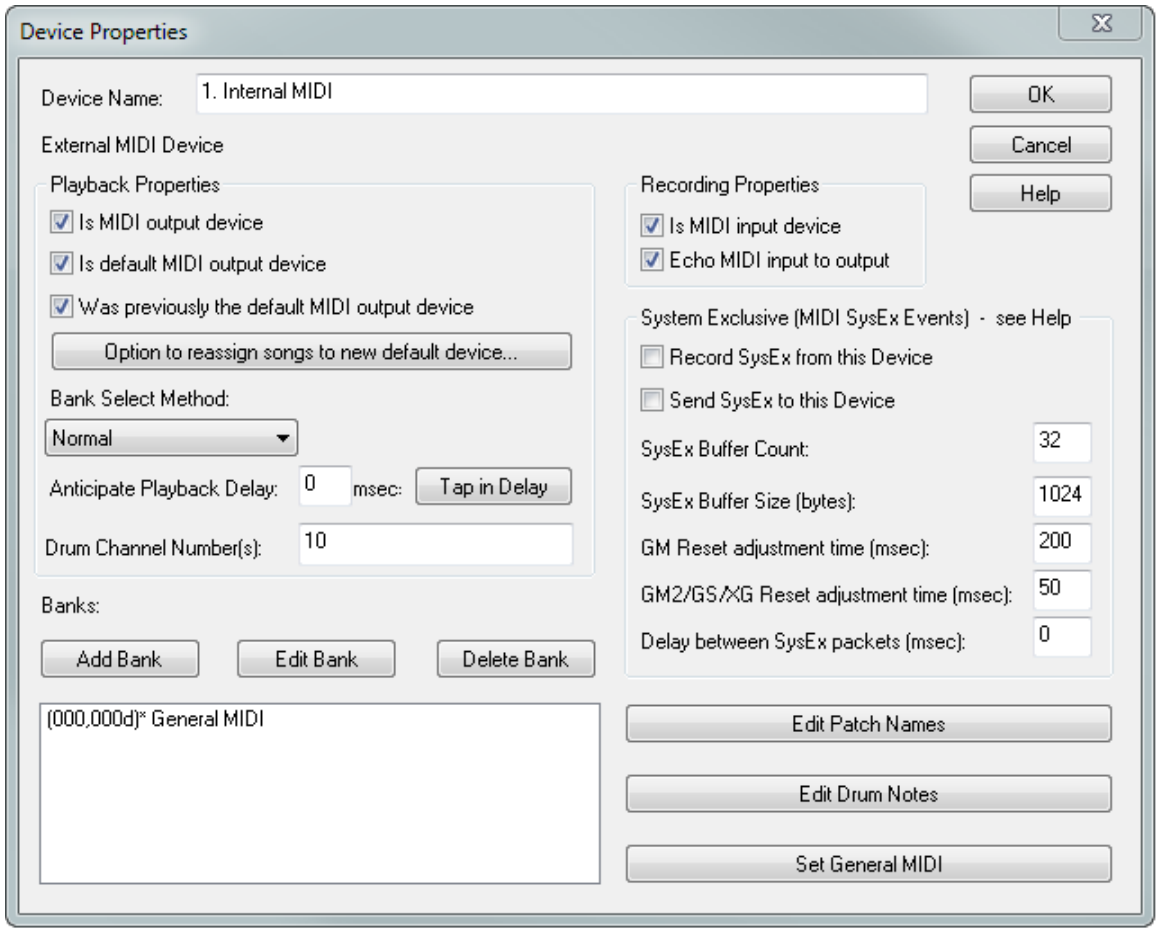
2. Use the Select command of the Config menu if the current configuration is not the one to which you wish to add the device.

3. If the device you want to add to the configuration has already been added or imported, then it will be listed under "Unassigned Devices", as illustrated below. In that case, skip to step #5.



4. If the device is not listed under "Unassigned Devices", then add it as a new device by choosing the New External Device command in the Device menu.

   Musician will present the following Device Properties dialog box:



5. In the dialog box, assign a meaningful name to the device. Specify the properties of the new device, as described in Specifying Properties of a Device 477. Then click the OK button.

Musician will list the new device under "Unassigned Devices" in the MIDI Device Configuration Window.

6. In the MIDI Device Configuration Window, select the device by clicking its name.
7. Choose the Connect to External Port command in the Device menu.

   Musician will present the Connect to External Port dialog.
8. In the Connect to External Port dialog, specify the external port to which the new device should be attached.
9. Click the OK button in the Connect to External Port dialog to complete the task.

7.8.4.4 Removing a Device

Removing a device normally removes it only from the current configuration. If it is present in other configurations, it will remain in those configurations. If it is no longer present in other configurations, then **Musician** will offer you the option to delete the description altogether.

To remove a device from a MIDI device configuration:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.
2. Select the device by clicking its name in the window.
3. In the Device menu, choose the Remove from Configuration command.

   -- OR --

   Hit the DEL key.
4. If the device is no longer present in any other configurations, **Musician** will ask you whether you want to delete the device permanently. Respond with "no" if you anticipate possibly using the device description later in another configuration.

7.8.4.5 Renaming a Device

When you assign instrument sounds to staves 161, you refer to the name of the device, a MIDI bank on the device (or "General MIDI 482"), and a MIDI program (instrument) patch. In assigning the instrument sounds to a staff, you will refer to *device* names rather than Windows *port* names. You cannot change the names that Windows uses for the MIDI ports, which are generally awkward to read, but you can change the names of devices so that the names make sense to you.

When **Musician** initially detects a MIDI port, **Musician** creates a "placeholder" device that is "connected" to the port. **Musician** assigns that placeholder device the same name as the port (such as " SB Live! External MIDI") to which is connected, or with which it is associated. You can change the name of the device to something like "Keyboard", or perhaps "Casio", to reflect the specific manufacturer and model of your keyboard or external MIDI sound module.

To rename the external MIDI device:

1. In the Setup menu, choose the MIDI Device Configuration command.

   -- OR --

   Type "qdc" for Quick Device Configuration.

Musician will display the MIDI Device Configuration Window.

2. Select the device by clicking its name in the window.
3. In the Device menu, choose Properties.

   Musician will present the Device Properties dialog box.
4. Change the Device Name in the Device Properties dialog.
5. Hit the OK button to complete the task.

7.8.4.6 Specifying Properties of a Device

The Notation Software Internal Synth has some additional settings that are available besides the "common" ones detailed below. Please see the topic "Notation Software Internal Synthesizer 419" for details on those specialized settings.

You can view and edit the properties of a MIDI device in the Device Properties dialog. The various properties of a device are described later in this topic.

If you intend to identify a new external device not previously defined in any configuration, you should first find out if you can import the device description. See Importing from a MIDI Device Description (.mdd) File 469 and Importing from a Cakewalk Instrument Description (.ins) File 471.

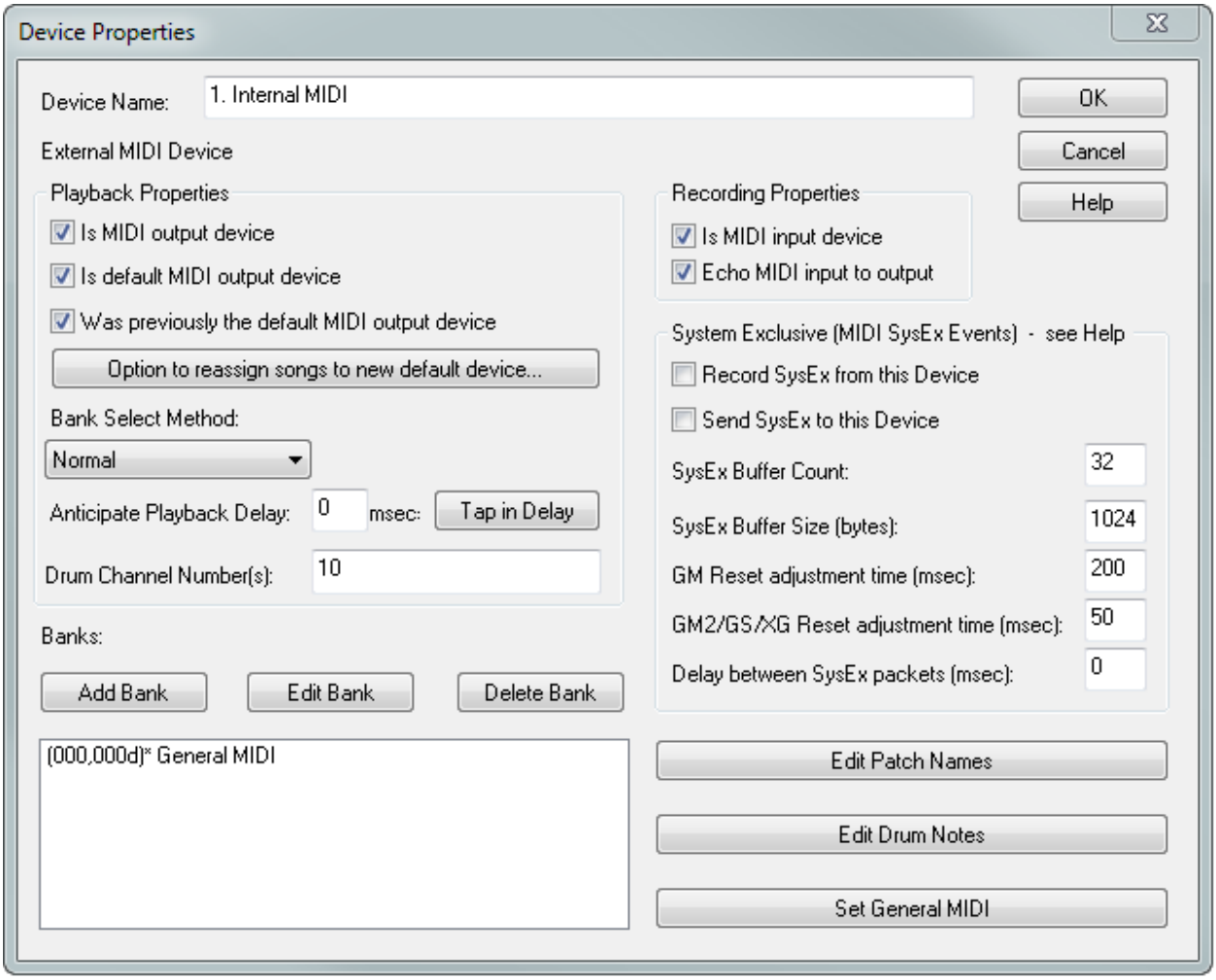
To view and change the properties of a device:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.
2. Select a device by clicking its name in the MIDI Device Configuration Window, and then choose the Properties command in the Device menu.

   -- OR --

   Right-Click the device's name with the mouse, and select "Properties" from the list there.

Musician will display the Device Properties dialog, such as the following:



3. Change values in the dialog as described below.
4. Click OK to commit the changes.

The remainder of this topic describes the various properties of a MIDI device.

A MIDI device can be an output device, an input device, or both an input and output device. Some MIDI keyboards are input-only. That is, they only send MIDI as input into the MIDI application, such as **Musician**. Such MIDI keyboards are also called "MIDI controllers". Other MIDI keyboards are also capable of playing MIDI output sent from the MIDI application.

Playback Properties (of an Output Device)

Is MIDI Output Device

Add a check mark to this checkbox if the device is a MIDI output device.

Is Default Output Device

Add a check mark to this checkbox if the device is the default MIDI output device. See also Specifying the Default MIDI Output Device 481.

Was Previously the Default MIDI Output Device

Use this option and the Option to Reassign button below it to determine how **Musician** should reassign staves to an old MIDI device output device that used to be the default MIDI playback device but has since been replaced with a new default MIDI output device. See Changing the Default Playback Device 437.

MIDI banks

A device can have one or more MIDI banks. Each MIDI bank consists of one set of up to 128 MIDI patches, which can be thought of as distinct instrument sounds. Some MIDI devices support multiple alternative banks of patches. If the device has multiple banks of patches, then you must specify the Bank Select Method (see below). In the above example, the Roland M-SE1 device has two banks named "Strings" and "Extras".

Sound cards typically have one or more software-based synthesizers that implement the standard General MIDI (GM) patches. Some external MIDI sound modules also implement General MIDI. To assign the set of General MIDI patches to a device, follow the instructions for Specifying a General MIDI (GM) Device 482.

For general instructions in adding, editing, renaming, and removing banks, see Managing MIDI Banks and Patches 489.

Bank Select Method

If the device has only one MIDI bank, then the Bank Select Method for this device is "None". Otherwise, the Bank Select Method will likely be the most difficult property of a device to find listed in your device owner's manual. You will need to search in the section of the owner's manual that is intended for software programmers, rather than normal users. Look under a section of the manual that describes "MIDI Messages". Under that section, look for a subsection that describes "Changing Patches", "Bank Changes", "Bank Selection", or "Bank Select Method".

When a MIDI program sends a MIDI message to a device to change the MIDI bank, the message can be formatted in a couple of different ways, depending on the expectation of the particular device. Each of the alternative MIDI industry standard methods for formatting the messages are listed below. No harm will come to your device if you choose the wrong Bank Select Method; you simply might not hear the right instruments played. The names of the Bank Select Method listed below are exactly as presented in the choice box in the Device Properties dialog box:

Normal: This is the default setting. Controller Number 0, followed by a value that specifies the particular bank to be selected, followed by Controller Number 32, followed typically by the value 0 but perhaps by a number that further specifies which bank is to be selected. This Bank Select Method is the most common one.

CTRL 0: Controller Number 0, followed by a value that specifies the particular bank to be selected.

CTRL 32: Controller Number 32, followed by a value that specifies the particular bank to be selected.

Patch 100 to 127: Patch numbers 100 to 127 select one of up to 28 alternative banks. For a given bank, only 100 patches will be available, numbered 0 to 99, since numbers 100 through 127 are reserved for bank selections.

Patch Names

Each MIDI bank has a set of MIDI patches, alternatively called "MIDI programs". The MIDI patches consist of up to 128 different instrument sounds, each identified within MIDI as simply a number from 0 to 127. When you assign an instrument sound to a staff, you must specify both the bank and a MIDI patch. (Note that if the staff includes mid-song MIDI program changes, **Musician** will correctly change the instrument sound in real-time during playback.) Because it is difficult and inconvenient to remember what MIDI program numbers are associated with which instrumental sounds, **Musician** shows you meaningful patch names, such as "Acoustic Guitar". For a given device, you can specify the wording of the patch names.

The patch names for one of the banks (or the only bank) of a device are typically listed in the device owner's manual in a section name "Patch List", or "Tone List", or "MIDI Programs". If the device has multiple MIDI banks, then the heading for the list of patches for a given bank will show the bank value and perhaps the controller values mentioned above under Bank Select Method.

For instructions in adding, editing, and renaming patches, see Managing MIDI Banks and Patches 489.

System Exclusive Events

If your device relies on System Exclusive Events, you can check the appropriate box to "Send SysEx to this Device". Checking this box will also make sure that any MIDI files that you export contain the proper Sys Ex events as well.

If your device relies on SysEx Events, then for optimal performance of sounds for your device you should check the following parameter values, which you will need to get from your device manual:

SysEx Buffer Count

SysEx Buffer Size (bytes)

GM Reset adjustment time (msec)

GM2/GS/XG Reset adjustment time (msec)

Delay between SysEx packets (msec)

Anticipate Playback Delay

Some MIDI software synthesizers, such as the Roland Virtual Sound Canvas, delay the performance of MIDI. The delay is necessary so that the software synthesizer can dynamically prepare the sound wave data during playback. Also, some acoustic player pianos, such as the Yamaha Disklavier, provide an option to delay playback by a specified number of milliseconds. The delay allows piano hammers traveling at different speeds (faster for louder notes) to hit the strings at more precise relative times.

If your MIDI software synthesizer has such a delay, or if your acoustic player piano is set for such a delay, then the millisecond duration of the delay must be specified so that **Musician** can synchronize other output devices and visual information, such as highlighting of notes, during playback.

Tap in Delay

Clicking this button will open the Tap in Delay 448 dialog which will let you listen to the playback of a scale on the selected device, and tap in the notes as you

hear them. **Musician** will then determine the Playback Delay for you, and save it so that it will correctly coordinate the highlighting of notes with their sound during playback.

NOTE: If a MIDI output device has a delay, the device cannot be successfully used to echo your live performance on a MIDI input device 113. You will experience a frustrating delay between the time you hit a note and the time you hear it. This is not **Musician**'s fault. It is just the nature of your MIDI output device if it has a built-in delay.

For further information, see Adjusting for the Delay of Some MIDI Output Devices 447.

Drum Channel Numbers

Some MIDI devices dedicate specific channel numbers to drum sounds. On drum channels, MIDI pitches are interpreted not as real pitches but, rather, as different types of drum sounds. The special MIDI device called "General MIDI", defines channel 10 as the drum channel. You should specify the drum channel(s) when defining a device so that when **Musician** transposes the pitches of a song to another key, it knows that it should not attempt to transpose the pitches in the drum channels. Otherwise, snare drum sounds might end up sounding like bells.

Enter the drum channel numbers separated by commas, such as in "10,12".

Recording Properties (of an Input Device)

Is MIDI Input Device

Add a check mark to this checkbox if the device is a MIDI input device.

Echo MIDI Input to Output

If echo is turned on, then your performance on the MIDI input device will be routed to a MIDI output device. Use the Select Play-Along Sound 113 command in the Perform menu to determine which output device will be chosen for echoing the input.

For an overview of MIDI "echo", see Deciding Whether or Not Your Keyboard Should Directly Produce Sound 444.

7.8.4.7 Specifying the Default MIDI Output Device

When you first open a MIDI file, **Musician** assigns all staves to a default MIDI output device. Initially this is the Notation Software Synth 419.

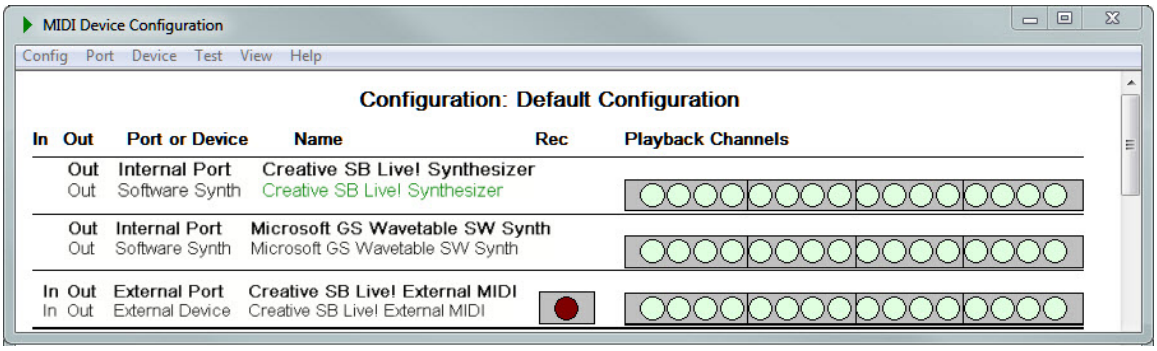
To review which device is the default MIDI output device:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

2. The default MIDI output default is highlighted in green. In the example below, the device "Creative SB Live! Synthesizer" is the default output device.



To change the default MIDI output device:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Config command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

2. Select the desired default MIDI output device by clicking its name, and then choose the Set as Current Playback Device command in the Device menu.

   -- OR --

   Double-click the name of the MIDI output device.

After opening a MIDI file, if you go to the Staff Setup 161 window, you will notice that all of the staves are assigned to the default MIDI output device that you have specified. In the Staff Setup window you can change the device assignment for any of the staves 161 .

7.8.4.8 Specifying a General MIDI (GM) Device

General MIDI (GM) is a standard specified by the MIDI Manufacturers Association (MMA). The General MIDI standard defines 128 distinct instrument sounds and a collection of drum sounds. Most sound cards that support MIDI also implement the General MIDI standard. Thus, you can play the same MIDI file on two different manufacturer's versions of GM sound cards and hear roughly the same instrument sounds. The quality of the instrument sounds can differ significantly, so that a song that sounds good on one sound card might not sound quite as good on another. Nevertheless, if there are four different instruments playing together in the MIDI source, for example, you will usually be able to identify what kind of instruments are playing, regardless of what sound card or MIDI device is used.

When **Musician** runs for the first time, it detects the software-based synthesizers for your sound card, and automatically creates corresponding devices for each. Also, **Musician** automatically specifies these to be General MIDI devices. This means that **Musician** assigns a single MIDI bank to the device, and names that bank "General MIDI".

Musician assigns standard General MIDI patch names to the General MIDI bank.

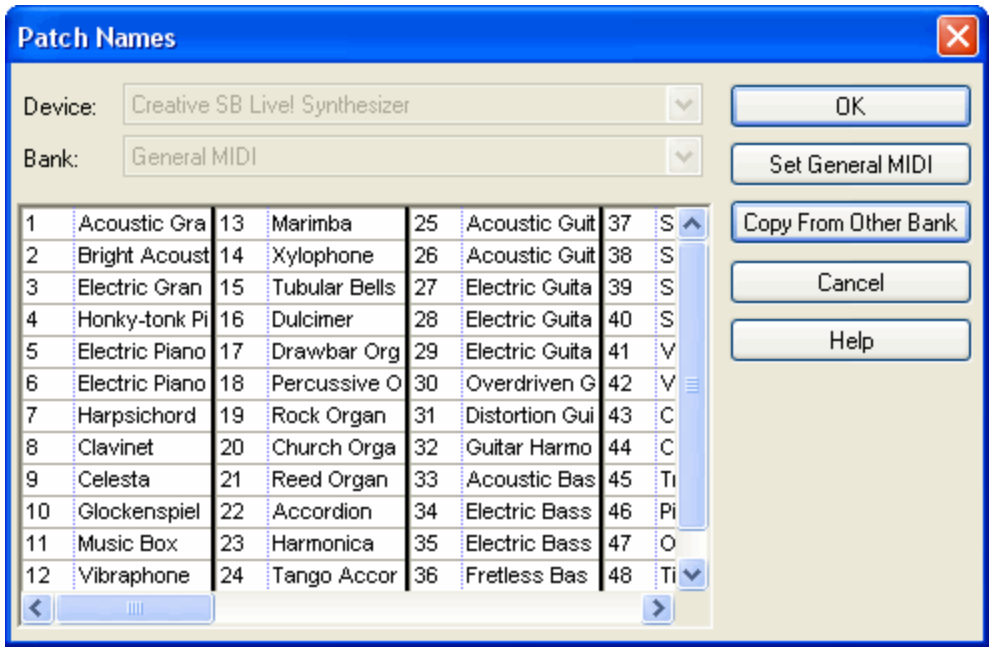
To view the General MIDI patch names for a device that is already configured:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command in the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

2. Click the name of a "Software Synth" device. If this device was initially configured by **Musician** , then **Musician** will assume that the device uses the General MIDI standard.
3. Choose the Properties command in the Device menu. **Musician** will display the Device Properties dialog box.
4. In the Device Properties dialog box, click the line "0 = General MIDI" that is listed under "Banks".
5. Click the Patch Names button. **Musician** will then display the following dialog box:



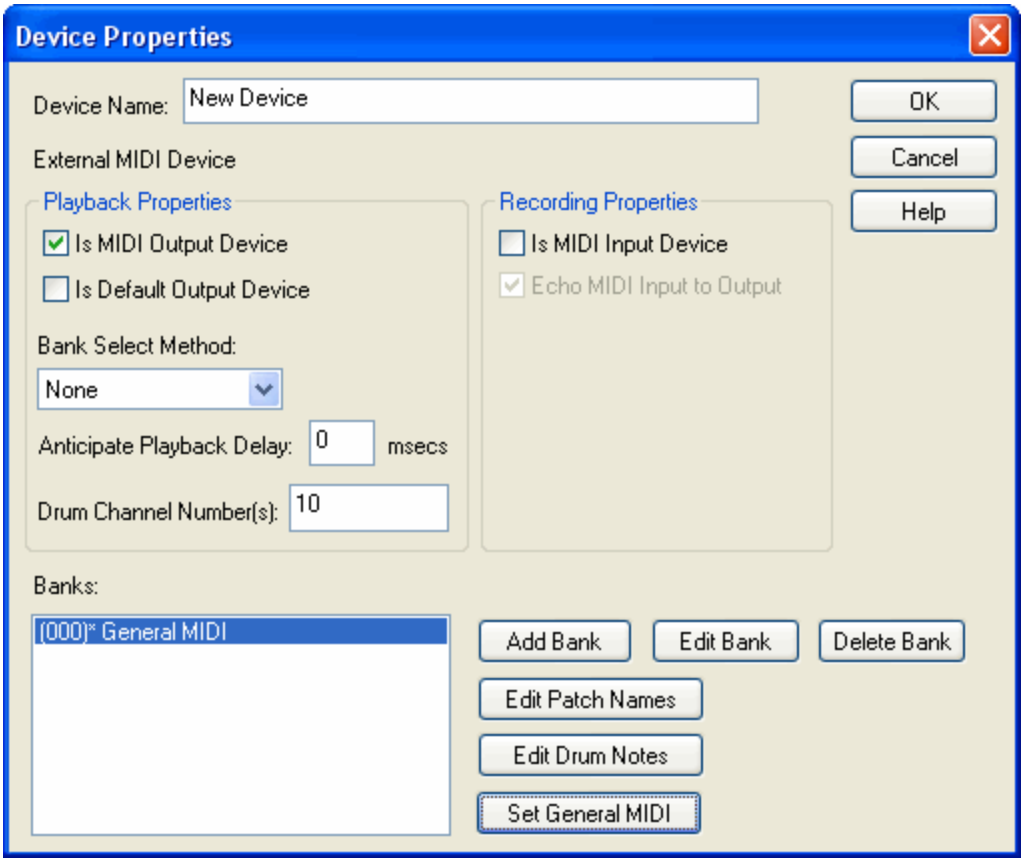
6. If you only want to view the General MIDI patch names, then click the OK button when you are done to exit the Patch Names dialog box, and click the OK button of the Device Properties dialog to exit that dialog box.

You might need to create a new device with the General MIDI specification. You will need to do the following procedure if this GM device is not already associated with the Windows MIDI output port of a software-based synthesizer automatically detected by **Musician**.

To create a new General MIDI device:

1. Follow the procedure for Adding an External Device 474, even if your device is an internal device.

2. In the Device Properties dialog, click the Set General MIDI button. A "General MIDI" bank will now be listed under "Banks", as illustrated:



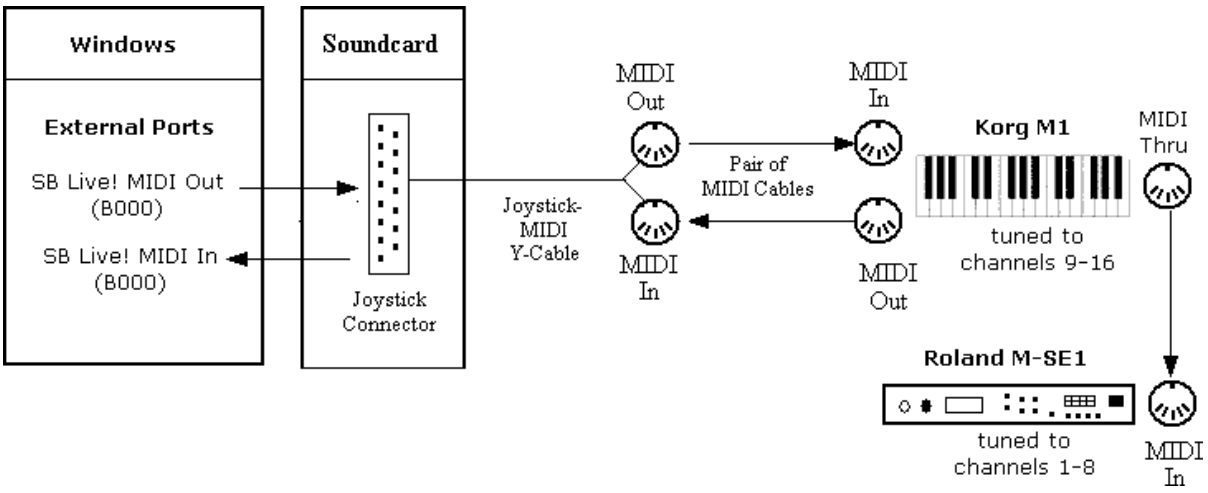
3. You can review the newly added General MIDI patch names by clicking the Edit Patch Name buttons.
4. Specify other properties of the new device, as described in Adding an External Device 474 (even if your device is an internal device).
5. Click the OK button to complete the task.

7.8.4.9 Tuning a Device to Specific MIDI Channels

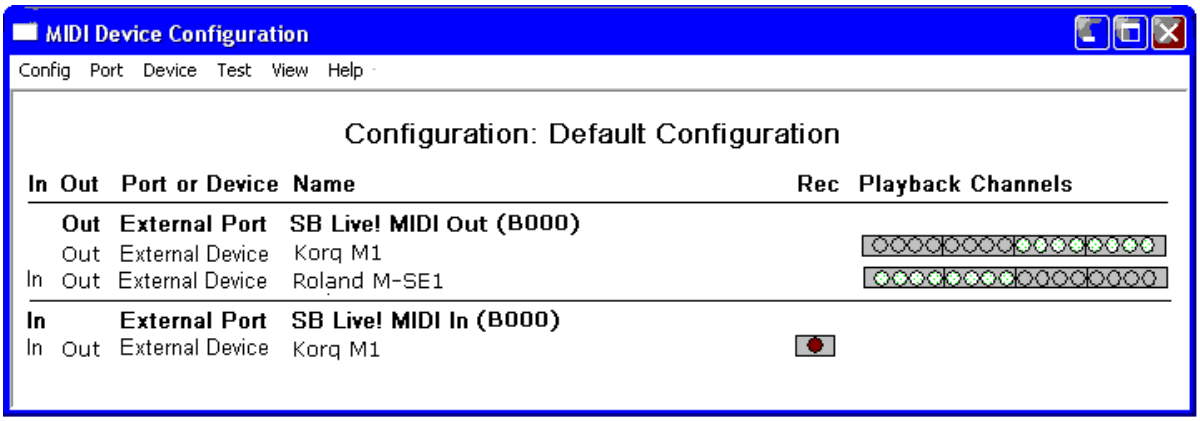
Some external devices have the capability to "tune in" to specific MIDI channels, while ignoring incoming MIDI events for other MIDI channels that are intended for, and passed on, to other MIDI devices connected via MIDI Thru connectors. Such devices typically provide front panel options for tuning into channels. By specifying which MIDI channels a given device is tuned to, you can help **Musician** determine which channels are intended to be performed by a given device.

In particular, if you assign a staff to the "Auto" MIDI channel of a "tuned" device, then **Musician** will play back that staff using only one of the channels that the device is tuned to. For details about assigning a staff to the Auto MIDI channel, see Assigning MIDI Channels 166.

In the following example, the 16 channels of MIDI performance sent from the SoundBlaster Live! MIDI Out port are first received by the Korg M1 device. The Korg M1 device forwards all of the MIDI performance, via its MIDI Thru connector, to the second device, a Roland M-SE1 sound module. The Korg M1 device is intended to respond only to channels 9 through 16; and the Roland M-SE1 device is intended to respond only to channels 1 through 8.



The MIDI Device Configuration for the above setup looks like this:



Notice that the first eight channel buttons are green for the Roland M-SE1, and the last eight channel buttons are gray. For the Korg M1, the first eight channel buttons are gray, and the last eight channel buttons are green. This means that the Roland M-SE1 is "tuned into" the first eight channels (1-8), and the Korg M1 is tuned into the last eight channels (9-16).

To tune a device into specific MIDI channels:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

2. For the desired device, click channel buttons, which are arranged in four groups of four buttons, to toggle whether the channel is tuned into or not.

   -- OR --

   Drag the mouse over the channel buttons to toggle several at a time.

It is important to understand that "tuning into" channels is intended to instruct **Musician** about your intentions for using MIDI channels on the devices, but it does not directly force the external devices to accept, or conversely, ignore incoming MIDI data on the specified channels. To accomplish this latter purpose, you must typically choose options on the control panel of the external device to tune that device to specific MIDI channels, and to ignore other channels. For details specific to your device, please refer to its owners manual.

7.8.4.10 Exporting to a MIDI Device Description (.mdd) File

By importing a MIDI Device Description (.mdd) file 469 or a Cakewalk Instrument Definition (.ins) file 471, you can spare yourself a lot of effort manually entering the patch names and other properties of a device. However, perhaps there was no device description yet available for your device, and you had to enter it manually. If you need to install **Musician** on a second computer at your home, then you can save yourself the effort of re-entering the same device information on your second computer. Instead, you can export the device information from **Musician** running on your first computer, into a MIDI Device Description (.mdd) file, and then import it into **Musician** running on your second computer.

Also, if you have manually entered a device description, we hope you will consider sharing it with other **Musician** users . You can export the device description into an .mdd file and send it to us. We will publish it at our web site so that other **Musician** users can make use of your contribution. These other **Musician** users and Notation Software will greatly appreciate your generosity. For details, see the instructions below.

Note that the format of the .mdd file is defined by Notation Software. Other music software companies are welcome to use this file format, and to refer users of their music software programs to the .mdd files available at our web site.

To export a MIDI device description:

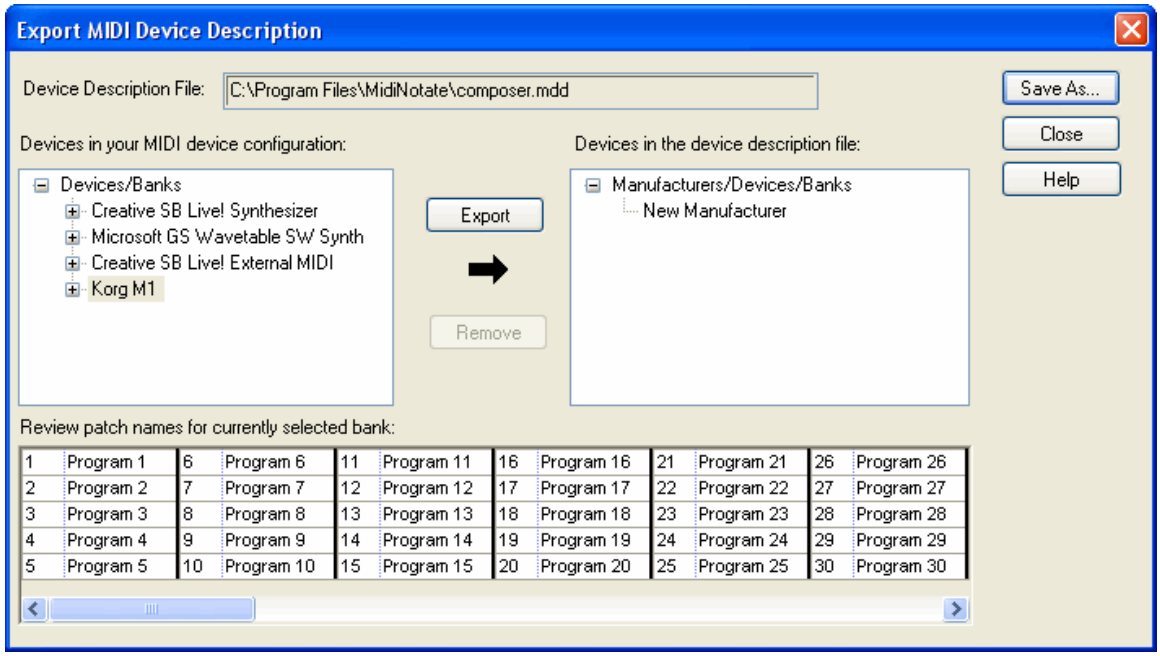
1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.

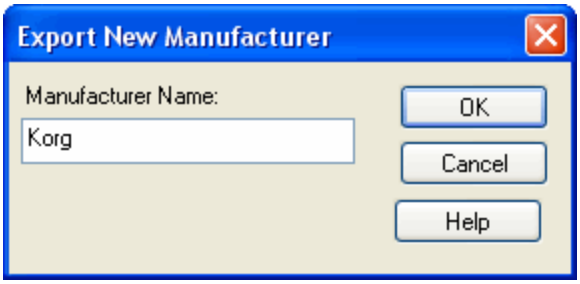
2. Choose Export from the Device menu. You do not have to previously select a device.

   Musician will present you with an Export MIDI Device Description dialog box, such as the following:

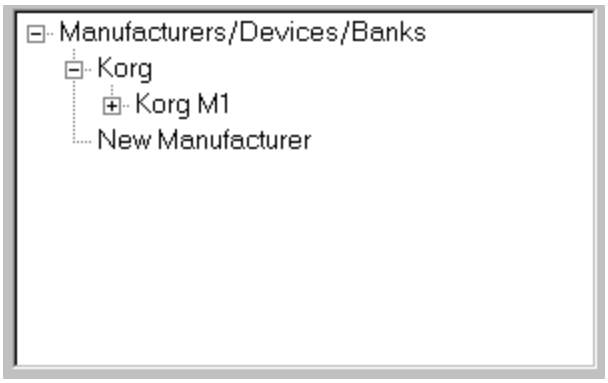


3. Under "Devices in Your MIDI Device Configuration", select the device that you wish to export.
4. In the panel on the right, select New Manufacturer, unless the manufacturer for your device happens to be listed already.
5. Click the Export button.

   Musician will display the Export New Manufacturer dialog box.
6. Enter the name of the manufacturer, for example:



   Musician will then show the newly exported device in the right panel of the Export MIDI Device Description dialog box:



7. If there are additional device descriptions you want to export, repeat steps 4 and 5.
8. Click the Save As button.

   Musician will present a Save As dialog box.
9. In the Save As dialog box, navigate to the directory where you want to save the MDD file. Give the file a name. And click the Save button.

To send your .mdd file to Notation Software

1. Use your favorite email program to prepare an email.
2. Give the email a subject line that identifies the manfucturer and model of the device, such as "Korg M1 MDD file".
3. Use the file attachment option in your email program to attach the .mdd file that you have saved according to the previous procedure.
4. Send the email to support@notation.com.

   We will really appreciate your contribution! And so will other **Musician** customers who use the same MIDI equipment that you do.

7.8.5 Assigning Bank, Patch, and Drum Note Names to a MIDI Device

When you specify an instrument sound for a staff 161 in a song, you use a Staff Setup window to identify the playback device, a MIDI bank on the device (many devices have only one bank), and the identification of some instrument sound that the device offers.

A *patch*, also called a "MIDI program" produces an instrument sound for a MIDI device. When a MIDI program change instruction is sent to the device on a given MIDI channel, the device subsequently uses the specified instrument sound to play notes on that channel. The patch, or MIDI program, is identified with a number between 1 and 128.

The General MIDI (GM) 482 standard specifies a standard set of 128 instrument sounds. If your playback device supports the GM standard, then you will not need to follow procedures in this section on Assigning Bank and Patch Names to a MIDI Device 491. Instead, you should follow the procedures in Specifying a General MIDI (GM) Device 482.

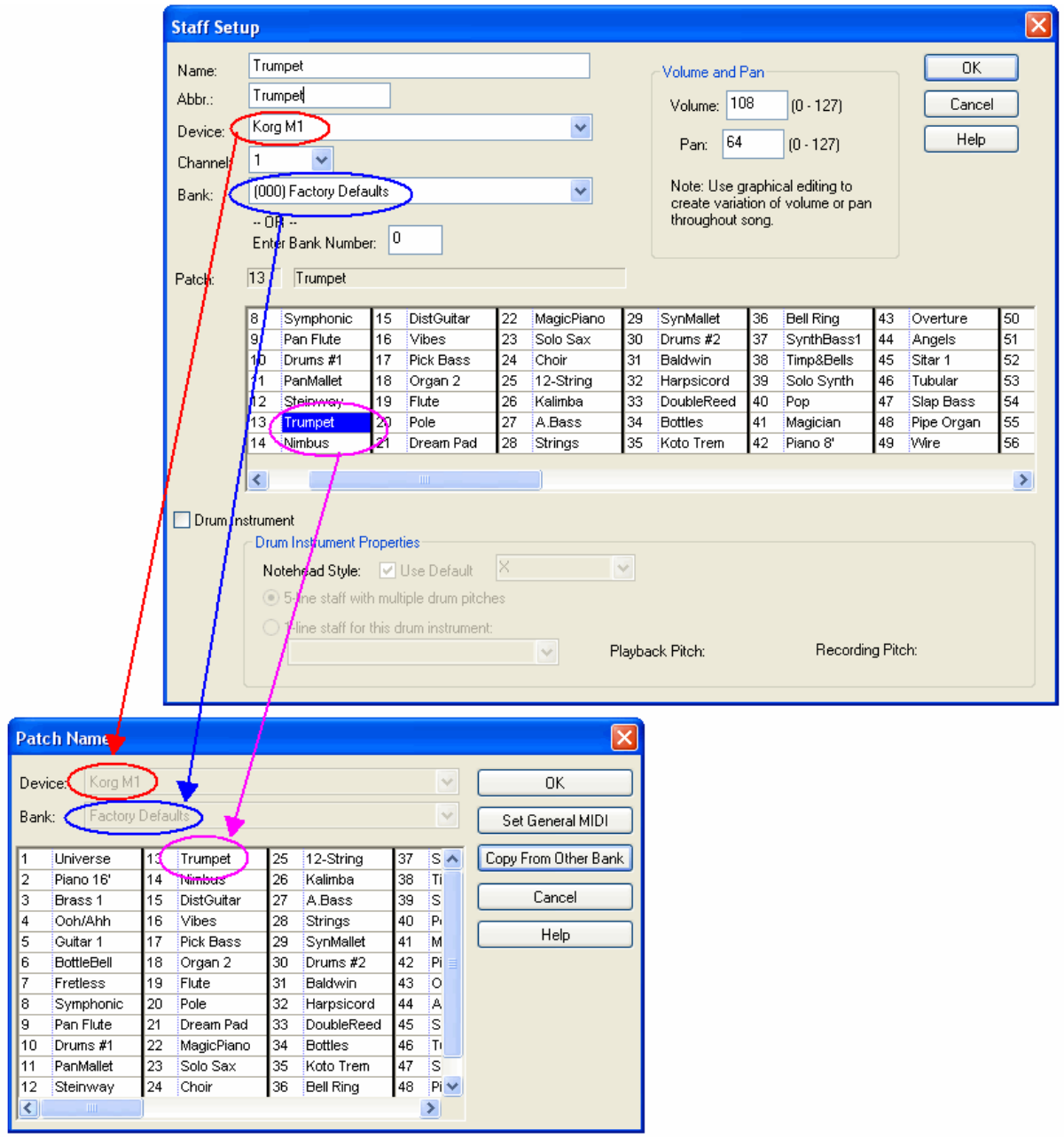
Some sound cards and most external MIDI devices offer alternative sets of instrument sounds, which do not adhere to the General MIDI standard. Also, some MIDI devices offer more than one alternative set of 128 patches, for a larger palette of instrument sounds. The palette of instrument sounds is divided into MIDI *banks*, each defining up to 128 instrument sounds. For such devices, when you use the Staff Setup dialog to specify an instrument sound for a staff, you must specify not only the device and patch number but also the bank number.

If you add a new, non-General MIDI external playback device to your MIDI configuration, **Musician** does not have any way of knowing the names of the instrument sounds that the device offers, unless you inform **Musician** what the names are. The easiest way to provide **Musician** the names of instrument sounds is to import them from a MIDI Device Description (.mdd) file 469 or Cakewalk Instrument Description (.ins) file 471. However, if you are not able to find a MIDI Device Description file or Cakewalk Instrument Description file for your device, then you will need to manually identify the one or more MIDI banks available for the device, and enter the names of the instrument sounds for each MIDI bank.

The procedure for identifying MIDI banks on a device is described in Assigning a Bank to a MIDI Device 489.

For each MIDI bank of a device, you can enter the names of the instrument sounds in a Patch Names dialog, as described in Assigning Patch Names for a MIDI Device or Bank of a Device 491. You only have to enter the patch names for a device once. After that, the patch names will be shown in the Staff Setup dialog as instrument sound names.

The following diagram shows the relationship between the Staff Setup window and the Patch Names dialog box. You will use the Staff Setup window many times as you assign sounds to staves in songs. You will use the Patch Names dialog box only once per device, to inform **Musician** about the instrument sounds provided by your playback device.



7.8.5.1 Assigning a Bank to a MIDI Device

If this is the first MIDI bank that you are specifying for a device with multiple banks, make sure that you specify the Bank Select Method. See Specifying Properties of a Device 477.

For devices with multiple MIDI banks, each bank has a distinct bank value. You will need to refer to your device owner's manual to determine the bank value, as well as to find the patch names for that bank.

Determining the bank value from the information in the device owner's manual can be somewhat difficult. The bank value should be presented in a heading at the top of the list of patch names for the bank.

- If the Bank Select Method 477 for your device is "Normal", then the heading for the patch names should indicate two numbers, one for Controller 0 and one for Controller 32, such as the following:

CC0: 80; CC32: 0

- If the Bank Select Method is CTRL 0 or CTRL 32, then there will be a single value for CTRL 0 or CTRL 32. That value will be between 0 and 127.
- If the Bank Select Method is Patch 100-127, then use the bank select patch value, which is a number between 100 and 127.

The most common Bank Select Method is "Normal", with values for CTRL 0 and CTRL 32.

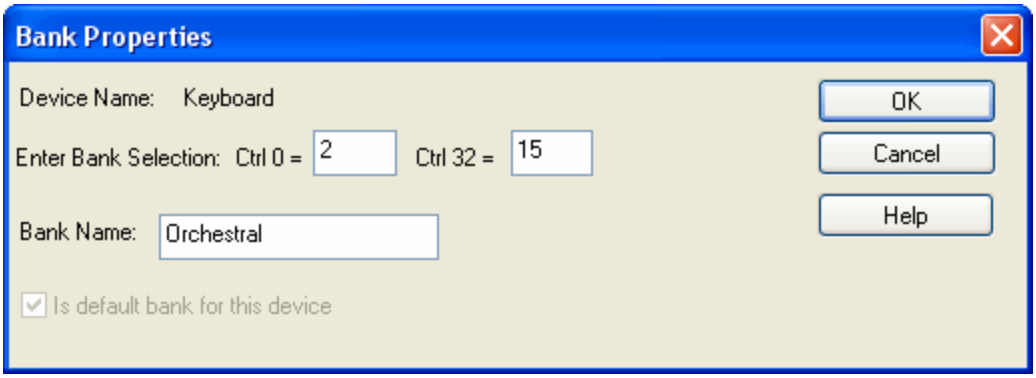
To add a MIDI bank to a device:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.
2. Select a device by clicking its name in the MIDI Device Configuration Window.
3. Choose the Device Properties command in the Device menu. **Musician** will display the Device Properties dialog box.
4. In the Device Properties dialog box, click the Add Bank button. **Musician** will display the Bank Properties dialog box.

   If the bank select method is "normal", then the Bank Properties dialog box will look like this:



5. Assign the bank a name, consistent with the name that the device manufacturer assigns to the bank, and click the OK button.

   The newly added bank will now be listed under Banks in the Device Properties dialog box.
6. Click the OK button to exit the Device Properties dialog box.

7.8.5.2 Removing a Bank from a MIDI Device

It is rare that you will need to remove a MIDI bank from a device. This might be necessary if you mistakenly added a bank.

To remove a MIDI bank from a device:

1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type or "qdc" for Quick Device Configuration.

2. Select a device by clicking its name in the MIDI Device Configuration Window.
3. Choose the Device Properties command in the Device menu. **Musician** will display the Device Properties dialog box.
4. In the Banks portion of the Device Properties dialog box, click the name of the bank you wish to remove.
5. Click the Delete Bank button.
6. Confirm that you wish to remove the bank.
7. Click the OK button to exit the Device Properties dialog box.

7.8.5.3 Assigning Patch Names for a MIDI Device or Bank of a Device

Patch names, which are meaningful substitutes for patch numbers, 0 to 127, are primarily used in the following way. When you assign an instrument sound to a staff in the Staff Setup 161 dialog, you select the instrument sound from your list of patch names rather than from a list of numbers, 0 to 127. It is much more convenient to refer to patch names than to have to remember or look up the meaning of the 128 patch numbers in some manual.

For any given device and its bank(s), you can choose the wording for each of the 128 patches.

To specify patch names for a MIDI bank:

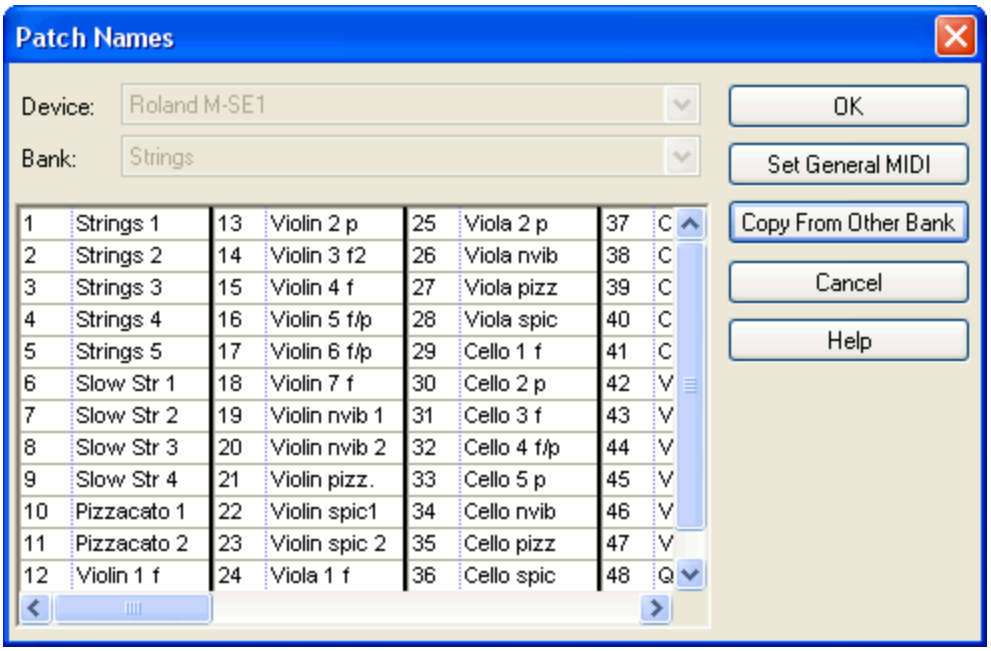
1. Open the MIDI Device Configuration Window 455 by choosing the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type or "qdc" for Quick Device Configuration.
2. Select a device by clicking its name in the MIDI Device Configuration Window.
3. Choose the Device Properties command in the Device menu. **Musician** will display the Device Properties dialog box.
4. Under Banks in the Device Properties dialog box, select the bank whose patches you wish to edit.

   If you have not yet added the bank, then follow the instructions in Assigning a Bank to a MIDI Device 486.
5. Click the Patch Names button.

Musician will display a Patch Names dialog, such as the following:



6. Add or change text for any of the patch names in the table. If the patches in this MIDI bank adhere to the General MIDI (GM) 482 standard, click the General MIDI button. Click the Copy From Other Bank button if you wish to copy the patch names from another bank of this device or from another device.
7. Click the OK button to complete the editing of the patch names.

7.8.5.4 Managing Drum Note Lists

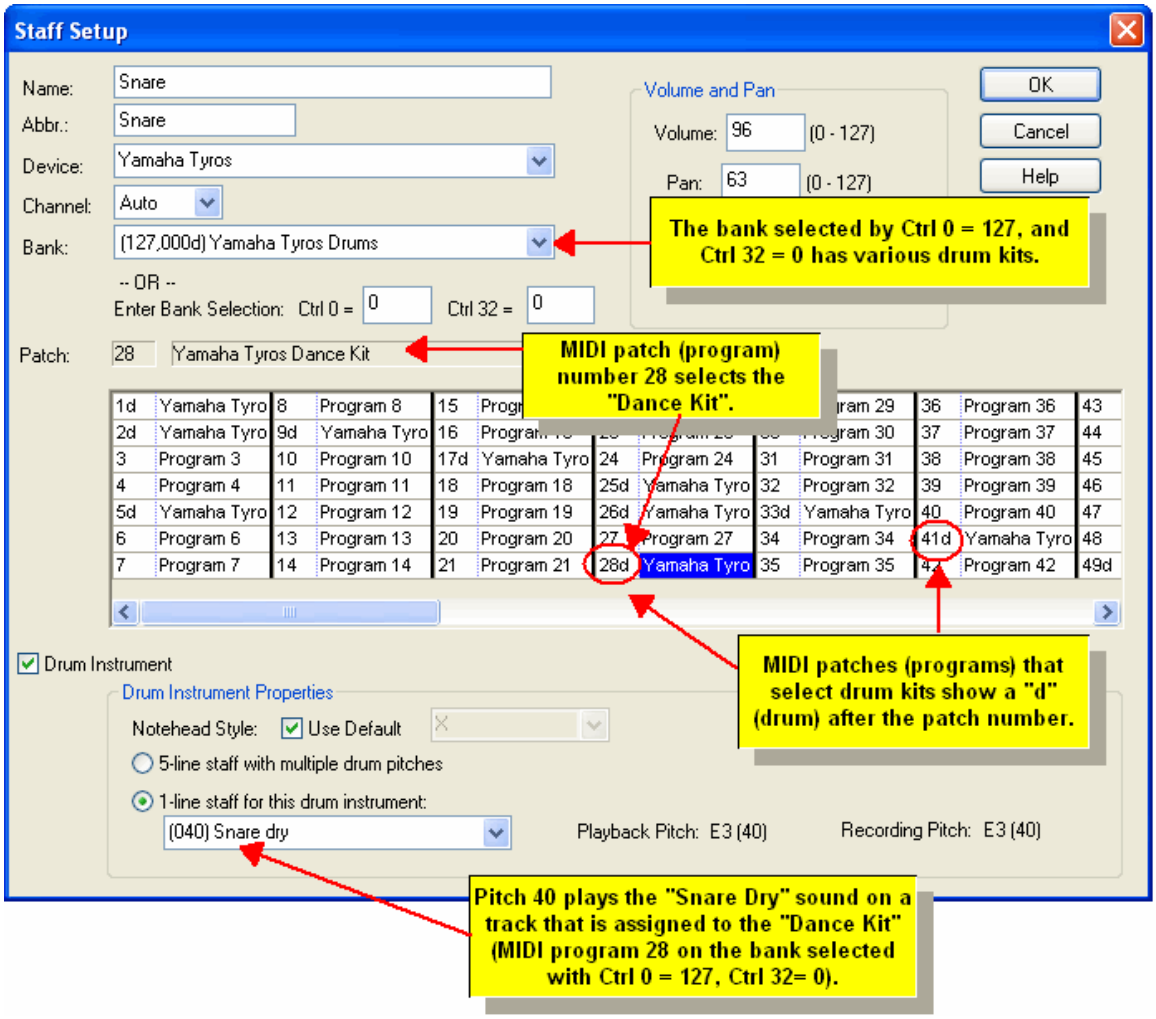
Most MIDI devices, including General MIDI devices, have one or more *drum kits*. A drum kit provides a set of various percussion instrument sounds.

General MIDI devices include a standard drum kit for drum sounds that are played on MIDI channel 10. The pseudo pitch of a General MIDI drum note determines its instrument sound. For example, middle-C (MIDI pitch 60) produces a "High Bongo" sound, and C# (pitch 61) produces a "Low Bongo" sound.

Many MIDI devices offer multiple drum kits. Each drum kit is associated with a unqiue combination of a MIDI bank and patch (program). For example, the Yamaha Tyros^{tm} keyboard has a bank (CTRL 0 = 127, CTRL 32 = 0) with several different drum kits. Each drum kit is assigned a different MIDI patch (program) number. For example, patch 17 is the "Rock Kit" and patch 28 is the "Dance Kit". In the Rock Kit, pitch 38 is "Snare Rock", and pitch 40 is "Snare Rock Tight". In the Dance Kit, pitch 38 is "Snare Clap" and pitch 40 is "Snare Dry". The Yamaha Tyros has hundreds of drum sounds assigned to different pitches for different MIDI programs on this particular drum bank (CTRL 0 = 127, CTRL 32 = 0).

With a General MIDI device, you must assign the drum staff to channel 10. For other devices with drum kits, you can usually assign any MIDI channel.

When you add a new drum staff for a non-General MIDI device using the Staff Setup 161 command, you will need to specify its bank and program, as illustrated here:



The rest of this topic explains how you can configure your MIDI device with *drum note names*. In the above example, "Snare Dry" is the drum note name for pitch 40 for MIDI program 28 on the Yamaha Tyros Drums bank. If you do not configure your MIDI device with drum note names, then you will be able to refer only to pitch and program numbers, which are difficult to remember, since any given device might have hundreds of different drum sounds.

The easiest way to configure your MIDI device with note names is to import a MIDI Device Description (.mdd) or Cakewalk Instruction Definition (.ins) file for the device. For instructions, see Importing from a MIDI Device Description (.mdd) File 469 and Importing from a Cakewalk Instrument Description (.ins) File 471. Only if you cannot find and import the note names should you spend the effort to manually enter them.

Before we describe the procedure for adding drum notes, we will describe how you can review the list of drum notes that already exist for a device. This will give you a better idea of where you are headed before you start preparing a new drum note list.

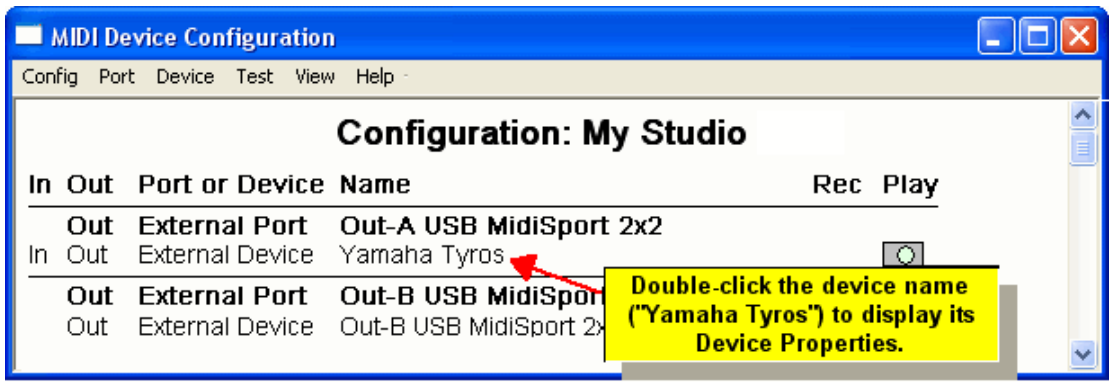
To review currently configured drum note lists for a device:

1. Choose the MIDI Device Configuration command in the Setup menu.

   -- OR --

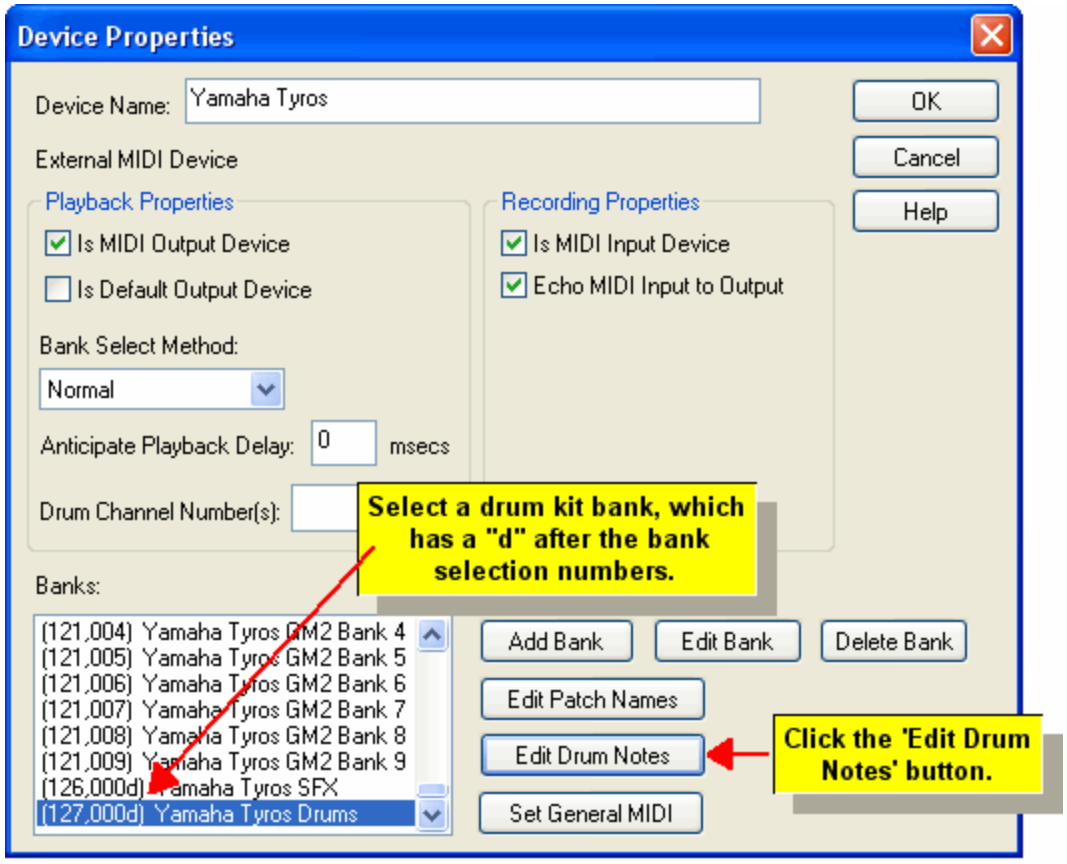
   Type for Quick Device Configuration.

Musician will display the MIDI Device Configuration Window, such as illustrated below.



2. Double-click the name of the device for which you wish to review the drum note list(s).

   Musician will display the Device Properties dialog box, as illustrated here:

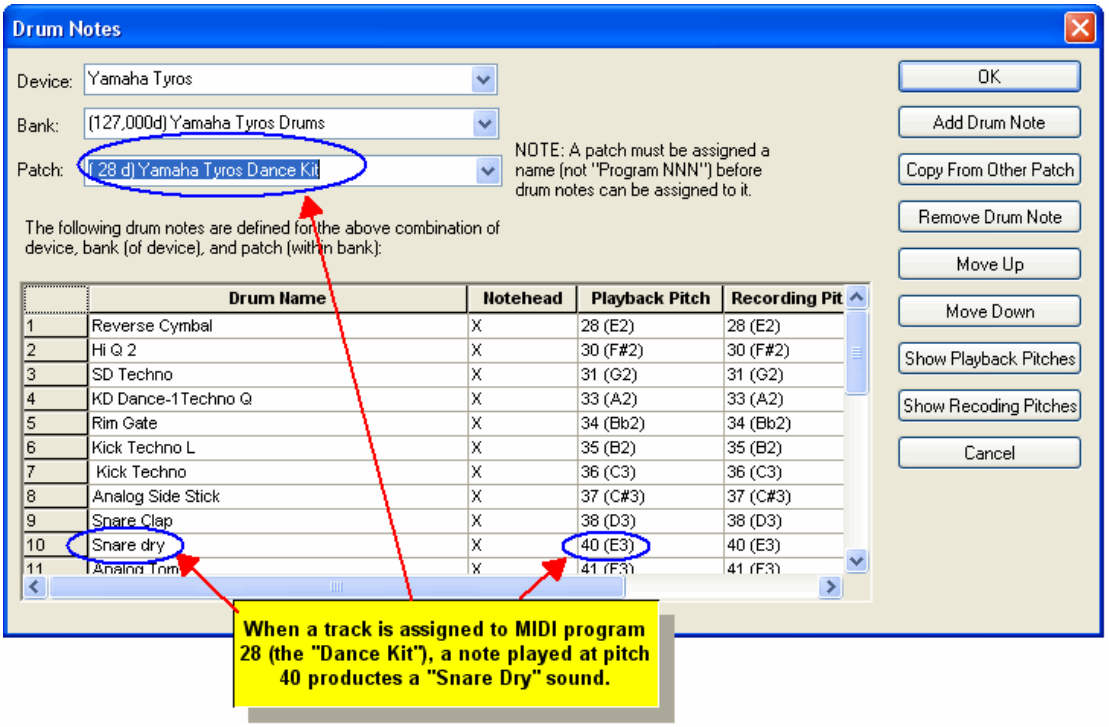


3. In the Banks list, select a bank that has a "d' after the bank selection number. The "d" indicates that the bank contains drum kits.

   In the above selection, the Yamaha Tyros Drums kit indicates a "d" after the bank selection values (CTRL 0 = 127, CTRL 32 = 0).

4. Click the Edit Drum Notes button

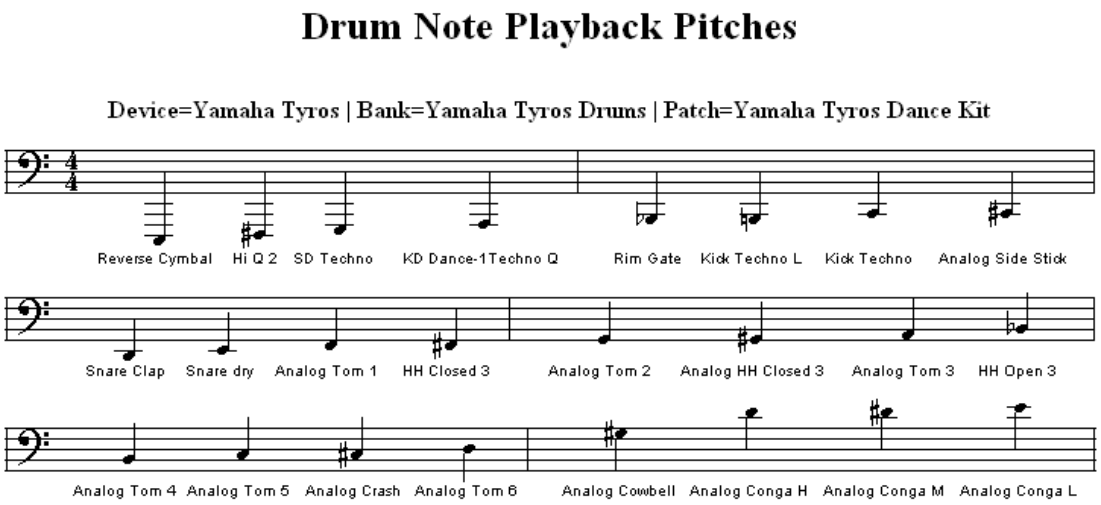
   Musician will display the Drum Notes dialog, which shows the names of all of the drum note pitches defined for the particular MIDI program (patch) on the specified MIDI bank:



5. Select the Patch (MIDI program) for a drum kit whose drum note names you wish to review, as illustrated above.

6. Optionally, click the Show Playback Pitches or Show Recording Pitches to view the drum note pitches graphically in a simulated score for which each distinct drum note is played once as a quarter note. The concept of recording pitches is explained later in this topic.

   Continuing with the above example, this is what the score looks like when you choose the Show Playback Pitches option for the Yamaha Tyros Dance Kit:



To specify the drum note names for a device:

Note that you will need to refer to the user's manual, or perhaps the front panel, of your MIDI keyboard or sound module, to determine the MIDI bank, patches (program numbers) and drum note pitches for the various drum kits available for playback on that device.

1. Choose the MIDI Device Configuration command in the Setup menu.

-- OR --

Type "qdc" for Quick Device Configration.

Musician will display the MIDI Device Configuration Window.

2. Double-click the name of the device for which you wish to specify the drum note names.

   Musician will display the Device Properties dialog box.

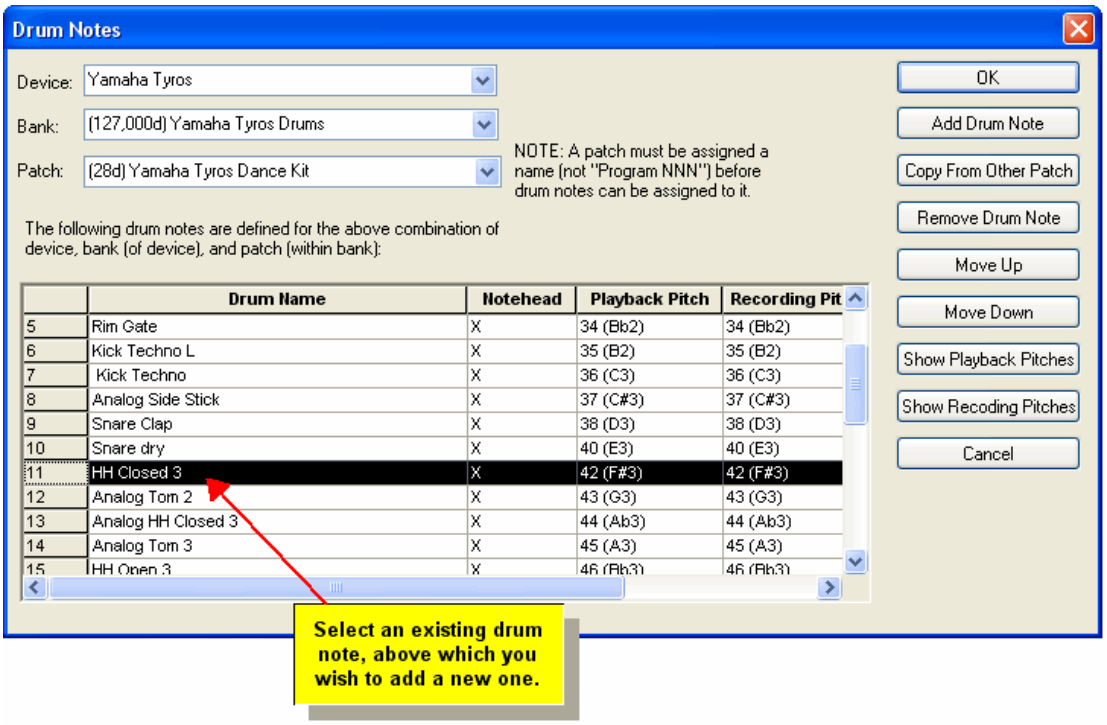
3. In the Device Properties dialog box, select the MIDI bank that provides the drum kit(s). (If the MIDI bank is not listed, then add it, as described in Assigning a Bank to a MIDI Device 489.)

4. Click the Edit Drum Notes button.

   Musician will display the Drum Notes dialog, as illustrated in step #4 in the previous procedure.

5. In the Drum Notes dialog, select the Patch (MIDI program) that selects a drum kit among those available for the bank of the device. (If the patch (MIDI program) is not listed, then add it, as described in Assigning Patch Names for a MIDI Device or Bank 491.)

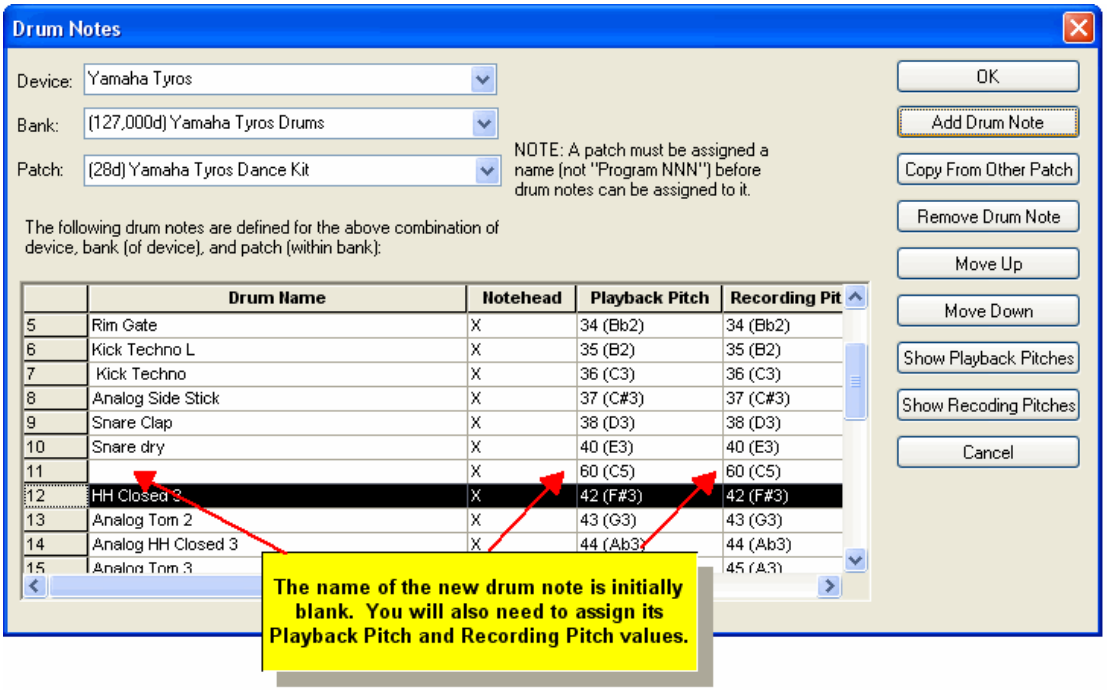
6. In the Drum Notes dialog, click an existing drum note. The new drum note will appear above the selected drum note, as illustrated below:



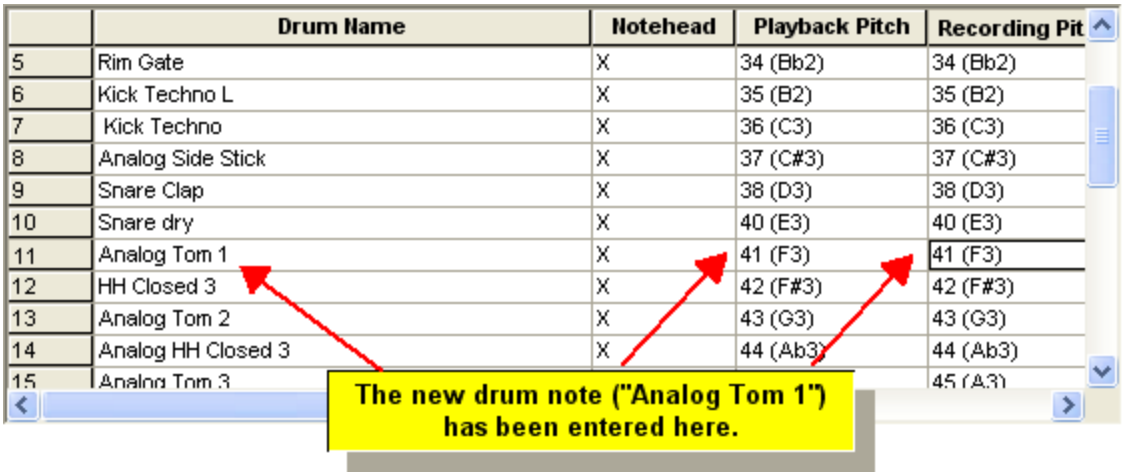
   The drum notes do not need to be listed in the same order as their pitches. You can organize the drum notes in any order that will make the most sense to you when you later assign drum notes to song staves. You can also change the order of the drum notes in the list at any time, using the Move Up and Move Down buttons.

7. Click the Add Drum Note button.

   Musician will insert a new row in the Drum Notes list. Initially, the name of the drum note will be empty. Also, the Playback Pitch and Recording Pitch will probably not be the value you want.



8. In the new row of the Drum Notes list, enter the name, Playback Pitch, and Recording Pitch of the new drum note, as illustrated below:



Often the manufacturer of MIDI equipment establishes standard drum kits that are shared among several models of MIDI keyboards and sound modules. Also, sometimes different drum kits for the same device have drum notes with different sounds, but the same names. In these cases, you can save effort in entering drum note names by copying a list from another device, bank, or patch (MIDI program).

To copy a list of drum notes from one device, bank, or patch to another:

1. Follow steps #1 through #5 in the above procedure for selecting the device, bank, and patch of a drum kit.
2. In the Drum Notes dialog, click the Copy From Other Patch button.

   The title of the dialog box will change from "Drum Notes" to "Copy Drum Notes from Another Device/Bank/Patch".
3. In this new dialog box, select the device, bank, and patch from which you wish to copy the entire list of drum notes. You can preview the list of drum notes before you commit to copying them.

4. Click the Copy From Other Patch button a second time.

7.8.6 Managing Alternative MIDI Device Configurations

NOTE: If your system includes only a single sound card and at most one external MIDI device, such as a MIDI keyboard, then you likely do not need to define more than one configuration. You can manage your sound card ports using the single "Default Configuration" that **Musician** originally creates for you, and you do not need to refer to this section.

If your music studio includes at least a couple of external MIDI devices, then there are likely multiple ways that you might want to arrange your devices, depending on the orchestration requirements for a given type of song. This might require that you reconnect MIDI cables, or change settings on the front panels of your devices.

Each time you change the physical arrangement of your devices, you will need to update the corresponding representation in the MIDI Device Configuration Window 455. This task is made easy by **Musician**, because you can name and save alternative configurations. If it takes you a couple of minutes to rearrange your physical devices, it will still take you only a few seconds to recall the corresponding configuration in **Musician** .

7.8.6.1 Saving a Configuration

To Save or Back up a configuration:

1. In the MIDI Device Configuration Window 455, choose the Save/Backup command from the Config menu.
2. Enter the name for the configuration in the dialog box that **Musician** presents to you.
3. Click the "Save" button to save the configuration and exit the dialog.

7.8.6.2 Selecting a Configuration

To select a configuration that you have previously saved:

1. Choose the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type "qdc" for Quick Device Configuration.
2. In the MIDI Device Configuration Window 455, choose the Select command from the Config menu. **Musician** will display the MIDI Device Configuration dialog box.
3. In the dialog box, select one of your previously saved configurations.

If you have a song currently opened, then **Musician** will be able to fully play all of the song staves only if the device assignments for the staves are supported by the new configuration. If some of the staves are assigned to a device no longer in the current configuration, then you will need to use the Staff Setup 161 window to reassign staves to devices in the new configuration.

7.8.6.3 Creating a New Configuration

To create an entirely new configuration:

1. Choose the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type or "qdc" for Quick Device Configuration.

2. In the MIDI Device Configuration Window 455, choose the New command from the Config menu.
3. Enter the name of the new configuration in the dialog box that **Musician** presents to you.

The new configuration will initially include no ports or devices. Usually it is more convenient to create a new configuration by cloning an existing configuration 499.

7.8.6.4 Re-Initializing a Configuration

If you change the sound card of your system or add a new one, **Musician** will also automatically detect it the next time you run the program. **Musician** will deactivate any Windows MIDI ports that are no longer in your Windows system. You can completely re-initialize the configuration based on the current Windows MIDI ports in your system, as though **Musician** were just installed for the first time. To re-initialize the configuration, follow the procedure below.

To re-initialize the current configuration:

1. Choose the MIDI Device Configuration command from the Setup menu.

   -- OR --

   Type or "qdc" for Quick Device Configuration.

2. Optionally make a backup of the configuration following the procedure for Cloning a Configuration 499.
3. Select the configuration 498 you wish to re-initialize if it is not already selected.
4. Choose the Initialize command in the Config menu.

7.8.6.5 Cloning a Configuration

You can make a copy of a configuration. Two good reasons for doing so are:

(1) to back up a configuration before making changes that you are uncertain you will want to keep

(2) to create a variation of an existing configuration.

To clone a copy of a configuration:

1. In the MIDI Device Configuration Window 455, choose the Clone To command in the Config menu.
2. Enter the name of the newly cloned configuration in the dialog box that **Musician** presents to you.

7.8.6.6 Renaming a Configuration

To rename a configuration:

1. In the MIDI Device Configuration Window 455, choose the Rename command from the Config menu.
2. Enter the new name for the configuration in the dialog box that **Musician** presents to you.

7.8.6.7 Deleting a Configuration

To delete a configuration:

1. In the MIDI Device Configuration Window 455, choose the Delete command from the Config menu.
2. **Musician** will ask you to confirm your intention to delete the configuration.

7.8.6.8 Restoring A Configuration

To Restore a previously saved configuration:

1. In the MIDI Device Configuration Window 455, choose the Restore command from the Config menu.
2. In the navigation dialog box, find the configuration you wish to restore and click on it to select it.
3. Click the "Open" button to restore the configuration and exit the dialog.

8 Appendices

Appendix A: Notation Musician Keyboard Shortcuts 501
Appendix B: What is MIDI? 509
Appendix C: Technical Support 510
Appendix D: Notation Musician License Agreement 511

8.1 Appendix A: Notation Musician Keyboard Shortcuts

Shortcuts Using Special Keys

Keystroke (Combinations)	Context	Action
ENTER	Viewing or editing the score.	Toggle between Select Mode and Add Mode 133.
SHIFT+ENTER	Viewing or editing the score.	For some types of objects, open the Properties dialog box.
Ins	Add Mode for notes.	Add a new note where the red to-be-added note is currently shown. (in <%**OTHERPRODUCT%>** only)
SPACE	Almost any time except when editing text.	Start or stop playback 94.
SPACE	A lyric is selected.	Advance to the next note or chord 259 to continue adding the next lyric.
CTRL+SPACE	A staff or region has been selected for recording.	Start recording (only in Composer).
ALT+SPACE	You have previously specified section that you want to practice.	Start a practice loop 117.
PAGEUP (or PAGEDOWN)	Vertical scrollbars are displayed in Page View or Window View.	Scroll up or down the page by a window's worth 149. If the page is already at the top (or bottom), advance to the top of the next page (or bottom of the previous page).
SHIFT+PAGEUP (or SHIFT+PAGEDOWN)	Window View or Page View.	Go to the top of the next (or previous) page 149.
CTRL+HOME	Window View or Page View.	Go to the beginning of the score 152.

CTRL+END	Window View or Page View.	Go to the end of the score 152.
TAB or SHIFT+TAB	A lyric or chord name is selected.	Advance to the next (or previous) note or chord to continue adding or editing the next lyric 378 or next chord name 413.
Ctrl + (increase) or Ctrl + (decrease) (for machines with a NumPad) OR CTRL + SHIFT + > (increase) CTRL + < (decrease)	One or more lyric or text items are selected, OR one or more notes are selected.	Increase or decrease the font size 370 of the selected text items OR increase or decrease the pitch of a selected note(s) by half step (in **Composer** only).
CTRL+N	Almost any time.	Create new file (only in Composer).
CTRL+O	Almost any time.	Open a file 64.
CTRL+F4	Almost any time.	Close a file.
CTRL+S	Almost any time.	Save an edited file 81.
SHIFT+CTRL+S	During or after playback.	Turn off stuck notes 102.
CTRL+P	Almost any time.	Print the current score or part 90.
ALT+[underlined letter of a main menu item]	Almost any time	Opens the command list for the menu item. For example,. "ALT + V" opens the "View" command list.
"K" plus mouse click	Using the Virtual Keyboard	Sets the cursor location to start adding notes (only in **Composer)**.

Shortcuts Using Arrow Keys

Keystroke (Combinations)	**Context**	**Action**
or	A note or chord selected.	Advance the selection to the next (or previous) chord 259 in the same

		staff.
↑ or ↓	A note selected.	Advance the selection to the note above (or below) in the same chord in the same same staff.
→ or ←	Adding notes.	Move the red to-be-added ♩ note to the next or previous position. (in Composer only)
↑ or ↓	Adding notes.	Move the red to-be-added ♩ note to the next staff pitch position above or below the current one. (in Composer only)
CTRL + ↓, ↑, →, or ←	Vertical or horizontal scrollbars are displayed along the side of the window.	Scroll the score by a small amount in the window.
SHIFT+↑ or SHIFT+↓	One or more notes selected.	Shift the selected notes to the staff immediately above (or below) 177.
A+→ or A+←	One or more notes selected.	Move the notated attack of the notes to the right (or left). 235
A+↓	One or more notes selected.	Snap ("quantize") the as-performed attack of the selected notes to their notated locations. (only in Composer)
C+↑ or C+↓	Show the velocity vectors (loudness) of notes, using SHIFT+V. Then select three or more notes.	Increase (or decrease) the contrast in loudness between the selected notes. (only in Composer)
C+→ or C+←	Show the velocity vectors (loudness) of notes, using SHIFT+V. Then select three or more notes.	Gradually increase (or decrease) the loudness of notes over the range of selection, (only in Composer) while preserving the accents of notes. ("C" suggests *crescendo*.)
D+→ or D+←	One or more notes selected.	Increase (or decrease) the notated duration of the selected notes 266.
E+↑ or E+↓	One or more notes selected.	Raise (or lower) the enharmonic spelling of a note 263, such as from C# to Db.
F+↑ or F+↓	Page layout view.	Increase (or decrease) the music font size 218.

L+↑ or L+↓	Show the velocity vectors (loudness) of notes, using SHIFT+V. Then select one or more notes.	Increase (or decrease) the loudness of the selected notes.(in **Composer** only).
P+↑ or P+↓ or CTRL+↑ or CTRL+↓	One or more notes selected.	Increase (or decrease) the pitch of the selected notes (in **Composer** only).
R+↓	One or more notes selected.	Snap ("quantize") the as-performed release of the selected notes to their notated locations.(**Composer** only)
S+↓	One or more notes selected.	Snap ("quantize") the as-performed attack and duration of the selected notes to their notated rhythms (only in Composer).
T+↑ or T+↓	Before or during playback.	Increase (or decrease) the percentage adjustment to the playback tempo (**Composer** only).
T+ENTER	Before or during playback.	Reset the tempo adjustment to normal (100%) 102.
V+↑ or V+↓	Before or during playback, with one or more staves selected.	Increase (or decrease) the volume level of the selected staves, or all staves if none are selected, and decrease the volume level of the other staves 105.
V+ENTER	Before or during playback.	Reset the volume levels of all staves to normal 105.

Palette Shortcuts 136

Keystroke Combination	Palette
SHIFT+A	Accents and articluations 340.
SHIFT+B	Beams 274.
SHIFT+C (once or twice)	Clefs 321 or chord names 401.
SHIFT+D	Dynamic marks 341.
SHIFT+E	Expressions 136 (master palette for other palettes).

SHIFT+F	Free text 390.
SHIFT+G	Graphical data: tempo, staff volume, staff pan, pitch bend, sustain pedal, and MIDI controller data.(in Composer only)
SHIFT+I	Instrument sound (mid-staff MIDI program change). (in Composer only)
SHIFT+K	Key signature 322.
SHIFT+L	Lyrics 376.
SHIFT+M	Meter 325.
SHIFT+N	Notes 256.
SHIFT+O (once or twice)	Ornaments 303 or 8va octaves 261.
SHIFT+P (once or twice)	Page text 394 or page layout 214.
SHIFT+R (once or twice)	Rests 293 or rehearsal marks 416.
SHIFT+S (once or twice)	Slurs 352 or sustain pedal marks 303.
SHIFT+T	Text (master palette for types of text) 365.
SHIFT+U	Go to the palette one level up in the palette hierarchy 136.
SHIFT+V	Velocity (note loudness). (in Composer only)
SHIFT+Y	Piano roll palette.(in Composer only)
> or <	Hairpin crescendo (or decresendo) 344.
$ or %	Special music symbols 348, such as 𝄋 and 𝄎.
[or {	Bracket or brace 317.
| (vertical line character)	Barline 327.
K + mouse click	Set position cursor for adding notes with Virtual Piano Keyboard (in Composer only)

Quick "Q" Commands 140

Keyboard Sequence	Menu / Submenu	Command

qam or qim	Score	Add (or insert) measure.(in Composer only)
qas	Staff	Add staff.(in Composer only)
qcl	Lyric	Copy lyrics 380.
qcmr	Score	Collapse multiple measure rests 295.
qcrl	Region	Convert region to selection of lyrics 241.
qcrn	Region	Convert region to selection of notes 241.
qcrs	Region	Convert region to selection of entire staff. (in Composer only)
qcuh	Edit	Clear undo history 243.
qdc	Setup	MIDI device setup 455. (See also qqds for Quick MIDI device setup.)
qdm or qrm	Score	Delete (remove) measures 247.
qds	Staff	Delete staff 158.
qdpn	Part	Display pitch names in noteheads for selected staves 211.
qfn	Note / Filter or Region	Filter notes according to selection criteria. (in Composer only)
qfs	Part	Font size and spacing 199.
qgm	View / Go to	Go to measure.
gqp	View / Go to	Go to page.
qgr	View / Go to	Go to rehearsal mark 154.
qhrs	Part	Hide Resting Staves 209.
qim or qam	Score	Insert (or add) measure. (in Composer only)
qin	Part	Instrument names display options 207.
qkte or qktm	Perform / Tempo	Keep adjusted tempo.
qmet	Perform	Toggle metronome 131.
qmn	Score	Measure numbers 255.
qms	Staff	Merge staves 168.

qpc	Setup	Enable pitch-to-command 121.
qpdf	File	Export PDF 51
qpgs	Part	Page setup 196.
qpl	Edit or Lyric	Paste lyrics 380.
qpnr	Perform	Set practice loop at next rehearsal mark 118 .
qppr	Perform	Set practice loop at previous rehearsal mark 118.
qpra	Perform	Practice setup 115.
qps	File	Print setup.
qpt	Edit	Paste tempo. (in Composer only)
qpv	View	Page view 143.
qqds	Setup	Quick MIDI device setup 422. (also see qdc for full MIDI Device Setup)
qrc	Chord Name	Remove chord names 401.
qrfp	Edit	Refresh current page.
qrfs	Edit	Refresh entire score.
qri	Score	Repeat instructions 334.
qrm or qdm	Score	Remove (delete) measures 247.
qro	Note / Filter	Remove overlaps of notes.
qrr	Note / Filter	Remove rests smaller than.
qrt	Staff	Re-transcribe staff 78.
qsas	Part	Show all staves.
qsbr	Bracket	Show brackets 317
qscn	Chord Name	Show chord names 415.
qscp	Staff	Show concert pitches 289.
qsgc	View	Show MIDI Controller graph (in Composer only) (select type from list)
qsgpa	View	Show Pan data graph (in Composer only)

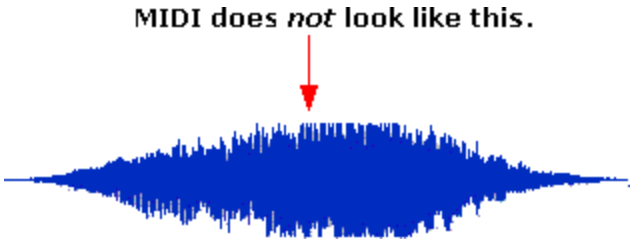
qsgpb	View	Show Pitch Bend data graph (in Composer only)
qsgs	View	Show Sustain Pedal data graph (in Composer only)
qsgt	View	
qsgv	View	
qsh	View	Show and hide parts of the Musician window 127
qsin	Part	Show or hide instrument names 207.
qsk	Virtual Keyboard	Show or hide the Virtual Keyboard (in Composer only)
qsl	Lyric	Show lyrics 373.
qsor	Ornament	Show ornaments and grace notes 307.
qsob	Part	Show types of objects 206.
qspld	Staff	Split drums 173.
qsplh	Staff	Split hands 171.
qsplm	Staff	Split melody and accompaniment 175.
qspp	View	Show playback position 99.
qsreg	Edit	Select region 241.
qssb	View	Show status bar 127.
qstb	View	Show toolbar 127.
qssc	View	Show staff controls 144.
qtc	Chord Name or Staff	Transcribe chord names 409.
qti	Staff	Transpose instrument key 289.
qto	Setup	Transcription options 73.
qtp	Staff	Transpose actual pitches 287.
qsus	Staff	Set up staves 161.
qvm	View	View measure range 152.
qwav	File	

qwv	View	Window view 143.
qz% or qzp	View	Zoom percentage 151.

8.2 Appendix B: What is MIDI?

MIDI (Musical Instrument Digital Interface) is an industry standard for passing musical performance information among electronic musical instruments and computers. There are very few details about MIDI that are neccessary for you to understand in order to use **Musician**. However, a general understanding about MIDI will help you to more quickly understand how **Musician** lets you create and edit both the music you see as notation and the music that you hear.

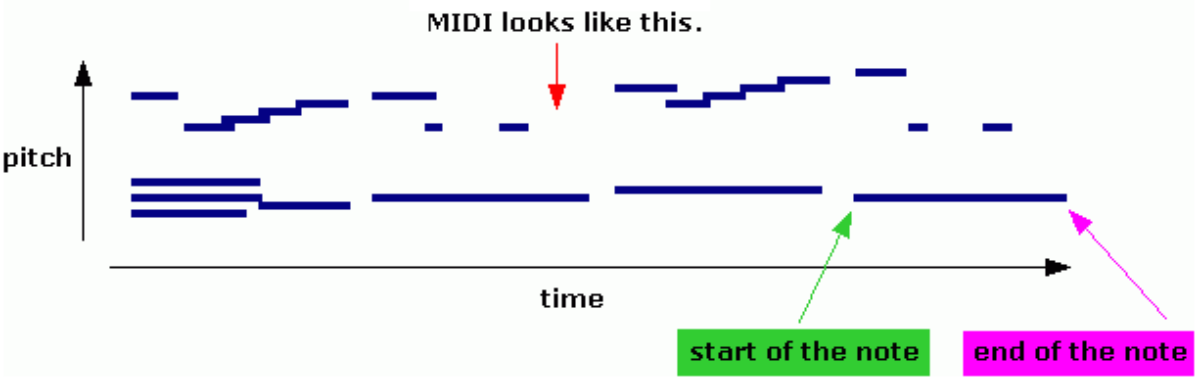
Most audio equipment that we are familiar with-- such as CD players and radios-- receive and send sound in the form of sound waves, such as shown below.



In contrast, MIDI instruments receive and send music data as specific actions to be performed, such as "play a Middle C note softly using the clarinet sound, for a duration of a quarter note at the current tempo." The MIDI instrument receiving such an instruction then produces the sound wave such as the one shown above.

When **Musician** (or any MIDI program) records a performance on a MIDI keyboard, **Musician** does not record the actual sound waves, such as shown above. Instead, **Musician** simply records what keys are played by the at what times, and with what loudness.

The following diagram illustrates MIDI note performance data. Each rectangle represents a single note that is to be performed using some instrument sound, such as a clarinet. The left edge of each rectangle marks the starting time of the note, and the right edge marks the ending time of the note. The vertical position of the rectangle represents the pitch of the note. This diagram does not illustrate the additional MIDI information for the loudness of the note.



A diagram of a MIDI performance, such as shown above, is commonly called "Piano Roll Notation" because it looks quite similar to piano rolls that were used in mechanical player pianos that were popular in the early 1900's. Each rectangle in the above diagram is like a hole in a piano roll. As the piano roll is scrolled during the performance, the player piano plays a key on the piano when it detects the hole, and releases the key when it detects the end of the hole.

A MIDI file is a saved recording of a MIDI performance. For a given song, a MIDI file is much smaller (as measured in bytes) than an equivalent audio recording of the song, saved in a .WAV or .MP3 file format or CD audio format. This is because only a few numbers are needed in the MIDI format to describe a note: its starting and ending times, pitch, loudness, and instrument sound. In contrast, tens of thousands of numbers are needed to describe the audio sound waves for just one second of music.

8.3 Appendix C: Technical Support

If while using **Notation Musician** you have questions about how to use the program, or experience difficulties using the program, there are several ways for you to receive help. Also, we would highly appreciate your suggestions for improving **Musician** (see #5 below).

1. **Use this User Guide (Help).**

   This User Guide provides detailed steps for how to accomplish various tasks in **Musician**. We encourage you to give this User Guide a try, since it is designed to help you do things that you want to do.

2. **Check whether a free update of Notation is available.**

   Notation Software provides free updates for maintenance releases of **Notation Musician,** fixing known bugs as well as providing new features and enhancements to the software. To check whether a new update is available, click on Help and then Check for Latest Software Update.

3. **Visit the Notation Users Community Forum.**

   Notation Software offers the **Notation Users Community Forum**, where **Notation Musician** users can trade tips with each other and the developer, ask questions, report software bugs, and request new features. You can visit the forum directly at:

   http://www.notation.com/vb-forum/index.php.

4. **Refer to Frequently Asked Questions (FAQs) or our KnowledgeBase at Notation Software's web site.**

   To visit our FAQ page you can go to http://www.notation.com/FAQs.php

   To find answers in our KnowledgeBase you can go to https://notation.kayako.com/category/1-knowledgebase

5. **Send a question or comments to Notation Software using the online form, or via email**

   If after exploring the above options your question still remains unanswered, then you can **Submit a Question or Comment** by visiting our Helpdesk directly at https://notation.kayako.com/conversation/new. You will receive a response within 24 hours, but typically much sooner.

   Alternatively, send your questions or comments via email to: support@notation.com

8.4 Appendix D: Notation Musician License Agreement

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Germany
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8.5 Appendix E: 3rd Party Libraries and Acknowledgements

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Smtp	special license agreement by PJ Naughter (www.naughter.com)
contains QHTM code	QHTM is copyright (c) 1999 Russ Freeman

For Linux and Mac Notation Software uses the concept of WineHQ (www.winehq.org), in particular for Mac we use the Wine package built by Mike Kronenberg (http://winebottler.kronenberg.org/).

The libs with the LGPL license are built according to the license agreement in separate dll files. In that set-up they are available for distribution in commercial applications like Notation Software products. The source code can be downloaded from the according distributor. All libs are built using the instructions of the distributor.



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Steinberg ASIO SDL Licensing Agreement signed between Notation Software Germany and Steinberg Media Technologies GmbH on Dec. 3rd, 2018

Soundfont	**License**
TimGM6mb.sf2	LGPL v2.1 or later
FluidR3Mono_GM.sf3	agreement with owners, license included in the package
MusicXML	MusicXML Public License 3.0

The **Band-in-a-Box®** plugin for **notation composer** is licensed from PG Music, Inc. (www.pgmusic.com) and is only available for Windows and Linux operating systems as an additional license purchase.

Acknowledgements

Thanks to the open source community for all their work, and that Notation Software Germany GmbH can use the dll libraries under the LGPL license.

Thanks to Steinberg Media Technologies for signing the license agreement so that Notation Software can use the ASIO compatible driver inside of **notation musician** and **notation composer**.

In particular we appreciate the great support which we have received from many people during our development efforts.

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