NoteAbilityPro Reference Manual

Version 3



info@opusonemusic.net

© 1992-2009 Keith A. Hamel. All Rights Reserved.

Table of Contents

Help Start Page

1 - Getting Started

- Step 1: Installing NoteAbilityPro
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbilityPro
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

2 - Overview

- Introduction to NoteAbilityPro
- Basic Steps for Creating a Score
- Contacting Opus 1 Music

3 - Basic Program Operation

- Create a new document
- Document setup
- Customizing your document setup
- Set NoteAbilityPro preferences
- Using the Score Controls
- Using the NoteAbilityPro tools
- Music Images and Score Structure panels
- Multi-Page Display
- Open an existing document
- Save a new document
- Save changes
- Save document under a new name
- Save in another file format
- Close a document
- Hide NoteAbilityPro
- Quit NoteAbilityPro

4 - Entering Music Into the Score

- Entering music images
- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering notes from MIDI file
- Entering chords
- Entering text
- Entering lyrics

- Adding graphic images
- Working with Adobe Illustrator

5 – Adjusting and Editing the Music

- NoteAbilityPro Layers
- Adjusting the Score Layout
- Selecting and Editing Images
- Cut, Copy and Paste Operations
- About the pasteboard

6 – Music Images Panel

- Working with the Music Images Panel
- Playback Controls Pane
- Image Attributes Pane
- Note Attributes Pane
- Accidentals & Articulations Pane
- Graphics, Lines & Tuplet Pane
- Symbols & Glissandi Pane
- Lyrics Pane
- Performance Settings Pane
- Beams, Ties, Tremolo Pane

7 – Score Structure Panel

- Working with the Score Structure Panel
- Time Signatures Pane
- Clefs & Key Signatures Pane
- Barlines & Braces Pane
- Measure/Page Numbers Pane
- Staff Hide/Show/Spacing Pane
- Staff Attibutes Pane
- Measures & Systems On Page Pane
- Transpose / Shift Images Pane
- Edit Filter / Delete Pages Pane
- Panel & Edit Buttons Pane

8 – NoteAbilityPro Menus

- NoteAbilityPro menu
- File menu
- Edit menu
- Format menu
- Tools menu
- Modify menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu
- Modify/Barlines Mensubmenuu
- Modify/Cresc-Decresc submenu
- Modify/Text submenu
- Modify/Page submenu

- Audio-MIDI menu
- Font menu
- Font/Text submenu
- Window menu
- IIMPE Menu
- Help menu

9 - Other NoteAbilityPro Panels

- Document Size panel
- Overview Panel
- Colors panel
- Font panel
- Staff Spacing Panel
- Part Extraction Panel
- Panic Panel
- Image List Panel
- Text Library Panel
- Image Library Panel
- Meter Map Panel
- Playback Map Panel
- Tempo Map Panel
- Lute Entry Panel
- Guitar Tablature Panel
- Dulcimer Tablature Panel
- Speech Recognition Controls
- Guido Panel
- Max Settings Panel
- Transport Controls
- Extended Note Panel
- Network Port Panel
- Antescofo Support
- OpenMusic Support
- NoteWriter Controls

10 - Page Setup and Printing

- Page Layout
- Print a document

11 - Audio and Playback

- Audio Options
- Track Setup Panel
- Midi Ports Panel
- Audio Units Panel
- Adding Audio Files
- Breakpoint Functions

12 - Reference

- QuickScrawl
- QuickKeys
- Figured Bass symbols
- Command list

- Hot Button
- Control Points
- Cursors
- Questions and answers
- Keyboard alternatives and shortcuts
- Music Font layout
- NoteAbilityPro definitions
- Music Performance Terms
- Glossary
- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro system requirements
- NoteAbilityPro registration
- NoteAbilityPro licensing agreement
- About the Author
- Acknowledgements
- Release Notes

13 - Example Scores and Tutorials

- Example scores
- Tutorial 1
- Tutorial 2
- Interfacing Max/MSP and NoteAbilityPro

1 – Getting Started

This Chapter covers the procedures for installing NoteAbilityPro on your computer, authorizing it, and running it for the first time.

- Step 1: Installing NoteAbilityPro
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbilityPro
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

See also

- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

Installing NoteAbility Pro

STEP 1: Installing NoteAbilityPro

Locate the NoteAbilityPro.pkg file on the NoteAbilityPro CD-ROM or on your hard drive. If you have downloaded NoteAbilityPro, it should be automatically uncompressed by Stuff-It and the installation package should be on your desktop.

When you double-click NoteAbilityPro.pkg, the Macintosh OS-X Installer application will be launched and you will be ready to install NoteAbilityPro and all its associated files. Since NoteAbilityPro installs some files in OS-X Application and System folders, you must be logged into your computer as a user with administrator privileges in order to install the program. If you are unsure whether you have administrator privileges, you should logout and login using the user name that you created when you first installed OS-X on your computer - this account has administrative privileges.

Follow the installation instructions and quit the Installer once you have been notified that the installation has been completed. NoteAbilityPro is installed in the OS-X Applications folder.

The installation of NoteAbilityPro places the following files in the following locations:

File	Description	Folder Location
NoteAbilityPro.app	the NoteAbility application	/Applications
NoteAbilityProHelp.help	the NoteAbility help files	/Library/Documentation/Help
Scriabin6.ttf	the NoteAbility music font	/Library/Fonts
Tablature.ttf	a lute tablature font	/Library/Fonts
NoteAbilityLib	NoteAbility PDF imports and image libraries	/Library/Application Support/NoteAbilityPro
NoteAbilityExamples	NoteAbility example files	/Library/Application Support/NoteAbilityPro
NoteAbilityTemplates	NoteAbility score templates	/Library/Application Support/NoteAbilityPro
MusicKit.framework	Run-time libraries needed by NoteAbility	/Library/Frameworks
MKDSP.framework	Run-time libraries needed by NoteAbility	/Library/Frameworks
MKPerformSndMIDI.framework	Run-time libraries needed by NoteAbility	/Library/Frameworks
SndKit.framework	Run-time libraries needed by NoteAbility	/Library/Frameworks

If you plan to use NoteAbilityPro often you may wish to add it to your Finder Viewer shelf or to your Application Dock so it is more readily accessible. You are also welcome to create an alias of the NoteAbilityPro application. However, you should not move the original NoteAbilityPro application out of the Applications folder.



Next Step...

See also

- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbilityPro
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

Midi Connections

STEP 2: Setting up your MIDI Connections

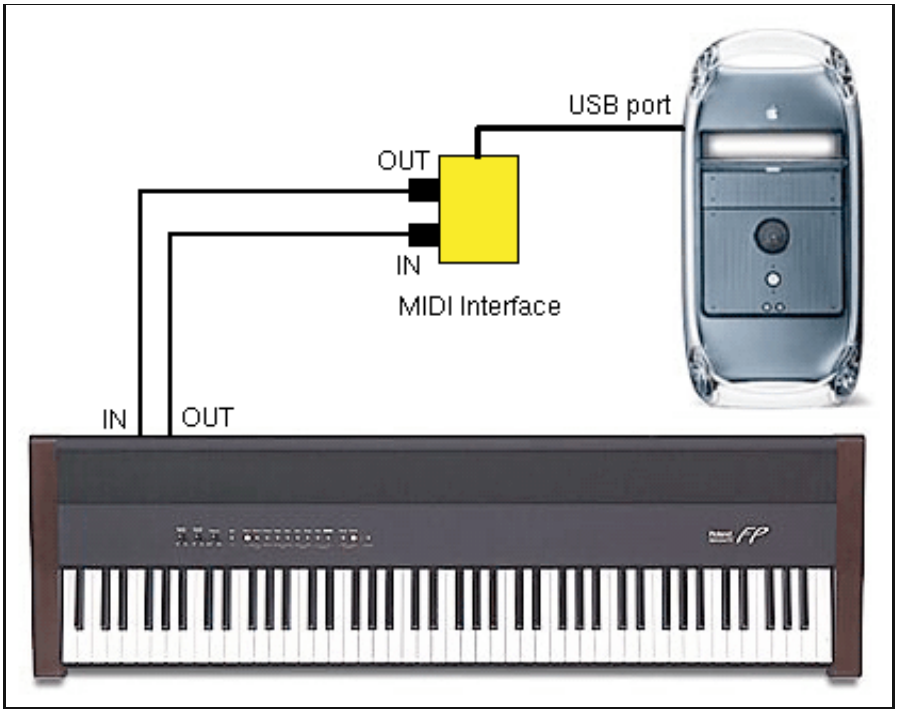
NoteAbilityPro can produce sound in a variety of ways:

1. using Apple's built-in DLS Synthesizer
2. using Apple's built-in Quicktime Musical Instruments
3. using installed Audio Unit sythesizer plugins
4. via MIDI to external synthesizers
5. by placing audio files or samples in a score

For more information on these various audio options, refer to the Audio Options pages. If you plan to use NoteAbilityPro with an external synthesizer, or you plan to use an external MIDI keyboard to enter notes, follow the instructions below, otherwise, continue to step 3.

NoteAbilityPro supports all USB and Firewire MIDI interfaces that are compatible with Macintosh OS-X. Your MIDI interface should be connected to one of the USB or Firewire ports on the back or side of your computer and you should ensure that you have downloaded and installed the correct driver or plugin for your MIDI interface. Check with the interface manufacturer's website to get the most recent version of the driver.

Once your interface is connected to the computer, attach your MIDI cables to your MIDI equipment. The way your equipment is connected will vary depending on the amount and type of equipment in your studio. The example below shows one MIDI keyboard/synthesizer connected to a simple USB MIDI interface. This setup is sufficient for use with NoteAbility. With this configuration, you will be able to enter notes by playing them on the keyboard and you will be able to hear your scores played back on the synthesizer.



If you have a more complicated MIDI setup, the OS-X **Audio Midi Setup** utility (located in the /Application/Utilities folder) can be used to help configure your MIDI interfaces, keyboard and synthesizers.

Apple provides an Interapplication MIDI Driver (IAC) which can be enabled in the Apple Midi Setup utility. However, there are currently a number of problems with the IAC driver and it is recommended that you do not enable the IAC driver for use with NoteAbilityPro. Some MIDI applications (such as Max/MSP and Digital Performer) create interapplication MIDI ports and these can be used with NoteAbilityPro for sending and receiving MIDI messaging between these applications.

Headphones or an amplifier and speakers attached to the keyboard/synthesizer are also necessary in order to hear sounds being played on the sythesizer.

Next Step...

See also

- Step 1: Installing NoteAbility
- Step 3: Authorizing NoteAbility
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

Authorizing NoteAbility Pro

STEP 3: Authorizing NoteAbilityPro

To run NoteAbility, locate the NoteAbiltyPro.app icon in the Applications folder, and double-click on the icon. If you have moved the icon to the shelf of the Finder Viewer, you may click on that icon as a short-cut.



The first time you launch NoteAbility, you will need to authorize the program by entering your license code. The license code is located on your CD-ROM case or is sent to you by email if you have downloaded NoteAbility electronically. The license code is your personal authorization code and should not be shared with other people. In order to authorize NoteAbilityPro, you must be logged into and account (i.e. as a user) that has administrative privileges.

NoteAbilityPro is installed in the */Applications* directory. This location makes NoteAbility available to all users on your computer. Please note that although NoteAbilityPro is available to all users, each user has his/her own set of preferences which are loaded whenever they are using the program. If you do not want NoteAblityPro to be accessible to all users, you can set access limitations to user accounts in the Accounts section of the System Preferences panel.

Locate the NoteAbilityPro application (in the */Applications* folder and double-click the icon, the Registration panel will appear so that you enter your license code.



Enter your license code as well as your name or company name in the appropriate fields in the Registration panel and click on the **Register Application** button. You will be informed if the license code is not valid. The Registration panel will appear each time you run NoteAbility until the application is successfully authorized. If NoteAbility is not succesfully authorized or you have clicked on the **Run Demo Version** button, then you are considered to be running the program in *Demo mode* . In Demo mode, saving and exporting files is not permitted and printing is restricted to the first page of the document.

Keep your license code in a safe place -- it will be necessary in order to authorize future upgrades to NoteAbility. If you loose your license code, please contact Opus 1 Music and we will send it to you again.

Next Step...

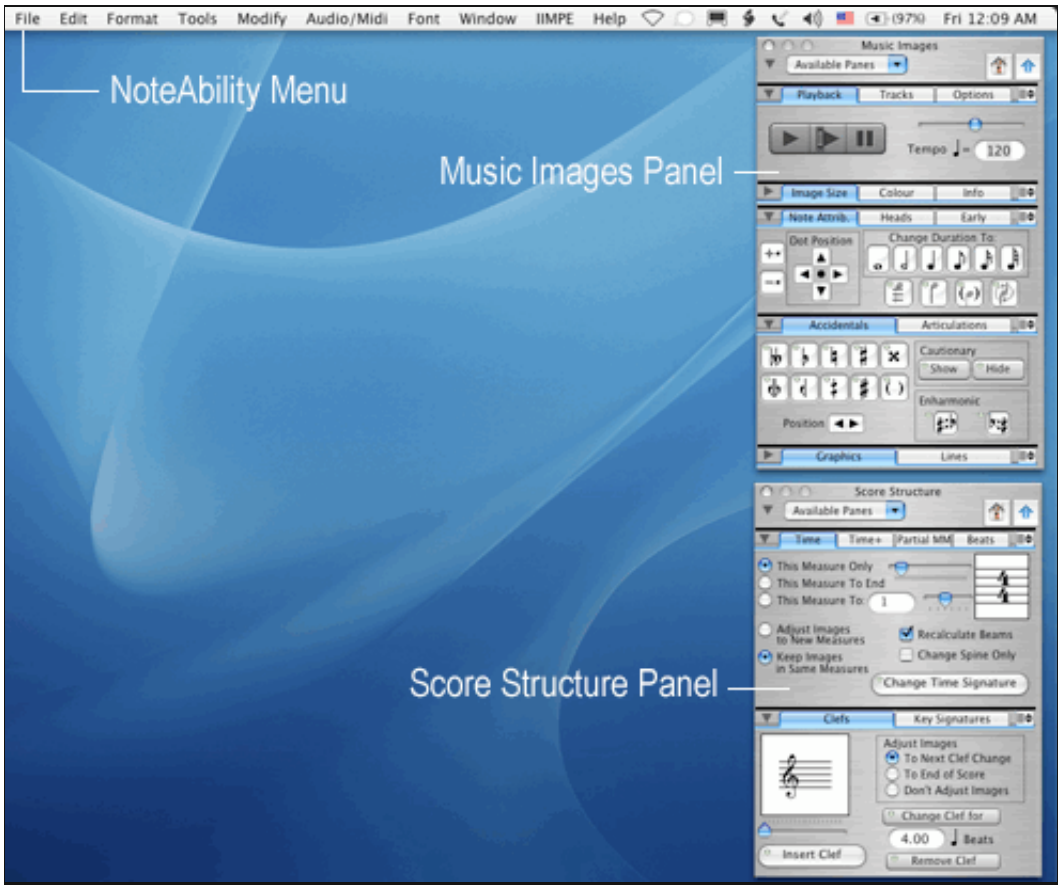
See also

- Step 1: Installing NoteAbility
- Step 2: Setting up your MIDI Connections
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

Observing the Application Layout

STEP 4: Observing the Application Layout

When NoteAbility starts up the info panel appears while the program is loading. Once it has loaded, two panels appear on the screen: the Music Images panel and the Score Structure panel. Both of these panels are extensible and customizable. The NoteAbilityPro menu is located across the top of the screen.



Both of these panels (and all panels in NoteAbility) can be moved to other locations on the screen and will appear at their new locations the next time NoteAbility is run.

The **Music Images** panel contains a collection of panes with controls for changing the image size or colour, for setting rhythmic values, for adding articulation marking or other symbols, for controlling score playback, and for altering or adding numerous other images.

The **Score Structure** panel also contains a collection of panes. However, these controls relate more to the score structure and document layout. Operations such as changing the number of systems on a page, changing staff attributes, inserting clefs or key signatures, or changing times signatures are located in this panel.

Other important controls such as the NoteAblity tools (which allow different activites such as entering images, selecting images, entering text or lyrics, and moving the cursor), and the controls for moving around the document or changing the view size are located along the top and bottom of each score window. These controls are only available once a score document has been created.

Next Step...

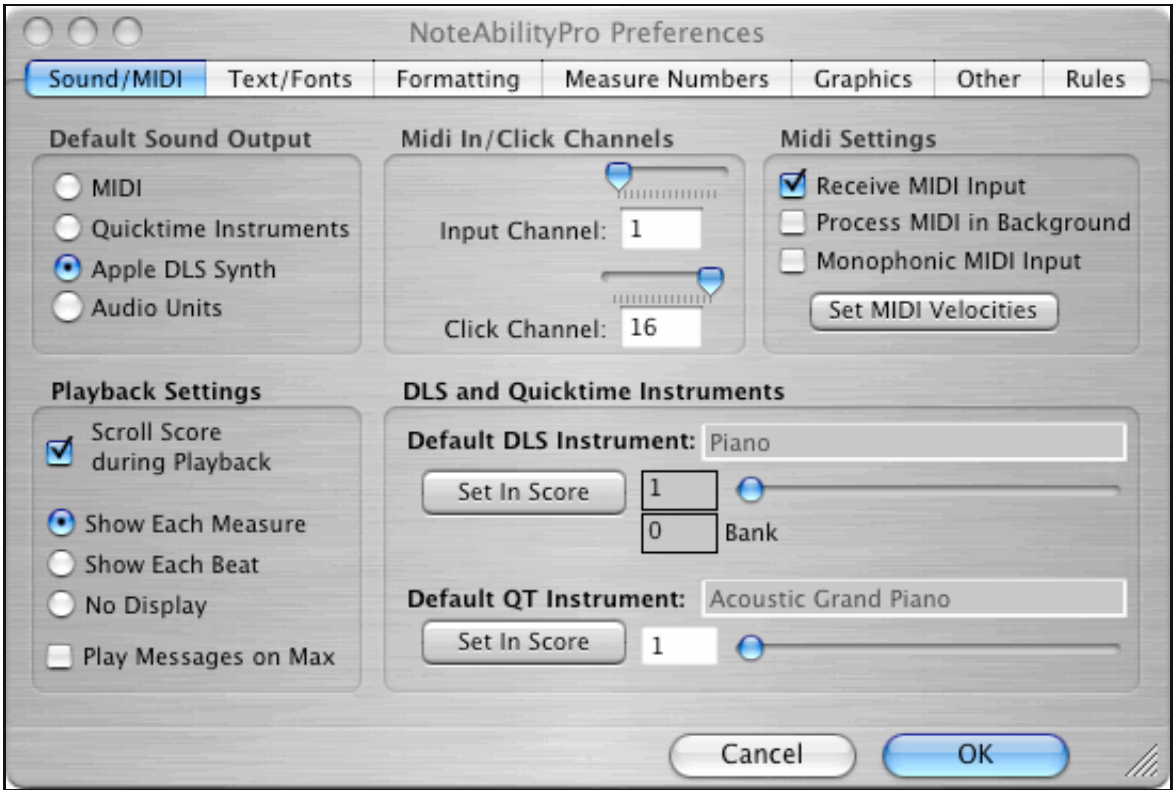
See also

- Step 1: Installing NoteAbility
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbility
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

Setting Initial Preferences

STEP 5: Setting Initial Preferences

NoteAbilityPro preferences are very extensive, and most of them require some familiarity with the program. The default preferences are suited to most user needs. However, you may want to set some important preferences (such as the default sound output, measurement units, and the music font) before using the program. To bring up the Preferences panel, choose the **Preferences** item in the **NoteAbilityPro** menu.



Different categories of preferences are located on different panes of the preference panel, with each pane being accessed by clicking on the tabs along the top of the window. Click on the **Sound/MIDI** tab first.

In order to hear pitches when they are entered and to listen to your scores you should select a sound method. Click on the radio button for the default sound output you want to use: By default the Apple DLS synthesizer is used for sound playback, but you can choose to have MIDI, Quicktime Musical Instruments, or Apple Audio Units as the default sound output. This setting is used to set the sound output method when new scores are created. Of course, each track (or staff) of your score can be altered to use any one of these methods after the score has been created. For more details on the differences between the various sound output methods, refer to the Audio pages of the Help files. If you choose to have MIDI as your default sound method, then you must have a compatible MIDI interface connected to your computer and the appropriate MIDI driver installed in your */Library/Audio/Midi Drivers/* folder. If you want NoteAbilityPro to receive imput from a MIDI keyboard, then make sure the **Receive MIDI Input** box is checked. It is possible to use a synthesizer keyboard for note entry in NoteAbilityPro, but use another sound output method (such as the Apple DLS Synthesizer) for sound production.

The Scriabin6 is the default music font for NoteAbilityPro and is included with the program. However, a number of other music fonts are supported by NoteAbilityPro, but they must be purchased and installed separately. To choose a different font, click on the **Text/Fonts** tab of the Preferences panel and choose from the list of available music fonts. Currently, the fonts supported by NoteAbilityPro are:

Font	Company
Sonata font	Adobe Systems Inc.
Petrucci font	Coda Music Technology Inc.
Engraver font	Coda Music Technology Inc.
Maestro font	Coda Music Technology Inc.
MaestroWide font	Coda Music Technology Inc.
Jazz font	Sigler Music Inc.
Opus font	Sibelius Inc.
Inkpen2 font	Sibelius Inc.
Swing font	Sigler Music Inc.

If you already own copies of these fonts in an earlier Macintosh operating system, you can move the fonts into the */Library/Fonts* directory of your Macintosh OS-X hard drive.

If you prefer to use a measurement unit other than inches, you may also want to change the measurement units used in various panels and the rulers in NoteAbilityPro. The measurement units are located under the **Other** tab in the Preferences panel. Choose between Inches, Centimeters,Points and Picas.

Once you have set the above preferences, click on the **OK** button to store these settings. NoteAbilityPro preferences may be changed at any time in the future. Please note that your preferences are set only for the current user. Other users must set their own preferences.

Next Step...

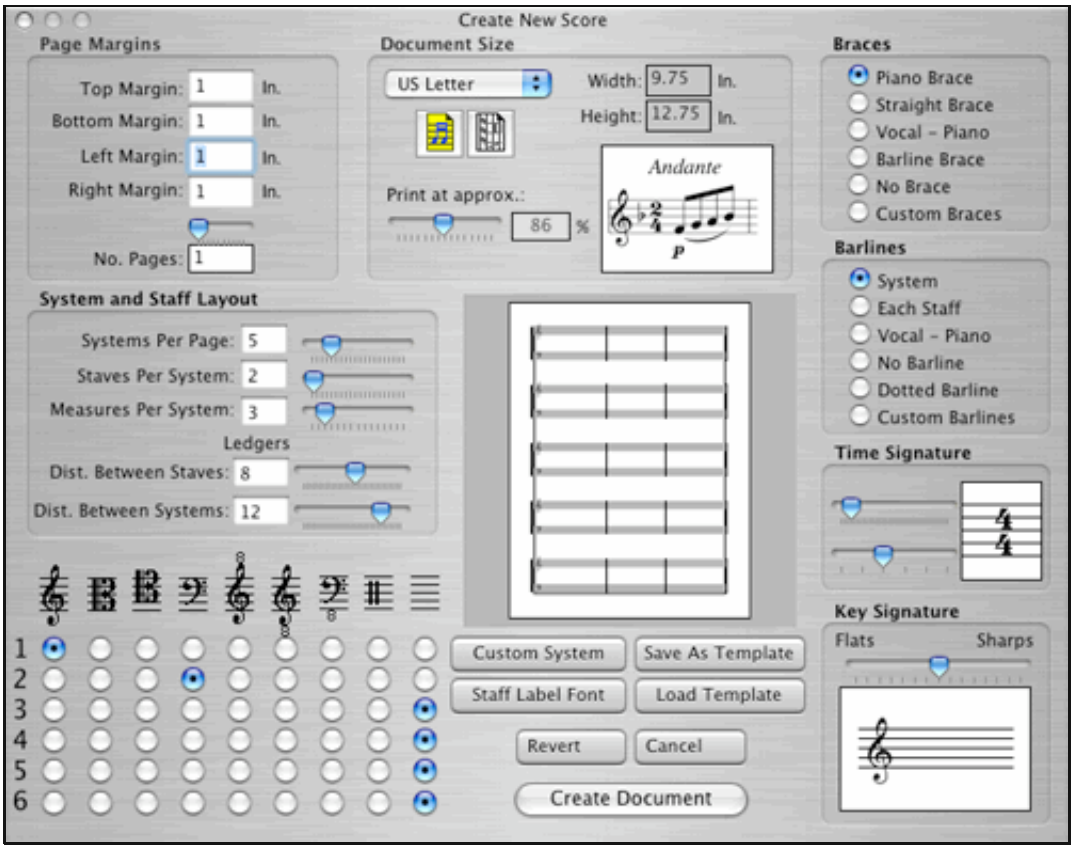
See also

- Step 1: Installing NoteAbilityPro
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbilityPro
- Step 4: Observing the Application Layout
- Step 6: Create a New Score
- Step 7: Enter Some Music into the Score

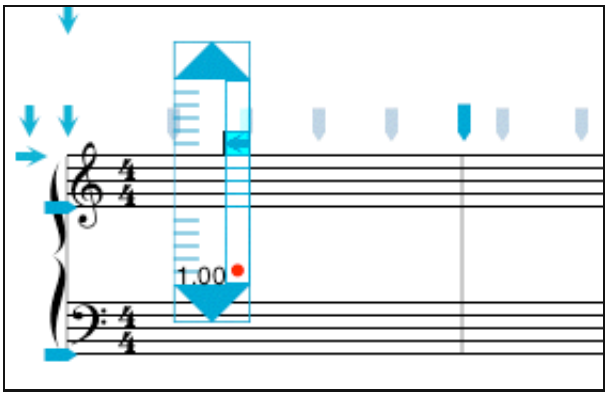
Create a New Score

STEP 6: Create A New Score

To create a new blank score, choose the **New** item from the **File** menu. A dialog box appears which allows you to describe the score layout (paper size, printing size, page margins, number of systems per page, number of staves per system, time signature, etc.)

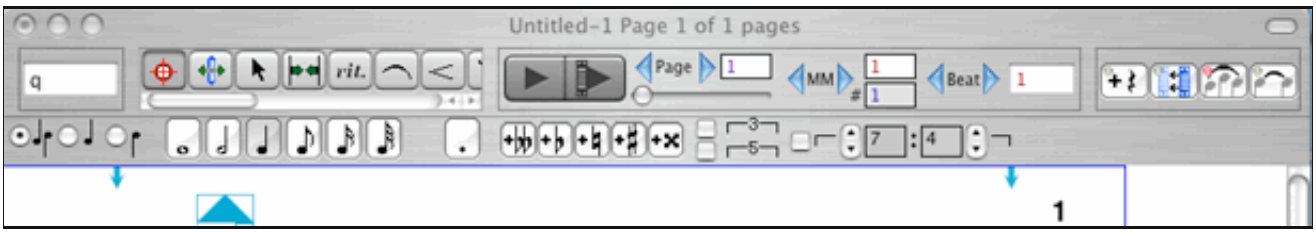


For now, just use the default settings (a piano score in 4/4 meter), by clicking on the **Create Document** button. A blank score with five piano systems should appear on the screen. Notice the Entry Cursor which is located on the top staff in the first measure of the score. This is the location at which notes and rests will be entered.



Along the top of the score, you will notice several important controls. These controls include the NoteAbilityPro Tool palette (which allows you to switch between operations such as entering images, editing images, entering text, etc.), the Command field (which indicates which image will be entered when

the mouse button is clicked on the score), controls for moving from measure to measure or page to page in the score, and score playback controls. There are aslo buttons for choosing which voice the notes are to entered in, for adding accidentals to notes, and check boxes to indicate that notes or rests should be triplets or quintuplets.



Initially the Command field should display a "q" which represents a quarter note. Whenever you type on your keyboard (while the score is the front and active window and you are not entering text) the characters appear in the Command field. The commands are usually one or two characters long such as:

- **h** – half note
- **q** – quarter note
- **e** – eighth note
- **s** – sixteenth note
- **rq** – quarter rest
- **f** – forte symbol
- **pp** – pianissimo symbol

Rather than typing the note commands, you may use the note buttons (located below the NoteAbilityPro Tool palette). While you are learning the image commands, you may want to use the Image List panel as a shortcut for entering the various music images.

Next Step...

See also

- Step 1: Installing NoteAbilityPro
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbilityPro
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 7: Enter Some Music into the Score

Enter Some Notes

STEP 7: Enter Some Notes in the Score

There are many methods of entering Notes in NoteAbility. You can enter them with the mouse, enter them with the on-screen keyboard, enter them in step-time from a MIDI keyboard, use the MIDI recorder, transfer notes from other file formats, and so on. All of these input methods are discussed later on in the Help files. To get started, try using both mouse input and the on-screen keyboard.

NoteAbility knows what image to enter by the command which appears at the top of the Control Panel. If there is no command, then no image will be entered. While working on scores, characters that are typed on the keyboard will appear in the Command field of the Control Panel (provided you are not entering text or working directly in another panel). Once you have typed the command which corresponds to the image you want to add to the score, you can move the mouse cursor to the appropriate location on the score and click the mouse button. After the image has been added to the score, you can enter more images of the same type using the same commmand, or enter a new command. You do not need to delete the previous command since it will automatically be replaced when you type the new command. A comprehensive list of all NoteAbility commands can be seen on the Command List page. A few of the most common commands are:

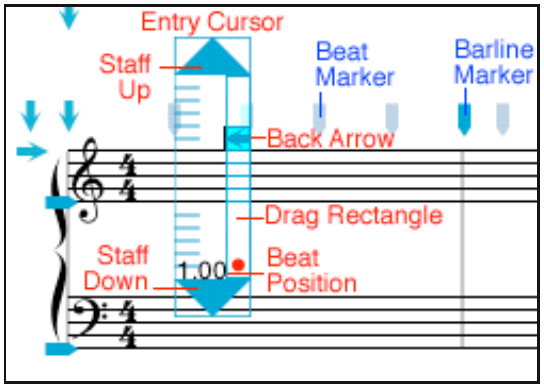
Command	Image	Command	Image
w	whole note	**rw**	whole rest
h	half note	**rh**	half rest
q	quarter note	**rq**	quarter rest
e	eighth note	**re**	eighth rest
s	sixteenth note	**rs**	sixteenth rest
ff	fortissimo	**pp**	pianissimo
f	forte	**p**	piano
mf	mezzo forte	**mp**	mezzo piano

When NoteAbility starts up the default command is *q* - the command for entering quarter notes. Try entering some quarter notes by clicking the mouse button close to the Entry Cursor. Notice that when you hold down the mouse button during entry and move the mouse up or down, the pitch of the note changes. The image is added once you release the mouse button, and the Entry Cursor moves to the next beat position.

- the blue markers above the staff indicate the beat positions.

Now type *e* on your keyboard (or click on the eighth note in the image palette part way down the Control Panel) and enter some more notes. Eighth notes are automatically beamed (unless auto-beaming is turned off), and the Entry Cursor moves forward to the next beat position each time a new note is added.

- the Entry Cursor can be moved back to its previous position by clicking on the small back arrow located on the Entry Cursor, it can be moved up and down (within the system) by clicking on the up and down arrows (at the top and bottom of the Entry Cursor) and it can be dragged anywhere on the page, by dragging the rectangular area on the right side of the Entry Cursor. It can also be moved by using the Spacebar and Shift-Spacebar



Try out some of the other commands - *rq* for example. When entering notes and rests, you will notice that although you can have your mouse cursor to the right or left of the Entry Cursor, you must be on the same vertical level as the Entry Cursor for the image to be added. This is not the case for many other images such as dynamics. When you enter these images (eg. *ff*, or *pp*) you can place them anywhere on the page (regardless of where the Entry Cursor is).

You might also like to try out the on-screen keyboard. The Keyboard panel appears when you choose **Keyboard...** from the **Tools** menu. When using the on-screen keyboard, you will still need to type a command to indicate the rhythmic values you want entered (such as *q* or *e*). Click on the keyboard to enter the desired pitches. As before, the Entry Cursor moves forward as you enter notes. When you reach the bottom of the page, you will automatically scroll to the next page.

Now that you have entered some images try printing the document by selecting **Print** from the **File** menu. Save the file (if you want to) by selecting **Save** from the **File** menu. Once you are done working with NoteAbility, choose **Quit** from the **File** menu.

You have now had a brief introduction to NoteAbility. You might want to browse through the sections of the help files that discuss Entering Images, Editing methods, the Menus commands, and the Music Images and Score Structure panels in order to learn about the many features that are available in this program. Once you have an good overview of NoteAbility, we recommend that you work through Tutorial 1.

Done...

See also

- Step 1: Installing NoteAbility
- Step 2: Setting up your MIDI Connections
- Step 3: Authorizing NoteAbility
- Step 4: Observing the Application Layout
- Step 5: Setting up your initial preferences
- Step 6: Create a New Score

NoteAbility Pro Overview

This Chapter provides a brief introduction and overview of NoteAbilityPro. Detailed information on methods for entering music, altering and editing your scores, as well as options for playback and printing are presented in subsequent chapters.

- Introduction to NoteAbility
- Basic Steps for Creating a Score
- Contacting Opus 1 Music

See also

- 1 – Getting Started
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

Introduction to NoteAbility Pro

NoteAbilityPro™ allows you to generate beautiful music scores quickly and accurately, to listen to your score through MIDI synthesizers or built-in audio devices, to extract instrumental parts if needed, and to print out the finished document using high precision graphics on your compatible printer. The extensive on-line help files included with the program will provide you with all the information you need to install and use this application.

Program Design

NoteAbilityPro was designed to be as natural as possible for the composer or arranger to use. It is page-oriented in design, and emphasizes flexible graphical control of music images, intelligent automation of notational syntax, WYSIWYG (What-You-See-Is-What-You-Get) display and an accessible and a direct user interface. A blank score is set up according to a template specifying page size, initial number of systems on the page, staves per system and measures per system. Using the paradigm of a composer writing on pages of manuscript, the music images are entered directly onto the page at any location and in any order. New pages are automatically added as required, and the user can freely more from one page to another either by using the measure and page controls located at the top of the score window.

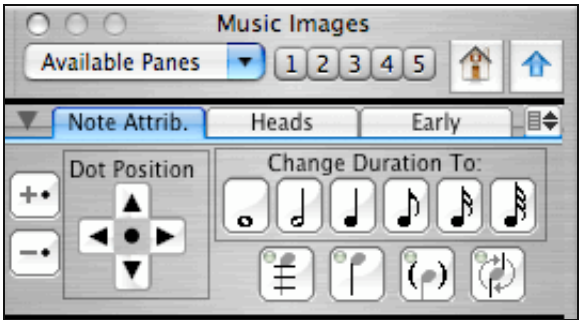
The important User-Interfaces to NoteAbilityPro are outlined below:

Score Controls

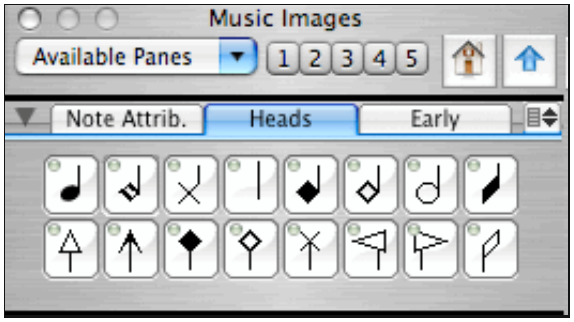
The NoteAbility Score Controls are located at the top of each score window. These buttons sliders and other controls include the NoteAblityPro Tool palette (for selecting a tool to perform insertion or editing tasks), the current command display (which identifies which image will be entered in the score next), as well as page, measure, beat, staff and playback controls.

Music Images Panel

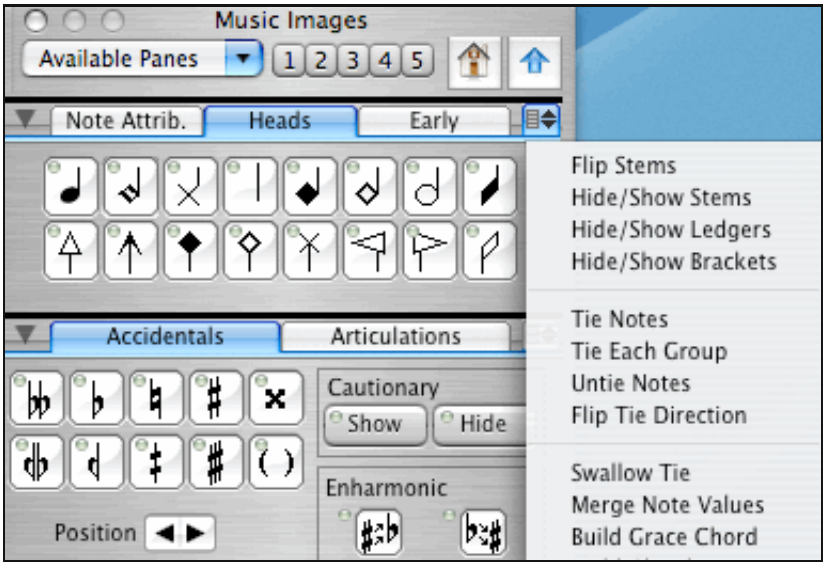
The Music Images panel normally remains visible at the top-right corner of the screen, and contains a series of segments (or panes) which are used for modifying characteristics or attributes of selected music images. Each pane in the Music Images panel contains several different views which can be selected by clicking on the tab. As well, new panes can be added and other panes removed from the panel by selecting items in the pull-down menu at the top of the panel. Each pane also contains a small pull-down menu located on the right side of the view - this menu contains items relevant to the specific pane. In the example below, the Note Attributes segment is shown in the Music Images panel.



Clicking on the **Heads** tab displays a pane with buttons for changing the noteheads of selected notes

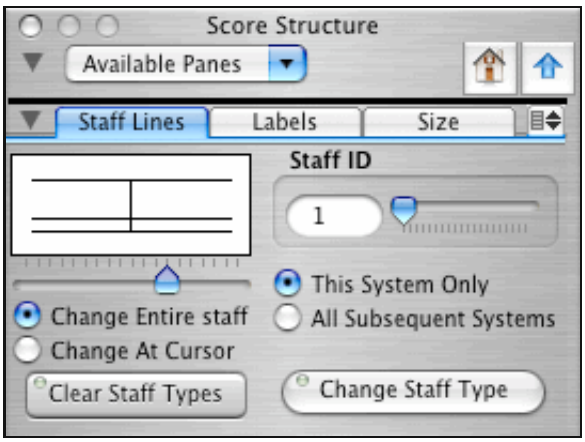


The pull-down menu associated with this pane is shown below. These menu items are duplicated in the main menu - they are duplicated here for convenience.



Score Structure Panel

The Score Structure panel is normally kept visible at the bottom-right corner of the screen. Like the Music Images panel, it holds a series of panes that can be added to and removed using the pull-down menu at the top of its window. The panes of this panel are used to alter the structure of the score and to perform some complex editing procedures. Operations such as altering time signatures or key signatures, changing the number of systems per page or measures per system, hiding and showing staves within the system, and changing staff size or attributes are found in the Score Structure panel. In the example below, the Staff Attributes segment is shown. There are three different, but related panes which can be accessed by clicking on the tabs: Staff Lines, Staff Labels, and Staff Size.



NoteAbility Menus

As well as standard filing operations such as Open, New, Save, Print and Quit, NoteAbility has an extensive Edit menu (which includes several different paste commands), a Format menu for modifying document features and alignment settings, a Tools menu for performing tasks such as part extraction and setting tempo changes, a Modify menu for changing the characteristics of Notes, Beams, Tuplets and Accidentals and and Audio/Midi menu for controlling playback characteristics. NoteAbility on-line help files are located in the Help menu. These help files are indexed and searchable using the Apple Help Viewer application.

Basic Steps for Creating a Score

NoteAbility is an extremely flexible application, so there are really no rules for how you must proceed when creating a score. However, your task will be simplified if you follow the suggestions below.

The Basic Steps for Creating a Score

1. Create your score layout by using the File/New command. Setup the score to accommodate all the staves and instruments that will be used in the score. If desired, you can save the template for use in later scores.
2. Enter the basic music images (notes and rests) on the score using any of the input methods available in NoteAbility. Change the number of systems on the page, the number of measures per system and the staff spacing as needed.
3. Once the basic score has been entered and the layout is satisfactory, add additional images (eg. dynamic marks, crescendi/decrescendi, articulations, slurs, lyrics, text and graphics).
4. Hide blank staves (if desired), make final adjustments to the score layout and delete any extra pages.
5. If you are concerned about performance accuracy, you can alter the playback settings, and create tempo and playback maps.
6. Print the finished document.
7. Extract the instrumental parts (if needed) and edit them by adding cues, adjusting for page turns, etc.

Helpful Hints

- After you have setup your score, save it with the File/Save... menu and give it a name. Save your document regularly while you are working on a it (especially before performing complex editing or formatting operations.)
- It is better (and safer) to make formatting changes to the score as you go rather than waiting until you have entered all the notes. When you change meter or shift measures from one system to another, some of the adjustments you have made to images may be undone when they are shifted from one measure to another or from one system to another.
- Use Paste Exact (Command-V) to paste passages that you have already edited with beams, tuplets groupings and accidentals to save yourself re-doing the same modifications on the pasted passage.
- Become familiar with the Score Controls since the NoteAbility tools, score position controls, view size settings, and playback controls are are located along the top and bottom of each score document.
- Become familiar with the Music Images panel and the Score Structure panel since most of the common editing and score formatting controls are located in this panel. Use the Inspector for changing the score layout, changing clefs, changing key signatures, changing time signatures, adding articulations, and for many, many other functions.
- Become familiar with the keyboard alternatives and shortcuts and the Hot Button - they can all be used to make score creation and editing much more efficient.

See also

- Keyboard alternatives and shortcuts
- Hot Button

Contacting Opus 1 Music

We are always interested in your suggestions for further enhancements to NoteAbilityPro. We hope to have your feedback so that we may improve NoteAbilityPro to better fulfill your needs and to provide you with the best music notation software on any platform.

Send your comments or questions by email to: opusone@telus.net

NoteAbility was written by Dr. Keith Hamel at the School of Music at the University of British Columbia. A license has been granted by the University of British Columbia to Opus 1 Music Incorporated for worldwide distribution of the program and the documentation.

© 1992 - 2008 Keith A. Hamel

All Rights Reserved.

NoteAbilityPro and the accompanying documentation are protected under international copyright law. Under these laws, neither the software nor the documentation may be copied, photocopied, reproduced, translated, or reduced for any electronic medium or machine-readable form, in whole or in part, without the prior written consent of Opus 1 Music Inc., except in the manner described in the licensing agreement.



Basic Program Operation

This chapter covers basic operations such as creating and setting up new documents, setting preferences, opening existing documents, and saving your documents on disk.

- Create a new document
- Document setup
- Customizing your document setup
- Set NoteAbility preferences
- Using the Score Controls
- Using the NoteAbility tools
- Music Images and Score Structure panels
- Multi-Page Display
- Open an existing document
- Save a new document
- Save changes
- Save document under a new name
- Save in another file format
- Close a document
- Hide NoteAbility
- Quit NoteAbility

See also

- 1 – Getting Started
- 2 – Overview
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

Create a New Document

1. Choose **File** from the main menu.
2. Choose **New** from the **File** menu.

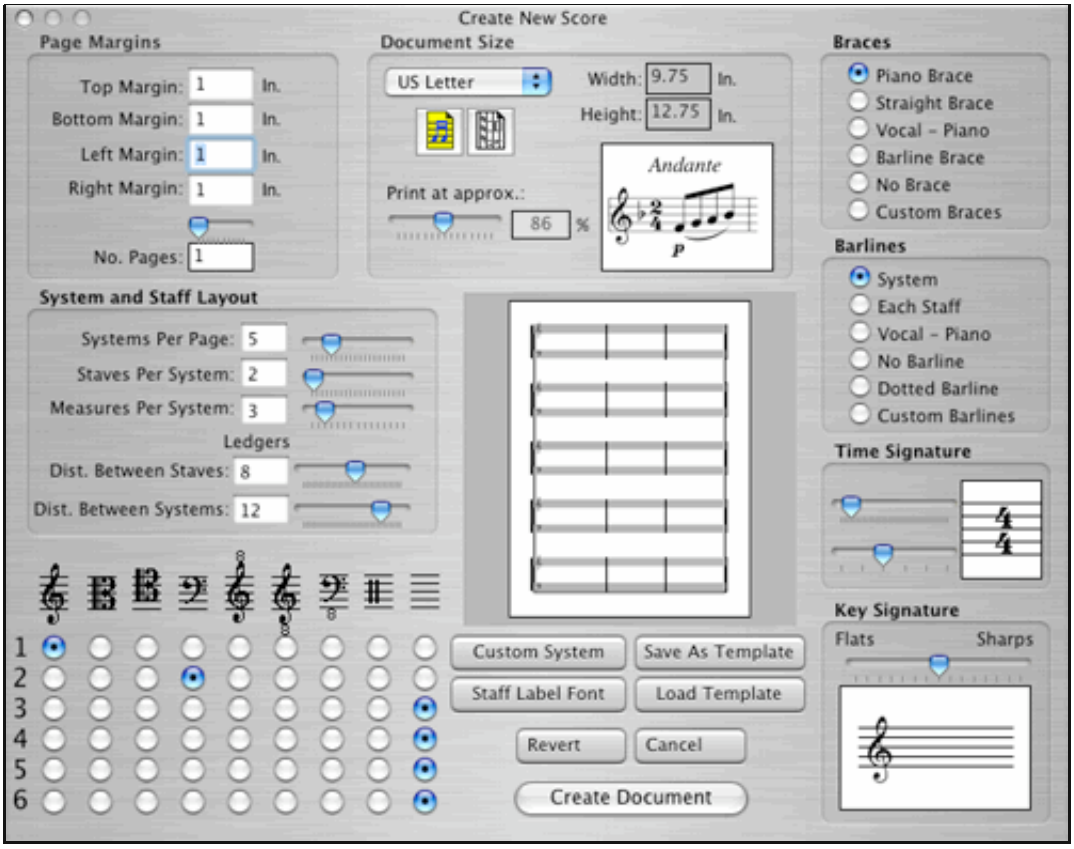
NoteAbilityPro automatically brings up the Document Setup panel so you can specify all the details of your new score.

See also

- Document setup
- Open an existing document

Document Setup Panel

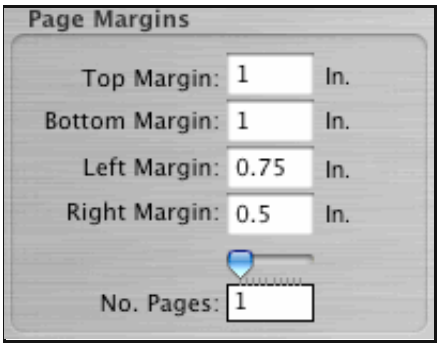
1. Choose **New...** from the File menu. The Document Setup panel will appear.
2. Choose all the options and settings you want for your new document.
3. Press the **Create Document** button to create the document, or press **Cancel** to cancel the new document. To discard your changes and return to the default piano score settings, press the **Revert** button.



You use the Document Setup panel to choose options for the layout and format of your score. If NoteAbility documents are already open, the front-most document's specifications and layout become the initial settings of this panel. If no NoteAbility document is open, then a simple piano score is used for the default settings.

Document Setup Options

- **Page Margins**

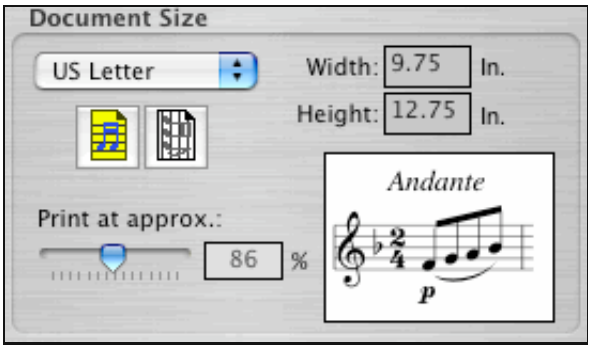


  - *Top Margin* – Set the size of the top margin.
  - *Bottom Margin* – Set the size of the bottom margin.

- *Left Margin* – Set the size of the left margin.
- *Right Margin* – Set the size of the right margin.
- *No. Pages* – Set the number of pages in the initial score.

The margins determine the distance from the edge of the page to the top line of the top staff. The bottom line of the bottom staff, and the left and right edges of the staves. The values for margins should always be positive (unless you want the staves to extend outside the visible page.)

- **Document Size and Print Reduction**



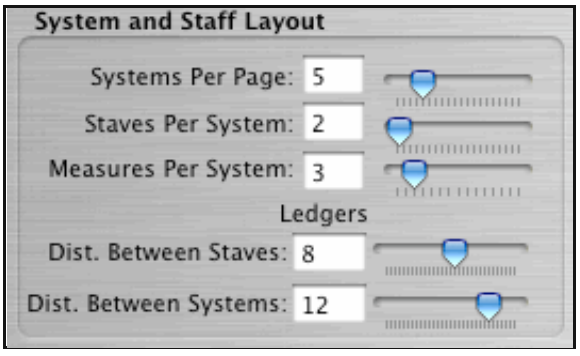
- *Paper Size and orientation* – Sets the paper size you are planning to print on.
- *Print reduction* – Sets the approximate print reduction or enlargement – standard sized scores should be set up at approximately 80% – 90%. Most composers find that scores printed at 100% are larger than necessary.
- *Width* – Displays the score page width of the working score.
- *Height* – Displays the score page height of the working score.

The **Working Score Size** refers to the logical dimensions of the page that you will be working on. If you plan to print at 75% on US Letter size paper (8.5 X 11 inches) then your score will be set up as 11.25 X 14.5 inches

- **Print View**

The Print View displays the approximate size of the images that will appear when the document is printed at the current reduction / enlargement size. As you become more familiar with NoteAbilityPro, you will know what print reduction / enlargement values are most appropriate for different types of scores.

- **System and Staff Format**



- *Systems Per Page* – Enter the number of music systems per page from 1 to 40 (followed by Return). You can also use the systems per page slider to adjust this number.
- *Staves Per System* – Enter the initial number of music staves per system from 1 to 40 (followed by Return). You can also use the slider to adjust this number.
- *Measures Per System* – Enter the initial number of measures per staves from 1 to 16 (followed by Return). You can also use the slider to adjust this number.
- *Distance Between Staves* – The distance between staves is calculated automatically, but you may alter this setting by typing a new value (followed by Return). The distance is set as the number of
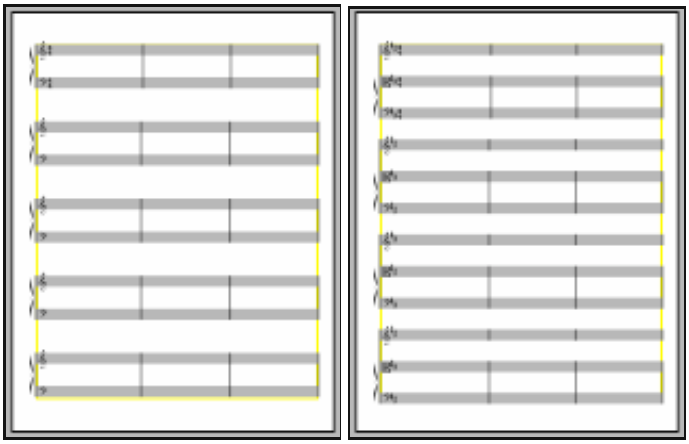
staff spaces in increments of .5 spaces.

- *Distance Between Systems* – The distance between systems is also calculated automatically, but you may alter this setting by typing a new value (followed by Return). The distance is set as the number of staff spaces in increments of .5 spaces.

This Distance between Staves and Distance Between Systems settings are automatically calculated as you change the other settings. However, you can alter the calculated settings.

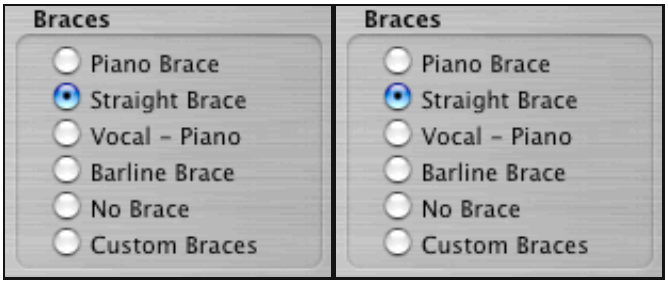
- **Minature Page Display** – A miniature view of your score page is displayed so that you can check to see that all your score setup settings are correct.

  In the examples below the default page is shown on the left and a page with some new settings is displayed on the right. All barlines types, braces types, time signature, and key signatures are displayed in the miniature page display.



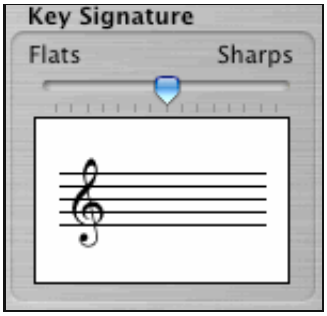
5 systems 2 staves 3 measures --- 4 systems 3 staves 3 measures

- **Barlines and Braces**

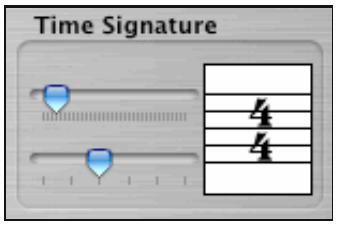


- *Barline radio buttons* – Allows you select the format of barlines on the system. Custom Barlines are automatically selected when you use the Custom System panel.
- *Brace radio buttons* – Allows you select the format of braces on the system. Custom Braces are automatically selected when you use the Custom System panel.

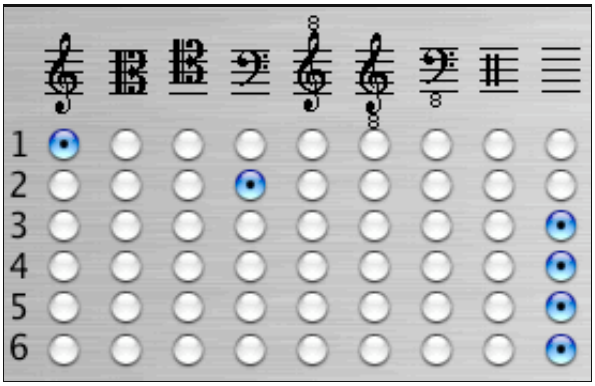
- **Key Signature** – Allows you select the key signature of the score. Up to 7 flats or 7 sharps may be set by moving the key signature slider.



- **Time Signature** – Allows you select the initial time signature of the score by adjusting the two sliders (one for the numerator and one for the denominator). Time signatures can be set to any combination from 1/1 to 32/32 as well as Common and Cut time (located at the far right of the numberator slider).



- **Clefs**



You may set the inital clef type for up to 6 staves. The final clef choice in the row is actually a pull-down menu which allows any of the remaining clef types to be chosen. If your system has more than 6 staves then press the Custom System button and use the Custom System panel to setup your document.

- **Panel Buttons**
  - **Save As Template** – Select this button to save all settings in this panel and the Custom System panel as a template.
  - **Load Template** – Select this button to open a template file containing the setting for this panel and the Custom System panel.
  - **Staff Label Font** – Select this button to open the Font panel so you can choose the font you want to use for staff labels. By default, the font set in your Preferences panel will be used.
  - **Custom System button** – Select this button to customize the system even further. The Custom System panel allows you to specify staff labels and clefs types, as well as brace and barline information on up to 40 staves.
  - **Revert button** – Reverts to the default settings.
  - **Cancel button** – Closes the panel without creating a new document
  - **Create Document button** – Creates a new document using the settings in this panel and the Custom System panel.

– NoteAbility templates have the extension .nt. Sample templates are stored in the /Library/Application

Support/NoteAbilityPro/NoteAbilityTemplates folder.

- The measurement units (inches, centimeters, points or picas) used in this panel and other NoteAbility panels are set in the NoteAbility Preferences panel.

- Remember to type Return after entering a number in any of the Text fields or it will not be registered.

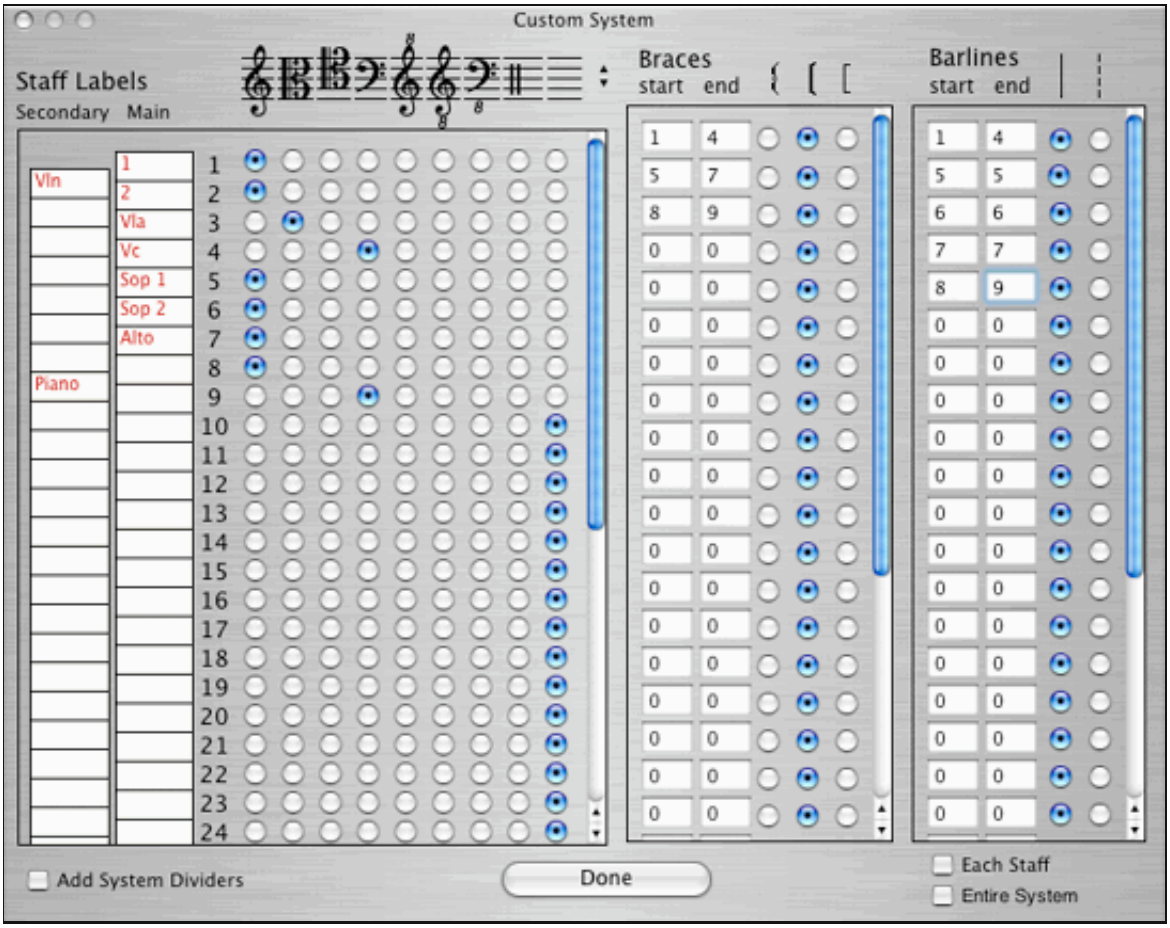
See also

- Customizing your document setup
- Page layout

Custom Document Setup

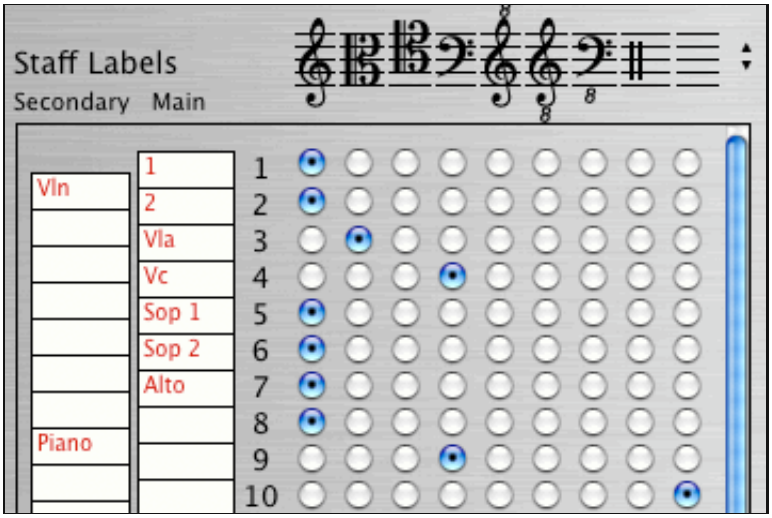
The Custom System panel is displayed when you press the **Custom System** button in the Document Setup panel. This panel lets you set up your score with detailed information about clefs, braces, barlines and staff labels. This panel is particularly useful for creating orchestral and chamber ensemble scores of up to 40 staves per system.

1. Choose **New** from the **File** menu. The Document Setup panel will appear.
2. Select the **Custom System** button on the Document Setup panel.
3. Choose the settings you want for your new document.
4. Press **Done** on the Custom System panel.
5. Choose the remaining settings and options from the Document Setup panel (eg. Page Size, Staves per System, etc.)
6. Press the **Create Document** button on the Document Setup panel to create the new document, or press the **Cancel** button to cancel the new document. To discard your changes and return to the default settings, press the **Revert** button.



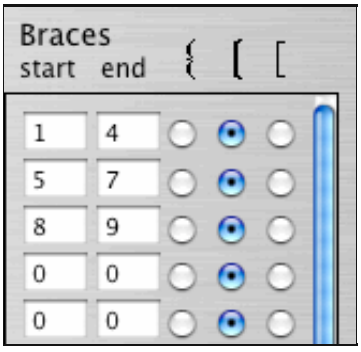
The Custom System panel lets you specify the following information:

- Staff Labels which will appear on each page of the score. The second column of labels appears directly to the left of the staff. The first column of labels is centred between two staves. In the example below: *1, 2, Vla, Vc, Sop 1, Sop 2,* and *Alto 1* appear respectively beside staves 1 to 7, while *Vln* is centred between staves 1 and 2, and *Pno* is centred between staves 8 and 9.

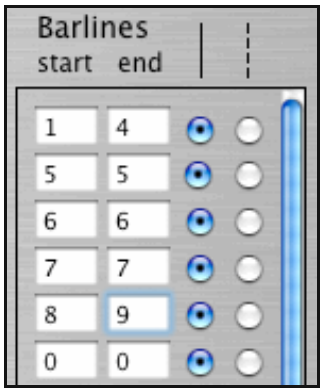


- The clef that will begin on each of the staves. Of course, clefs can be changed in the score as needed. In the example above, Vla has an alto clef, Vc has a bass clef, the Pno has a treble and bass clef while all the other instruments have treble clefs.

- The Brace format for the score. To set up the brace format, type the staff numbers (from the top of the system) that the brace starts and ends at and indicate the brace type. In the example below, a straight brace will be created from staff 1 to staff 4 and from staff 5 to 7 and a piano brace will be created from staff 8 to staff 9. Braces can be nested if needed.
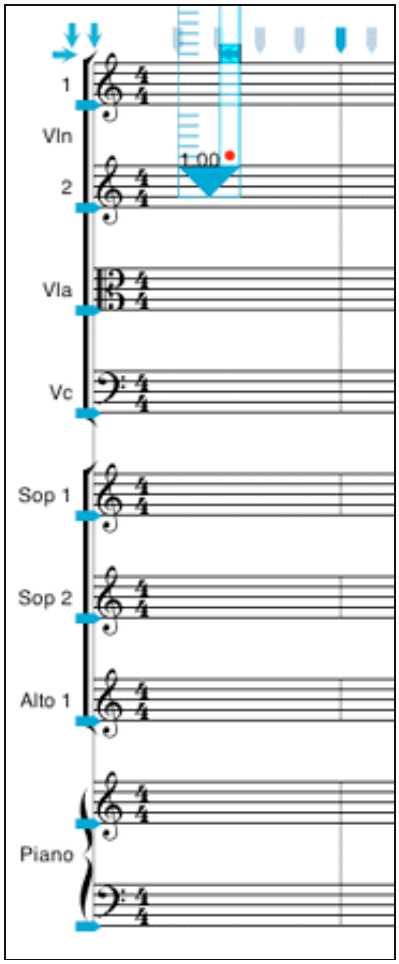


- **D)** The Barline format for the score. As in the case of braces, you specify the starting and ending staff numbers along with the barline type (solid or dotted). In the example below, there is a single barline encompassing the first 4 staves, then separate barlines on each of the next three staves, then a single barline joining staff numbers 8 and 9 (the piano staves). As a shortcut, you can click on the check boxes at the bottom of the Barline column if you want each staff to have a separate barline or you want one barline to run throughout the system.



- **E)** You can also indicate that you want System Dividers to be included in your score. (System dividers are the two angled lines commonly found in orchestral music to separate systems).

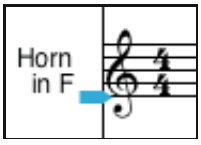
When you have set up all the characteristics of your score, click the **Done** button and you will return to the Document Setup panel. The Barline and Brace settings in the Document Setup panel should now be set to Custom Brace and Custom Barline to indicate that you want the the document setup specifications taken from the Custom System panel.

The settings listed above should give you the system layout shown below.



- Make sure you have set the correct number of systems and staves in the Document Setup panel since this panel determines how many staves and systems will be placed on the page. Even though you provided information for 9 staves in the Custom System panel, if the Document Setup panel is set for only 2 staves per system, only the first two staves will be drawn in each system.

- if a multi-line staff label is required you can use the backslash character - | - to indicate line breaks. For example, a label entered as: *Horn|in F* will appear in the score as:



See also

- Document setup
- Create a new document
- Page layout

NoteAbility Pro Preferences

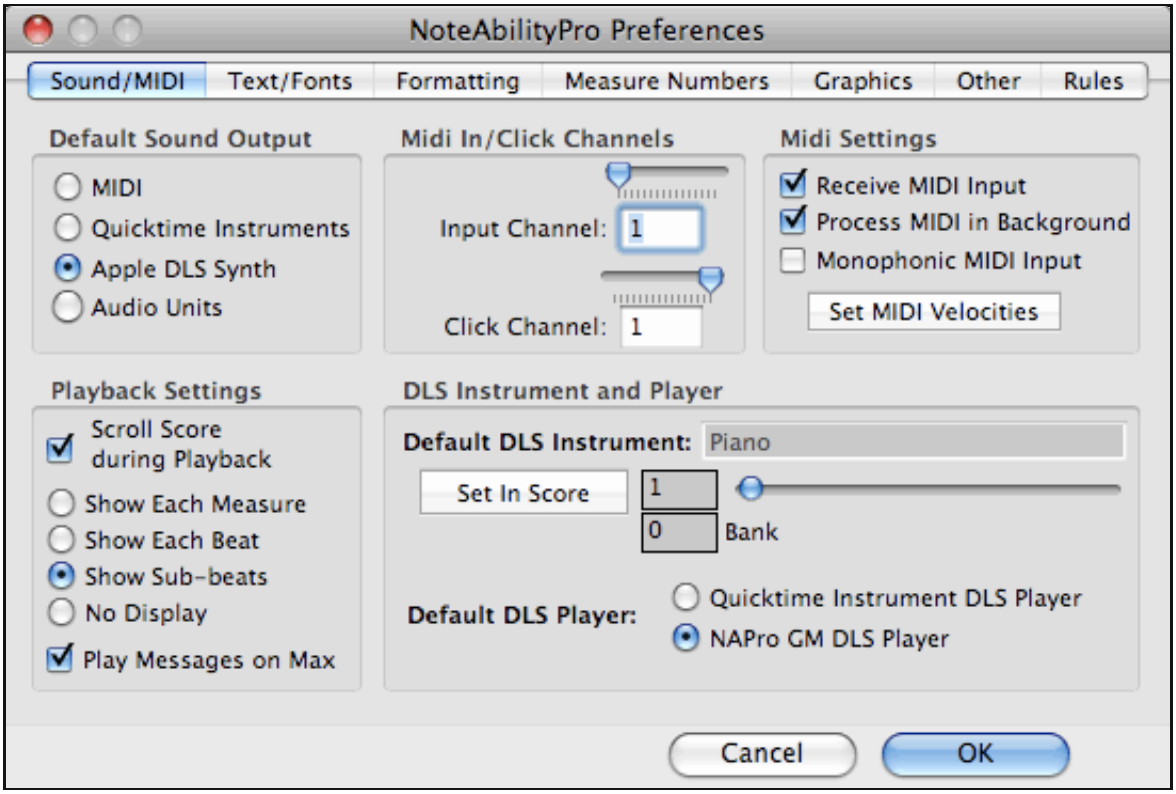
1. Choose **Preferences...** from the **NoteAbilityPro** menu.
2. Set the preferences for NoteAbilityPro in the panel.
3. Click **OK** to save your preferences.

The NoteAbilityPro Preferences panel contains 7 panes, each of which is accessed by clicking on the tabs along the top of the panel. Each of the panes allows different categories of preferences to be set. Once you have selected your preferences, click on the **OK** button and they will be stored for you. To revert to your previous settings, click on **Cancel** button.

- Sound/MIDI Pane
- Text/Fonts Pane
- Formatting Pane
- Measure Numbers Pane
- Graphics Pane
- Other Pane
- Rules Pane

Sound / MIDI Pane

The Sound / MIDI pane contains all the preferences related to sound output, default instrument choices, and playback settings.



Default Sound Output – Choose the default sound output method to be used during note entry and score playback. Sound output can be set to use an external MIDI synthesizer (provided you have a synthesizer and a compatible MIDI Interface connect to the USB port of your computer), using Quicktime Musical Instruments, using Apple's DLS Synthesizer, or using an installed Audio Unit Synthesizer.

Scroll During Playback – Indicate whether or not the score will scroll from page to page during playback

by checking the **Scroll Score During Playback** box.

Playback Hightlight – Set whether the score will highlight measures, highlight beats or provide no display during score playback by choosing from the three options:

1. Show Each Measure – highlights each measure during playback
2. Show Each Beat – an arrow indicates each beat during playback
3. Show Sub-beats – a vertical line with the current score location is displayed during score playback
4. No Display – no score display during playback

Play Messages On Max – This setting is for users wanting to send Max messages embedded in the score to Max/MSP using System exclusive MIDI or Network messages.

MIDI Input Channel – Set the MIDI input channel using the input channel slider or by typing in the Input Channel text field. The input channel number should correspond to the channel that your keyboard is set to transmit on. *Normally channel 1 is the default transmission channel.*

MIDI Click Channel – Set the MIDI channel to be used as a click track when recording using the MIDI Recorder can be set using the Click Channel slider. The Click Channel should be set to a MIDI channel that you are not using for recording.

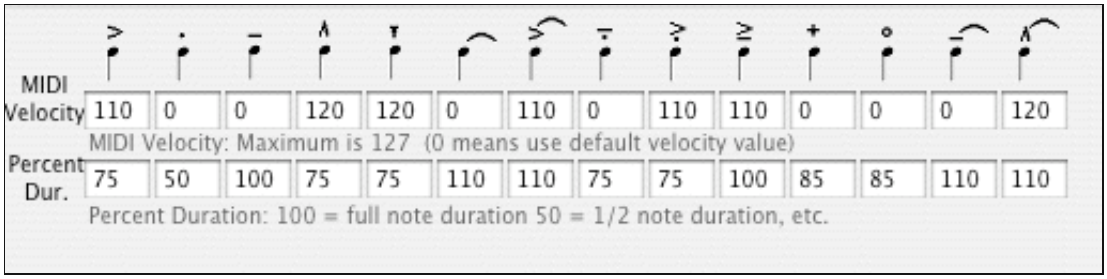
First MIDI Channel – The First Channel number field is used to set the number the first incoming MIDI channel. Normally this is 1, but on some MIDI keyboards the first input channel may be either 0 or 2.

Receive MIDI Input – You can set NoteAbilityPro to receive MIDI input from a connected MIDI keyboard. When the **Receive MIDI Input** box is checked NoteAbilityPro is set to receive notes whenever keys are played on the MIDI keyboard.

Process MIDI in Background – You can set NoteAbilityPro to receive MIDI input from another application while NoteAbilityPro is running in the background. This setting can be used to transfer data from other MIDI applications either directly to NoteAbilityPro or via a MIDI interface.

Monophonic MIDI Input – You can set NoteAbilityPro to receive MIDI as a successive stream of notes. When this box is checked, incoming MIDI data will not be formed into chords – all notes will be treated as separate events.

Set MIDI Velocities – This button causes a drawer to appear below the Preference panel on which the velocity and relative duration values for various articulations can be set. The MIDI Velocity and Percent Duration fields can be set for each of the 14 articulations available in NoteAbilityPro. Velocity values should be between 0 and 127. A value of 0 means that a default velocity value will be used. The percentage duration controls how short or long the note will sound relative to its notated duration (50 indicates that the note will only sound for 50% (1/2) of its indicated duration.) Durations can be larger than 100 percent if desired. Click on the **Close** button once you have set your articulation preferences and they will be saved when you click on the **OK** button on the Preference panel.



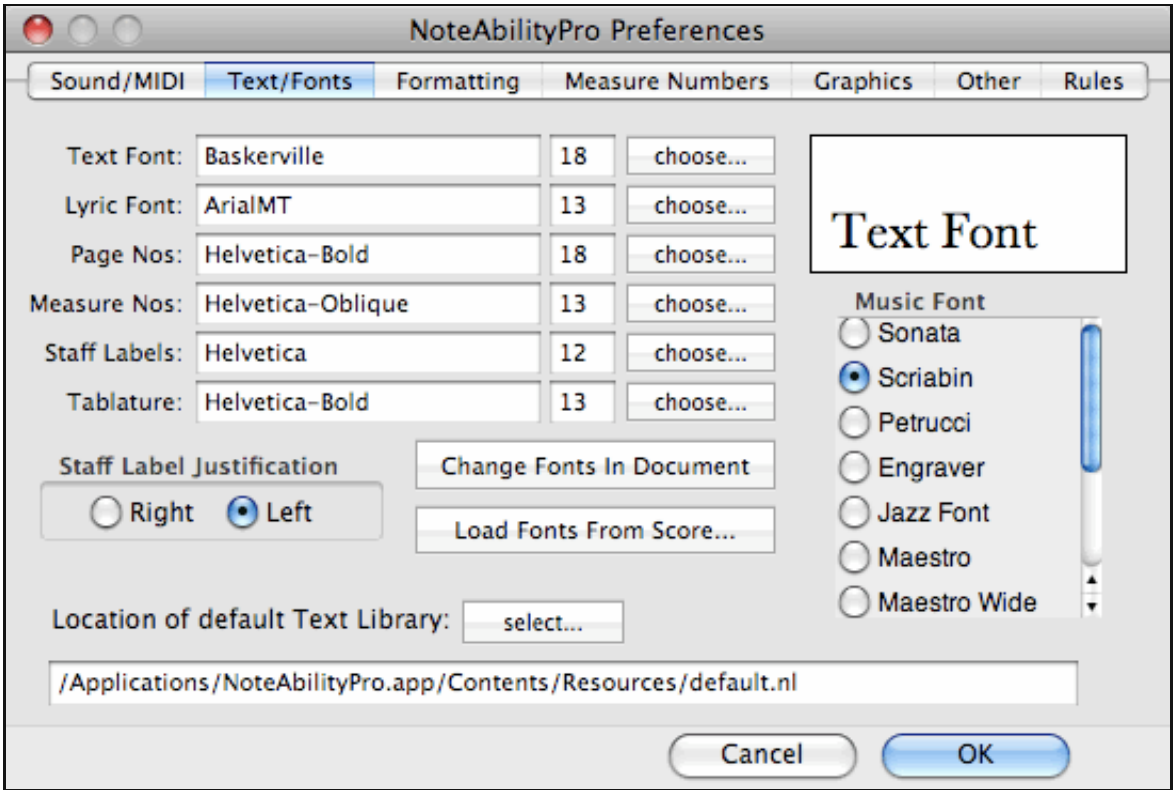
Default DLS Instrument – You can use the Default DLS Instrument slider to select the default DLS Synthesizer instrument. This is the DLS instrument that will be used by all staves when a new document is created. Once the document is created, you can the Track Setup panel to alter the DLS Instrument for each staff on the score. To transfer the selected DLS Instrument to the current score, click on the **Set In Score** button.

Default DLS Player – You can either Apple's Quicktime Music Instrument DLS player or NAPro's General MIDI DLS Player as your default sound generator. Once the document is created, you can use the Track Setup panel to alter the DLS Player by loading a different soundfont. While the Quicktime Music Instrument DLS has more timbres available, the quality of the sounds in the NAPro GM DLS Player is better.

– If you select MIDI for audio playback, you must have a compatible MIDI interface connected to your computer's USB port and the necessary MIDI drivers must be installed in your System. Contact the manufacturer of your MIDI interface for information on drivers for Macintosh OS-X.

Text / Fonts Pane

The Text / Fonts pane contains all the preferences for fonts to be used for page numbers, measure numbers, staff labels, etc. As well, the music font (which is used for drawing all music symbols) is selected on this pane.



The following default fonts can be set as preferences:

- **Music Font** – All available music fonts are shown in the Music Font list. The Scriabin6 font is distributed with NoteAbilityPro and is the default music font. Other music fonts must be purchased separately and place in the OS-X /Library/Fonts directory or your own Library/Fonts directory. The Music Font is used for the display and printing of all music symbols in the score.
- **Text Font** – You can set the default font to be used for standard Text by entering the font name and size, or by clicking the **Choose** button. This setting is only a default. The text font and size can be altered anywhere in the score by using the Font panel or Font menu options.
- **Lyric Font** – You can set the default font to be used for Lyrics by entering the font name and size, or by clicking the **Choose** button. This settings can also be altered by using the Font buttons on the Lyric Panel.
- **Page Numbers** – You can set the default font to be used for Page Numbers by entering the font name and size, or by clicking the **Choose** button. The font used for Page Numbers can also be set in the Page Numbers pane in the NoteAbilityPro Inspector.
- **Measure Numbers** – You can set the default font to be used for Measure Numbers by entering the font

name and size, or by clicking the **Choose** button. The font used for Measure Numbers can also be set in the Measure Numbers pane in the NoteAbilityPro Inspector.

- **Staff Labels** – You can set the default font to be used for Staff Labels by entering the name and font size for Staff Labels, or by clicking the **Choose** button. The font size of labels can be altered by using the Staff Attributes pane in the NoteAbilityPro Inspector.
- **Tablature Font** – You can set the default font to be used for Guitar or Dulcimer tablature by entering the name and font size for the Tablature Font, or by clicking the **Choose** button.

When you click on the **Choose...** button located to the right of each of the font categories, the OS-X Font panel is displayed and you can select from all available fonts and sizes. The choosen font is displayed in the Font View located in the top-right corner of the pane.

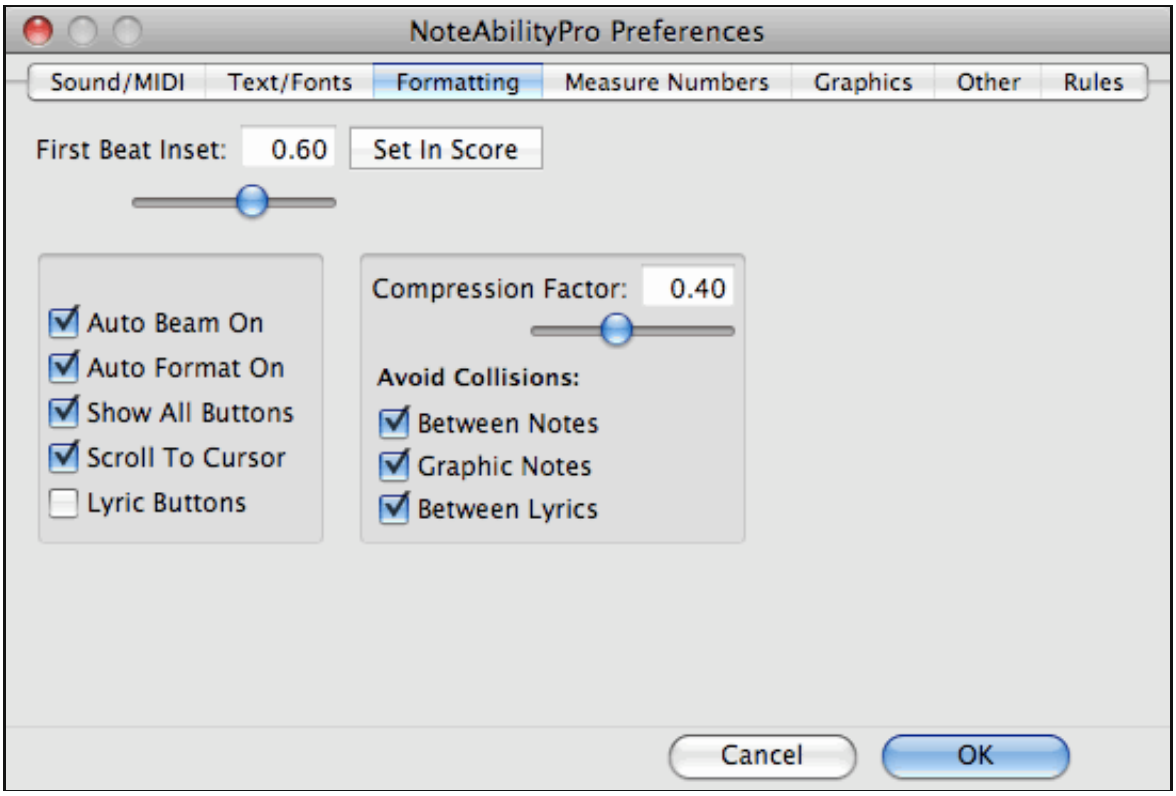
The **Change Fonts in Document** button transfers the current font setting to the front score, and the **Load Fonts From Score...** loads the settings for Lyrics, Page Numbers, Measure Numbers, and Staff Labels from the current score.

Staff Label Justification – Staff Labels can be set to be either Right or Left Justified by choosing one of the two radio buttons. By default, staff labels are Right Justified.

Text Library Location – The location of the default Text Library is indicated at the bottom of this pane. If you want to choose a text library that you have created and previously saved (using the **Save** button on the Text Library Panel) as your initial library, click on the **select...** button and locate this text library – it will be loaded each time NoteAblity is launched.

Formatting Pane
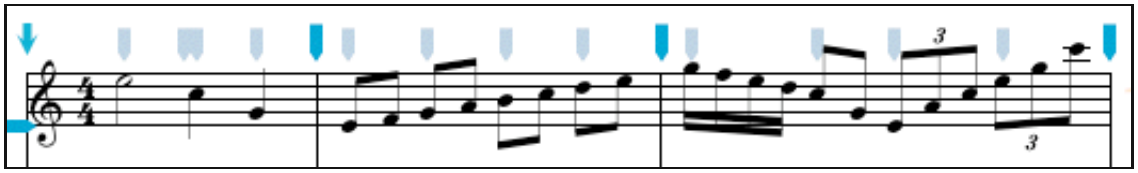
The Formatting pane contains preferences for page and system formatting and for some display attributes.
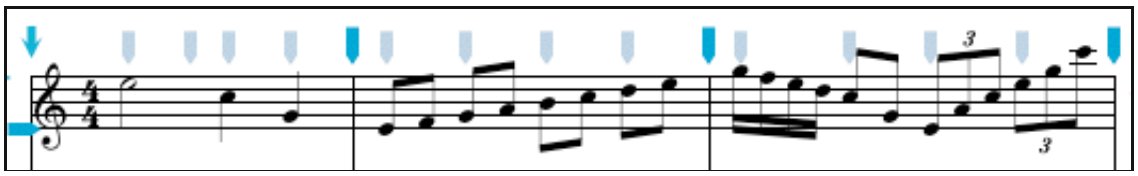


First Beat Inset – the First Beat Inset setting controls the distance from the barline to the first note position. A value of 0 places the first beat location very close to the previous barline, while a value of 1 allows ample room between the barline and the first beat. To alter the settings in the current score, click on the **Set In Score** button.

Compression Factor – This setting controls the way in which note spacing is adjusted when a system or page is formatted. The Compression Factor is adjusted using a slider – it has a range between 0.0 and 1.0. The larger the Compression Factor, the more equal the beat spacing will be regardless of how many notes are in each of the beats. The smaller the Compression Factor, the more groups or notes are spread out to take up the empty spaces in other places within the system. Below are a few of examples of how this value affects the format of the system.
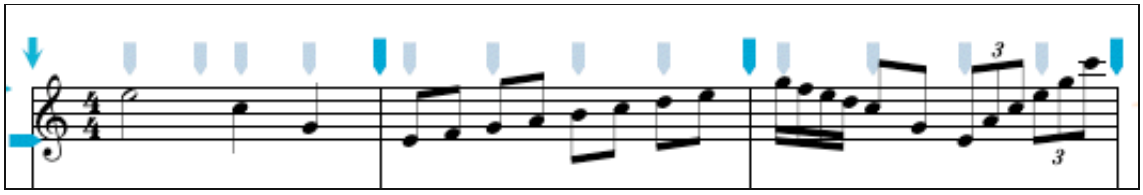
Compression Factor of 0.1
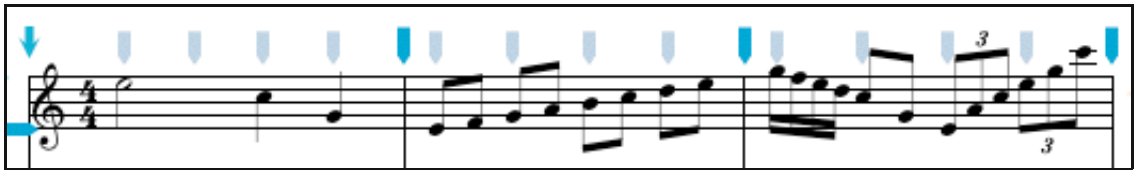


Compression Factor of 0.4 **(the default)**



Compression Factor of 0.9



Compression Factor of 1.0



Auto Beam On – Causes notes to be automatically beamed as they are entered.

Auto Format On – Causes the system to be formatted whenever the last note on a line is entered.

Show All Buttons – Causes all page, system and staff buttons as well as the buttons which constitute the rhythmic spine along each system to be displayed on the page.

Scroll To Cursor – Causes the score view to adjust so that the Entry Cursor is always visible.

Lyric Buttons – Show Lyric Position buttons below each staff in the document. This setting only needs to be turned on if lyrics are being used in the score.

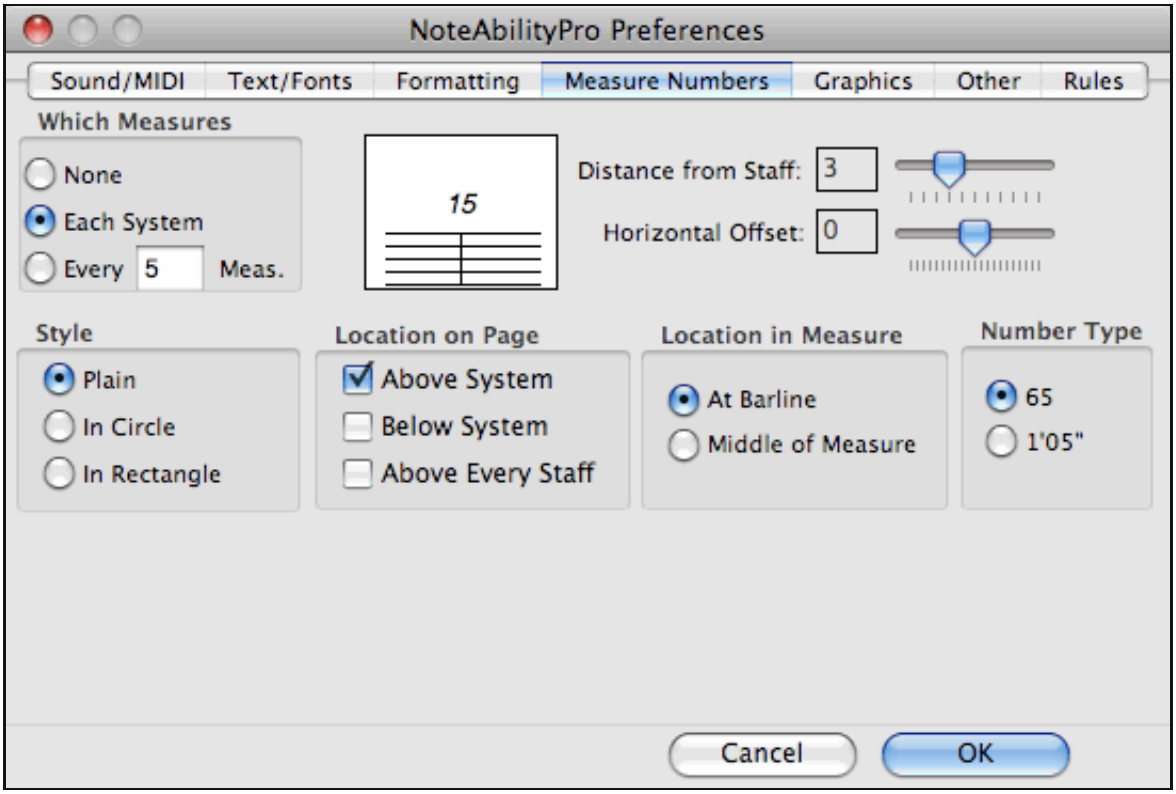
Avoid Collisions – you can set NoteAbilityPro to check for collisions between images during system or page formatting. The following boxes can be checked:

- **Between Notes** – During formatting, this setting causes note positions to be adjusted to avoid overlapping other notes or accidentals.
- **Between Graphic Notes** – During formatting, this setting causes graphic notes positions and grace note positions to be adjusted to avoid overlapping other notes or accidentals. *Graphic notes are grace notes and notes entered with the "&" prefix (i.e. "&e").*

- **Between Lyrics** – During formatting, this setting causes lyric positions to be adjusted to avoid overlapping other lyrics.

Measure Numbers Pane

The Measure Numbers pane contains preferences for measure number appearance and location.

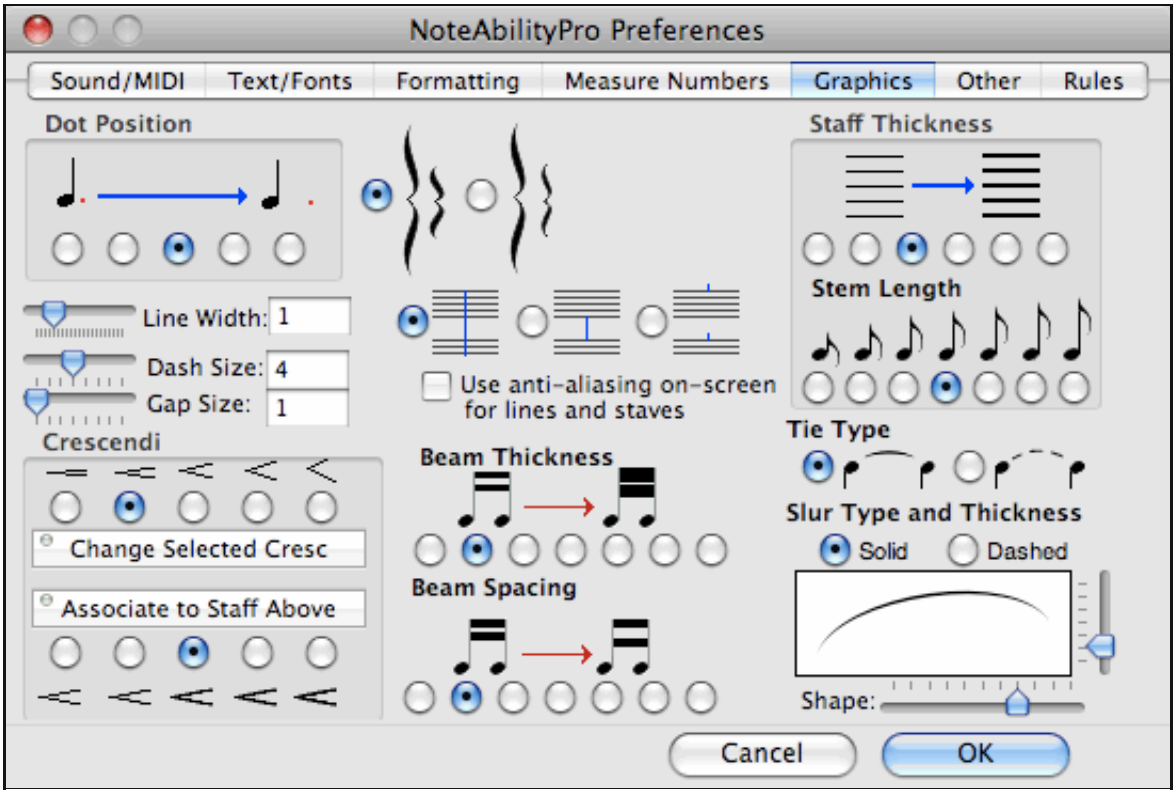


In this pane, you can set which measures will have measure numbers on them, whether the measure numbers have a circle or a rectangle around them, whether they appear above the system, below the system or above every staff in the system, whether they appear at the barline, or in the middle of the measure, the distance they appear above or below the staff, and a horizontal offset from their normal drawing position. The Measure Number view shows the appearance of the measure numbers. To change the font used for measure numbers, switch to the Text / Font pane of this panel and choose a different measure number font.

You can also choose to have measure numbers represented as minutes and seconds rather than numbers. If you do this, it is assumed that there is one second in each measure (1/4 at mm=60 or 2/4 mm=120, etc.). When using this feature, you may have to modify specific measure numbers using the Measure Number pane in the Score Structure Panel.

Graphics Pane

The Graphics pane contains preferences for screen graphics and other drawing characteristics.



Dot Position – The default horizontal location of dots relative to the notehead can be set by choosing from the 5 radio buttons.

Default Line Width – You can set the Default Line Width by moving the Line Width slider. This line width is used for drawing lines, rectangles and ovals with the NoteAbilityPro drawing tools.

Crescendo Width – You can set the default crescendo width by selecting one of the 5 radio buttons, and you can set all selected crescendo and decrescendo images by clicking on the **Change Selected Cresc** button. The **Associate to Staff Above** button connects selected crescendo and decrescendo marks to the staff immediately above the image.

Crescendo Line Thickness – You can set the default crescendo line thickness by selecting one of the 5 radio buttons.

Scale Piano Braces – You can set whether you want the thickness of piano braces to remain constant or to be reduced and increased as the height of the piano brace changes. Option 1 maintains the same thickness, while option 2 causes the thickness of the brace to be adjusted as the height is altered.

Anti-aliasing On-screen – The **Use anti-aliasing on-screen for staves and lines** check box controls whether anti-aliasing is used for thin lines and staff lines. Normally this box is not checked since thin lines appear gray when antialiasing in on.

Beam Thickness and Spacing – Choose one of the seven options for beam thickness and beam spacing (i.e. distance between beams).

Staff Thickness – You can set thickenss of staff lines by selecting one of the 6 radio buttons. This setting controls the thickenss of the actual lines drawn, not the distance between the lines. *N.B. You may find when large scores are printed (at small reduction percentages) that increasing the staff thickness will help make the staff lines clearer.*

Tie Type – Choose either to have solid or dashed ties.

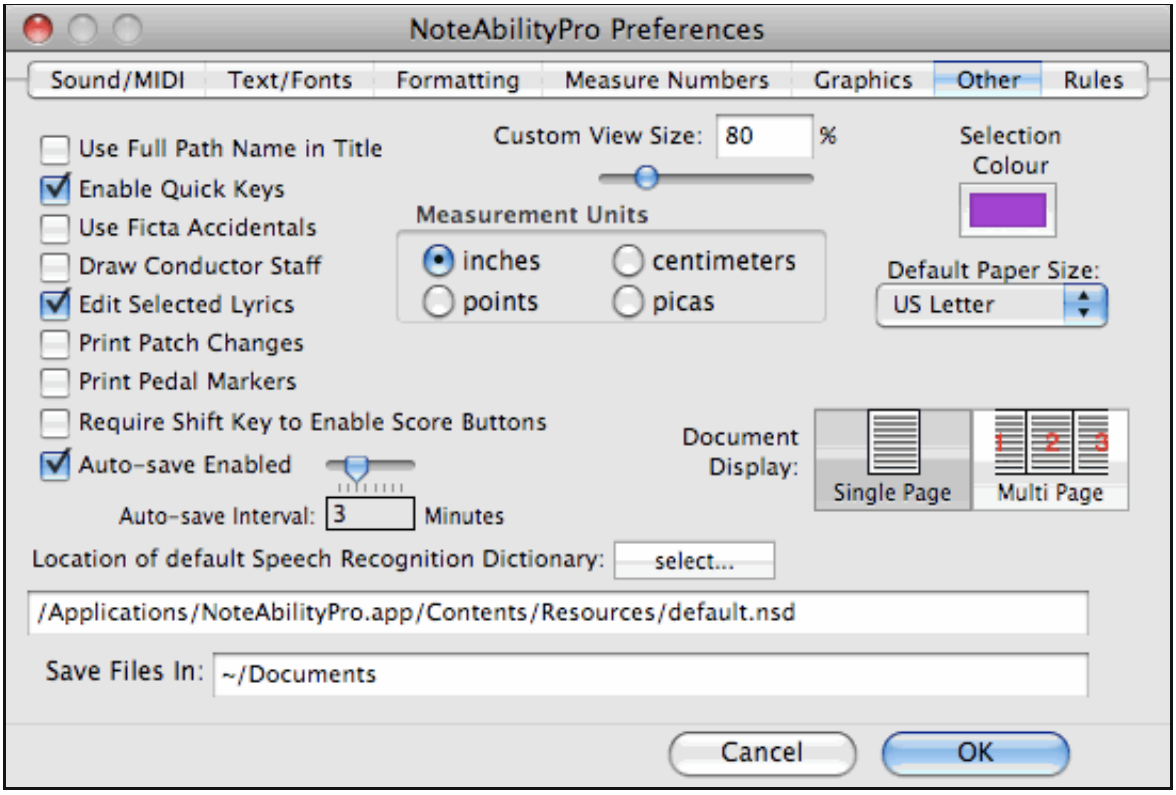
Slur Type – Choose either to have solid or dashed slurs.

Slur Shape and Thickness – You can adjust the default appearance of both the slur thickness (vertical

slider) and the slur shape (horizontal slider). The slur characteristics are displayed in the rectangle.

Other Pane

The Other Pane contains miscellaneous preferences such as background colour and measurement units.



Custom View Size – The custom view size can be set with the Custom View slider. This view size is used when Custom is selected from the Image View pull-down menu on the Control Panel or in the Score Control Bar.

Measurement Units – Choose the Measurement units to be used with rulers and panels in NoteAbilityPro. Options are:

1. Inches
2. Centimeters
3. Points
4. Picas

Document Display – Set your default document display to either Single-Page Display or Multi-Page Display. Individual documents can be changed using the *Multi Page Display* menu item in the Format menu or with the toggle button on the Score Controls.

Selection Colour – This colour well is used to set the colour of selected images in NoteAbilityPro. The new colour can be dragged to the colour well from the Color panel.

Default Paper Size – The default paper size pull-down menu can be used to specify the paper size to be used when new documents or parts are created.

Check boxes can be set for the following preferences:

- The **Use Full Path Name in Title** setting will cause the full pathname of the document to appear in the window title rather than just the filename.
- The **Enable Quick Keys** setting allows Quick Keys input. Quick Keys uses the numerical keypad to indicate the interval above or below the last entered note. Refer the Quick Keys reference for complete details on

how to use Quick Keys.

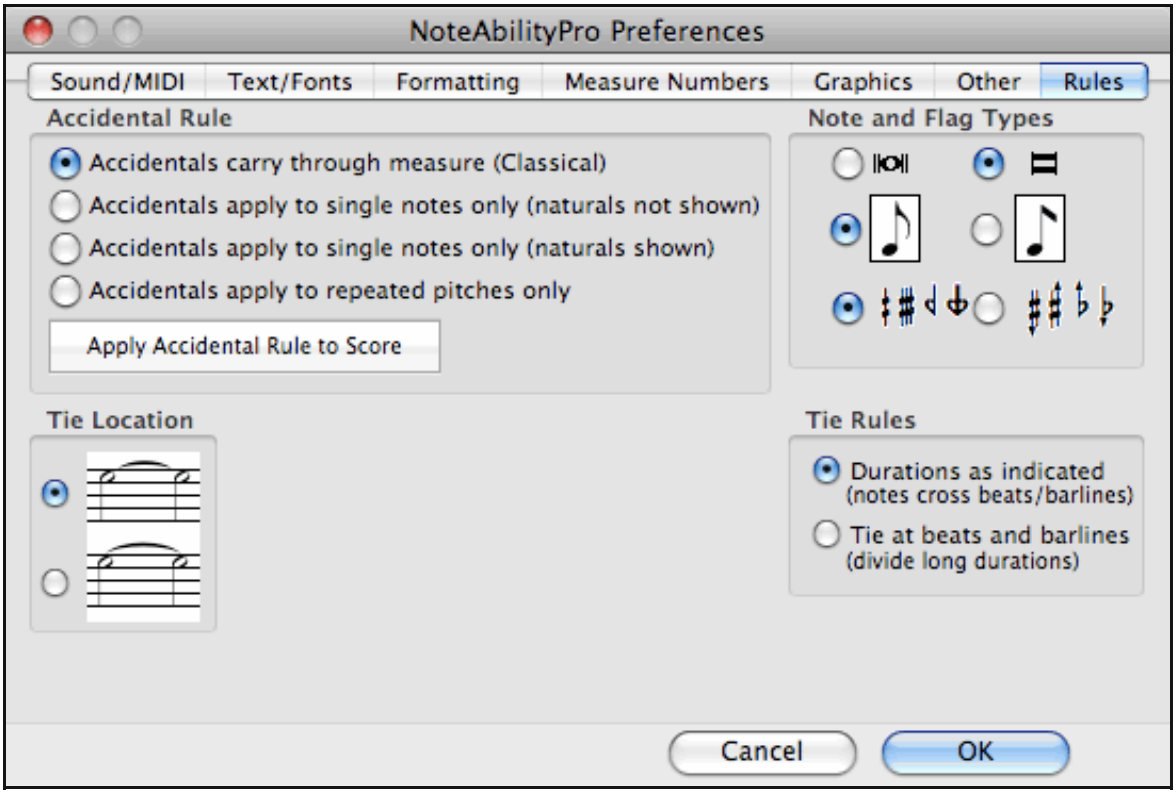
- The **Use Ficta Accidentals** setting will cause accidentals to appear above notes rather than to the left of the notehead. This is a convention of early music.
- The **Use Mensurstrich** setting will cause barlines to be drawn between staves (but not through the staff itself). This is a convention of some styles of early music. Mensurstrich can also be turned on from the **Modify/Mensurstrich On/Off** menu item.
- The **Draw Conductor Staff** setting will cause an additonal single-line staff to be drawn at the top of each system in the score. This can be used for adding conductor cues or other markings. *This setting is not saved with the preferences.*
- The **Edit Selected Lyrics** setting will cause selected lyrics (i.e. lyrics selected with the Selection tool) to be loaded as the current Command. This can simplify editing of lyrics.
- The **Print Patch Changes** controls whether patch change images (a number in a circle) will either appear or not appear when the document is printed.
- The **Require Shift Key to Enable Score Buttons** is a setting which, when engaged, will only make the score button active when the shift key is down. Some user find that this makes editing images on the score easier since they cannot inadvertantly grab and move a score button.
- The **Auto-save Enabled** check box allows you to set whether or not NoteAbilityPro automatically saves backup copies of your files while you are working. The slider is used to set the interval of time (1 to 60 minutes) between each auto-save. Auto-saved files are saved in the */tmp* directory on your OS-X system. This directory is cleared out each time you restart your computer so the files will only be available to you if you computer has not been restarted. To recover lost files, use the menu item Restore Auto Saved Files located in the *FIle* menu.

Speech Recognition Dictionary Location - The location of the default Speech Recognition Dictionary is indicated near the bottom of this pane. If you want to choose a speech dictionary that you have created and previously saved (using the **Save** button on the Speech Control Panel) as your initial dictionary, click on the **select...** button and locate this speech dictionary - it will be loaded each time NoteAblity is launched.

File Location - The default path where new documents will be saved is specified at the bottom of the page.

Rules Pane

The Rules Pane contains preferences relating to music notation rules and conventions.



Accidental Rules – You can choose between 4 different rules which control the conditions under which accidentals are added to notes:

1. Accidentals are assumed to carry through the measures (in the same octave only) – this is the standard rule for most music
2. Accidentals are assumed to apply only to the note they immediately preceed and notes with no accidental are assumed to be natural
3. Accidentals are assumed to apply only to the note they immediately preceed and all notes will display an accidental (including naturals)
4. Accidentals carry through the measure while the pitch is immediately repeated, but does not carry through after a change of ptich

To apply the accidental rule to the current score, click on the **Apply Accidental Rule to Score** button.
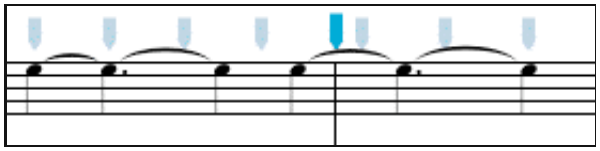
Tie Location – You can choose between two different default tie positions: ties appearing between noteheads, and ties appearing above or below the noteheads.

Breve Type – You can choose between two different images for breves (i.e. double whole notes).

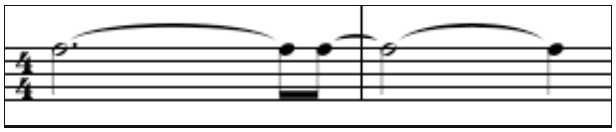
Flag Type – You can choose between two different flag types: standard curved flags or straight angled flags. The straight angled flags are used in some editions of contemporary music.

Quartertone Type – You can choose between two different representations of 1/4 tones: independent symbols OR standard sharps and flats with an arrow up or down to indicate the quartertone change.

Tie Rules – You can choose either to have durations entered in your score regardless of where they occur in a measure or you can choose to have tied notes automatically generated when durations cross beats and barlines. When option 1 is selected, you indicate how you want ties to occur explicitly in the Command (eg. a Command "qq.q" will form the following tied group regardless of where it is entered in the measure.



With option 2, this Command will be interpreted as 3.5 quarter beats and the durations will be re-calculated according to the meter and location in the measure.

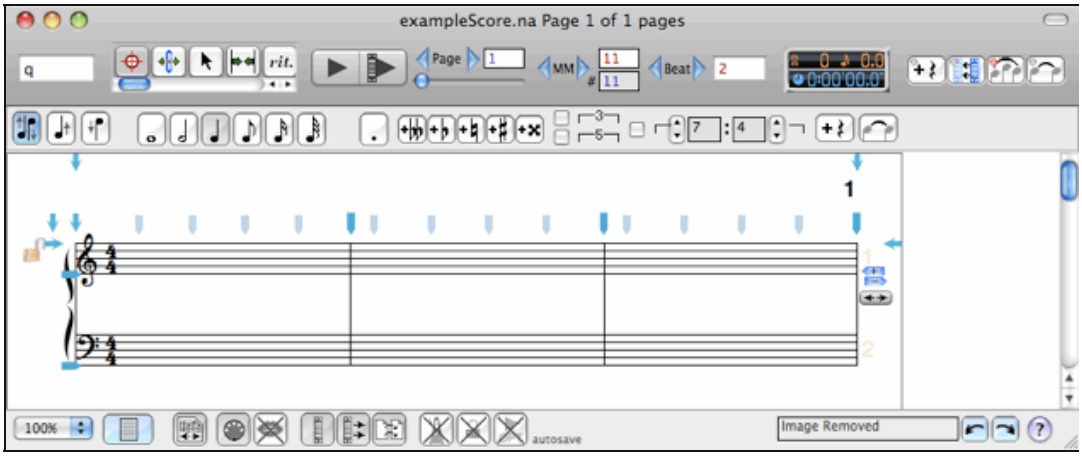


See also

- Installing NoteAbilityPro
- MIDI Connections
- MIDI Ports Panel

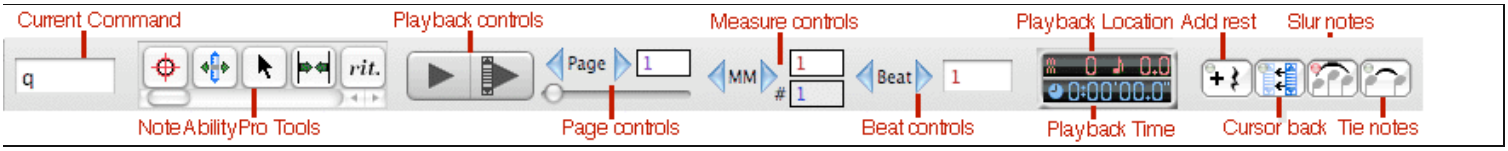
Score Controls

The NoteAbility tools and some of the most commonly used score controls are located at the top and bottom of the score window.



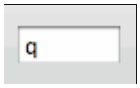
Above the score there are two sets of controls. The upper row of controls is the Score Toolbar and contains many of the tools and buttons that are essential to operate the program. The lower row of controls is context sensitive and alters depending on the current activity of the user.

The controls in the Score Toolbar at the top of the score window consist of the Current Command display (which indicates which image will be added), the NoteAbility Tool Palette (the 20 different tools that are used for entering various kinds of images, for selecting images and for text editing), playback controls, page controls (for shifting from one page to another), controls for moving the Entry Cursor to different measure, and beat locations, and buttons for some common editing actions.



Current Command

On the left side of the Score Controls is the *Current Command*. This text field displays the sequence of characters that indicates which NoteAbility image will be added next. Except when you are using one of the text tools or entering text in a panel, all typing done while the score is active will appear in the Current Command field.



Since NoteAbility automatically directs your typing into this field, it is not necessary to click the cursor in this text box before typing. Also, after an image has been added to the score, new typing will automatically replace the existing command with the new characters. This means that if you are continuing to enter the same image, you don't need to type anything, and if you want to enter a new image, you can simply type the new command without deleting the previous one. For a complete list of the NoteAbility commands for various music symbols refer to the NoteAbility Command List

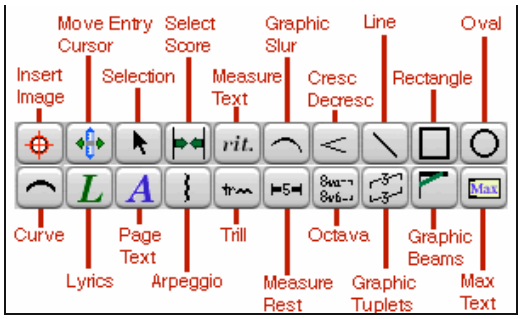
> – You may also use the Note Palette or the Image List panel to supply the command rather than typing it.

NoteAbility Tool Palette

The palette of *NoteAbility Tools* control the various functions that you can perform with the program. When one of these tools is choosen, the button is highlighted and the cursor is modified to reflect the activity selected. The tools are contained within a scrolling window with the most common tools normally visible.



Currently in NoteAbility there are 20 different tools available – they are:



Insert Image tool	For entering most musical images onto the score. The actual image entered is determined by the command in the Command field
Move Entry Cursor tool	For adjusting the position of the Entry Cursor
Selection tool	For selecting an image or group of images in the score for editing
Select Score tool	For selecting a segment of the score (along a single staff or on multiple staves)
Measure Text tool	For entering and editing text that is affixed to the measure and staff
Graphic Slur tool	For adding graphic slurs (slurs not connected to notes)
Crescendo/Decrescendo tool	For adding crescendos and decrescendos
Line tool	For drawing lines
Rectangle tool	For drawing framed and filled rectangles
Oval tool	For drawing framed and filled ovals
Curve tool	For drawing curved lines
Lyrics tool	For entering lyrics under a line of music
Page Text tool	For entering and editing text that is affixed to the page
Arpeggio tool	For adding arpeggio images
Trill tool	For adding trills
Multiple Measure Rest tool	For adding multiple measure rests
Octava/Octava Basso tool	For adding octava and octava basso images
Graphic Tuplets tool	For adding graphical tuplets
Graphic Beam tool	For adding graphical beams
Max Text tool	For adding Max text (for use with use with the Max/MSP application)

– The Graphic Beams tool, the Multiple Measure rest tool, Graphic Slur tool, and the Tuplet tool should only be used only when graphical versions of these images are required. Normally, multiple measure rests are created by the Measure Rests menu item, tuplets are formed automatically when tuplet note and rest values are entered in the score, beams are created either automatically as notes are entered or with the Beam Notes menu item, and slurs are created by selecting notes and clicking on the Slur Notes button.

Playback Controls

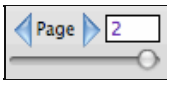


For convenience, Playback controls are included at the top of the score – they also appear in the Playback Controls pane of the Music Images Panel. The first of these two buttons causes the score to play from the beginning, while the second button causes the score to play from the measure that the Entry Cursor is currently in. While playing, the button you clicked changes to a Stop icon -- clicking the button during playback stops the performance.



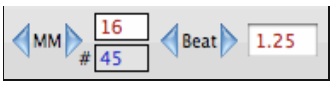
Whatever tempo, tempo map, playback map has been set for the score will be used during playback. While playing, a view appears below these controls with miniature buttons which can be used to stop or pause playback or alter the tempo.

Page Controls



The Page Controls allow you to move to a different score page. The left and right arrows shift to the previous or next page, while the scroll bar allows you to jump quickly to another page. You can also change pages by entering the page number in the *Page* text box and typing *Return*. There are also menu items in the **Format** menu (and the shortcuts Command-< and Command->) which move you to the previous or next page.

Measure and Beat Controls



The Measure and Beat Controls show the current position of the Entry Cursor and allow you to move the Entry Cursor to different measure and beat locations in the score. The left and right arrows shift to the previous or next measure or beat. You can also move the Entry Cursor to a specific measure or beat position by entering a number in the *Measure* or *Beat* text boxes and typing return. If the measure is on a different page, the score will jump to that page. The second measure text box shows the measure number of the specified measure (since measure numbers may not conform to the actual number of measures in the score. In the example above, the Entry Cursor is on beat 1.25 of the 16th measure of the score which is measure number 45 (since the first measure of this particular score is 29.)

While these controls can be used to move the Entry Cursor around the score, it is usually faster to move around the document using the Space-bar or Shift-Space bar which move the Entry Cursor to the next or previous beat position or to drag the Entry Cursor by grabbing the rectangle along the right side of the Cursor.

> – Regardless of the page number or measure numbers displayed on the score, the Score controls consider the first page and first measure of the document to be 1.

Editing Shortcuts



Some of the most commonly used editing functions have button shortcuts on the score toolbar:

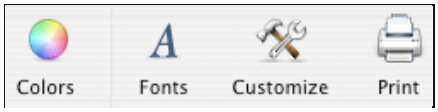
- **Insert Rest** button – can be used to enter a rest of the same duration as the note value indicated in the current command. If the Current Command is *q* a quarter rest will be inserted, if the Current Command is *e* an eighth rest will be inserted, and so on. **(alternative: Command-r)**
- **Jump Cursor Back** button – can be used to cause the Entry Cursor to jump back to its previous location. This is useful when chords are being entered. **(alternative: Command-g)**
- **Slur Notes** button – can be used to create a slur above or below selected notes. Slurs entred using this button are connected to the notes and adjust automatically as the notes are adjusted. **(alternative: Command-spacebar when it is the hot button)**
- **Tie Notes** button – can be used to create a tie between selected notes. Notes must be in the same voice and be the same pitch in order to be tied. **(alternative: Command-Shift-T)**

> – The small red circle in the Slur Notes button indicates that this button is the current "hot button". The "hot button" can be activated by typing Command-spacebar rather than by clicking on the button. Almost all buttons in NoteAbilityPro have a a small circle (usually in the top-left corner) which can be enabled causing that button to be the new "hot button" – the previous button will no longer be highlighted.

Customizing the Score Toolbar

The Score Toolbar can be customized by either choosing the **Customize Toolbar...** item in the **Windows** menu or by Control-clicking the toolbar. A number of buttons such as a page setup button, a print button, a color panel button, can all added to on the Score Toolbar. As well existing tools can be removed. Since the NoteAbility Tools and the Current Command are not available elsewhere in the application, you should not remove these items from the toolbar.

Some of the additional toolbar items are shown below:



Context Dependent Controls

Below the Score Toolbar there is another row of controls which alternates between 3 sets of controls depending on whether you are entering notes, editing the score, or playing the score.

When you are entering images in the score, the following controls are available:



Current Voice



Normally in NoteAbility there are three voices permitted per staff. When notes (or chords) are entered in one of these voices, their default stem direction is set to be:

- stems up or down depending on the pitch or on the pitches of the beam group
- stems in an upward direction
- stems in a downward direction

To switch voices in the score, click on one of the three *Voice* radio buttons. All images entered with the mouse, the on-screen keyboard, or using a MIDI keyboard will belong to the voice set with these controls.

It is possible to flip the stem direction of notes regardless of which voice the notes belong to. However, these notes and chords will revert back to their default direction when the images are adjusted.

– It is important to remember that all notes entered into the same voice at the same beat location are formed into chords. If you want notes (or chords) at the same beat location to have separate stems, they must be entered as different voices. Most music can be entered using the first voice, and other voices are normally only necessary when two or more separate voices are written on one staff.

Note Palette



Some of the common note values are available in the Note Palette. Clicking on one these buttons loads the appropriate character into the Current Command. For example if you click on the eight note button followed but the dot button, the Current Command will be *"e."* while if you click on the sixteenth note button, the Current Command will be *"s"*. Note also that if you type a command (such as *"w"* the appropriate button (in this case the whole note button) will be highlighted.

Accidental Palette



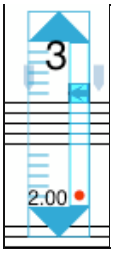
The accidental palette allows accidentals to be applied to the last entered note (or any collection of notes selected with either the Selection or Select Score tools). These buttons are shortcuts to the *Modify / Accidentals* menu items.

Tuplet Controls



To engage triplets, quintuplets or any arbitrary tuplet grouping, click on these radio buttons.

When any tuplet grouping is engaged, the Entry Cursor is altered so that the tuplet value is indicated in the Entry Cursor.

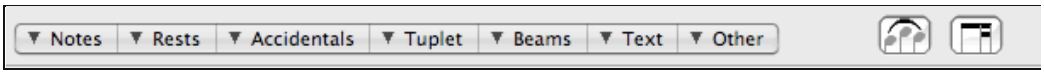


This helps to remind you to turn off the tuplet setting after you have finished entering it. (Command-e can also be used to clear the tuplet setting.)

> – The tuplet value must be set before notes are entered. It is not possible to enter notes as eighth notes and then to modify them so that they are triplet eighth notes. Click on the triplet button before entering the notes -- this will ensure that they are positioned correctly in the score and that they will have the correct playback duration.

An **Insert Rest** button and a **Tie Notes** button are also include in this collection of controls.

When editing the score (i.e. the Selection or Select Score tool has been choosen), the following controls are available:



These popup menus are duplicates of the menus found in the *Modify* menu, but are positioned here for ease of access. As well, a **Slur Notes** button and a **Beam Notes** button are positioned beside the pull-down menus. For information on these menus, refer to the Modify Menu.

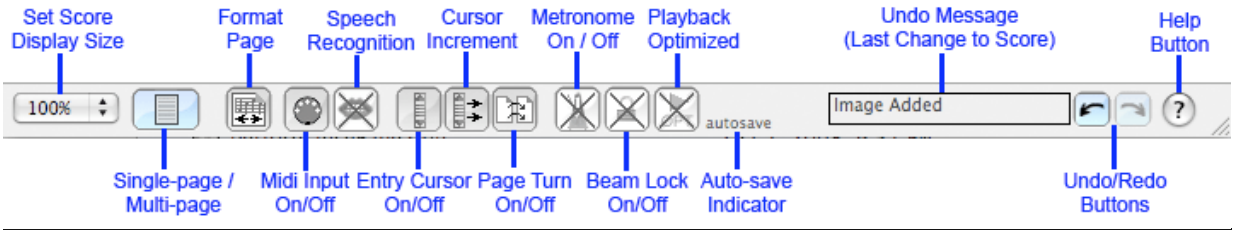
When you are playing back a score, the following controls are available:



There are miniature buttons for stopping or pausing playback, a tempo slider and tempo display for adjusting tempo during playback and counters which display both elapsed time and the measure and beat currently playing.

Playback counters can also be added to the main Score Control area using the **Customize Toolbar...** menu mentioned above. These counters will retain the score playback duration and ending playback position after the score has finished playing.

At the bottom of the score there are buttons and controls for the following actions:



- changing the document view size, (between 25% and 200%)
- switching between single-page and multi-page display
- causing the music on the current page to be formatted
- enabling or disabling MIDI input to this document
- enabling or disabling speech recognition commands
- turning the Entry Cursor on or off
- turning on or off the auto increment feature of the Entry Cursor (normally the Entry Cursor will advance to the next beat position after entering a note or rest)
- turning on or off the auto page turn feature (normally when you reach the end of the page, the score moves to the next page)
- enabling or disabling a metronome during score playback
- locking the positions of stems and beams in the current score
- optimizing playback so that the counters and playback markers are more accurate
- displaying the last change to the score (that can be undone)

- undoing or redoing the last change to the score
- bringing up the Help files.

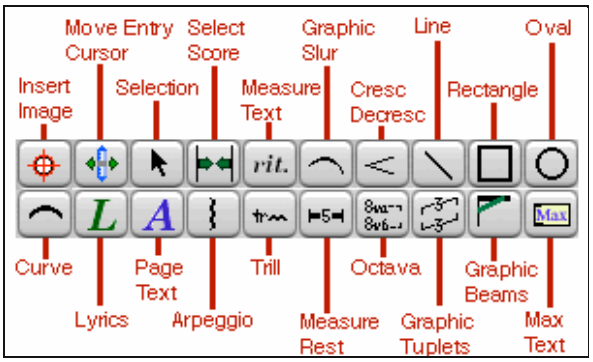
When enabled, the playback metronome will play a note on each beat of the score using the instrument set on the DLS channel 1. The first beat of each measure is accented.

See also

- Using NoteAbility tools
- NoteAbility Command List
- Image List panel

NoteAbility Pro Tools

The NoteAbility tools are located in a scroll window at the top of each score window. The available tools are:



The NoteAbility tools control the various functions that the user most often performs with the NoteAbility. The specific function of each of these tools is described below:

Image	Tool	Description
	Insert Image	For entering most musical images onto the page.
	Move Entry Cursor	For re-positioning the Entry Cursor.
	Selection	For selecting an image or a group of images on the score.
	Select Score	For selecting a segment of the score (along a single staff or on multiple staves).
	Measure Text	For entering and editing text (affixed to the measure and staff).
	Graphic Slur	For adding graphic slurs (slurs not connected to notes)
	Crescendo	For adding crescendi and decrescendi.
	Line	For drawing straight lines.
	Rectangle	For drawing framed and filled rectangles.
	Oval	For drawing framed and filled ovals.
	Curve	For drawing curved lines
	Lyrics	For entering Lyrics under a line of music.
	Page Text	For entering and editing text (affixed to the page).
	Arpeggio	For adding arpeggios.
	Trill	For adding trills.
	Multiple Measure Rest	For adding multiple measure rests.
	Octava	For adding octava and octava basso images.
	Graphic Tuplet	For adding tuplet graphics.

	**Graphic Beam**	For adding beam extensions and measured tremolo.
	**Max Text**	For entering and editing Max text boxes.

Insert Image Tool

When the Insert Image tool is selected and the mouse is clicked on the score, the image indicated in the Current Command field of the Score Controls is added either at the Entry Cursor (in the case of regular notes and rests) or at the position of the mouse cursor. While the mouse button is held down, the notes and rests can be dragged up and down and other images can be dragged in any direction to a new position. For a complete List of commands see the Image List panel.

Move Entry Cursor Tool

When the **Move Entry Cursor tool** is selected the Entry Cursor will be repositioned at the mouse cursor when the mouse button is depressed.

- The Entry Cursor can also be moved by dragging the bar along its right edge or by holding down the Command key and clicking the mouse cursor at a new location.

Selection Tool

When the **Selection tool** is selected you can click on one of the control points of an image to move or adjust it, or you can drag the mouse cursor to create a selection rectangle. All images in the rectangle are selected, and they can then be moved or adjusted by placing the cursor in this rectangle and dragging the mouse cursor. Some images (eg. regular notes and rests) will not be moved away from their metrical position.

- Slight adjustments to the horizontal position of regular notes and rests can be made by holding down the Control key while dragging the images. If you do not want notes to linked to the metrical structure create Graphical notes and rests with the commands &h, &q, &rq &rs etc. instead of the commands h, q, rq, rs etc.

Select Score Tool

When the **Select Score tool** is choosen you can select all images in a portion of the score by setting the starting and ending points of the selection. This tool can be used to select images on certain staves across multiple measures or across mulitple pages. When you depress the mouse button, a starting arrow appears, allows you to set the beginning of the selection. When you depress the mouse button again, an ending arrow allows you to set the end of the selection. The selected area includes all measures between the start and end points and all staves between (and including) the starting staff and ending staff. The height of the selection arrows is modified to show which staves are included in the selection.

- When using either the **Selection** or **Select Score** tools, the selected images are redrawn in red to indicate that they are selected.

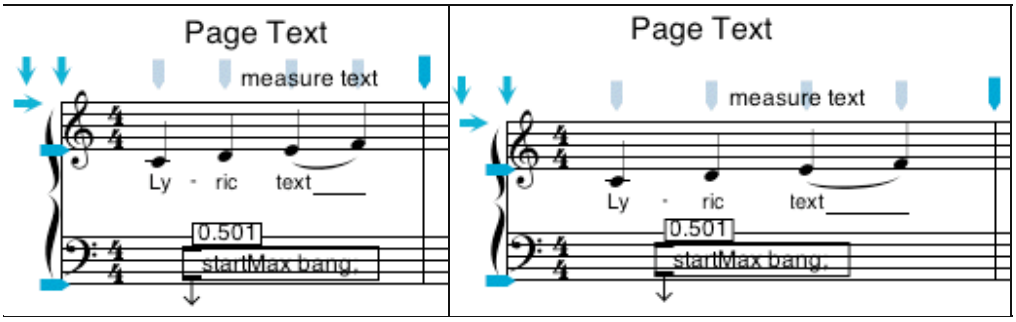
Text Tools

NoteAbility supports 4 different types of Text:

1. **Measure Text**(the most common type of text) is associated with a staff and a beat location in a measure. This text is adjusted with as the staff and rhythmic spine (beat positions) are adjusted. Examples of this text type are dynamics and tempo indications (eg cresc., rit..., fingering numbers, and any markings that

are an integral part of the music, and whose position should be adjusted along with the music.)
2. **Page Text** is used for text that is to be fixed at a particular location on the page (eg. title, composer's name, etc.).
3. **Max Text** is a special-purpose class of text that is used for creating Max object boxes. Max text is enclosed in a rectangle, and indicates the beat position of the text. Like Measure text, Max text is linked to the music structure. Unless you are using NoteAbilityPro to control Max/MSP or to generate Max qlists, you will not likely use Max text.
4. **Lyrics** are entered by selecting the Lyric tool, placing the Entry Cursor at the beat location you want the lyric to appear, typing the syllable (which appears in the Command Field) and pressing the Return. For more details, see Entering Lyrics.

The example below show the four different types of text, and the effect of adjusting the staff and beat positions.



Tools for Complex Images

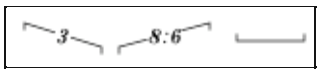
There are a number of tools for drawing complex images: **Graphic Slur tool, Crescendo tool, Arpeggio tool, Graphic Beam tool, Trill tool, Multiple Measure Rest tool, Octava tool** and **Graphic Tuplet tool**. These tools are used to draw images that have a horizontal or vertical dimension to them. In each case (except when using the **Graphic Slur Tool**), you depress the mouse button to start the image, then drag the mouse to the desired height or width and release the mouse button. These images all have two Control Points - one at the beginning of the image and one at the end. Either or both the the Control Points can be adjusted. Since slurs have three Control Points - one at the beginning, one in the middle, and one at the end, an unusual drawing technique is used:

- depress the mouse button to start the slur,
- drag and release the mouse button at the middle point of the slur,
- then continue moving the mouse and click to finish the slur.
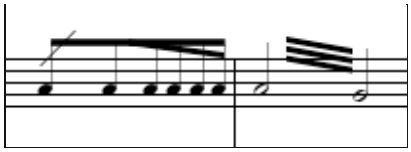
When using the **Graphic Tuplet tool** or the **Octava tool**, holding the Shift key down while drawing the image will draw the second of the two images shown on the tool button (an octava basso or a tuplet which goes below notes.)

The **Graphic Tuplet tool** should only be used for adding tuplet graphics in instances when tuplets do not appear automatically, or where the tuplet you want is too complex for NoteAbilityPro to calculate. Type the number you want to appear in the tuplet in the Command field before drawing the tuplet. If no number is entered, then a bracket with no number will be supplied.

COMMAND: 3 8:6 none (with Shift Key)

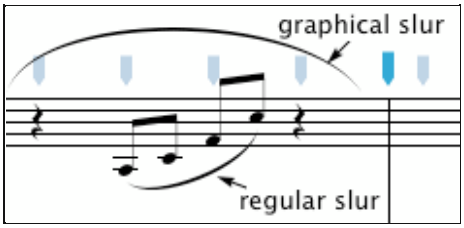


The **Graphic Beam tool** should only be used for adding beam extensions (eg. feathered beams or measured tremolo). Normal beam groups are added with the Beam Notes menu items (Command-b or Command-B).



Type the number of beams to be drawn in the Command field before drawing the beam. If no number is entered, a single beam is drawn.

The **Graphic Slur tool** should only be used for adding slurs in instances where the Slur Notes method (i.e. selecting notes and clicking on the **Slur Notes** button) will not work (such as when you want a slur over images other than notes or when you need more than 1 slur over a group of notes.)



– Remember that tuplets are normally created automatically by NoteAbilityPro as notes and rests are entered into the score, and beams and slurs are normally created through editing procedures such as **Beam Notes** and **Slur Notes**. The Graphic Slur, Graphic Tuplet, and Graphic Beam tools are only need for creating graphical versions of these images.

Drawing Tools

The **Line tool, Rectangle tool, Oval tool** and **Curve tool** are the NoteAbilityPro drawing tools. They allow simple graphic shapes to be drawn directly onto your score. These images are entered in the same way that the complex images are entered – with curves being entered in the same way that slurs are entered. The graphics attributes (eg. line width, fill colour etc.) for these images are set in the Graphics pane of the Music Images panel. The type of line drawn by the **Line tool** (eg. with arrowheads, dashed, etc) is set in the Line pane of the Music Images panel.

More complex graphics can be added by dragging PDF, TIFF or other graphic images directly onto the score or by using the Image Library panel to insert images into the score.

See also

- Entering Lyrics
- Entering music images
- Entering Slurs and Curves
- Control Points

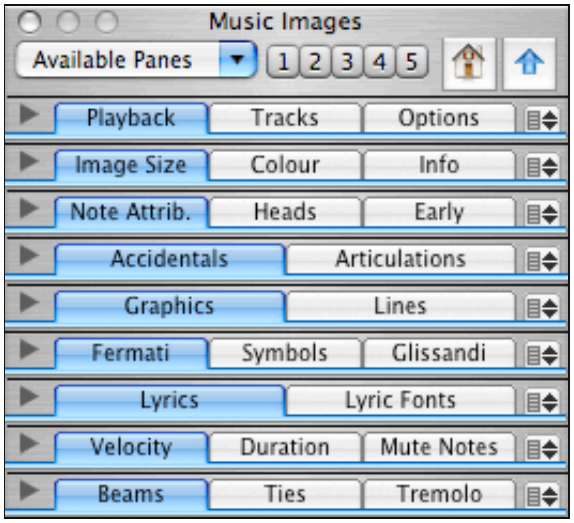
Music Images and Score Structure Panels

The two most important panels in NoteAbilityPro are the Music Images and Score Structure panels which normally remain visible on the screen while you are using the program.

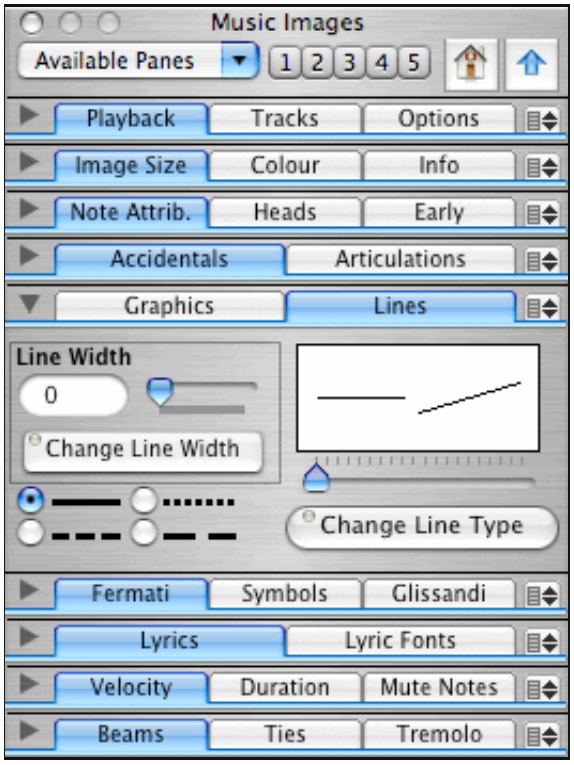
The first of these panels contains controls for editing and modifying most music images, while the second contains controls for altering the score structure. Each panel has several rows of panes and any number of these panes can be made visible at any time (provided you have enough screen space to show them).

Both the Music Images and Score Structure panels have pull-down menus at the top labeled **Available Panes** which allow you to add or remove panes from the panel while you are working. All of the panes that are currently loaded are indicated with a check beside them in the menu.

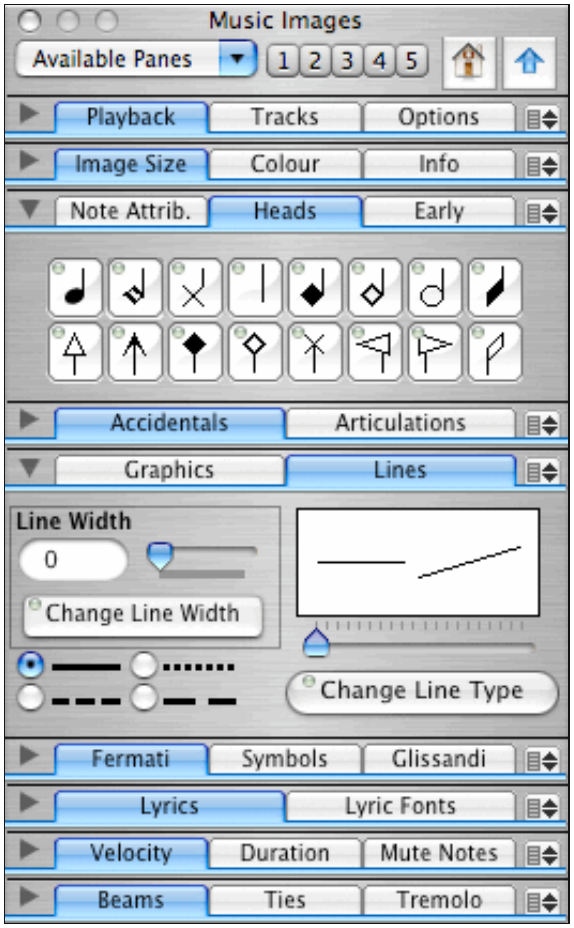
Each of the panes loaded into the panel can be opened or closed and clicking on the small triangle at the left side of the pane (or you can simply click on the tab you want to use to open or close that view. Since each of the panes in this panel has 2 or 3 tabs views that you can choose between there are a total of 24 different views available in this panel – and up to 9 can be visible at any one time. When all possible panes of the Music Images panel are loaded, but none are open, the panel will look as follows:



Clicking on the **Lines** tab will make that view visible, providing access to all the controls for adjusting Lines:



Clicking on the **Lines** tab again or clicking on the small triangle on the left of the tab bar will close this pane. If you click on the **Heads** tab while the **Lines** pane is open, a second set of controls, for altering noteheads, becomes visible as well:



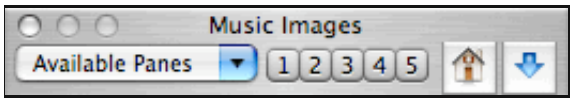
– To open a pane and close all other panes at the same time, click on a tab while holding down the Control key.

To save screen space, the entire series of panes can be completely collapsed and reopened by clicking on the large arrow located in the top-right corner of the panel.

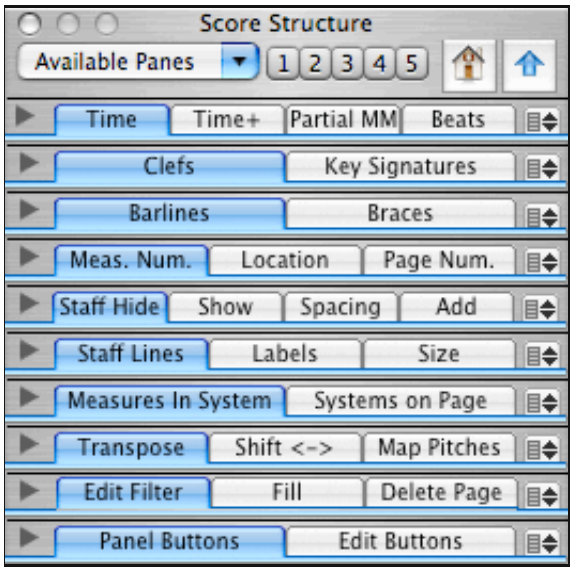
Each pane includes a small pull-down menu located on the top-right corner of the pane. This menu contains menu items that are relevant to the controls in the pane. In most cases, these menus are duplicates of menus in the main menu bar and are included here for convenience.

Clicking on the **Home** button located at the top of these panels moves the window to a default location on your screen.

The five numbered buttons along the top of these panels allow you to store preset arrangements of the panes and save them as preferences. To store an arrangement of visible panes, hold the Shift key down while clicking on one of the numbered buttons. To recall a stored preset, click on the button and the stored configuration of panes will be loaded and displayed.



The Score Structure panel is controlled in exactly the same way. There are 28 panes available in this panel which can be used to adjust the score structure and to perform some of the advanced editing procedures such as transposition.



– When you first start using NoteAbilityPro, not all the available panes will be loaded into the Music Images and Score Structure panels -- these can be loaded as they are needed. When NoteAbility quits it will re-open next time with the panel configurations you last used.

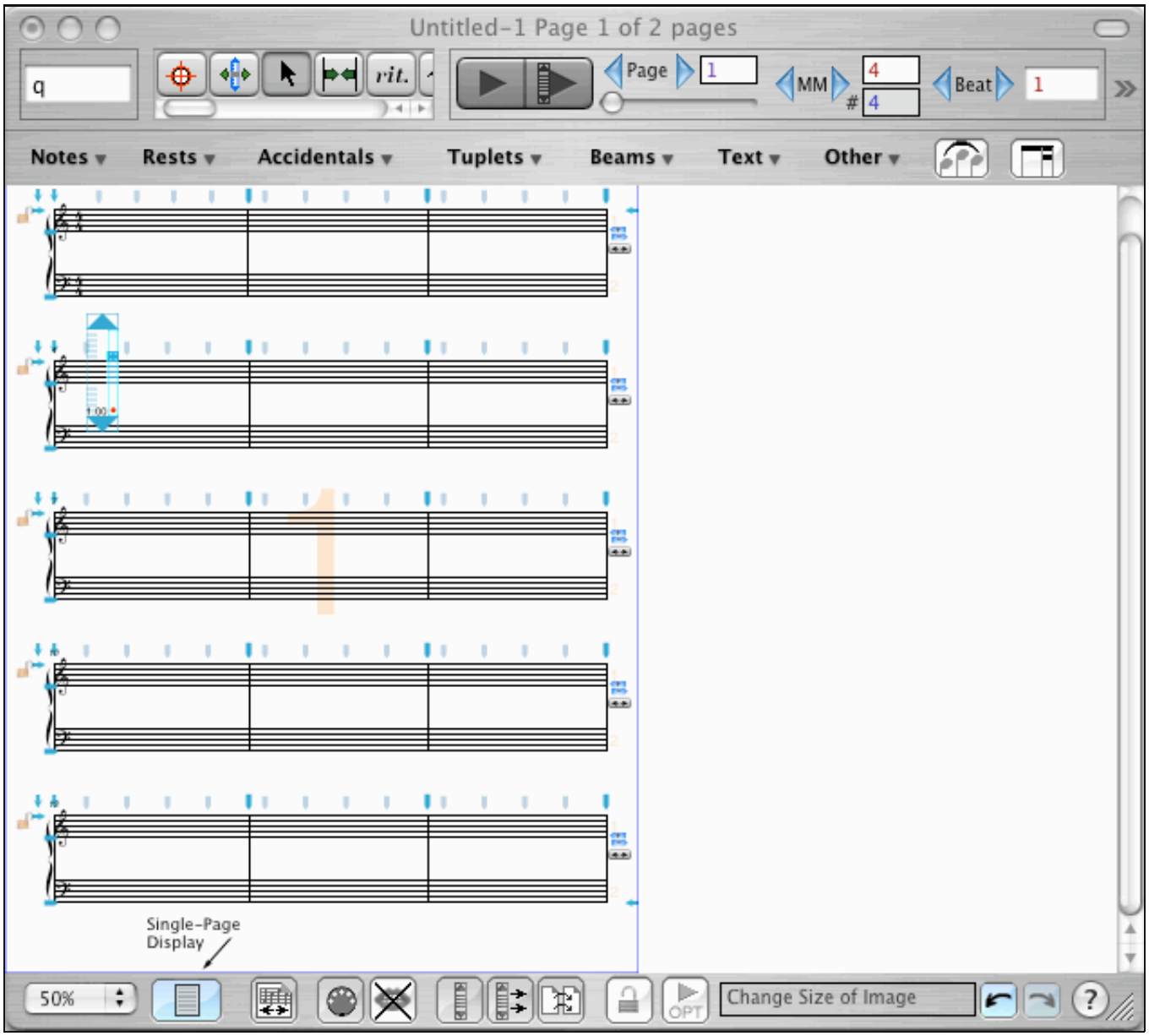
See also

- Music Images Panel
- Score Structure Panel

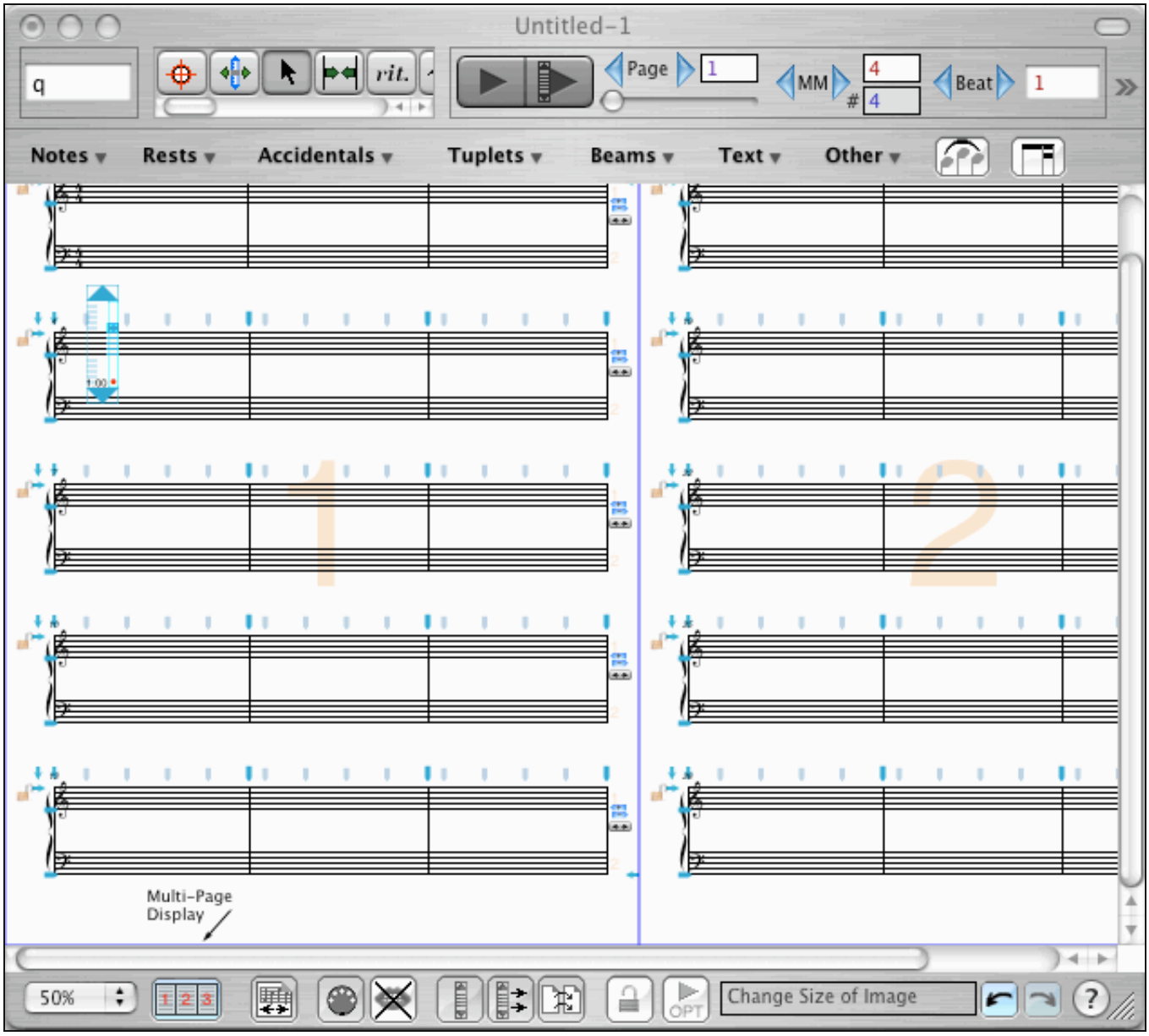
Multi-Page Display

NoteAbilityPro supports two modes of viewing scores:

Single-Page display



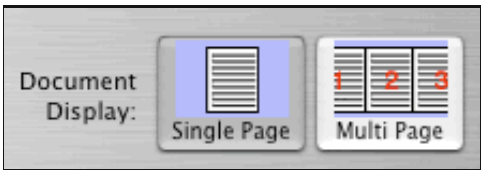
Multi-Page display



You can switch between display modes by clicking on the **Page Display Mode** button at the bottom of the score window or by selecting the *Single-Page Display / Multi-Page Display* item from the *Format* menu.

Single-Page display allows only one page of your score to be visible. Multi-Page display shows the entire score as a series of pages side-by-side. When using Single-Page display, you must click on the page arrows (at the top of the score) in order to view a different page (or to create a new page). When using Multi-Page display you can use the horizontal scrollbar located at the bottom of the score window to move through your score.

Multi-Page or Single-Page display can be set as a preference in the **Other** tab of the NoteAbilityPro Preferences panel. Select one of the two modes (shown below) and click on the **Save** button in the Preferences panel.



When using Multi-Page display, the horizontal scroll bar can be used to move through all pages in the score. As well, you can drag the Entry Cursor from page to page or you can use the Overview Panel to

move from page to page. When using the Selection arrow, a rectangular selection is restricted to the dimensions of the page on which you begin your selection. However, it is possible to shift-select images on different pages. Whenever you click the cursor on a new page in your score, that page becomes the active page, and the Entry Cursor should appear on that page and the current action should take place. To avoid images being added unintentionally, it is recommended that when moving to a new page, you hold down the Command key and place the Entry Cursor on the new page (by clicking the mouse button on that page) before performing the action.

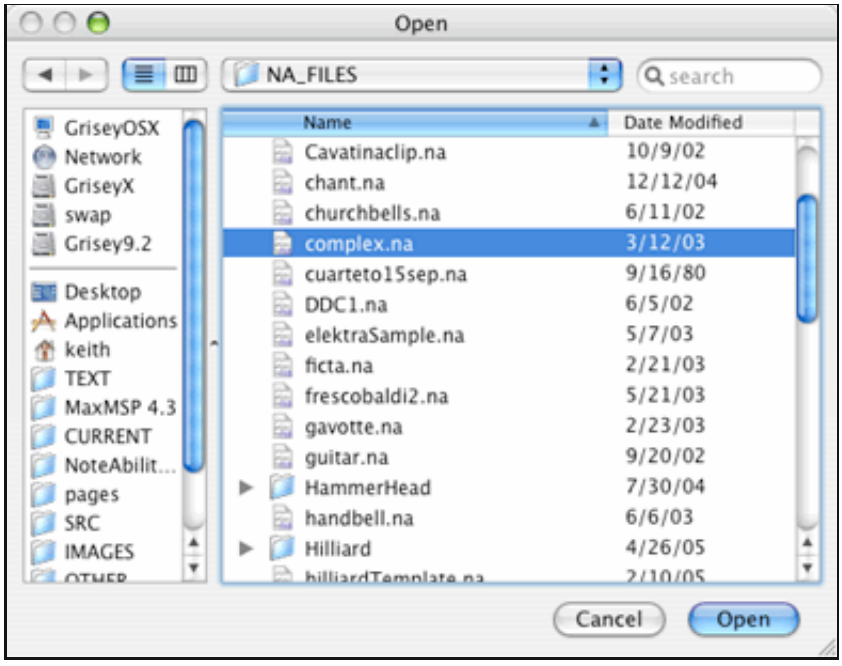
- NoteAbilityPro users who are running on slower computers (eg. using G3 or slow G4 processors) or who are working on very large documents may want to use Single-Page display mode. Since all the score pages are loaded into memory when using Multi-Page Display mode there are far more demands on your system. If you find that the NoteAbilityPro becomes slow to respond to your commands when using Multi-Page Display mode, you should switch to Single-Page Display mode.

See also

- NoteAbility Preferences
- Overview Panel
- Score Controls

Open an Exisiting Document

1. Choose **Open...** from the **File** menu.
2. In the Open panel, select the file or files you want to open.
3. Click **Open**.



The NoteAbility Open panel will locate either the default directory set in the Preferences panel or the last directory you opened a NoteAbility file in.

Select the file (or files) you want to open and click on the **Open** button. If you decide you do not want to open the files, click on the **Cancel** button. If you would like the current directory to be added to your list of favourite places, click on the **Add to Favourites** button.

To open more than one file at a time, Shift-click or Command-click the desired files. It is only possible to open multiple files if they are located in the same folder or directory.

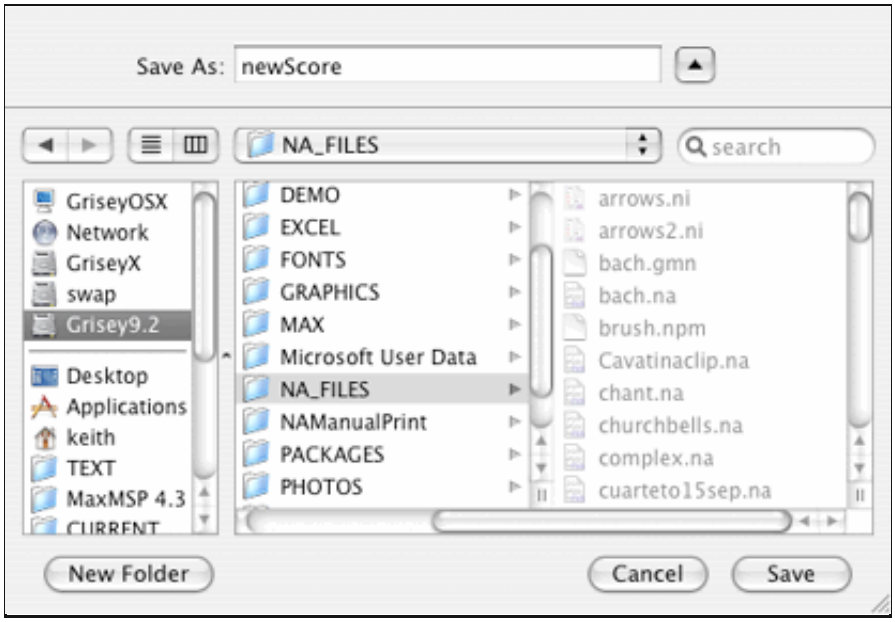
- You can double-click a NoteAbility file in the Finder to open the file.
- You can drag a NoteAbility file (i.e. a file with the extension ".na ") onto the NoteAbility application icon. to open the file.
- Recently opened NoteAbility files can also be opened using the **Open Recent** menu item in the NoteAbility **File** menu.

See also

- Create a new document
- Save a new document

Save a New Document

1. Choose the **Save...** menu from the **File** menu.
2. In the Save panel, name the file and select the folder you want to put it in.
3. Click **Save**.



If you click on the **Cancel** button the Save Panel closes and the document remains unsaved. To place the document in a new folder, click on the **New Folder** button and give the folder a name. When you click **Save**, the panel closes and the file is saved at the location you have indicated. The name you have given the document will appear in the score window's title bar.

The extension .na is automatically added to NoteAbility files – it is not necessary for you to add this extension to the file name.

– Once a document has been saved on disk, the **Save** command will overwrite the existing file with the new changes.

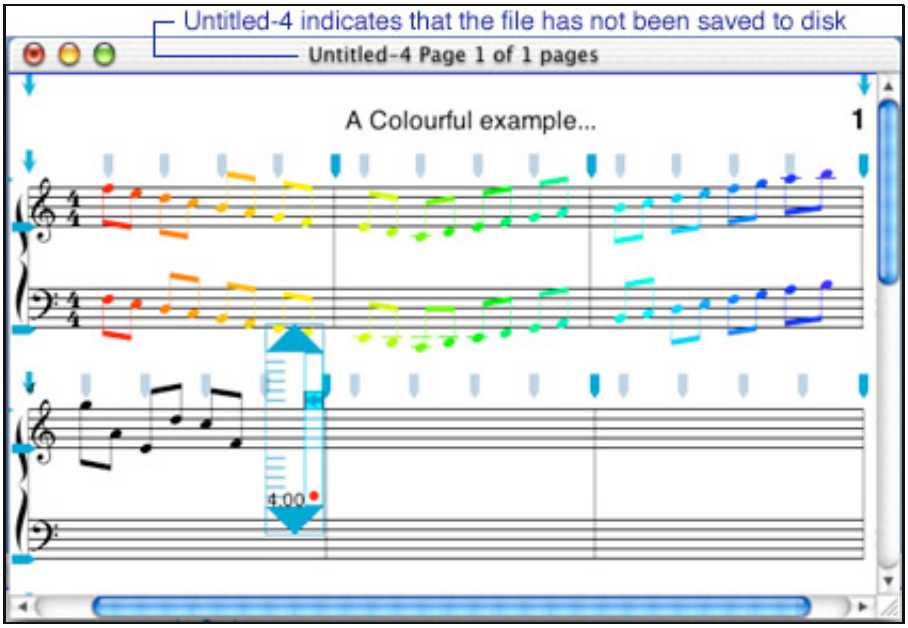
– You can also replace a file on disk with the one you're saving. In the panel above, select the file you want to replace and click **OK**. In the panel that asks if you want to replace the file, click **Replace**.

See also

- Create a new document
- Save document under a new name
- Save in another file format
- Save changes

Save Changes

1. Choose **File** from the main menu.
2. Choose the **Save** menu from the **File** menu.
3. If the document has previously been saved, then the file is updated on your disk. If it has not yet been saved, then the Save Panel will appear allowing you to name the file.



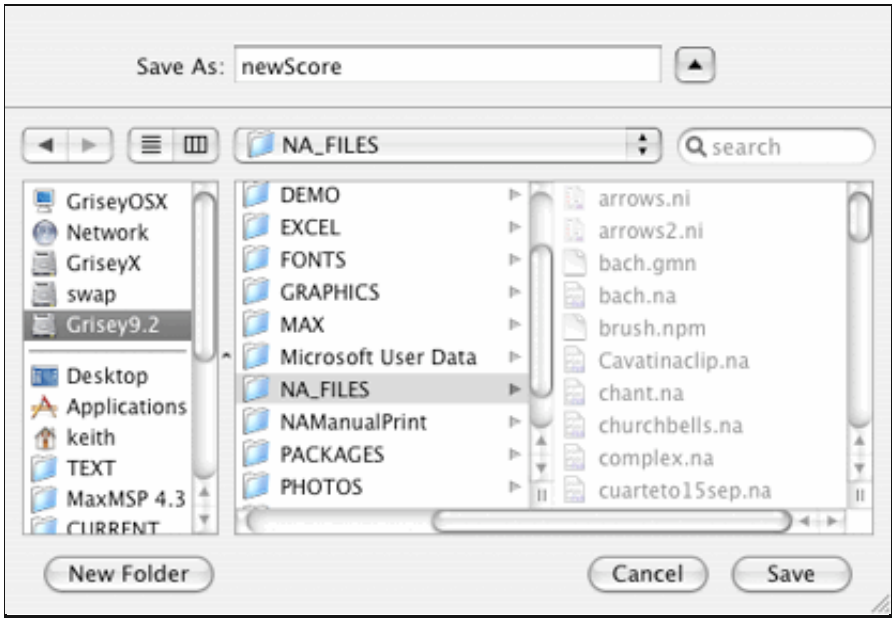
- When you choose Save... the contents of the window replace the previous version of the document on disk. If you want to save the file without over-writing the previous version of the file use Save As...and give the document a new name.
- You should save changes periodically as you work on a score, not just when you're about to close the file.

See also

- Save a new document
- Save in another file format
- Save document under a new name

Save As

1. Choose the **Save As...** menu from the **File** menu.
2. In the Save panel, give a new name to the file and select the folder you want to put it in.
3. Click **Save**.



When you click on the **Save** button, the previous copy of the file remains unaltered (since the last time it was saved), and the new document name will now be used for the file. The new document name will appear in the title bar of the document.

Click on the **Cancel** button to halt the save operation and keep the original document with its original name.

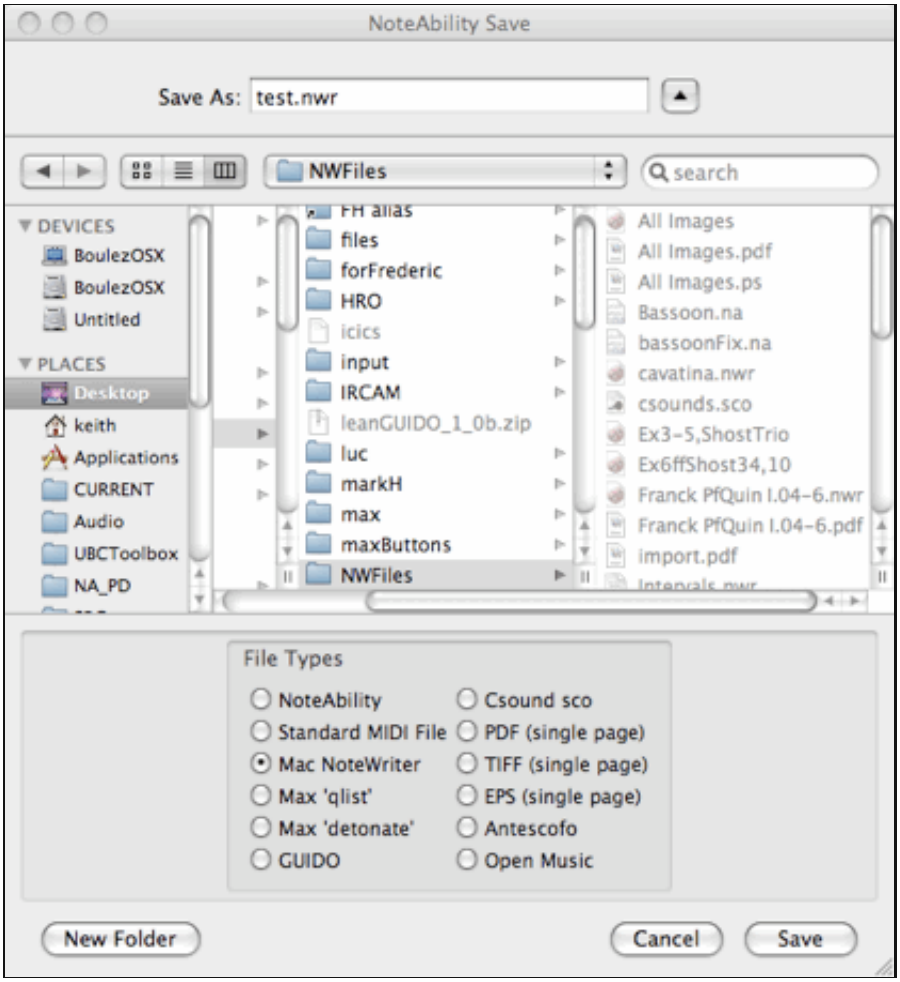
To place the new copy of the document in a new folder, click on the **New Folder** button and give the folder a name.

See also

- Save a new document
- Save in another file format
- Save changes

Save To

1. Choose the **Save To...** menu from the **File** menu.
2. In the NoteAbility Save panel, select the file type you want to save the file in
3. Name the file and select the folder you want to put it in.
4. Click **Save**.



The available file formats are:

File Type	Extension	Description
NoteAbility	.na	This is the normal NoteAbility file format and is only included in this panel for completeness.
Standard MIDI	.mid	For transferring scores to other music applications on any hardware platform
Mac NoteWriter	.nwr	For transferring scores to the Macintosh program - NoteWriter.
Max qlist	.pat	For transferring scores into Max qlists objects. MaxMSP is real-time interactive performance software which runs on a variety of platforms.
Max detonate	.pat	For creating Max detonate objects (which are used for score following in MaxMSP).
GUIDO	.gmn	For creating Guido Music Notation file for export to other music notation programs and computer music systems.
Csound sco	.sco	For creating Csound score files (for use with the Csound software synthesis environment.)
PDF	.pdf	For creating a single page PDF file. This option can also be achieved by using the Save File option in the Print panel.
TIFF	.gif	For creating a single page TIFF file. This action can also be done by using the Grab application.

EPS	.eps	For creating a single page EPS file. This option can also be achieved by using the Save File option in the Print panel.
Antescofo	.txt	For creating an antescofo formatted score which can be used in conjunction with the MaxMSP Antescofo object for score following.
Open Music	.om	For creating an open music formatted score which can be imported into IRCAM's Open Music application.

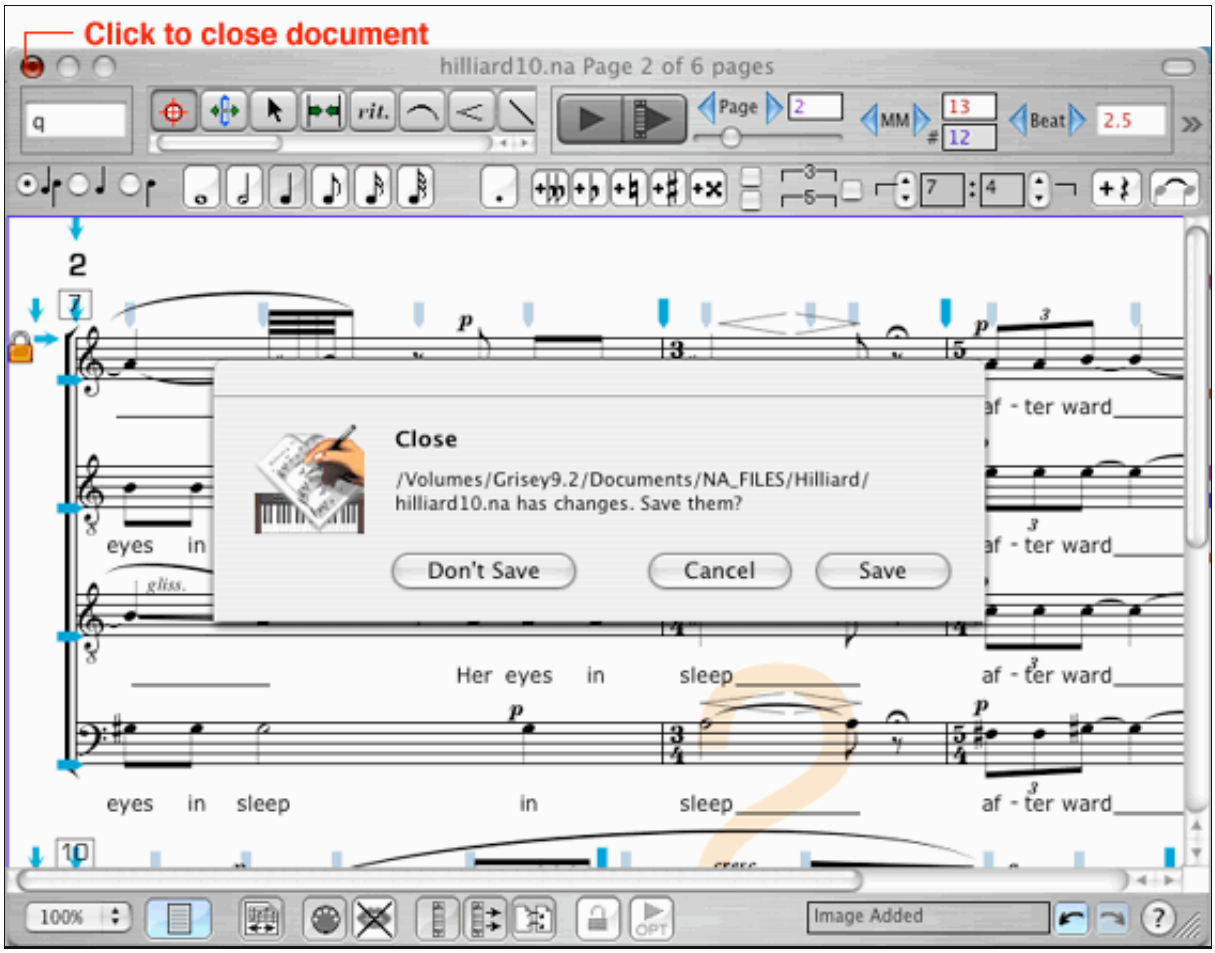
- – only notes, patch changes, time signatures, key signatures, and tempo information are included in Standard MIDI files.
- – If you want to save an entire NoteAbility document as an PDF file, use the Print... menu item, and set the Output Options (under the *Copies and Pages* pull down menu) to save the document as a PDF file. Once this is done, click on the **Save...** button in the standard Print panel. Also, individual pages can be copied in TIFF or PDF format and pasted directly into graphics applications by setting the Copy Types panel and using the Copy All command.
- – Always remember to save your document in NoteAbility format (with the **Save...** or **Save As...** menu items) as well as saving it in an alternate file format. If you want to be able to open and edit the document at a later time using NoteAbility, you must save the file in NoteAbility format.

See also

- Save a new document
- Save Changes
- Save Document under a new name

Close a Document

1. Click the close button in the title bar of the document window.
2. If you've made changes since you last saved the document, a panel appears asking whether you want to save changes to the document.
    - Click **Save** in the panel to save the document.
    - Click **Cancel** to stop the document from closing and continue working on it.
    - Click **Don't Save** to discard your changes.



– You can also close a document by choosing the **Close** item from the **File** menu or the **Close Window** item from the **Window** menu.

See also

- Save changes

Hide NoteAbility Pro

To hide the NoteAbilityPro application, choose **Hide NoteAbilityPro** from the **NoteAbilityPro** menu.

To make NoteAbilityPro visible again, double-click the NoteAbilityPro application icon on the Dock (N.B. the Dock is the row of icons at the bottom of your screen - running applications have a triangle at the bottom of their icon).



To hide (i.e. miniaturize) a single file rather than the entire application, either:

- double-click the title bar of the file.
- click on the "miniaturize button" in the file's title bar  (this button has a "-" sign in it).

When the file is miniaturized, an icon for the file is added to the Dock. To make the file visible again single-click the icon (representing the file) which is now located on the Dock.



- Hiding NoteAbility removes all its windows from view while NoteAbility continues to run. When you unhide NoteAbility, all its windows reappear and the application is activated.

- If you log out while there are hidden applications still running, you will be prompted to save changes to all unsaved files before quitting and logging out.

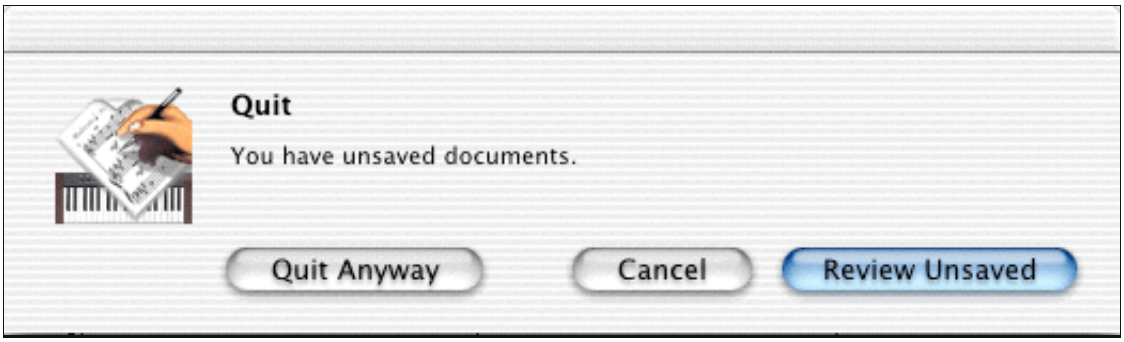
See also

- Quit NoteAbilityPro

Quit NoteAbility Pro

To Quit NoteAbility choose **Quit** from the **NoteAbilityPro** menu.

If you have any unsaved documents open when you choose **Quit**, a panel appears asking you whether you want to save your files before quitting.



- Click on the **Review Unsaved** button and you will be prompted to save each "unsaved" files OR
- Click **Cancel** to stop the **Quit** command and continue using NoteAbilityPro OR
- Click **Quit Anyway** to quit without saving "unsaved" files.

– Quitting NoteAbility puts away all the windows associated with the application.

– If you think you may want to edit another document later in your work session and just want your NoteAbility windows out of the way, it's better to hide NoteAbility than quit it.

See also

- Hide NoteAbilityPro

Entering Music into the Score

NoteAbility can be used to create a wide variety of scores from the simplest song to the most complex orchestral score. This Chapter discusses how music images are entered on the score.

- Entering music images
- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering notes from MIDI file
- Entering chords
- Entering text
- Entering lyrics
- Adding graphic images

See also

- 1 - Getting Started
- 2 - Overview
- 3 - Basic Program Operation
- 5 - Adjusting and Editing the Music
- 6 - Music Images Panel
- 7 - Score Structure Panel
- 8 - NoteAbilityPro Menus
- 9 - Other NoteAbilityPro Panels
- 10 - Page Setup and Printing
- 11 - Audio and Playback
- 12 - Reference
- 13 - Example Scores and Tutorials

Entering Music Images

Entering Simple Images

To add images such as notes, rests, dynamic markings and other simple musical symbols (eg. signa, fermata, pause, down bow, etc.) select the Insert Image tool from the NoteAbility Tool palette and type the appropriate character or sequence of characters on the keyboard. The text you type will appear as the **Current Command** at the top of the score window. Commands can be also be entered by selecting the image in the Note Palette (located in the Score Controls), or by selecting the image in the Image List panel in the *Help* menu. If regular notes or rests are being entered, the Entry Cursor should be placed on the correct staff and at the desired beat position - these images are placed at the left edge of the Entry Cursor (and may be dragged up and down while the mouse button is depressed.) Other images are entered at the mouse cursor position regardless of which staff the Entry Cursor is on.

Entering Complex Images

To add images such as trills, octava signs, arpeggios, crescendi or decrescendi, multiple measure rests, lines, rectangles, ovals or curves, select the appropriate tool from the NoteAbilityPro Tool palette. Place the cursor on the score, depress the mouse button and drag the mouse to draw the image. Trills, octava signs and multiple measure rests are normally drawn left to right and arpeggios are drawn bottom to top. Crescendi can be drawn either left to right (crescendo) or right to left (decrescendo). Lines, ovals and rectangles can be drawn in any direction. Mulitple measure rests and triplets use the number that is typed in the Command field. Ovals, Lines, Rectangles and Curves are drawn with the currently Graphics settings (from the Graphics pane of the Music Images panel). Different line types (eg brackets, pedal markings, arrows etc.) can be set in the Line pane of the Music Images panel. To create an octava basso or a downward tuplet, select the tool and hold the shift key down while clicking and dragging the mouse.

Slurs are normally enetered by selecting groups of notes and clicking on the **Slur Notes** button in the Score Controls. You can use *Shift-Selecting* to select a series of note groups to be slurred -- a slur will be added to the notes in each of the selected groups.

Graphic slurs can be entered by selecting the slur tool from the NoteAbility Tool palette.

> - When NoteAbility starts up the **Slur Notes** button is set as the Hot Button -- the small circle on left side of the button is highlighted) Uou can activate any button that is the Hot Button by typing Command-spacebar.

To add a graphic slur (i.e. slurs not attached to notes) or a curve, select the Graphic Slur or Curve tool from the NoteAbility Tool palette, depress the mouse button to start the slur or curve, drag to the centre point and release the mouse to set the middle point. Continue dragging the mouse to create the second half of the slur and click the mouse button again at the location you want the slur or curve to end. Slurs and curves should be drawn from right to left.

Again, the process for adding a graphic slur or curve is:

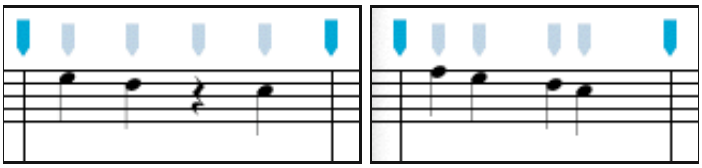
1. depress the mouse button to start the image
2. drag the mouse (with the button down)
3. release the mouse button at the midpoint of the image
4. drag the mouse (with the mouse button up)
5. click the mouse to finish the image

Image Associations

All images appear at the image size indicated in the Image Size pane of the Music Images panel -- normally this will be the same image size as the staff that the Entry Cursor is on -- and they are associated with the staff that is closest to the point where the image first appears. As well as being associated with a staff, every image has a beat position within the measure it appears in. The staff association affects how the image will be adjusted vertically and the beat position affects how the image will be adjusted horizontally. Images will generally move up and down as the staff they are associated with changes its vertical position on the page. The horizontal position of the image is altered as the rhythmic spine is adjusted or the measure is automatically formatted.

> – The rhythmic spine is the horizontal position of beats within the measure. The spine can be altered by moving the Beat Buttons.

All beats are equally spaced -- Altered rhythmic spine



Entering Notes

Although most images are entered simply by specifying the Command and clicking the mouse on the score, NoteAbility provides a variety of methods for entering notes. For more details on theses methods, refer to the following sections of the documentation:

- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering notes from a MIDI file

See also

- Entering lyrics
- NoteAbility Command List
- Control Points

Entering Notes with the Mouse
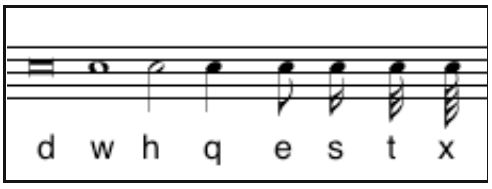
1. Choose the Insertion tool from the NoteAbilityPro Tool palette.
2. Select the desired note duration from the Note palette or type the corresponding Command.
3. Move the Entry Cursor to the correct staff and beat position and click on the mouse button to place the note on the page.

For notes to be entered on the page, the Insertion tool must be selected, and the Entry Cursor should be placed at the desired staff and beat location. Notes are entered according to the Current Command (as displayed in the Score Controls). Commands can be entered by typing on the keyboard, by selecting an image in the Note Palette (which is also located in the just above the score), or by selecting the image from the Image List panel in the Info menu.

There are three different categories of notes:

1. Regular notes which are entered at the beat position indicated by the Entry Cursor.
2. Graphical notes which can be placed anywhere in the measure (regardless of where the Entry Cursor is)
3. Grace notes which are smaller version of Graphical notes.

The Commands for regular notes are:
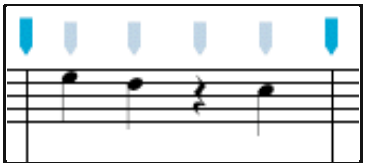


Command	Image	British Terminology	Duration
d	double whole note	Breve	8.0 beats
w	whole note	Semi-breve	4.0 beats
h	half note	Minim	2.0 beats
q	quarter note	Crotchet	1.0 beat
e	eighth note	Quaver	0.5 beats
s	sixteenth note	Semiquaver	0.25 beats
t	thirty-second note	Demisemiquaver	0.125 beats
x	sixty-fourth note	Hemidemisemiquaver	0.0625 beats
z	one-twenty-eighth note	Semihemidemisemiquaver	0.0625 beats

Graphic notes commands have a prefix of "&" (eg &w, &h, &q). Grace notes have a prefix of "g" (eg. gw, ge, gs). Graphic notes are only used in instances where the notation requires notes that to be unmeasured. Likewise, grace notes can be positioned freely in front of or after regular notes.

- – Add Grace Slash and Remove Grace Slash menu items (in the *Modify/Notes* menu) can be used to add or remove a slash to a grace note
- – A Build Grace Chord menu item (in the *Modify/Notes* menu) can be used to create chords out of individual grace or graphic notes.

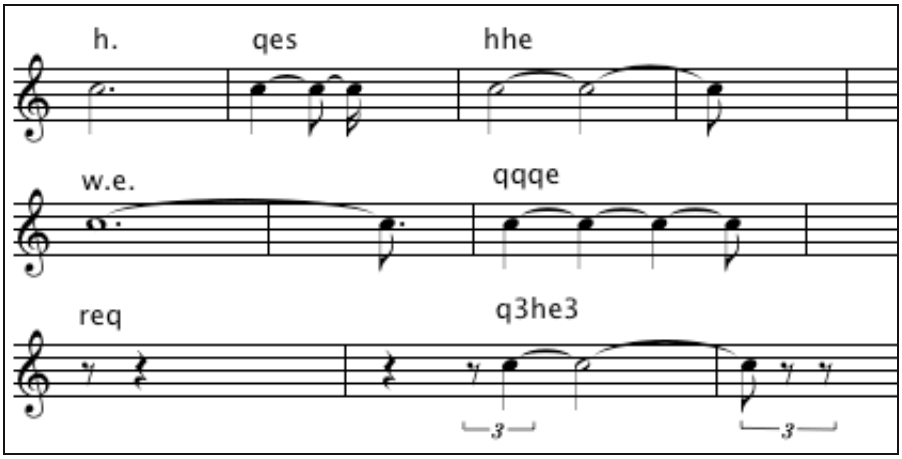
Rests use the same sequence of commands with a prefix of "r" (eg. rw, rh, rs) and graphic rests have the same sequence of commands with the prefix "&r". As an alternative, rests can be entered without the "r" prefix by using Command-r (or the Insert Rest button on the Control panel). This short cut allows you to insert rests of the same duration as the last note without changing the Command. In the example below, the Command was set to "q", then two notes were entered followed by Command-r then another note.



When entering regular notes or rests, commands can combine any of the duration characters (d, w, h, q, e, s, t, x, z, and .) to create a sequence of tied notes or repeated rests. Thus the command "q." will create a dotted quarter note while "qe" will create a quarter note tied to an eighth note.
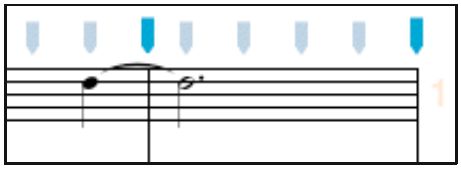
It is also possible to indicated simple tuplet values in the command -- "q3e5" will create a triplet quarter note tied to a quintuplet eighth note. (A number 2 - 9 following a duration is interpreted as a tuplet value). Some examples of commands and the results should make this clear:

Command	Duration	Notes
h.	3.0 beats	1/2 note (dotted)
qes	1.75 beats	1/4 tied to 1/8 tied to 1/16
hhe	4.5 beats	1/2 tied to 1/2 tied to 1/8
w.e.	6.75 beats	whole (dotted) tied to 1/8 (dotted)
qqqe	3.5 beats	1/4 tied to 1/4 tied to 1/4 tied to 1/8
req	1.5 beats	1/8 rest followed by 1/4 rest
q3he3	3.0 beats	tripet quarter followed by 1/2 notes followed by a triplet eighth note
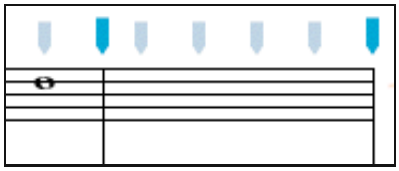


Normally, notes values will be entered as indicated by the series of durations even if the ties contradict the normal beat divisions of the measure. If you want ties to be automated so that they always conform to standard beat divisions in the measure change the **Tie Rule** preference (in the Rules tab of the Preference Panel).

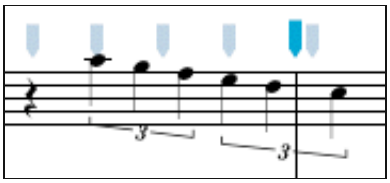
Thus, if you are on the fourth beat of a measure and you want a note that lasts 4 beats, type the command "qh." (or "qhq" if you want the half note at the beginning of the second measure to be tied to a quarter rather than entered as a dotted half.)



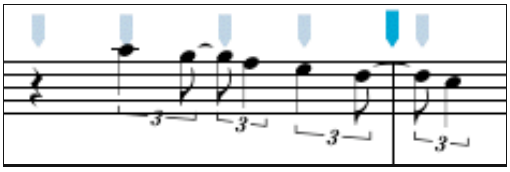
If you type the command "w" a whole note will be place at the fourth beat of the measure:



Although this may not seem to be a useful procedure at first, it allows you far more flexibility than if NoteAbility always calculated the tied groups. For example, creating triplets across a main beat or a barline is easy to do in NoteAbility. Here, quarter notes were entered with the triplet button checked.

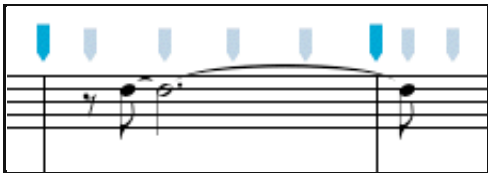


If this is not desired, the commands could be set to combinations of "q" and "ee" to create:



> – When notes and rests are pasted (with the Paste Into menu command), the durations are automatically recalculated and notes are grouped according to the normal beat divisions. To retain the same sequence of note and rest values use the menu command Paste Exact.

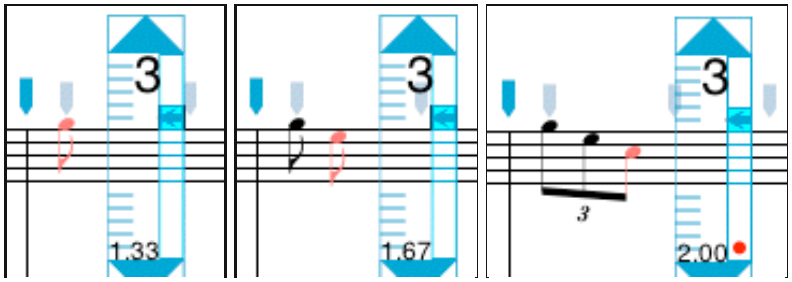
In the next example the command "eh.e" was used to enter a note at beat 1.5:



If Auto Increment is on, the Entry Cursor will move forward when a note or rest has been entered. If Auto Beam is on, notes are automatically beamed when a beat group has been completed. If Auto Format is on, the system is formatted whenever the Entry Cursor moves from the end of one system to the beginning of the next. These setting can be turned on and off from the Preferences panel.

> – To move the Entry Cursor back to the position of the previous note (in order to build a chord), click the Step Back button in the Control panel (or type Command-g).

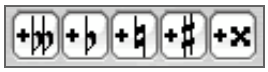
Tuplets (i.e. triplets, quintuplets and other groupings) are set with the check boxes on the Score Controls. The tuplet remains active until the check is removed. (E.g. if an eighth note is selected and the triplet check box is selected, triplet eighths will be entered.) Once a complete triplet group has been entered, the triplet number (with a bracket if necessary) is added. The stages of entering a beat of triplet eighths are:



– Tuplets can be hidden, and triplet brackets and ratio indications (eg 3:2) can be shown or hidden using the *Modify/Tuplets* menu items.

Accidentals can be added to the last note entered several different ways:

1. clicking on the accidental buttons in the Accidental pane in the Music Images panel,
2. by clicking on the Accidental buttons in the Score Controls:
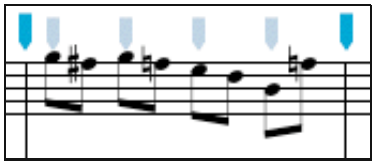


3. by using the menu items in the *Modify/Accidentals* menu which have the following command shortcuts:

Command – 2	Add Double Sharp
Command – 3	Add Sharp
Command – 4	Add Natural
Command – 5	Add Flat
Command – 6	Add Double Flat

4. by right-clicking (or Control-clicking) the mouse on the score window in order to bring up the score pop-up menu, then selecting the Add Sharp, Add Natural, or Add Flat menu items.

Normally redundant accidentals (after the first accidental on that pitch in the measure) are not shown. If you want the accidental to be shown, use the Force Accidental menu item (Command – 1). In the example below, the F natural in the last beat is considered to be redundant, so it only appears if the accidental is forced.



If you prefer an accidental behaviour other than the normal "classical" behaviour of accidentals (i.e. accidentals are considered to carry through the current measure, then you can select a different Accidental Rule from the Rule tab of the Preferences panel.

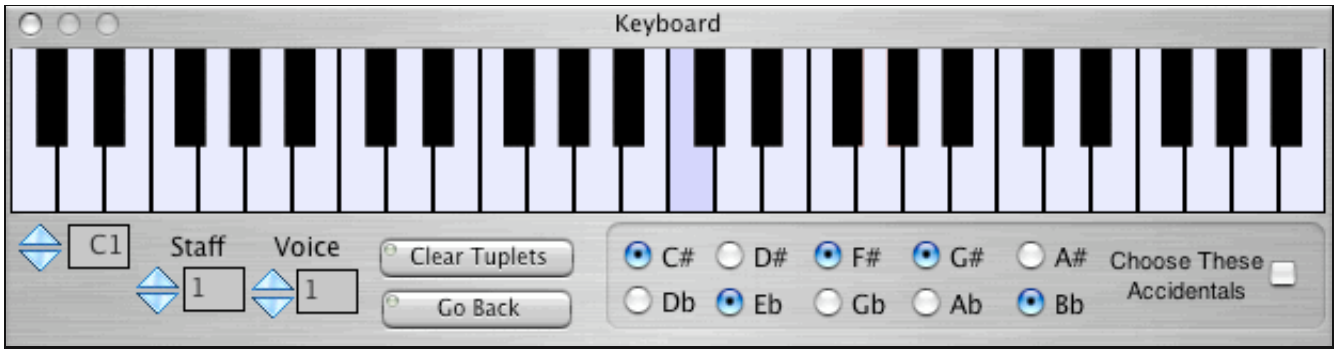
See also

- Entering notes with the on-screen keyboard
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering notes from MIDI file
- Entering lyrics
- Set NoteAbility preferences
- Control Points

Entering Notes with the Onsceen Keyboard

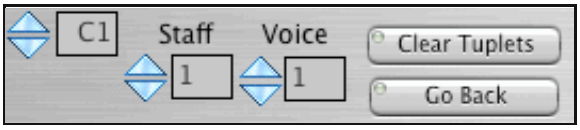
1. Choose *Keyboard...* from the *Tools* menu.
2. Choose the Insertion tool from the NoteAbility Tool Palette.
3. Select the desired note duration in the Note Palette or type the corresponding Command (eg. *q*, *e*)
4. Click the desired pitch on the keyboard.

In addition to placing notes directly on the page, they can be entered from the on-screen keyboard which can be called from the *Tools* menu (Command-k) or by clicking on the Keyboard button located on the **Panel & Edit Buttons** pane of the Score Structure panel.



The Command field indicates which note value (or sequence of tied notes) will be entered, the Entry Cursor determines the beat position of the note, and the pitch is set by the note played on the keyboard. The appropriate accidental is added automatically either according to the current key signature or according to the accidentals set on the bottom-right corner of the Keyboard panel.

A number of additional controls are available on the on-screen keyboard.



The arrows at the far left alter the register of the keyboard up and down by octaves. The number displayed indicates what the bottom note of the keyboard is. (C2 is an octave below middle C, C3 is middle C, etc.) Middle C is highlighted on the keyboard so it can be seen easily.

The Staff and Voice arrows allow you to switch staves within the system or to switch voices on the staff. The **Clear Tuplets** button clears any tuplet values that have been set, and the **Go Back** button returns the Entry Cursor to the previous beat position so that a chord can be built.



The accidental radio buttons allow you to force certain accidentals when one of the 5 black keys is played. Click on the **Choose These Accidentals** checkbox and choose the accidentals you want. If you don't have **Choose These Accidentals** checked, NoteAbilityPro will choose accidentals based on the current key signature.

- A note can be switched to its enharmonic above or below with the menu items located in the *Modify/Accidentals* menu or using the enharmonic buttons on the Toolbar. For example to change F# to Gb use **Enharmonic Above** and to change F# to Ex use **Enharmonic Below**.

See also

- Entering notes with the mouse
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering notes from MIDI file
- Entering lyrics
- Set NoteAbility preferences

Entering Notes with the Midi Keyboard

1. Choose the Insertion tool from the NoteAbility Tool Palette located at the top of the score window.
2. Select the desired note duration from the Note Palette or type the corresponding note Command (eg. *q*, *e*)
3. Play a note or chord on your MIDI keyboard.

A MIDI keyboard can be used to specify the pitch, with the Current Command indicating the note duration (or sequence of tied notes) and the Entry Cursor determining the beat position. This is commonly known as MIDI step-time recording. The new notes are not added to the score until the key on the MIDI keyboard is released so that you may hold down several notes at the same time to create chords.

- A MIDI keyboard with must be connected to your computer and configured as a MIDI input device in the Midi Ports panel before MIDI input can be used.

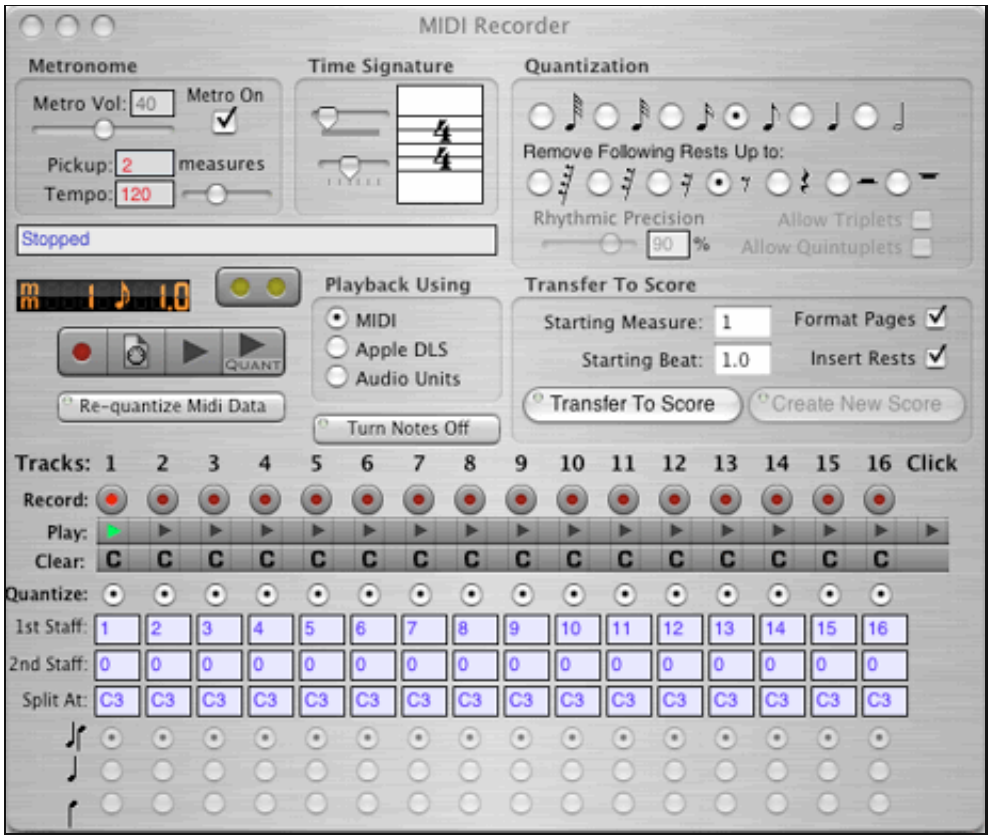
- When using step-time recording, make sure you clearly separate the notes when playing. If a second key is depressed before the previous one is released, the two will be formed into a chord.

See also

- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes with the MIDI recorder
- Entering notes from MIDI file
- Entering lyrics
- Set NoteAbility preferences
- MIDI Connections

Entering Notes with the Midi Recorder

1. Set up a new document or open an existing score.
2. Select *MIDI Recorder...* from the *Audio/Midi* menu. The MIDI Recorder panel will appear:



The MIDI Recorder is used for recording tracks from a MIDI keyboard and transferring them to your score. You can record up to 16 tracks, and can transfer the recorded material to any location in the score. Each track can be transferred to a single staff, or the track can be split between two staves (which need not be continguous). As well, you can specify which voice you want the track transferred to, so it is possible to transfer more than one track to a single staff.

The Record and Playback controls are located on the left side of the panel:



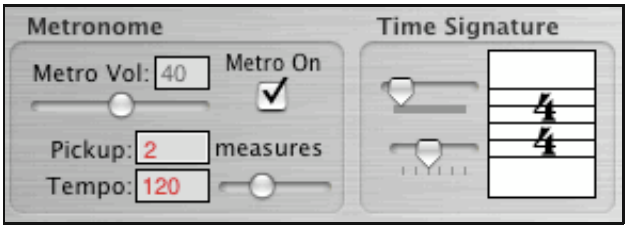
These controls allow you to Record MIDI from your keyboard, Read Standard MIDI files (created by other music applications), playback the original recording (or imported MIDI file), and playback the quantized recording (or imported MIDI file).

> – Quantization refers to the process or adjusting the rhythm and durations of a live performance to create a more metrically accurate version of the music.

The procedure for recording tracks of MIDI and transferring them to your score is as follows:

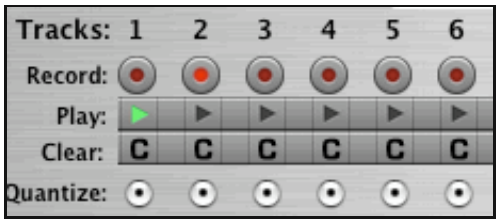
1. Set the metronome speed, volume and time signature.
2. Set the number of measures of pickup you want (this is the number of measures counted out before the recording starts)
3. Set the sound playback device you want to use - MIDI, Apple DLS, or Audio Units.
4. Select the track you want to record on by highlighting the record button for that track.
5. Click on the **Record** button in the Record and Playback controls and begin playing on your MIDI keyboard.
6. Click the **Record** button to stop recording once you are finished playing.
7. Quantize the performance by setting the appropriate quantization values and clicking on the **Re-quantize Midi Data** button.
8. Listen to the quantized score by clicking on the **Play Quantize** button. If the quantized performance does not sound correct, adjust the quantization settings and click on the **Re-quantize Midi Data** button again.
9. Continue recording other tracks if desired.
10. Set the staves and voices to which each recorded track should be transferred.
11. Set the measure number and beat position of the score that you want your recording transferred to and click **Transfer to Score**.

Step 1: Set the time signature and metronome.



The time signature for the metronome is set in the same fashion as the time signature is set in the Document setup - with sliders for the setting the numerator and the denominator. The metronome volume, tempo, and number of pickup measures can also be set. The metronome will only play if the M.M.On box is checked. During recording and playback, a metronome flashes on every beat and the current measure and beat are displayed.

Step 2: Set the record track



The 16 tracks have buttons for record, playback, a button to clear the track and a button to indicate whether or not the track should be quantized (either after a new recording is made or when the Re-quantize button is clicked.) You can record in only one track at a time. In the example above, track 1 has already been recorded, and the user is now playing track 1 while recording on track 2. To clear a track, simply click on the clear button.

The Quantize radio buttons allow you to quantize different tracks with different sets of quantization values. Once you have correctly quantized a track, turn the Quantize radio button off on that track and the track will no longer be quantized

Step 3: Click on the **Record** button



Play your music on your MIDI keyboard using the metronome as your guide. Remember to wait for your pickup measures before beginning.

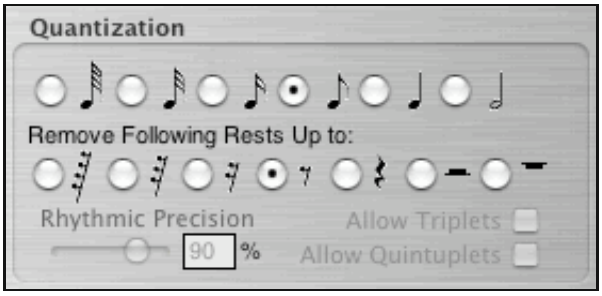
Step 4: Click on the **Record** button again to stop the recording.

There are two playback buttons. The first is for playing the original recording (or imported file) along with any errors or rhythmic inaccuracies that it may contain. The second play button (called Play Quantized) is for playing and stopping the quantized version of your performance.

- The **Turn Notes Off** button is used to turn off any "hung" MIDI notes. (These are notes that continue to sound when the stop button is pressed.)

Step 5: Quantize the performance

The Re-quantize button applies the current quantize values to the tracks that are set to be quantized. To check that you have used the best quantization values, listen to the quantized score by clicking on the **Play Quantized** button.

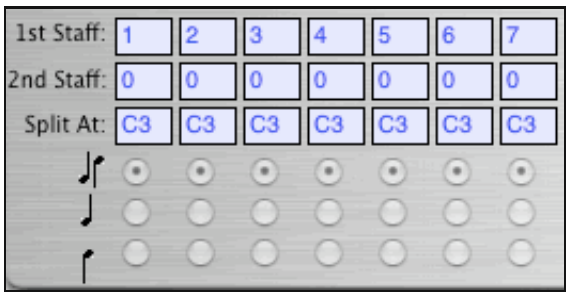


There are two sets of quantization values. The first set indicates the minimum value of rhythmic precision that will be allowed. (Eg. when set to a sixteenth note, all beat positions and durations will be rounded to the closest sixteenth note.) The second set of values indicates how much notes will be extended to fill in the rests between notes. This is necessary since it is not always possible to play notes without separating them and thereby placing a short rest between them. Experimenting with different quantization values and listening to the quantized score should help clarify the effect of various settings.

Step 6: Continue recording other tracks

You can record as little or as much MIDI data as you want before transferring it to the score. Sometimes it make sense to record an entire composition before transferring it, while at other times it may be better to record short fragments and transfer each one independently and then clear the track from the MIDI Recorder.

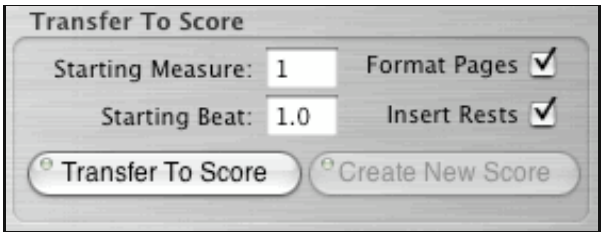
Step 7: Set the staves and voices for the transfer



The bottom section of the MIDI Recorder allows the staff and voice for each track to be set. The staves in the score are identified by the Staff ID (which is the idnetification number that appears at the right edge of a staff). If you want the track divided between two staves, then indicate the second Staff ID and a split point. Notes above the split point will appear on the first staff and notes below the split point will appear on the second staff. (The split point is indicated as a note name and octave number - middle C is C3). You also set which of the three possible voices you want to transfer the track to. Normally the first voice will be selected unless you want to transfer two tracks to the same staff in which case you will set one track to have stems up and one track to have stems down.

Step 8: Transfer your performance to the score

Set the measure number and beat position and transfer your quantized recording to the score.



First, set the starting measure number and beat position for the transfer. This is where measure 1, beat 1 of your quantized recording will appear. You should also set whether you want the pages to be formatted and whether you want rests to added wherever appropriate. When you are ready to send the quantized recording to the score, click on the **Transfer To Score** button. If you now want to make a new recording, remember to clear the data currently in the tracks by clicking on the **Clear** buttons on all the active tracks.

- – You must have an document open in order to transfer your recording to a score. If several scores are open, the transfer is made to the front-most score.
- – If notes are transferred to an area of the score where there are already notes, the new material will be merged with the original score material.
- – If more than one track is transferred to the same Staff ID and the same voice, the data will be merged on that staff.

See also

- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes in step-time with a MIDI keyboard
- Entering notes from a MIDI file
- Entering lyrics
- Set NoteAbility preferences
- MIDI Connections

Entering Notes from a Midi File

1. Set up an empty document with the number of staves needed to import your MIDI file.
2. Choose *MIDI Recorder...* from the *Audio/Midi* menu. Make sure that the quantization values are set to appropriate durations for the file you are reading (16th notes and 32nd rests are the default settings).
3. Click on the Read File Button  and select the Midi file from the Open Panel.
4. Play the quantized version of the MIDI file to check that the music sounds correct -- alter the quantization values and click on the **Re-quantize Midi Data** if necessary.
5. Set how the tracks should transfer onto the staves and voices in your score.
6. Click the **Transfer to Score** button.

Example file: Importing Bach's C Major Prelude

The score Bach's C Major Prelude is included as one of the example files that comes with NoteAbility. To import this file:

1. Set up a standard piano score (4/4 in C Major). For this particular file, a slightly wider page (10 X 14) with 6 systems per page (3 measures per system) works well. The time signature is 4/4 and the key signature is C major.
2. Select *MIDI Recorder...* from the *Audio/Midi* menu or click on the MIDI Recorder button on the Toolbar.
3. Make sure that the quantization values are set to 16th notes and 16th rests.
4. Click on the Read File Button and select the Midi file (BachCMajorPrelude.mid). It is located in the /Library/Application Support/NoteAbilityPro/NoteAbilityExamples folder.
5. Click on the **Re-quantize** button.
6. Select the desired Playback device on the Midi Recorder panel and click on the **Play Quantized** Button to listen to the quantized score. If the piece does not sound correct, alter the quantization values and click on the **Re-quantize** button again.
7. Set the tracks so that track 1 is going to staff 1, track 2 to staff 2 with stems up and track 3 to staff 2 with stems down.
8. Check that the Starting Measure is 1 and the Starting Beat is 1.0. Click **Transfer in Score**.

Other properly formatted MIDI files should work. Currently, they shouldn't include any tempo changes. Remember to set up a score with the proper key signature, time signature and as many staves as are needed. If you know that the imported file has meter changes in it, it is better to create the meter changes in your empty scorethan to change the meter after all the notes have been entered. You can use the Meter Map Panel to create all the meter changes in the score before transfering the music to the score.

- – The maximum number of tracks that the MIDI Recorder can accept is 16. To import more than 16 tracks, save your MIDI file in 16 track segments and import them into the MIDI Recorder one at a time.
- – When quantizing MIDI files, you should check that both the rhythms (i.e. the starting beat positions) and the durations of the music are correct. If notes that should be separated have been formed into chords, then reduce the quantization duration. If the music is rhythmically inaccurate, increase the quantization duration. If the notes are too short during playback (ie. they sound staccato) increase the duration of the **Remove Following Rests up to** setting.

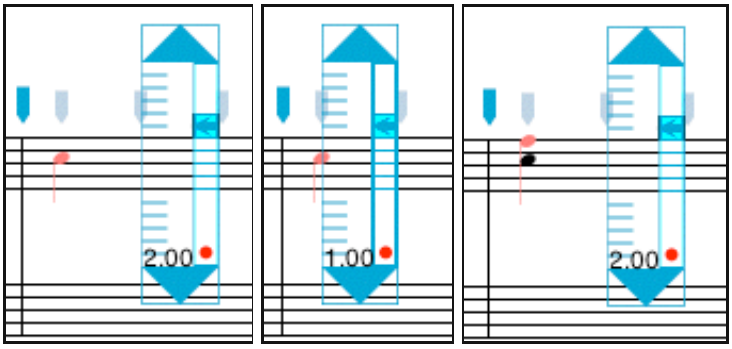
See also

- Entering notes with the mouse
- Entering notes with the on-screen keyboard
- Entering notes with the mouse
- Entering notes in step-time with a MIDI keyboard
- Entering notes with the MIDI recorder
- Entering lyrics
- Set NoteAbility Preferences
- MIDI Connections

Entering Chords

When more than one note is entered at the same beat location and in the same voice, NoteAbility creates a chord. Chords can be built at any time and in any order. You can enter a single line then go back to the beginning and enter a second layer of notes or you can enter a single note and immediately return to the previous beat position and add the next note of the chord.

First note added – Entry Cursor repositioned – Second note added

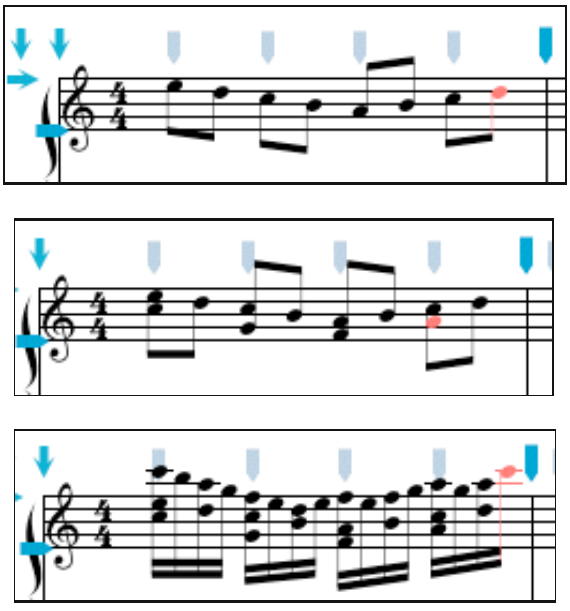


To return to the previous beat position either:

- click on the back arrow (small left-facing arrow) located on the Entry Cursor
- type command-g to step back to the previous note location
- press on the **Step Back** button on Score Controls 
- press on the **Go Back** button on the Keyboard panel
- turn the auto increment feature off using the button located at the bottom of the score window . This stops the Entry Cursor from moving to the next beat position after a note has been entered.

When chords are built, the stem direction and notehead position (on the right or left of the stem) is automatically calculated.

When different rhythmic values are used in a chord, the smallest rhythmic value is generally used when the chord becomes part of a beam. In the example below, a layer of eighth notes was entered followed by a layer of quarter notes, then a layer of sixteenth notes.



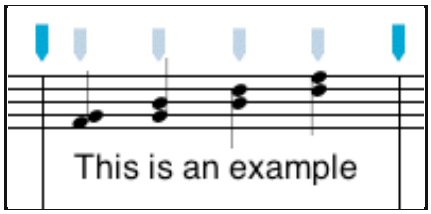
– Even though all notes in the above example appear as sixteenth notes, the original durations are retained and are used during playback or if the file is exported as a Standard MIDI file.

See also

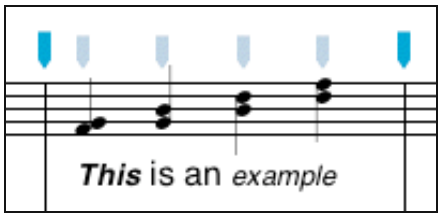
- Entering notes
- Entering notes from a Midi File
- Set NoteAbility preferences

Entering Text

1. Select the Measure Text or Page Text tool from the NoteAbilityPro Tool palette.
2. Click on the score where you want the text to appear.
3. Type the text (using Return to create multiple lines of text if needed)



NoteAbility text is entered by selecting either the Measure Text or the Page tool (depending on whether the text should adjust with the music [Measure Text] or remain fixed on the page [Page Text]), then clicking the cursor on the score, and typing on the keyboard. The entered text can be edited (using the same tool) by selecting portions o f the text and re-typing or pasting text from another source. All characteristics of the text (fonts, size, justification, leading, kerning, etc.) can be set either by selecting portions of the text and using the Font Panel (command-t) or by using the functions available in the NoteAbility *Font* and *Font/Text* menus.



Page Text remains at a fixed location on the page while Measure Text is associated to a staff and to a beat position in the measure. Information such as crescendo, decrescendo, tempo changes, and most other text comments (pizz., arco., etc.) should be entered as Measure Text since you normally want the text to be adjusted as the staff and beats are adjusted. Page Text is normally used for titles, authors names, copyright notices, and other text that should remain fixed on the page.

Although text boxes have two Control Points (one at the bottom-left, and the second at the top-right), the entire text can be moved by using the Selection tool, clicking anywhere on the text and dragging the mouse.

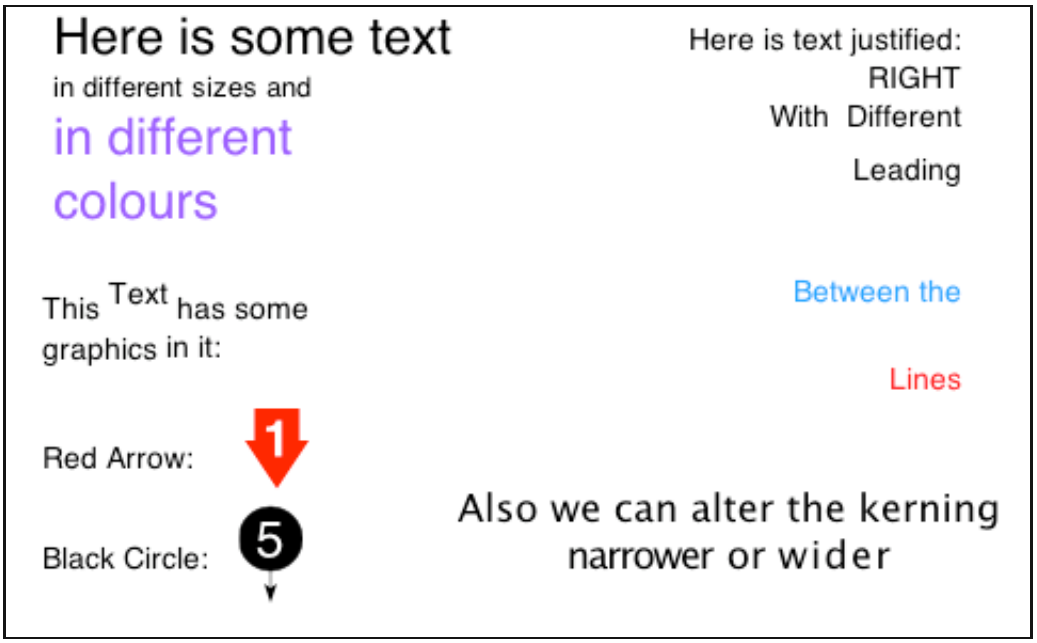
- Once you have entered text of one type or another (i.e. Measure or Page Text), you can use either of the text tools to edit the text without changing the text type. (In other words, Page Text always remains Page Text even though you may use the Measure Text tool to edit it.)

To change the colour of text, highlight the text you want to alter (using the Measure Text or Page Text tool), and drag a colour from the Color well on the Color Panel, (or from any other visible color well) onto the highlighted text.

To insert graphics (eg. TIFF files, PDF files, Quicktime Movies, etc.) into your text, select the Measure Text or Page Text tool, and click the cursor in the text box at the location you want the graphic image to appear. Locate the icon for the graphic image in the finder, and drag it to the text box.

Each text element in NoteAbility has its own text ruler which can be shown by clicking the mouse in the text box and choosing the *Show Ruler* item from the *Format* menu. The ruler can be used to change leading, tabs, and justification of the text.

The example below shows text in different fonts, sizes, justifications, as well as superscript, different leading, and inserted graphics.



– Max text can be inserted using the Max Text tool (icon with Max on it). This tool is used for inserting text messages into your score so the Max/MSP interactive software can be controlled during score playback. The beat location of the Max message appears above the text.

– You can force text to appear on every page of your score by selecting the text (with the Selection tool) and choosing the *Make Header* item in the *Modify/Text* menu.

– You can set text to be extracted into each document (during part extraction) by selecting the text (with the Selection tool) and choosing the *Make Text Global* item in *Modify/Text* menu.

– You can have a frame drawn around Text boxes by selection the text (with the Selection tool) and choosing the *Add/Remove Frame* item in *Modify/Text* menu.

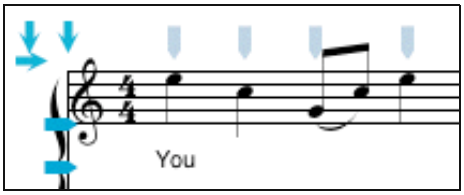
See also

- Text tools
- Modify Text menu
- Entering lyrics

Entering Lyrics
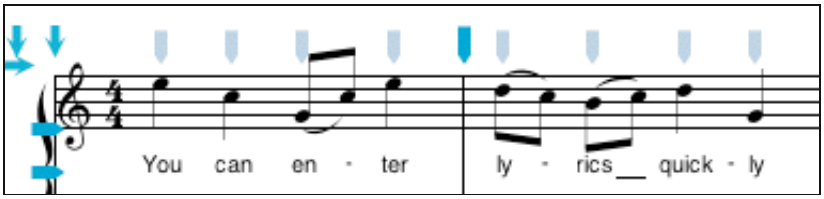
1. Select the Lyrics tool from the NoteAbility Tool Palette.
2. Position the Entry Cursor on the first note to receive a lyric.
3. Type the syllable or word to be centered under the note and press the Return key.
4. The word appears below the note and the Entry Cursor will then move to the next note in the current voice.





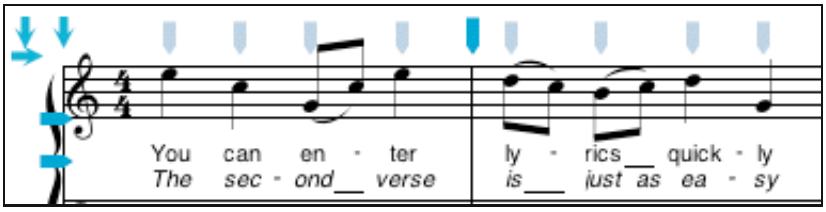
NoteAbility lyrics are entered by selecting the Lyric tool, and positioning the Entry Cursor on the first note to receive a lyric. Type the syllable or word to be centered under the note and press the return key. The word appears and the Entry Cursor will then move to the next note. To move without entering a lyric, press the Tab key. To place a dash between syllables, enter the syllable followed by a dash (e.g. ev-), press the Return key and enter the next syllable (e.g. er). The two syllables will be joined by a dash. To append an extended underscore to a syllable or word type the syllable followed by an underscore (e.g. er_). Additional underscores can be used to extend across several notes. In the following example, the Lyric tool was selected, the Entry Cursor placed at the beginning of the measure, and the following sequence typed:

You<Return>can<Return>en-<Return>ter<Return>ly-<Return>rics_<Return>quick-<Return>ly<Return>



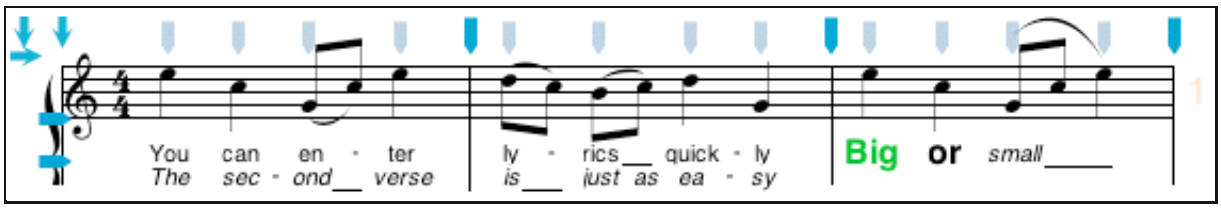
- the Current Command box must not be highlighted when entering lyrics. However, you may need to click in the Current Command box in order to enter an unusual character (such as a character with an accent or a special symbol transferred from the Font panel). You must un-select the Current Command box by clicking on the score before typing on the Return key to enter the lyric text.

The vertical position of the lyrics can be adjusted by the Lyric Position button located at the right of the line of lyrics. This button sets the base line of the first line of lyrics. If the Lyric Position button is not visible, it can be made visible by checking the **Lyric Button** check box in the Preferences panel. The current verse and spacing between verses (leading) can be set from the Lyric Pane (found in the Music Images panel).
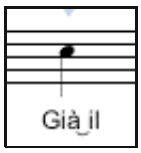


The Lyric pane of the Music Images panel can also be used to change the font used for lyrics and to link lyrics with dashes and underscores.

Lyrics can be set to different fonts and sizes by selecting a new font from the Lyric pane. Also, the colour of lyrics can be changed by setting the Text colour well in the Graphics pane in the Music Images panel before entering the lyric.



In some languages, small slurs are required between syllables within a single lyric. To do this, enter an Option-Spacebar character where you would like the slur to appear. For example if you enter the lyric text: Giˆ(Option-spacebar)il , it will appear as.



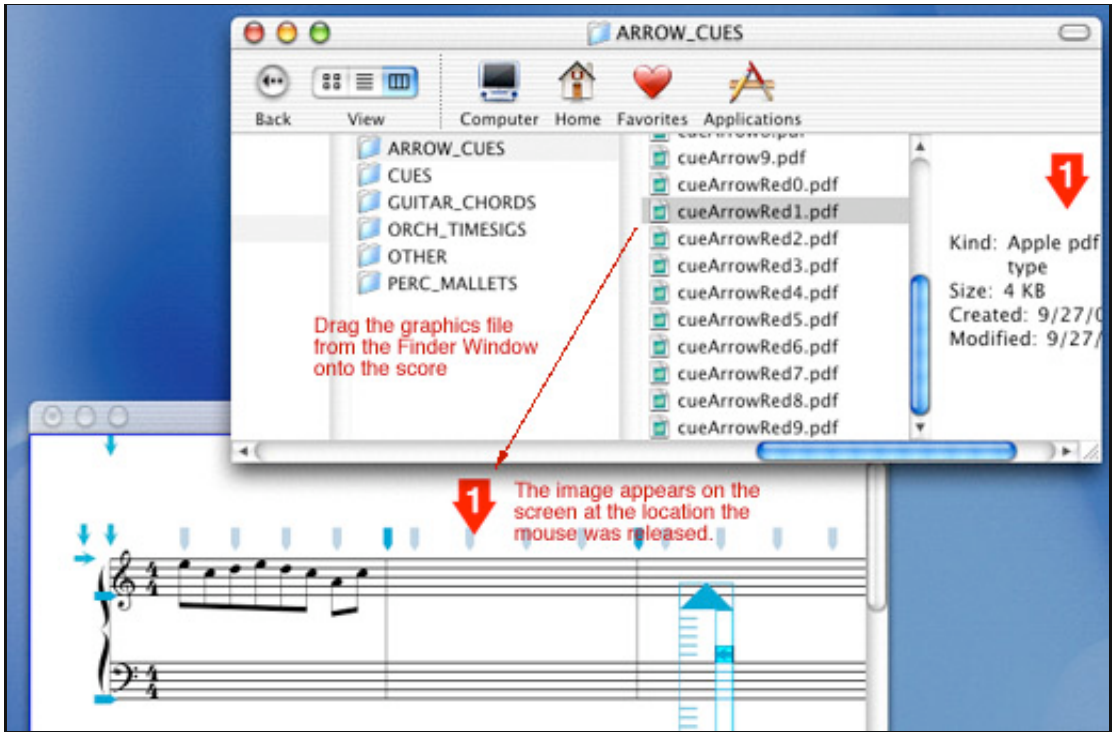
- – When first entered, dashes may not be properly centered since they do not yet know where the following syllable will be located. However, when the measure is redrawn, the dashes will be properly centered between syllables.
- – To extend an underscore across several syllables, type an underscore lyric under each successive note in the sequence.
- – If you want to avoid collisions between lyrics during system formatting, check the **Avoid Collisions Between Lyrics** checkbox in the Preferences panel.

See also

- Lyric Pane
- Entering figured bass symbols

Adding Graphic Images

1. Locate the graphic image (PDF, EPS, TIFF, JPG, GIF or PICT) image in a Finder Window.
2. Drag the icon of the graphics file onto your score to the location you want it to appear.
3. Release the mouse button when the icon is in the correct position. It will appear where you have "dropped" it on the score
4. You can adjust the position of the image by selecting and dragging the bottom-left corner of the image. The top-right corner can be adjusted to change the size of the image.



- The image you add may be in PDF, EPS, TIFF, JPG, GIF or PICT file format. For more information about graphics formats on your computer, see your computer's Help pages.
- The graphic images you add are copies of the original. The files containing the original image remain on disk.
- It is also possible to drag graphics (and quicktime movies) into text boxes. To do this, the text box must be active (i.e. it must have a flashing cursor). The graphic will be inserted at the cursor position in the text box.
- A library of PDF graphic images is included with NoteAbility. Look in the */Library/Application Support/NoteAbilityPro/NoteAbilityLib* folder on your hard drive for percussion mallets, guitar chords, cues, rehearshal letters, large time signatures, etc., etc. You are free to build your own graphics libraries of commonly used symbols. PDF and EPS images generally produce better results when they the images are resized, but other graphics formats may be used as well.

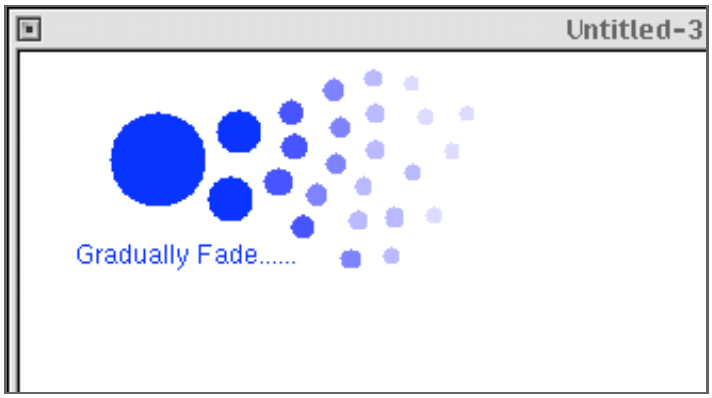
Pasting Graphics into NoteAbility

You may use copy and paste commands to add graphics images to a NoteAbility file. To do this, copy the image from any graphics application that supports either PDF, TIFF, PICT or JPG images. Once your have copied the graphic image, return to NoteAbility, and use the Paste command from the Edit menu. A copy of the image will be located at the Entry Cursor. Once it is pasted, it can be adjusted to the correct position by selecting the bottom-left corner of the image and dragging it. The size of the image can be altered by dragging the top-right corner of the image.

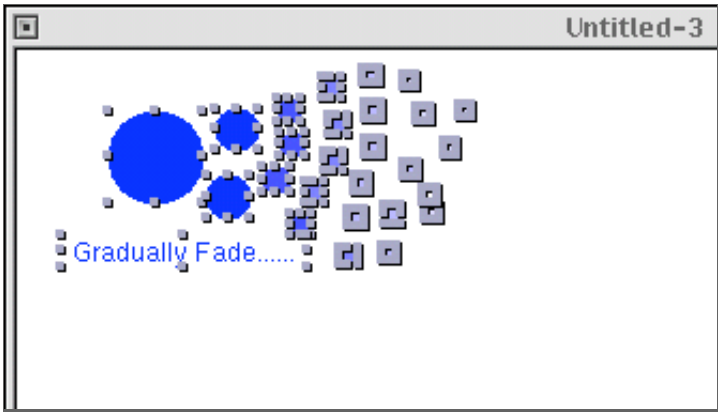
In the example below some graphics were copied from the *Sketch.app* and pasted into NoteAbility (any

standard graphics program - Adobe Illustrator, Photoshop, etc. could be used instead of Sketch.app):

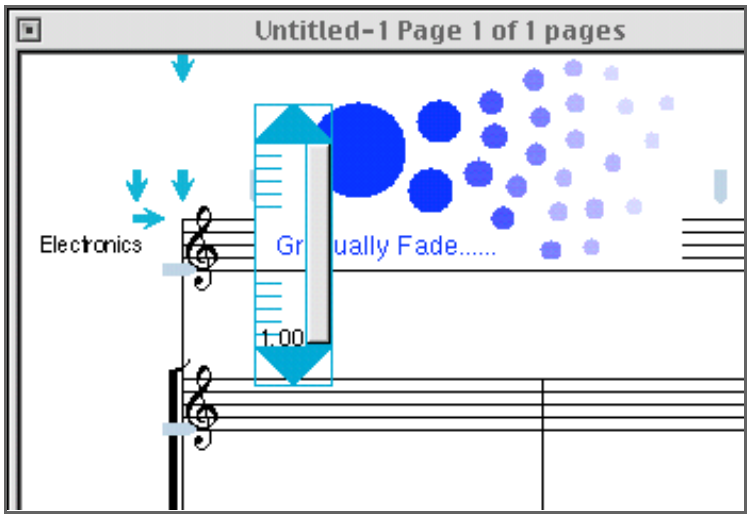
1. Create the graphic image in *Sketch.app*.



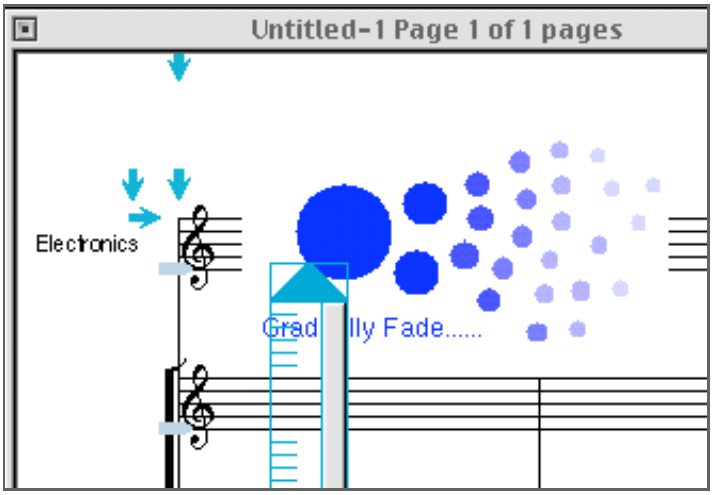
2. Select the area to copy and choose **Copy** from the *Sketch.app* **Edit** menu.



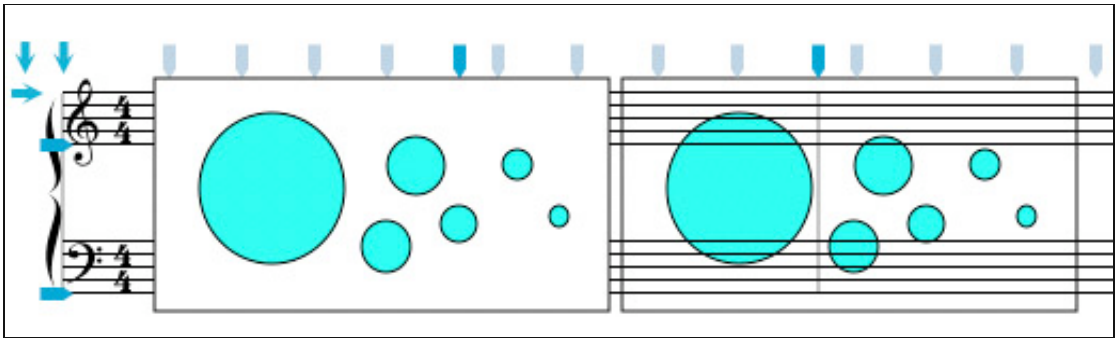
3. Return to NoteAbility (by clicking on a NoteAbility window), position the Entry Cursor approximately where you want the graphic placed and choose **Paste Into** from the NoteAbility **Edit** menu TIFF images (such as this one) typically have an opaque background, EPS images are transparent.



4. Move the graphic image by making a selection rectangle around the bottom-right corner of the image and dragging it to the desired location on the score.



If you want the graphic image to appear behind the staves and music, select the bottom-left corner of the graphic image and click on the **Send to Back** button on the Graphics pane of the NoteAbility Inspector. In the example below, the first graphic is in the foreground, and the second copy of the graphic is in the background.



Collections of PDF and EPS images can be also be stored in the Image Library Panel and inserted from this panel into the score. Refer to the Image Library Panel for details on how to load and save image libraries.
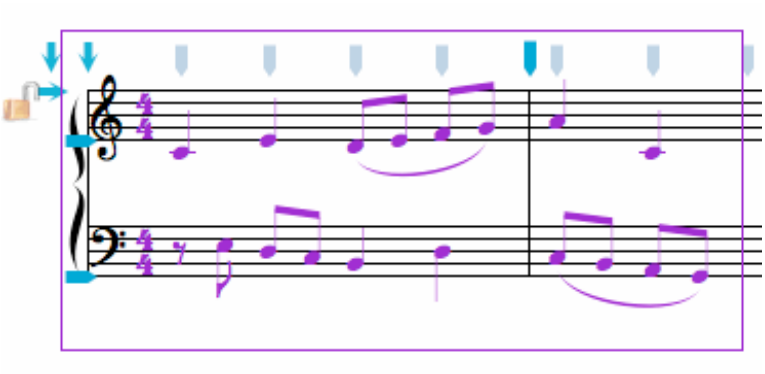
See also

- Drawing tools
- Image Library Panel
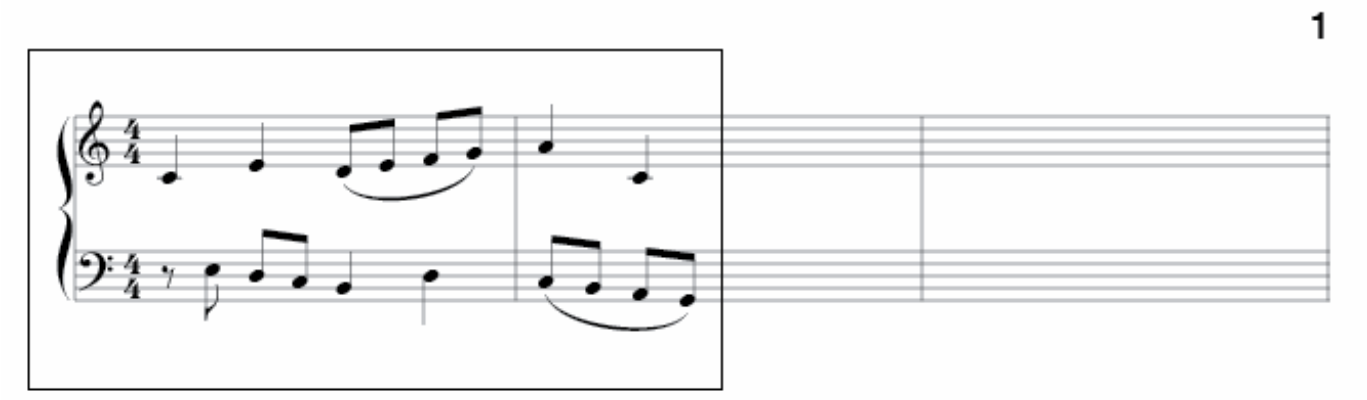
Using Adobe Illustrator

Creating a graphic score using NoteAbilityPro and Adobe Illustrator

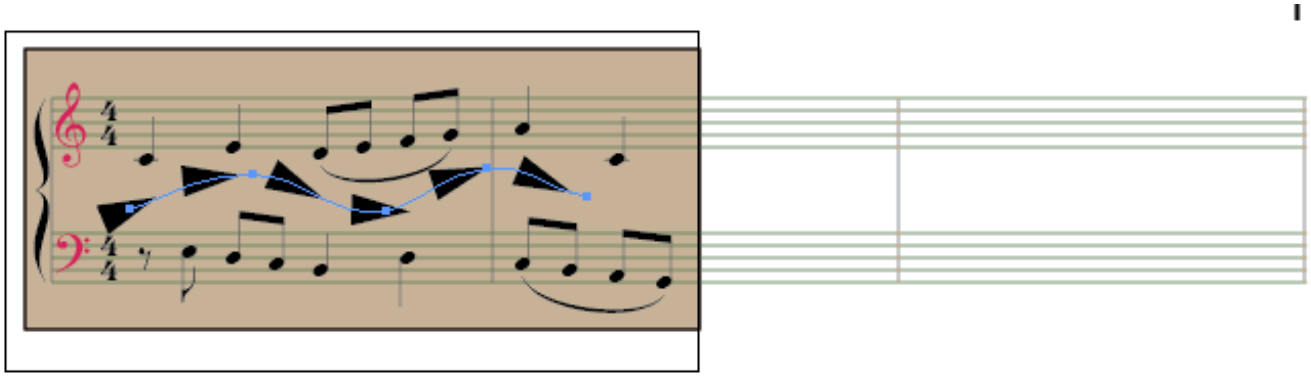
1. Using the Select Tool in NoteAbilityPro, make a rectangle around the desired area in NoteAbilityPro.



2. Use the **File/Save Selection As PDF** menu (Command-Option-9) to save the selected area as PDF file.
3. Move to Adobe Illustrator and Open the file you just created. You will notice all graphics for the entire NoteAbilityPro page are included in the Illustrator document, but there is a bounding box which restricts (clips) the graphic to the area you selected. You can alter all the graphic images on the page, but only the area inside the bounding box will be visible when the graphic is printed or pasted back into NoteAbilityPro.



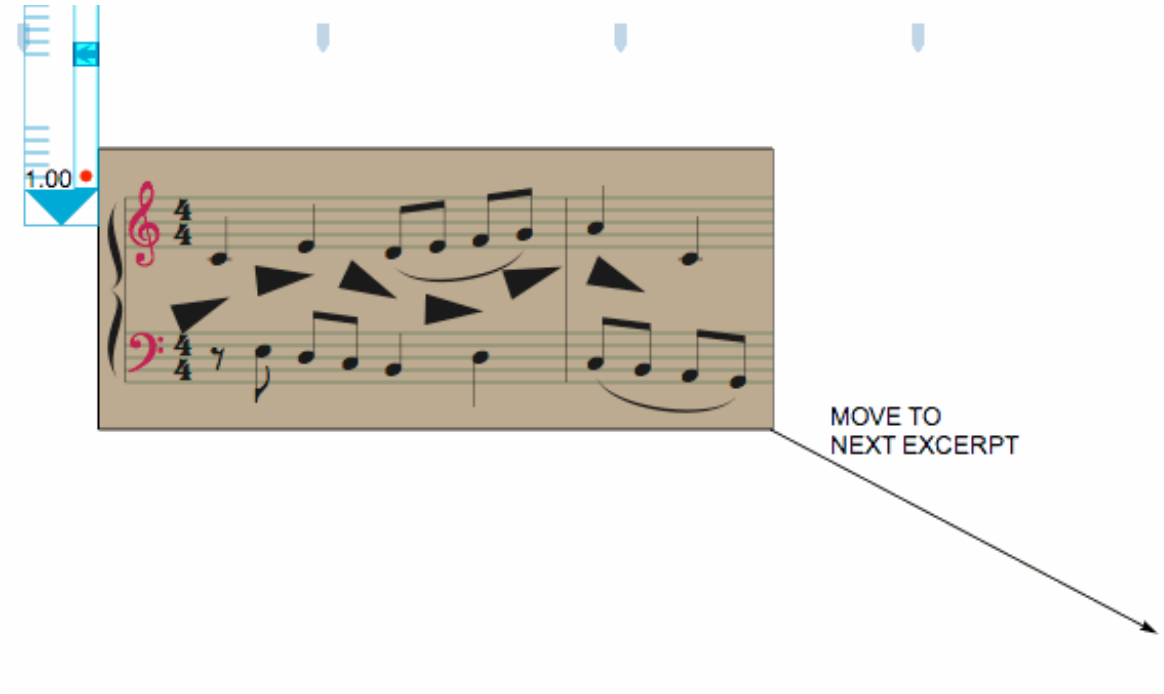
4. Within Adobe Illustrator, you can modify the image and save the changes when you are done. All the individual elements of the NoteAbilityPro excerpt can be altered and additional graphics can be added if desired. In this example, the staff and clef colours were changed, a background rectangle was added and some graphic arrows were added.



5. Create a new multi-page NoteAbilityPro document with 1 staff (1 system, 1 measure) on each page and no clef, no brace and no barline. Hide the time signature (using pull down menu on the Time Signature pane) and change the staff type so that it has no lines (using the Staff Lines pane). You will now have a blank NoteAbilityPro document with 1 invisible staff to which you can associate your graphics.



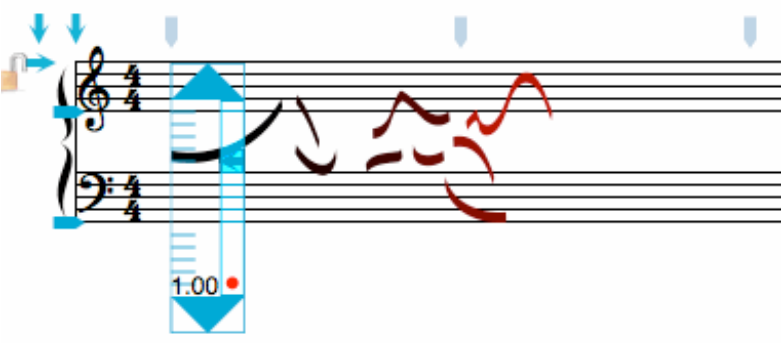
6. Drag the PDF file you saved in Adobe Illustrator onto your NoteAbilityPro document (on whichever page you want the image to appear on) and adjust its position by selecting and dragging the bottom-left corner. If you want to alter the size of the image drag the top-right corner of the area. The individual elements in this graphic cannot be altered unless you return to the Illustrator and alter them from there.
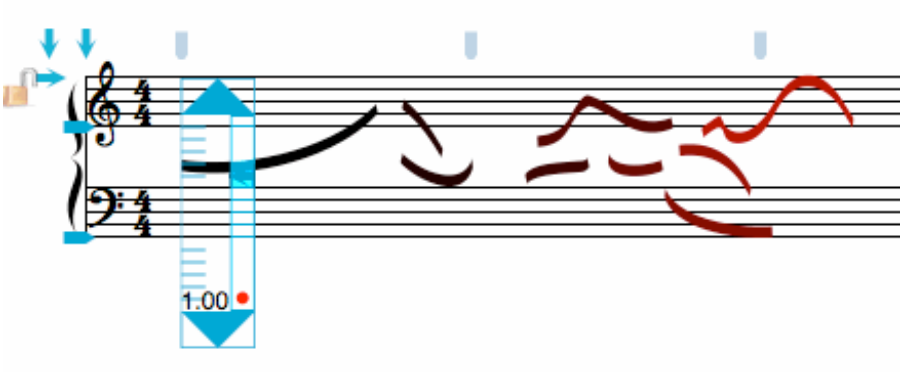


Continue adding more PDF excerpts and other NoteAbilityPro images into the documents. Of course, the music inside the PDF graphics will not playback when you play the score.

Copying Directly from Adobe Illustrator to NoteAbilityPro

It is possible to select images in Adobe Illustrator, copy them in Illustrator, and paste them directly into NoteAbilityPro. The pasted image will be located at the Entry Cursor position.



The pasted image can be moved by dragging the bottom-left corner of the bounding box and can be stretched or compressed by dragging the top-right corner of the bounding box.



See also

- NoteAbility menus
- Image Library Panel

Adjusting and Editing the Music

This Chapter discusses the basic procedures for adjusting the score structure and editing your music.

- NoteAbilityPro Layers
- Adjusting the Score Layout
- Selecting and Editing Images
- Cut, Copy and Paste Operations
- About the pasteboard

See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

NoteAbility Pro Layers

A NoteAbilityPro score consists of two separate layers. There is an underlying layer which consists of the score structure of staves, measures, meters, key signatures, clefs, and measure numbers. Essentially, this is the structure that is setup when you first create a new document. The second layer consists of the all the music images (notes, rests, dynamic markings, slurs, etc.) that you place on top of the score structure.

It is important to understand which parts of your score belong to each of these layers since the manner in which you edit your music is different depending on whether you are making an adjustment to the score structure or the music images:

To alter the score structure or score layout, you need to make to either adjust the layout buttons on the score or use the editing procedures found in the the Score Structure panel. All the music images placed on the score will automatically adjust as the score structure is altered. For example, you might want to change the number of measures on a system - to do this, you can either click on the "+" or "-" the buttons located on the score to the right of each system, or you can use the Measure In System pane in the Score Structure panel.

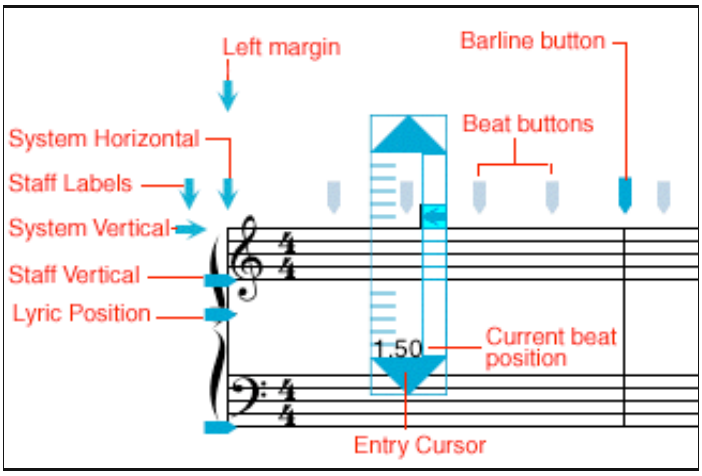
To adjust music images which have been placed onto the score, you can select the images (using either the Selection or the Select Score tools) and use any of the menu items in the *Edit* or *Modify* menus, any of the menu items which appear in the pull-down menus at the top of the score window, or any of the buttons and controls in any of the panes in the Music Images Panel. For example, adding articulations to a group of notes or copying and pasting music material are all changes to the music image layer.

See also

- Adjusting the Score Layout
- Selecting and Editing Images
- Music Images and Score Structure panels

Adjusting the Score Layout

Adjustments to the layout of the musical structure (beat locations, measure size, staff positions, system positions, position of lyrics, positions of staff labels, and page margins) can be done directly on the page by dragging the Score Layout buttons. All affected images on the page are adjusted when these buttons are moved.

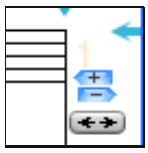


Local changes to the page and system format are made by moving the buttons for the system, staff, lyric, barline and beat position. For example, you may move the vertical positioning of the staff by moving the Staff Vertical button up or down. All images associated with that staff will also be adjusted up or down.

Moving different buttons adjusts the page layout at different levels:

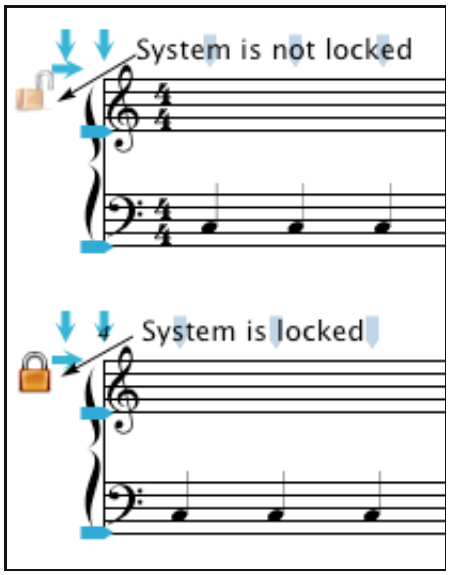
Item Repositioned	Levels affected
Left Margin	All systems on the page
Right Margin	All systems on the page
Top Margin	All systems on the page
Bottom Margin	All systems on the page
System Horizontal	A single system
System Vertical	A single system
Staff Labels	A single staff
Staff Vertical	A single staff
Lyric Position	A single staff
Beat Buttons	The beat before and after
Barline Buttons	All beats in measure and the barline

As well as the buttons listed above, there are three buttons which appear to the right of the first staff on each system. The top two buttons (which contain a + and a – symbol) are used to increase or decrease the number of measures in the system. They can be used as a shortcut for the functions available in the Measures In System pane in the Score Structure panel.



The Format System button:  is used to adjust the layout of the system so that the music is correctly spaced and collisions between images are avoided.

At the left side of each system there is a Lock System button which can be used to stop measures in that system from being re-formatted and stop measures being shifted off that system.



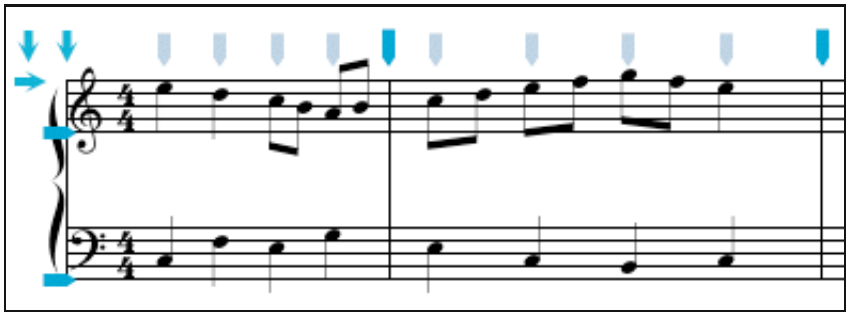
The Score Layout buttons are purely for adjustment purposes and do not appear when the score is printed. To hide these buttons un-check the **Show All Buttons** item in the Preferences panel or choose the *Hide All Buttons* menu item in the **Format** menu.

> – Since many scores do not use lyrics, the Lyric Position buttons can be kept hidden with a setting in the Preferences panel.
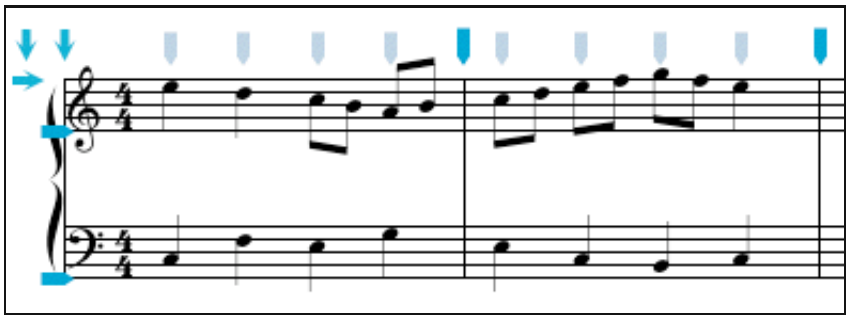
An Example of Layout Adjustment

In the example below we are repositioning the notes by moving the first Barline button - notice that all beats in the first measure are stretched and all beats in the second measure are compressed.

Before:



After:



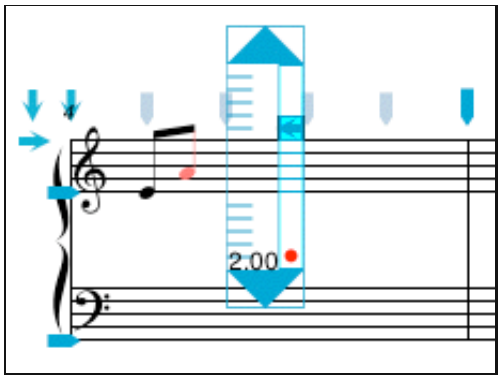
As well as manual adjustment to the page and musical structure (beats, measures etc.), the **Format System** button (located to the right of the system) and **Format Page** button (located at the bottom of the score window) use an algorithm (with a compression factor which can be set in Preferences) to adjust all beat positions on the system or page. The horizontal positions of all images are adjusted to make the spacing more aesthetically pleasing and to avoid collisions between successive notes and accidentals. When the **Auto Format** button is checked in the Preferences panel, a Format System command is invoked whenever the Entry Cursor completes a line of music and moves to the next system.

- the Beat and Barline buttons are often referred to as the rhythmic spine since they represent the position of all the beats in the system.

The Entry Cursor

Notes and rests are entered at the beat location determined by the left edge of the Entry Cursor and indicated numerically at the bottom of the Cursor. The Entry Cursor can be moved with the Move Entry Cursor tool (on the Control panel), by dragging the Cursor by the vertical bar on the right side of the Cursor, by using the spacebar (forward) or Shift-key and spacebar (backward), or by holding down the Command key and clicking the mouse at a new location. In measures where notes have not yet been entered, the Entry Cursor can be placed at every .25 of a beat. In measures where notes and rests already appear, the Entry Cursor can be placed at every .25 of the beat and at any beat location where a note or rest already exists. A small red dot appears on the entry cursor when it is on a full beat position (as opposed to begin between beats.)

To move the Entry Cursor vertically to another staff within the same system you can click on the up or down arrows at the top and bottom of the Cursor.



In the example above, the next entered note will appear at beat position 2.00 (the beginning of the second beat).

- When one of the Page Margin buttons is adjusted with the Alternate key held down, the new margin position is set on all pages of the document.

- The vertical position of staves and systems can also be set using the Staff Spacing pane of the NoteAbility Inspector or using the Staff Spacing panel located in the **Tools** menu

See also

- NoteAbility Preferences
- Staff Spacing pane
- Staff Spacing panel

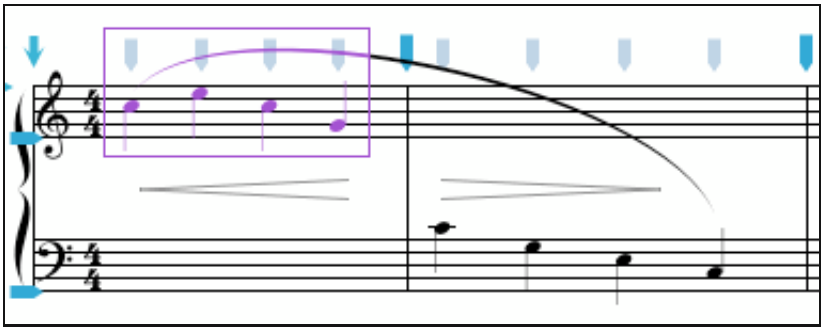
Selecting and Editing Images

NoteAbility editing is done by first selecting the desired images, then choosing an edit command (usually a menu item or a button in one of the panes in the Music Images panel). Selection can be done with either the Selection or Select Score tool.

Editing with the Selection tool

The Selection tool can be used to drag a single image to a new location by depressing the mouse button with the cursor over the main Control Point of the image (for notes, this is at the centre of the notehead). Also, a group of images can be selected by dragging the cursor over a rectangular area. All images that have any Control Points within the rectangle are considered to be selected, regardless of which staff or system they are associated with.

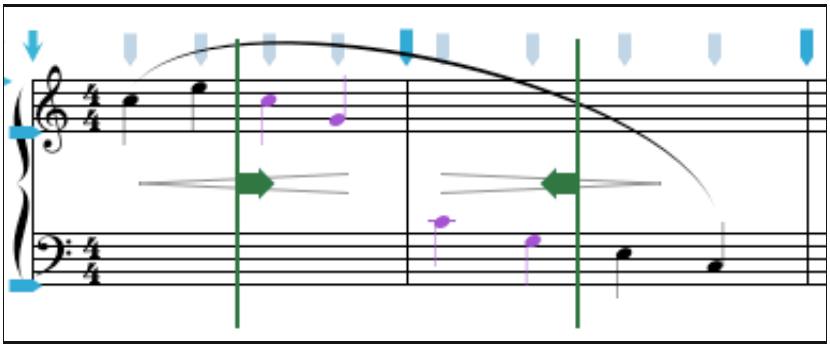
In the example below the first four notes of the score and the slur are selected and ready for editing:



Editing with the Select Score tool

Selecting images with the Select Score tool involves two-stages. When the mouse button is first clicked, the starting staff and starting beat position is shown with an arrow facing right. Then, a second click indicates the ending staff and ending beat position with an arrow facing left. All images between the beginning and ending staves and the beginning and ending score positions are considered to be selected. This method allows you to select all the images on the specified staves across multiple pages. (For example, this selection tool could be used to select all of the images on a particular staff from the beginning of the document to the end.)

In the example, the middle four notes of the score are selected and ready for editing:

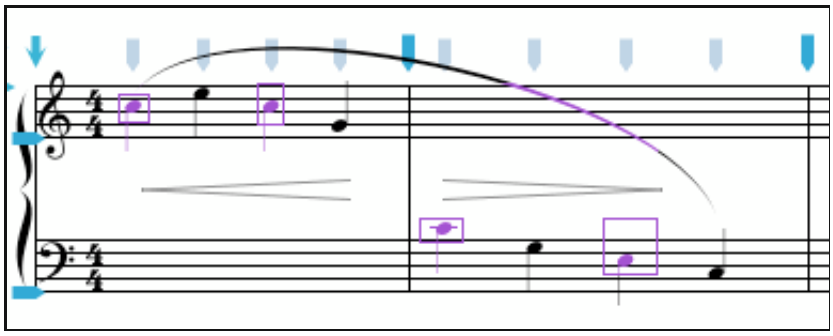


– Selected images are redrawn in the Selection colour so that you can more see which images are selected. The Selection colour can be customized in NoteAbility Preferences.

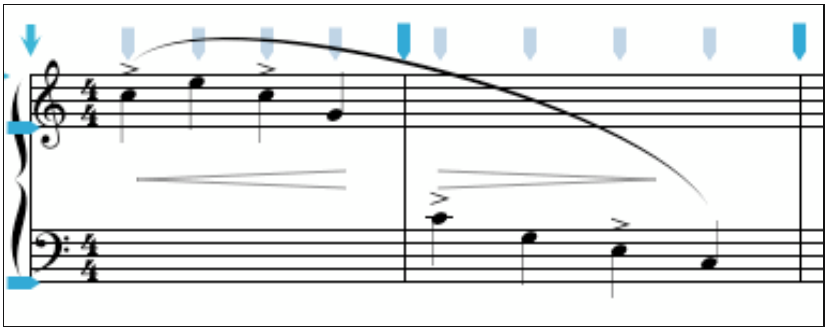
Shift-Selecting Images

Shift-selecting allows discontiguous areas of the score to be selected. To do this, create a rectangle with the Selection tool, then hold the Shift key down to create additional rectangles. All the images in all selection rectangles are now selected for editing, adjusting, or moving. (To move these images, release the Shift key, place the cursor in the **last** rectangle created and drag the mouse cursor.) To avoid confusion that may occur when copying and pasting discontiguous groups of images, it is best to collect images from left to right in the score (i.e from lesser to greater measure numbers and from the first to last staff in the system.)

In the example below every second note has been selected:



If you clicked on the accent button in the Articulation pane in the Music Images Panel, an accent would be added to each of the selected notes:



Adjusting and Moving Images

To adjust images, you can either click directly on the control point of an image using the Selection tool and drag it, or you can make a selection rectangle around a control point and place the mouse cursor inside this rectangle to drag it. The image will be altered according to which control point is dragged - for example if you drag the control point on the head of a note, the pitch will change, while if you drag the control point on the end of the stem, the stem length will be adjusted.

In order to adjust the position of an entire image, you can either make a select around the entire image, or select one of the Control Points of the image and hold down the Alternate key while dragging the image. Normal notes (i.e. not graphic or grace notes) and rests cannot be moved horizontally away from their spine position unless the image is selected and the arrow keys on the keyboard are used. This procedure should only be used in order to offset a note from its normal beat position -- if you need to move notes and rests to new beat locations, you should cut the images and paste them in the new location.

Modifying and Editing Images

NoteAbilityPro allows you to perform many different actions on selected music images from modifying an attribute or appearance of the image (such as adding an articulation or symbol to a note) to performing various kinds of transformation (such as transposing the notes or beaming a group of notes together.) To

modify music images, you use the menu items in the Modify menu (which contains 9 submenus that are specific to certain kinds of images) or you use the panes in the Music Images Panel or in the Score Structure Panel. These panels are extensible and contain many of the editing and transformation operations you will need while creating your scores.

See also

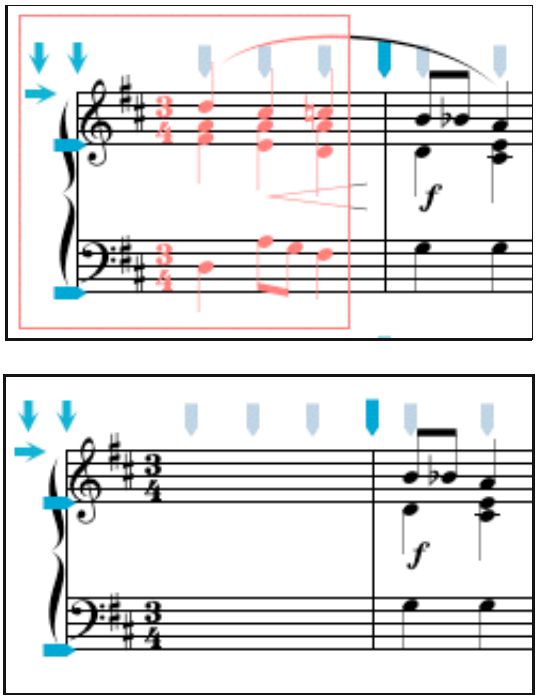
- Editing Panels
- Edit Menu
- Control Points

Cut, Copy, and Paste Operations

In order to perform any editing operation in NoteAbility, you must first select the images that you want to alter. Use the Select Image or Select Score tool to make your selection. Selected images are redrawn in gray to show you that they are selected.

Cut

The Cut operation (invoked either from the Edit menu or by typing Command-x) removes the selected images from the score and stores them in the pasteboard so that they can be pasted elsewhere in the score. The example below shows the score with a selected area and then the same score after the Cut command was issued.



Notice that elements that are part of the music structure such as clefs, key signatures, time signatures, staves, braces and barlines are not considered to be selected and are not removed from the score. Only images you have added to the music structure can be removed from the score using the cut or delete commands. Notice also that the slur and crescendo are removed even though only part of them has been selected - all images that have a Control Point in the selection area are considered to be selected.

Delete

The delete operation (invoked either from the Edit menu or by typing the Delete or Backspace key) removes the selected images from the score, but does not save a copy of them on the pasteboard. Whatever was in the pasteboard before issuing the Delete command will remain there unaltered.

Copy

The Copy operation (invoked either from the Edit menu or by typing Command-c) is similar to the Cut except that the selected images are not removed from the score. As in Cut, the selected images are stored on the pasteboard so they can be pasted elsewhere in the score.
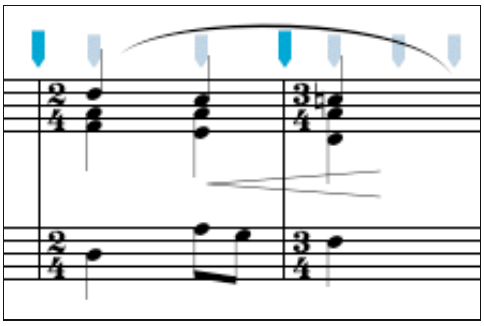
– Whenever you make a cut or a copy that includes more than one staff (as in the example above), it is important to remember where the first note (or rest) occurs in the selected passage so that you will be able to place the Entry Cursor at the correct location when you later paste the selection elsewhere in the score.

Paste Into
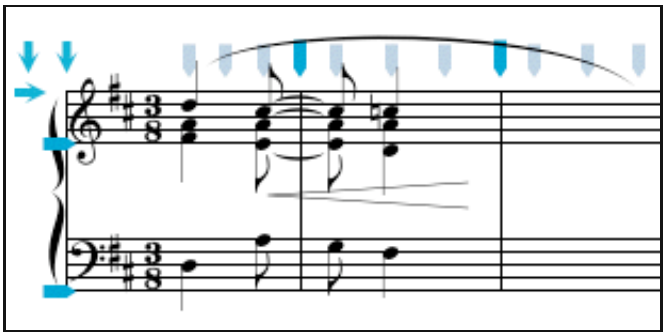
The Paste Into command (invoked either from the Edit menu or by typing Command-v) is the standard paste command (i.e. the one you will most often use). The previously cut or copied material will be added to the score (and merged with existing material beginning at the location of the Entry Cursor). Place the Entry Cursor where you want the first note (or rest) that occurred in the cut or copied passage to appear – for more information refer to Setting the Paste Location below.

When using Paste Into, the data in pasteboard is considered to be unformatted (i.e. the beam, tie and accidental information is not retained) so that the data will be formatted according to the music structure in the new location. The examples below should make this clear. The passage selected and cut above was pasted:
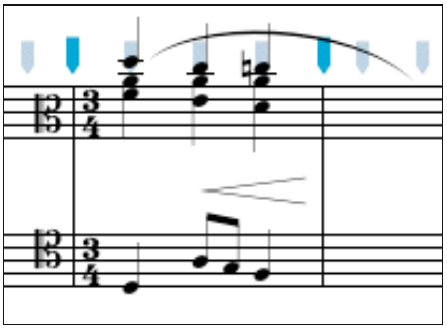
1 – at the beginning of a 2/4 measure:
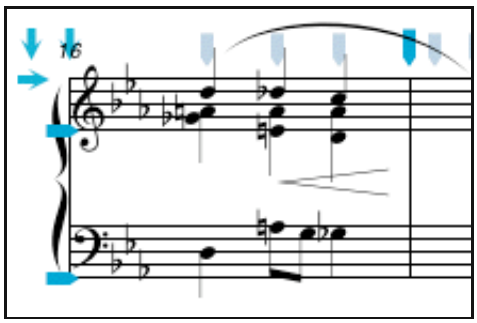


2 – at the beginning of a 3/8 passage:



3 – into a passage with different clefs:



4 – into a passage with a different key signature:



– Some images (eg. slurs) may extend beyond the group of notes cut or copied and others may need some slight adjustments or modifications. Theses alterations can be made after the paste has been performed.

– Paste Into can also be used to paste TIFF, PDF, ASCII text or RTF material cut or copied from other applications. If the other application supports several pasteboard types, PDF has precedence over TIFF and RTF has precedence over ASCII text.

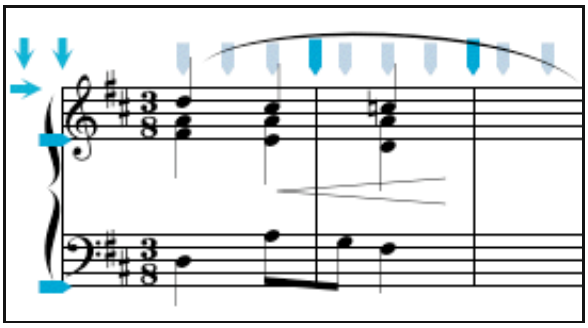
Paste Exact

The Paste Exact operation (invoked either from the Edit menu or by typing Command-V) is a modified version of the Paste Into operation. It is used whenever you want to retain specific details of the original cut or copy rather than having the pasted passage reformatted according to the new music structure. Paste Exact retains the following information from the original cut or copy:
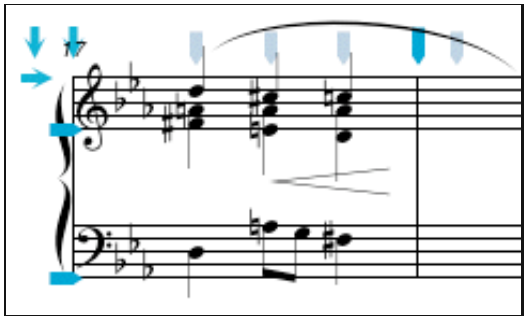
- the pitch name and accidental
- the note and rest duration (including ties)
- the beam and tuplet groupings

If examples 2 and 4 above are performed with Paste Exact, the results would be:

1 – at the beginning of a 3/8 passage



2 – into a different key signature
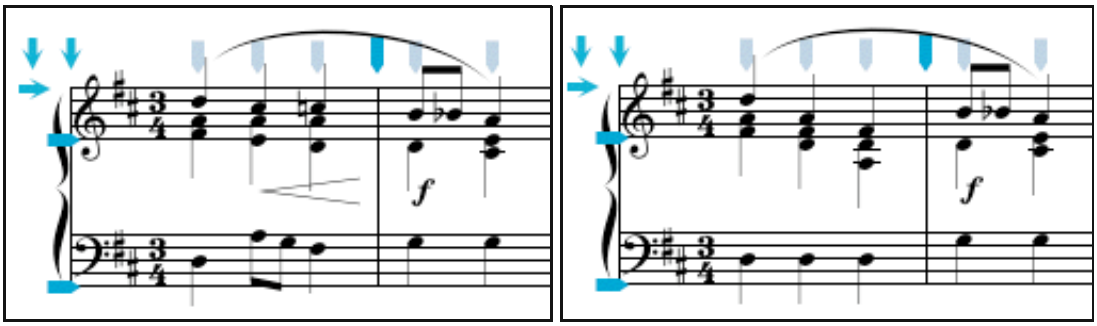


– Of course, the correct pitches are retained in a Paste Exact operation regardless of the clef or key signature of the

section you are pasting into.

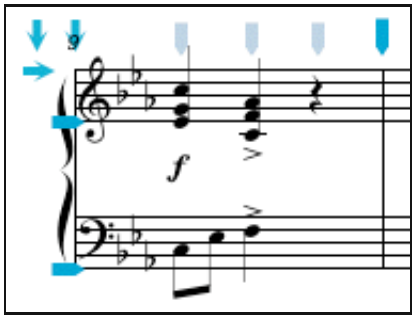
Paste Over

Paste Over operates the same way as Paste Into except that any images located in the area you are pasting into are cleared before the new images are added. This operation is useful for replacing a part of an existing passage with copied selection. In the example below, two beats are pasted over the second and third beats of the measure

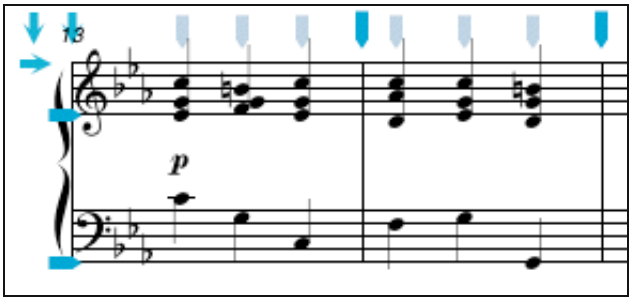


Insert
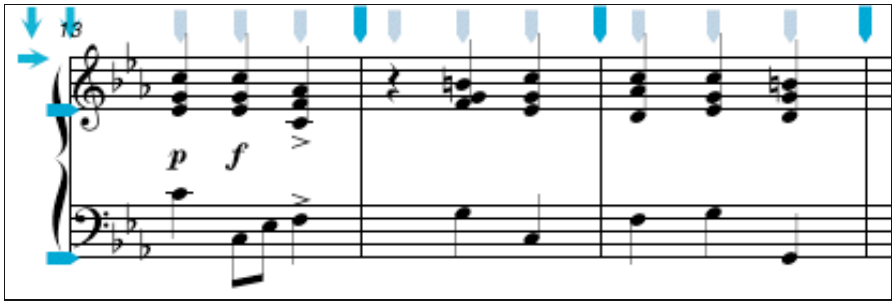
The Insert operation (invoked from the Edit menu) inserts the copied or cut data at the Entry Cursor after first shifting all the music from the Entry Cursor through to the end of the score to the right in order to make room for the paste. In calculating how much room is needed for the new music, only notes and rests are counted, and the music is shifted so that no overlapping will occur between the pasted notes and rests and those already in the score. If the following passage is copied, a total of three beats is calculated (even though the second staff only has two beats).



Before inserting, the score appears:



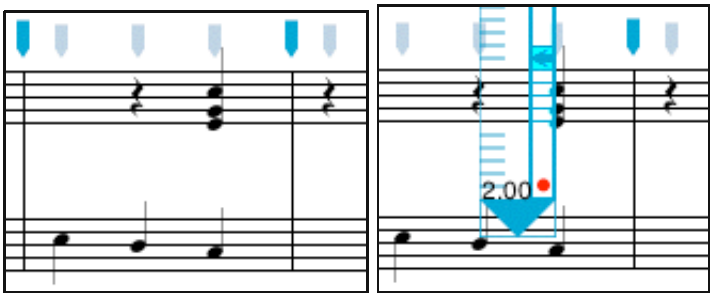
After inserting the copied passage beginning on the second beat of the first measure, the score appears:



Setting the Paste Location

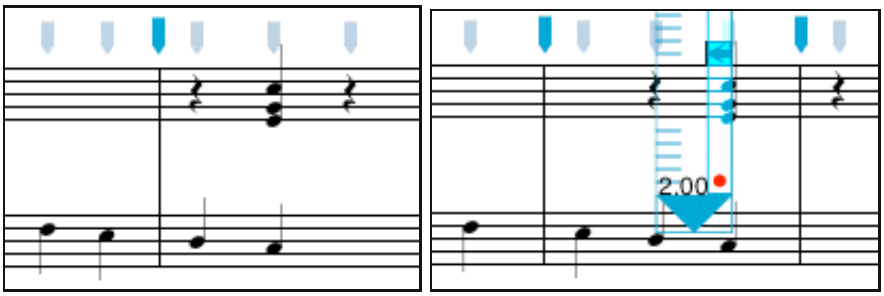
In most cases the placement of the Entry Cursor for pasting is intuitive, but there are some instances where it may not be obvious where to place the Entry Cursor when performing a paste operation. The basic rule is that the first note (or rest) found in the copied data is the image which will appear at the beat location and on the staff of the Entry Cursor when the paste is performed. All other images are positioned relative to this first image. In determining which note (or rest) is the first one selected, it is necessary to know that the data stored in the pasteboard voice by voice from the the top staff down through all the staves in the system. If there are no notes or rests in the selection to be pasted then the first image found will be placed at the Entry Cursor. In the example below, if the entire measure is copied, the first note will be the rest on the second beat of the top staff. Therefore, this rest will appear at the Entry Cursor when pasted, and the notes on the first beat of the second staff will appear on the staff below and on the beat before.

original copied data - - pasted at Entry Cursor



Remember to position the Entry Cursor on the staff that has the first image - this may not be in the first measure of the music data as in the example below:

original copied data - - pasted at Entry Cursor



Caution should be used if you are pasting data from mulitple staves onto a place in the score where the staff layout is different, or where the staff format (i.e. the number and arrangement of staves) changes from system to system. In these cases, the pasted data may not always end up on the staves you want them. When unsure, copy and paste the data staff by staff.

- If you accidentally paste data into the wrong location on the score it is better to undo the paste, move the Entry

Cursor to the correct location and paste again than to try to move the incorrect data.

See also

- Control Points
- Edit Menu
- Save document in another file format

About the Pasteboard

Like other Macintosh OS-X programs, the pasteboard acts as a temporary storage location for data that NoteAbility uses when you perform a Cut or Copy command on a document . When using the Copy command, NoteAbility only stores the selection in NoteAbility format to save time. This means that the data can be pasted into a different location in the score or into another NoteAbility score, but it cannot be exported to another application.

When using the *Copy All Types* menu item (Command-Shift-C) NoteAbility copies the selection in a variety of formats which can include NoteAbility format, PDF (Portable Document Format), TIFF format, PICT format, Standard MIDI format, NeXT SCORE format, Max qlist format, CSound sco, GUIDO interchange format, JPEG format, and EPS format. Since NoteAbility supports so many file formats, and since some applications will accept more than one of these formats, there is a *Copy Types...* menu item (in the *Tools* menu) which displays up a panel which allows you to set the formats that *Copy All Types* will send to the pasteboard. Once copied, the data can be pasted in any application that is able to receive one of the copy types selected. In the example below, the Copy Types panel has been set to copy in PDF format so it can be pasted into an application that supports PDF graphics (such as Mail.app).



PDF, TIFF, PICT, JPEG and EPS are graphic formats, Standard MIDI and NeXT Score formats are audio playback formats, Max qlist format is used to transferring Max messages from your score into a Max qlist object, CSound sco format is used to transfer note information to a Csound score file, and GUIDO is a notation interchange format, used to transfer the score to another music application capable of receiving GUIDO format. In order for inter-application pastes to work, the application you are pasting the data into must be capable of receiving data via the pasteboard.) If an application (such as a text editor) can receive multiple formats (i.e. it supports both text and graphics), then it will paste the format it prefers.

- For more information on the GUIDO notation format and applications on various platforms that support GUIDO, please refer to the GUIDO home page.

- It is possible to copy a portion of your score in PDF format and paste it back into the score as a graphic image. This could be useful in situations where you might want a graphic example (such as an ossia) included in the score.

See also

- Edit Menu
- Save document in another file format

Music Images Panel

This Chapter discusses the Music Images panel which contains most of the controls for altering and modifying the music images on your score.

- Working with the Music Images Panel
- Playback Controls Pane
- Image Attributes Pane
- Note Attributes Pane
- Accidentals & Articulations Pane
- Graphics, Lines & Tuplet Pane
- Symbols & Glissandi Pane
- Lyrics Pane
- Performance Settings Pane
- Beams, Ties, Tremolo Pane

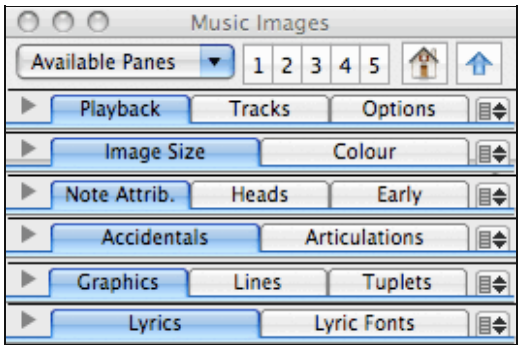
See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

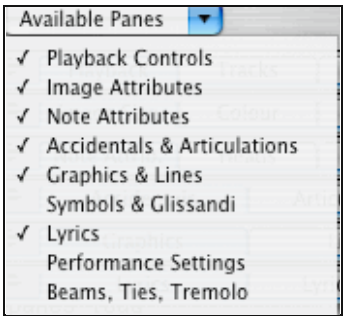
Working with the Music Images Panel

If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.

The Music Images panel contains extensible rows of panes which can be used for altering or modifying most music images on your score. The pull-down menu at the top of the panel (entitled **Available Panes**) allows you to add or remove panes from the panel. A check mark in the pull-down menu indicates which panes are included in the pane and can be removed - the absense of a check mark means that pane can be added. A total of 9 panes can be stored in the Music Images panel. In the example below, 5 panes are included in the panel.



and the **Available Panes** menu looks like:



You can see from this menu that three panes are not loaded into panel.:

- Symbols & Glissandi
- Performance Settings
- Beams, Ties, Tremolo

Since each pane has 2 or 3 tab views (which can be accessed by clicking on the tab), a total of 24 panes (or views) is available in this panel. In order to access the individual tab views, you must first ensure that the pane to which the view belongs has been added to the panel. Then you can click on the tab to display the individual controls you are looking for.

The five numbered buttons along the top of this panel allow you to store preset arrangements of the panes and save them as preferences. To store an arrangement of visible panes, hold the Shift key down while clicking on one of the numbered buttons. To recall a stored preset, click on the button and the stored configuration of panes will be loaded and displayed.

Below is a list of the main panes and the tab views that are contained in each pane.

Main Pane	Tab Views	Description
Playback Controls		
	Playback	Controls for playing the score and setting playback tempo
	Tracks	Controls for indicating which staves (tracks) are turned on or off for playback
	Options	Controls for isolating single staves (tracks) for playback

Image Attributes		
	Image Size	Controls for altering the point size of selected images
	Colour	Controls for altering the colour of selected images
Note Attributes		
	Note Attrib	Controls for changing attributes of notes such as the duration value or the presence of ledger lines or stems
	Heads	Controls for changing the type of notehead on selected images
	Early	Controls for entering and converting to early music notation
Accidentals & Articulations		
	Accidentals	Controls for adding or modifying accidentals on notes
	Articulations	Controls for adding or removing articulation marks on notes
Graphics & Lines		
	Graphics	Controls for setting colours and other attributes of rectangles, ovals and curves
	Lines	Controls for setting the type, thickness, and other attributes of lines
Symbols & Glissandi		
	Fermati	Controls for setting the characteristic of fermati and attaching them to notes
	Symbols	Controls for setting the characteristic of music symbols and attaching them to notes
	Glissandi	Controls for glissandi between notes
Lyrics		
	Lyrics	Controls for connecting lyrics and setting verses
	Lyric Fonts	Controls for choosing and setting the fonts of lyrics
Performance Settings		
	Velocity	Controls for altering the velocity (volume) of selected notes
	Duration	Controls for altering the playback durations of selected notes
	Mute Notes	Controls for muting or unmuting notes during playback
Beams, Ties, Tremolo		
	Beams	Controls for altering the appearance of beam groupings
	Ties	Controls for altering the drawing position and appearance of ties
	Tremolo	Controls for adding tremolo slashes to selected notes

– When you quit NoteAbilityPro, the configuration of the Music Images panel (i.e. which panes have been loaded into the panels and which panes are open) is saved as a preference and will be loaded next time you launch the program.

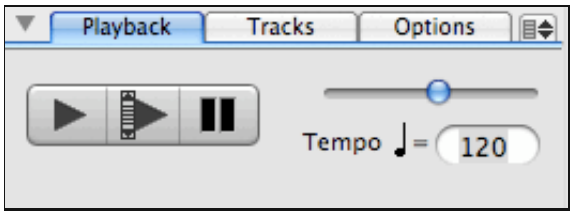
See also

- Music Images and Score Structure Panels
- Playback Controls Pane
- Image Attributes Pane
- Note Attributes Pane
- Accidentals & Articulations Pane
- Graphics & Lines Pane
- Symbols & Glissandi Pane
- Lyrics Pane
- Performance Settings Pane
- Beams, Ties, Tremolo Pane
- Score Structure Panel

Playback Controls Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Playback Controls pane (which contains the tabs: Playback, Tracks, Options) is not visible in the Music Images Panel, select Playback Controls from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the three tabs in the Playback Control pane to view controls for Playback, Tracks or Options.

Playback Tab

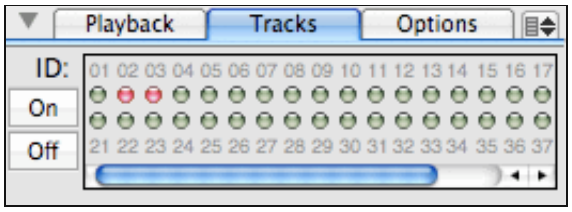


The Playback tab contains controls for setting the playback tempo and for starting, stop, or pausing score playback.

The first play button starts playing the score from the beginning. The second play button starts playing the score beginning in the measure that the Entry Cursor is currently on. The third button pauses the score during playback.

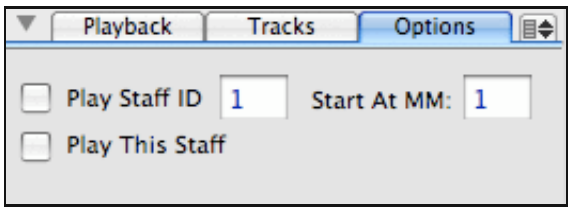
The tempo slider can be adjusted before or during playback, and is updated automatically if you have set a tempo map for the score using the Tempo Map panel.

Tracks Tab



The Tracks tab allows you to turn on or off specific track (staves) for playback for situations where you want to listen to only some of the staves. Click on the buttons to enable or disable individual staff numbers. The **On** button turns all tracks on, while the **Off** button turns all tracks off. In the example above only staves 2 and 3 are enabled for playback.

Options Tab

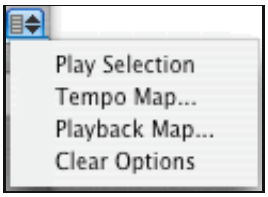


The Options tab includes some checkboxes that allow you:

- Play Staff ID - to play a specific staff ID
- Play This Staff - to play the staff that the Entry Cursor is currently on

As well, there is a setting to indicate what measure the score should start playing at.

Menus Items



The pull-down menu located at the top-right corner of the Playback Control pane contains the following items:

Play Selection	play only the selected notes in the score.
Tempo Map	display the Tempo Map panel so that a series of tempo changes can be specified.
Playback Map	display the Playback Map panel so that repetitions of certain portions of the score can be set.
Clear Options	clear the checkboxes in the Options tab.

- As well as the playback controls on this pane, you can use the **Play** and **Play From Cursor** buttons on the Score Controls (at the top of the score window).

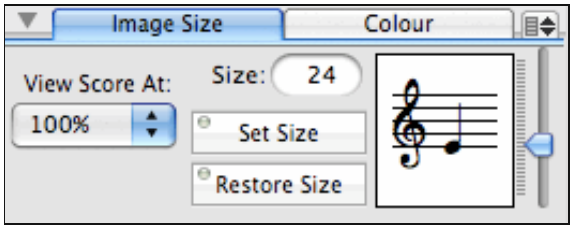
See also

- Music Images Panel
- Score Controls
- Playback Map Panel
- Tempo Map Panel

Image Attributes Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Image Attributes pane (which contains the tabs: Image Size & Colour) is not visible in the Music Images Panel, select Image Attributes from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the two tabs in the Image Attributes pane to view controls for Images Size, or Colour.

Image Size Tab



The Image Size pane contains controls for setting the size of selected images and for changing the score view size.

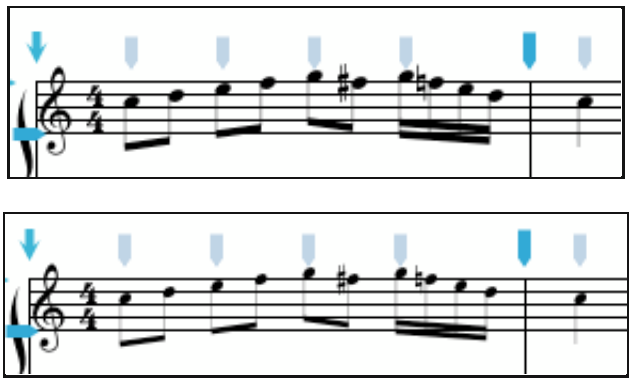
The view pull-down menu is a duplicate of the view menu located at the bottom-left corner of the score window. Display sizes between 25% and 200% as well as one custom display size (which is specified in the Preference panel) are available.

The slider along the right side of the pane is used for setting the image size - the image display and the size field are updated as you move the slider. Alternatively, you can enter the desired image size in the **Size:** field and type return.

Clicking on the **Set Size** button causes the pointsize of all selected images in the score to be altered. The **Restore Size** button sets the **Size:** field and the slider to the default size - 24 point.

All new images entered on the score will be entered at the image size indicated in this panel.

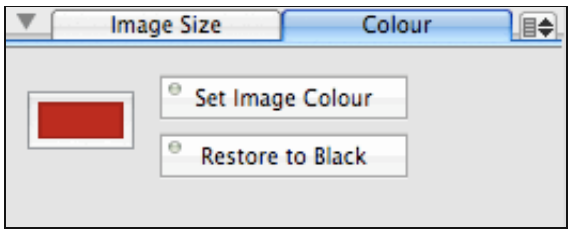
In the example below the notes were entered at pointsize 24 (the default size), then the notes were selected, the image size slider adjusted to 18 pointsize and the **Set Size** button clicked. You can see that the size of the images is smaller, but none of the other characteristics (length of stem, beam angle, horizontal or vertical position) has changed.



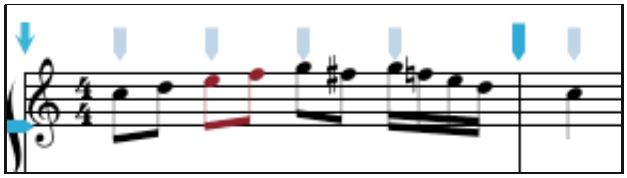
- Whenever the Entry Cursor is moved to a new staff, the Image Size controls are updated to the size of this staff. This ensures that in scores containing different sized staves the image sizes will normally be the same size as the

staff onto which they are entered.

Colour Tab

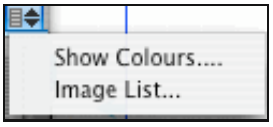


The Colour tab allows you to change any selected images to the colour stored in the colour well. To select a colour, click on the border of the colour well and the Colors panel will appear. Selecting a colour in the Colors panel, or dragging a colour from the panel to the colour well sets the colour of the well. To change the colour of selected images, click on the **Set Image Colour** button. The **Restore Image Colour** button sets the colour well back to black. In the example below the second and third notes were selected and the **Set Image Colour** button clicked.



– beams and tuplets are drawn in the same colour as the first note in the beam group.

Menus Items



The pull-down menu located at the top-right corner of the Image Attributes pane contains the following items:

Show Colours...	display the OS-X Colour panel.
Images List...	display the Image List panel which shows many of the music images available in NoteAbilityPro along with their commands.

– As well as the playback controls on this pane, you can use the **Play** and **Play From Cursor** buttons on the Score Controls (at the top of the score window).

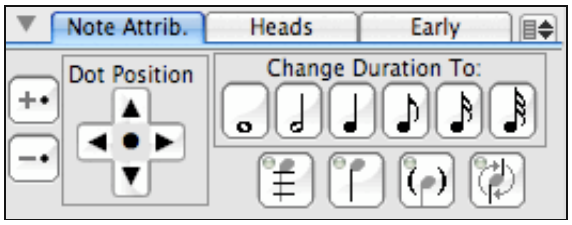
See also

- Music Images Panel
- Image List Panel
- Colors Panel

Note Attributes Pane

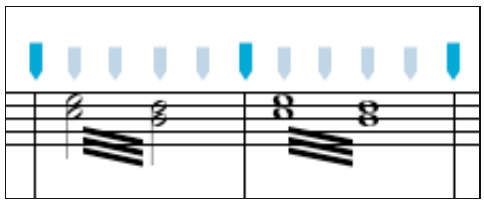
1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Note Attributes pane (which contains the tabs: Note Attrib., Heads, Early) is not visible in the Music Images Panel, select Note Attributes from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the three tabs in the Image Attributes pane to view controls for Note Attrib., Heads, or Early Music.

Note Attrib. Tab

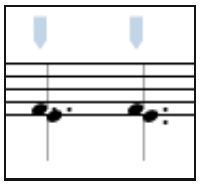


The buttons on the Note Attributes tab operate on all selected notes and in many cases, on all selected rests as well.

To change the rhythmic value of a note or rest, choose the new durational value and click on the **Change Duration To:** button. Although the rhythmic value and appearance of a note or rest is altered, the position within the measure is not. A good example of how this might be used is shown below - where measured tremolo is required. The two chords are entered as half notes so that their beat positions will be correct, then they are selected and changed to whole notes using the **Change Duration To:** button:



Similarly, dots can be added or removed from notes and rests by clicking on the **Add Dot** button (which contains a "+" sign) or the **Remove Dot** bottom (which contains a "-" sign). While the appearance and playback duration of the note is altered, the beat position of the image is not altered. The 4 **Dot Position** arrows can be used to adjust the location of dots beside selected notes. Although NoteAbilityPro automatically makes adjustments to the position of the dots when chords are built, you may need to manually adjust the position of a dot occasionally. In the example below, the upper note's dot was shifted to the right and the lower dot was shifted down.

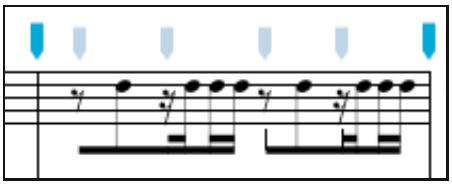


The 4 buttons along the bottom of this pane are for:
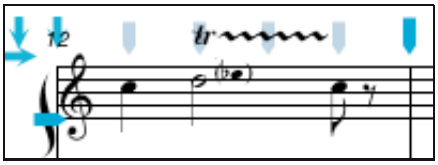
- **Hide/Show Ledgers** - hides (or makes visible if currently hidden) the ledger lines associated with selected notes.
- **Hide/Show Stems** - hides (or makes visible if currently hidden) the stems, flags and beams of selected

notes.

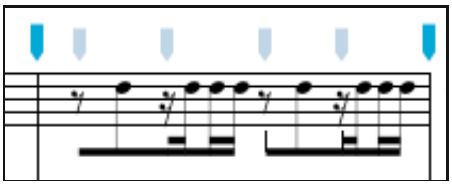
- **Hide/Show Parentheses** – hides (or makes visible if currently hidden) a bracket around the selected notehead.
- **Flip Stem** – flips the stem direction of selected notes. If notes are beamed, the entire beam group is flipped.



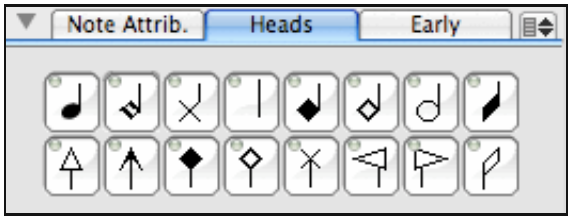
A common use for the **Show/Hide Parentheses** button is shown below; here the second note of a trill is shown as a bracketed note (with the stem removed). This note was entered as a graphic note with an image size of 18 points.



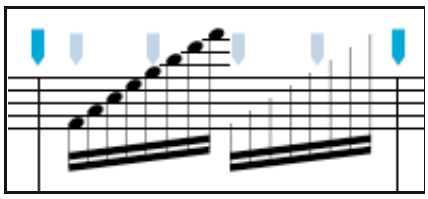
The **Show/Hide Stems** button can be used to draw short stems on rests if this appearance is desired. Here, the two rests in the second group were selected and the **Show/Hide Stems** button clicked.



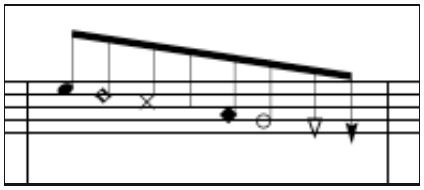
Heads Tab



To change the appearance of noteheads in your score, select a note or group of notes and click on one of the 16 notehead buttons. When changing to some of these noteheads, you may also want to remove ledger lines by using the **Hide/Show Ledgers** button discussed above.

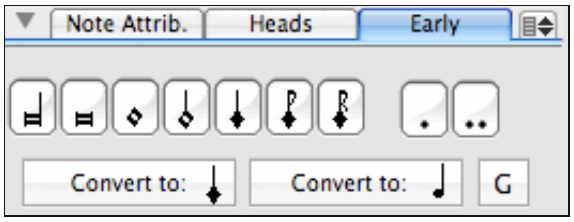


Any note can be set to any one of these notehead types. A few of the noteheads can be seen below:



- the first notehead type refers to normal noteheads (not necessary to filled noteheads) so a half or whole double whole noteheads will be drawn if the duration so dictates.
- changing the notehead does not alter the pitch of a note – even in the case where there is no notehead.
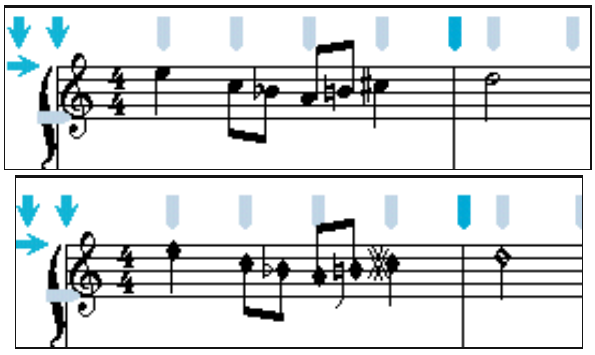
Early Music Tab



The Early Music Tab contains a palette of "early music" symbols and buttons for converting between "early music" notes and conventional notes.

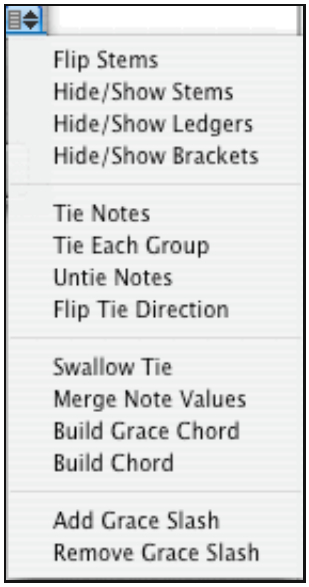
The "early music" symbols consist of notes, dots and accidentals. There are both regular and graphical versions of the "early music" notes. The commands for these notes have a prefix "n" – "nd", "nw", "nh" ... or a prefix "&n" for the graphical versions – "&nd", &nw", "&nh"... A long note (which appears as a double whole note with a stem on the right side) can be created with the commands "nl" or "&nl".

To convert selected notes from regular notes to Early Music notes, click on the first of the two conversion buttons. To convert the other direction, click on the second of these buttons. The example below shows a conversion between regular notes and Early Music notes:



The "G" button in this view is for creating graphical versions of the Early Music notes; when selected, subsequent "early music" notes will be made graphical (i.e. not fixed to the rhythmic spine)

Menus Items



The pull-down menu located at the top-right corner of the Note Attributes pane duplicates the NoteAbilityPro *Modify/Notes* menu and contains the following items:

Flip Stems	flip the stem direction of selected notes.
Hide/Show Stems	hide or show stems, flags, and beams of selected notes.
Hide/Show Ledgers	hide or show the ledger lines of selected notes.
Hide/Show Brackets	hide or show the brackets (parentheses) around the noteheads of selected notes.
Tie Notes	form a tie between selected notes (notes must have the same pitch and be in the same voice).
Tie Each Group	form a tie between each group of shift-selected notes.
Untie Notes	remove the tie between selected notes.
Flip Tie Direction	reverse the drawing direction of the tie between selected notes.
Swallow Tie	convert the selected tied notes into one note value equivalent to the tie duration.
Merge Note Values	convert the selected notes or rests into one note or rest value equivalent to the duration of the selected notes.
Build Grace Chord	build a chord from selected grace notes.
Build Chord	build a chord from selected graphic notes.
Add Grace Slash	create a grace note slash across the flag or stem of selected notes
Remove Grace Slash	remove the grace note slash from the flag or stem of selected notes

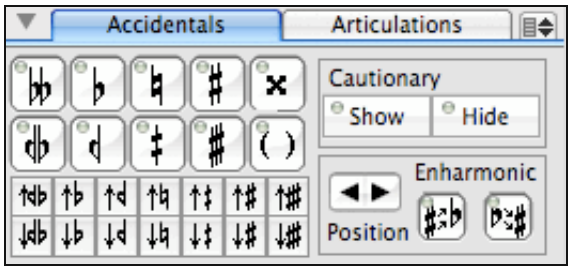
See also

- Music Images Panel
- NoteAbility menus
- Image List Panel
- Colors Panel

Accidental & Articulation Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Accidental & Articulations pane (which contains the tabs: Accidentals and Articulations) is not visible in the Music Images Panel, select Accidental & Articulations from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the two tabs in the Accidental & Articulations pane to view controls for Accidentals or Articulations.
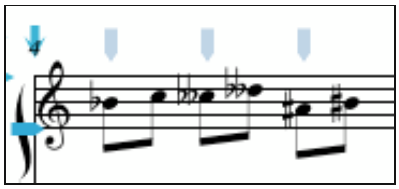
Accidentals Tab



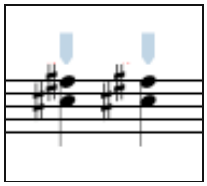
The Accidentals & Articutlation pane is used for adding accidentals to notes, for hiding or showing accidentals, for placing parentheses around accidentals and for adjusting the position of accidentals. In every case, notes in the score to be altered are first selected, then the appropriate button is clicked.

To add accidentals to selected images, click on desired accidental button. The top row of buttons is used for adding standard accidentals, the bottom row includes accidentals for making notes: 3/4 flat, 1/4 flat, 1/4 sharp and 3/4 sharp. The last button adds parentheses around the accidental (or removes the parenthesis if the accidental already contains one). The bottom two rows of buttons are for adding 1/8 tones which display an up or a down arrow beside the appropriate 1/4 tone accidental.

To shift accidentals to the enharmonic above or below, click on one of the enharmonic buttons. (The first button - enharmonic above - shifts the selected note(s) to the same sounding pitch but on a higher diatonic step - C# -> Db. The second button - enharmonic below - shifts the selected note(s)to the same sounding pitch on a lower diatonic step - C# - > Bx.). In the example below Bb-C was stated three times, the second time it was enharmonically shifted above, the third time is was enharmonically shifted below:
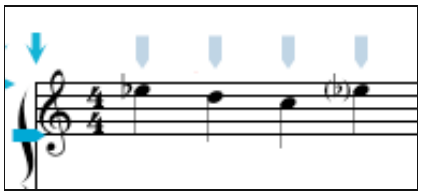


Accidental positions (i.e. the distance they appear to the left of the note) can be adjusted by clicking on the two arrow buttons. In the example below, the accidental positions of the second chord have been adjusted to the left.



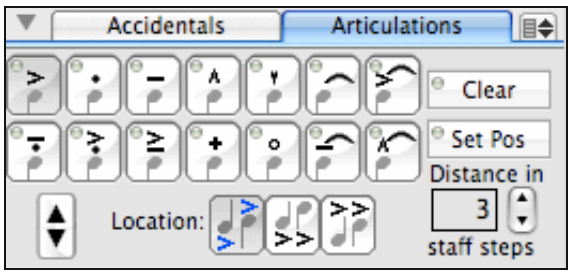
To show or hide cautionary accidentals, click on the **Show** or **Hide** buttons. In the example below, the Eb

on the 4th beat was not shown when entered. It was created by selected the note, then clicking on the **Show** button, then clicking on the parenthesis button.



- You can also use the Modify/Accidentals menu to perform many of the same tasks.
- The score pull-down menu (click on the score and right-click or Control-click with the mouse) contains shortcuts for sharps, naturals and flats.
- By default, the last note entered is considered to be selected unless a selection has been made with either the Select Image or Select Score tools.
- Rules which control when accidentals are added to notes can be set in the Rules pane of the NoteAbility Preference panel.
- There are two different graphical representations of quarter tones -- you may set the desired display using the NoteAbility Preference panel.

Articulations Tab
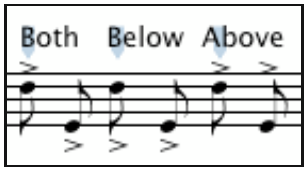


The Articulations pane is used for adding articulations to notes (or chords), for removing them and for changing their position relative to the note. In each case, select the notes to be altered before using the buttons in this pane. (Since the last note entered is automatically considered to be selected, you can click on these buttons after entering a note in order to add an articulation to the note.

To add an articulation to a selected note or group of notes

1. Choose the type of articulation by clicking on on of the radio buttons.
2. Set the position of the articulation by choosing one of the three Location buttons (should the articulation always be above the note, always below the note, or should it change its position depending on the stem direction of the note.)
3. Set the distance in staff spaces that the articulation should appear (above or below the notes, but clicking on the small "stepper" arrows.
4. Click on the kind of articulation you want added to the selected notes.
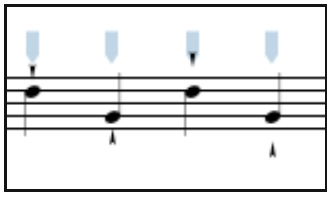
The example below shows the 3 location options - each pair of notes is set to a different location:



To remove an articulation from a selected note or group of notes, click on the **Clear** button.

To change the position of articulations, set whether the location of the articulation and set the distance in staff spaces that the articulation should appear above or below notes, then click on the **Set Pos** button.

In the example below, the position of articulations (which appear above or below notes) have been changed from 3 to 5 staff spaces:

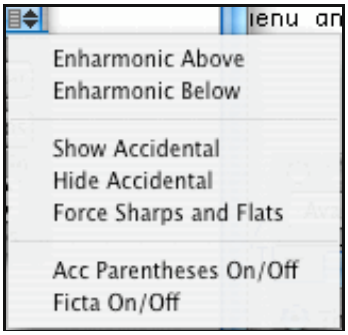


To large Up and Down arrows are provided for a shortcut for position adjustments to the articulations of selected notes.

– Individual articulation marks can also be manually repositioned on the score by selecting them with the Selection tool and dragging them. Only one articulation can be moved at a time using this method.

Menu items

The pull down menu located at the top-right corner of this pane is a duplicate the NoteAbilityPro *Modify/Notes* menu and contains the following menu items:



Enharmonic Above	shift selected notes to the enharmonic a step above
Enharmonic Below	shift selected notes to the enharmonic a step below
Show Accidental	show the accidental regardless of the current accidental rule
Hide Accidental	hide the accidental regardless of the current accidental rule
Force Sharps and Flats	force sharps and flats on selected notes to be shown
Acc Parentheses On/Off	toggle parentheses around accidentals on or off
Ficta On/Off	toggle ficta accidentals On/Off (ficta accidentals appear above the notes rather than to the left of them)

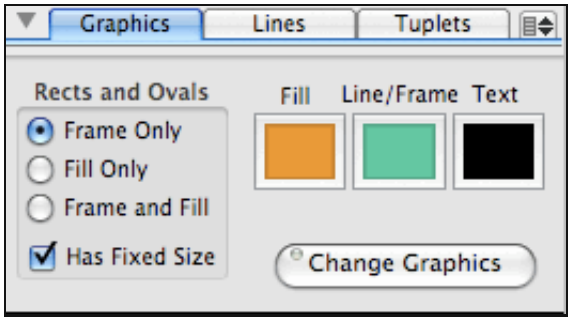
See also

- Music Images Panel
- NoteAbility menus

Graphics, Lines and Tuplet Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Graphics & Lines pane (which contains the tabs: Graphics, Lines and Tuplets) is not visible in the Music Images Panel, select Graphics & Lines from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the three tabs in the Graphics & Lines pane to view controls for Graphics, Lines or Tuplets.

Graphics Tab



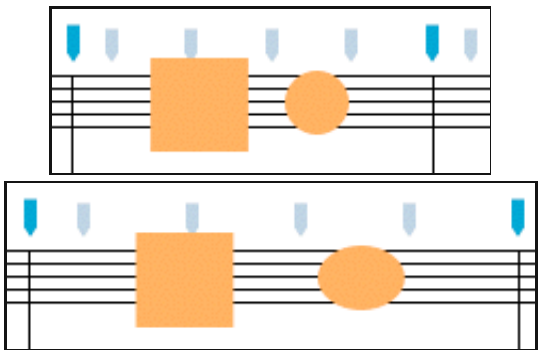
The Graphics pane is used for setting the attributes of the the NoteAbilityPro graphics objects: lines, rectangles, ovals, curves as well as the color of text.

The three color wells hold the current color (or grayscale) for:

- filled rectangles or ovals
- lines and frames for rectangles or ovals
- text

To change the colors in the wells, use the **Show Colors...** item in the **Format** menu or click on the border of one of the colour wells. Once you have selected your color in the Color panel, drag the color and drop it in one the wells in this pane.

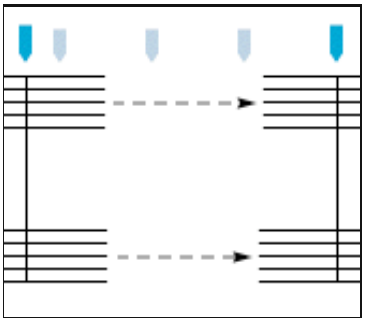
The Graphics pane includes radio buttons to set whether rectangles and ovals are framed only, filled only or framed and filled. There is also a check box **Has Fixed Size** which allows the size of rectangles and ovals to be fixed so they don't change their shape as the rhythmic spine is adjusted. The **Has Fixed Size** setting must be made before the image is drawn. In the example below, the rectangle has fixed size, while the oval does not. Compressing or stretching the measure will distort the oval, but not the rectangle.



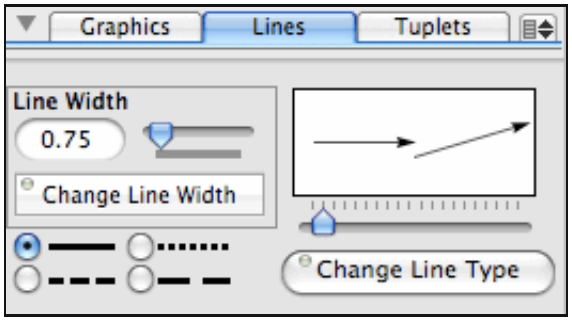
To change the characteristics of an existing graphic object, select the image, choose the desired settings in the Graphics pane and click the **Change Graphics** button.

– All new graphics are drawn using the settings in this pane. If you change the settings in order to alter an exising graphic image, you may want to revert the settings before adding more images.

– It is possible to control whether a graphic object is drawn before or after another image by changing its voice with the Change Voice buttons since the voices on each measure are drawn one after another. In the example below white rectangles are used to erase part of the staff. The white rectangles are set to voice 1 and the lines are set to voice 2 This ensures that the lines will be drawn after the erasure (white) rectangle.



Lines Tab



NoteAbility supports 20 different line types, each of which can be solid or dashed, can be drawn at any line thickness and colour (the colour is set in the Graphics tab), and can be set to any point size (using the **Image Size** slider in the Image Attributes pane.)

To enter lines in your score:

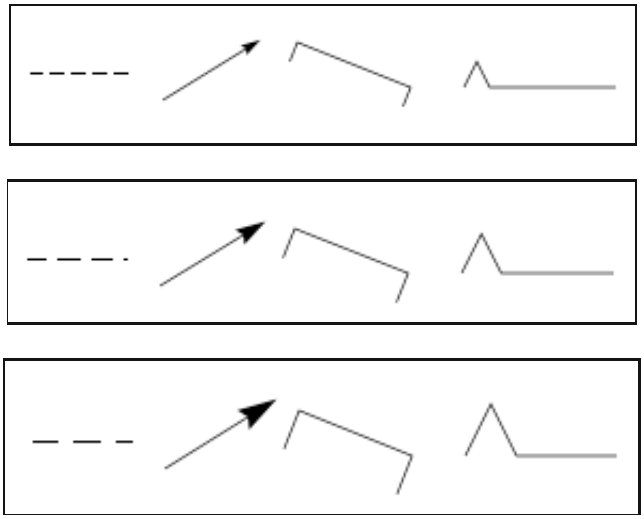
1. Select the line type using the slider on the right side of the pane – two examples of the line are shown in the white rectangle
2. Set the line width by using the Line Width slider.
3. Select whether you want the line to be solid or dashed (there are 3 different dash sizes)

Draw lines using the Line tool from the NoteAbilityPro Tool palette – lines will appear on the score using all the characteristics you have just set.

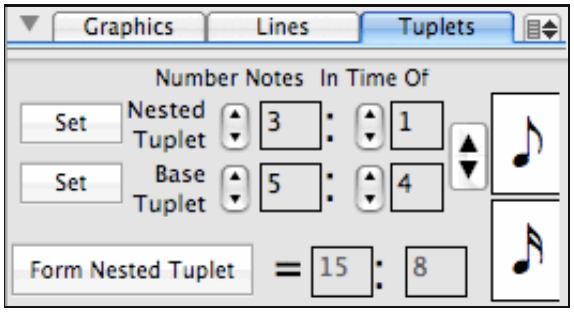
To change the attributes of lines that have already been added to your score, select the lines on the score (using the Selection or Select Score tools), then choose the new line type, line width, whether they are to be solid or dashed, and click on the **Change Line Type** button.

To change only the line width of selected lines, set a new line width and use the **Change Line Width** button.
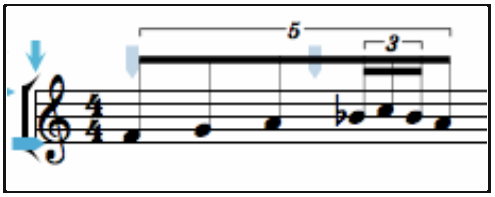
It is also possible to change the image size of a line by selecting it, choosing a new image size in the Image Attributes pane and clicking on the **Set Size** button. Changing the image size (or point size) of a line has different effects depending on the line type. Generally, the size of extended lines or the size of the arrow head is altered with different image sizes. The line thickness is not altered since that attribute is set with the Line Width slider. In the example below, the four different line types are shown at 24, 36 and 48 point sizes:



Tuplets Tab
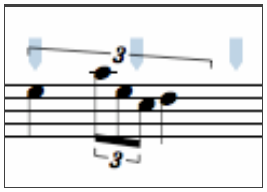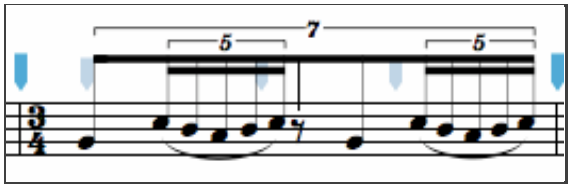


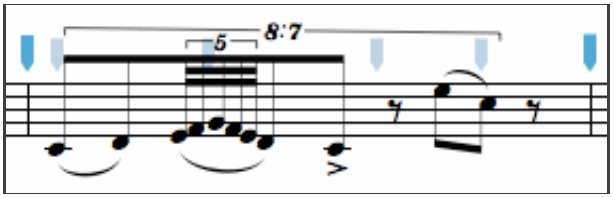
The tuplet tab is used for creating nested tuplets (tuplets within tuplets.) In a situation where you need a tuplet such as a triplet within another tuplet such as a triplet or a quintuplet, you can use this panel to build your nested tuplet. The figure below shows an example of a nested tuplet.



In this example, the base tuplet is an eighth note quintuplet (5 eighth notes in the time of 4 eighth notes) and the nested tuplet is a triplet where 3 notes appear in the time of 1 of the base units. Before creating nested tuplets, you need to determine the base tuplet (i.e. the number of notes that will appear in the time of how many of those notes, and what rhythmic value the base tuplet will have. For the nested tuplet, you need to know how many notes should appear in place of how many of the base tuplets.

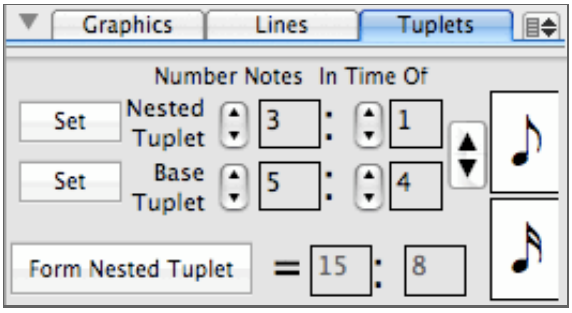
Here are a few more examples:

Base tuplet	Base Duration	Nested Value	Appearance
3 in the time of 2	Quarter note	3 in the time of 1 base unit	

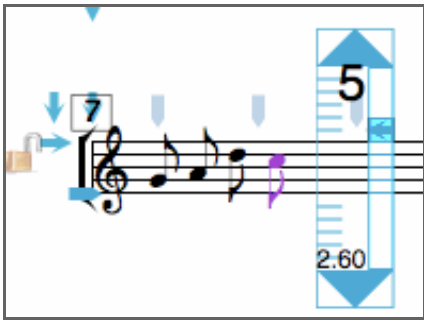
7 in the time of 6	Eighth note	5 in the time of 2 base units	
8 in the time of 7	Eighth note	5 in the time of 1 base units	

The procedure for creating nested tuplets is as follows:

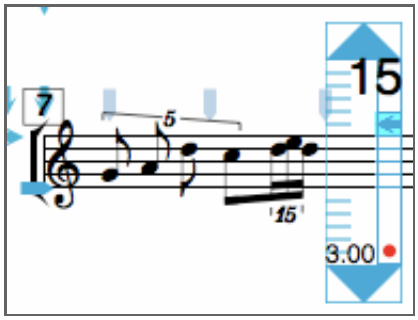
- Enter the values for base tuplet, nested tuplet and base rhythmic unit by clicking on the up and down arrows on the panel. The panel below shows a base value of 5 in the time of 4 eighth notes and a nested value of 3 in the time of 1 of the base units. The values at the bottom of the panel show the actual duration values of the nested tuplet (which are 15 sixteenth notes in the time of 8 sixteenth notes).



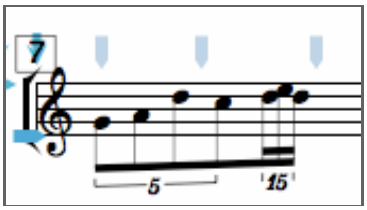
- If you are entering notes with a duration of the base tuplet, click on the **Set** button beside the Base Tuplet. When you do this, the appropriate command will be entered in the Command field and the tuplet setting on the top of the score window will be set automatically. These values can be altered if needed (for dotted notes or tied notes or if you want to enter rests) but in many instances you can use these values to insert the notes. In the example below four eighth note (quintuplets) were entered.



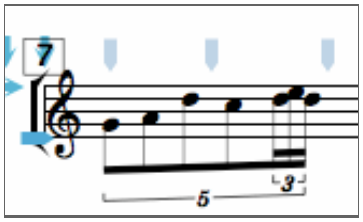
- When you want to enter note belonging to the nested tuplet, click on the **Set** button beside the Nested Tuplet, and the appropriate command and tuplet setting will be passed to the score. Again, these values can be altered if needed. In this example, the tuplet values 15 in the time of 8 with the command "s" for sixteenth note were passed to the score. When three sixteenth notes are entered the results are as follows:



- The beaming and tuplet grouping still needs to be corrected -- the music is intially entered with the tuplet values that were used (5 : 4 && 15 : 8). Select the entire collection of notes and use the **Beam Notes** command (Command-b) to create a single beam group.



- Finally, select the notes again and click on the **Form Nested Tuplet** button located on the Tuplet pane. The two levels of tuplets should be calculated and displayed.



Each tuplet can be adjusted and (if desired) the ratio can be displayed and the bracket hidden.

- Nested tuplets can only be formed in situations where the second tuplet (i.e. the nested tuplet) is completely contained within the base tuplet -- it is not possible to form nested tuplets across multiple base tuplets.

- When copying and pasting nested tuplets, make sure you use the Paste Exact operation (Command-Shift-V) in order that the nested tuplet gets recreated. If you use Paste (Command-v) you may have to reselect the notes and click on the **Form Nested Tuplet** button to recreate the nested tuplet.

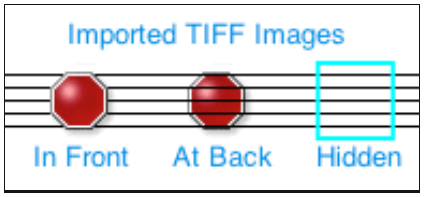
Menu items

The pull down menu located at the top-right corner of this pane refer to Import Graphics - these are graphics files that have been dragged and dropped onto the score or inserted using the Image Library Panel.



Bring Import Graphic To Front	bring selected import graphics in front of staves and other music images
Send Import Graphic To Back	send selected import graphics behind staves and other music images
Hide/Show Import Graphic	hide or show the selected import graphics

The **Bring To Front** and **Send To Back** menu items refer only to Imported PDF, EPS, TIFF, JPEG, PICT, or GIF files. You can use these buttons to cause the graphic images to be drawn (and printed) before or after score is drawn. The example below shows an imported TIFF image (a stop sign) which is placed once in front of the score, once behind the score. The third copy of this image has been hidden by selecting the image and clicking on the **Hide/Show Import Graphic** menu. This image will appear when the document is printed.



– Import graphic images can be made global so that they extract with every extracted part by selecting the image and choosing the *Modify/Text/Make Text Global* menu item.

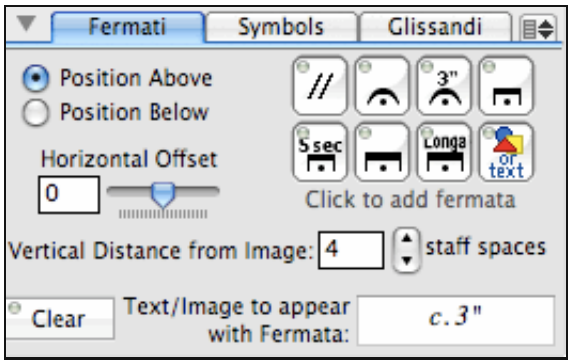
See also

- Music Images Panel
- NoteAbility menus
- Image Library Panel

Symbol & Glissandi Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Symbols & Glissandi pane (which contains the tabs: Fermati, Symbols, and Glissandi is not visible in the Music Images Panel, select Symbols & Glissandi from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the three tabs in the Image Attributes pane to view controls for Fermati, Symbols, or Glissandi.

Fermati Tab



The Fermata pane is used to add fermati (of various types) to selected notes or rests. Although it is possible to add fermati graphically (using the *ferm* or *fermu* commands, the fermati added using this pane are retained with the notes and rests during reformatting and part extraction. As well, it is possible to add text and/or images along with the fermata.

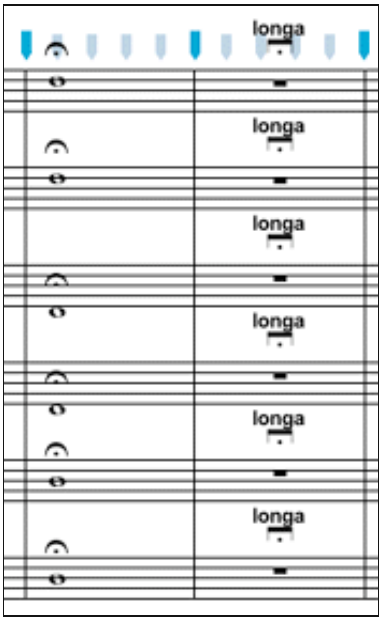
To add fermati to notes or rests, select the images in the score, the set the relative position of the fermata (above or below the note/rest) and the vertical distance from the note/rest (in staff spaces). If you are going to add a fermata type which includes text (fermata types 3, 5, 7 or 8), then type the text into the text box located at the bottom of the pane. Once the text has been entered, you can change the font, by selecting the text and using the standard text panel (Command-t). If you do not want the fermata to be centred directly above or below the note/rest, you can set the Horizontal Offset slider to cause the fermata to appear to the right or left of the note/rest. Once all these settings are correct, click on the fermata type you want and each of the selected notes and rests will have a fermata attached to them.

The **Clear** button removes existing fermatas from any selected notes.

The **Change Fermata/Symbol Position** menu item (in the small pull-down menu) is used for changing the position (i.e. the vertical distance, horizontal offset and relative position) of the fermati on any selected notes or rests.

> – As well as typing text into the fermata text field, you can drag or paste images (PDF, TIFF, etc.) int the text field. Text can contain multiple lines, colours, etc.

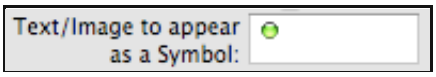
In the example below, two different types of fermatas (type 2 and type 5) were applied to each of the two measures.
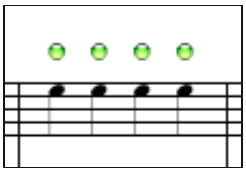


For the second measure, the text "longa" was added in the fermata text field - as shown below:
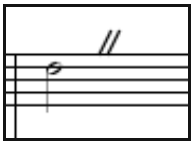


The last fermata type allows text and/or graphics to be added to notes or rests without a normal fermata image. This is very useful for times when you want some text or an image to appear above or below a note - even if it is not being used as a fermata. In the example below, a small button has been dragged into the text field, and the last fermata type has been choosen.



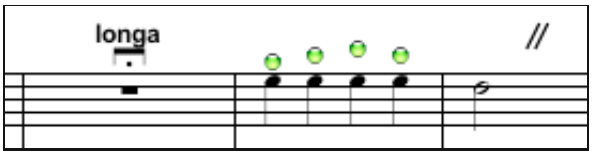
When you add this fermata type to a group of selected notes, the images appear above the selected notes:



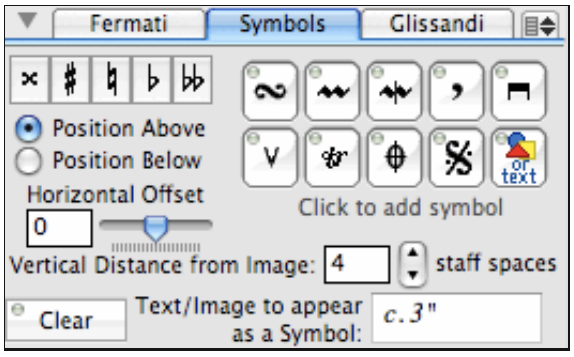
The **Horizontal Offset** slider is useful in conjunction with the first fermata type. This fermata normally appears to the right a note. In this case it was offset to the right by 8 staff spaces using the **Horizontal Offset** slider.



Finally, it is possible to drag the fermata image up and down directly on the score, by selecting the fermata and dragging it. However, these images can only be moved horizontally by using the **Horizontal Offset** slider along with the **Change Position** button. In the example below, the positions of the fermatas have been adjusted manual by selecting each one and dragging them up or down.



Symbol Tab



The Symbol pane is used to add ornament and other symbols to selected notes. Although it is possible to add these symbols graphically (using commands such as *mord* or *tr*, these symbols are retained with the notes during reformatting and part extraction. As well, it is possible to add text and/or images and have the text or image associated with the note.

To use the Symbol pane, select the notes in the score that you want symbol to appear on, then set the relative position of the symbol (above or below the note) and the vertical distance from the note (in staff spaces). If you have chosen a mordent, turn, or trill symbol, you can also select an accidental to appear above the image. If you have chosen to add text or graphics to a note, type the text in the text field. Fonts can be changed by selecting the text and using the standard text panel (Command-t). Once you selected all the symbol settings, click on the button corresponding to the type of symbol you want and the symbol will be added to all selected notes.
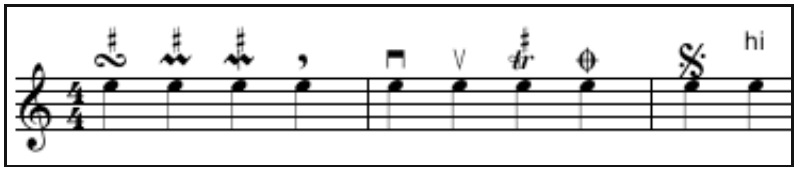
The **Clear Symbol** button removes existing symbols from any selected notes.

The **Change Fermata/Symbol Position** item in the small pull-down menu is used for changing the position (i.e. the vertical distance, horizontal offset and relative position) of existing symbols on any selected notes.
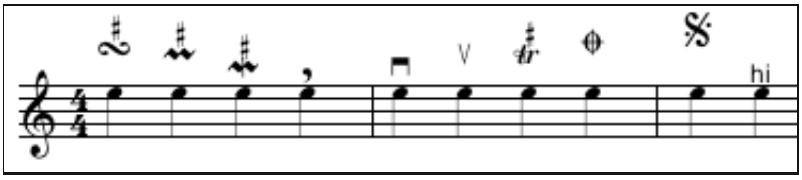
- As well as typing text into the symbol text field, you can drag or paste images (PDF, TIFF, etc.) into the text field. Text can contain multiple lines, colours, etc.

- Trills added with the symbol pane do not include an extension line. If you need an extension line, add the trill using the Trill tool from the NoteAbilityPro Tool Palette.

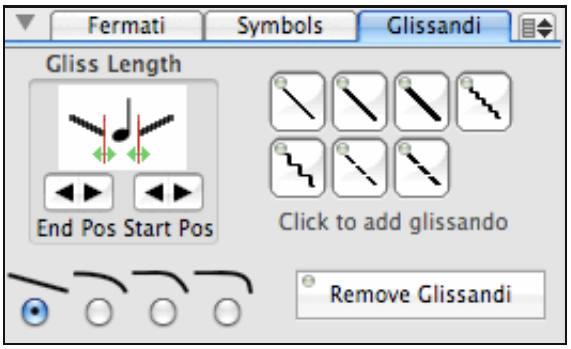
In the example below, different symbols have been added to each of the notes. (A sharp was selected in the accidental radio buttons.)



I is possible to drag the symbol image up and down directly on the score, by selecting the symbol and dragging it. However, these images can only be moved horizontally by using the **Horizontal Offset** slider along with the **Change Position** button. In the example below, the positions of the fermatas have been adjusted manual by selecting each one and dragging them up or down.



Glissandi Tab

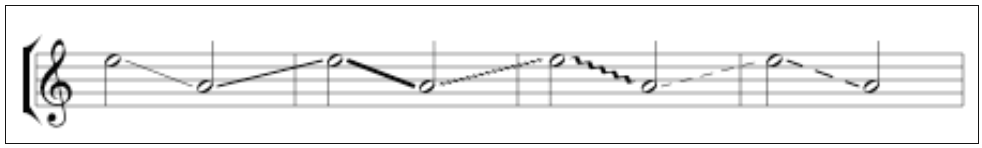


The Glissando pane is used for creating glissandi between notes and for altering the appearance of the glissandi.

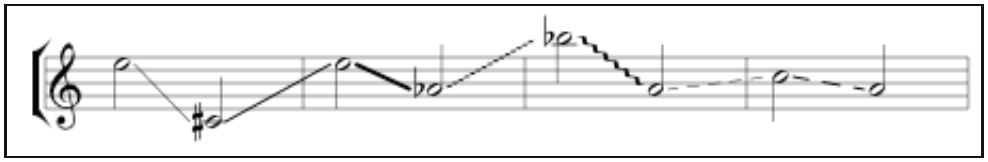
Although it is possible to create glissando lines by using the Line tool, it is often useful to have the glissando lines connected to notes so that when the notes are adjusted, the glissando line is adjusted as well. In order to have glissando lines connected to the notes, you must first select the notes using either the Selection or Select Score tools. Next, click one of the 7 different types of glissando lines available in NoteAblityPro and the glissando line will connect the selected notes. If desired, you can choose to have your glissando line curved using one of the radio button in the bottom-left corner of the pane. Curves operate both in upwards and downward directions.

- If more than two notes are selected before the **Gliss between Notes** button is pressed, glissandi are created between successive notes in the selection. However, in cases where confusion might occur (as in the case of glissandi between chord notes) it is best to select notes in groups of two and create a single glissando between the pair of notes.

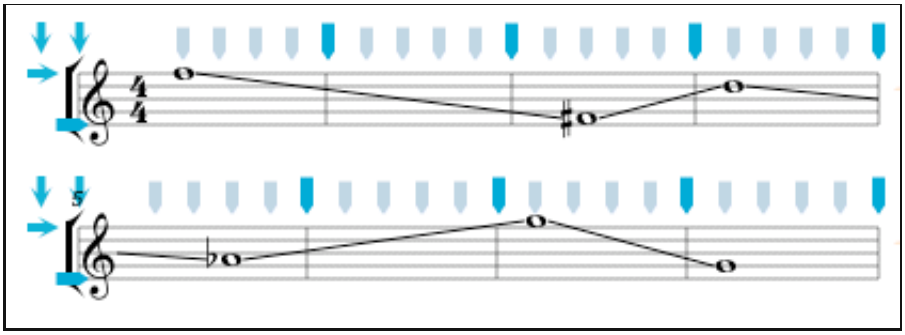
The example below shows the 7 types of glissandi available in NoteAbility.



Below, several of the pitches were altered and accidentals added. Notice that the glissando lines are adjusted to the new pitch level and allow space for the accidentals.



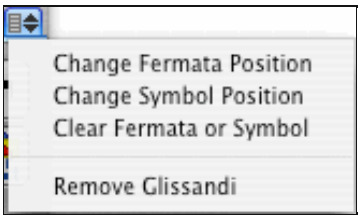
It is possible to have glissando lines cross from one system to another in this case, the glissando line continues at the beginning of the next system (as in the example below)



The **Remove Glissandi** button is used to remove glissandi from selected notes. Only the glissando which begins at the selected note is removed, not the glissano which ends at the selected notes.

The Gliss Length arrows adjust the position of the start or end points of the gliss relative to the notehead. These arrows operate on the glissandi that are attached to selected notes. The **End Pos** arrows alter the gliss line that ends at the selected note, and the **Start Pos** arrows the alter the gliss line that starts at the selected note.

Menus Items



The pull-down menu located at the top-right corner of the Symbols & Glissandi pane contains the following items:

Change Fermata Position	alter the position of the fermati on selected notes to the positions (location, vertical distance, and horizontal offset) indicated on the Fermata pane.
Change Symbol Position	alter the position of the symbol on selected notes to the positions (location, vertical distance, and horizontal offset) indicated on the Symbol pane.
Clear Fermata or Symbol	remove fermati or symbols on selected notes or rests
Remove Glissandi	remove glissandi from selected notes

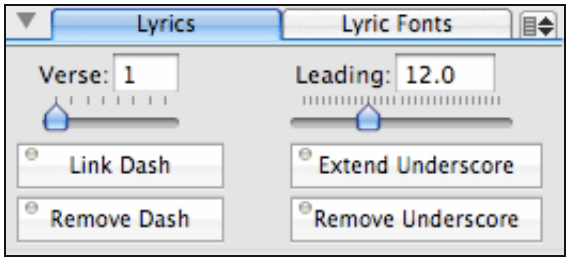
See also

- Music Images Panel
- NoteAbility menus
- Font Panel
- Colors Panel

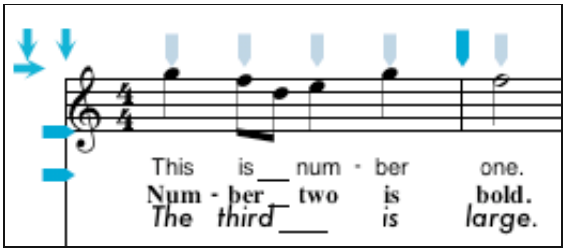
Lyrics Pane

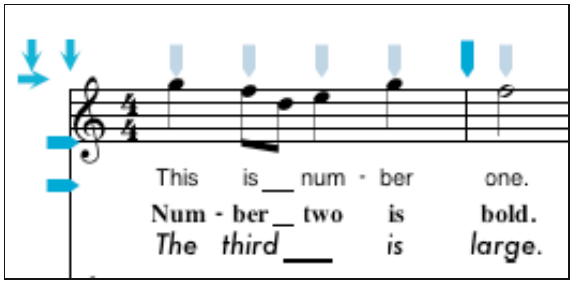
1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Lyrics pane (which contains the tabs: Lyrics and Lyric Fonts) is not visible in the Music Images Panel, select Lyrics from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the two tabs in the Lyrics pane to view controls for Lyrics or Lyric Fonts.

Lyrics Tab



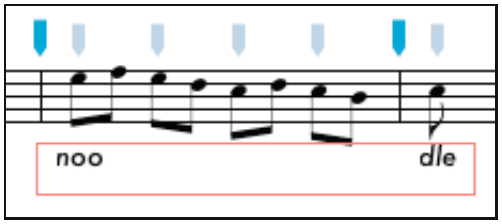
The Verse field can be set to a number from 1 to 8 either by typing in a new number or using the slider. All subsequent lyrics entered will be set to the new verse number. Each verse appears below the previous verse at a distance (in points) set by the leading field. The leading distance can be changed either by typing a new number in the leading field or by using the slider.) Leading values are in points (there are 72 points in an inch) and they can be either positive (below the previous verse) or negative (above the previous verse.) In the examples below, there are three verses displayed with leading values of 12 point and 16 point.

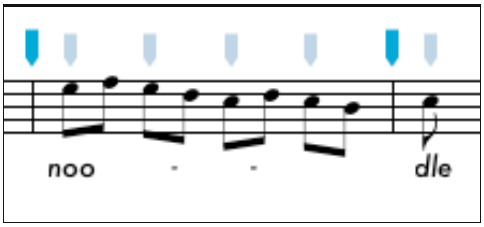




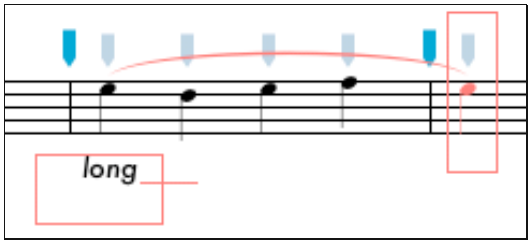
- New leading values change the distance between verses in the entire document.
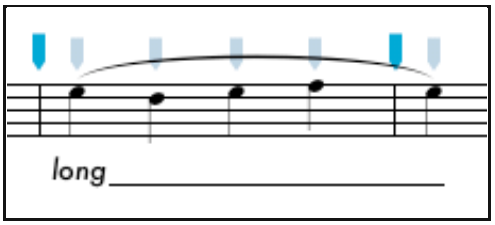
The **Link With Dash** button is used to join two selected lyrics so that they will be joined with a dash (i.e. so they appear to be two syllables as in "num - ber" in the example above). The **Remove Dash** button removes all dashes that begin on the selected lyrics. In the example below the two lyric syllables where selected, and the **Link with Dash** button was clicked. If needed, shift-selection can be used to link a series of pairs of lyrics.





The **Extend Underscore** button extends an underscore from the first selected lyric image to the first selected note image. Underscore are used to indicate that syllables are held for more than one note (as in "third__" in the example above.) The **Remove Underscore** button removes all underscores that begin on the selected lyrics. In the example below, the lyric syllable and the last note in the passage were shift-selected, and the **Extend Underscore** button was clicked.

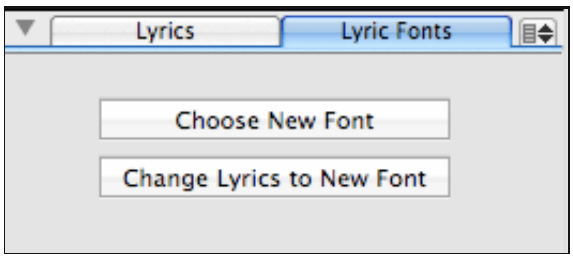




- The vertical position of lyrics below the staff is controlled by the Lyric Position button which is located at below the beginning of the staff. If the Lyric Position buttons are not visible, they can be displayed by selecting the Lyric Buttons check box in the Preferences panel. The Lyric Position button sets the base line of the first verse of the lyrics

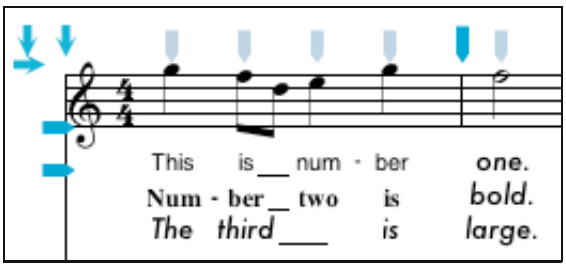
- The **Link With Dash** button can also be used to link Figured Bass symbols to one another.

Lyric Fonts Tab



The **Choose New Font** button brings up Font panel and allows you to set a new lyric font. All subsequent lyrics will use the new font.

The Change Lyrics to New Font button allows you to alter the font of selected lyrics to the font to the current lyric font (i.e. the last font set after clicking the **Choose New Font** button or the lyric font specified in the Preference panel. In the example below, the last word in each verse was selected and the **Change Lyrics to New Font** button was used to set them all to the current lyric font.



Menu items

The pull down menu located at the top-right corner of this pane are duplicates of the buttons on the Lyric Fonts tab view.



Choose New Font	select a new lyric font
Change Lyrics to New Font	change selected lyrics to the current lyric font

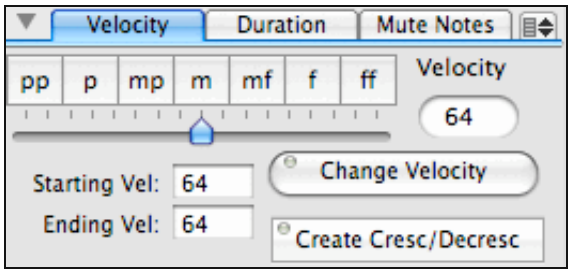
See also

- Music Images Panel
- NoteAbility menus
- Entering Lyrics
- NoteAbilityPro Preferences

Performance Settings Pane

1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Performance Settings pane (which contains the tabs: Velocity, Duration, Mute Notes) is not visible in the Music Images Panel, select Performance Settings from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the three tabs in the Performance Settings pane to view controls for Velocity, Duration or Mute Notes.

Velocity Tab



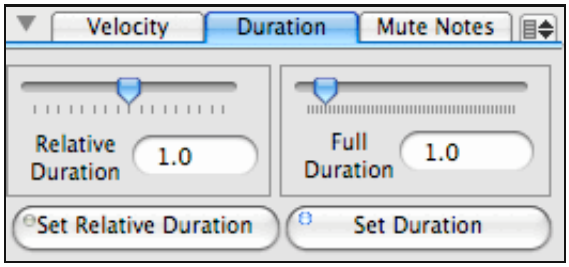
The Velocity tab contains controls for setting the velocity (or volume) of selected notes.

The velocity slider, text field and dynamic level buttons all set the current velocity (i.e. volume) – which is displayed in the Velocity text field. When notes are entered, this velocity value is stored for playback. This means that you can alter the velocity while you are entering notes by setting the velocity value before a new note is added. You can also alter the velocity of selected notes by setting a new velocity value and clicking on the **Change Velocity** button.

If you want to create a smooth crescendo or decrescendo, select a group of notes (probably using the Select Score tool), set the Starting Velocity and Ending Velocity values and click on the **Create Cresc/Decresc** button.

– Playback settings affect MIDI, DLS, Audio Unit, and Quicktime playback. Imported audio files are not affected by these settings.

Duration Tab

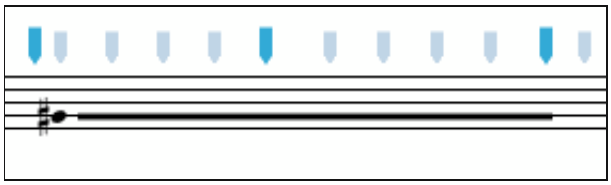


The Duration tab allows you alter the playback duration of selected notes without changing the appearance of the notes.

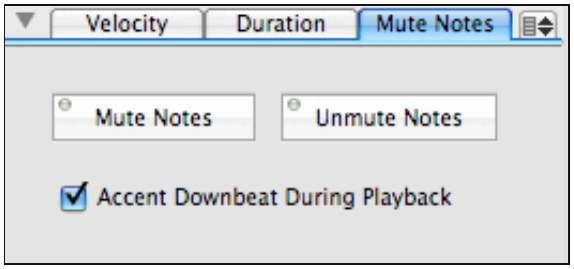
The Relative Duration slider and text field allow you to set the playback duration relative to the actual written duration. When the relative duration is 1.0 the two are the same. When the relative duration is less

that 1, the playback duration will be shorter than the written duration (creating a more staccato playback.) When the relative duration is greater than 1, the playback duration will be longer than written duration and a legato effect is created. Currently, when certain articulations are added to notes, the relative duration is modified. To set your own relative duration values for notes, select the notes, set the relative duration and click on the **Set Relative Duration** button.

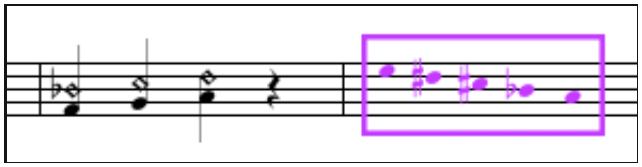
The Full Duration slider and text field allow you to set the playback duration to any number of beats you want. This is useful in some contemporary scores where you want a note to play much longer than the duration of the note value. In the example below, the duration of the note was set to 8.0 beats so that it plays for the duration that the line indicates.



Mute Notes Tab

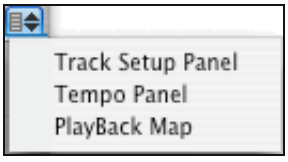


The two buttons on this tab view allow selected notes to be muted or unmuted (if they were previously muted). The **Mute Note** button is designed for use on any notes that you would rather did not sound when the score is played. In the example below, the harmonic notes were muted so that they do not sound during playback, and the notes in the rectangle were muted since they are not part of the performance score.



The **Accent Downbeat During Playback** is a setting which causes a slight accent to be played on the first beat of each measure.

Menus Items



The pull-down menu located at the top-right corner of the Performance Settings pane contains the following items:

Track Setup Panel	display the Track Setup panel so that the sound output controls for each track (staff) can be set.

Tempo Map Panel	display the Tempo Map panel so that a series of tempo changes can be specified.
Playback Map Panel	display the Playback Map panel so that repetitions of certain portions of the score can be set.

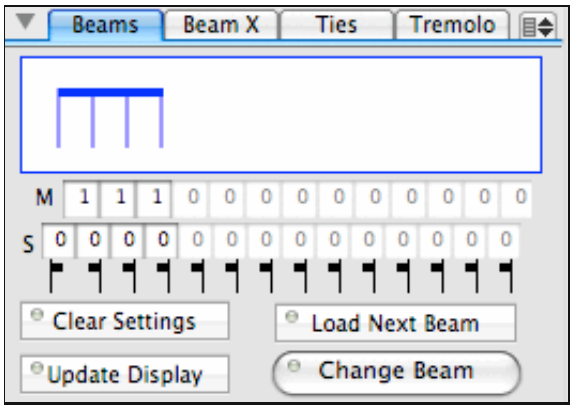
See also

- Music Images Panel
- Score Controls
- Track Setup Panel
- Tempo Map Panel
- Playback Map Panel

Beams, Ties, Tremolo Pane
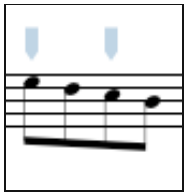
1. If the Music Images panel is not already visible on your screen, choose *Music Images Panel...* from the *Tools* menu to make it visible.
2. If the Beams, Ties, Tremolo pane (which contains the tabs: Beams, Beam X, Ties, Tremolo) is not visible in the Music Images Panel, select Beams, Ties, Tremolo from the **Available Panes** pull-down menu at the top of the Music Images Panel.
3. Choose between the four tabs in the Beams, Ties, Tremolo pane to view controls for Beams, Beam X, Ties or Tremolo.

Beams Tab

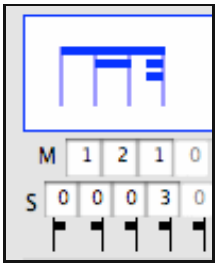


The Beams tab contains controls for for altering the format of beams. To use this pane, you must first select a beam group (or select a several beam groups), then click on the **Load Next Beam** button. The beam groups will be loaded sequentially into the pane for editing until all selected beams have been edited.

The display shows the beam format of the selected beam. In this case the beam group below was selected:
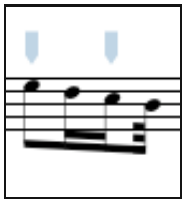


The two series of numbers refer to the number of beams between each staff, and the number of short beams that appear on the right or left of the staff. In the example above, each of the segments have one beam and no short beams. These values can be edited and the **Update Display** button clicked to display the results (as in the exaple below.)

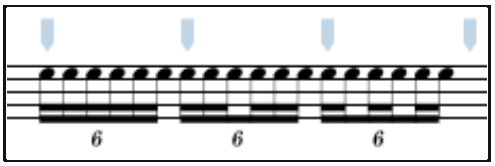


– The small beam direction (to the right or to the left) can be changed by clicking on the small beam icon.

When the **Change Beam** button is clicked, the selected beam group is altered in the score and the next selected beam is loaded into the Beam pane ready for editing. Note that the rhythmic positions of the notes are not altered, only the appearance of the beam.

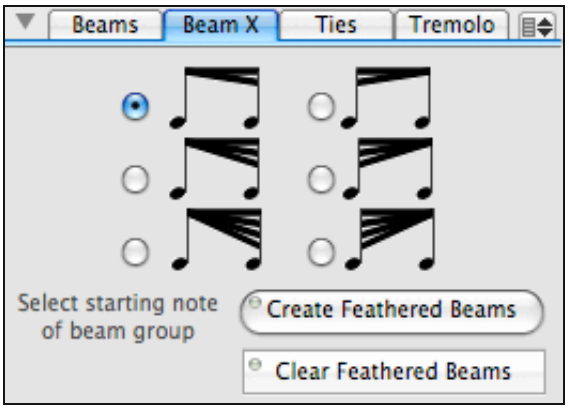


Editing beam groups should only be necessary when the default beam groupings are not to your liking or in unmeasured passages (perhaps using Graphic notes.) The example below shows three different ways of beaming the same group of notes (all are correct in different circumstances):



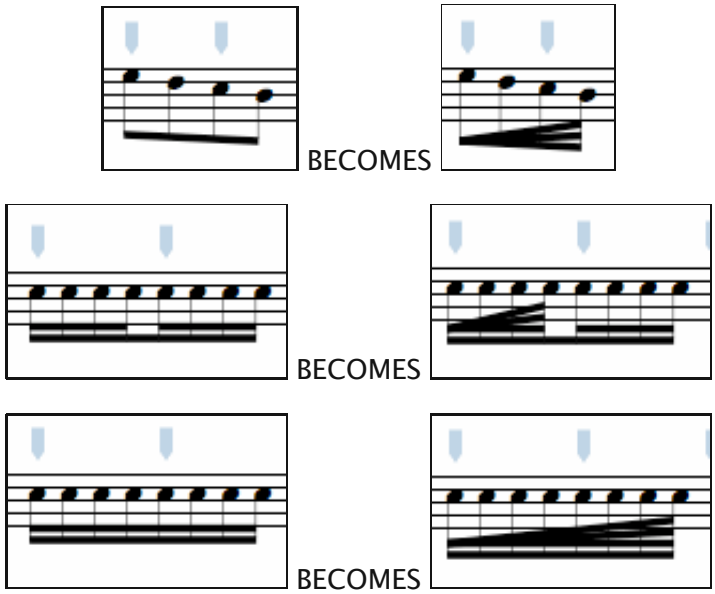
The **Straighten Beam** menu item (in the small pull-down menu) is used to straighten selected beams so that they are drawn horizontally (i.e. parallel to the staff lines).

Beam X Tab
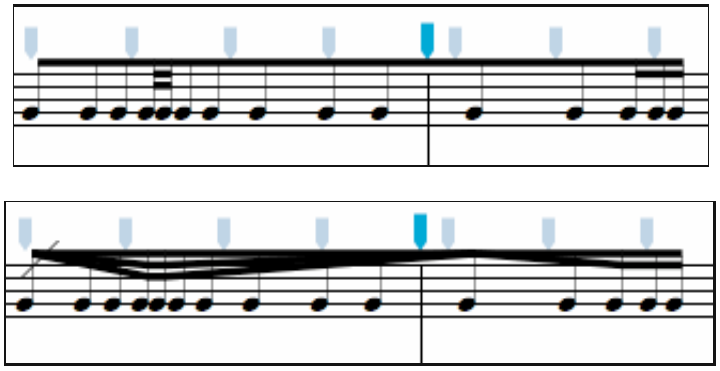


The Beam X tab view contains controls to create and modify feathered beams. Feathered beams are beams that are increase or decrease the number of beams across a series of notes and that represent rhythmic accelerandi or ritardandi. In other words, if you want to represent a gradual increase or decrease in rhythmic values across a beamed group then you may want to use feathered beams.

To create feathered beams, notes must already be beamed. Select the first note of the beam group to be affected by the feathered beam, select the type of feathered beam you want, and click on the **Create Feathered Beam** button. The feathered beam will be created from between the start note you have selected and the last note in the same beam group (i.e. that contains the same number of beams as the starting note. In the examples below, the first note in the beam group is selected and the second feathered beam in the first column was selected.



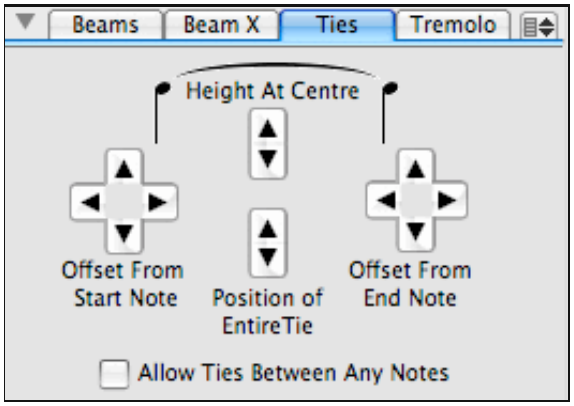
Notice that in each case two additional beams are feathered from the first note in the beam group to the last note in the same beam group.

Feathered beams can be used to form complex beam sequences. However, in some cases you may have to modify the beam grouping using the Beam pane (described above) so that the feathered beam begins and ends where you want it to. Below is an example of a complex feathered beam using three different feathered beam settings.



To remove a feathered beam, select the first note of the beam group containing a feathered beam and click on the **Clear Feathered Beams** button.
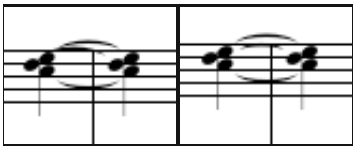
Ties Tab



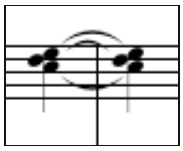
The Ties tab view contains controls to modify the appearance of ties. To alter a tie, you must select the

note that the tie originates from. The adjustment arrows on this pane are self-explanatory: the four arrows at the start note and end note adjust the starting and ending position of the tie relative to the note, and the two middle buttons increase or decrease the height of the tie's arc.

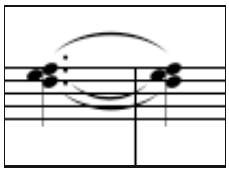
The adjustments to the starting and ending positions are used in chords which include seconds as in the following example where the starting tie position of the middle note in the chord is shifted to the right three units.



If the height of all three ties are increased (with the up arrow), the result is:



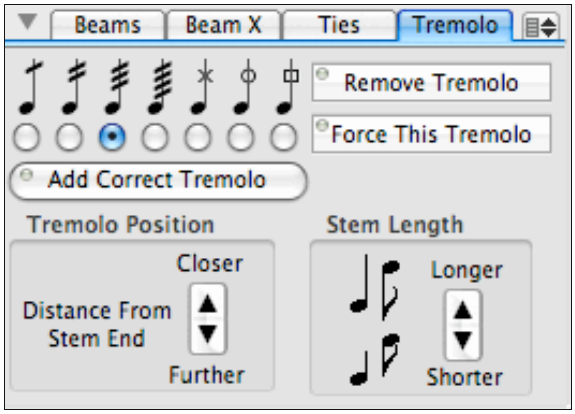
Adjustments to the entire tie position are sometimes needed when dots or accidentals interfere with the tie. In the example below, the top tie has been shifted higher to avoid colliding with the dot.



The **All Ties Between Any Notes** check box allows you to tie notes that would not normally be tied. This check box enables tieing between note that are different pitches or notes that are in different voices.

> – the default drawing position of ties can also be set in NoteAbilityPro preferences.

Tremolo Tab
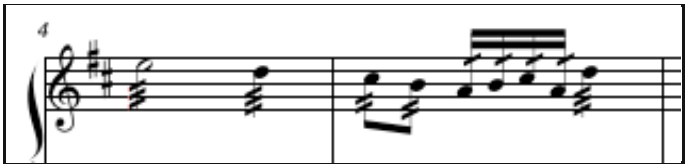


The Tremolo tab view contains controls for adding tremolo slashes to notes and for adjusting the stem lengths of notes.
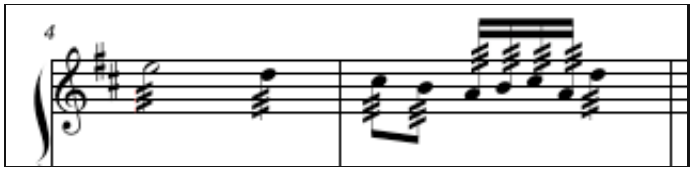
To add tremolo indications to a selected group of notes, you can either set the tremolo speed by choosing one of the radio buttons and click on the **Add Correct Tremolo** button or you can choose one of the four tremolo speed radio buttons and click on the **Force This Tremolo** button. The difference between these

commands is that Add Correct Tremolo will calculate the number of tremolo beams needed depending on the duration of the notes, whereas Force This Tremolo adds the specified number of tremolo beams to all notes regardless of their duration. The examples below should make the difference clear.

Add Correct Tremolo:



Force This Tremolo:
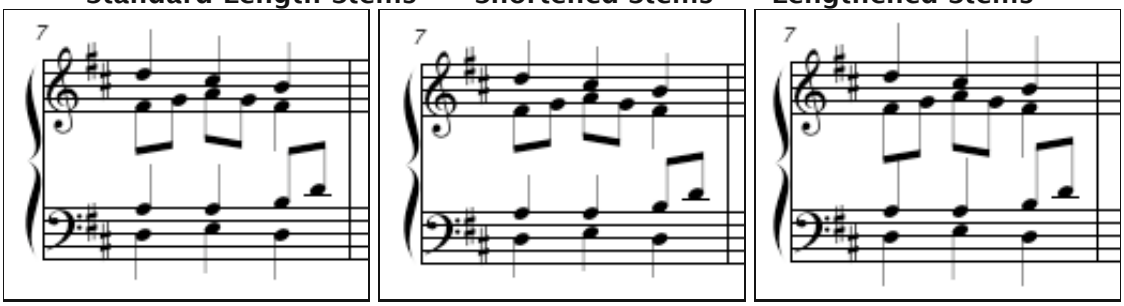


To remove tremolo indications from selected notes click on the **Remove Tremolo** button.

The tremolo marks are drawn at a set distance from the end of the note stem. You can use the up or down arrows to adjust this distance and thereby change the position of the tremolo on the stem (i.e. it will be drawn closer or further from the stem end.)

The **Stem Length** arrows are used to adjust the stem lengths of selected notes, so that they are drawn shorter or longer with each click of the arrow. The stems of all selected notes are altered whether they have flags or beams attached to them. The example below shows a score passage followed by the same passage with shorter stems, then the same passage with longer stems.

Standard Length Stems -- Shortened Stems -- Lengthened Stems



Menus Items



The pull-down menu located at the top-right corner of the Beam, Ties, Tremolo pane contains the following items:

Straighten Beams	adjust selected beams so that the beam is drawn horizontally (parallel to the staff liens).
Make Ties/Slurs Dashed	modify selected ties and slurs so that they are dashed.
Make Ties/Slurs Solid	modify selected ties and slurs so that they are solid.

See also

- Music Images Panel
- Score Controls

Sscore Structure Panel

This Chapter discusses the Score Structure panel which contains many of the controls for modifying your score layout and its underlying musical structure.

- Working with the Score Structure Panel
- Time Signatures Pane
- Clefs & Key Signatures Pane
- Barlines & Braces Pane
- Measure/Page Numbers Pane
- Staff Hide/Show/Spacing Pane
- Staff Attibutes Pane
- Measures & Systems On Page Pane
- Transpose / Shift Images Pane
- Edit Filter / Delete Pages Pane
- Panel & Edit Buttons Pane

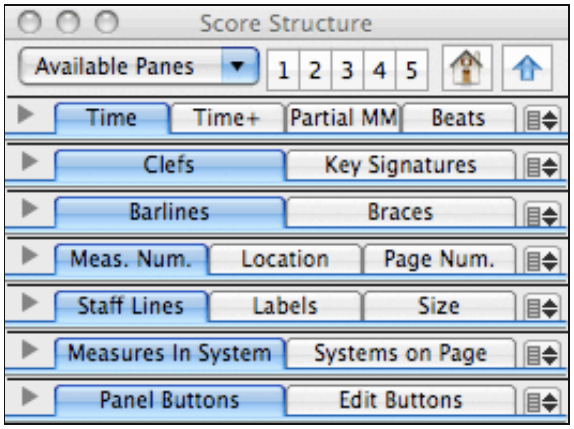
See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

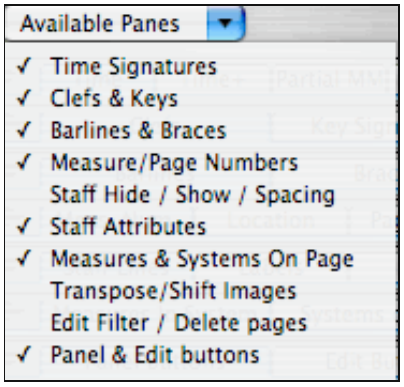
Score Structure Panel

If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.

The Score Structure panel contains extensible rows of panes which can be used for modifying the underlying musical structure of your score or for performing some of the more advanced editing procedures. The pull-down menu at the top of the panel (entitled **Available Panes**) allows you to add or remove panes from the panel. A check mark in the pull-down menu indicates which panes are included in the pane and can be removed – the absense of a check mark means that pane can be added. A total of 10 panes can be stored in the Score Structure panel. In the example below, 7 panes are included in the panel.



and the **Available Panes** menu looks like:



You can see from this menu that three panes are not loaded into panel.:

- Staff Hide / Show / Spacing
- Transposition / Shift Images
- Edit Filter / Delete Pages

Since each pane has between 2 and 4 tab views (which can be accessed by clicking on the tab), a total of 28 panes (or views) is available in this panel. In order to access the individual tab views, you must first ensure that the pane to which the view belongs has been added to the panel. Then you can click on the tab to display the individual controls you are looking for.

The five numbered buttons along the top of this panel allow you to store preset arrangements of the panes and save them as preferences. To store an arrangement of visible panes, hold the Shift key down while clicking on one of the numbered buttons. To recall a stored preset, click on the button and the stored configuration of panes will be loaded and displayed.

Below is a list of the main panes and the tab views that are contained in each pane.

Main Pane	Tab Views	Description
Time Signatures		
	Time	Controls for changing the time signature in the score
	Time+	Controls for creating complex time signatures
	Partial MM	Controls for creating pickup measures and other instances of incomplete measures
	Beats	Controls for setting the beat configuration of specific measures (in order to force beaming conventions)
Clefs & Key Signatures		
	Clefs	Controls for creating or removing clef changes in the score
	Key Signatures	Controls for inserting or removing key signatures in the score
Barlines & Braces		
	Barlines	Controls for changing the characteristics of barlines
	Braces	Controls for changing the characteristics of braces located at the beginning of each system
Measure/Page Numbers		
	Meas. Num.	Controls for setting the characteristics of measure numbers
	Location	Controls for setting the location on the score of measure numbers
	Page Num.	Controls for setting the characteristics and location of page numbers
Staff Hide/Show/Spacing		
	Staff Hide	Controls for hiding empty staves in your score
	Show	Controls for making visible staves that have previously been hidden
	Spacing	Controls for setting distance between staves in your score
	Add	Controls for adding new staves to your score
Staff Attibutes		
	Staff Lines	Controls for changing the number of lines in staves
	Labels	Controls for changing the labels which appear to the left of staves
	Size	Controls for changing the pointsize of staves and all images associated with those staves
Measures & Systems On Page		
	Measures In System	Controls for changing the number of measures in specific systems in your score
	Systems On Page	Controls for changing the number of systems on specific pages of your score
Transpose / Shift Images		
	Transpose	Controls for transposing selected images by intervals or keys
	Shift <->	Controls for shifting selected images forward or backward in your score
	Map Pitches	Controls for mapping pitches in non-linear ways
Edit Filter / Delete Pages		
	Edit Filter	Controls for selectively removing images from a selection
	Fill	Controls for pasting music repeatedly down or across your score
	Delete Pages	Controls for deleting extra pages in your score
Panel & Edit Buttons		
	Panel Buttons	Shortcuts to all the panels available in NoteAbilityPro
	Edit Buttons	Shortcuts for many of the editing operations available in NoteAbilityPro

– When you quit NoteAbilityPro, the configuration of the Score Structure panel (i.e. which panes have been loaded into the panels and which panes are open) is saved as a preference and will be loaded next time you launch the program.

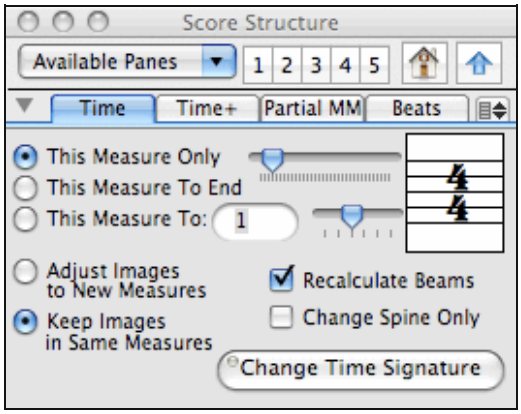
See also

- Music Images and Score Structure Panels
- Time Signatures Pane
- Clefs & Key Signatures Pane
- Barlines & Braces Pane
- Measure/Page Numbers Pane
- Staff Hide/Show/Spacing Pane
- Staff Attibutes Pane
- Measures & Systems On Page Pane
- Transpose / Shift Images Pane
- Edit Filter / Delete Pages Pane
- Panel & Edit Buttons Pane
- Music Images Panel

Time Signature Pane

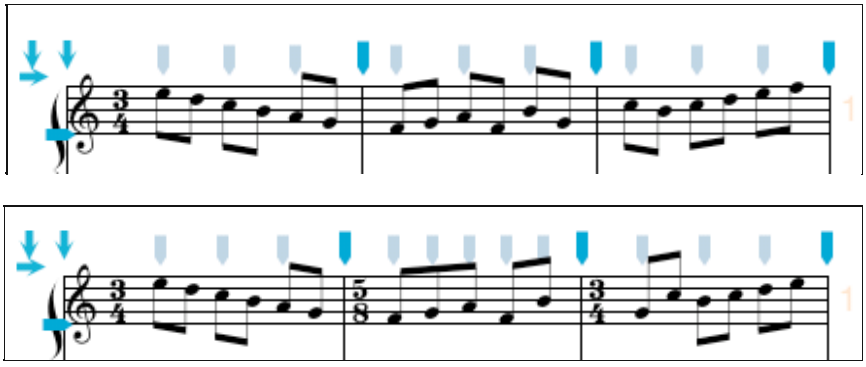
1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Time Signature pane (which contains the tabs: Time, Time +, Partial MM, and Beats) is not visible in the Score Structure Panel, select Time Signature from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the four tabs in the Time Signature pane to view controls for Time, Time+, Partial MM, or Beats.

Time Tab
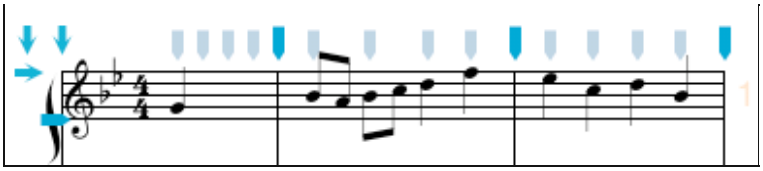


To change time signatures, set the time signatures numerator and denominator with the two sliders. Choose how many measures from the current measure are to be changed to the new time signature: only one measure, to the end of the score, or to (and including) a specified measure number. You should also set whether you want images adjusted to new measure or kept in the same measures they are currently in. If you want the beam groupings of notes recalculated, check the **Recalculate Beams** check box. If you only want the rhythmic spine altered, but no new time signature to be entered and no image adjustments to take place, check the **Change Spine Only** check box. Once all the appropriate settings have been made, click on the **Change Time Signature** button.
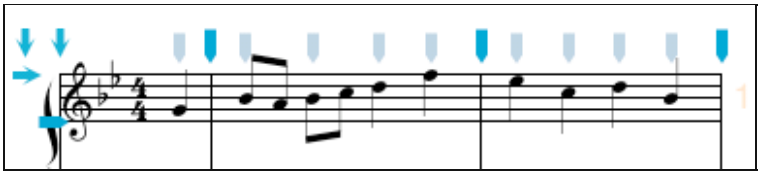
If you have chosen either to change time signatures for one measure or until a specified measure number, the time signature will be changed back at the correct measure. In the example below, the time signature of the second measure was changed from 3/4 to 5/8.



Notice also that some notes were adjusted to new measures and that the passage was re-beamed according to the normal beat divisions.

Choosing **Change Spine Only** can be useful for creating pickup measures. In the example below, the first measure was changed to a1/4 measure with the **Change Spine Only** setting. Here, the 4/4 time signature is not removed, the1/4 time signature is not added, and the spine is simply changed to have only one beat.

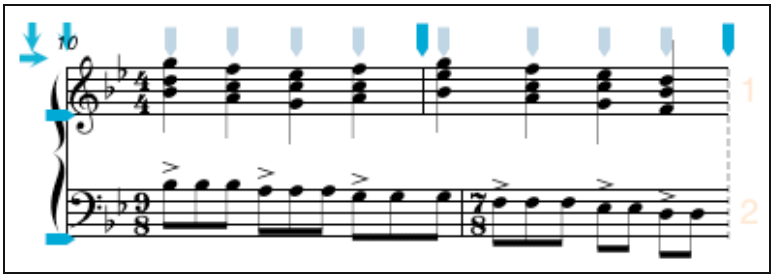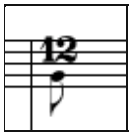




The Partial MM tab view can also be used to create incomplete or partial measures

To hide or show time signatures or to remove unwanted time signatures from your score, use the menu items in the small pull-down menu located on the top-rigth corner of this pane.

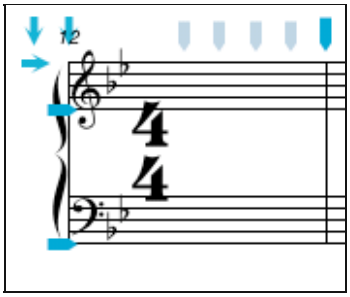
- Since there is only one rhythmic spine it is not possible to have two different time signatures in the same measure. However, it is possible to fake multiple meters by hiding the barlines on a staff (with the Barline pane) and adding time signatures and barline graphically (i.e. using the Commands for adding graphical version of these images.) The example below shows a 4/4 measure on the top staff and a "faked" 9/8 measure followed by a 7/8 measure on the second staff:



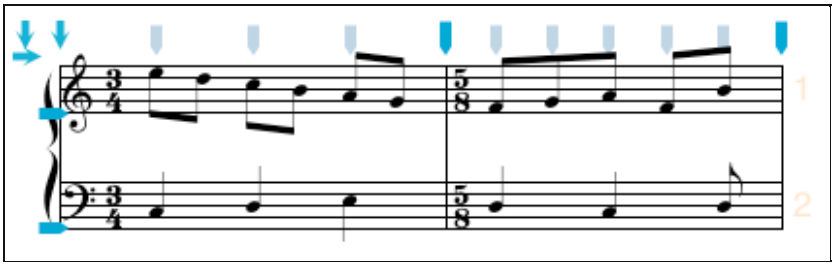
- Complex time signatures such as 4/4 + 1/8 can also be added graphically or they can be added using the Time+ tab view. The non-standard time signature below was created using the Command *12* for the numerator and a graphical note for the denominator.

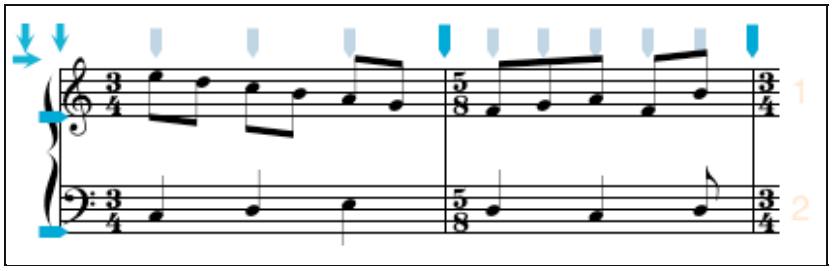


- Since any NoteAbility image can be set to be any point size, you can choose to remove some of the time signatures in a score (using the **Remove Graphic T.S.** menu item in the pull-down menu), make the remaining time signatures larger (by selecting them and setting them to a larger image size with the **Set Size** button on the Control panel) and drag them so that they are centred them between staves:

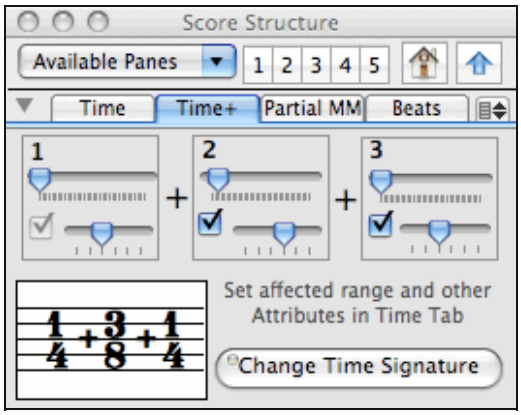


– Cautionary time signature at the end of systems are not added automatically. They can be added by using the either the **Modify/Cautionary Time Sigs** or **Modify/Modify Page/Add Cautionary Time Sigs** menu items – these menu items add cautionary time signatures through the entire document or only on the current page respectively. As an alternative, cautionary time signatures can be added manually by moving the last barline button slightly to the left and using graphic commands for time signature (eg. 3/4).





Time+ Tab
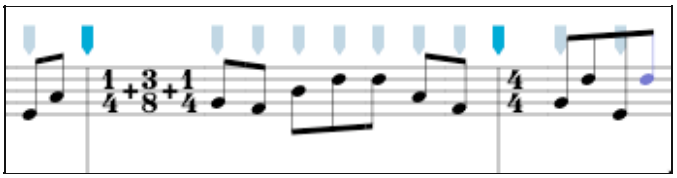


The Time+ tab view is used for entering complex time signatures in your score. Complex time signatures are meters which are comprised of two or more time signatures which are added together. Although complex time signatures are not common, they are sometimes used when a composer wishes to explicitly indicate the beat groupings. For example, a composer may wish to have a meter of 3/4 + 1/8 rather than a meter of 7/8. When a new complex time signature is entered, you can choose either to have all notes in subsequent measures adjusted to their new metrical positions or to keep images at their current beat positions.

It is possible to specify complex time signatures with either two or three component time signatures. There are three groups of numerator and denominator sliders – each of which control one of the component time signatures. If you want to create a time signature with two components, set the first time signature with the first numerator and denominator sliders, then check the second check box and set the second time signature with the second numerator and denominator sliders. If you want a a third component in your time signature, check the third check box and set the third time signature with the third numerator and denominator sliders. Next, you must set the details as to how many measures are to be affected by the time signature change and whether beams are to be re-calculated. All of these setting are on the Time tab view, so you must click on this tab in order to specify these settings. Choose how many measures from the current measure are to be changed to the new time signature: only one measure, to the end of the score, or to (and including) a specified measure number. You should also set whether you want images adjusted to new measure or kept in the same measures they are currently in. If you want the beam groupings of notes recalculated, check the **Recalculate Beams** check box. If you only want the

rhythmic spine altered, but no new time signature to be entered and no image adjustments to take place, check the **Change Spine Only** check box. Once all the appropriate settings have been made, return to the Time+ tab view and click on the **Change Time Signature** button.

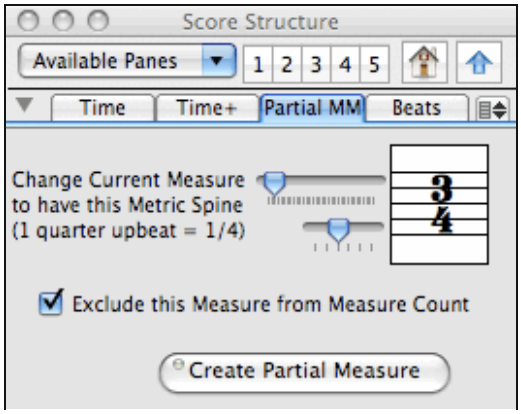
If you have chosen either to change time signatures for one measure or until a specified measure number, the time signature will be changed back at the correct measure. In the example below, a complex time signature of 1/4 + 3/8 + 1/4 was entered for 1 measure. Notice that the beam groupings reflect the beats indicated by the complex time signature.



– Since all spine beats within the measure are must be of equal value, NoteAbility will calculate how many beats and the value of the beats that will be inserted into the score. For example if you specify a complex time signature of 2/4 + 1/8 + 3/16, NoteAbility will create 13 beats each of which has the duration of a sixteenth note. If 2/4 + 1/8 + 3/8 is entered, NoteAbility will create 4 beats each of which has the duration of a quarter note.

– If you want to change the beat groupings without entering a complex time signature, use the Beats tab view of this pane.

Partial MM Tab
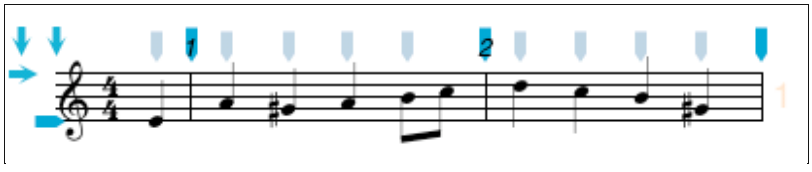


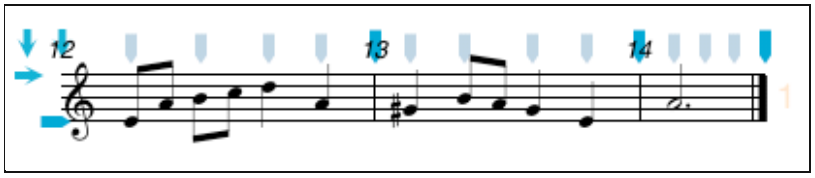
Partial measures can be found as upbeat measures at the beginning of scores and of sections of scores, at the end of scores (to match the upbeat values at the beginning of the score) and any other place where the number of actual beats in the measure differs from the beats in the time signature.

To create a partial measure:

1. Place the Entry Cursor in the measure you want altered.
2. Use the numerator and denominator sliders to set the number and type of beats you would like to appear in this measure. For example, a 1/4 beat upbeat measure should display 1/4.
3. Check the **Exclude This Measure from Measure Count** check box if the current measure should not be counted with a measure number. (Normally upbeat measures are not counted as complete measures).
4. Click on the **Create Partial Measure** button.

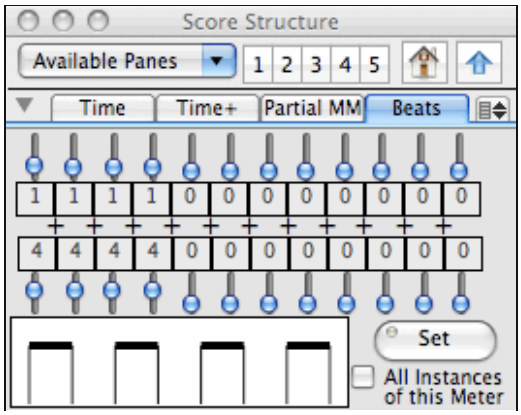
In the example below, a 1/4 upbeat is created (with the measure number excluded), at the beginning of the score, Notice that the 4/4 time signature still remains. In the second example, a 3/4 measure is created at the end of the score (with the measure number included).





– Partial or upbeat measures can also be created using the **Change Spine Only** setting in the Time tab view.

Beats Tab



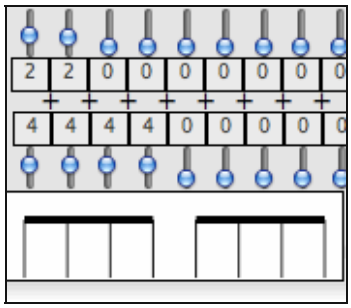
The Beat Grouping pane is used for altering the beat groupings in a particular measure or for a particular meter throughout a score. The beat grouping for a measure determines how notes will be beamed together during automatic beaming. This pane is only necessary if you require beat groupings other than the standard groupings for a particular meter. For example, a standard 4/4 measure normally has a beat pattern of 1/4 + 1/4 + 1/4 + 1/4, so the display will look like the example above:

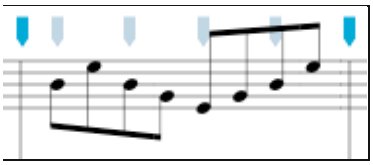
To alter the beat groupings, adjust the numerator and denominator sliders to the beat pattern you want, and click on the **Set** button. If you want all instances of this meter altered throughout the score, check the **All Instances of This Meter** button before clicking on the **Set** button.

– No beat group will be registered if either the numerator slider or demoninator slider is set to 0.

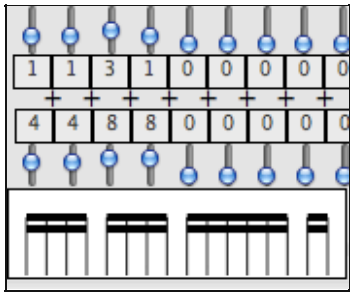
Below are two examples of diffent beat groupings of a 4/4 meter along with the beaming that will occur in the music once these groupings are set:
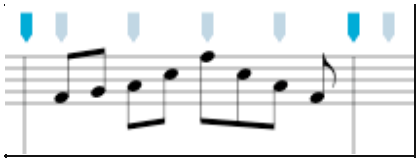
Example 1





Example 2



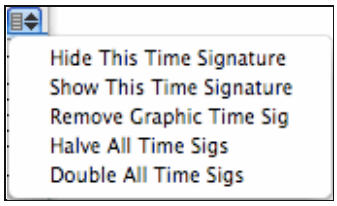


- It is up to you to make sure that you have indicated the correct number of beats for the meter. Excess beats or insufficent numbers of beats may result in parts of the measure not being formed into beam groups

- Notes are not re-beamed if you change the beat groupings of measures that already contain notes. To re-beam after changing the beat groupings you must select the notes, Unbeam them with the **Unbeam Notes** menu item and use the **Beam On Beat** menu item to re-beam the notes according to the new groupings.

Menu items

The pull down menu located at the top-right corner of this pane contains items to Hide or Show time signatures in your score and to remove unwanted time signatures.



Hide This Time Signature	hide the time signature from the measure that the Entry Cursor is currently on.
Show This Time Signature	show the time signature from the measure that the Entry Cursor is currently on.
Remove Graphic Time Sig	Remove any selected time signatures.
Halve All Time Sigs	Double the denominator values on all time signatures in the score.
Double All Time Sigs	Halve the denominator values on all time signatures in the score.

The **Remove Graphic Time Sig** menu item is necessary because time signatures are not normally copied, cut or pasted like other images. Although they are music images, they are considered to be part of the music structure. This menu item allows them to be explicitedly removed from your score.

The **Halve All Time Sig** menu will alter all time signatures so they are half their current value. For example 4/4 measures will become 4/8 measures, 3/2 measures will become 3/4 measures. The position of notes and their rhythmic values are not changed.

The **Double All Time Sig** menu will alter all time signatures so they are double their current value. For example 4/8 measures will become 4/4 measures, 3/8 measures will become 3/4 measures. The position of notes and their rhythmic values are not changed.

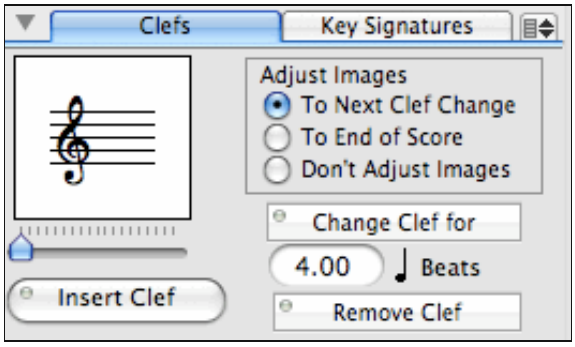
See also

- Score Structure Panel
- Document Setup Panel
- NoteAbility menus

Clef & Key Signature Pane

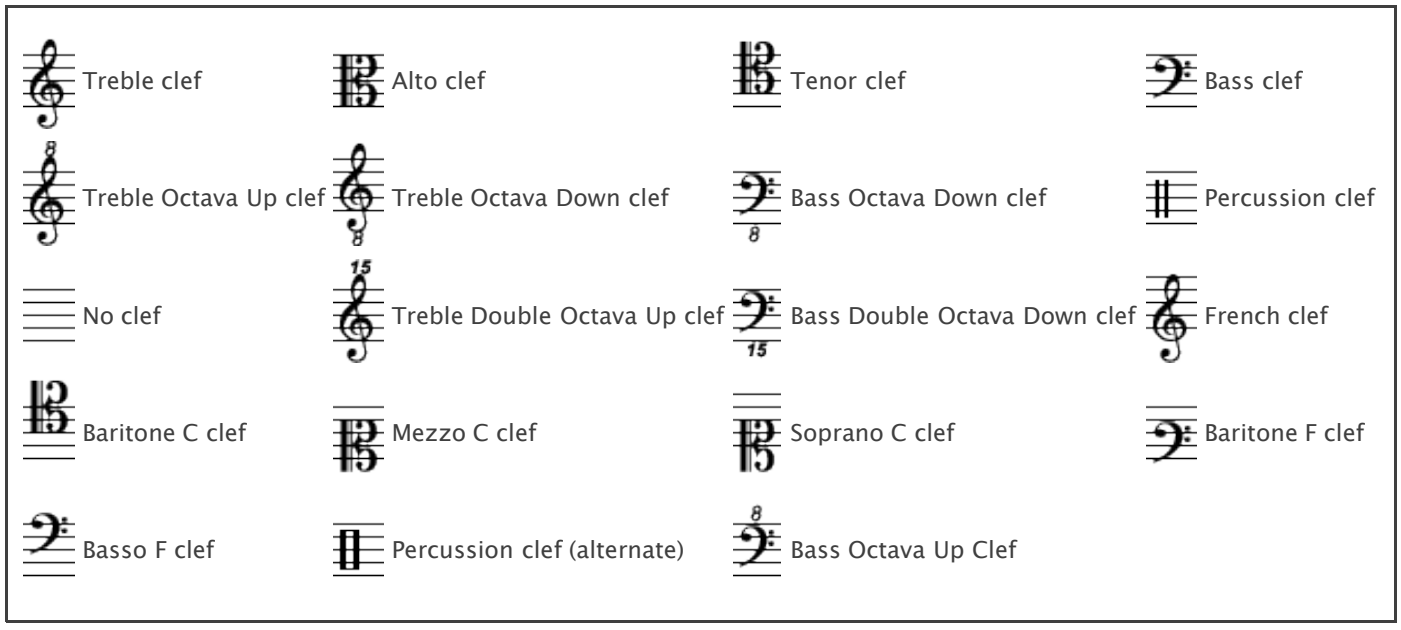
1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Clefs & Key Signature pane (which contains the tabs: Clefs and Key Signatures) is not visible in the Score Structure Panel, select Clefs & Key Signature from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the two tabs in the Clefs & Key Signature pane to view controls for Clefs or Key Signatures.

Clefs Tab



The Insert Clef pane is used for temporarily changing clefs on the staves in your score.

There are nineteen clef types available in NoteAbilityPro:

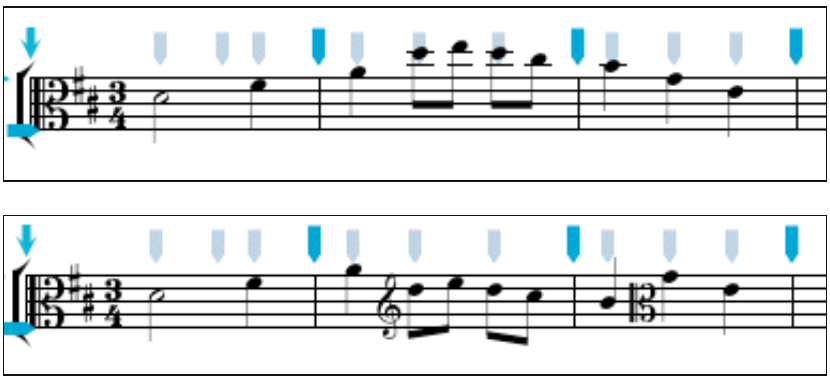


To insert a clef, place the Entry Cursor at the beat location where the new clef should begin. Choose the new clef to be inserted by adjusting the slider until the desired clef appears, then set whether images should be:

1. adjusted until the next clef change on the same staff,
2. adjusted until the end of the score (which will remove all other inserted clefs to the end of the score),
3. left where they are and just insert the clef.
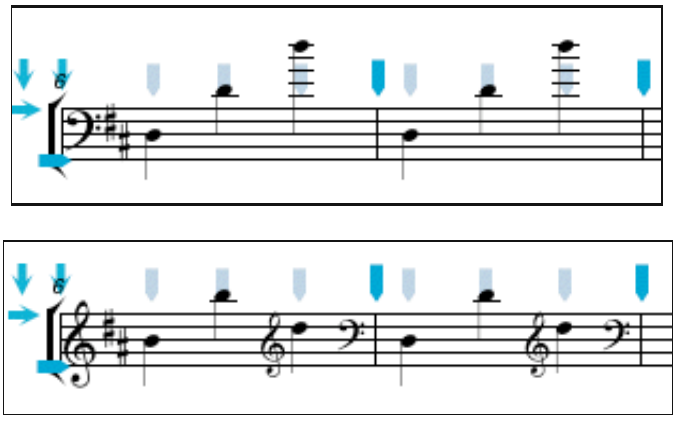
Click on the **Insert Clef** button. The clef will appear to the left of the Entry Cursor (and it may be adjusted

later to avoid collisions with other images). If the Entry Cursor has been placed on the first beat of a measure, the clef will appear at the end of the previous measure. In the example below, the Entry Cursor was placed on beat 2 of the second measure and a treble clef was inserted, then the Entry Cursor was placed on beat 2 of the third measure and an alto clef was inserted.



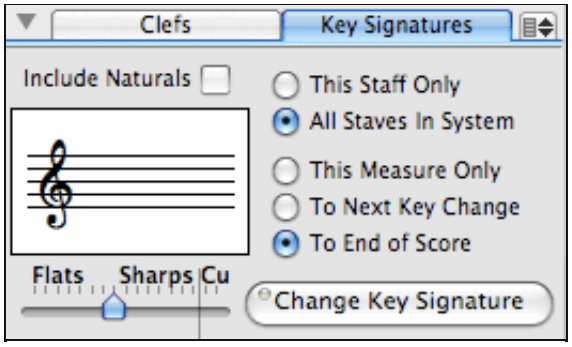
To Remove a clef, place the Entry Cursor at the position that the clef was entered and click the **Remove Clef** button. If you are not sure what the beat position of the inserted clef is, select the clef and examine it in using the Image Info pane.

If you only want to change a clef for a short duration of your score, you can set the number of quarter note beats that the new clef is needed and click on the **Change Clef** button. This operation will insert the new clef at the Entry Cursor and then insert the original clef after the specified number of beats. This operation is useful if you are altering clefs after notes have already been added to the score. Here, only the notes between the two clefs will be changed to the correspond to the new clef. In the example below, a treble clef is needed only for the last beat of each measure. Place the Entry Cursor on beat 3 of the first measure, adjust the slider so that a treble clef is displayed, set the duration to 1.0 beats, and click on the **Change Clef** button. Repeat the same procedure on the next measure.



- If you try to insert a clef that is already the current clef on the staff, NoteAbilityPro will give you a warning that the clef seems to be redundant.
- If you insert a clef and choose not to adjust images, then the pitches of notes after the clef will not be altered and the score playback may not be consistent with the appearance of the score.
- For playback purposes, the Percussion and blank clefs play as if they were Treble Clefs.

Key Signatures Tab



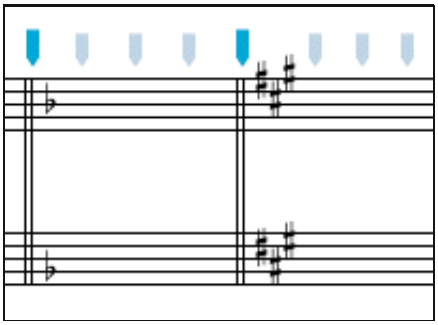
The Key Signatures tab view is used insert or change key signatures in your score.

In NoteAbilityPro, key signatures appear only at the beginning of measures, although not all staves in the system are required to have the same key signature.

To change the key signature, place the Entry Cursor in the measure where the key signature change will occur. Select the new key signature using the slider. Choose whether the new key signature will be added only on the staff that the Entry Cursor is on or on all staves in the system. Choose whether the keys signature will be added:

1. only for the selected measure,
2. until the next key change,
3. until the end of the score,

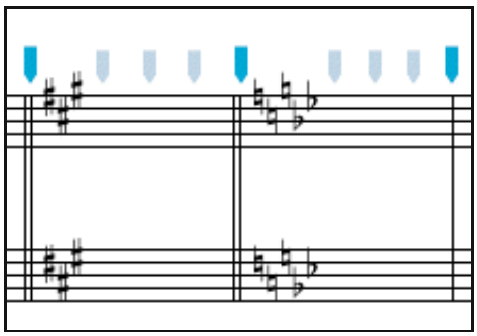
then click on the **Change Key Signature** button.



The other buttons on the Key Signatures pane allow you to hide or show the key signature or to hide the key signature on only one staff. In each case the Entry Cursor should be placed in the correct measure before the button is clicked

When new key signatures are added, a thin double barline is inserted. If desired, this barline can be altered using the Barline tab in the Barlines & Braces pane in the Score Structure panel.

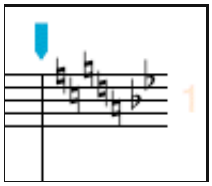
If the **Use Naturals** check box is selected, then the new key signature will include accidentals which cancel the previous key signature (as in the example below).



In addition to the standard flat and sharp key signatures, each score can have 2 custom key signatures

which can include combinations of sharps and flats as well as quarter tones. These custom key signatures appear in the last 2 positions of the key signature slider. To create custom key signatures, use the Custom Key Signature Panel in the **Tools** menu.

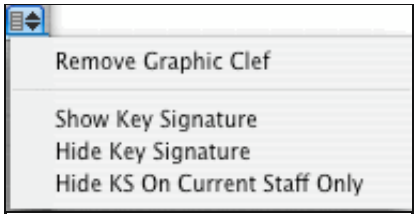
– Graphical versions of key signatures are available for unusual circumstances (eg. cautionary key signatures). There is also a set of graphical key signatures with naturals so you can include cancellation key signatures as in the example below which is changing from B major to Bb major between the end of one system and the beginning of the next.



(The commands used to add the cautionary key signatures were "knb" and "kbb" for key-natural-B and key-Bb.)

Menu items

The pull down menu located at the top-right corner of this pane contains items to Hide or Show key signatures in your score and to remove graphic clefs from the score.



Remove Graphic Clef	remove selected graphic clefs from the score.
Hide Key Signature	hide the key signature from the measure that the Entry Cursor is currently on.
Show Key Signature	show the key signature from the measure that the Entry Cursor is currently on.
Hide KS On Current Staff Only	Hide the key signature in the measure and staff that the Entry Cursor is currently on.

The **Remove Graphic Clef** menu item can be used to remove clefs that have been added as graphic images. Graphic clefs are entered by using commands (eg !tc, !bc15 rather than by using the **Insert Clef** button on this panel).

The **Hide Key Signature** and **Show Key Signature** menu items are used for hiding or unhiding previously hidden key signatures. In both cases, the Entry Cursor must be placed in the measure that the key signature appears in. All existing key signatures in that measure will be hidden or shown. If you only want to hide the key signature on one staff, place the Entry Cursor on the desired staff and select the **Hide K.S. On Current Staff Only** menu item.

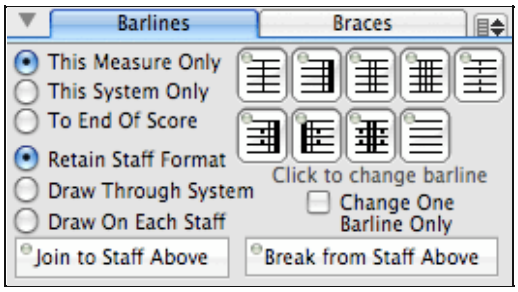
See also

- Score Structure Panel
- Document Setup Panel
- NoteAbilityPro menus
- Custom Key Signatures Panel

Barlines & Braces Pane

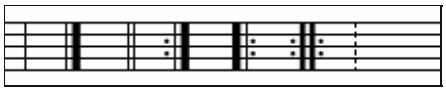
1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Barlines & Braces pane (which contains the tabs: Barlines and Braces) is not visible in the Score Structure Panel, select Barlines & Braces from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the two tabs in the Barlines & Braces pane to view controls for Barlines or Braces.

Barlines Tab



The Barlines tab view is used for modifying the attributes of the barlines in your score.

There are eight barline types (including one type with no lines) that can be used within NoteAbilityPro:



To change the barline type through the entire system, place the Entry Cursor in the measure you want altered, and click on one of the eight barline buttons. If you want only one barline within the system changed, check the **Change One Barline Only** box before clicking on the barline button.

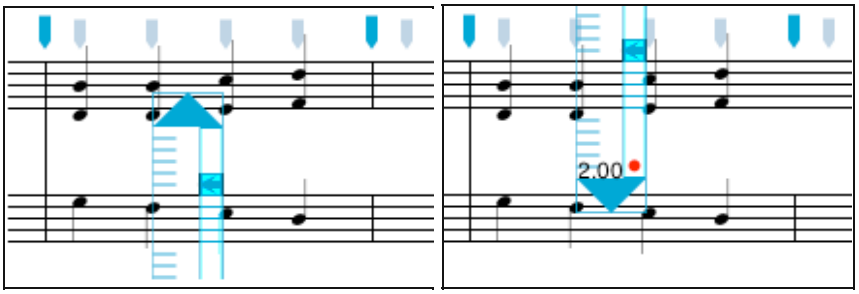
The three radio buttons in the top-left corner specify whether barlines are changed only in the measure that the Entry Cursor is in, in all measure in the system, or from the position of the Entry Cursor to the end of the score.

When changing barlines, you can also set radio buttons to either retain the current arrangement of staff groupings by the barlines (i.e. Retain Staff Format), to create one barline through the entire system, or the create a barline on each staff.

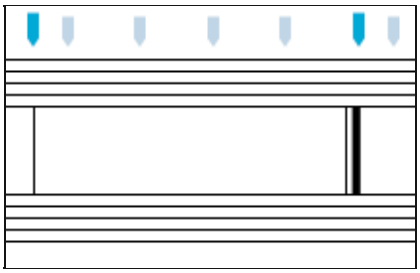
To change the staff groupings of barlines, use the **Join To Staff Above** or **Break From Staff Above** buttons. These buttons will join the staff that the Entry Cursor is on to the staff above, or break the staff that the Entry Cursor is on from the staff above.

It is also possible to hide or show the barline with the **Hide/Show Barline** menu item located in the small pull-down menu located in the top-right corner of the pane.
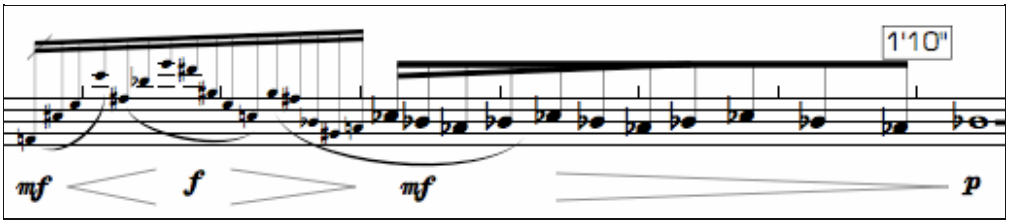
In the example below, the Entry Cursor was placed on the second staff of the measure and the **Break From Staff Above** button was clicked, then the Entry Cursor was moved to the first staff and the **Hide/Show Barline** menu item was selected:



Mensurstrich barlines can be drawn between staves by using the *MensurStrich On/Off* item in the *Modify / Barlines* menu. Mensurstrich barlines appear between the staves in the system, but not across the staff lines. This type of barline is found in some editions of early music. Mensurstrich barlines can be set as the default barline method in the Other pane of the Preferences panel.

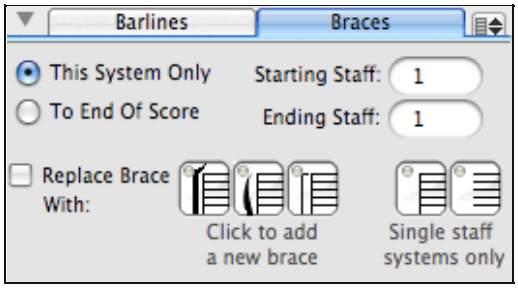


Tick barlines can be drawn above the top staff of the system using the *Tick Barline On/Off* item in the *Modify / Barlines* menu. This barline type is useful in scores where second markings rather than barlines are desired as in the example below. Tick barlines can be set as the default barline method in the Other pane of the Preferences panel.



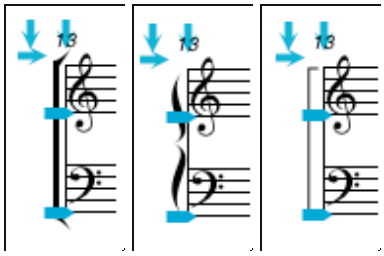
- – the barline for a measure is always the barline at the end of the measure, not at the beginning.
- – Graphic version of barlines can be added anywhere in the measure with the barline commands listed in the Commmand List.
- – Barlines are part of the underlying music structure (along with braces, clefs and staves), so they cannot be selected and adjusted in the same way that other music images can.

Braces Tab



The Braces tab view is used for modifying the attributes of the braces or adding new braces to your score.

There are three main brace types in NoteAbilityPro:



Straight Brace -- Piano Brace -- Thin Brace

As well, you can choose to just have barline instead of a brace, or you can have no brace or barline at all. A brace may be set to cover as many staves as you want, and braces can be nested around one another.

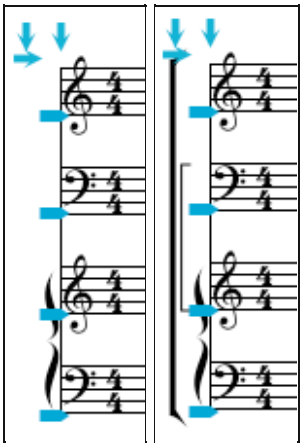
To add a new brace,

- specify whether you want it added only on this system or until the end of the score,
- set the starting and ending staff numbers within the system - (if the brace is only to cover one staff, then the starting and ending staff numbers will be the same
- click on the brace button corresponding to the brace you want added.

If the new brace includes staves that already have a brace on them, then the brace is offset to the left. In the example below, a new Thin Brace is added starting at staff number 2 and ending at staff number 3. Since staff number 3 already has a brace, the new brace is offset to the left. Next, a Straight Brace is added starting at staff 1 and ending at staff 4 - again the brace is offset to the left because the new brace overlaps the existing braces.

To change the type of brace in your score place the Entry Cursor on one of the staves within the brace group, then set whether you want the brace changed only on the system you are on or until the end of the score, check the **Change Current Brace To** box, then click on the brace button for the type of brace you want.

To remove a brace place the Entry Cursor on one of the staves within the brace group, set whether you want the brace removed only on the system you are on or until the end of the score and select the **Remove Brace** menu item from the small pull-down menu located in the top-right corner of this pane.



- Braces are part of the underlying music structure (along with barlines, clefs and staves), so they cannot be selected and adjusted in the same way that other music images can.

- Braces added or altered with the Braces pane appear only at the beginning of the system. To place braces elsewhere in your document you can add graphical straight and piano braces with the commands: "(", ")", "{" and "}" or use the line tool to draw thin braces.
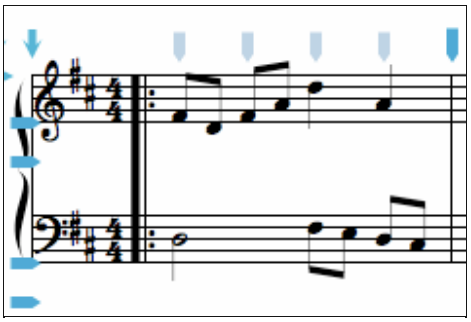
Menu items

The pull down menu located at the top-right corner of this pane contains items to Hide or Show barlines in your score and to remove braces from the score.



Hide/Show Barline	hide or show (if already hidden) the barline at the end of the measure that the Entry Cursor is currently on.
Add/Remove Begin Repeat	add or remove a begin repeat barline at the beginning of the current measure.
Remove This Brace	remove the brace that appears on the staff that the Entry Cursor is currently on.

The **Add/Remove Begin Repeat** menu item is used when you have a repeat segment beginning in the first measure of a system. A begin repeat barline will be placed before the first beat in the measure, as seen below:



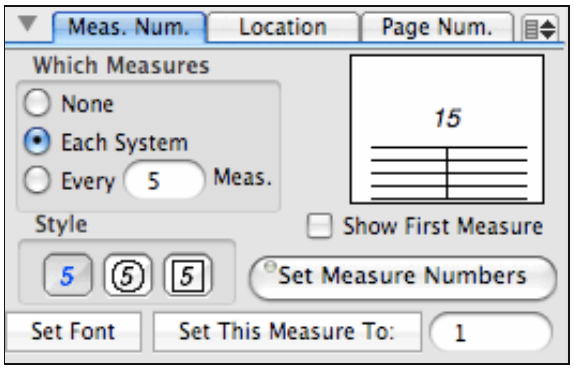
See also

- Score Structure Panel
- Document Setup Panel
- NoteAbility menus

Measure / Page Numbers Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Measure / Page Numbers pane (which contains the tabs: Meas. Num., Location, and Page Num.) is not visible in the Score Structure Panel, select Measure / Page Numbers from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the three tabs in the Measure / Page Numbers pane to view controls for Meas. Num., Location, and Page Num..

Measure Number Tab



To change the way that measure numbers appear in your score:
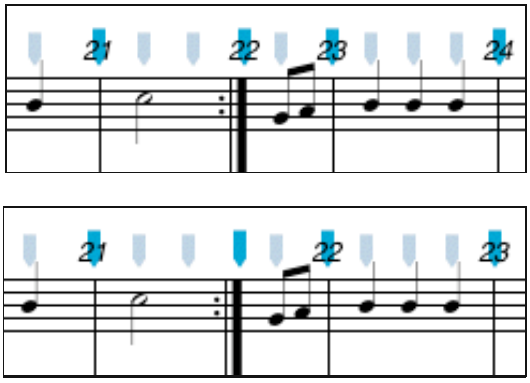
1. Set the frequency that the measure numbers will appear – choose either never, at the beginning of each system, or every fixed number of measures (usually 5 or 10).
2. Set the style of the the measure numbers by clicking on one of the three buttons – choose either plain, in a circle or in a rectangle.
3. If desired, you may also change the font by clicking on the **Set Font** button, and selecting and setting a new font in the Font Panel.
4. Click on the **Set Measure Numbers** button.

The display on the right side of this view shows the appearance of the measure number as the style or font is changed. The exact position of measure numbers relative to the staff, and which staves the measure numbers are drawn above or below is set in the location tab view of this pane. These two tab views work together to allow great flexibility in the positioning of measure numbers.

If you want a measure number to be displayed on the first measure of your score, check the **Show First Measure** box. (Normally, no measure number is displayed in measure 1.)

There are also buttons to exclude or include a measure in the measure number count, and a button to set the measure number of a particular measure. In each case, the Entry Cursor is placed in the measure you want to operate on. Excluding measures can be used if you have a pickup measure or if have created an unmeasured section in your score.

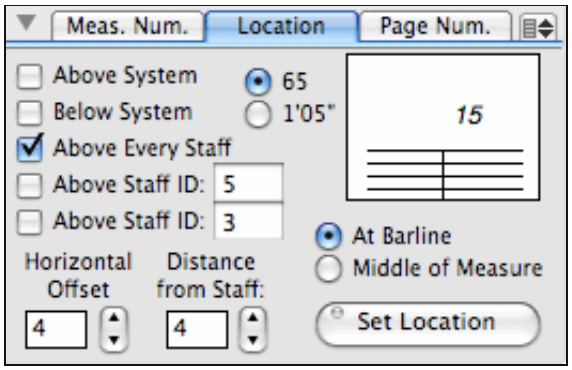
In the example below, a one beat pick up measure was created (using the Change Spine Only setting in the Time Signature pane). The Entry Cursor was placed in the first measure and the **Exclude This Measure** button was clicked followed by the **Set Measure Numbers** button.



Setting the number of a measure with the **Set This Measure To:** button is most often used when you are breaking a large score into multiple documents. In this case, you will want to set the first measure number of the new document to follow the last measure number of the previous document. Both the actual measure number in the document and the measure number appearing in the score are displayed in the Score Controls at the top of the score window.

- You should click on the **Set Measure Numbers** button after you have clicked on the **Exclude This Measure**, **Include This Measure** or **Set This Measure To:** buttons so that the measure numbers are rebuilt to reflect the changes.
- The default font used for measure numbers can be saved as a preference in the Preferences panel.
- It is not possible to have different measure number fonts or measure number styles within the same document.

Location Tab

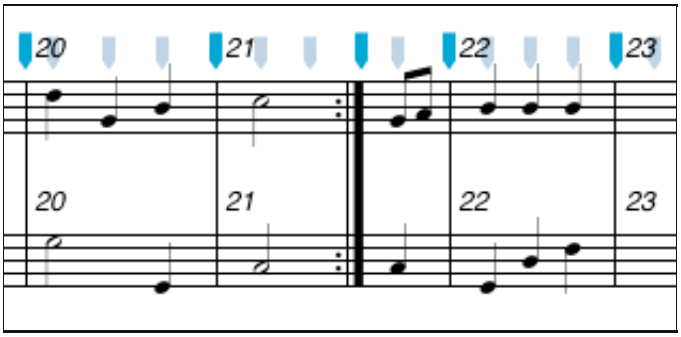


The Measure Numbers Location tab view is used to control the exact position of the measure numbers relative to the staves on the score.

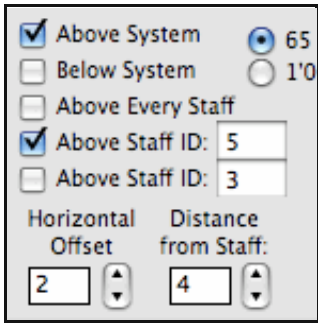
This pane is used in conjunction with the Measure Number tab view to alter all aspects of the appearance of measure numbers.

Measure numbers can be set to appear at the barline or in the middle of the measure. The distance (in ledger lines) above or below the staff can be set with the **Distance From Staff** slider and the horizontal offset (also in ledger lines) can be set with the **Horizontal Offset** slider. The Location check boxes allow you to specify which staves measure numbers will appear above or below. The five check boxes can be used in combination, and specific staff IDs can be entered in the last two check boxes. Once all settings have been made, click on the **Set Meas Number Location** button.
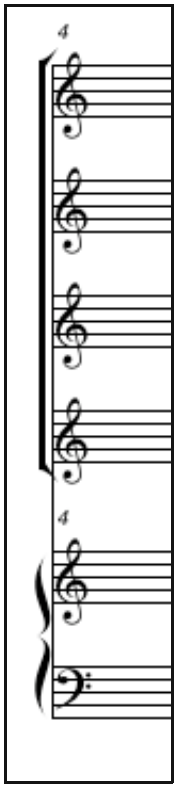
The settings shown above will result in the following measure numbers being created in the score.



In the next example, measure numbers are set to appear above the system, and above staff ID 5. A smaller font is set (in the Measure Numbers pane), the Horizontal Offset is set to 2 and the Distance From Staff is set to 4.

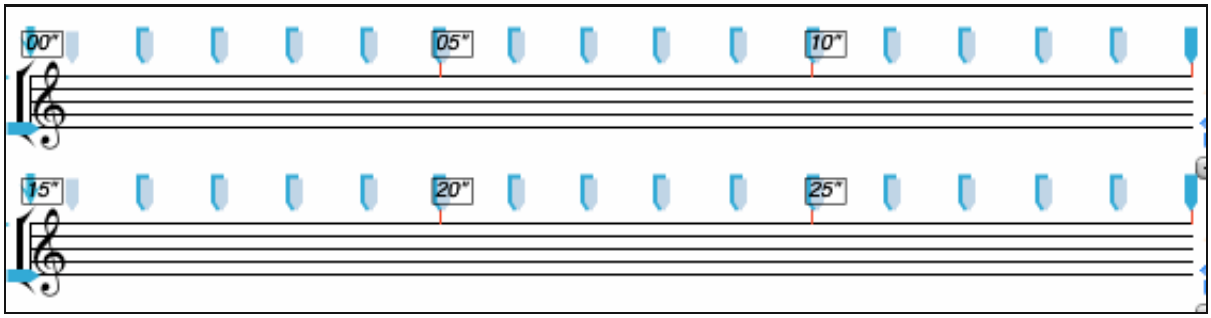


The measure numbers will appear in the score as follows:
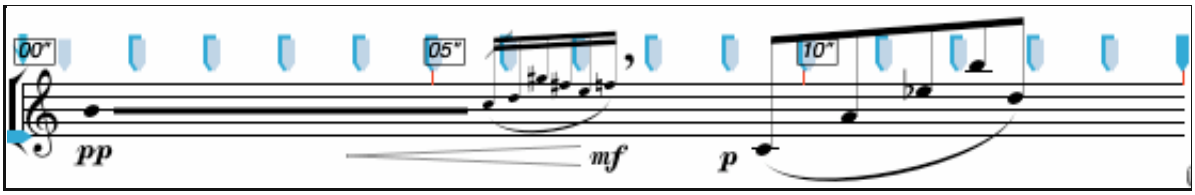


If you want to use timing (minutes and seconds) in your score instead of measure numbers, choose the radio button indicating 1'05" instead of 65. When this radio button is set, measure numbers are displayed as if they were minutes and seconds - measure 65 appears as 1'05', measure 300 appears as 5'00" and so on. When using this timings in your score, the assumption is that each measure is 1 second long (1/4 at mm=60 or 2/4 at mm=120). If this is not the case, you will have to explicitly set the measure numbers for each measure. Since timing scores usually start at 0 rather than 1, you will probably want to set the

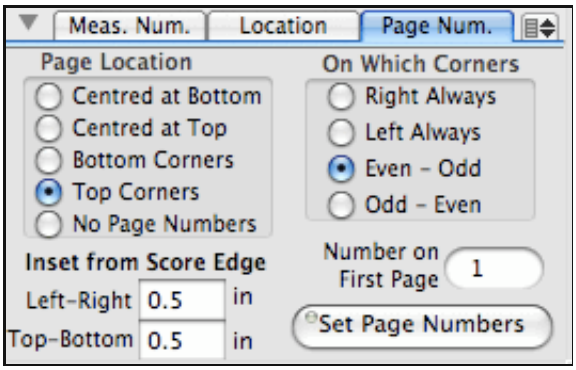
first measure number to 0. In the example below, a score has been set up with 1/4 meter with 15 measures on each system and no barlines, the first measure has been set to 0 and timing measure numbers have been choosen. As well, the first beat inset has been altered to 0 using the Format pane of the Preferences panel and small ticks have been added every 5 measures by placing the Entry Cursor in the desired measure and selecting the *Tick Barlines On/Off* from the *Modify / Barlines* menu. The result is:



Notes (graphic or regular) can be freely placed on this score to create a graphic score with timing indications:



Page Numbers Tab



The Page Numbers pane is used to set the position and font of page numbers in your score.

To change the page numbers on your document:

1. Set the location of the page numbers by choosing one of the Page Location options.
2. If you have selected either Bottom Corners or Top Corners as the location, then choose which corners they should appear on: right always, left always, even numbers on the left and odd on the right, or odd numbers on the left and even on the right.
3. Set the distance that the page numbers are inset from the left or right margins and from the top or bottom margins by editing the appropriate text fields.
4. You can change the font or font size by clicking on the **Change Font** button and selecting the new font in the Font Panel.
5. You can also set the page number of the first page to be something other than 1 by entering a new number in the Number On First Page text field.
6. Click on the **Set Page Numbers** button once all the above choices have been made.

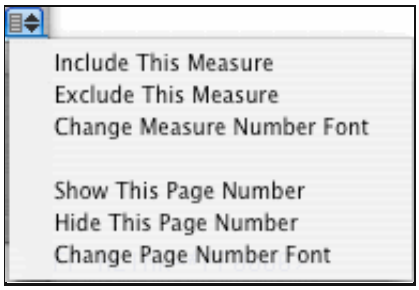
You also have the option of hiding or un-hiding the page number on the current page by selecting on the

Hide This Page Number or the *Show This Page Number* items in the small pull-down menu located in the top-right corner of this pane. These options are necessary if you want to omit the page number on the first page of your score. These operations can also be performed by using the *Show/Hide Page Numbers* item in the *Modify / Page* menu.

– An example of when you may want to alter the number of the first page is when you are breaking a large score into multiple documents. In this case, you should set the first page number of the second document so that it follows the last page number of the first document.

Menu items

The pull down menu located at the top-right corner of this pane contains items relating to measure and page numbers.



Include This Measure	Include the measure that the Entry Cursor is currently on in the measure number count
Exclude This Measure	Exclude the measure that the Entry Cursor is currently on from the measure number count (it will have the same measure number as the previous measure)
Change Measure Number Font	Calls the Font panel so that a new font can be choosen for measure numbers
Show This Page Number	Show (the previously hidden) page number on the current page
Hide This Page Number	Hide the page number on the current page
Change Page Number Font	Calls the Font panel so that a new font can be choosen for page numbers

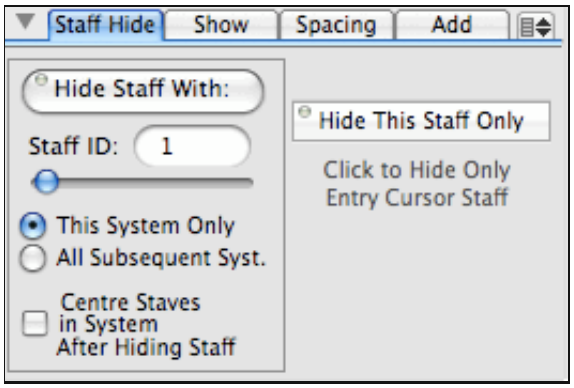
See also

- Score Structure Panel
- NoteAbilityPro Preferences
- NoteAbility menus

Staff Hide/ Show/ Spacing Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Staff Hide/Show/Spacing pane (which contains the tabs: Staff Hide, Show, Spacing and Add) is not visible in the Score Structure Panel, select Staff Hide/Show/Spacing from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the four tabs in the Staff Hide/Show/Spacing pane to view controls for Staff Hide, Show, Spacing or Add.

Staff Hide Tab



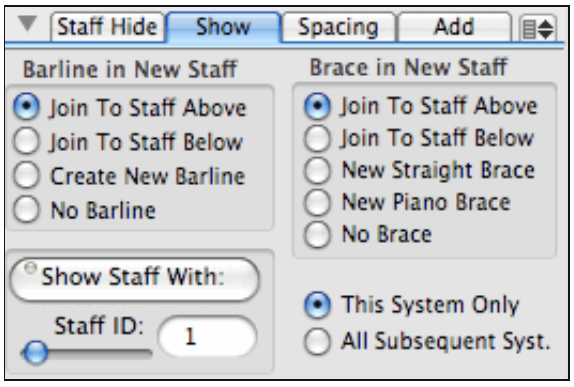
The Staff Hide tab view is used to hide staves that you don't want displayed in system, and the next tab view (Show) is used to show previously hidden staves. Normally, this panel is used to hide empty staves if you want only the staves with music on them to appear in the score.

Hiding staves is best done after the score has been completed and the number of measures per system has been finalized.

To hide a staff:

1. Set whether you want to hide the staff only on the system that the Entry Cursor is on or on all subsequent systems (including the current system.)
2. Set the staff number by typing in the Staff Number text field or by using the slider. (The staff number is identified by the staff ID – a yellow number which appears at the right end of the staff.)
3. Click on the **Hide Staff With:** button.

Staff Show Tab

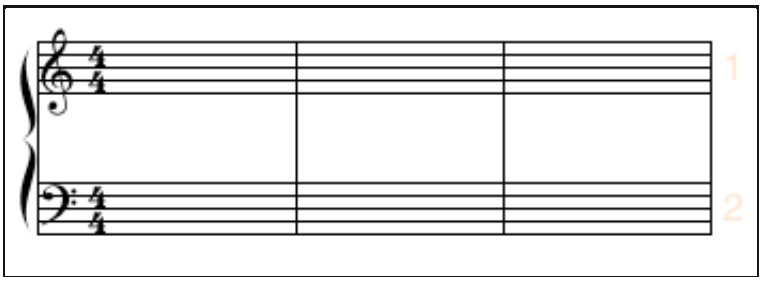


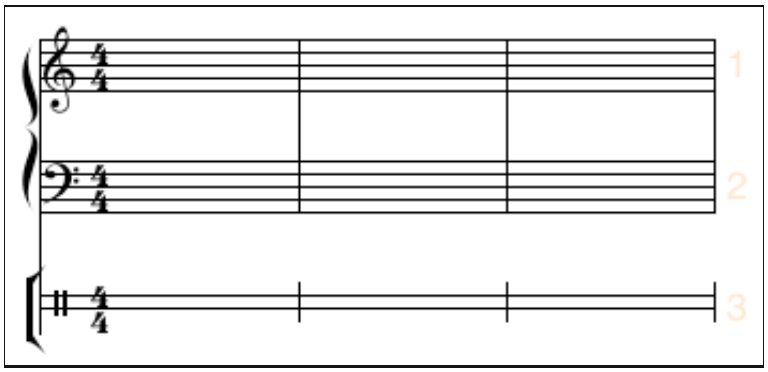
Staves can only be shown if they have previously been hidden. If you need to add a new staff to your score, use the Add Staff tab view in this pane.

To show a hidden staff:

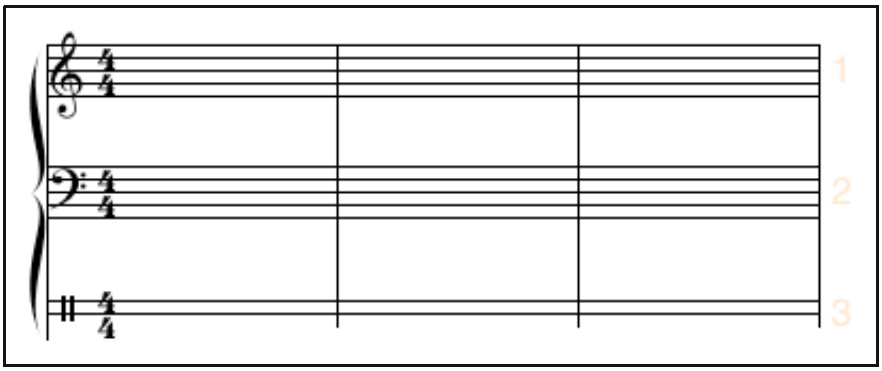
1. Set whether you want to show the staff only on the system that the Entry Cursor is on or on all subsequent systems (including the current system.)
2. Set the staff number that the hidden staff should appear above by typing in the Staff Number text field or by using the slider. (The staff number is identified by the staff ID – a yellow number which appears at the right end of the staff.)
3. Set the characteristics for the brace and barlines on the staff to be shown – should a new brace or barline be created, or should the brace or barline be joined to the staff above or below.
4. Click on the **Show Staff With:** button.

If you are showing a staff that is below all staves in the system, enter a staff number greater than the number of staves in the system. In the example below, the third staff in the system (a percussion staff) was hidden. It is shown again by setting the staff number to 3, and indicating that it should have a new straight brace and a new barline.



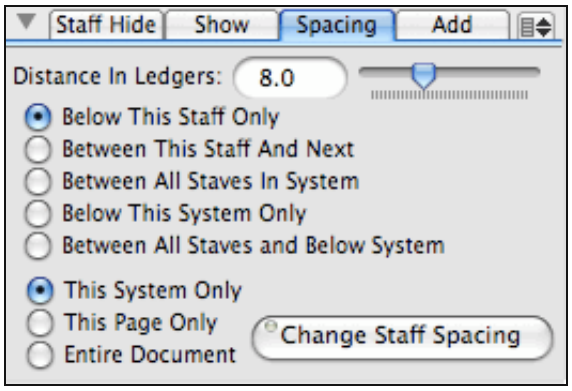


If the settings had indicated that the new staff should have its barline and brace joined with the staff above, it would look like:



– If you change the number of measures in the system after you have hidden staves, there is a possibility that a measure with music on it will be shifted to a system that has that staff hidden. Although the hidden music is not lost, extra care should be taken when changing the measure layout of the score after staves have been hidden.

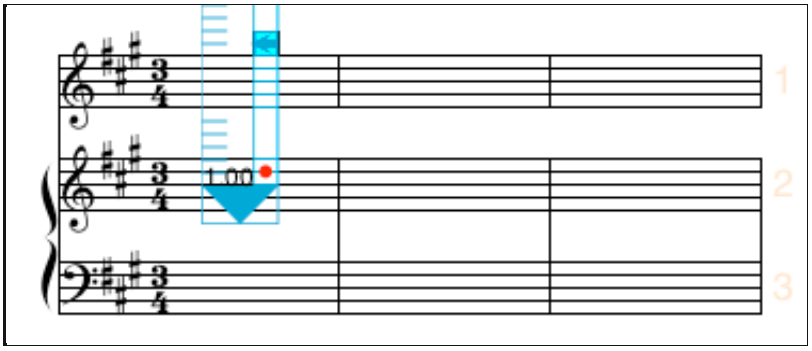
Staff Spacing Tab



The Staff Spacing tab view is used for changing the vertical distance between staves in the system. Although it is possible to manually adjust the vertical position of staves with the Staff Position buttons, the Staff Spacing pane gives you more control over the spacing and allows changes to be made for all systems on the page or throughout the entire score.

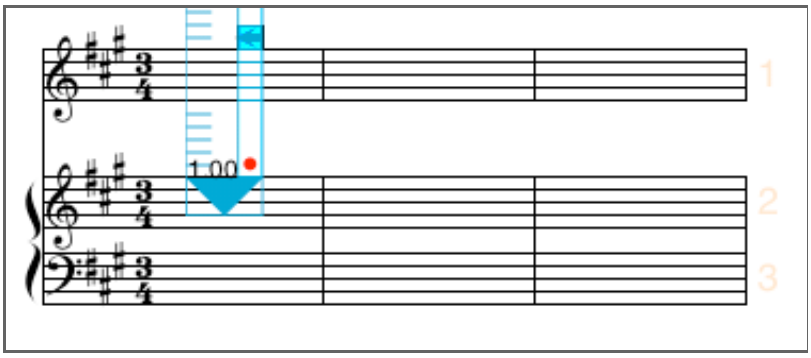
Staff spacing distances are set in the number of ledger lines between the bottom line of one staff and the top line of the staff below. A normal spacing is 7 or 8 ledger lines, with 6 or less being a close spacing and more than 10 being a wide spacing. When changing the spacing between staves, first set the distance (either by typing the value in the text field or using the slider), then set which staves you want affected, and whether you want staff positions adjusted only on the current system (i.e. the one that the Entry Cursor is on), only on the current page, or throughout the entire document. After setting these controls, click on the **Change Staff Spacing** button.

In the following examples, we begin with a system of 3 staves (with staff spacing set to 4 ledger lines.)

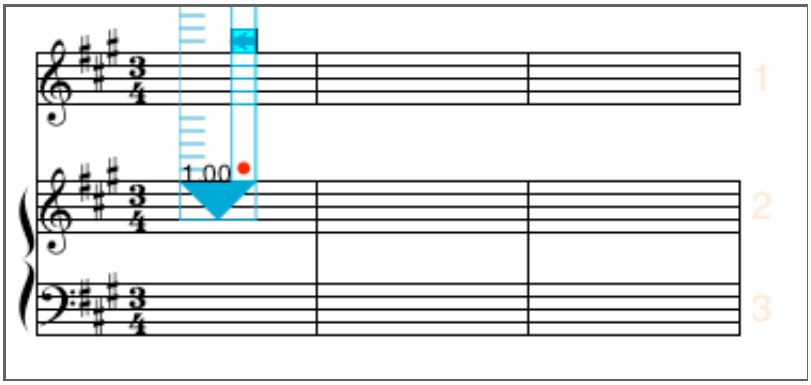


If we place the Entry Cursor on the top staff and set the new staff spacing to 6 ledger lines. The effect of the various options are:

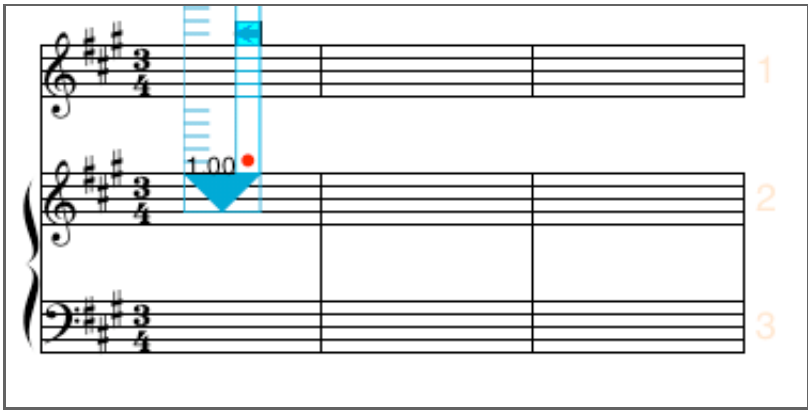
1. **Below This Staff Only** option:



2. **Between This Staff and Next** option:



3. **Between All Staves in System** option:

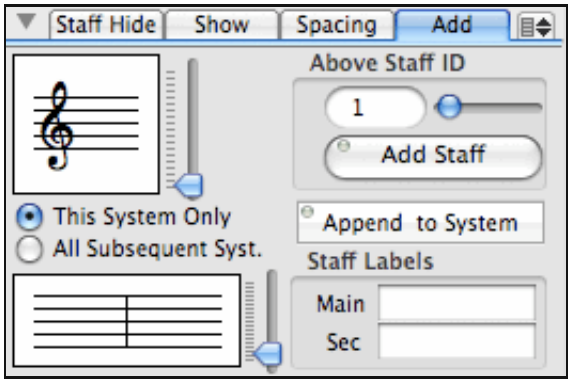


The **Below This System Only** option creates space between the bottom of the current system and the top of the next system. The **Between All Staves and Below System** option sets the space between all the staves in the system and between the bottom of the system and the top of the next system.

An alternate method of adjusting staff spacing is to use the Staff Spacing panel which allows all staff spacing distances in the current system to be loaded and edited. This method is particularly useful for systems containing many staves.

– It is possible for systems to overlap one another or to run off the bottom of the page if the settings are not appropriate. If staves do run off the bottom of the page, you can readjust them by moving the Bottom Page Margin button which will reset the bottom staff of the bottom system.

Staff Add Tab



The Staff Add tab view is used to add more staves to your score. The new staff can either be inserted in the middle of a system or appended to the bottom of the system.

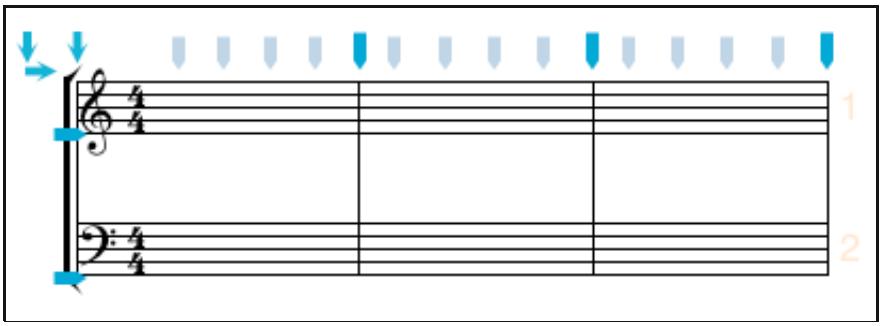
You should only add a new staff if you are adding a new instrument to the score, of if an exising instrument requires more staves than it currently has. If you have previously hidden a staff, use the Staff Show tab view in this pane to show the hidden staff rather than adding a new one.

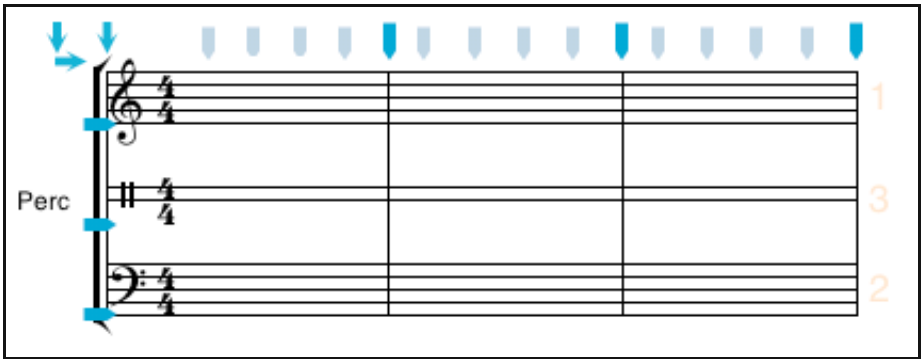
To add a new staff to your score:

1. Set the number of lines and arrangement of staff lines using the Staff Type slider located in the bottom-left corner of the view - the staff type is displayed in the white rectangle.
2. Set whether the staff should appear only on the system that the Entry Cursor is on (This System Only) or on that system to the end of the score (All Subsequent Systems).
3. Set the initial clef that will be drawn on the staff by using the clef slider located in the top-left corner of the view.
4. Enter the staff labels (if needed) in the Main and/or Sec. text fields.
5. If you are appending a staff to the bottom of the system you can now click on the **Append to System** button. If you are inserting a staff in the middle of a system, set which staff ID the new staff should be placed above with the Above Staff ID slider or text field and click the **Add Staff** button.

- The Main staff label is placed to the left of the staff, while the Secondary staff label is centred between the new staff and the next staff in the system. If you want only a Secondary staff label, enter a space (using the spacebar) in the Main staff label field and the desired staff label in the Secondary staff Label field.

In the example below, a new two line staff (with the main label "Perc" and a percussion clef) was inserted above staff ID 2. Notice that the new staff has an ID of 3 since it was the third staff to be added to the score (despite the fact that it appears above Staff ID 2.)

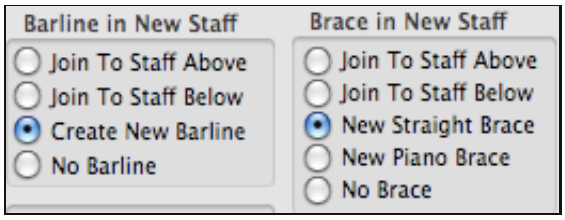




The font for the staff label is specified in the Preferences panel.

When a new staff is added it is possible to specify whether it will have a new brace or is joined to the brace group above or below, and likewise whether it will have a separate barline or whether the barline is joined to the staff above or below. These specifications must be set in the Staff Show tab view before the new staff is added. The relevant portions of the Staff Show tab view are shown

below:

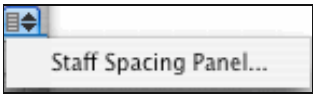


- Each staff has an ID number (which appears in a light colour at the right edge of the staff.) It is the Staff ID number which links staves from system to system and is used for part extraction. Always ensure that you are entering the correct instrumental part on the correct staff ID - especially if you have hidden staves on some systems. (For example, if the clarinet part is on Staff ID 4, then make sure that the clarinet's part is entered on Staff ID 4 on every system (regardless of how many staves are visible in the system). Using staff labels will help simplify this - since all staves with the same ID will have the same staff label.

- Even though a staff may be added part way through the score, it is considered to exist throughout the entire score. It can be unhidden on earlier systems using the Staff Show tab view in this pane if needed.

Menu items

The pull down menu located at the top-right corner of this pane contains a menu item for showing or hiding the staff spacing panel.



Staff Spacing Panel..	Show the Staff Spacing panel with more comprehensive staff spacing options

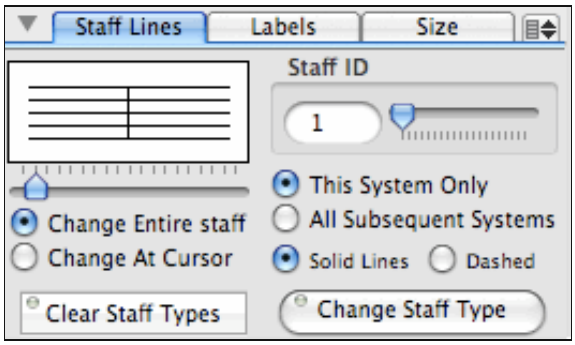
See also

- Score Structure Panel
- Staff Spacing Panel
- NoteAbility menus

Staff Attributes Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Staff Attributes pane (which contains the tabs: Staff Lines, Labels and Size) is not visible in the Score Structure Panel, select Staff Attributes from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the three tabs in the Staff Attributes pane to view controls for Staff Lines, Staff Labels or Staff Size.

Staff Lines Tab

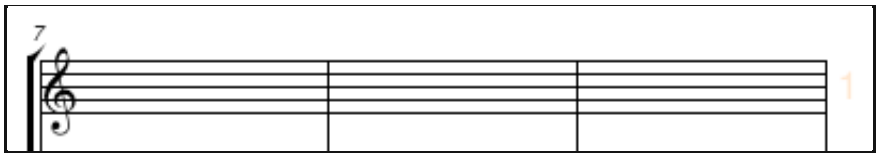


The Staff Lines tab view is used to alter the number and arrangement of staff lines

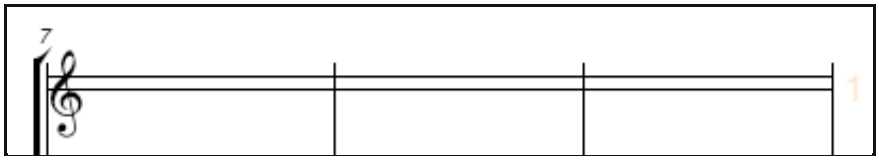
To change only the staff type (i.e. the number and arrangement of staff lines), select the new staff type using the Staff Type slider, choose whether the change should take place only on the current system only or on all subsequent systems, set the Staff Number that is to be altered. If you want the staff type to change in the middle of the system, click the **Change From Cursor** check box. Once all the settings are correct, click the **Change Type Only** button.

In the example below, the entire staff was changed from a five line staff to a two line staff. (The clef was also changed using the Clef & Key Signature pane.

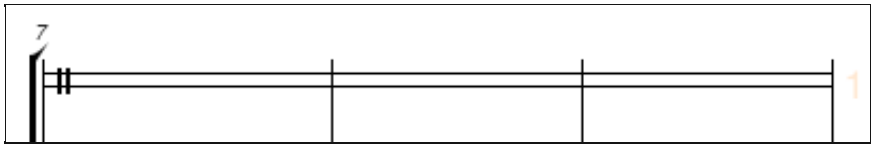
Original staff:



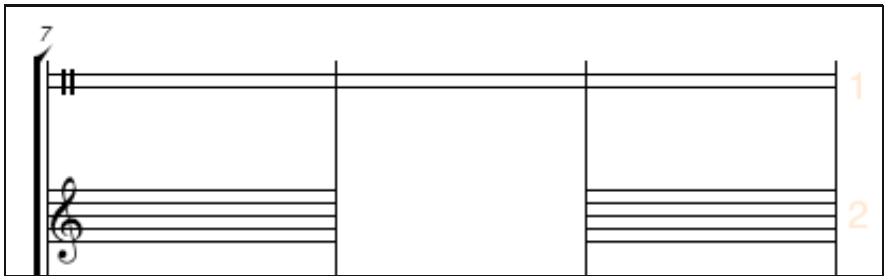
New staff type:



Clef Inserted at beat 1.00 of first measure:

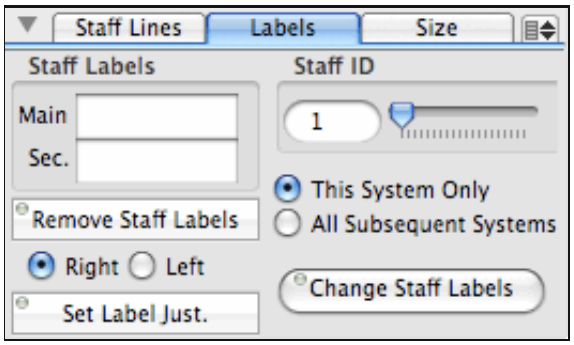


In the following example, the **Change From Cursor** feature was used. The Entry Cursor was placed on beat 5.00 of the first measure (i.e. on the barline) and the staff type of Staff Number 2 was changed to have 0 staff lines. The Entry Cursor was then placed on beat 5.00 of the second measure (i.e. on the barline) and the staff type of Staff Number 2 was changed to have 5 staff lines. The result is a cut-out score where sections of the staff are invisible.



If you want your staff lines to be dashed rather than solid, selected the **Dashed** radio button before clicking on the **Change Staff Type** button.

Staff Labels Tab



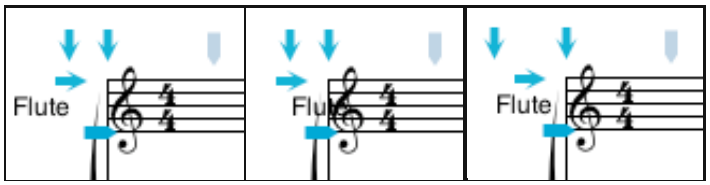
To change staff labels in your score:

1. type in the new staff labels in the Main and/or Secondary text fields
2. set the label justification (usually labels are Right justified,)
3. set the staff you want to modify with either by adjusting the slider or by typing the ID number into the Staff ID text field
4. set whether you want only the current staff altered (This System Only) or this staff in All Subsequent Systems
5. click on the **Change Staff Labels** button

If you want to remove either the Main or Secondary labels, type a single space in the text field before clicking on the **Change Staff Labels** button. The font and size of staff labels are set in the NoteAbilityPro Preference panel.

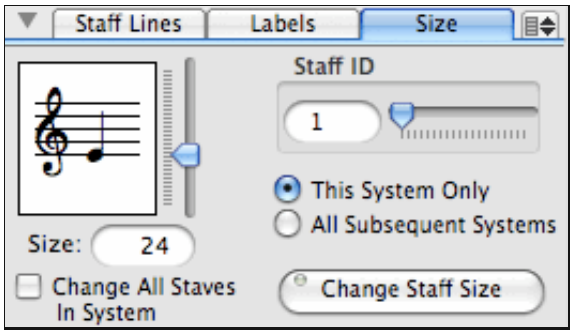
The **Set Label Just.** button is used to set the staff label on the staff to be either right or left justified. This button affects all staves in the system. If you set a staff label to be left justified, you will likely have to adjust the Staff Label Position arrow which is located just to the left of the top of each system.

Right Justified - - - - Left Justified - - Label Position adjusted



– The Main staff label is placed to the left of the staff, while the Secondary staff label is centred between the the staff and the next staff in the system. If you already have a Main or Secondary label that you want to remove, enter a single space in the text field.

Staff Size Tab



To change the point size of staves:

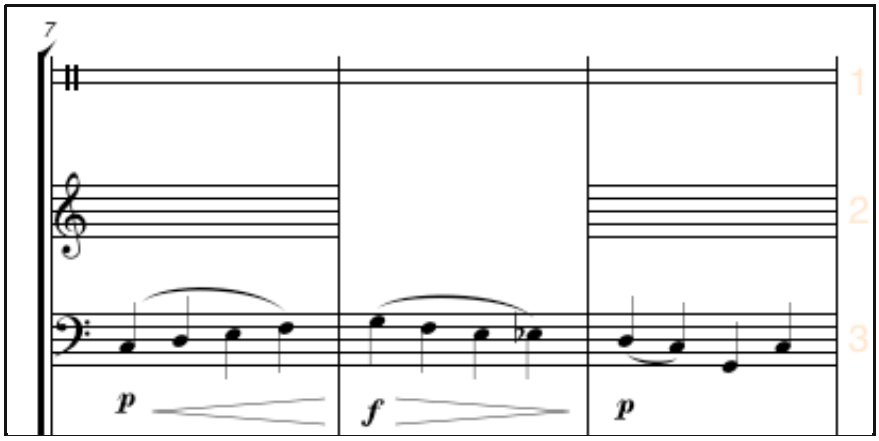
1. adjust the point size slider or type the new point size into the text field
2. set the staff ID you want to alter by adjusting the slider or typing the staff ID number into the text field
3. indicate whether you want to change all staves in the system or just the current staff ID
4. indicate wether you want to change only this system (This System Only) or All Subsequent Systems in the score
5. Click on the **Change Staff Size** button.

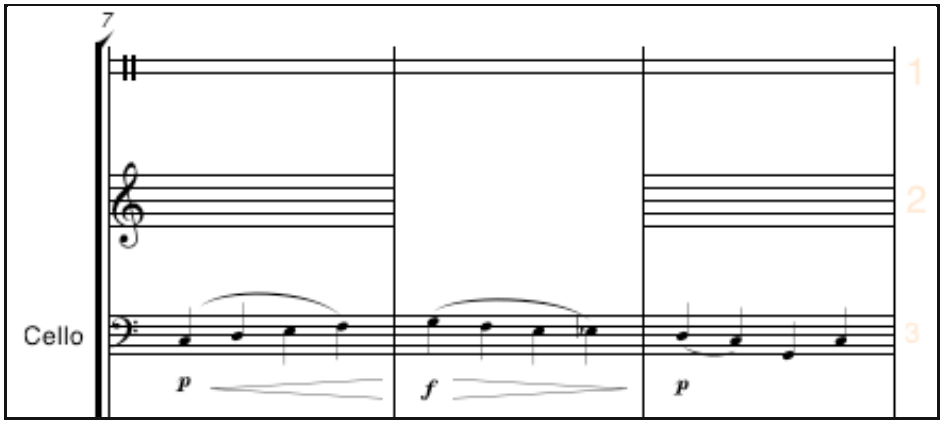
All notes on the altered staves will be adjusted in size to the new point size, but the horizontal locations of the images will not be altered.

– If you place your Entry Cursor in the first measure of the score, then choose to Change All Staves in System and All Subsequent Systems, then you will change the size of all staves in the score.

– When the Entry Cursor is place on a staff, the Image Size slider and display in the Image Attributes pane is adjusted to the staff size so that images are entered at the correct point size.

In the example below, the third staff was altered to have a point size of 18. Notice that all images associated with the staff are reduced to the new point size. As well, a staff label *Cello* was added using the Staff Label tab view.





Menu items

The pull down menu located at the top-right corner of this pane contains related to staff types and labels.



Clear Staff Types	Clear the staff type changes on the current staff so that there is only one staff type on the system.
Change All Staff Attributes	change all the attributes set in the Staff Lines, Labels and Size tab views at once.
Clear All Staff Labels	remove all the staff labels on the current system.

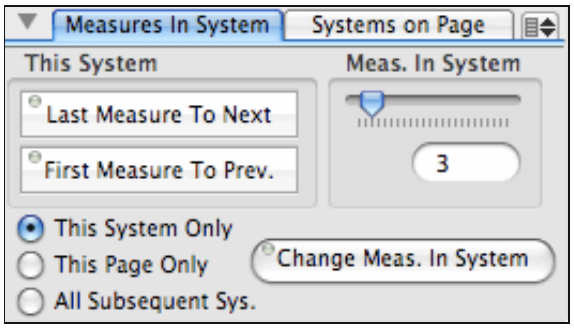
See also

- Score Structure Panel
- Image Attributes pane
- NoteAbility menus

Measures & Systems on Page Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Measures & Systems On Page pane (which contains the tabs: Measure In System and Systems On Page) is not visible in the Score Structure Panel, select Measure In System from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the two tabs in the Measures & Systems On Page pane to view controls for Measure In System or Systems On Page.

Measure In System Tab



The Measures In System pane is used to alter the number of measures that appear in each system of your score.

To change the number of measures in a system:

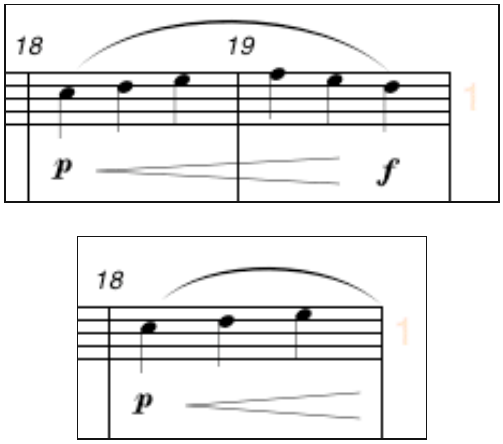
1. Place the Entry Cursor in the system that you want altered.
2. Set the new number of measures either with the slider or by typing a new number in the **Meas. In System** field.
3. Select whether the changes are for **This System Only** (the system that the Entry Cursor is currently on) for **This Page Only**, or for **All Subsequent Systems** (including the system that the Entry Cursor is on).
4. Click the **Change Meas. In System** button.

Measures are wrapped forward or backward from system to system as needed, and extra pages are added if required. Formatting (i.e. adjusting the beat positions and the horizontal layout of the music) will take place automatically on any systems which have been altered.

To move only one measure to the next or to the previous system you can use the **Last Measure To Next** or **First Measure To Prev.** buttons. Again, the current system is defined as the system in which the Entry Cursor appears.

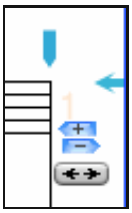
- – Changes to measures in the system will not take place on systems have have been locked with the System Lock button located to the left of the top staff of the system. Only systems up to the locked system will be altered.

- – When measures are wrapped from one system to another some images (i.e. graphical slurs, lines, etc.) may be truncated at the end of the system. Check these images and modify them if needed. The example below shows a graphical slur and a crescendo that are truncated when the last measure is transferred to the next system.

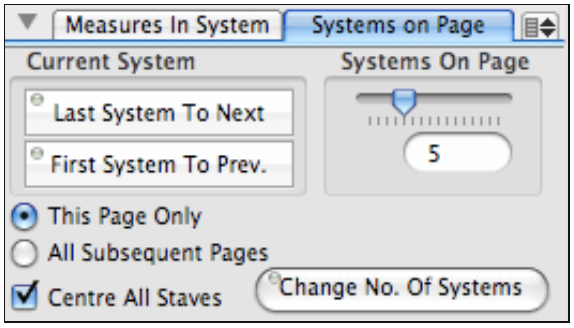


Here, a new graphical slur and crescendo must be added at the beginning of the next measure. To avoid having to re-enter images, it is a good idea to perform all of your system and measure formatting before you adding graphical slurs, lines, trills and other graphics.

As a short cut, you can increase or decrease the number of measures in a system by clicking on one of the small blue arrows located to the right of the first staff of each system. These buttons either increase (+) or decrease (-) the number of measures on the system by wrapping systems to or from subsequent systems.



Systems On Page Tab



The Systems On Page pane is used to alter the number of system drawn on each page.

To change the number of systems on the page, set the new number of systems by typing the number into the text field or moving the slider. Set whether you want the number of systems changed only on the current page or on the current page and all subsequent pages. If you want all the staves on the page adjusted so they are equidistant after the number of systems have been changed, check the **Centre All Staves** check box. Once you have set all of the above, click on the **Change No. Of Systems** button. Systems will be wrapped from page to page as needed, and new pages will be added at the end of the document if required.

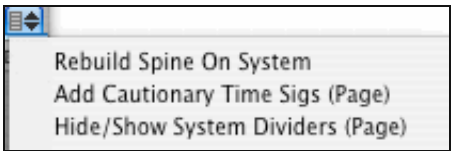
If you simply want to shift the last system on page to the next page or the first system on the page to the previous page, use the **Last System To Next** or **First System To Previous** buttons.

- Changing the number of systems on the page can be done either before or after your music has been added to

the score, but like most formatting operations, it is easier and faster to perform after you have entered the basic musical information (eg. notes and rests), but before you have completed all the final details of your score.

Menu items

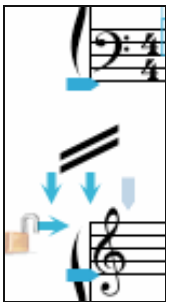
The pull down menu located at the top-right corner of this pane contains items relating to measure and system formatting.



Rebuild Spine On System	re-build the rhythmic spine on the system that the Entry Cursor is currently on.
Add Cautionary Time Sigs (Page)	adds cautionary time signatures at the end of systems on the current page.
Hide/Show System Dividers (Page)	hides or shows system dividers (slashes) between systems on the current page.

The *Rebuild Spind On System* menu item can be used to reset the rhythmic spine to its default spacing. This can be useful if the Rhythmic Spine has become distorted by a poorly formed image or a system with too much music on it.

System dividers are sometimes used in orchestral and large ensemble scores to separate systems clearly:



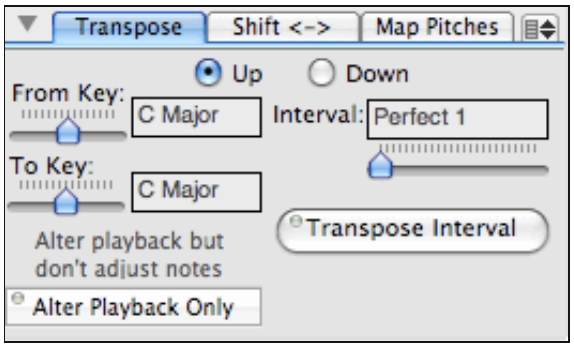
See also

- Score Structure Panel
- Document Setup Panel
- NoteAbility menus

Transpose / Shift Images Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Transpose / Shift Images pane (which contains the tabs: Transpose, Shift <->, and Map Pitches) is not visible in the Score Structure Panel, select Transpose / Shift Images from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the three tabs in the Transpose / Shift Images pane to view controls for Transpose, Shift <->, or Map Pitches.

Transpose Tab
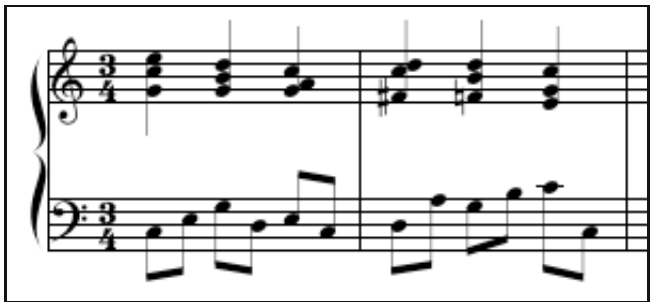


The Transposition pane is used for transposing selected notes up or down by a specified interval.

Select the notes you want transposed. If you want to transpose an entire instrumental part, use the Select Score tool to select the staff from the first to the last measure. Choose the direction of transposition (up or down) and set the transposition interval either by moving the Interval slider or by setting the From Key and To Key sliders. The interval name is displayed below the Interval slider. Click the **Transpose Interval** button.
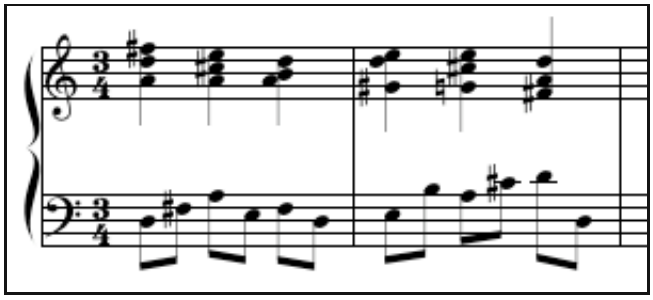
NoteAbility performs correct interval transposition (unless the new note does not exist in which case an enharmonic is used.) This means that when an F# is transposed by an augmented 4th it becomes a B# and when it is transposed by a diminished 5th it becomes a C natural. Likewise a Gb transposed by an augmented 4th becomes a C natural, and when it is transposed by a diminished 5th it is a Dbb.

If you want to transpose a passage and change the key signature, you must perform the two tasks separately; one with the Transpose tab view and one with the Key Signatures tab view in the Clef & Key Signatures pane. In the example below, the two steps are shown – first the passage is transposed up a Major second, then the key signature is changed from C major to D major.
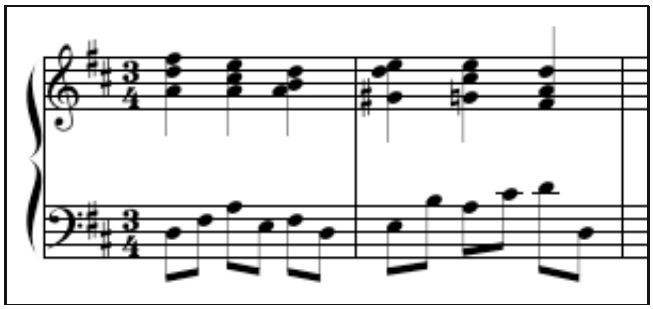
Original:



Transposed up a Major 2nd:



Key Signature changed to D major:

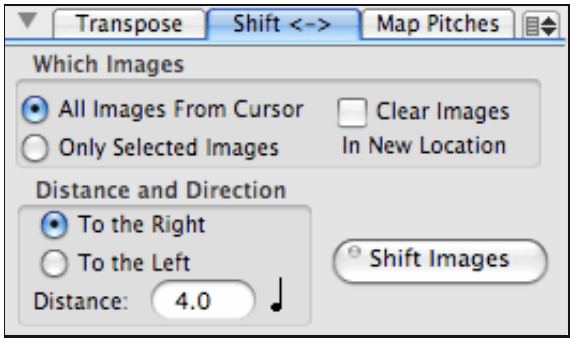


The **Alter Playback Only** button can be used to transpose the playback pitch of selected notes The appearance of the notes is not altered by this button. The transpose playback feature is useful in situations where the displayed pitch is not the correct playback pitch. An example would be where octava or octava-basso symbols are used, or where a transposing instrument has been used for a portion of the score. To use this feature, select the notes to be altered, set the transposition interval and direction and click on the **Alter Playback Only** button.

To cancel the playback transposition, select the notes and use the *Cancel Playback Transpose* menu item in the small pull-down menu located in the top-right corner of the pane.

- Since stem direction may change during transposition, some graphic slurs and other images may have to be adjusted manually.

Shift <-> Tab

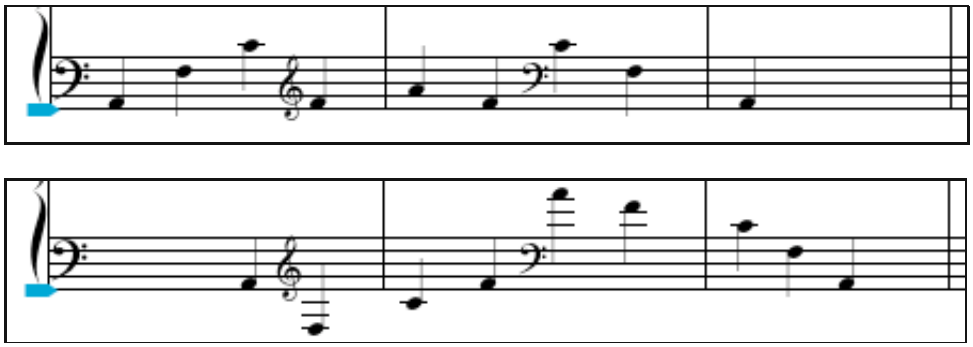


The Shift Images pane is used to shift images in your document either to the right (i.e. to greater measure numbers) or to the left (i.e. to lesser measure numbers).

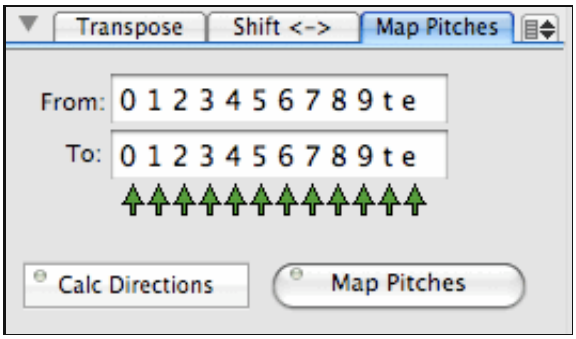
To adjust the position of images, you can either place the Entry Cursor at the beginning of the passage to be moved (and choose the **All Images From Cursor** radio button) or select the images to be moved (and choose the **Only Selected Images** radio button.) If you are shifting all images from the cursor, then you will be moving all the images on all staves beginning at the Entry Cursor and ending at the end of the score. You must also set whether you want the images shifted to the right or to the left, and check

whether you want the images that already exist in these measures to be cleared (otherwise the shifted images will be merged with the images already there). Next, set the distance (in quarter note beats) of the shift and click on the **Shift Images** button.

- the positions of inserted clefs are NOT shifted with the music, so you should be cautious when shifting music that includes clef changes. In these cases, it might be better to cut the passage, remove the clef changes, paste the passge at the new location and re-enter the required clef changes. The results of shifting a passage with clef changes by 2 beats to the right is shown below:



Map Pitches Tab



The Map Pitches pane is used to perform non-linear pitch transformations on selected notes.

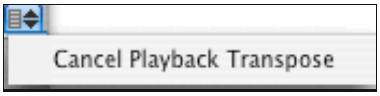
This was added to the NoteAbility Inspector at the request of composer Stephen Dembski. This pane allows selected pitches to be transposed to other pitches in a non-uniform way. The series of source and destination pitches are listed in the two text fields, and the direction of transposition is set by the arrows. (Clicking the arrow switches its direction). The pitches are entered as pitch class values 0 through 9 with 10 as either "a" or "t" and 11 as either "b" or "e". Using this notation, C is 0, C# or Db is 1, etc.

Notes with the corresponding pitch class values in the first row will be transposed (in the direction of the arrow) to the pitch class values in the second row when the **Map Pitches** button is clicked.

The **Calc Direction** button is used to automatically set the direction arrows to the smaller interval. (EG. A pitch mapping from "0" to "9" will have a downward direction while a mapping from "1" to "5" will have an upward direction

Menu items

The pull down menu located at the top-right corner of this pane contains menu items related to transposition.



Cancel Playback Transpose	remove the playback transposition from selected notes so that the correct pitch is played.

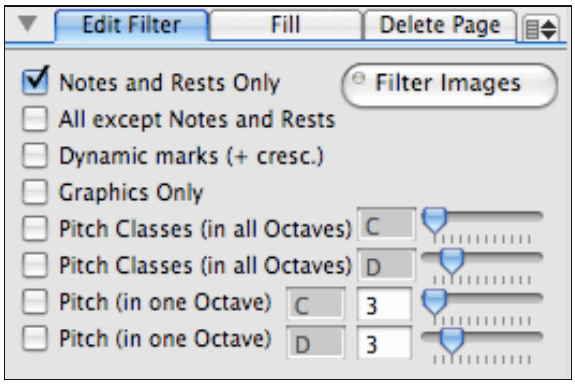
See also

- Score Structure Panel
- Document Setup Panel
- NoteAbility menus

Edit Filter / Delete Pages Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Edit Filter / Delete Pages pane (which contains the tabs: Edit Filter, Fill, and Delete Pages) is not visible in the Score Structure Panel, select Edit Filter / Delete Pages from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the three tabs in the Edit Filter / Delete Pages pane to view controls for Edit Filter, Fill, or Delete Page.

Edit Filter Tab



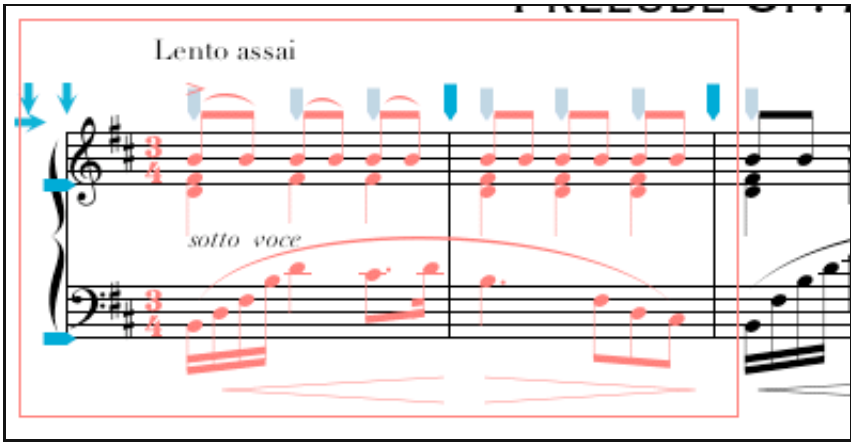
The Edit Filter tab view is used to modify a selected portion of the score to exclude certain images. This allows you to more easily perform editing operations on certain kinds of musical infomration.

To use the Edit Filter, make a selection in the score (using any of the standard selection methods). Then set the filter by clicking on the check boxes in the Edit Filter pane. These settings determine which images will remain selected. All other images will be unselected once you click on the **Filter Images** button. Although the selection rectangle in the score remains, the actual images selected will be modified to reflect the settings you have made in the Edit Filter tab view.

The first 4 check boxes refer to categories of images that can be retained in the selection (i.e. dynamic markings and crescendi). The last 4 check boxes refer specifically to pitches. The first two of these allow you to retain only certain pitch classes (i.e. pitches in all octaves), and the second two of these allow you to retain only pitches in a specified octave. You can, therefore, restrict a selection either to a specific pitch class or to a pitch in a specific octave. The sliders are used to set the pitch, and the octave number is typed into the octave text box. After clicking on the **Filter Images** button only the images indicated by your check boxes will continue to be selected.

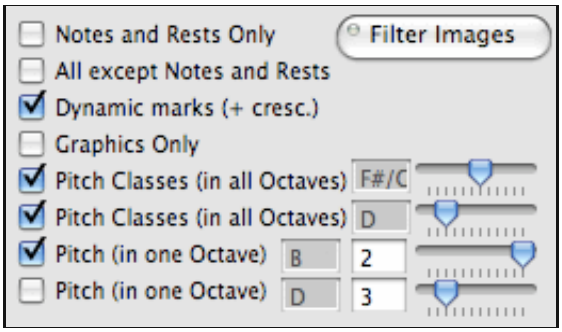
– Although it is normally possible to select a series of check boxes, some of the filter settings are mutually exclusive (eg. *Notes and Rests Only* and *All Except Notes and Rests*). In those cases, it is not possible to select both check boxes. The *Clear Checks* menu item (in the small pull-down menu located in the top-right corner of this page) is used to turn off all check boxes and thereby clear out the filter.

In the example below, we begin with a selection made around the first two measures of a Chopin prelude.

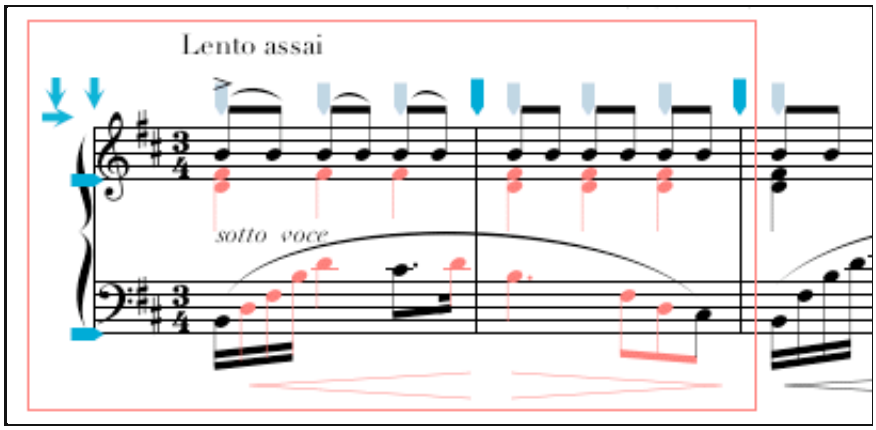


Next, we make a number of settings in the Edit Filter pane. We set the filter to remove all images except:

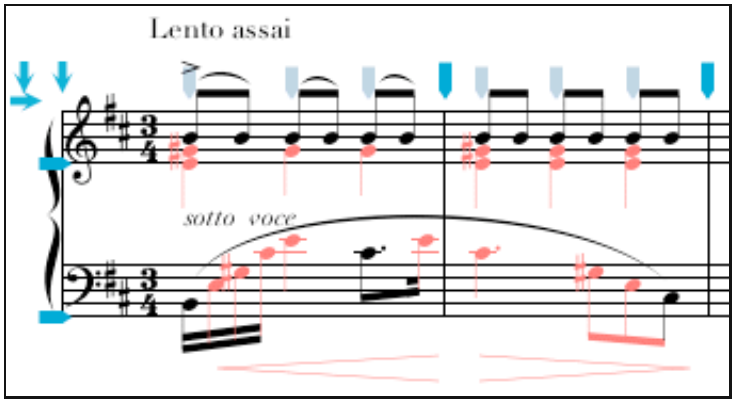
- dynamics and crescendi
- all pitches belonging to the pitch class F#/Gb
- all pitches belongin to the pitch class D
- the note B in the second octave (just below middle C "C3")



Once you click on the **Filter Images** button the score selection is altered so that only the images you indicated are selected:

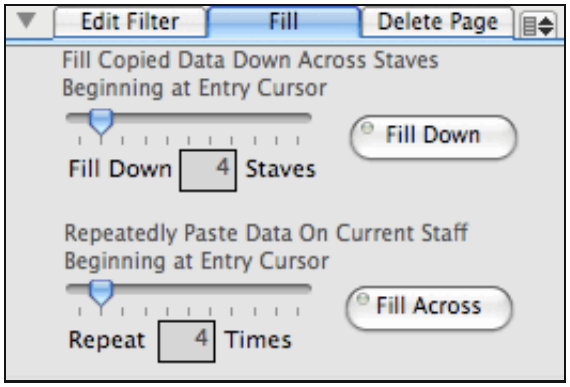


You may now perform whatever editing procedure you desire on the remaining pitches. You can drag these images with the mouse, or use andy of the menu or inspector panes editing routines. In this example, the Transposition pane was used to raise the selected notes by a Major second – my apologies to Chopin.



The Edit Filter pane is useful in instances where you want to modify only specific pitches or specific kinds of images. For example, aligning dynamic markings, changing pitches enharmonically, or adding articulations to only certain pitches. In these cases, the Edit Filter is much more efficient than creating a series of selection rectangles using Shift-Selection.

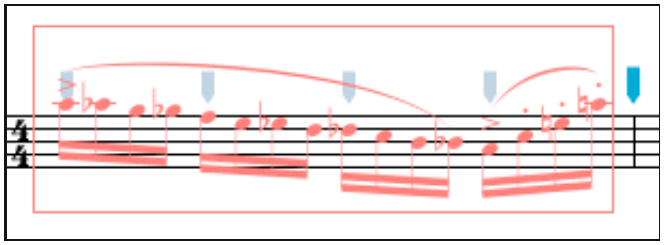
Fill Tab
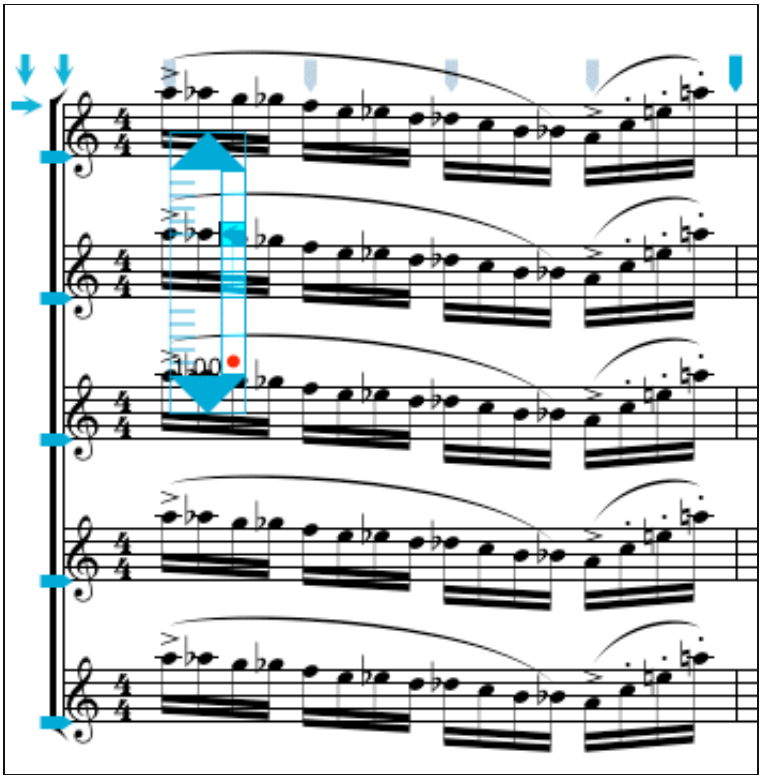


The Fill Across/Fill Down pane is used for pasting copied material repeatedly along the staves, or down through the staves in the system.

In order to use the **Fill Down** or **Fill Across** functions, you must first copy the material you want pasted so that this data is loaded into the copy buffer. Next, place the Entry Cursor at the location you want the first copy of the pasted data to appear. Next set the number of repetitions you want to by adjusting the appropriate slider. Finally, click on either the **Fill Down** or **Fill Across** buttons.

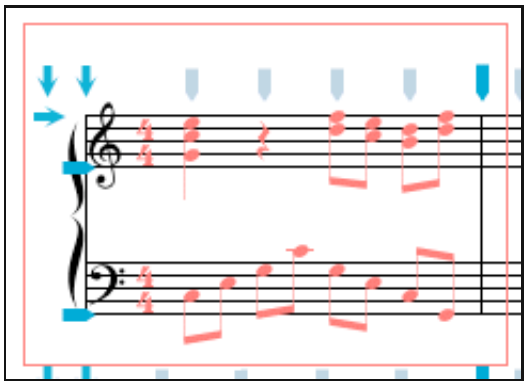
The example below demonstrates how to create a score excerpt where all five staves contain the same music. First, enter a line of music, select it by making a rectangle around it with the Selection tool, and copy the passage using the **Copy** item in the **Edit** menu:



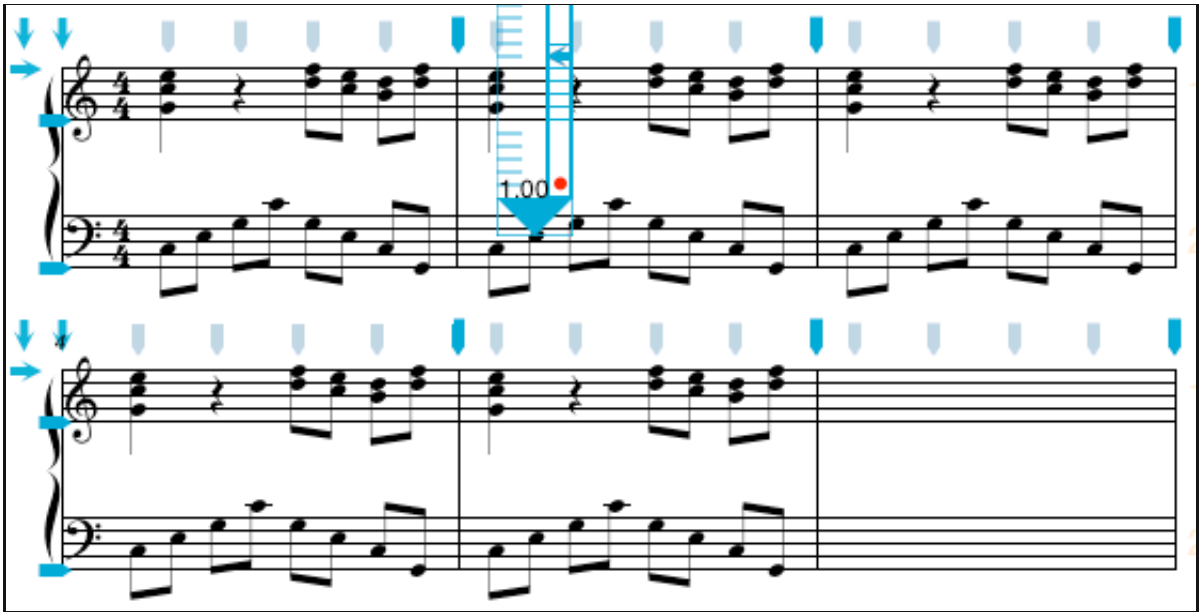
Next, place the Entry Cursor on the second staff of the system (on the beat position you want the music to begin at - i.e. immediately beneath the first note of the passage). Set the number of staves you want pasted onto (4 in this case). Finally, click on the **Fill Down** button and the following score will be created:



Similarly, **Fill Across** also requires that the music data to be pasted is first entered, selected, and copied. The music data can cover as many staves as you want. In the example below, a short passage on two staves is entered, selected with the Selection tool, and copied.

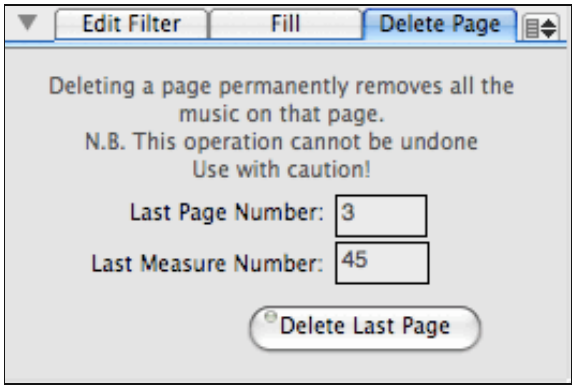


The Entry Cursor is placed on the first staff and on the beat position immediately following the passage. Next, the number of repetitions is set using the slider in the Fill Across box. FInally, the **Fill Across** button is clicked. The resulting score is:



– The **Fill Down** operation can be used when a series of staves has the same rhythm but different pitches. In this situation it is probably faster to paste the data into all the staves (using **Fill Down** and adjust the incorrect notes.)

Delete Page Tab



The Delete Last Page pane is used to remove extra pages that have been added to the end of your document and are no longer needed.

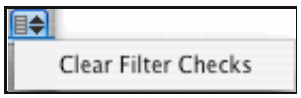
The last page number and last measure number are displayed when the tab view is activated, and these values are updated every time you remove a page. To remove a page, click on the Delete Last Page button. Since this operation cannot be undone, a panel appears to ensure that you really do want to delete this page. Deleting pages is sometimes necessary because NoteAbilityPro automatically adds new pages as needed or when certain formatting operations take place. For example if you have two pages each with 5 systems on a page and 5 measures per system and you change all systems to have only 3 measures, NoteAbilityPro will wrap the existing measures onto new pages and you will now have 4 pages with 15 measures per page.

– Deleting extra pages is normally left until the document is finished and all measure and system formatting has been done.

– You can delete pages in the middle of your score by using the *Delete Page* item from the *Format* menu.

Menu items

The pull down menu located at the top-right corner of this pane contains menu items related to the Edit Filter.



Clear Filter Checks	unchecks all the check boxes in the Edit Filter tab view.

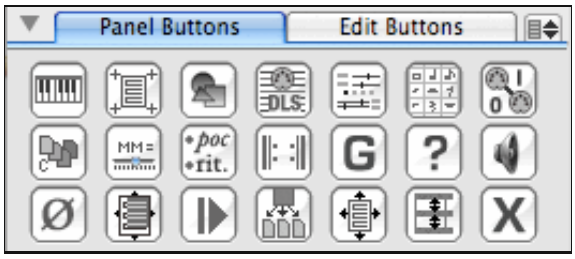
See also

- Score Structure Panel
- NoteAbility menus

Panel & Edit Buttons Pane

1. If the Score Structure panel is not already visible on your screen, choose *Score Structure Panel...* from the *Tools* menu to make it visible.
2. If the Panel & Edit Buttons pane (which contains the tabs: Panel Buttons and Edit Buttons.) is not visible in the Score Structure Panel, select Panel & Edit Buttons from the **Available Panes** pull-down menu at the top of the Score Structure Panel.
3. Choose between the two tabs in the Panel & Edit Buttons pane to view controls for Panel Buttons or Edit Buttons.

Panel Buttons Tab



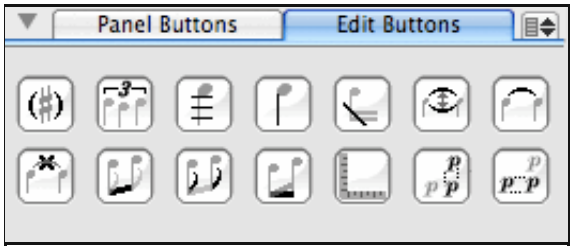
The Panel Buttons tab view contains buttons which correspond to many of NoteAbilityPro panels. In most cases, clicking on the button makes the panel visible, and clicking the button a second time hides the panel. This is not the case for the Page Setup, buttons since these panels are automatically closed after they are used.

The following panels have buttons in the Panel Button tab view:

Keyboard panel	Page Setup panel	Image Library panel
Tracks panel	Preferences panel	Command List panel
Midi Ports panel	Copy Types panel	Tempo Map panel
Text Library panel	Playback Map panel	Guido Import/Export panel
Help panel	Audio Units panel	Panic panel
Overview panel	Midi Recorder panel	Extract Parts panel
Document Size panel	Staff Spacing panel	Extended Notes panel

Whenever one of these panels is open, the button is highlighted to indicate that it is already visible.

Edit Buttons Tab



The Edit Buttons tab view contains shortcuts for some of the most common editing operations. The following actions can be performed using these buttons:

Add Parentheses to accidentals	Form Tuplet from notes	Add or Remove Ledgers from notes
Add or Remove Stems from notes	Add Grace Slash to notes	Flip Tie direction
Tie notes	Un-tie notes	Beam notes
Un-beam notes	Straighten beam angle	Hide or Show Ruler
Align Vertical	Align Horizontal	

As with all editing operations, you must select the note or notes to be altered before clicking on the button.

See also

- Score Structure Panel
- Other NoteAbilityPro Panels
- NoteAbility menus

NoteAbility Pro Menus

This Chapter covers the basic program operations as well the editing, formatting and image modification functions that are available using NoteAbilityPro menus



The layout of NoteAbilityPro menus and sub-menus is as follows:

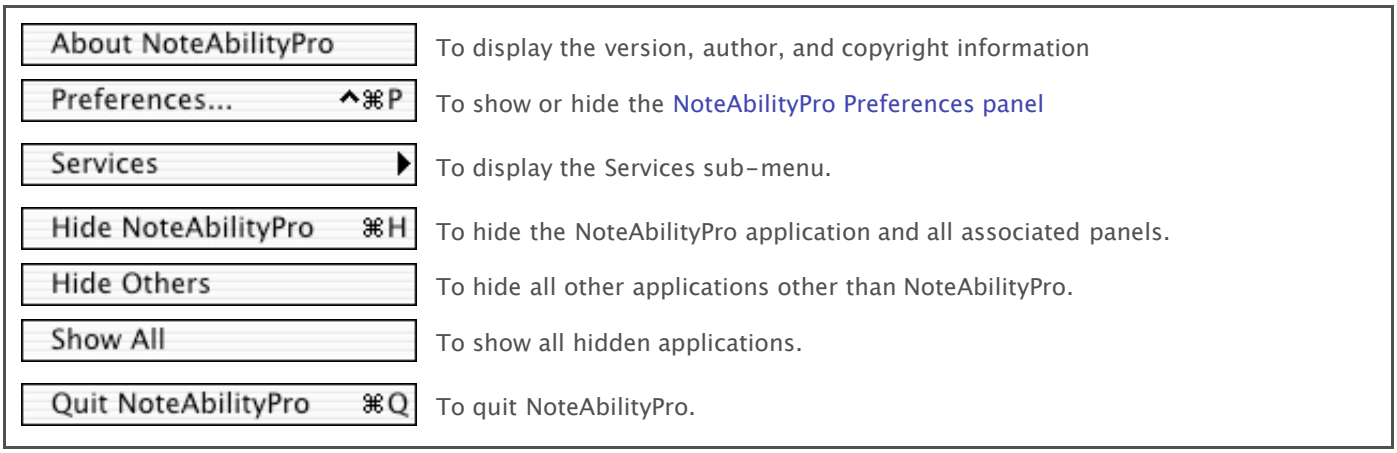
- NoteAbilityPro Menu
- File Menu
- Edit Menu
  - Edit/Spelling Menu
- Format Menu
- Tools Menu
  - IIMPE Menu
- Modify Menu
  - Modify/Notes Menu
  - Modify/Accidentals Menu
  - Modify/Tuplets Menu
  - Modify/Beams Menu
  - Modify/Rests Menu
  - Modify/Barlines Menu
  - Modify/Cresc-Decresc Menu
  - Modify/Text Menu
  - Modify/Page Menu
- Audio-MIDI Menu
- Font Menu
  - Font/Text Menu
  - Font/Kern Menu
  - Font/Ligature Menu
  - Font/Baseline Menu
- Window Menu
- IIMPE Menu
- Help Menu

See also

- 1 - Getting Started
- 2 - Overview
- 3 - Basic Program Operation
- 4 - Entering Music Into the Score
- 5 - Adjusting and Editing the Music
- 6 - Music Images Panel
- 7 - Score Structure Panel
- 9 - Other NoteAbilityPro Panels
- 10 - Page Setup and Printing
- 11 - Audio and Playback
- 12 - Reference
- 13 - Example Scores and Tutorials

NoteAbility Pro Menu

The NoteAbility Pro menu includes the About NoteAbility menu item, NoteAbility Preferences, the Services sub-menu and the Hide and Quit menus.



The **Services** sub-menu includes all services that are available to NoteAbilityPro from other applications. Selected data can be passed to other applications for processing. For example, you can select text in NoteAbilityPro and choose the **Make Stickie** item in the **Services** sub-menu to create a Stickie with the selected font in it. Applications which provide Services are automatically added to the Service sub-menu.

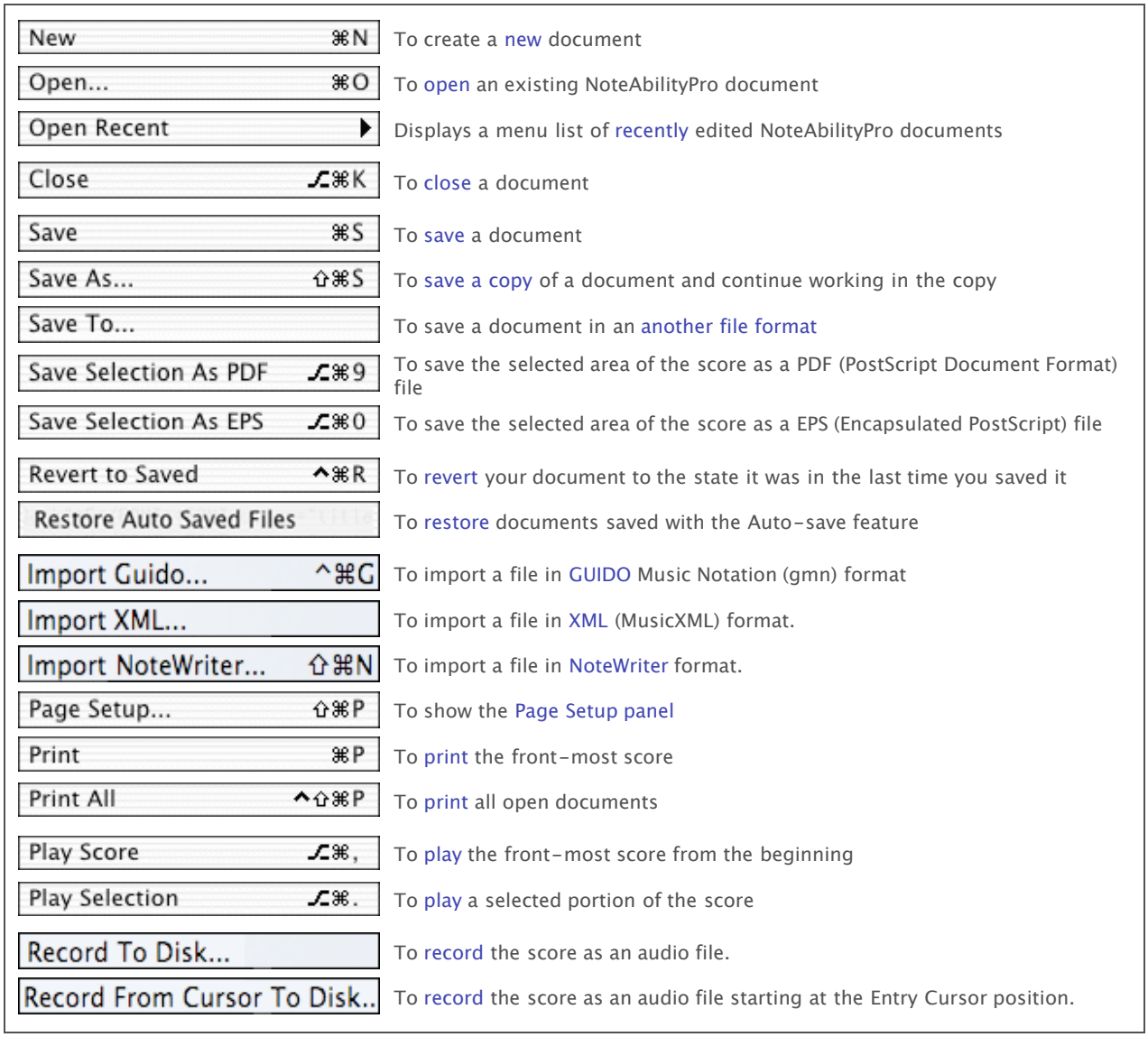
The **Info Panel** displays copyright and licensing information about NoteAbility as well as the current version number. The Info Panel is automatically displayed when NoteAbility is launched and remains visible until the program has finished loading.

See also

- Set NoteAbilityPro preferences
- Edit Menu

File Menu

The File menu includes items for opening, saving, printing and playing documents.



The **Open Recent** menu item displays a sub-menu listing some of the recently edited NoteAbilityPro documents. You can open any one of these files by selecting it with the cursor (while the mouse button is still depressed.) The **Open Recent** sub-menu also includes a **Clear Menu** item which (when selected) clears the list of recent documents from this menu.

The **Revert To Saved** menu item replaces the current document with the copy of the document that was last saved on disk. A warning panel will appear to ensure that you want to remove all the changes you have made since the file was last saved.

The **Restore Auto Saved Files** menu item allows you to open documents that have been saved onto your hard drive with NoteAbilityPro's auto save feature. If the Auto-save feature is enabled in the NoteAbilityPro Preference panel (Other tab), all opened files are saved periodically into a temporary file location. After a software crash, it is possible to use this menu item to open any files that have been "auto-saved" since the last time the computer was restarted. Files are stored in your computer's */tmp* folder. Once a file has been restored, you should save it into your a new location on your hard drive.

The **Import Guido...** menu item brings us the standard Open.. dialog box and allows you to import a text file in GUIDO Music Notation format. If the document layout information is included in the GUIDO file, then a new document will be created. If you are importanting incomplete GUIDO data, you should select

and paste the GUIDO data into an existing NoteAbilityPro document -- the imported GUIDO code will be pasted beginning at the Entry Cursor position.

The **Import XML...** menu item brings up the standard Open panel and allows you to import a file in MusicXML format. Normally these files have the extension .xml and can be created in other Notation programs such as Finale or Sibelius. NoteAbilityPro imports the MusicXML file as faithfully as possible although there will likely be some discrepancies between the original file and the NoteAbilityPro score.

The **Import NoteWriter...** menu item brings up the standard Open panel and allows you to import a NoteWriter file. Normally, these files are expected to have the extension .nwr. Imported NoteWriter files use a sub-class of NoteAbilityPro images that allow only limited editing operations. The available editing options are available in the NoteWriter Controls panel in the **Tools** menu. Imported NoteWriter files can be printed, saved as PDF through the Print panel, and saved as NoteAbilityPro documents for later printing and editing.

The **Print...** menu item brings up the standard Print panel so that you can Print, or Save the document as a PDF or EPS file. If you have not yet chosen your print and page settings with the Page Setup panel, your score will be scaled to the reduction size you set up when the document was originally created. For more details on printing refer to the chapter on Printing.

The **Print All...** menu item brings up the standard Print panel, but rather than printing only one document, it prints all open NoteAbilty documents one after another. You should set the Page Layout on all documents before using this menu item.

The **Play Score** menu item can be used instead of clicking on the play button on Control Panel. While the score is playing the menu title is changed to "Stop Play" and the menu functions as a stop button. If the Playback map and Tempo map are active, they are used during playback.

The **Play Selection** menu item can be used to play a group of notes selected with either the Select Image or Select Score tool. The tempo indicated in the Control Panel is used for playback.

The **Record To Disk** menu item allows you to record your score as an audio file. When selected, a dialog box appears which lets you name the file and choose the audio format. Currently there are 4 audio formats supported:

- Mpeg4 Audio Format(.m4a)
- Core Audio Format (.caf)
- AIFF Audio Format (.aif)
- WAVE Audio Format (.wav)

Of these formats, the first 2 are compressed audio formats which take up approximately 1 Mb of disk space per minute of sounds whereas the last 2 formats are high quality digital audio formats that take up approximately 10 Mb of disk space per minute of sound. All formats can be played by Quicktime Player or by ITunes. The WAVE and AIFF formats should be compatible with all standard audio players and editors.

Once you have named the file and selected the audio format, the score will be played and during playback will be transfered to disk as an audio file. Once the score has finished playing you may open the audio file, or burn it onto a CD using ITunes.

The **Record To Disk From Cursor** menu item allows you to record your score as an audio file beginning at the measure the Entry Cursor is currently in. The process is the same as that outline above.

See also

- NoteAbility Pro Menus
- Edit Menu

IIMPE Menu

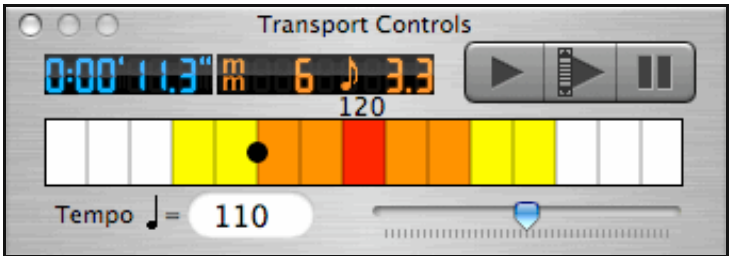
The IIMPE (Integrated Interactive Music Performance Environment) menu lists commands for controlling NoteAbilityPro when used in interactive performance environments. These commands are included as part of a research project focused on live interaction with the Max/MSP software developed by Cycling 74. If you are not using NoteAbilityPro to control Max/MSP in real time, then you can ignore this menu.

Most of these menu items are shortcuts for controlling the Transport Control panel which is a floating window providing quick adjustments to playback.

Play From Cursor ^⌘3	Start the score playing from the measure that the Entry Cursor is in.
Pause/Restart ^⌘4	Pause score playback or Resume playback if the score is already paused.
Reset Tempo ^⌘5	Rest the tempo to the score tempo after it has been adjusted with the Tempo Jump Up and Tempo Jump Down menu items.
Tempo Jump Up ^⌘6	Adjust the current score tempo to a faster tempo (by 10 beats per minute)
Tempo Jump Down ^⌘7	Adjust the current score tempo to a slower tempo (by 10 beats per minute)
Extended Note Panel...	Show or hide the Extended Note panel.

All open document windows (i.e. score windows) are also displayed in the Windows menu. You can bring a particular window to the front by choosing its menu item.

– If the Transport Controls are visible on the screen, the tempo and playback controls will be altered by these menu item or their shortcuts.

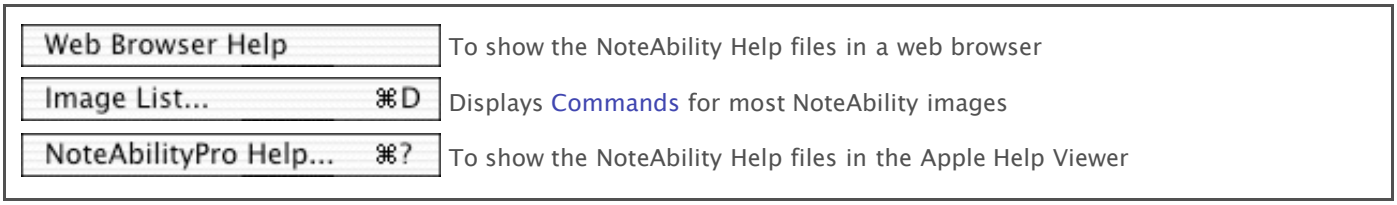


See also

- NoteAbilityPro Menus
- Max/MSP Settings panel
- Extended Note panel
- Transport Controls

Help Menu

Accesses NoteAbility Help Pages.



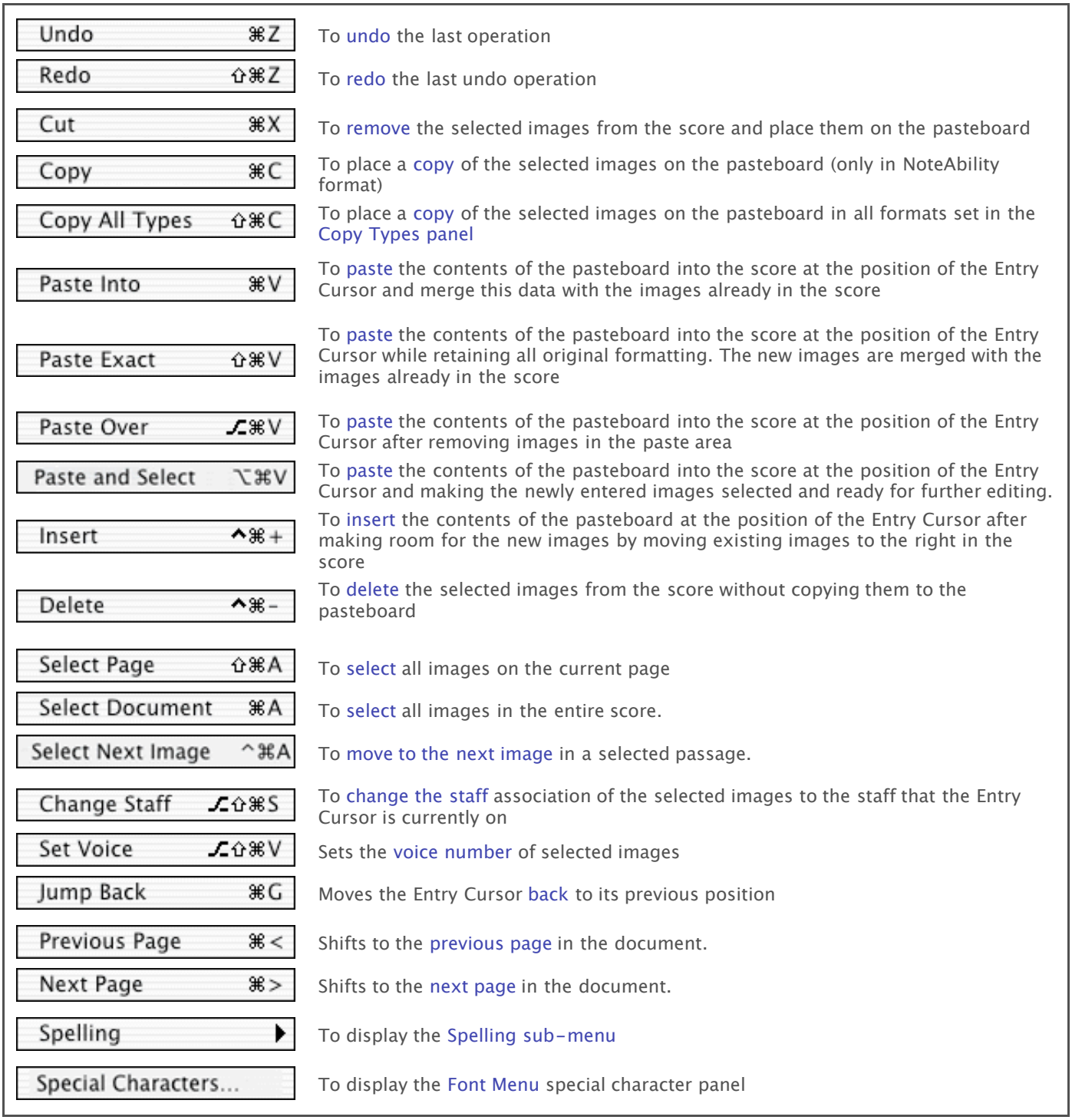
The NoteAbility Help pages are in html format and can be viewed either in the Apple Help Viewer or in any standard Web browser. In the Apple Help Viewer, the help pages are searchable. Individual help pages can be reached either from the Contents page or from the Index.

See also

- NoteAbilityPro Menus
- Command List panel

Edit Menu

The Edit menu includes items for editing your score.



The **Set Voice** menu item shifts the voice number of selected notes to one of the 3 voices set in the NoteAbility Score Controls. The 3 voices allowed for each staff in NoteAbility are:

- a voice with stems which default to going both directions
- a voice with stems which default to an upward direction
- a voice with stems which default to a downward direction.
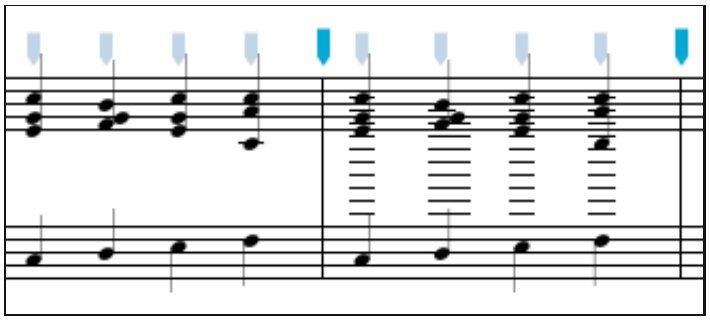
The **Jump Back** menu item causes the Entry Cursor to move back to its previous position. This menu is normally activated through the Command short-cut: Command-g.

The **Select Page** menu item selects all images on the current page. The selection is done by creating a seleciton rectangle the size of the entire page. This menu item followed by Copy All Types menu ittem can be used to quickly copy and paste a score page into another document as a TIFF or PDF image.

The **Select Document** menu item selects all images on all pages of the document. This operation can be used for performing global operations on the entire document (such as changing the size of all images on the document) or for copying the entire score for pasting into a new document.

The **Select Next Image** menu item highlighs the next image in a previously selected passage and enables editing for that image. To use this menu item, select an area of the score, then use this menu item (or the shortcut Control-right arrow key) to move through the selected images one-by-one. As each image becomes selected, you can perform other editing operations on it, before moving to the next image.

The **Change Staff** menu item is used to change the staff association of selected images to the staff ID that the Entry Cursor is on. This menu item should only be used if you discover that an image is associated with the wrong staff and therefore is not adjusting its position when the staff is adjusted. This operation can be used for dynamic marks, text, slurs, graphics, etc. but not normally for notes since ledger lines will be drawn to the new staff and the pitches will now be incorrect:



When the staff association is changed, the relative voice number is retained - if an image was in the second voice on staff ID 2 and it is changed to staff ID 1, it will now be on the second voice of staff ID 1.

Undo

The Undo operation (Command-z) reverts the document to its state before the last image was added or the last editing change was made. Multiple levels of Undo are available in NoteAbility, so you can walk back through the history of the changes to your document. Although most editing operations can be reversed with undo, many formatting operations cannot. The last operation that can be reversed with undo is displayed in a text field at the bottom of the score window.



Before performing an Undo, check that the Undo Display is showing the change to the document that you want to undo.

Redo

The Redo operation (Command-Z) reverts the document to its state before the last Undo was performed. Redo can only be performed after undo (or after a series of undos). Once a new change has been made to the document, you cannot redo any previous undos. The bottom of each score window has an Undo button (left arrow) and a Redo button (right arrow) which can be used instead of the menu items or menu shortcuts:



The **Previous Page** and **Next Page** menu items are short cuts for changing pages in the front-most score. Changing pages can also be done by clicking on the Page arrows in the Control panel.

The **Spelling** sub-menu is part of the Macintosh OS-X environment, and may change with different versions of the operating system. Currently there are three items in the Spelling sub-menu operation:

Spelling... ⌘:	To display the Spelling panel.
Check Spelling ⌘;	To check the spelling of selected words.
Check Spelling As You Type	To show spelling errors during typing by underlining the words

See also

- NoteAbility Pro Menus
- Note Editing
- Cut, Copy and Paste operations

Format Menu

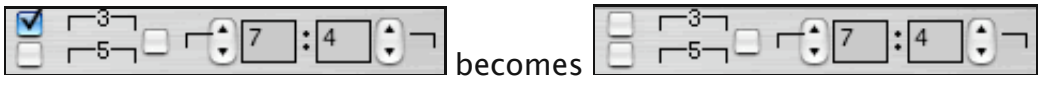
The Format menu lists commands for turning on and off various features and settings (eg. rulers, control points) and for inserting and deleting measures.

Grid Off ⇧⌘G	To turn on or off the alignment grid
Hide All Buttons ⌘\	To hide or show all Score Layout buttons
Show Control Points ⇧⌘D	To show or hide control Points on all images
Show Ruler ⇧⌘R	To show or hide the Page Rulers
Multi Page Display	To switch between Single-Page Display and Multi-Page Display
Clear Tuplet Button ⌘E	To clear the tuplet settings in the Score Controls
Refresh Page ⇧⌘L	To redraw the current page
Show Colors... ^⌘C	To show the Colors panel
Align Vertical ⎇⌘<	To adjust selected images so they are aligned vertically
Align Horizontal ⎇⌘>	To adjust selected images so they are aligned horizontally
Change Document Size... ⎇⌘D	To show the the Change Document Size panel
Insert Blank Measure ⎇⌘M	To insert a new measure after the measure that the Entry Cursor is in
Insert Blank System Before	To insert a new system before the system that the Entry Cursor is currently on.
Insert Blank System After	To insert a new system after the system that the Entry Cursor is currently on.
Insert Blank Page...	To insert a blank page either before or after the current page.
Delete This Measure ⎇⇧⌘M	To delete the measure that the Entry Cursor is in.
Delete This Page ⎇⇧⌘P	To delete the page that the Entry Cursor is currently on.

The **Grid On/Off** menu item is used to turn on or off the alignment grid to which most images are adjusted. Normally the Grid is left on, and images are locked to the closest grid point when they are entered or when they are moved or adjusted. The size of the grid is proportional to the size of the staff that is associated with the image. If you need to make very fine adjustments to an image, you can temporarily turn the grid off. The same menu item is used to turn the Grid back on.

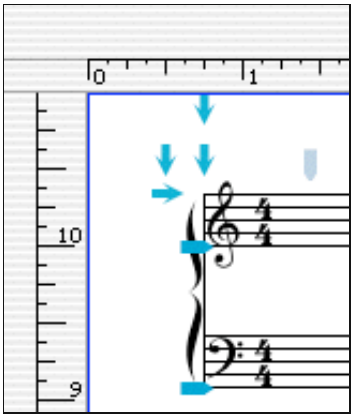
- Although you get more precision when the grid is off, it is more difficult to align images to the same horizontal or vertical location.

The **Clear Tuplet Button** menu item (which can also be invoked by typing Command-e or by clicking on Clear Tuplets o n the on-screen keyboard) is used to remove the check mark from any of the Tuplet buttons that is highlighted on the Score Controls. This menu item is an alternative to manually removing the check mark by clicking on it.



Once the tuplet are cleared, the tuplet indication in the Entry Cursor is also removed.
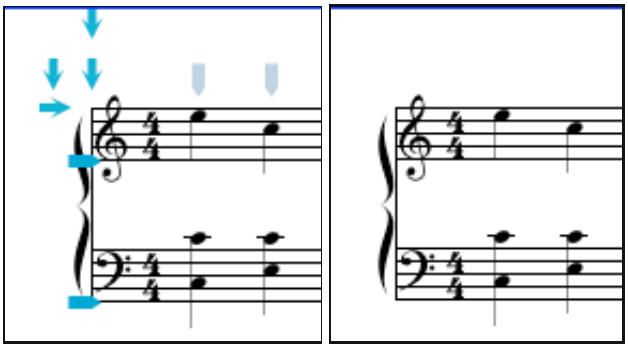
The **Show/Hide Ruler** menu item is used to display or remove horizontal and vertical rulers on the page. The rulers appear along the left side and top of the page. The measurement units (i.e. inches, centimeters, picas or points) that appear in the ruler are taken from the measurement units set in the Preferences panel. Currently measurements can be in inches, centimeters, points, or picas.



When entering new images the mouse positions are tracked on the rulers while the mouse button is depressed (and while the image is dragged into position.)

The **Show/Hide All Buttons** menu item is used to display or hide all the Score Layout buttons which are used to manually adjust page margins, system and staff positions and beat and barline positions.

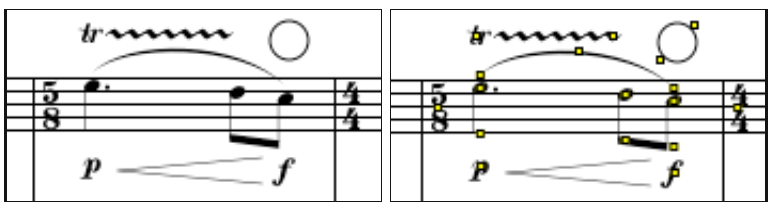
Score Layout buttons shown -- Score Layout buttons hidden



When the page control buttons are hidden, they are still moved when automatic reformatting is done, but cannot be moved manually.

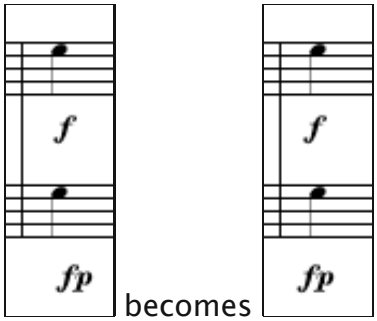
The **Show/Hide Control Points** menu item is used to display or remove the Control Points on all images. Since the Control Points are used to move and adjust images, you can turn them on if you are having difficulty adjusting an image, or while you are becoming familiar with NoteAbility. Control Points are not printed even when they are shown on screen.

Control Points hidden -- Control Points shown

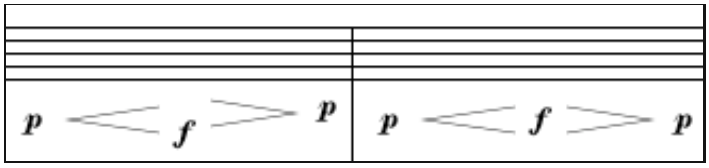


The **Refesh Page** menu item is used to redraw the entire page. This command can be used in any situation where the page is not redrawn or updated properly. This command is also available in the Panic panel.

The **Align Vertical** menu item is used to adjust selected images so they are all aligned vertically. The horizontal position (x location) of the first image in the selection is used to set the horizontal positons of all other images in the selection. This command can also be invoked by clicking on the Align Vertical button on the Toolbar.



The **Align Horizontal** menu item is used to adjust selected images so they are all aligned horizontally. The vertical position (y location) of the first image in the selection is used to set the vertical positons of all other images in the selection. This command can also be invoked by clicking on the Align Horizontal button on the Toolbar.

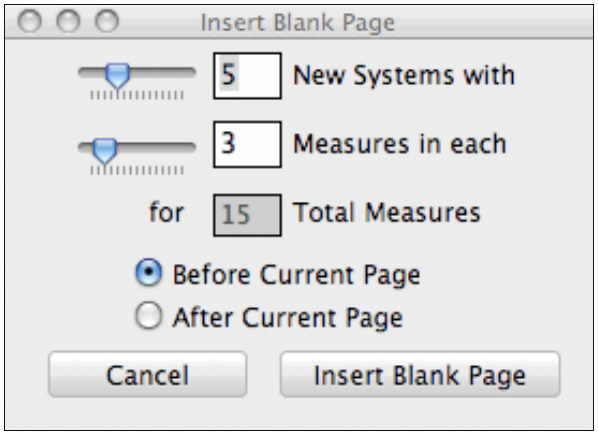


- In both the Align Vertical and Align Horizontal operations, you can use Shift-Selection to select the first image followed by the other images you want aligned to the first image.

The **Insert Blank Measure** menu item is used to insert a new blank measure after the measure that the Entry Cursor is in. The new measure will be created with the same time signature as the previous measure is added to the same system. The entire music structure (including measure numbers) is modified to reflect the change.

The **Insert Blank System Before** and the **Insert Blank System After** menu items are used to add a new blank system either before or after the current system. The new system will have the number of measures setup when the document was first created.

The **Insert Blank Page...** the menu item displays a panel which allows you to set the number of systems and measures in the new page and to indicate whether you want it placed after or before the current page.



The **Delete This Measure** menu item is used to remove the measure that the Entry Cursor is on from the music structure and to delete all images in that measure. It is not possible to delete measures from systems that only have 1 measure, so you must first shift measures from other measures to this system before deleting the measure.

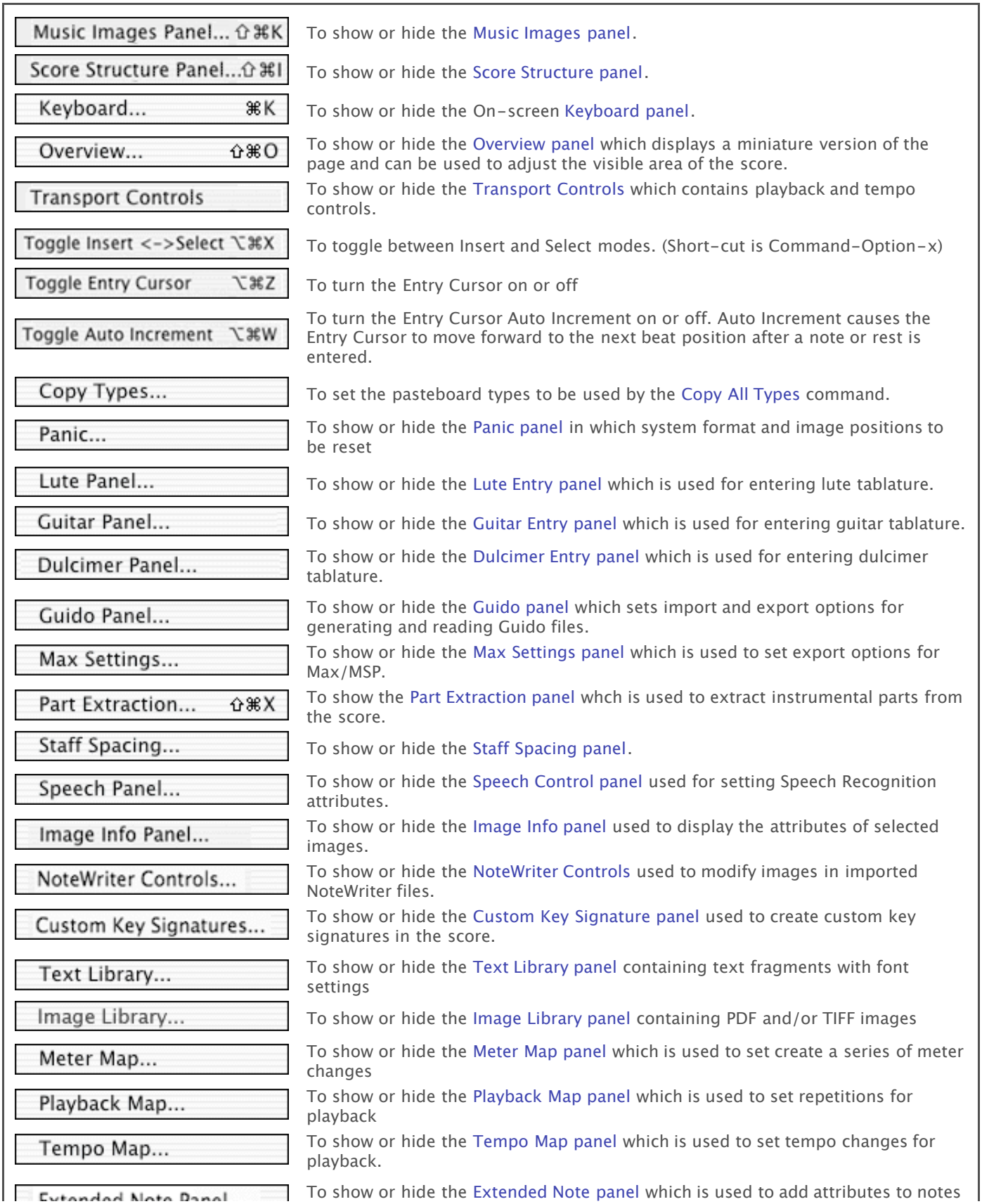
The **Delete This Page** menu item is used to remove the the current page and all the music on that page from your score. The music structure of all subsequent measures are adjusted accordingly. This operation is not undoable, so it should be used with care.

See also

- NoteAbility Pro Menus
- Modify Menu

Tools Menu

Lists commands for showing various NoteAbilityPro panels and tools.



Extended Note Panel...	for interactive performances.
Network Port Panel...	To show or hide the Network Port panel which is used to set network port and score-following attributes for interactive performances.
BPF Editor...	To show or hide the BPF Editor panel which is used to create Break-point Envelopes for interactive performances.
Antescofo Editor...	To show or hide the Antescofo Editor panel which is used to assist in the creation of antescofo (score-following) files.
IIMPE	Displays the IIMPE sub-menu with items useful in controlling interactive music performances.

- shortcuts for many of these panels are available by clicking buttons on the Panel Buttons tab view in the Score Structure panel.

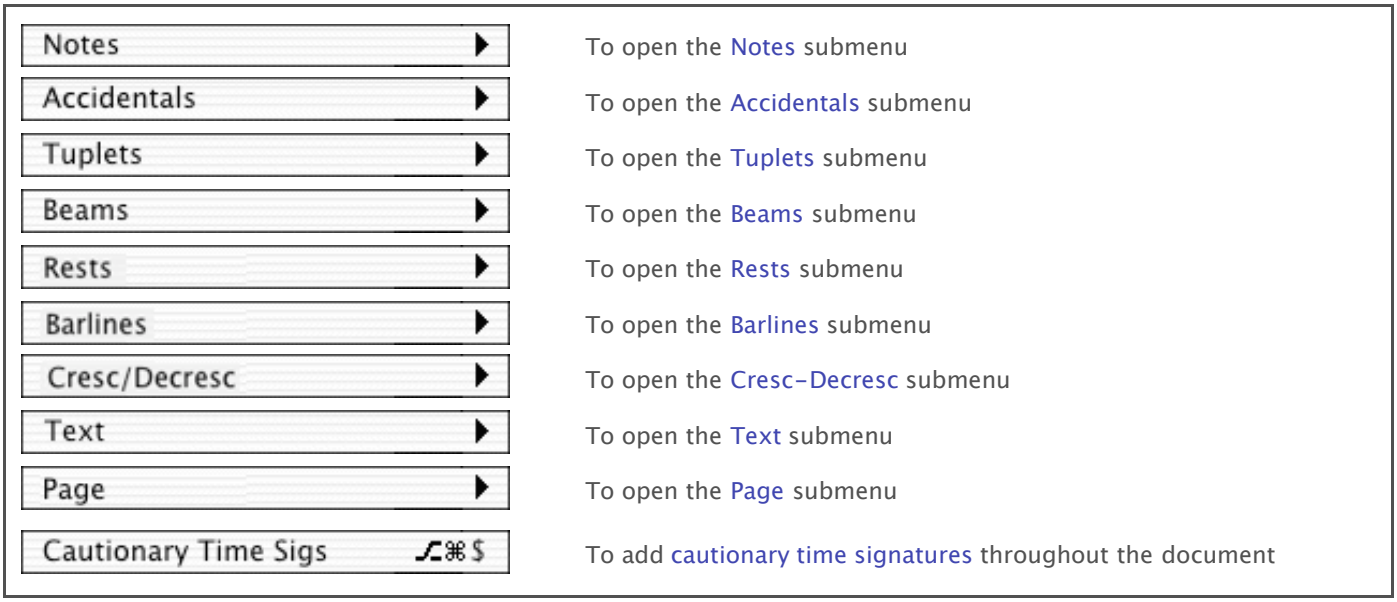
- these menu items can be used both to make a panel visible or to hide the panel if it is already visible.

See also

- NoteAbilityPro Menus
- Format Menu
- Score Structure Panel

Modify Menu

The Modify menu lists commands for altering the format and appearance of most music images.



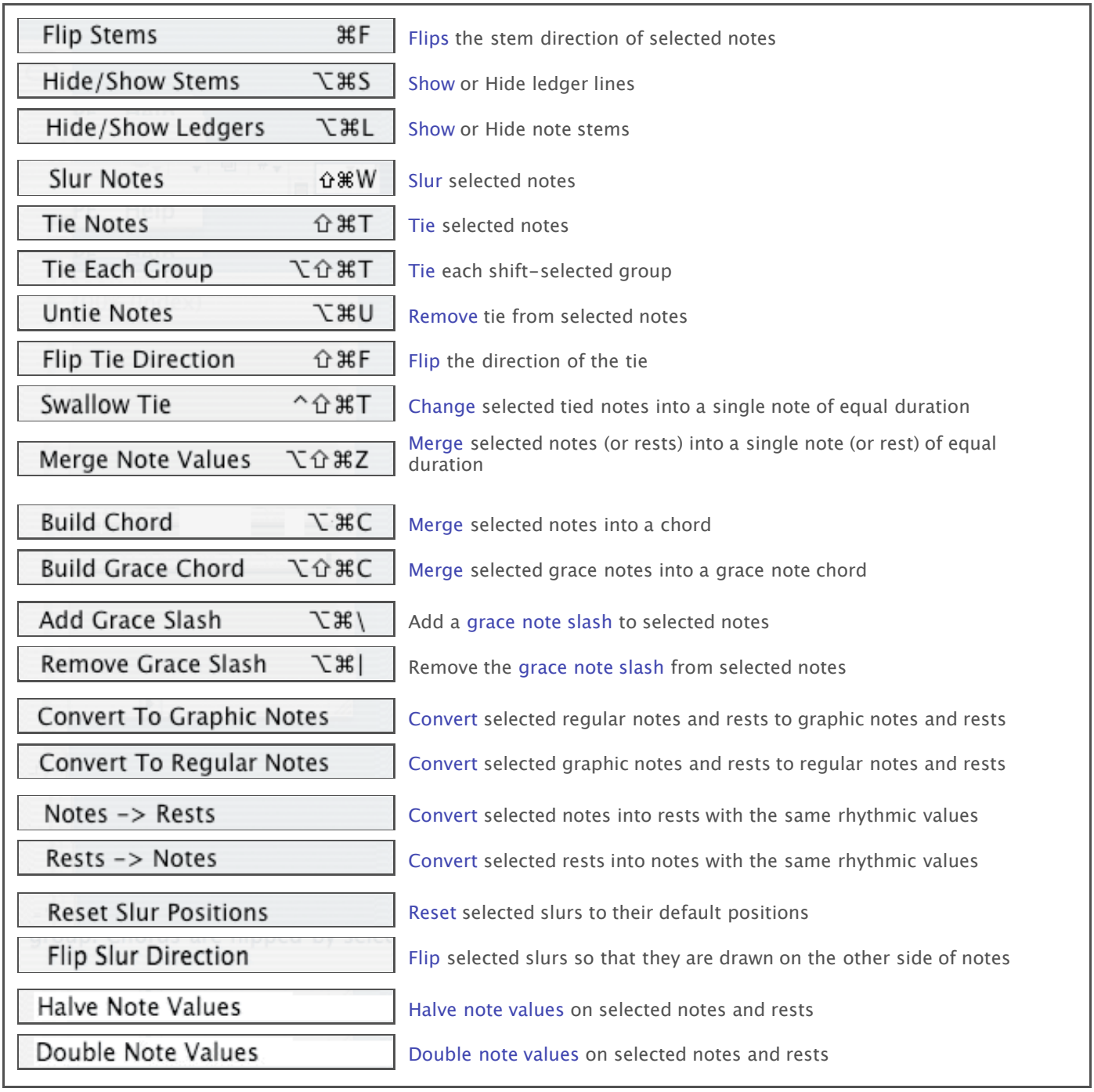
The **Cautionary Time Sigs** menu item adds cautionary time signatures at the end of systems where they are needed. These time signatures are needed when time signatures change between the end of one system and the beginning of the next. The final barline of the system is shifted to the left, and a graphical time signature is added.

See also
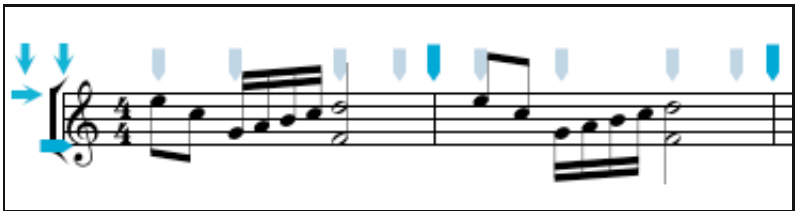
- NoteAbilityPro Menus
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu
- Modify/Barlines submenu
- Modify/Cresc-Decresc submenu
- Modify/Text submenu
- Modify/Page submenu
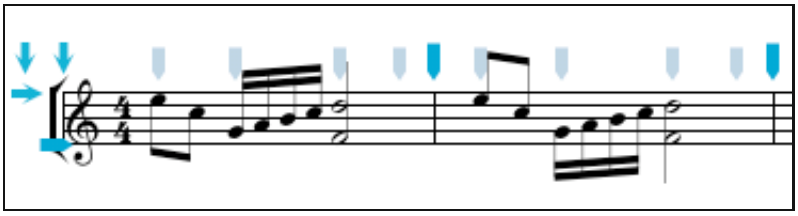
Modify/ Notes Menu

The Modify/Notes menu lists commands for altering the attributes and appearance of notes.



The **Flip Stems** menu item is used to flip the stem direction of selected notes without changing the voice that the notes belong to. An entire beam groups is flipped by selecting the first note of the group. Chords are flipped by selecting any note in the chord.

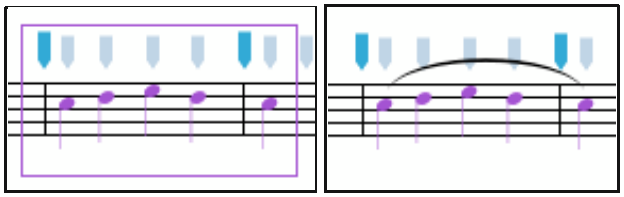




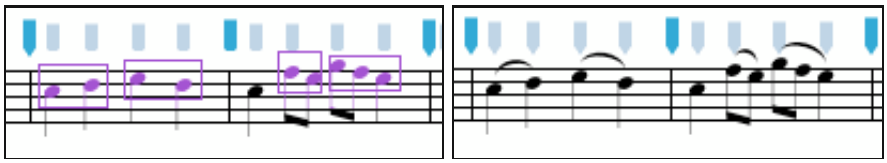
- Under some formatting and editing operations stems will be flipped back to their default positions.

The **Slur Notes** menu item is used to slur selected notes together. If a series of selection rectangles has been made, then each group of notes in each rectangle are slurred together. If you need to create a slur from one system to another, use the Score Select tool to define the starting and ending points of the selection. You can also create slurs by clicking on the **Slur Notes** button in the Score Controls The examples below demonstrate how the **Slur Notes** command works -- the selection is shown, followed by the results of the **Slur Notes** command.

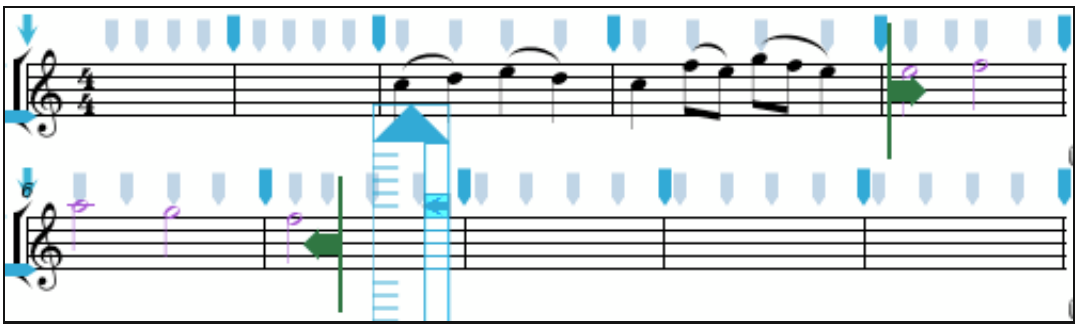
Single Selection:

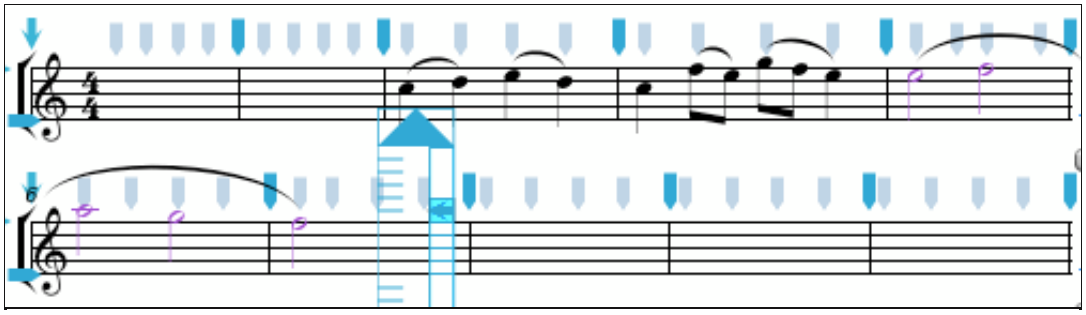


Multiple Selection (using Shift-Select):

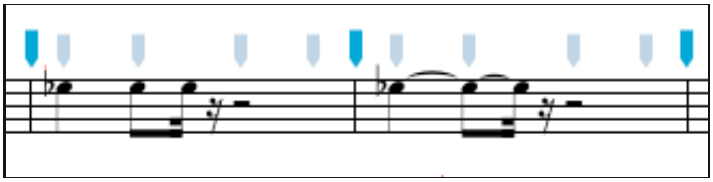


Selection Scross System (using Select Score tool):

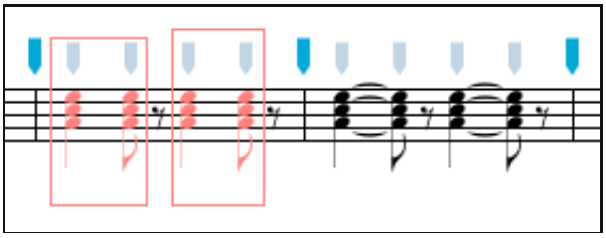




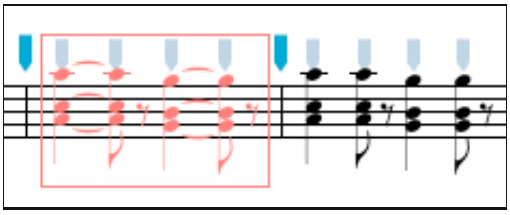
The **Tie Notes** menu item is used to tie selected notes together. Only notes belonging to the same voice and that are the same pitch can be tied together. Ties can extend between systems and across pages. Chords can be also be tied with this command.
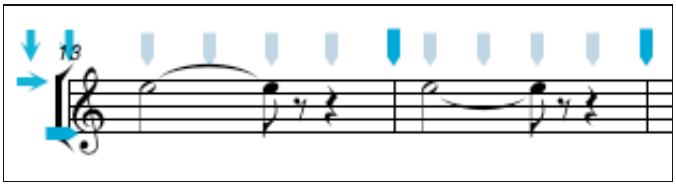


The **Tie Each Group** menu item is used to tie each shift-selected group of notes together. Only notes belonging to the same voice and that are the same pitch can be tied together. (In the example below each pair of chords was shift-selected.)
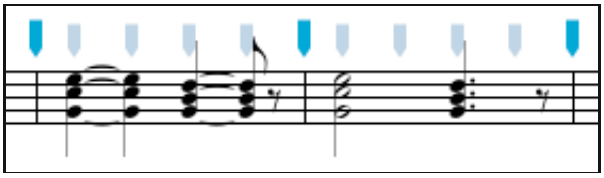


The **Untie Notes** menu item is used to remove ties from selected notes. The durations of the individual notes are not altered.
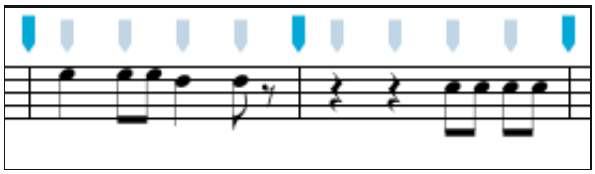


The **Flip Tie Direction** menu item is used to flip the direction of ties that begin on selected notes.

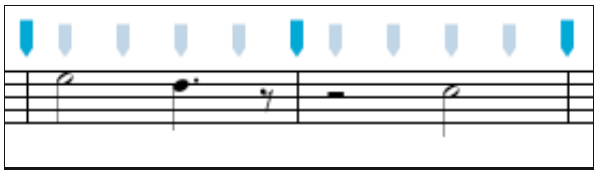


The **Swallow Tie** menu item is used to reduce selected tied notes into a single note with duration equal to the tied group. If there is no single duration that can be represented by the tied group, a close approximation is used.

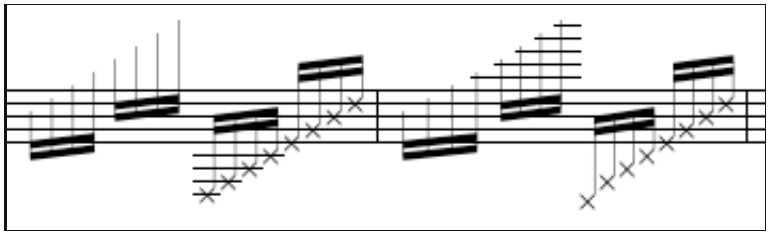


The **Merge Notes** menu item is used to reduce selected repeated notes (or rests) into a single note (or rest) with duration equal to the repeated group. If there is no single duration that can be represented by the group, a close approximation is used.

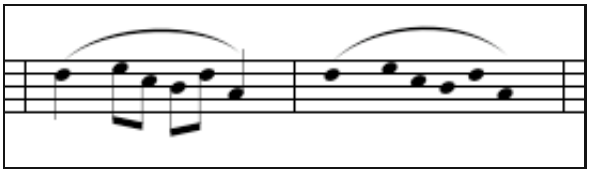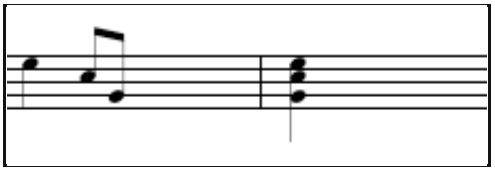




The **Hide/Show Ledgers** menu item hides the ledger lines of selected notes or shows the ledger lines on notes whose ledger lines have previously been hidden. The staff assocation of the selected notes is not altered by this command.



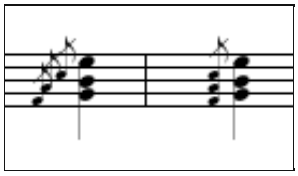
The **Hide/Show Stems** menu item hides the stems of selected notes or shows the stem lines of notes whose stems have previously been hidden.



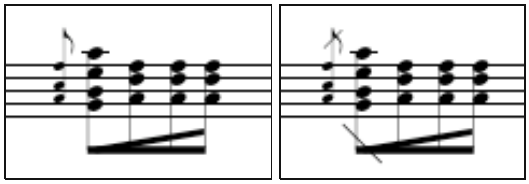
The **Build Chord** menu item forms a chord from the selected notes and places them at the beat position of the first image in the selection.
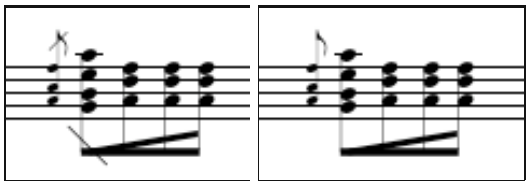


The **Build Grace Chord** menu item forms a chord from the selected grace notes (or graphic notes) and places them at the beat position of the first image in the selection. Since grace notes and graphic notes have arbitrary beat positions when entered, this is the only way to create chords of these images.
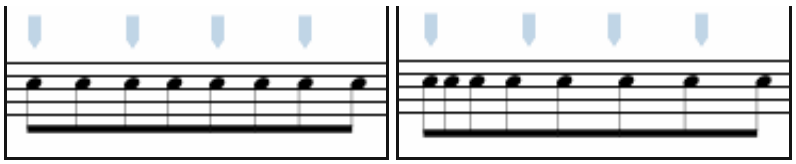


The **Add Grace Slash** menu item adds a grace slash to all selected notes or to the beam if the notes are beamed. Any note (whether or not it is a grace note) can have a grace slash.



The **Remove Grace Slash** removes grace slashes from selected notes.
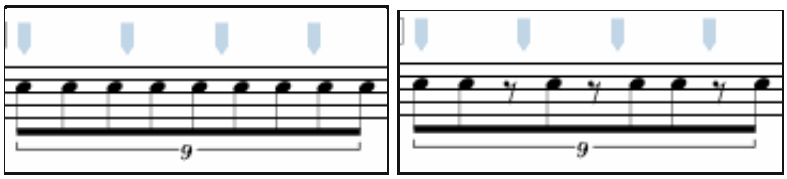


The **Convert To Graphic Notes** menu item converts selected notes and rests into graphic notes and rest. Since graphic notes and rests can be freely moved around the document, this operation is useful when you want to enter notes and rests with fixed rhythmic values, then modify them as if they were graphic notes. In the example below, notes were entered as regular notes and converted to graphic notes so that they can be moved more easily.



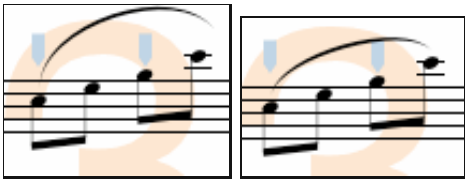
The **Convert To Regular Notes** menu item converts selected graphic notes and rests into regular notes and rest. Once converted to regular notes and rests, these images are fixed to the rhythmic spine and can only be adjusted slightly away from their spine positions.

The **Notes -> Rests** menu item converts selected notes into rests with the same duration values. In the example, the third, fifth and eighth notes were selected and converted into rests.
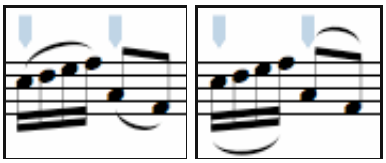


The **Rests -> Notes** menu item converts selected rests into notes with the same duration values. The note will appear on the middle line of the staff and can then be adjusted to the desired pitch.

The **Reset Slur Positions** menu item removes any position offsets that have been made to selected slurs and resets the slur to its default position. In the example below, the control points of the slur were manually adjusted. The slur was selected and this menu item was used to reset the slur positions.



The **Flip Slur Direction** menu item changes slurs so that they are drawn on the opposite side of their notes - if they were drawn above the notes, they will be drawn below and vice versa. In the example below, the direction of both slurs was flipped.



The **Halve Note Values** and **Double Note Values** menu items modify the values of selected notes so that they are either half or double their original durations. The positions of the notes in the measures (i.e their beat location) is not altered. These menu items can be used in conjunction with the Double Time Signature and Halve Time Signature menu items located in the pull-down menu of the Time Signatures pane to convert complete scores to half or double rhythmic values (eg. a score in 4/4 can be rebuilt in 4/8)

See also

- NoteAbilityPro Menus
- Modify Menu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu
- Time Signatures pane
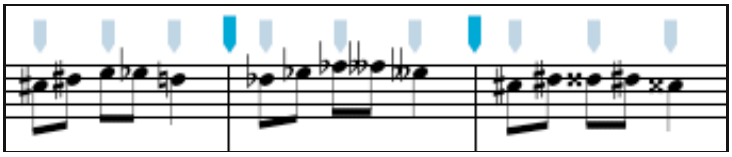
Modify/ Accidentals Menu

The Modify/Accidentals menu lists commands for adding, deleting, and modifying accidentals.

Enharmonic Above ⌘=	Change the selected notes to the enharmonic equivalentthat is a diatonic step above
Enharmonic Below ⌘-	Change the selected notes to the enharmonic equivalent that is a diatonic step below
Force Accidental ⌘1	Force the Accidental on selected notes to be visible
Don't Force Acc. ⎇⌘A	Don't force the accidental on selected notes to be visible
Force Sharps and Flats ⎇⌘#	Force only non-natural accidentals on selected notes
Hide Accidental	Hide accidentals on selected notes
Show Accidental	Show hidden accidentals on selected notes
Parentheses On / Off ⌘(	Turn on or off parentheses around accidentals on selected notes
Ficta On / Off ⌘7	Turn on or off ficta accidentals
Double Sharp ⌘2	Change the accidental on selected notes to a double sharp
Sharp ⌘3	Change the accidental on selected notes to a sharp
Natural ⌘4	Change the accidental on selected notes to a natural
Flat ⌘5	Change the accidental on selected notes to a flat
Double Flat ⌘6	Change the accidental on selected notes to a double flat
Quarter Flat ⌘9	Change the accidental on selected notes to a quarter flat
Quarter Sharp ⌘0	Change the accidental on selected notes to a quarter sharp
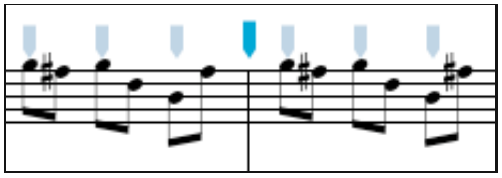
The **Enharmonic Above** and **Enharmonic Below** menu items alter selected notes so that they are the enharmonic equivalent a diatonic step above or below the original note. (The enharmonic above F# is Gb and the enharmonic below F# is Ex). In some instances, the enharmonic equivalents are not possible, so the original pitches are left (as in the case of the enharmonics below C# and D#)

Original - - - Enharmonic Above - - - Enharmonic Below



The **Force Accidental** menu item is used to cause accidentals to be shown that are normally considered to be redundant. The **Don't Force Acc.** is used to turn off forced accidentals.

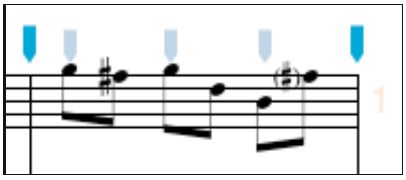
Original passage - - - Accidental forced on F#



– It is not possible to use the **Don't Force Acc.** menu item to remove an accidental that is considered to be essential (eg. the second note in the example above.)
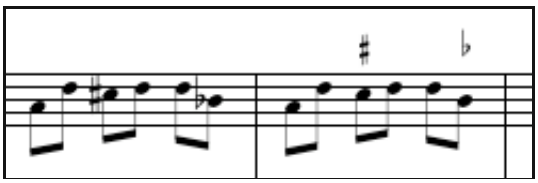
The **Force Sharps and Flats** menu item causes accidentals to be shown on all notes which have a double sharp, sharp, flat or double flat. This is useful in highly chromatic music where the composer does not want accidentals to carry through the measure.

The **Parentheses On/Off** menu item is used to add or remove parentheses around accidentals; parentheses are often used for cautionary accidentals. If an accidental already has parentheses, they are removed, otherwise they are added. In the example below parentheses were added to the penultimate note which had previously been forced with **Force Accidental**
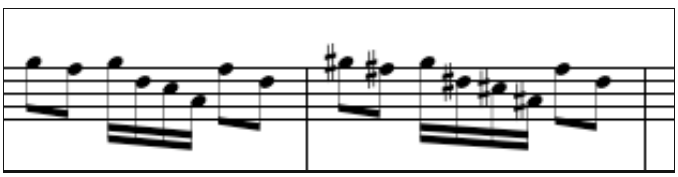


– The accidental placed in parethesis is slightly smaller than the regular accidental.

The **Ficta On/Off** item is used to alter selected notes to either use Musica Ficta or not. Musica Ficta refers to the placement of accidentals above the note rather than to the left of it; this method of positioning accidentals was common in Early Music. If needed regularly, Musica Ficta can be set as a preference (in the Other Tab of the NoteAbilityPro Preference panel). The example below shows a passage followed by the same passage using Ficta accidentals.



The vertical position of Ficta accidentals is adjusted by using the Shift Accidental buttons in the the Accidentals & Articutlations pane of the Music Images panel. Rather than adjusting the position left or right, the position is adjusted up or down. Parentheses may also be added to Ficta accidentals using the **Parenthesis On/Off menu item from this menu.**

The **Double Sharp, Sharp, Natural, Flat, Double Flat, Quarter Flat,** and **Quarter Sharp**menu items are used to change the accidentals of selected notes to the indicated accidentals. Normally, redundant accidentals within the measure are not repeated. In the example below, all notes were selected and the **Sharp** menu item was choosen.



- Since the last entered note is automatically considered to be selected, you can use the Command shortcuts (Command-2 through Command-6) to add an accidental to a note immediately after entering it.

- The relative position of accidentals can be adjusted using the Accidentals & Articutlations pane of the Music Images panel.

- The rule that governs whether accidentals carry through the measure or not can be set in the Rules tab of the NoteAbilityPro Preferences panel.

See also

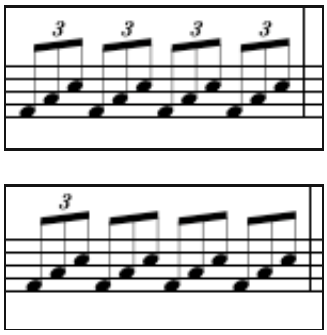
- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu

Modify/ Tuplets Menu

The Modify/Tuplets menu lists commands for forming and modifying tuplet groupings

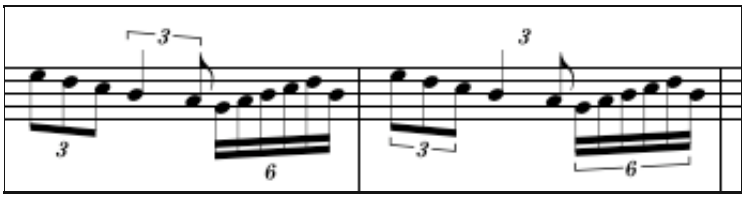
Show / Hide Tuplets ⌘]	To show or hide tuplet markings
Show / Hide Bracket ⌘[	To show or hide tuplet brackets
Show / Hide Ratio ⇧⌘]	To show or hide the tuplet ratio
Straighten Tuplets ⇧⌘[	To straighten the tuplet so that it is horizontal to the beam
Flip Tuplet Direction ⇧⌘F	To flip the direction of the tuplet (above or below the notes)
Form Tuplet ⇧⌘T	To form a tuplet group from the selected notes and/or rests

The **Show / Hide Tuplets** menu hide tuplets if they are visible, and shows them if they have previously been hidden. This menu item is used to hide redundant tuplet indications (as in the example below.)
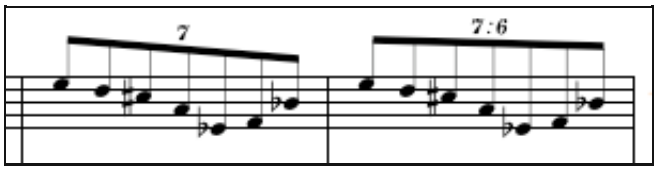


- Hiding a tuplet does not change the duration or the beat position of the images -- only the appearance of the tuplet is altered.
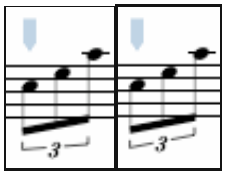
The **Show / Hide Bracket** menu item is used to show or hide the bracket that indicates the beginning and end of the tuplet group. Normally, the bracket is not needed if there is a beam that indicates the tuplet group. However, brackets can be hidden or shown if desired. In the example below, the **Show / Hide Bracket** menu was applied to all notes.



The **Show / Hide Ratio** menu item is used to show the tuplet ratio if it is not visible and to hide it if it is. The tuplet ratio is used to show the number of notes that the tuplet group should be played in. Normally, ratios are unnecessary except in ambiguous situations or in complex scores. In the example below the tuplet is clarified by showing the ratio (which reveals that it is 7 in the time of 6 eighth notes.)

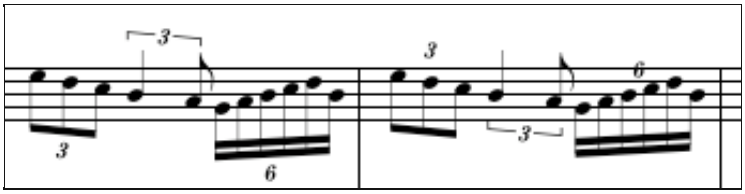


The **Straighten Tuplets** menu item is used to reset the angle of the tuplet bracket so that it is parallel to the beam. This item is used in situations where the tuplet bracket has been adjusted manually away from its normal position.



it is not visible and to hide it if it is. The tuplet ratio is used to show the number of notes that the tuplet group should be played in. Normally, ratios are unnecessary except in ambiguous situations or in complex scores. In the example below the tuplet is clarified by showing the ratio (which reveals that it is 7 in the time of 6 eighth notes.)
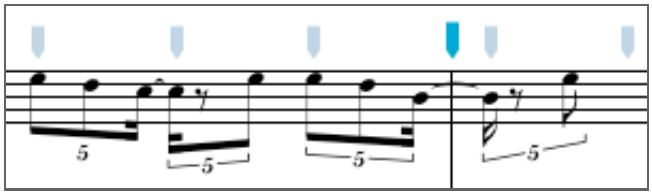
The **Flip Tuplet Direction** menu item shifts the position of the tuplet so that it is above the note group if it was below, or below the note group if it was above. This menu item does not change any other attributes of the tuplet.
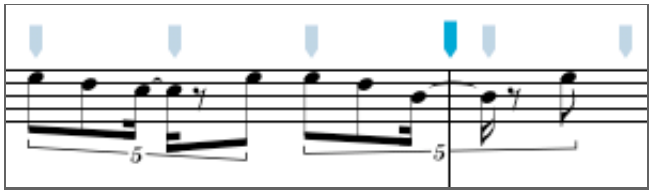


– There are Control Points at the corners of the tuplet brackets (or at the location that the corners would be if the tuplet had brackets.) These Control Points can be adjusted to alter the position of the tuplet number or to change the angle of the tuplet bracket.

The **Form Tuplet** menu item is used to create a tuplet group out of selected notes and rests. All notes and rests in the selection must have been entered with the same tuplet setting in the Control panel (i.e. they must all be triplets, or quintuplets, or 7:4, etc.). This menu item is most often used to merge several beats of tuplets into a single tuplet group. The example below should help to clarify this.
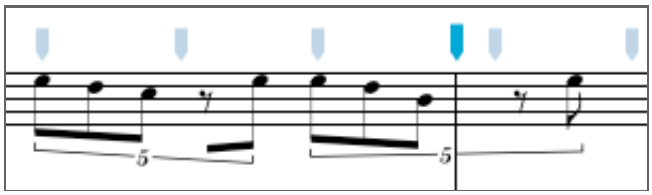
1. The default beaming and tuplet groupings of data that was pasted into NoteAbility:
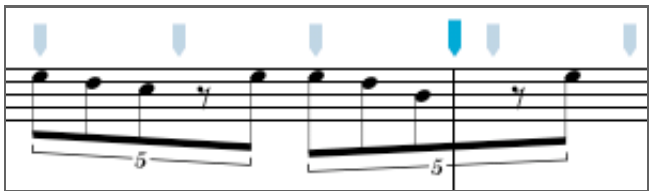


2. After the **Form Tuplet** command was applied to each two-beat group.
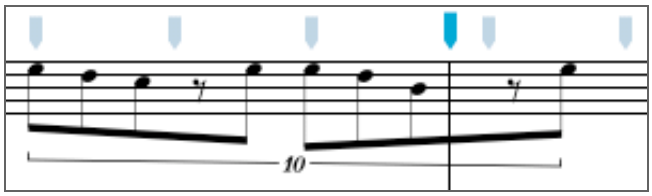


3. After the third note in each group is selected and the **Swallow Tie** menu item is applied.



4. After each two-beat group is selected and the **Beam Notes** command is applied.



Alternatively, the entire measure could have been formed into a single tuplet group giving us:



– NoteAbility automatically calculates the correct tuplet numbers. Even though quintuplets (5:4) were entered in the example above, when ten notes and rests are grouped together the number 10 will appear rather than 5.

See also
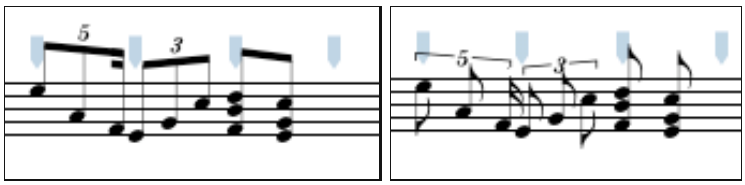
- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Beams submenu
- Modify/Rests submenu

Modify/ Beams Menu

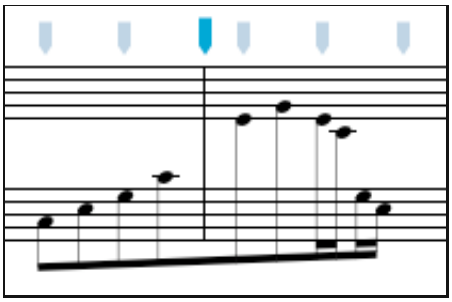
The Modify/Beams menu lists commands for forming and removing beams.

Beam Notes ⌘B	Joins all selected notes into a single beamed group.
Beam Each Group ⇧⌘B	Joins each shift-selected group into a beamed group.
Beam on Beat ⎇⌘B	Joins selected notes and rests into beam groups according to the beat divisions of the measures.
UnBeam Notes ⇧⌘H	Breaks any selected beamed notes into unbeamed notes.
Straighten Beam ⇧⌘Q	Adjusts the beam angle so that the beam is horizontal.
Add / Remove Begin Repeat	Adds a begin repeat barline at the beginning of the current measure.

The **UnBeam Notes** menu item (Command-H) removes the beams from selected notes. (Only one note in the group need be selected for the beam to be removed.) The positions of the stems will be recalculated once the beam has been removed.
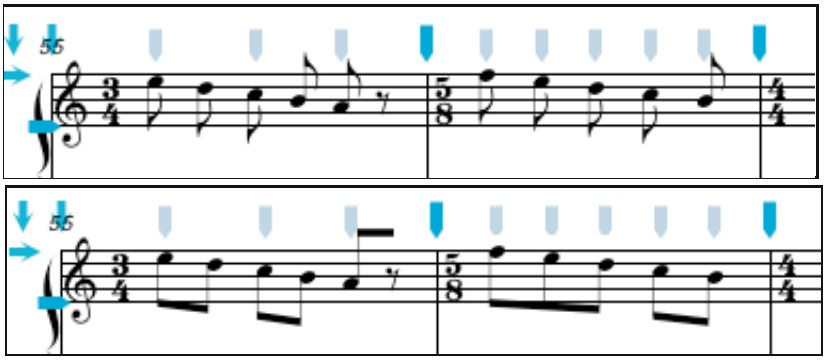


The **Beam Notes** menu item (Command-b) adds a beam to all selected notes and rests provided that they all belong to the same system. (Beaming across staves within the system and across barlines is permitted.)

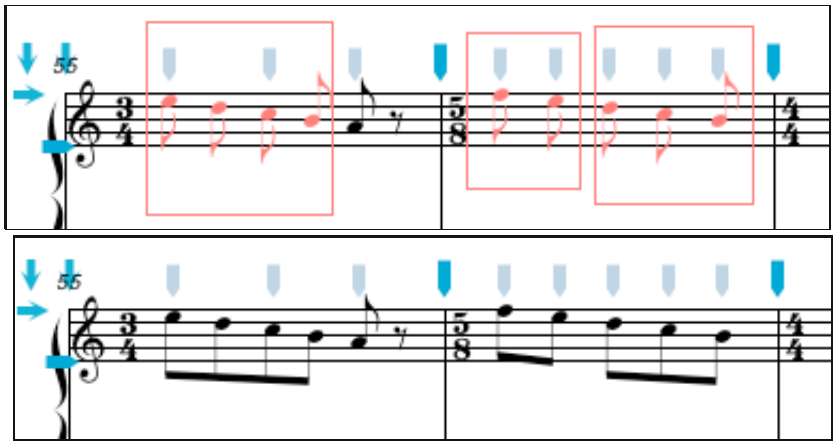


- In some instances large beam groups may have to be edited using the Beams pane in the NoteAbility Inspector.
- When notes belonging to different staves are beamed together, they are first all transferred to the same voice (despite the fact that they remain on different staves.)
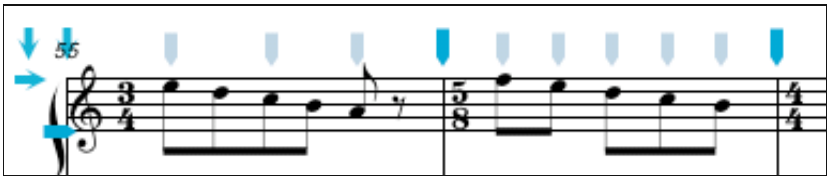
The **Beam On Beat** menu item beams selected notes and rests according to the beat divisions in the measure. In the example below, the entire passage was selected and the **Beam On Beat** command applied.



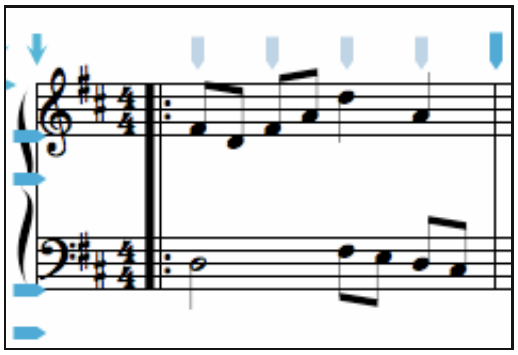
The **Beam Each Group** menu item (Command-B) forms a beam from each shift-selected group or notes and rests. This command provides more flexibility than the **Beam On Beat** command. The example below shows the shift-selected areas and the results of the **Beam Each Group** command.



The **Straighten Beam** menu item (Command-Z) adjusts the beam angle so that it is horizontal. The example below shows the results of the **Straighten Beam** command applied to all three beams.



The **Add / Remove Begin Repeat** menu item adds (or removes is one is already present) a Begin Repeat barline at the beginning of the current measure. These barlines are necessary in situations where the first measure of a systems has a begin repeat barline. The barline is placed just before the beginning of the first beat as shown below:



- It is not necessary to remove existing beams before forming new ones since the existing beams will automatically be removed before the new beam is added.

See also

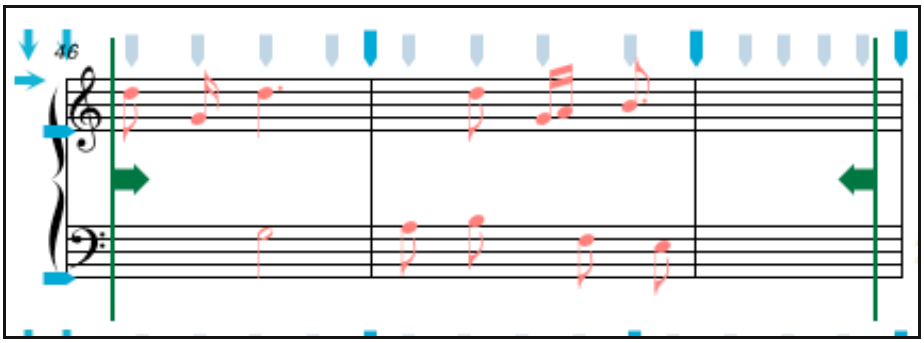
- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Rests submenu
- Barlines & Braces Pane

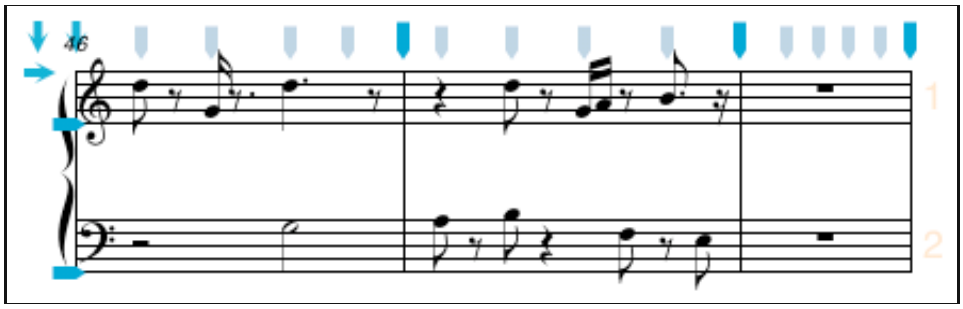
Modify/ Rests Menu

The Modify/Rest menu lists commands creating and removing rests.

Insert Single Rest ⌘R	To insert a rests equivalent in duration to the current note value
Remove Selected Rests	To remove all rests from the selected area of the score
Insert Rests In Selection ⌥⌘R	To insert rests wherever there are unfilled beats in the current selection (using the Select Score tool)
Build Measure Rests ⌥⇧⌘R	To group measures in the current selection (using the Select Score tool) into Multiple Measure Rests
Hide/Show Rests	To hide or show selected rests.

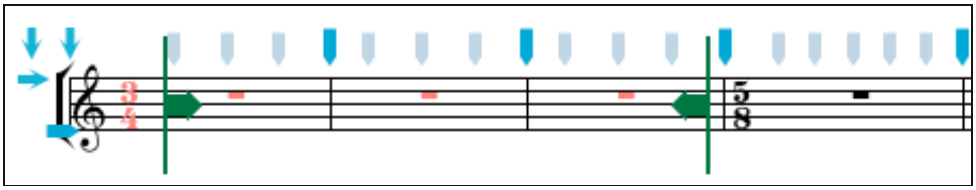
The **Insert Rests** menu item fills all empty beats in a selected section of the score with rest of the correct value. To use this command, select portion of the score with the Select Score tool, then select the **Insert Rests** menu item.

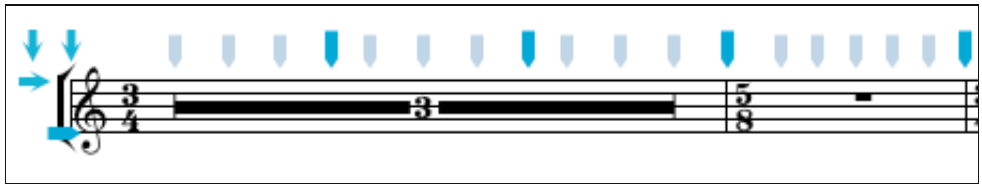




– The Insert Rests command will not work unless the Select Score tool has been used to select an area of the score.

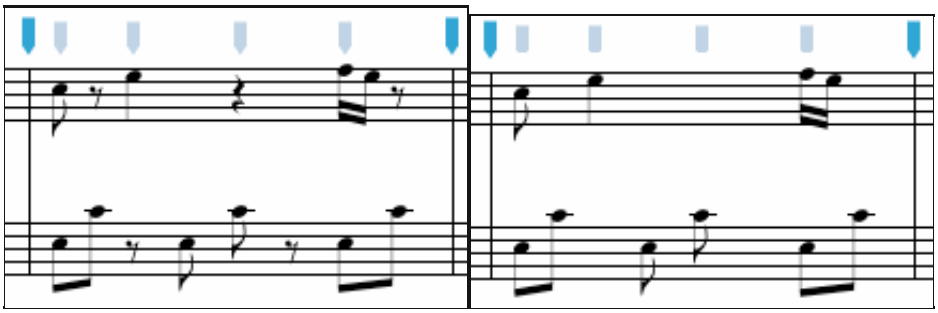
The **Measure Rests** menu item groups selected measures into multiple measure rests. Any unnecessary barlines are removed and the multiple measure rest image is inserted. To use this command, select portion of the score with the Select Score tool, then select the **Measure Rests** menu item.





- According to convention, Multiple Measure Rests will not extend across meter changes or across systems
- The Measure Rests command will not work unless the Select Score tool has been used to select an area of the score.

The **Remove Selected Rests** menu item provides a short cut for removing only the rests in a selected area of the score, leaving all other images intact. Either the Selection or Select Score tools can be used to create the selection.



See also

- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
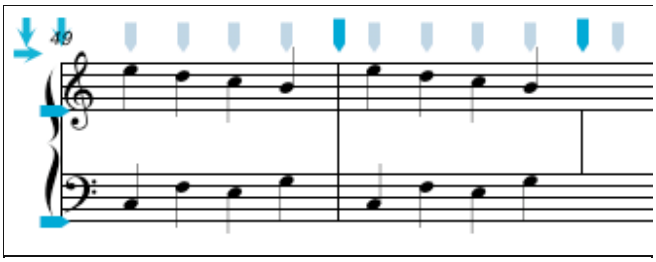
Modify/ Barlines Menu

The Modify/Barlines menu lists commands to alter the appearance of barlines.
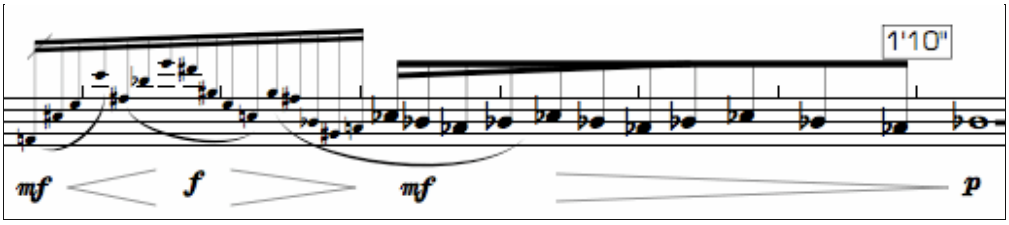
Mensurstrich On / Off ⌘8	To turn on or off mensurstrich barlines
Tick Barlines On / Off	To turn on or off tick barlines
Hide / Show Barline ⌥⌘1	To show or hide the barline in the measure that the Entry Cursor is currently in

The **Mensurstrich On/Off** menu item changes the barline format of the current measure (i.e. the measure that the Entry Cursor is on) between normal barlines and mensurstrich barlines. Mensurstrich barlines are used in early music and are drawn between the staves in a system but not through the staves themselves. Normally mensurstrich is only used when barlines are set to draw through the entire system – if the barline is set to draw on single staves, no barline will appear. If mensurstrich barlines are to be used throughout the entire document, you should check the **Use Mensurstrich** item in the Graphics tab of the NoteAbility Preferences panel.

Mensurstrich Barlines Off – – – Mensurstrich Barlines On



The **Tick Barlines On/Off** menu item changes the barline format of the current measure (i.e. the measure that the Entry Cursor is on) between normal barlines and tick barlines. Tick barlines consist of a small red mark just above the top line of the staff. Tick barlines are useful in scores using timing rather than conventional measures. The example below shows a score with tick barlines.



Notice that in the above example the first beat inset has been reduced to 0 so that all beats are equally spaced.

See also

- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu

Modify/ Cresc- Decresc Menu

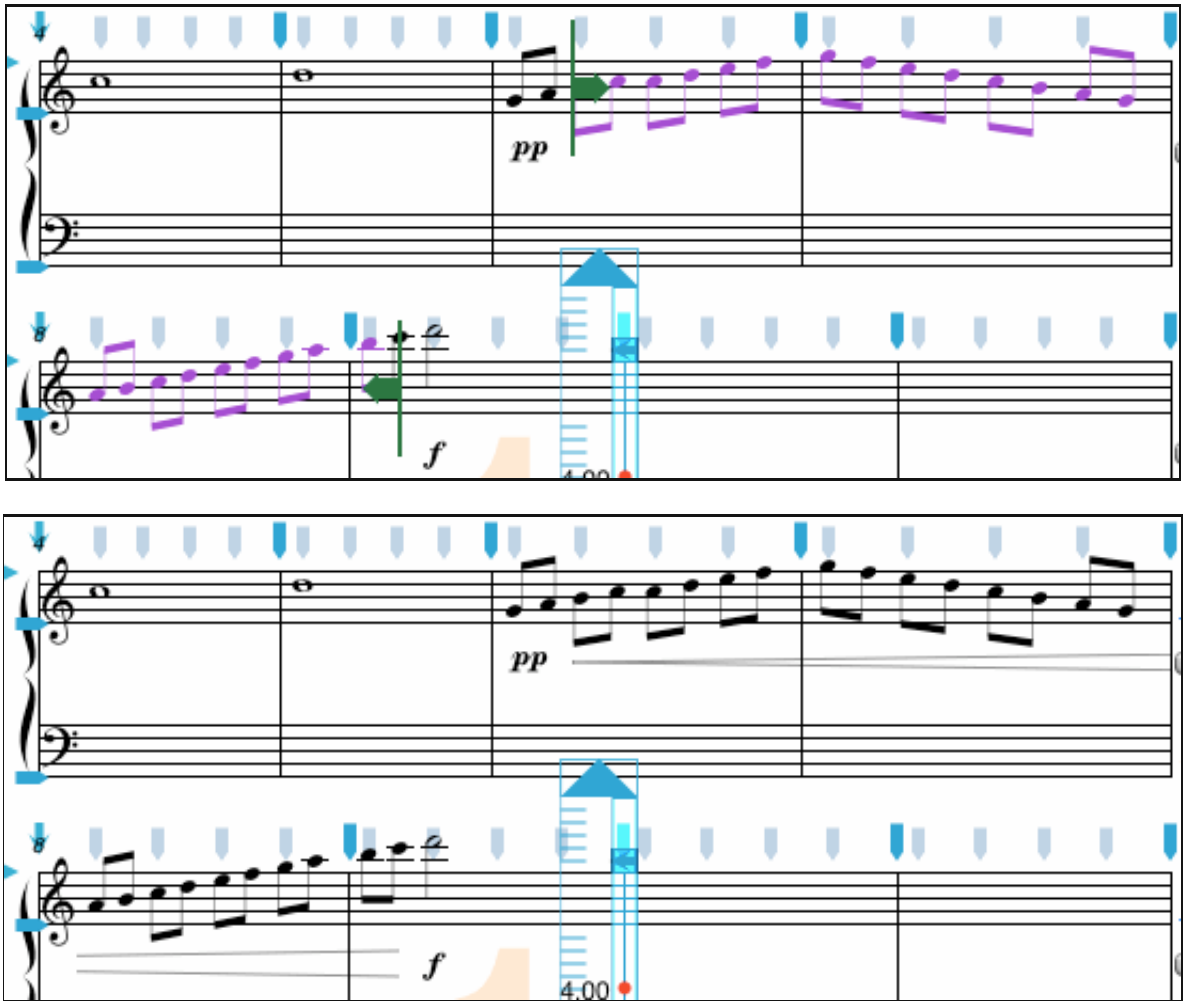
The Modify/Cresc menu lists commands for creating crescendi and descrescendi.

Build Cresc	To create crescendi in the score as indicated by the Select Score arrows
Build Decresc	To create decrescendi in the score as indicated by the Select Score arrows

Normally crescendi and descrescendi are entered using the Cresc tool from the NoteAbilityPro Tools palette. However, if you need a crescendo or a decrescendo to cross from one system to another, you will need to do the following:

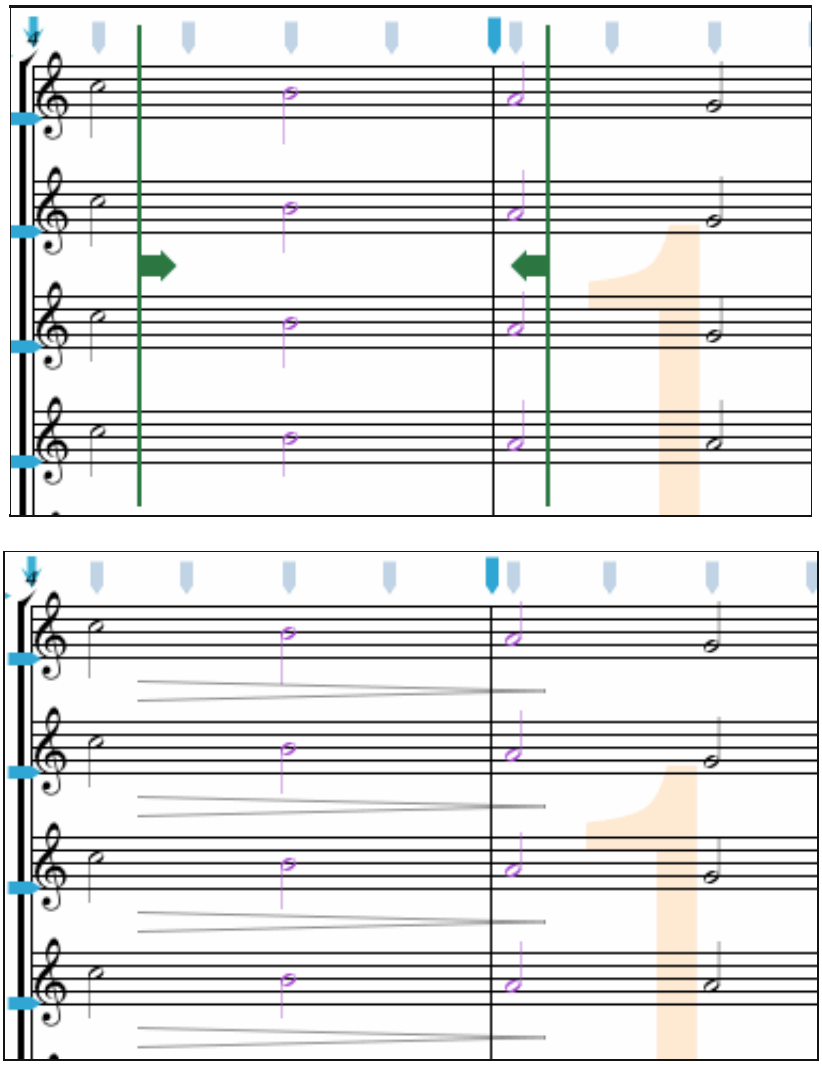
1. Choose the Select Score tool from the NoteAbilityPro Tools palette
2. click to place the starting arrow of the selection on the staff and location you want your crescendo or decrescendo to start
3. click again to place the ending arrow on the staff and location you want your crescendo or decrescendo to end.
4. choose either the **Build Cresc** or **Build Decresc** menu items to create the image

The example below should make this clear. The selection area is shown, followed by the crescendo that results.



It is also possible to use these menu items to create crescendi or descrescendi across many staves. In this case, select several staves with the Select Score arrows by placing the start arrow on the first staff and the

end arrow on the last staff that you want included. A crescendo or decrescendo will be added to each staff. The example below should make this clear:



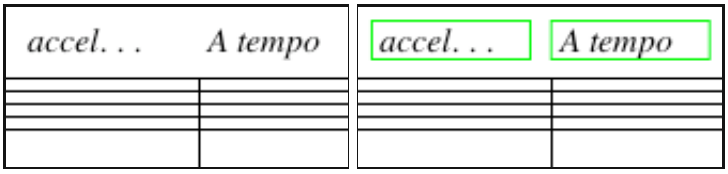
See also

- NoteAbilityPro Menus
- Modify Menu
- Modify/Notes submenu
- Modify/Accidentals submenu
- Modify/Tuplets submenu
- Modify/Beams submenu
- Modify/Rests submenu

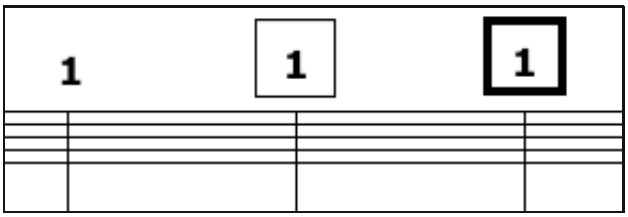
Modify/ Text Menu

Make Text Global ⎇⌘G	Set the text (or image) to be global so that it is extracted with all instrumental parts
Add/Remove Frame ⎇⌘[	Adds or removes a frame around the text boxes
Make Header ⎇⌘H	Convert selected text boxes from Regular text to Header text
Remove Header ⎇⇧⌘H	Changes selected text boxes from Header text to Regular text
Centre Text on Page	Centre the selected text boxes so that they are centred horizontally on the page
Annotation On/Off ⌥⇧⌘A	Convert selected text boxes from Regular text to Annotated text or vice versa
Make Font Smaller ^⌘,	Resize the text in the selected text box so that it is 1 point smaller
Make Font Larger ^⌘.	Resize the text in the selected text box so that it is 1 point larger

The **Make Text Global** menu sets the selected text box to be global so that it will be extracted with all instrumental parts. If text is already global, then this menu removes its global status. Global text is drawn with a bright green frame around it so that it can be distinguished from other text. The frame does not print when the document is printed



The **Add/Remove Frame** menu item adds or removes a frame around the selected text. The thickness of the frame can be set with the Set Size button on the Control panel which alters the point size of the text object but doesn't alter the point size of the actual text.

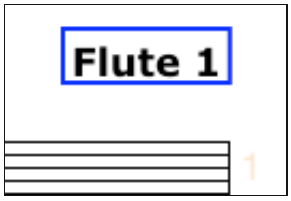


The **Make Header** and **Remove Header** menu items convert selected text between regular text and header text. Header text appears on each page of the score at the same physical location. It is useful for titles, copyright notices, instrument indications and any other marking that you want to appear on each page. To create header text:

1. enter the text (either Page text or Measure text) at the location you want the text to appear.
2. Select the text with the Selection tool
3. Choose the **Make Header** menu item

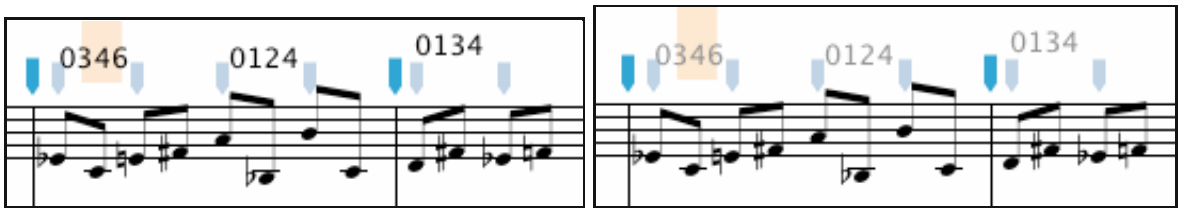
To revert header text to regular text, select the text and choose the **Remove Header** menu item.

On screen, header text has a blue rectangle around it so it can be distinguished from regular text – the rectangle does not appear when the document is printed. In the example below, the text "Flute 1" will appear on each page of the document.



– When Header text is moved, it will be moved on all pages in the document.

The **Annotations On/Off** menu item converts selected Text boxes to Annotations. Annotations appear on the screen (in gray) but are not printed when the document is printed. Annotations are useful to composers who wish to make text comments on the score but do not want those comments printed in the final score. In the example below, the Regular text box is converted to an annotation using this menu item.



The color of Annotation text can be changed by selecting a color from the Color panel and dragging it onto the selected text in the Annotation text box.

See also

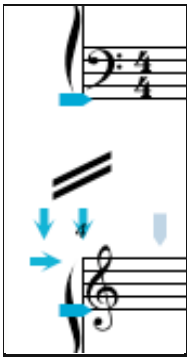
- NoteAbilityPro Menus
- Modify Menu
- Part Extraction panel
- Colors panel

Modify/ Page Menu

The Modify/Page menu lists commands relating to the appearance of score pages.

Hide/Show System Dividers ⎇⌘/	To hide or show system dividers on the current page
Hide/Show Page Number ⎇⇧⌘P	To hide or show the page number on the current page
Add CautionaryTime Sigs ⎇⌘%	To add cautionary time signatures on the current page

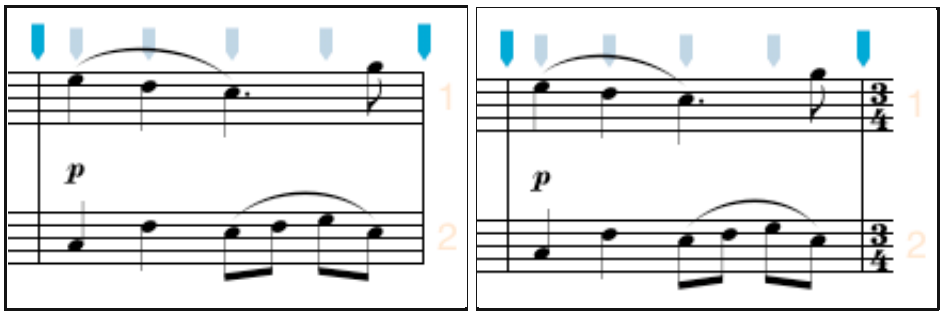
The **Hide/Show System Dividers** menu is used to add or remove system dividers on the current page. (System dividers are two angled lines that visually separate one system from another.) If system dividers are visible on the page they will be hidden, otherwise they will be shown between all systems on the page.



– System dividers can be set in the Custom Setup panel to appear on each page of your score .

The **Hide/Show Page Numbers** menu is used to hide or show the page number on the current page. This operation can also be performed from the Page Numbers pane in the NoteAbility Inspector.

The **Add Cautionary Time Sigs** menu cause cautionary time signatures to be added to the current page. Cautionary time signatures appear at the end of the system when there is a change of meter between the last measure of the system and the first measure of the next system. When cautionary time signatures are added, the final barline of the system is shifted to the left, and a graphical time signature is added.



See also

- NoteAbilityPro Menus
- Modify Menu
- Custom Setup panel

Audio/ MIDI Menu

The Audio/MIDI menu lists commands for showing panels relating to Audio and MIDI

Track Setup...	To show the Track Setup panel which allow you to configure the sound output method, volume, panning, and instruments for each staff of your score.
Midi Ports...	To show the MIDI Ports panel which allows you to configure the MIDI input and outputs connected to your computer.
Midi Recorder...	To show the MIDI Recorder panel which is used to record music from a MIDI keyboard and transfer it to your score.
Audio Units...	To show the Audio Units panel which allows you to configure the Audio Units installed in your computer, to select Sound Fonts and to setup audio effects units.
All Notes Off	Turns off any MIDI, DLS or Audio Unit notes that are currently sounding. Occasionally when a score is stopped some notes remain turned on. This menu item will turn them all off.

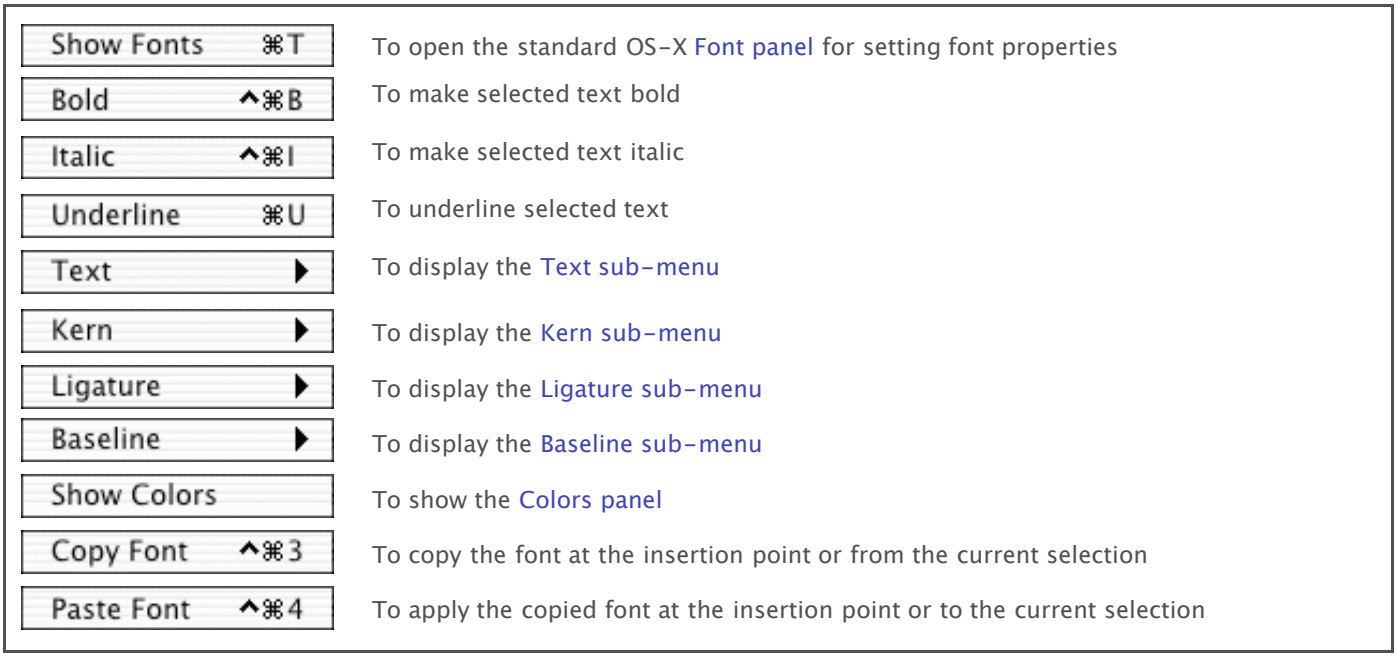
– Shortcuts for these panels are available in the Panel & Edit Buttons pane of the Score Structure panel.

See also

- NoteAbilityPro Menus
- MIDI Recorder panel
- Tracks panel
- MIDI Ports panel

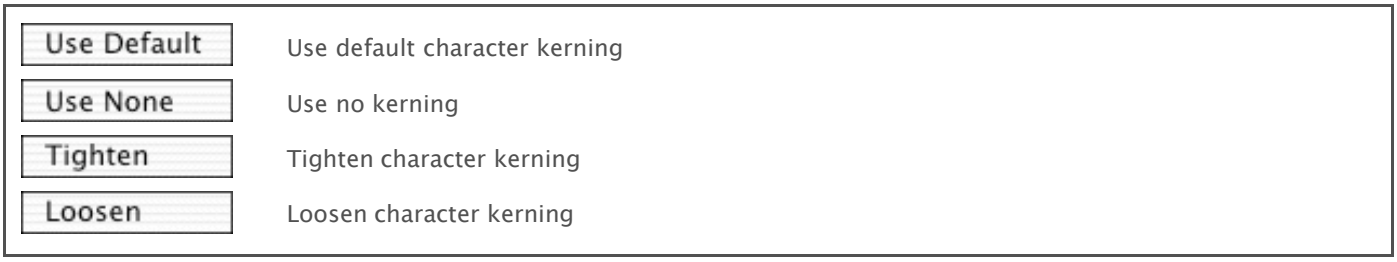
Font Menu

The Font menu lists commands for altering the appearance of text.



The Kern sub-menu includes commands for altering the kerning in selected text. Kerning changes can be made to any all text types permitted in NoteAbility (Measure Text, Page Text, Max Text, Header Text) with the exception of Lyrics.





The Ligature sub-menu includes commands for altering the ligatures contained in the selected text. Ligature changes can be made to any all text types permitted in NoteAbility (Measure Text, Page Text, Max Text, Header Text) with the exception of Lyrics.





The Baseline sub-menu includes commands for altering the baseline attributes in the selected text. Baseline changes can be made to any all text types permitted in NoteAbility (Measure Text, Page Text, Max Text, Header Text) with the exception of Lyrics.



Use Default	Use default character baseline
Superscript	Superscript selected characters
Subscript	Subscript selected characters
Raise	Raise selected characters
Lower	Lower selected characters

See also

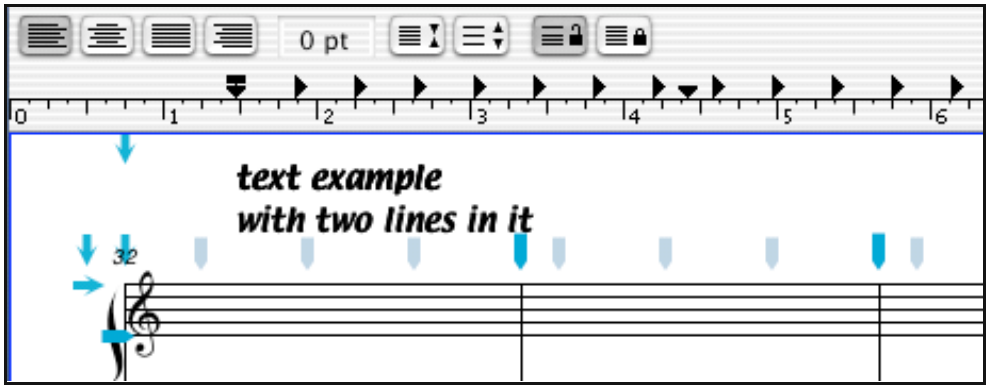
- NoteAbilityPro Menus
- Font/Text submenu

Font/ Text Menu

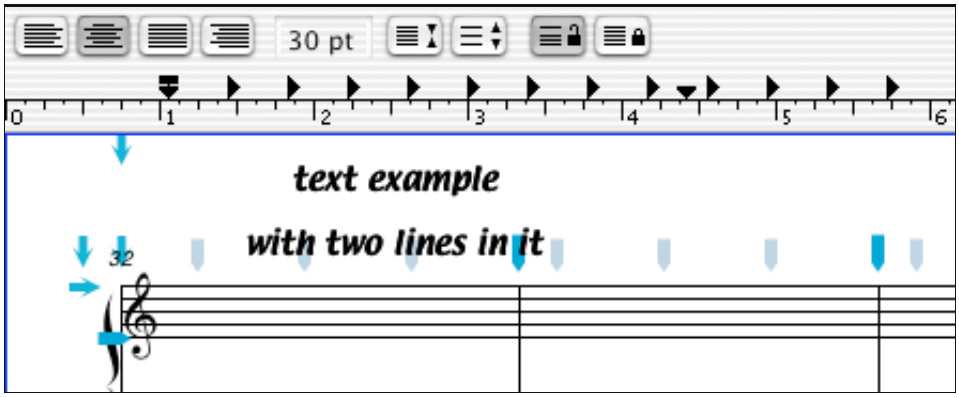
The Font/Text menu lists commands for aligning text in a document.

Align Left	To align selected text with the left margin
Center	To centre selected text between both margins
Justify	To fully justify selected text
Align Right	To align selected text with the right margin
Show Ruler	To display the text ruler at the top of the page
Copy Ruler ^⌘1	To copy the text ruler settings
Paste Ruler ^⌘2	To replace current ruler settings with those copied with the Copy Ruler command

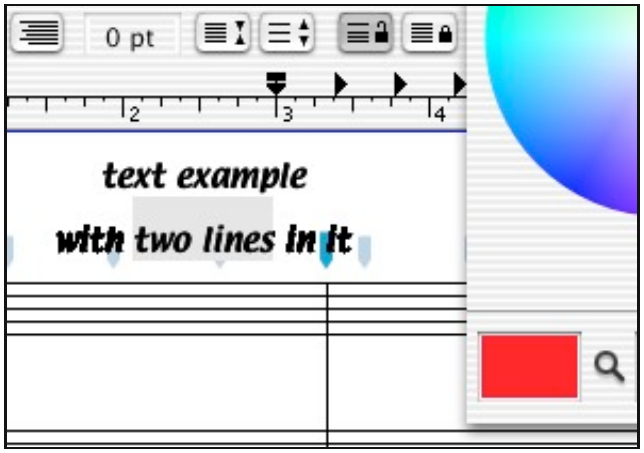
The text ruler is a separate ruler from the page rulers which show the dimensions of the page and allow vertical and horizontal markers to be set on each page of your score. When the **Show Ruler** item is selected from the **Text** menu, a text ruler is displayed and the tab, justification, and leading values for the active text box (i.e. the text box that the insertion cursor is currently in) are shown. When you place the cursor in another text box, the ruler loads the settings for the new text box. The example below shows the text ruler above an active text box.

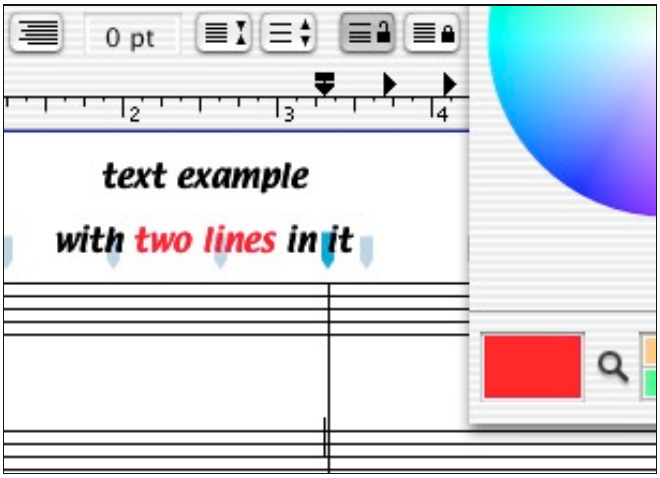


The buttons and tab settings on the ruler can be used to change characteristics of the selected text. In the following example, the entire text was selected, the centre justification button selected, and the leading (i.e. distance between lines) was set to 30 points.



Colour can be added to selected text by selecting the text and dragging a colour from any colour on your computer. In the example below, red colour was dragged from the Color panel onto the selected text.





See also

- NoteAbilityPro Menus
- Font Menu

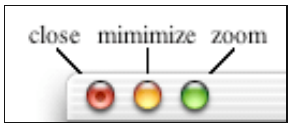
Window Menu

The Window menu lists commands for managing windows.

Close Window ⌘W	To close the front window
Zoom Window	To zoom the window either "out" to fill the entire screen or "in" to a smaller size
Minimize Window ⌘M	To minimize the front window and leave its icon in the dock at the bottom of the screen.
Hide Toolbar	To show options for customizing the Toolbar (i.e. the Score Controls that appear at the top of every score)
Customize Toolbar...	To hide the Toolbar (i.e. the Score Controls). Normally it is not possible to operate NoteAbilityPro without the Score Controls visible.
Arrange in Front	Brings all NoteAbility windows to the front.

All open document windows (i.e. score windows) are also displayed in the Window menu. You can bring a particular window to the front by choosing its menu item.

- – The **Close Window**, **Minimize Window**, and **Zoom Window** commands can also be performed by clicking on the Close, Minimize, or Zoom buttons located at the left corner of the window's title bar. The Hide/Show Toolbar button is located at the right side of the title bar



- – If your document has been changed since you last saved it, you will be asked whether you want to save the changes before it is closed.

See also

- NoteAbilityPro Menus

Other NoteAbility Pro Panels

This Chapter covers the panels used for operations such as setting tempo and repetitions in the score, extracting parts, modifying document size, and entering tablature notation.

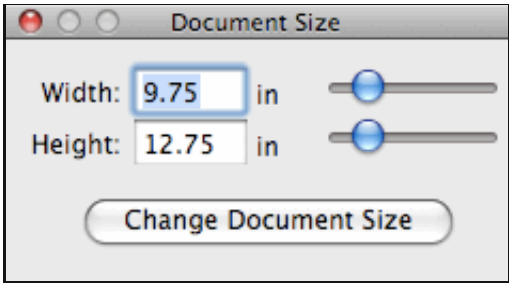
- Document Size panel
- Overview Panel
- Colors panel
- Font panel
- Staff Spacing Panel
- Part Extraction Panel
- Panic Panel
- Image List Panel
- Text Library Panel
- Image Library Panel
- Meter Map Panel
- Playback Map Panel
- Tempo Map Panel
- Lute Entry Panel
- Guitar Tablature Panel
- Dulcimer Tablature Panel
- Speech Recognition Controls
- Guido Panel
- Max Settings Panel
- Transport Controls
- Extended Note Panel
- Network Port Panel
- Antescofo Support
- OpenMusic Support
- NoteWriter Controls

See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference
- 13 – Example Scores and Tutorials

Document Size Panel

1. Choose **Format** in the menu bar.
2. Choose **Change Document Size...** from the **Format** menu.



The Document Size panel allows you to change the page dimensions of your document. You can set the new size either with the sliders or by typing new values in the text fields followed by Return. The measurement unit (eg. inches, centimeters) used in this panel is taken from your settings in the Preferences application. Click on the **Change Document Size** button after settng the new page height and width. The current margins are retained as is the distance between staves in the system. If the page is made taller or shorter, the distance between systems is increased or decreased. Changes to the document width cause the rhythmic spine to expand or compress on each system.

– After changing the document page size, you may have to adjust the printing reduction or enlargement using the Page Setup panel.

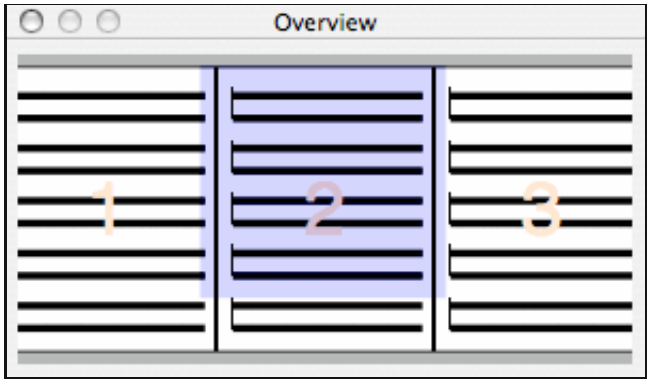
Increasing the document size and then reducing the print precentage is a good way of creating a less dense score – you should consider doing this if you find that notes become too close to one another on the page.

See also

- Page Layout

Overview Panel

1. Choose **Tools** in the menu bar.
2. Choose **Overview...** from the **Tools** menu.



The overview panel displays a miniature version of the page you are working on. The overview shows the positions of the staves and braces, and the area of the score that is visible in the main window is highlighted. Rather than using the scroll bars to move around the page, you can drag the highlighted area to another location on the score page. As you drag the highlighed area, the visible area of the score will scroll to the location indicated on the overview. This feature is particularly useful for orchestral scores where only a small portion of the score may be visible.

If you are currently working in Multi-Page mode, then the display will show three pages (as seen above) and you can use this panel in order to scroll from page to page in your document.

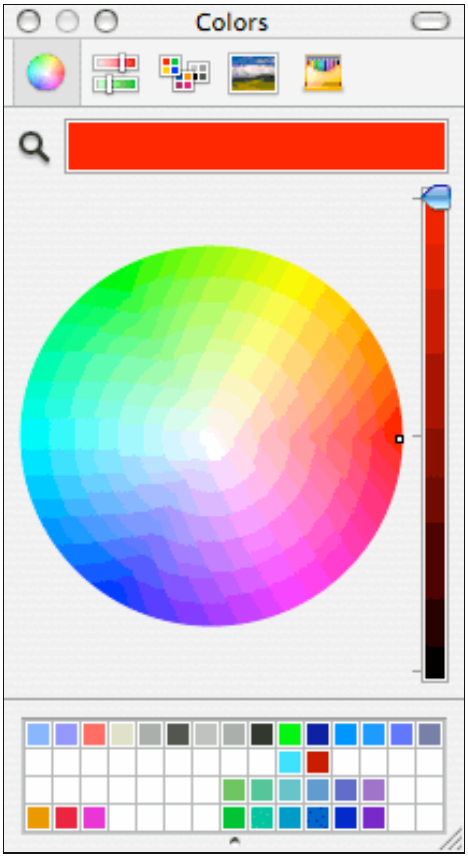
– Adjusting the view does not change the position of the Entry Cursor. Before entering new notes or rests, you should hold down the Command key and click the mouse to place the Entry Cursor in the visible region of the score.

See also

- Setting NoteAbility Preferences
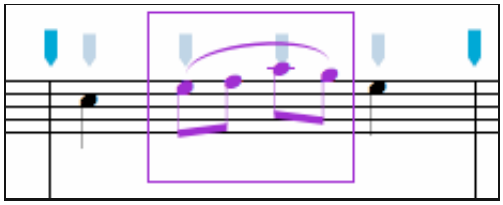
Colors Panel

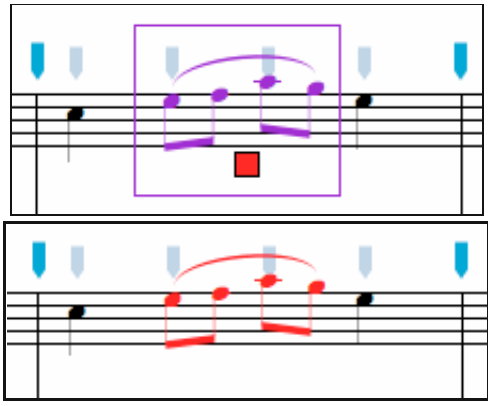
1. Choose **Format** in the menu bar.
2. Choose **Show Colors...** from the **Format** menu.



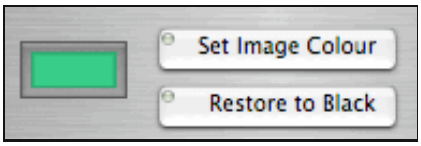
The Colors panel is the standard OS-X panel used for setting colors and grayscale. In NoteAbilityPro, the Color panel can be used to set the image color well in the Image Attributes pane of the or any of the three color wells in the Graphics pane located in the Music Images panel. These color wells which control the Image Color, Fill Color, Line Color and the Text Color. To change any one of these colors, select a color in the Color panel and drag the color (either from the color well at the top of the panel or from the small color squares at the bottom of panel) and drop the color into one of the NoteAbility color wells. In addition, colors from any color well or from the color panel can be dragged and dropped onto selected text to change the color of the text. Finally, you can drag colors onto selected images in the score in order to set the image color of the selected images.

In the example below a group of notes was selected, and a red colour was dragged from the Colors panel into the selected rectangle in the score:





– As a short cut, you can click on the edge of a color well to bring up the Colors panel with the color well's color selected. Changes to the Colors panel automatically update the color in the original color well.



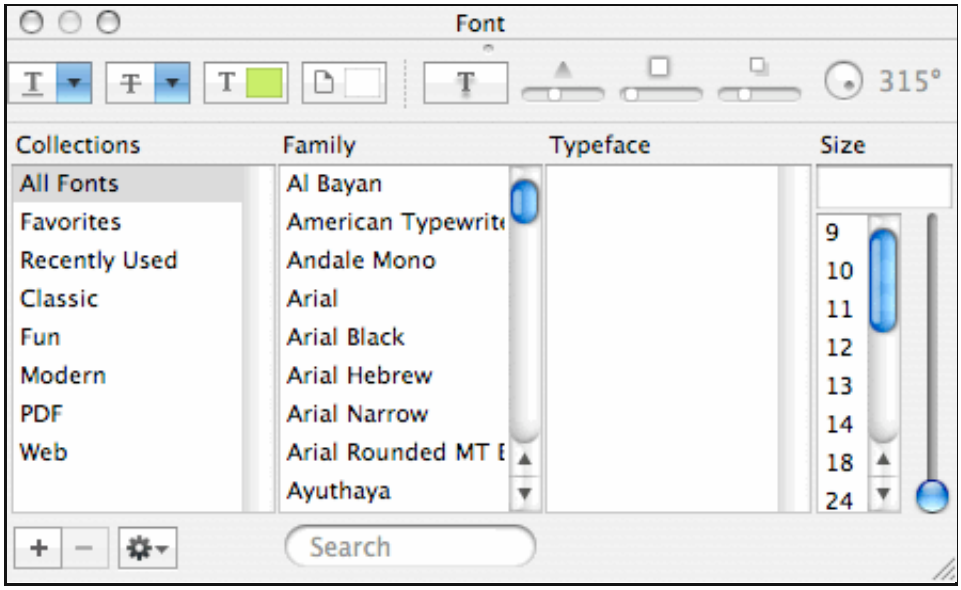
See also

- Graphics pane
- Image Attributes pane

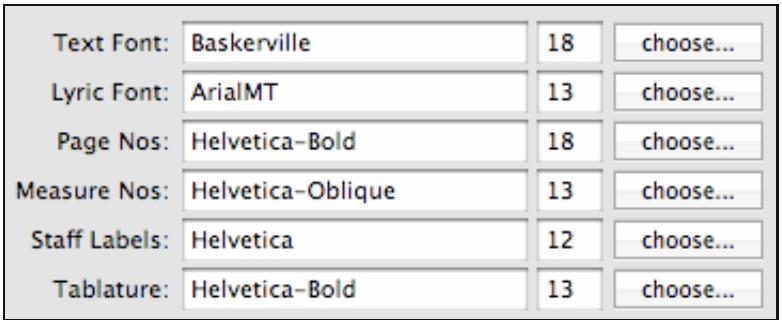
Font Panel

1. With the NoteAbility Measure Text or Page Text tool, select the text whose font, style or size you want to change
2. Choose **Font** from the menu bar
3. Choose **Show Fonts...** from the **Font** menu (or type Command – t)
4. Select the new font, type or size in the Font panel.

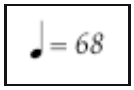
The Font Panel displayed by this menu item is the standard OS-X font panel that can be used to change the font properties of selected text.



Clicking on a new font setting changes the selected text to the font specified in the panel, or (if no text is selected), sets the next text to be entered to this font. In NoteAbilityPro, the Font panel is also used to change the font used for lyrics, measure numbers or page numbers. In order to change these types of text, you must call the Font panel by using the **Set Font** or **Select New Font** buttons on the Lyric panel, the Measure Numbers pane or the Page Numbers pane respectively, or by clicking on the **set** buttons on NoteAbilityPro Preferences (as shown below). In each case, the font panel will be displayed and the new settings will be applied to the appropriate text type.



– The music font you are using with NoteAbilityPro may be used to create symbols that are not available in the program. Indications such as metronome markings can be created by combining a music font with a normal text font:

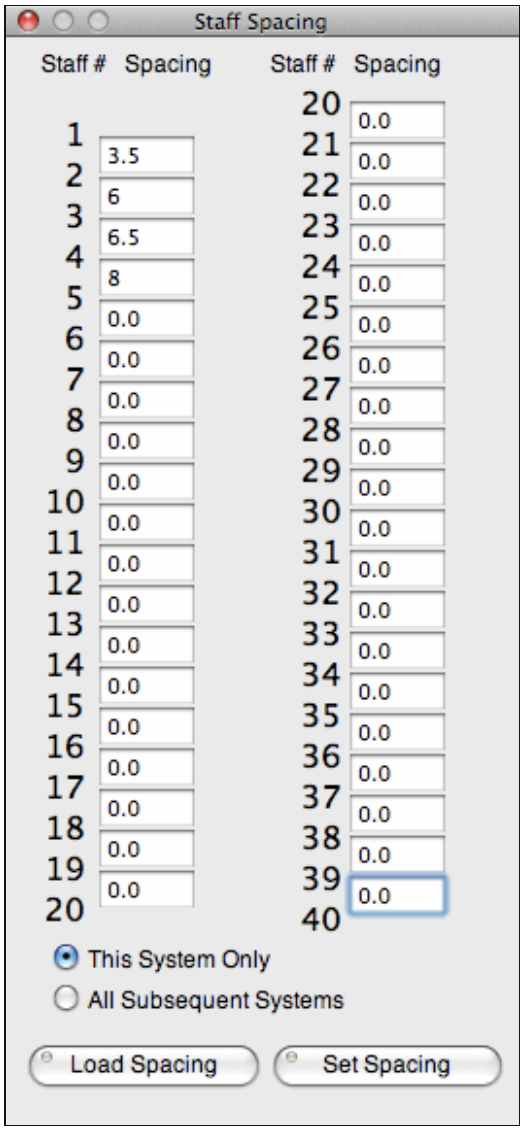


See also

- Text menu
- Font menu
- Lyrics pane
- Measure Numbers pane

Staff Spacing Panel

1. Choose **Tools** in the menu bar.
2. Choose **Staff Spacing...** from the **Tools** menu.



The **Staff Spacing...** menu item brings up a panel which allows the spacing between staves in orchestral or large chamber scores to be set more efficiently. The user can type in the distance (in ledgers) between each staff or use the **Load Spacing** button to load the current spacing values for the system. The new values are set (either only to the current system or to all subsequent systems) by clicking on the **Set Spacing** button.

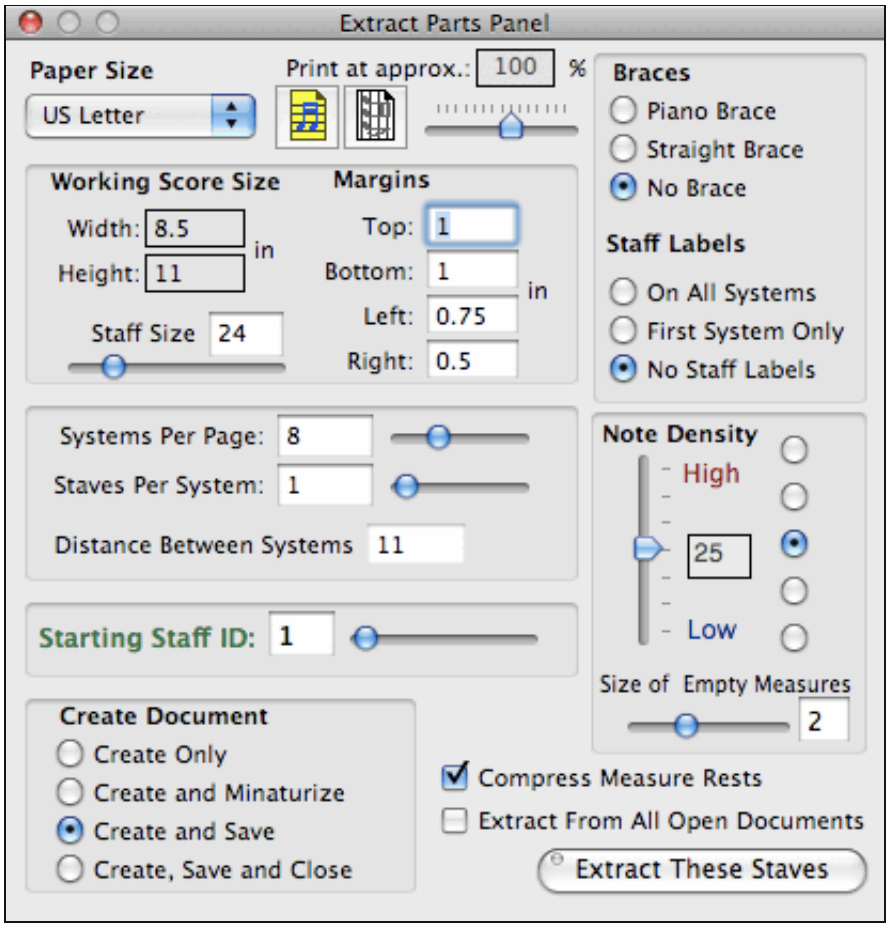
- – In order to properly align images to the grid, only integer and half values are permitted in the staff spacing text fields. Values such as 7.5 and 8 are acceptable, 7.75 and 8.2 are not.
- – Remember that the spacing values are the distances between staves, so if you have ten staves, you will only have 9 spacing values to set.

See also

- Staff Hide/Show/Spacing Pane

Part Extraction Panel

1. Choose **Tools** in the menu bar.
2. Choose **part Extraction...** from the **Tools** menu.

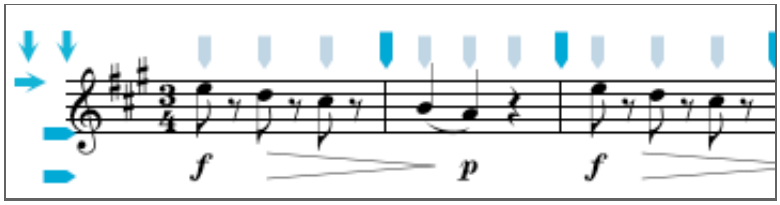


The Part Extraction panel is used to extract instrumental parts from a score. In order to extract a part you specify which staff (or staves) to extract. All the images associated with that staff as well as any text that has been designated as "global text" are copied into a new document. The Part Extraction panel can be kept visible until all the desired parts have been created.
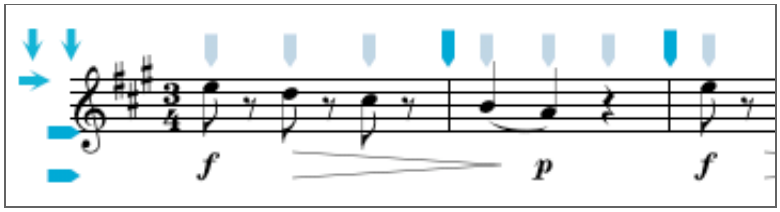
The procedure for extracting parts is:

1. Make sure that the score you want to extract from is the front document - be careful that you are not trying to extracting parts from a parts document that you just created.
2. Set the paper size, paper orientation, margins, the systems per page, and the number of staves to extract. (Normally the number of staves will be 1 - unless you are extracting a piano, harp or other instrument that uses two staves.)
3. Set the Staff ID number that you want to extract (or the Staff ID number of the top staff if you are extracting several staves.) The Staff ID is always displayed at the right side of the staff in the score.
4. Set the kind of braces you want and whether you want staff labels extracted.
5. Set the note density of the extracted part. The note density refers to the number of notes and other images in a system. For more complex scores, it is better to keep the density medium-low or low. In simple scores (or parts with lots of rests), you can use a higher note density. The example below shows the first line of an extracted part with low, medium and high density.
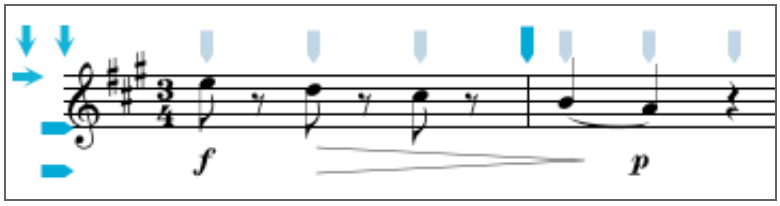
High Density



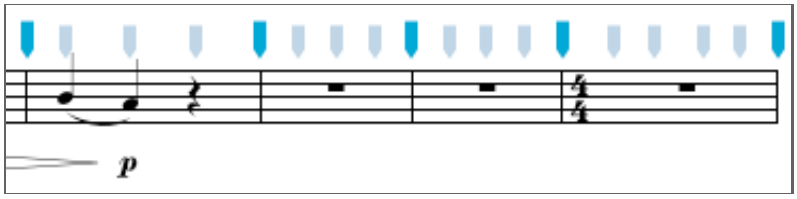
Medium Density

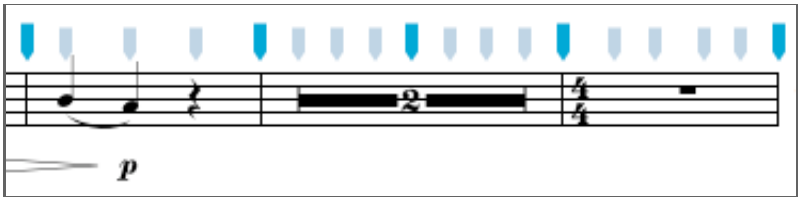


Low Density



6. Set whether you want the new document
    - created and left open
    - created and miniaturized at the bottom of the screen
    - created and saved on disk
7. Set whether you want empty measures (or measures with only rests) merged into multiple measure rests by checking the **Compress Measure Rests** button. The example below shows a passages with empty measures left unmerged and the same passage with empty measures merged into mulitple measure rests.
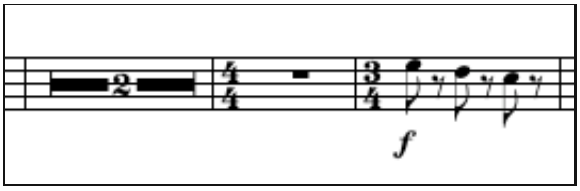




8. Click on the **Extract These Staves** button

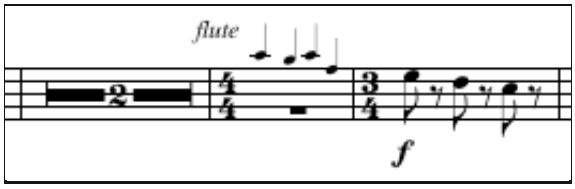
If you have indicated that the extracted part should be created and saved on disk, a Save Panel will appear so that you can name the new document. If you have indicated that the new document should be miniaturized, it will appear as an icon at the bottom of the screen, but will not be saved until you choose to save it.

Adding Cues

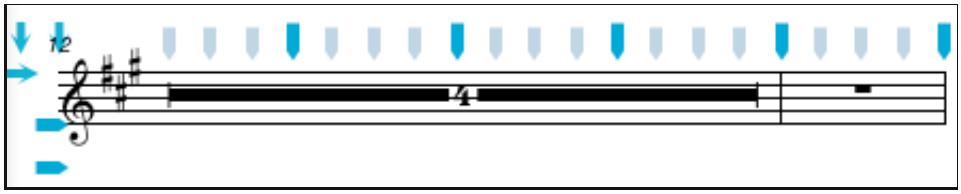
If mulitple measure rests are are not created when the part is extracted, they can formed later by using the Select Score tool to select a series of measures and choosing the Measure Rest menu item from the Modify menu. If this procedure was used on the first two measure of the above example, the result would be:



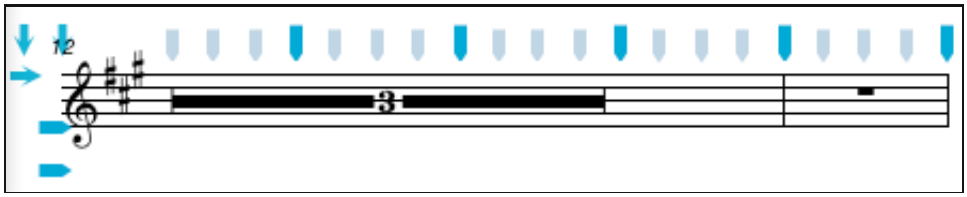
A cue could now be added to the third measure if desired. Cues can be entered as regular-sized notes, then resized with the **Set Image Size** button on the Control panel or the image size can be set before the notes are entered. In the example below, 18 point image size is used for the cue notes. Measure Text can also be added to identify the cue instrument.



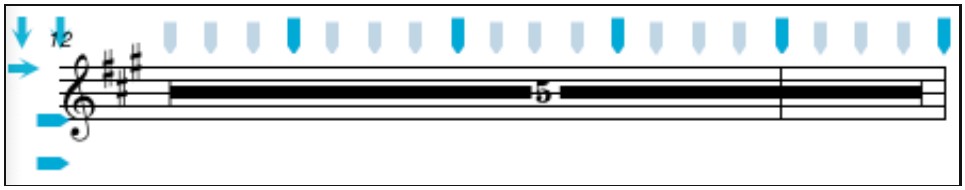
– When the length of multiple measure rest images is altered (by dragging one of the ends) the number that appears in the centre of the image is updated to indicate how many measures it now encompasses. After changing the length of a multiple measure rest, you may have to adjust some of the barlines that were previously hidden or shown. (You can using the Barlines & Braces pane to do this.)



Multiple Measure Rest shortened – a barline must be added

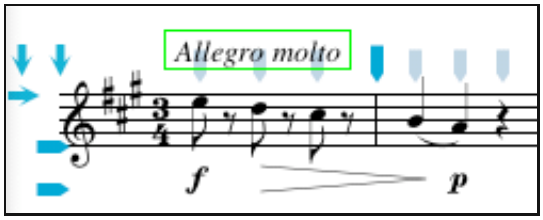


Multiple Measure Rest lengthened – a barline must be hidden



Global Text

Any text or imported graphic images that you want included with every extracted part can be designated as "global text" by selecting the text object or graphic image and choosing the *Make Text Global* item from the *Modify/Text* menu. This operation is necessary for text such as tempo changes, rehearsal numbers and titles. Global text is drawn on-screen with a light green box around it so that you can distinguish it from other text.



– Since extracted parts are separate editable documents, any changes you later make to the score must also be made to the parts, or the parts must be extracted again.

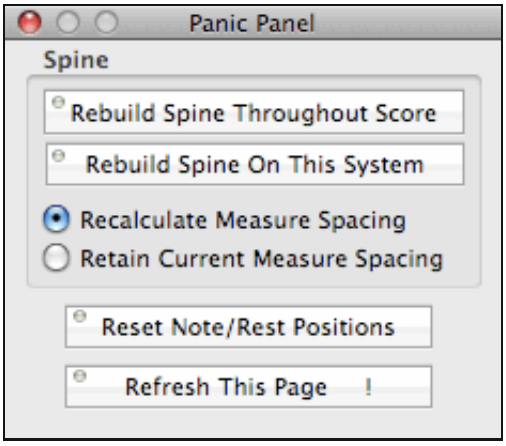
– If you are extracting parts from a score which consists of several seperate documents, check the **Extract From All Open Documents** box. Documents are extracted in the order they were opened, so you should make sure you open your documents in the correct score order. Also, make sure you close each extracted part before extracting the next part or the previous part will be included in the extraction (since it would be another open document).

See also

- Document Setup
- Modify Text submenu

Panic Panel
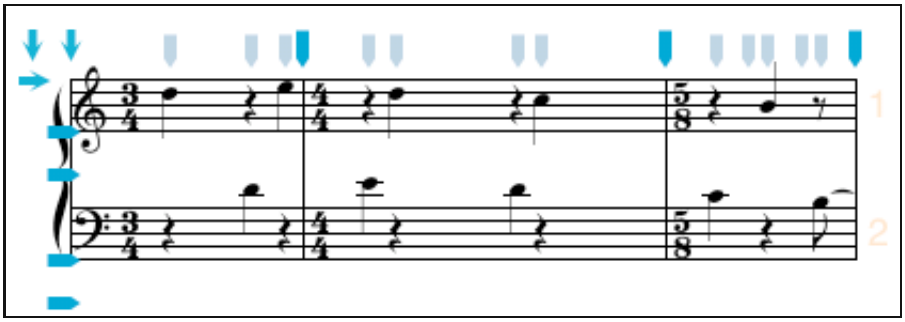
1. Choose **Tools** in the menu bar.
2. Choose **Panic...** from the **Tools** menu.
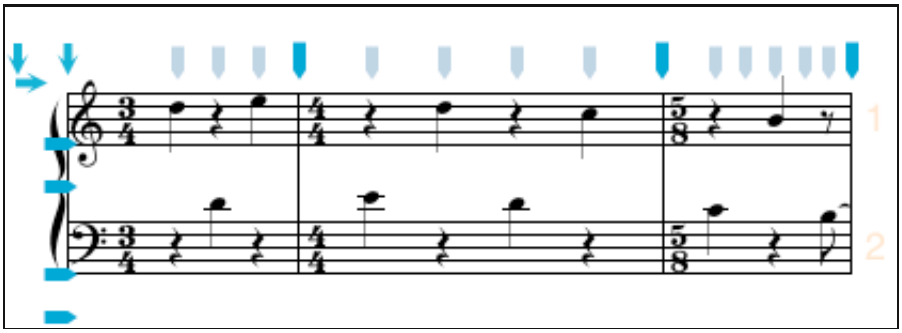


The Panic panel contains buttons to refresh the page display, to rebuild the rhythmic spine, or to reset image positions. It is called the "Panic" panel because it is only used when your document has inadvertently been altered in a ways that cannot be fixed with other formatting or editing operations.

Occassionally, the rhythmic spine may become distorted during system formatting. If this happens, you can rebuild the spine by clicking the **Rebuild Spine Throughout Document** or **Rebuild Spine On This System** buttons. As the buttons suggest, the first operation rebuilds the spine throughout the document while the second only rebuilds the spine on the system that the Entry Cursor is on. When rebuilding the spine, the **Recalculate Measure Spacing** radio button causes the measures re-spaced according to the meter, while the **Retain Current Measure Spacing** will rebuild the rhyhmic spine within each measure, but not adjust the size that the measure currently are. In the example below, the two radio button settings are used on a spine that was distorted because a number of Beat buttons were dragged out of order.

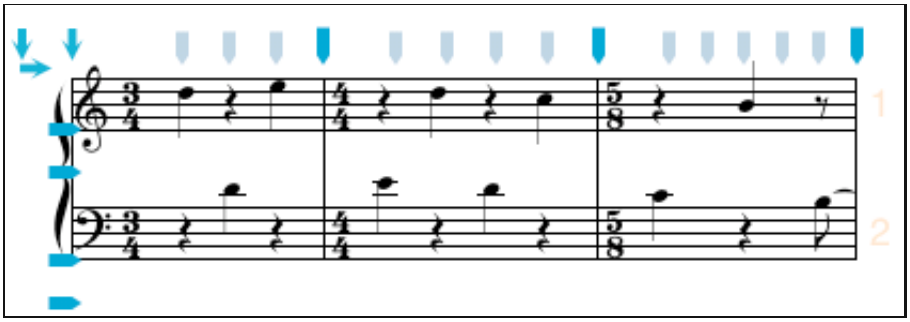
Damaged spine:



Spine rebuild but measures spacing retained:

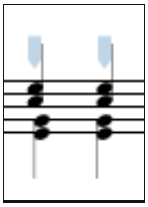


Spine rebuilt and measure spacing recalculated:



The **Reset Note/Rest Positions** button is used to move adjusted notes and rests back to their original spine positions. In the case of regular notes, this will only be necessary if a note has been dragged away from the spine while holding the Control key down.

In the example below, the note in the lower voice is reset to its original spine position after having previously been adjusted to the right.



– To check whether a note has been dragged away from its spine position, select it and choose the Image Info tab view in the Image Attributes pane of the Music Images panel. The distance that the image has been adjusted to the left (negative) or right (positive) will be displayed in the XOffset field of this pane.

The **Refresh This Page** button (or Command – !) will cause the current page to be redrawn. This button can be used when a portion of the page is not drawn properly, and the page needs to be refreshed. Redraw errors sometimes occur when an image accidentally gets dragged too far out of position (eg. across several systems). Deleteing the image, or moving it back to its proper positions should resolve this problem.

See also

- Adjusting score layout

Image List Panel

1. Choose **Help** in the menu bar.
2. Choose **Image List...** from the **Help** menu.

The Image List panel (short cut: Command - d) displays a list of most NoteAbilityPro images along with their commands.



The Image List panel contains eight rows of buttons, each with a NoteAbilityPro image on it. Clicking on one of the buttons loads the command for the image into the Command field in the front-most score. If the **Hide This Panel After Selection** box is checked, then the Image List panel disappears after the image has been choosen so that you can enter the image on the music page.

When first learning to use NoteAbilityPro, it is a good idea to use the Image List panel regularly until you are familiar with NoteAbilityPro image commands.

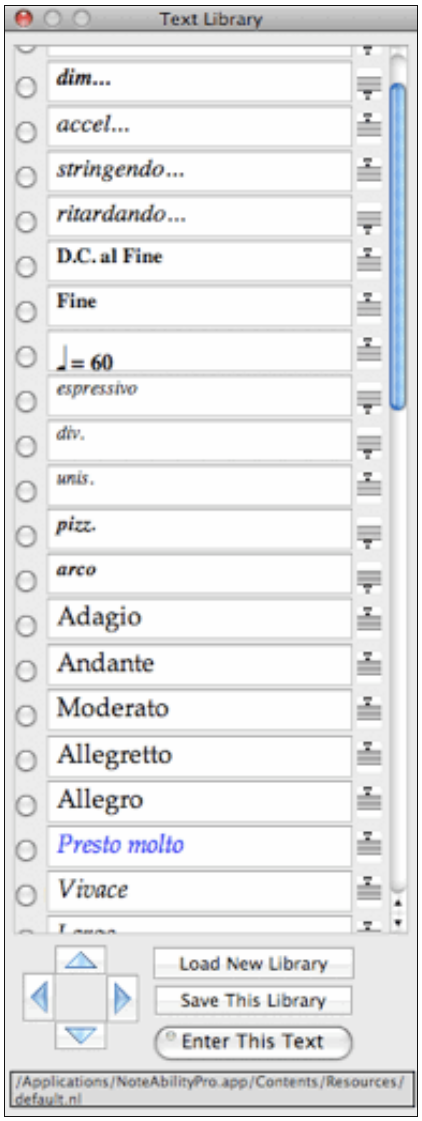
> - The Image list does not contain a complete list of available images, only the most common. More complex commands such as *wqe.* and *fffp* are also available, but these must be typed in.

See also

- NoteAbility Command List
- Using the Score Controls

Text Library Panel

1. Choose **Tools** from the menu bar.
2. Choose **Text Library...** from the **Tools** menu.

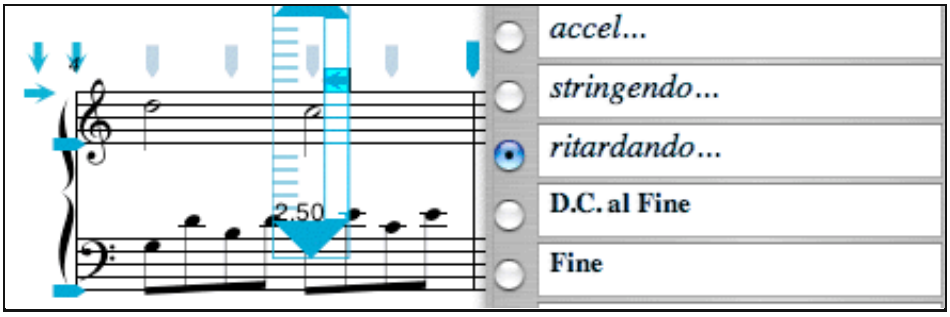


The Text Library panel holds a list of customized text strings in set fonts. You can enter new text in the fields, change the font of the text, and load and save libraries (with the **Load New Library** and **Save This Library** buttons.)

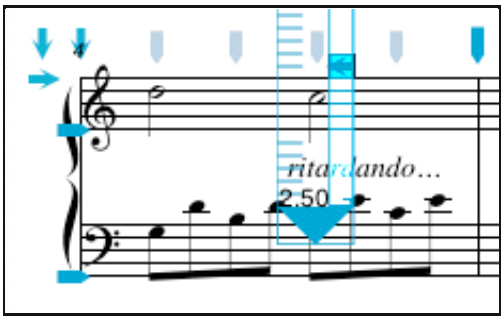
To transfer text from the library into the score, select the desired text by clicking on the radio button to the left of the text field and set whether you want the text to appear above or below the staff by clicking on the icon to the right of the text field. Click on the **Enter This Text** button to transfer the text. It will be placed at the Entry Cursor either above or below the staff.

The position of the text can be altered after entry by clicking on the four direction arrows at the bottom of the panel or by simply dragging the text to a new location.

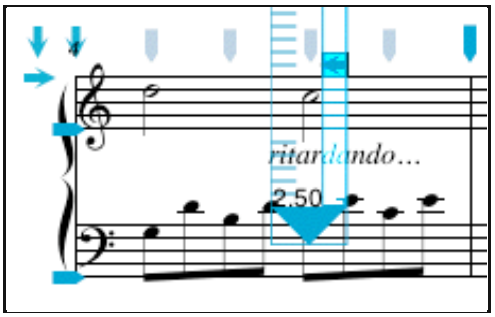
In the example below, the text field containing the text *ritardando...* was selected by clicking on the the radio button to its left, and setting the position icon so that the test will appear below the staff that the Entry Cursor is on.



After the **Enter This Text** button was clicked, the text was transferred to the score.



The text position was then adjusted by clicking once on the up arrow and once on the left arrow



The NoteAbility Text include multiple fonts and sizes within each field. The fonts can changed by selecting the text and using the Font panel, and colour (from the color panel) can be dragged onto selected text. Text and/or graphics can also be pasted into the text fields, and graphics files (PDF, TIFF, etc.) can be dragged into the text field. Each text field can contain multiple lines of text (if desired), and text selected in each text field responds to the menu items in the NoteAbility Font and Text menus (for changes to kerning, baseline changes, etc.)

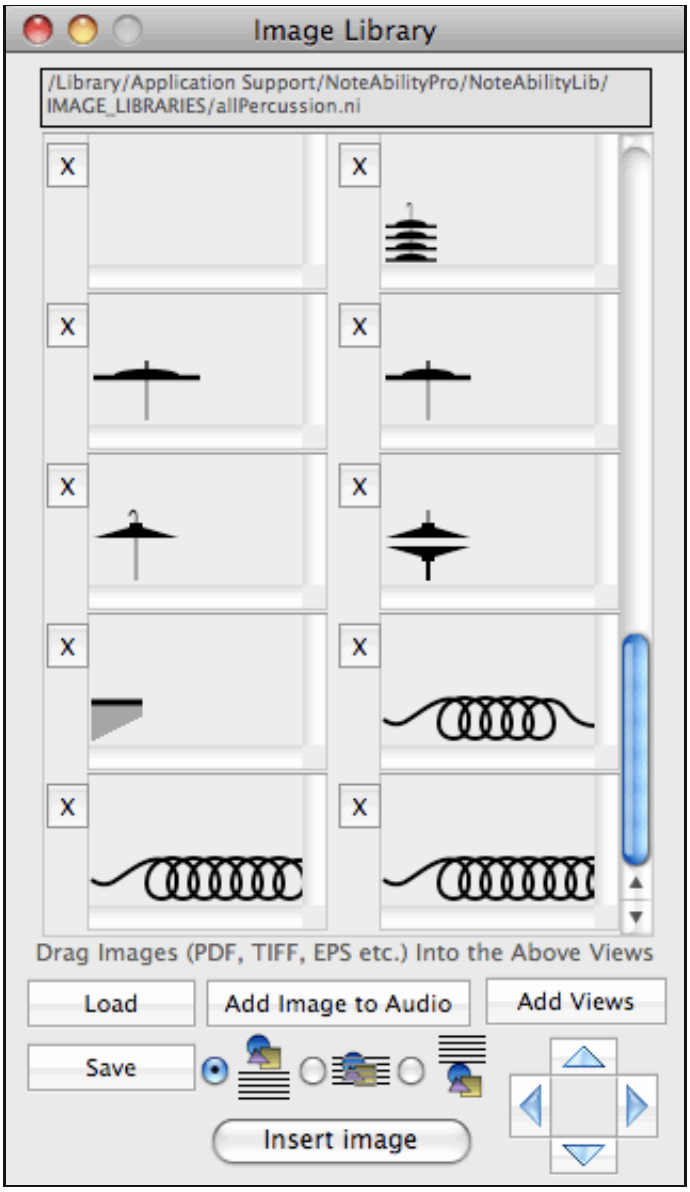
– NoteAbility text libraries are given the extension .nl .

See also

- Font panel
- Using the Score Controls

Image Library Panel

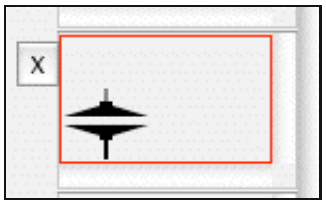
1. Choose **Tools** from the menu bar.
2. Choose **Image Library...** from the **Tools** menu.
3. The Image Library Panel will appear on the screen.



The Image Library is a panel containing images (in PDF, EPS, or TIFF format) that can be inserted directly into the score at the position of the Entry Cursor. Functionally, the Image Library works in a similar way to the Text Library. Image Libraries made be loaded from and saved to disk by clicking on the **Save** or **Load** buttons located at the bottom of the panel. To create a new image library, you can simply drag image files (PDF, EPS, or TIFF) into the image boxes on the Image Library panel. (The image boxes are scrollable so you can drag a large image within the box in order to see the entire image.) It is not possible to paste images into the Image Library, complete PDF or TIFF images which exist as saved files must be dragged from a Finder or desktop window into the Image Library box. To increase the number of images in the library, click on the **Add Views** button (this adds 2 blank boxes to the bottom of the view area.)

A number of image libraries are included in the NoteAbilityLib folder (in a sub-folder entitled IMAGE_LIBRARIES.)

- When images are dragged onto an image library box, the cursor will become a "+" when the box is ready to accept the image. If an image already exists in the library box, drag the cursor so that it directly over the existing image.



To enter images from the Image Library into the score, select the image by checking in the image box. (A red frame around the image box indicates that the image is the selected image.)

When you click on the **Insert Image,** button, the selected image will appear in the front-most score at the horizontal position of the Entry Cursor. You can indicate whether you want the image to appear above the staff, centred on the staff, or below the staff by selecting one of the three radio buttons near the bottom of the panel. After the image has been added to the score, you can adjust the location of the image by clicking on the 4 arrow buttons located at the bottom right corner of the panel. Alternatively, you can drag the image as you normally would (by selecting the bottom-left corner of the image).

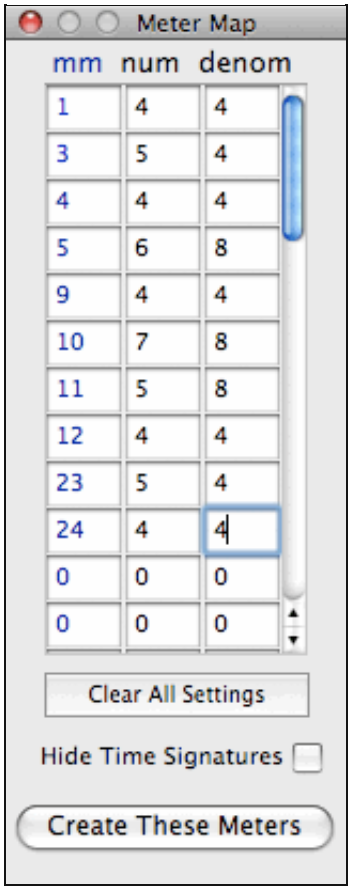
- NoteAbility image libraries are given the extension .ni
- The default location for NoteAbilityPro image libraries is: /Library/Application Support/NoteAbilityPro/NoteAbilityLib/IMAGE_LIBRARIES

See also

- Importing Graphics
- Text Library Panel

Meter Map Panel

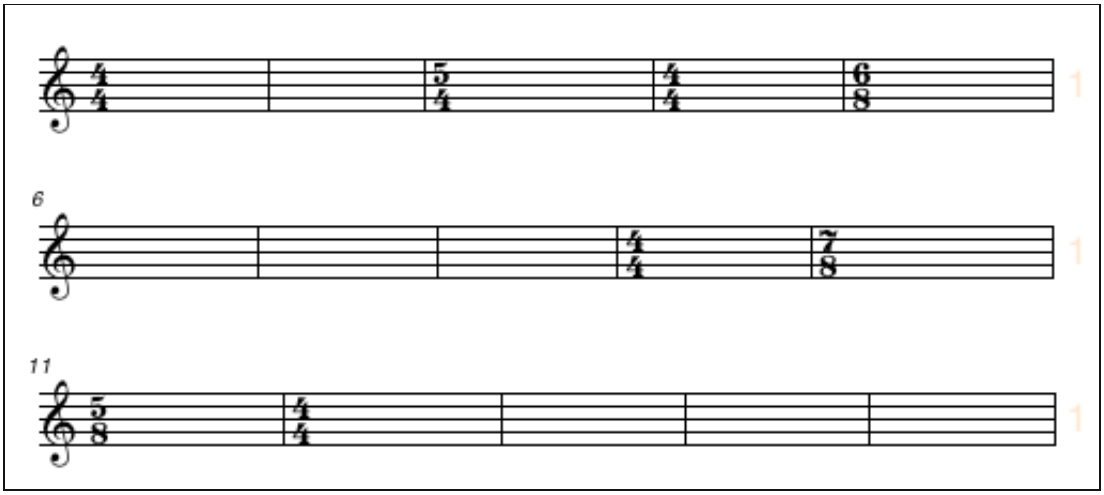
1. Choose **Tools** in the menu bar.
2. Choose **Meter Map...** from the **Tools** menu.



The Meter Map is used to specify a sequence of meter changes quickly and easily. It can be used anytime, but usually it is used immediately after a document has been created if you already know the metrical structure of the score.

To transfer a sequence of meter changes to the score, fill as many values as are need in the text fields, by specifying the measure number, the numerator and the denominator. If you want a rhythmic spine created but no time signtatures, check the **Hide Time Signatures** button. Click **Create These Meters** to create the meter changes in the score.

The **Clear All Settings** button resets all text fields to 0 so that new values can be inserted.



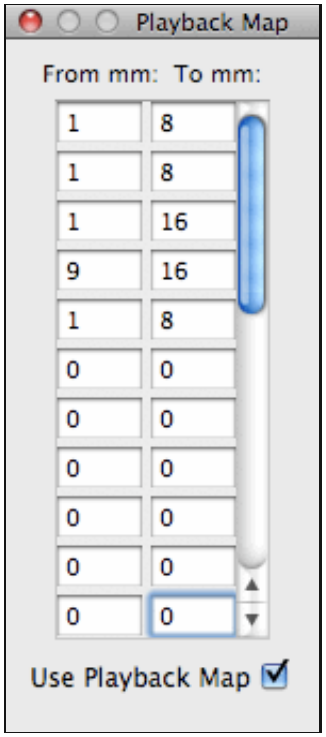
– For a long series of meter changes, fill the panel with values, create the meters, clear the values, and repeat this process until all the measures in your score are done. A mm value of 0 indicates the end of the sequence of meters.

See also

- Document setup
- Time Signature pane

Playback Map Panel

1. Choose **Tools** in the menu bar.
2. Choose **Playback Map...** from the **Tools** menu.



The Playback Map is used to control the sequence of measures to be played in the score. To use the Playback Map, fill in the **From mm** and **To mm** fields for each section of the score and check the **Use Playback Map** box. In the example above, measure 1 to 8 are repeated three times, followed by measures 9 to 16 repeated twice, then measures 1 to the 8.

The Playback map is independent of any repeat barlines that might be present in the score. Conversely, repeat barlines in the score do not cause sections of the score to repeat during playback unless the Playback map is set.

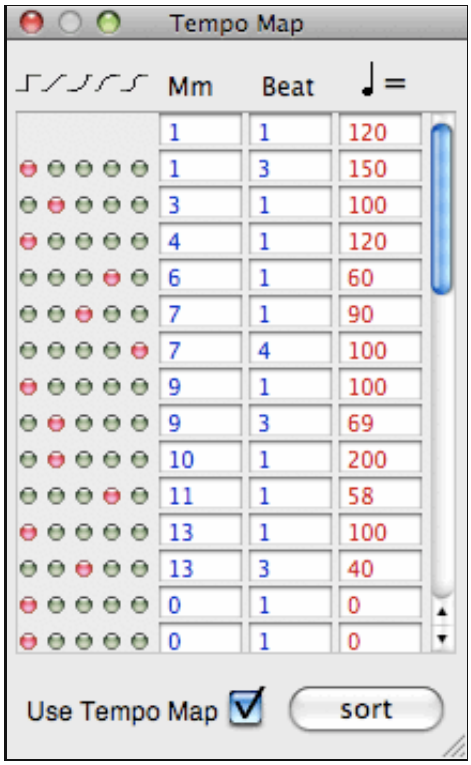
- – The words "first" and "last" can be used to indicate the first and last measures of the score.
- – The playback map is saved with your score.

See also

- Document setup
- Tempo Map panel

Tempo Map Panel

1. Choose **Tools** in the menu bar.
2. Choose **Tempo Map...** from the **Tools** menu.



To use the Tempo Map, fill in the tempo changes by indicating the measure number, the beat, and the metronome value. You can also choose a transition method between the previous tempo and the next one. The possible transition methods are:

1. Immediate tempo change at the time indicated.
2. Linear change of tempo between the previous tempo and the new tempo.
3. Exponential change of tempo (remaining closer to the previous tempo and moving more quickly to the new tempo toward the end of the time period.)
4. Reverse Exponential (Logarithmic) change of tempo (moving more quickly toward the new tempo at first and more slowly toward the end of the time period.)
5. Sigmoid change of tempo (moving slowly away from the original tempo, then more quickly during the middle of the change and more slowly again as the new tempo is approached.)

Check the **Use Tempo Map** button to have NoteAbility use these values during playback.

In situations where you want a tempo to be steady for a period of time followed by an accel... or a dim... you will have to indicate the starting point of the tempo change by repeating the same tempo at the place where the tempo change will start. In the example above, a tempo of 100 is reached at measure 7 beat 4, and is steady until measure 9 beat 1. At this point there is an ritardando to 69 at measure 9 beat 3.

Although measure number and metronome values should be integers, the beat position can be a real numbers such as 1.25 or 3.376. The tempo slider and tempo field in the Control panel are updated as new tempi occur during playback.

The **sort** button is used to sort the tempo indications so that they are sequential. If you decide to add a new tempo change in the middle of your score, you can add it at the bottom of the tempo map and click on the **sort** button to have it inserted at its correct location.

– The Tempo Map is used when the score is played from the beginning or when played from the Entry Cursor (using the playback controls on the Control panel.) When a selected group of notes is played (using the Play Sel. menu item) the tempo indicated in the Tempo field of the Control panel is used.

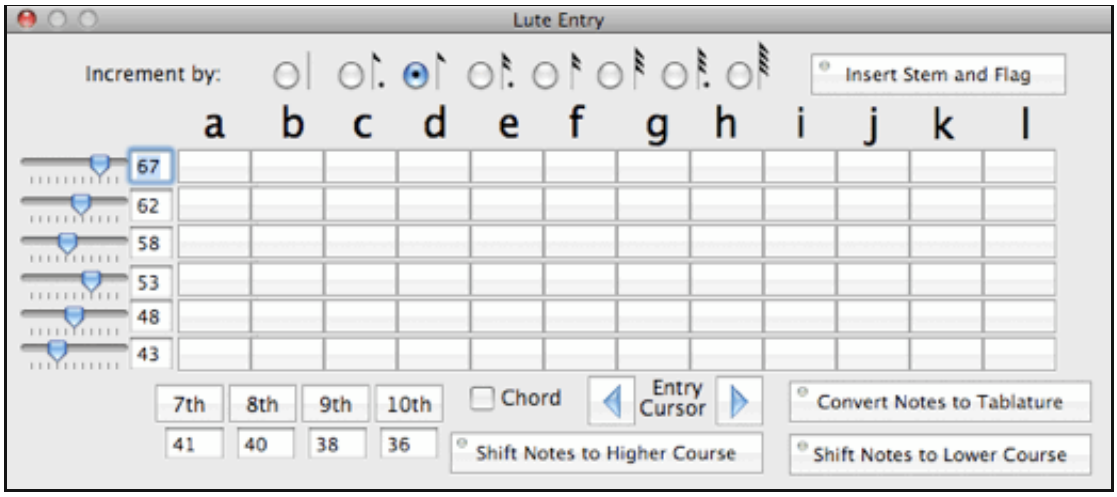
– The Tempo Map is saved with your score.

See also

- Performance Settings pane
- Playback Map panel

Lute Tablature Panel

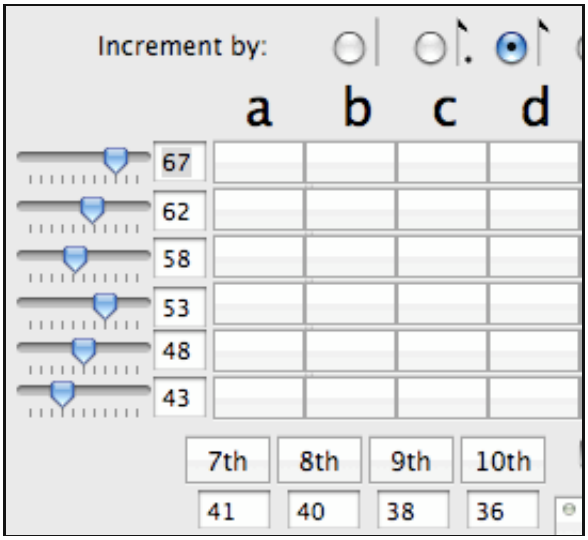
1. Choose **Tools** in the menu bar.
2. Choose **Lute Panel...** from the **Tools** menu.



The Lute Tablature panel can be used for entering French lute tablature directly on your score. The convention of using rhythms that are one half of the normal duration has been adopted. Therefore use a single-flag stem for quarter note, a double-flag stem for an eighth note, etc.

To enter lute tablure:

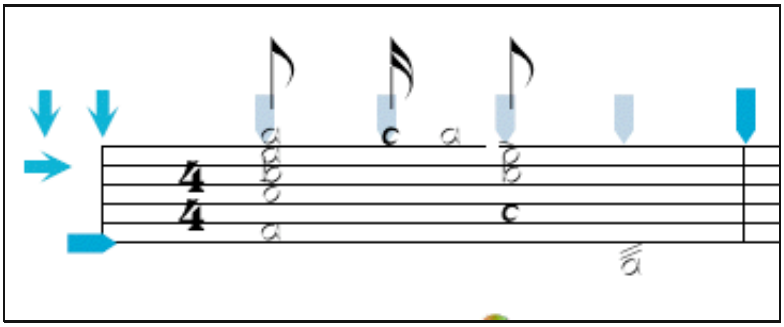
1. Change your staff type to a 6-line staff (using the Staff Lines tab view in the Staff Attributes pane).
2. Place the Entry Cursor at the beat location you want to begin.
3. Choose the rhythmic duration of the notes to be entered by selecting one of the radio buttons along the top of the panel. Click the **Insert Stem and Flag** button if you want the rhythm to appear above the staff.
4. Click the course (string) and fret number on the grid. The left side begins with open strings, and the top course is the top of the grid. The strings can be tuned using the sliders located at the left side of the panel or by typing a number into the text boxes. (Numbers can also be typed in for the 7th through 10th courses). Initially the strings are tuned from top to bottom: G3, D3, A2, F2, C2 and G1 with the lower courses being tuned to: F1, E1, D1 and C1. (As a reference remember that middle C is pitch number 60).



The **Chord** check box turns off Auto Increment, so you can build chords more easily, and the **Cursor** buttons shift the Entry Cursor to the right or left.

Each note will sound when it is entered, and the tablature can be played back using the Playback controls.

The lute panel also has a button – **Convert Notes to Tablature** hich can be used to convert selected notes into lute tablature. Only notes are converted to tablature notation since rests, dynamic markings, and other conventional symbols are not normally included in lute tablature. You will also have to add rhythmic indications after you have converted your notes to tablature.



You can also use the Lute panel to shift selected tablature notes to a higher or lower course (i.e. string). Shifting notes to a higher or lower course does not change the pitch of the note, but rather changes to a lower or higher fret letter on another string. For example, the note G3 can be played on the open top string (letter *a* on the top string) or it could be played on the fifth fret of the second string (letter *f* on the second string.) To switch between these options, you can select the note, and click on **Shift Notes to Lower Course** (to move to the second string) or **Shift Notes to Higher Course** (to move to the first string).

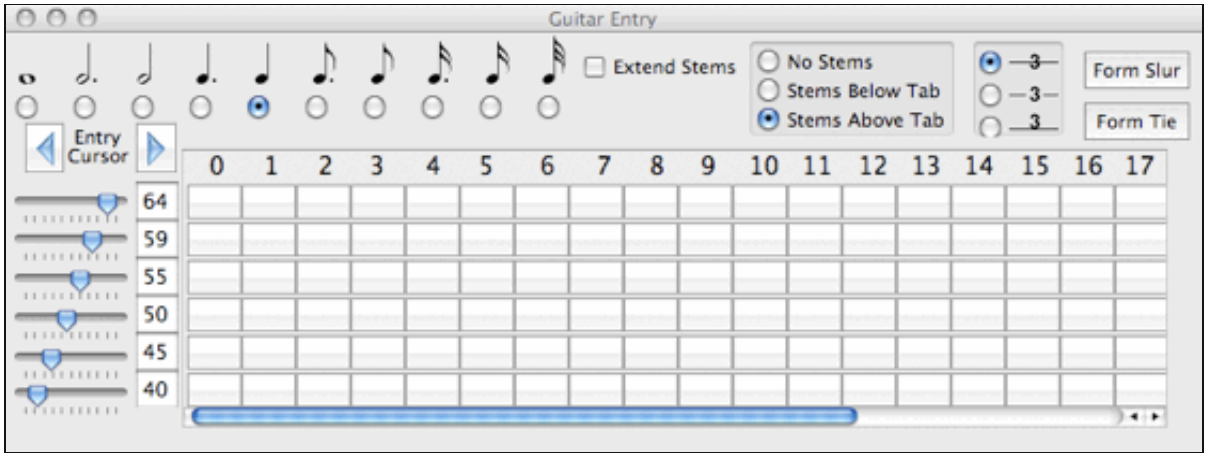
- – If you prefer beamed stems instead of flags, enter notes (with stems up) above the staff, change the notehead to stems only (with the Note Attributes pane) and mute the notes (with the Performance Settings pane) so they don't play.
- – Although you can cut and paste tablature, to alter the notes, you must remove the incorrect notes and re-enter them.
- – To create lute tablature you must have the Tablature font designed by Lyle Nordstrum. This font is installed with NoteAbilityPro.
- – While it is possible to change the tuning of notes while you are entering them, altering the tuning will not change the pitch of notes once they have been entered into the score.

See also

- Staff Attributes pane
- Note Attributes pane
- Performance Settings pane

Guitar Tablature Panel

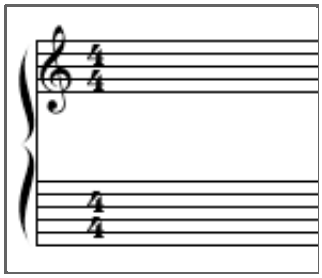
1. Choose **Tools** in the menu bar.
2. Choose **Guitar Panel...** from the **Tools** menu.



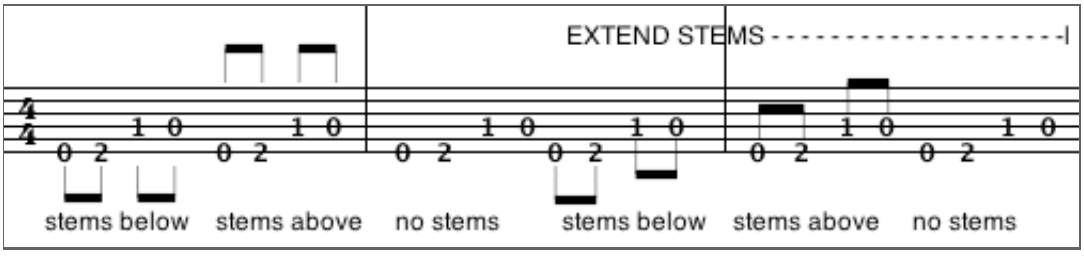
The Guitar Tablature panel can be used for entering standard guitar tablature in your score. The entry panel is designed to be used with a 6-line staff (where each staff line represents 1 string of the guitar and where numbers represent the frets on the string. Normally, the highest pitched string is at the top of the 6-line staff and the lowest pitched string is the bottom, but this can be altered if necessary.

To enter guitar tablature:

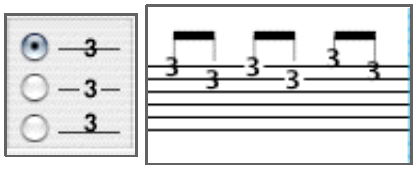
1. Change your staff type to a 6-line staff (using the Staff Lines tab view in the Staff Attributes pane). Since you cannot specify alternate staff types in the document setup, you will have to change the staff type after you created your document. The example below shows a regular 5-line staff and the 6-line guitar tablature staff:



2. Place the Entry Cursor at the beat location you want to begin.
3. Choose the rhythmic duration of the note (i.e. tablature number) to be entered by selecting one of the radio buttons along the top of the panel. If needed, tuplets can be set using the tuplet indications on the control panel.
4. Choose whether you want to have stems (flags and beams)appear above the tablature, below the tablature, or to not have stems appear at all. In addition you can check the **Extend stems** check box to have your stems extend to the tablature number. The example below shows the effect of the various settings:

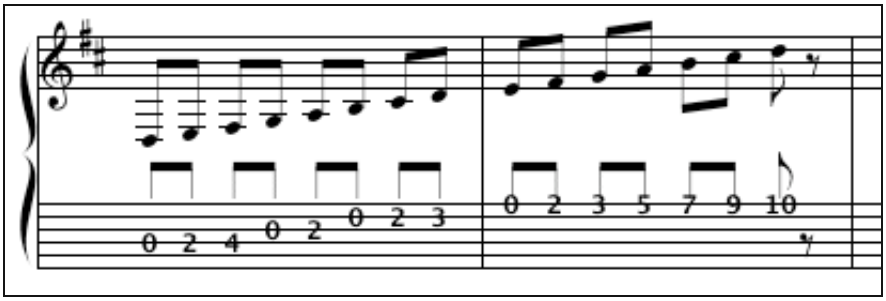


5. Choose whether you would like the tablature to be centred on the line, to erase the line, or to appear above the line by selecting one of the three options:



6. Click the button on the fretboard grid that corresponds to the string and fret number you want. The left side of the grid begins with the open strings, with the highest pitched string at the bottom of the grid. (Initially the strings are tuned from top to bottom: E3 (midi:64), B2 (midi:59), G2 (midi:55), D2 (midi:50), A1 (midi:45), E2 (midi:40). The pitches of the open strings can be altered using the sliders at the left side of the panel – midi pitch numbers (i.e. middle C3 = 60) are indicated. (For example, to use low D tuning on the 6th string, alter the bottom slider from 40 to 38.) The tablature number you have chosen will appear on your score at the correct location on the 6 line staff. Each note will sound when it is entered, and the tablature can be played back using the score Playback controls.

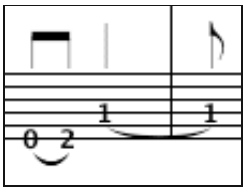
The example below shows a D Major scale in both conventional notation and in guitar tablature.



To build chords, you can use the Entry Cursor arrows on the panel to move back to the previous note position or you can drag the Entry Cursor directly on the score beore entering the next tablature character.

The **Form Slur** button can be used to create a slur between tablature numbers. Select the numbers you want slurred, and click on the **Form Slur** button. Tablature slurs are only intended to occur on the same string.

The **Form Tie** button can be used to create a tie between tablature numbers that are the same (i.e. the same string and fret). Select the numbers you want tied, and click on the **Form Tie** button. The duration of the first note is altered to include the duration of the second note. The example below shows a slur followed by a tie.



- The font used for the tablature text can be set in the *Text/Font* pane of the Inspector Panel.

- For maximum flexiblity, the dulcimer tablature numbers are separate images from the stems/flags. The stems/flags are simply muted notes without noteheads or ledger lines – they can be adjusted freely (as any note can be.) This means that stem lengths, beam angles and stem positions can all be altered using normal editing procedures. However, when you copy and paste tablature flags, you should use the **Exact Paste** method to insure that the noteheads and ledger settings are retained when pasted into the score.

- Tablature numbers can be adjusted left and right, but not up and down, and the number cannot be

changed. If you have entered the incorrect tablature number, select it and remove it, then enter the correct number.

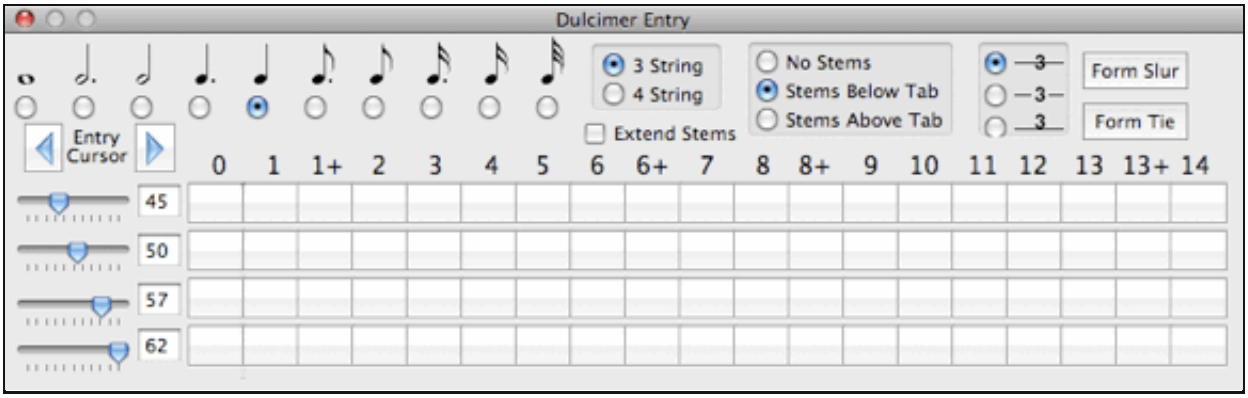
– If you prefer shorter stems in your tablature rhythms, you can change the default stem length in the Tremolo tab view in the Beams/Ties/Tremolo pane in the Music Images panel.

See also

- Staff Attributes pane
- Note Attributes pane
- Performance Settings pane
- Dulcimer Tablature Panel

Dulcimer Tablature Panel

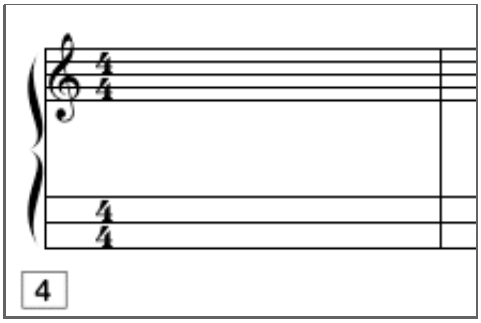
1. Choose **Tools** in the menu bar.
2. Choose **Dulcimer Panel...** from the **Tools** menu.



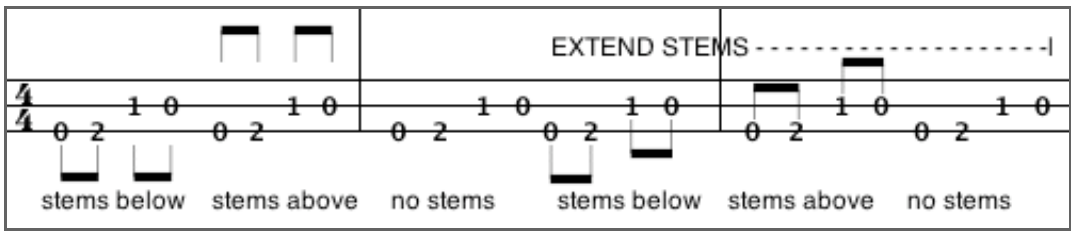
The Dulcimer Entry panel can be used for entering dulcimer tablature in your score. The entry panel can be used to enter either 3-string or 4-string tablature with the highest pitched string appearing at the bottom.

To enter dulcimer tablature:

1. Change your staff type to a wide 3-line or 4-line staff (using the Staff Lines tab view in the in the Staff Attributes pane of the Music Images panel). For the tablature numbers to appear at the correct location you use the 3 and 4 lines staff types that use double staff spacing. Since you cannot specify alternate staff types in the document setup, you will have to change the staff type after you created your document. The example below shows a regular 5-line staff and the wide 3-line dulcimer staff:

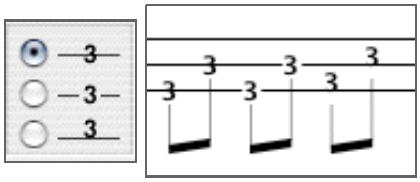


2. Place the Entry Cursor at the beat location you want to begin.
3. Choose the rhythmic duration of the note (i.e. tablature number) to be entered by selecting one of the radio buttons along the top of the panel. If needed, tuplets can be set using the tuplet indications on the control panel.
4. Choose whether you want to have stems (flags and beams)appear above the tablature, below the tablature, or to not have stems appear at all. In addition you can check the **Extend stems** check box to have your stems extend to the tablature number. The example below shows the effect of the various settings:



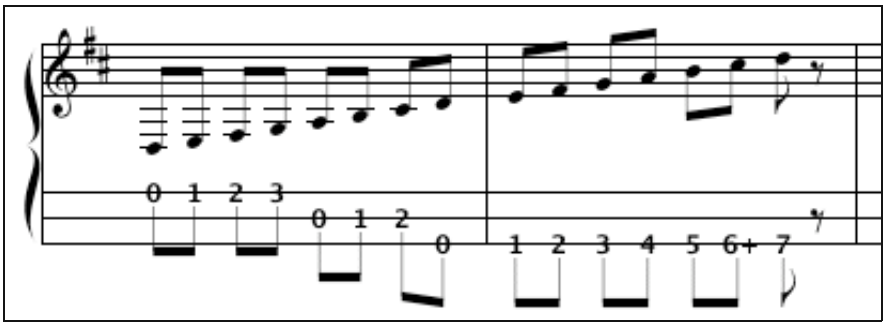
5. Choose whether you would like the tablature to be centred on the line, to erase the line, or to appear above

the line by selecting one of the three options:



6. Click the button on the fretboard grid that corresponds to the string and fret number you want. The left side of the grid begins with the open strings, with the highest pitched string at the bottom of the grid. (The strings are tuned from top to bottom: A1 (midi:45), D2 (midi:50), A2 (midi:57), D3 (midi:62). The pitches of the open strings can be altered using the sliders at the left side of the panel - midi pitch numbers (i.e. middle C3 = 60) are indicated. The tablature number you have chosen will appear on your score at the correct location on the 3 or 4 line staff. Each note will sound when it is entered, and the tablature can be played back using the score Playback controls.

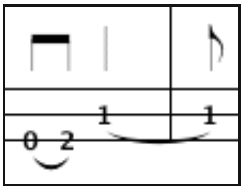
The example below shows a D Major scale in both conventional notation and in dulcimer tablature.



To build chords, you can use the Entry Cursor arrows on the panel to move back to the previous note position or you can drag the Entry Cursor directly on the score beore entering the next tablature character.

The **Form Slur** button can be used to create a slur between tablature numbers. Select the numbers you want slurred, and click on the **Form Slur** button. Tablature slurs are only intended to occur on the same string.

The **Form Tie** button can be used to create a tie between tablature numbers that are the same (i.e. the same string and fret). Select the numbers you want tied, and click on the **Form Tie** button. The duration of the first note is altered to include the duration of the second note. The example below shows a slur followed by a tie.



- The font used for the tablature text can be set in the *Text/Font* pane of the Inspector Panel.

- For maximum flexiblity, the dulcimer tablature numbers are separate images from the stems/flags. The stems/flags are simply muted notes without noteheads or ledger lines - they can be adjusted freely (as any note can be.) This means that stem lengths, beam angles and stem positions can all be altered using normal editing procedures. However, when you copy and paste tablature flags, you should use the **Exact Paste** method to insure that the noteheads and ledger settings are retained when pasted into the score.

- Tablature numbers can be adjusted left and right, but not up and down, and the number cannot be changed. If you have entered the incorrect tablature number, select it and remove it, then enter the correct number.

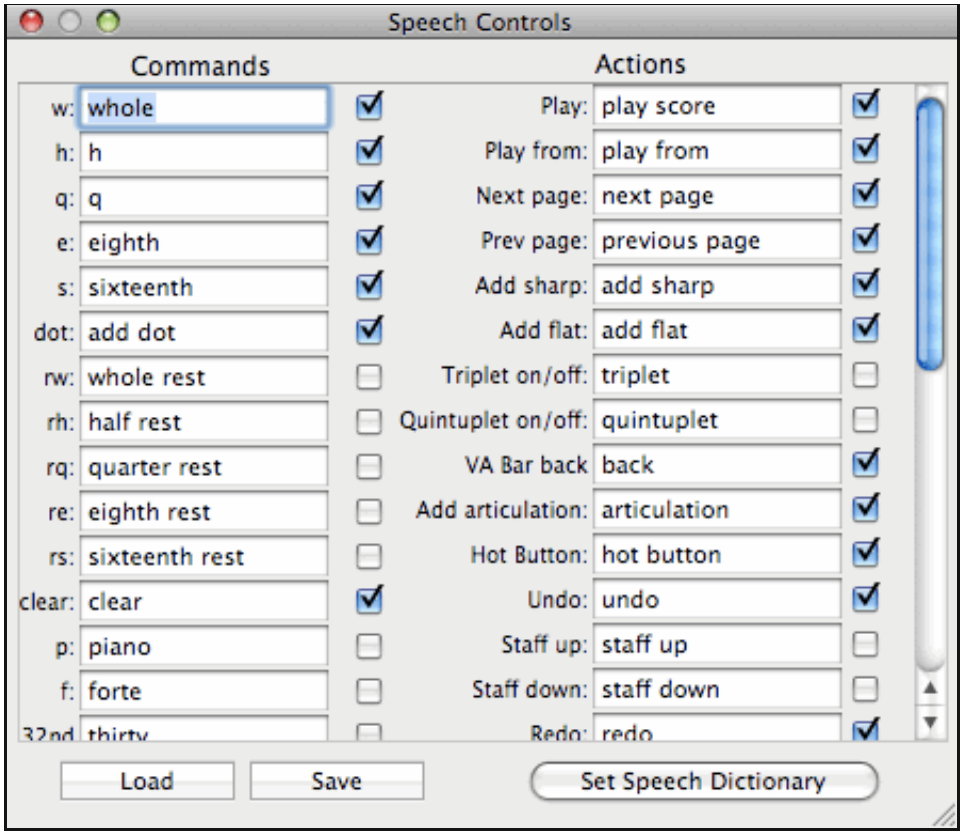
- If you prefer shorter stems in your tablature rhythms, you can change the default stem length in the Graphics pane of the Inspector panel.

See also

- Staff Attributes pane
- Note Attributes pane
- Performance Settings pane
- Guitar Tablature Panel

Speech Recognition Controls

1. Choose **Tools** in the menu bar.
2. Choose **Speech Panel...** from the **Tools** menu.



Speech Recognition allows you to use voice commands to interact with NoteAbilityPro using your computer's built-in microphone and a microphone attached to your audio interface. Words, phrases or sounds can be linked to NoteAbility commands or actions. When NoteAbilityPro is started up, Speech Recognition is disabled; if you want to enable it, check the **Speech On/Off** box which appears at the bottom of the score window:

On --- Off



The **Speech Controls...** menu item brings up a panel which allows your speech recognition dictionary to be edited and saved. This dictionary matches spoken phrases with the commands or action which will result when the spoken phrase is detected. Although the Speech Recognition software is designed only to recognize English, it will recognize other languages provide they are entered using English phonetic spelling.

The first row of settings are shortcuts for typing commands - they set (or add to) the current command, while the second row of settings link phrases or words to actions (such as *Undo* or *Add Sharp*). Only the settings which are checked are currently active. Once you have set your dictionary with the desired words or phrases, and decided which dictionary elements to enable, click on the **Set Speech Dictionary** button. If you want to save your settings or load previous settings, use the **Load** or **Save** buttons. A saved dictionary stores all the phrases you have set along with an indication of whether they are turned on or not.

- When the Speech Recognizer matches a phrase, a short sound is played to indicate that NoteAblity has responded to the command.

- While the speech dictionary can be very useful, you should remember that the more choices the Speech Recognizer has, the more likely it is to choose incorrectly. For this reason, you may find that keeping the dictionary small (i.e. with relatively few commands and actions enabled) will produce more reliable results.

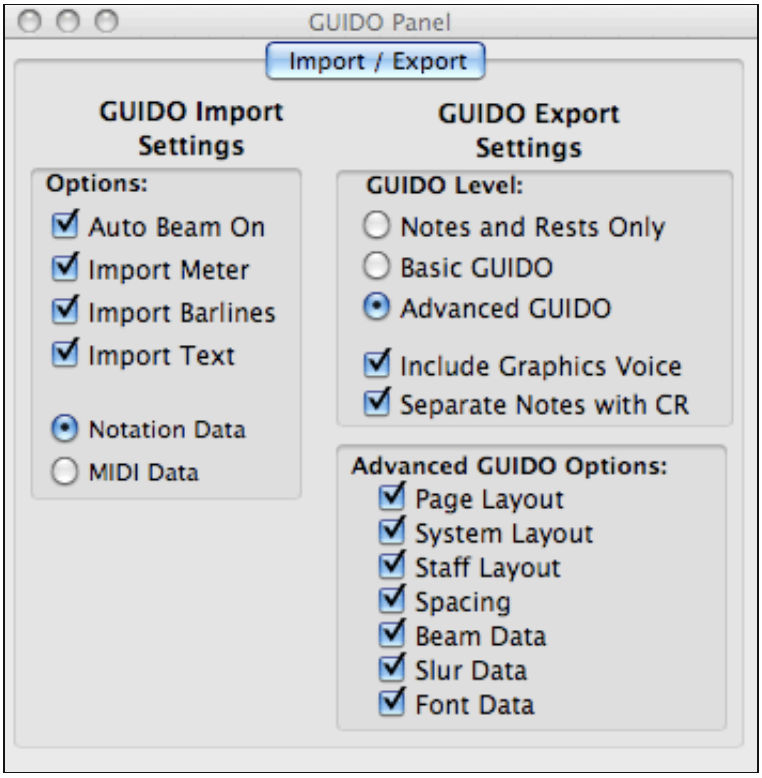
- The default location of the Speech dictionary can be set using the **Other** tab in the **NoteAbility Preferences** panel.

See also

- NoteAbilityPro Preferences

Guido Controls

1. Choose **Tools** in the menu bar.
2. Choose **Guido Panel...** from the **Tools** menu.
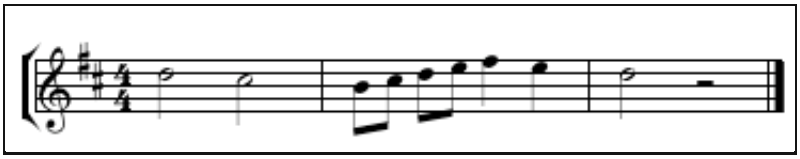


The Guido panel is used for setting options for importing and e xporting files in GUIDO Music Notation format. GUIDO is a music notation interchange format that allow musical scores or excerpts of scores to be transfered from one environment to another. For a detailed explanation of the Guido Music Notation Format refer to: http://www.informatik.tu-darmstadt.de/AFS/GUIDO/

Guido Export

Before exporting a score in Guido Music Notation format, you should first bring up the Guido panel and set the export options. NoteAbility uses these options when it is saving a file in Guido format (through the **Save To...** menu item) or when it is copying data in Guido format using the **Copy All Types** menu item.

NoteAbility can produce Guido files that are limited to only notes and rests, to the Basic Guido specification (which includes all standard music images), or to the Advanced Guido specification (which also includes page, system and staff layout information and precise spacing positioning information.) When generating Advanced Guido files, a series of check boxes allows you to specify whether specific images or features will be included in the Guido file. As well, you can indicate whether a graphical voice (containing images such as slurs and dynamic markings) should be generated for each staff.

In the example below, a simple musical example was saved as a Guido file (using the **Save To...** menu) in each of the t hree settings.



File saved as Notes and Rests Only

```
{ [
d2*1/2 c#2*1/2
b1*1/8 c#2*1/8 d2*1/8 e2*1/8
f#2*1/4 e2*1/4 d2*1/2 _*1/2
] }
```

File saved as Basic Guido

```
{ [
\tempo<"1/4=120">
\staff<id=1,dy=0.00pt>
\beamsAuto \stemsAuto
\clef<"g2"> \key<+2> \meter<"4/4">
d2*1/2  c#2*1/2
\bar<2>
\beam(b1*1/8 c#2*1/8)
\beam(d2*1/8 e2*1/8)
f#2*1/4 e2*1/4
\bar<3>
d2*1/2 _*1/2
\doubleBar<4>
] }
```

File saved as Advanced Guido

```
{ [
\pageFormat<w=612.00pt,h=792.00pt,lm=54.00pt,tm=72.00pt,rm=36.00pt,bm=72.00pt>
\tempo<"1/4=120">
\systemFormat<staves="1-1",dx=0.00pt>
\accol<id=0,range="1-1",style="straightBrace">
\staff<id=1,dy=0.00pt>
\staffFormat<style="standard",size=3.00pt>
\beamsAuto \stemsAuto
\space<2.00pt> \clef<"g2">
\space<16.00pt> \key<+2>
\space<22.16pt> \meter<"4/4"> \space<21.32pt>
d2*1/2 \space<36.93pt> c#2*1/2 \space<36.54pt>
\bar<2>
\space<17.99pt>
\beam<dy1=-7.00hs, dy2=-7.00hs>( b1*1/8 \space<15.58pt>
c#2*1/8 )
\space<14.58pt>
\beam<dy1=-7.00hs, dy2=-7.00hs>( d2*1/8 \space<15.58pt>
e2*1/8 )
\space<14.60pt>
f#2*1/4 \space<23.16pt> e2*1/4 \space<23.18pt>
\bar<3>
\space<17.99pt>
d2*1/2 \space<36.20pt> _*1/2 \space<36.20pt>
\doubleBar<4>
] }
```
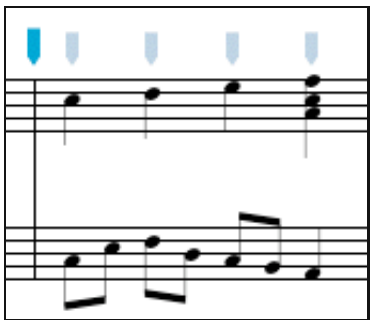
Guido Import

When Guido files are imported, the user can indicate (using the Guido panel) whether meters, barlines and

text will be included in the import, and whether autobeaming will be used when the Guido data is converted into NoteAbility.

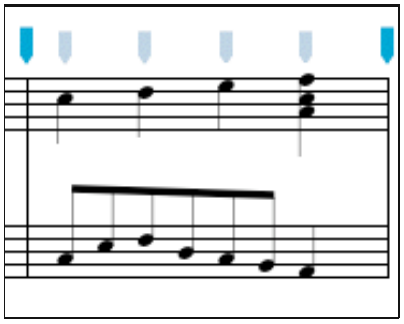
The import options are active both when Guido files are imported using the **Import Guido** menu item or when Guido data is pasted directly into a score document. In the current version of NoteAbility, Guido is the default format when ASCII text is pasted from the Pasteboard into NoteAbility. The text data is interpreted as Guido and the corresponding music will appear at the Entry Cursor. In the example below, the following Guido code was copied from an ASCII text editor and pasted into NoteAbility. The music appears beginning at the Entry Cursor position. (Default beams were generated on the second staff.)

```
{[c2*1/4 d e {f,c,a1}],[c0*1/8 e f d c b-1 a*1/4]}
```



In the following example, the beaming of the notes on the second staff is specified in the Guido code.

```
{[c2*1/4 d e {f,c,a1}],[\beam(c0*1/8 e f d c b-1) a*1/4]}
```



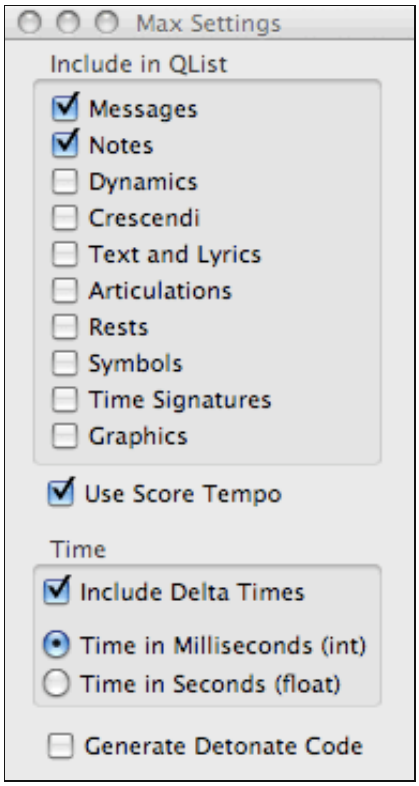
– Guido import and export features will continue to grow as NoteAbility develops further and as more applications begin to support Guido music notation format.

See also

- Save In Other Formats
- Import Guido
- Copy Types panel

Max Settings Panel

1. Choose **Tools** in the menu bar.
2. Choose **Max Settings...** from the **Tools** menu.

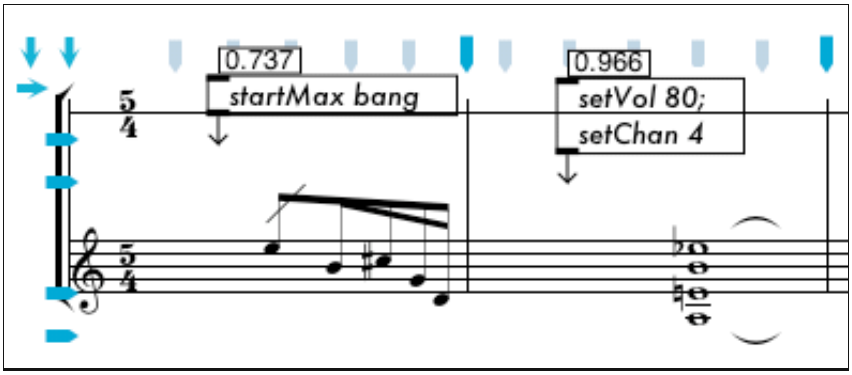


The Max Settings panel is used if you want to create Max qlists or Max detonate objects to be used in the Max/MSP program developed at IRCAM, Opcode Music, and Cycle74 Inc. Max/MSP is an interactive music environment which runs on Macintosh computers (Max), in java under linux (JMax) and on Next computers (FTS-Max). Those who are unfamiliar with Max/MSP can ignore this panel.

The series of check boxes sets which kinds of NoteAbility images will be converted into qLists if a Copy All Types command is issued (and the Max qlist type is set in the Copy Type panel) or if a Save To... Max qlist is performed. The **Use Score Tempo** button determines whether the score tempo is used (rather than mm. 60). The Time settings determine whether delta times are used between events (this is normal in max qlists) and whether milliseconds or floating point seconds are used for the timing information.

The **Generate Detonate Code** is checked if you want to create Detonate code rather than qlist code (in a Copy All Command.)

The example below shows a score fragment with the corresponding Max qlist (with delta times in milliseconds and at a tempo of a quarter note = 120)




```
startMax bang;
459 ;
note 76 80 4 62;
532 ;
note 71 80 4 62;
422 ;
note 73 80 4 62;
293 ;
note 67 80 4 62;
202 ;
note 62 80 4 62;
703 ;
setVol 80;
setChan 4;
1016 ;
note 75 80 4 2000;
note 71 80 4 2000;
note 64 80 4 2000;
note 57 80 4 2000;
```

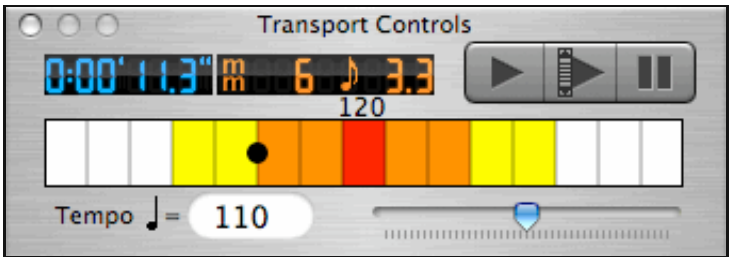
- The Max qlist and explode pasteboard type is ASCII text, so the data can be pasted into any text application.
- For the complete details on how Max qlists are implemented in NoteAbilityPro contact Opus 1 Music, Inc.

See also

- Copy Types panel

Transport Controls

1. Choose **Tools** in the menu bar.
2. Choose **Transport Controls...** from the **Tools** menu.



The Transport Controls are on a floating window and provide a simple, but direct interface for controlling score playback interactively. There are buttons for :

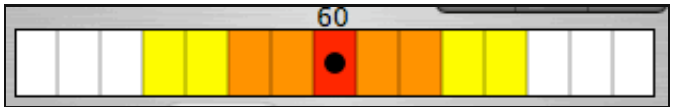
1. Playing the score from the beginning
2. Playing the score from the measure the Entry Cursor is in
3. Pausing and resuming playback.



There are also counters which update the time and the measure and beat of the performance.



To adjust the tempo during playback, you can either move the slider, or click anywhere in the metronome control area.



The red rectangle is the score tempo, the rectangles above create increases in tempo and the rectangles below create decreases in tempo.

You can also use the scroll wheel of your mouse (provided your mouse has a scroll wheel) in order to adjust the tempo during playback.

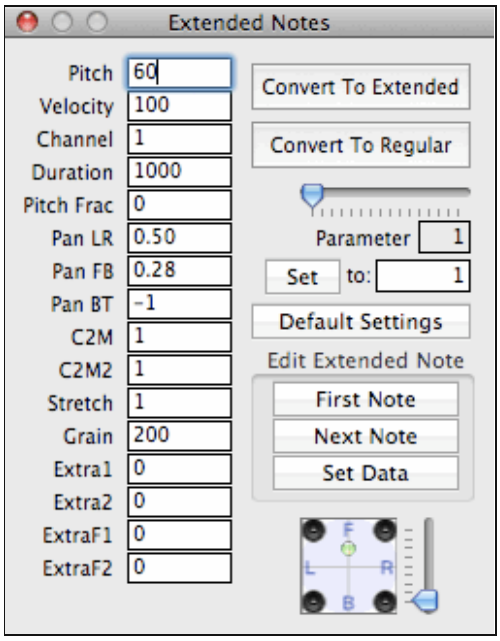
For maximum control of playback, you can also use the shortcuts in the IIMPE menu for starting stoping or adjusting the playback tempo.

See also

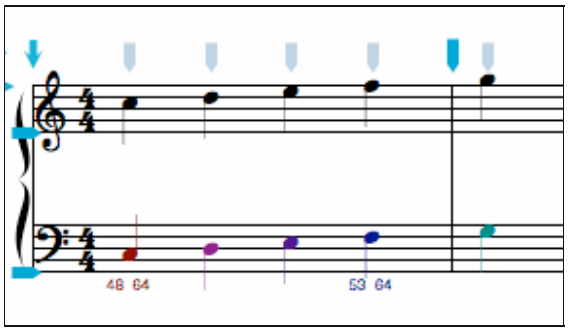
- Score Controls
- Playback Controls pane
- IIMPE Menu

Extended Note Panel

1. Choose **Tools** in the menu bar.
2. Choose **IIMPE** in the Tools menu.
3. Choose **Extended Note Panel...** from the **IIMPE** menu.



The Extended Note Panel provides a tool for embedding additional data in a note. This additional data is intended to be used in the Integrated Interactive Music Performance Environment (IIMPE) which has been developed by the author. Basically, the panel allows you to convert Regular notes into Extended notes (and vice versa) and to add a series of parameters (pitch fractions, panning locations, c to m ratios, etc.) to the extended notes. In a score, the extended notes are shaded in different colours (depending on the channel they are on), and will pass their data on to Max/MSP during playback. In the score example below, the black notes are regular notes, while the coloured notes are extended notes – they will only playback if the Track (staff) is set to Network or MIDI. Each of these notes can have a different panning location, pitch, pitch fraction (for microtones) etc. Obviously, a Max/MSP patch has to be built that will receive and correctly interpret the incoming data.



For more information on Extended notes, please contact the author of NoteAbilityPro.

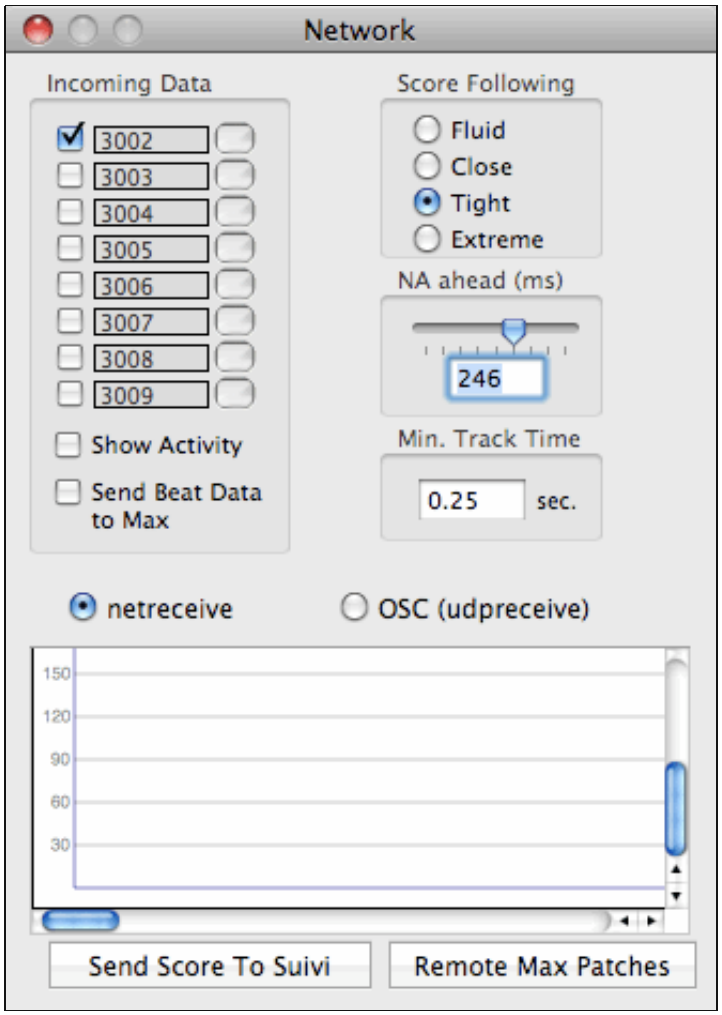
See also

- Performance Settings Pane
- Track Setup Panel

Network Port Panel

1. Choose **Tools** in the menu bar.
2. Choose **IIMPE** in the Tools menu.
3. Choose **Network Port Panel...** from the **IIMPE** menu.

The Network Port panel displays all settings related to score-following and the receiving of remote messages from interactive performance software such as MaxMSP and Pd.

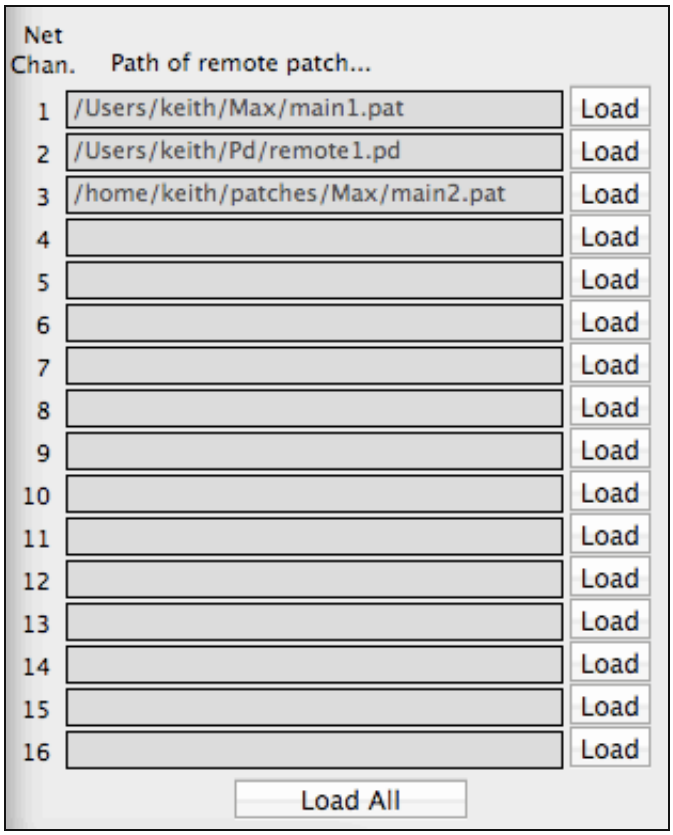


The **Incoming Data** area of the Network Port panel allows up to 6 TCP ports to be actively receiving data. These ports should correspond to the ports being used to send data on the server application (MaxMSP or Pd). If the **Show Activity** radio box is selected lights will flash and any received synchronize messages will be tracked in the graph located near the bottom of the panel. The **Send Beat Data to Max** check box cases measure and beat data to be send to MaxMSP or Pd during score playback. This data is sent out the first network address and port specified in the Network Connections area of the Track Setup panel.

The score following area of the panel is used for controlling the mode of score following, the number of milliseconds that NoteAbilityPro is running ahead of the connected software. and the minimum time that new synchronize messages will be processed. As well, you can format the outgoing data for either the netreceive object (MaxMSP or Pd) or the OSC (udpreceive) object in MaxMSP.

The **Send Score to Suivi** button is used to update the internal score representation in the MaxMSP suivi.score object (which is the score following object developed at IRCAM.

The **Remote Max Patches** button displays a sliding pane which allows MaxMSP or Pd patches to be loaded on remote computers.



Each row of this panel will send a remote message to the Network Channel as configured in the Network Connections area of the Track Setup panel when the **Load** button is pressed. The message will load the MaxMSP or Pd patch at the path indictated in the text field. To send a load message to all network channels at once, click on the **Load All** button. In the example above, there are 3 remote computers with patches ready to be loaded – network channels 1 and 3 are running MaxMSP, while network channel 2 is running Pd.

In order for the patch to be loaded, the application must be running on the remote computer and the appropriate loading patch should be open. For MaxMSP, the NAStarter patch (available as part of the UBC Max/MSP/Jitter Toolbox) can be used.

See also

- Track Setup panel
- Antescofo Support

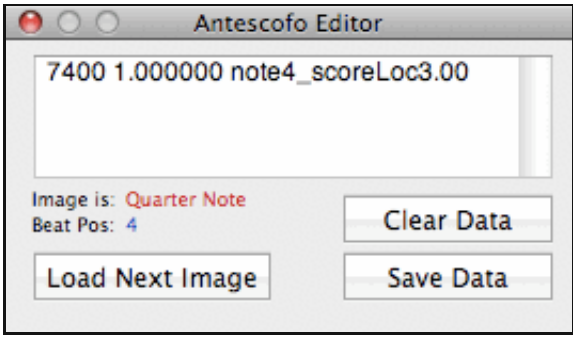
Antescofo Support

Support for IRCAM's antescofo score-following software has been added to NoteAbilityPro. Antescofo is an anticipatory score-following system developed by Arshia Cont which can be interfaced to NoteAbilityPro. Score position messages are received from antescofo as part of the Integrated Interactive Music Performance Environment (IIMPE) and can be used to synchronize a live performance with a NoteAbilityPro score during playback. In order to use antescofo and NoteAbilityPro the following steps should be followed:

1. The NoteAbilityPro score containing an instrumental part (usually in the first staff) should be saved as an antescofo score. This is done by selecting the **Save To...** menu item from the **File** menu and selecting Antescofo as the file type. This file contains an ASCII representation of all the music events in the top staff along with basic tempo information.
2. The saved antescofo file must be opened by the antescofo object in a MaxMSP patch (available from the author)
3. The Network Port panel must be set to receive TCP Network messages on the port specified in the MaxMSP patch (usually port 3002).
4. The appropriate settings for receiving score-following messsages (latency and score-following method) should be selected in the Network Port panel.
5. Click the play button on the score window and wait for messages from antescofo (through MaxMSP).

The Antescofo Panel

The Antescofo Editor is a panel that allows you to customize the antescofo data associated with individual notes and rests in the score. To make the panel visible, select the **Antescofo Editor...** item in the **Tools** menu.



To load the next selected note or rest into the editor, click on the **Load Next Image** button. The text which appears in the editor is the antescofo data for that image. This normally consists of a midicents value (Midi Pitch X 100), a duration and a label associated with the event. You may modify these values, or add additional antescofo information. The **Save Data** button will save the updated data with the note or rest. The **Clear Data** button clears the text field so you can enter a new antescofo message. Altering the antescofo data should only be done with a clear understanding of the data format required of the antescofo editor. For more information on the antescofo data format, contact the author.

See also

- Track Setup panel
- Network Port panel
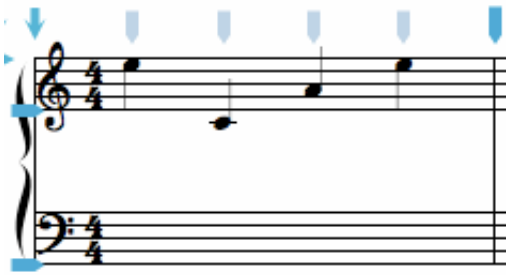
Open Music Support

Support for IRCAM's OpenMusic interchange format has been added to NoteAbilityPro. It is possible to export music data from OpenMusic and paste it directly into NoteAbilityPro. The new data is pasted into the NoteAbilityPro score beginning at the position of the Entry Cursor.

The OpenMusic data format is a text-based format consisting of tags (much like html) around music information such as notes, rests, durations, and tuplets. For example, the following OpenMusic Data:

```
<POLY>
<TEMPERAMENT> 8 </TEMPERAMENT>
<VOICE>
<MEASURE>
<METER> 4 1024 </METER>
<C>
<D> 1024  </D>
<N> 7600 </N>
</C>
<C>
<D> 1024  </D>
<N> 6000 </N>
</C>
<C>
<D> 1024  </D>
<N> 6900 </N>
</C>
<C>
<D> 1024  </D>
<N> 7600 </N>
</C>
</MEASURE>
</VOICE>
</POLY>
```

would appear, when pasted into a NoteAbilityPro score as:



It is also possible to generate OpenMusic files from NoteAbilityPro by using the **Save To...** item in the **File** menu and selecting OpenMusic as the file type. For the procedures required for importing these files into OpenMusic, refer to the OpenMusic help pages.

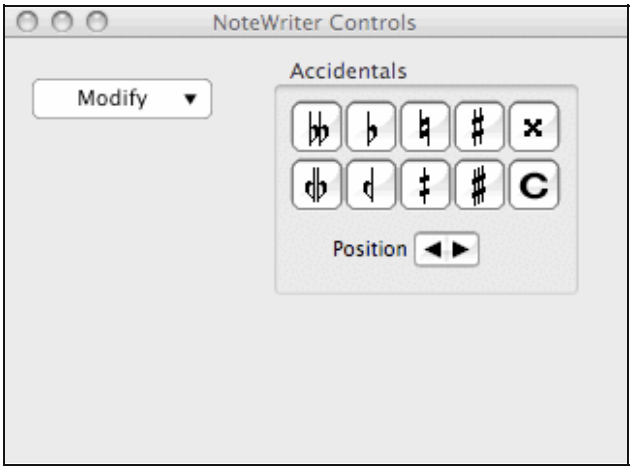
See also

- Cut, Copy, and Paste Operations
- Save To...

NoteWriter Controls

1. Choose **Tools** in the menu bar.
2. Choose **NoteWriter Controls...** from the **Tools** menu.
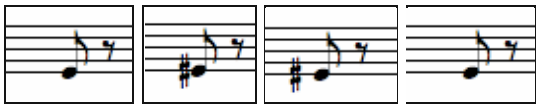
The NoteWriter Controls panel displays buttons and menus for performing some basic editing task on imported NoteWriter documents.



The **Modify** pull-down menu duplicates the items in the NoteWriter **Modify** menu. These items operate on selected NoteWriter images (which have been imported from a NoteWriter file).

Beam Notes	Form selected notes into a single beam.
Unbeam Notes	Remove the beam from selected notes and change the notes back to their original rhythmic values.
Next Staff	Shift the staff association of selected notes and rests to the NoteWriter staff immediately below the staff to which the notes are currently associated.
Previous Staff	Shift the staff association of selected NoteWriter notes and rests to the NoteWriter staff immediately above the staff to which the notes are currently associated.
Remove Ledgers	remove the ledger lines on selected NoteWriter notes.
Add Ledgers	Add ledger lines on selected NoteWriter notes. The notes will be associated to the closest NoteWriter staff.
Find Closest Staff	Change the staff association of selected NoteWriter notes so that they are associated to the closest NoteWriter staff.

The Accidental buttons can be used to alter the accidental type associated with selected notes. The **C** button clears any accidentals associated with the note. The left and right position arrows can be used to adjust the position of the accidental relative to the notehead. In the example below, a note was selected and the sharp button clicked, then the left arrow was clicked twice. Finally, the **C** button was clicked:



As more NoteWriter editing operations are supported in NoteAbilityPro, more controls will be added to this panel.

See also

- File Menu
- Save To Panel

Page Setup and Printing

NoteAbilityPro documents can be printed at any percentage reduction or enlargement on a variety of paper sizes. This Chapter discusses how to use the Page Setup panel to set the characteristics of the printing job, and how to print the document or save it as a PDF (Portable Document Format) or EPS (Encapsulated PostScript File).

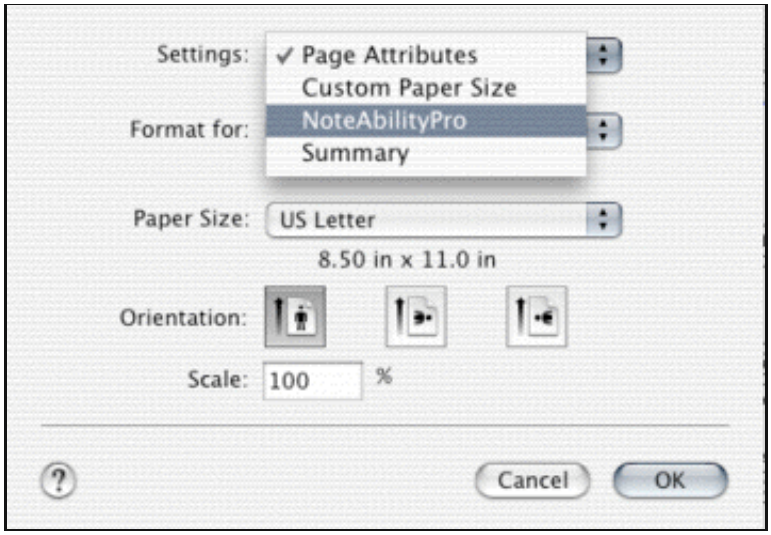
- Page Setup
- Print a document

See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 12 – Reference
- 13 – Example Scores and Tutorials

Page Setup

Choose **Page Setup...** from the **File** menu. The Macintosh OS-X page setup panel will appear:



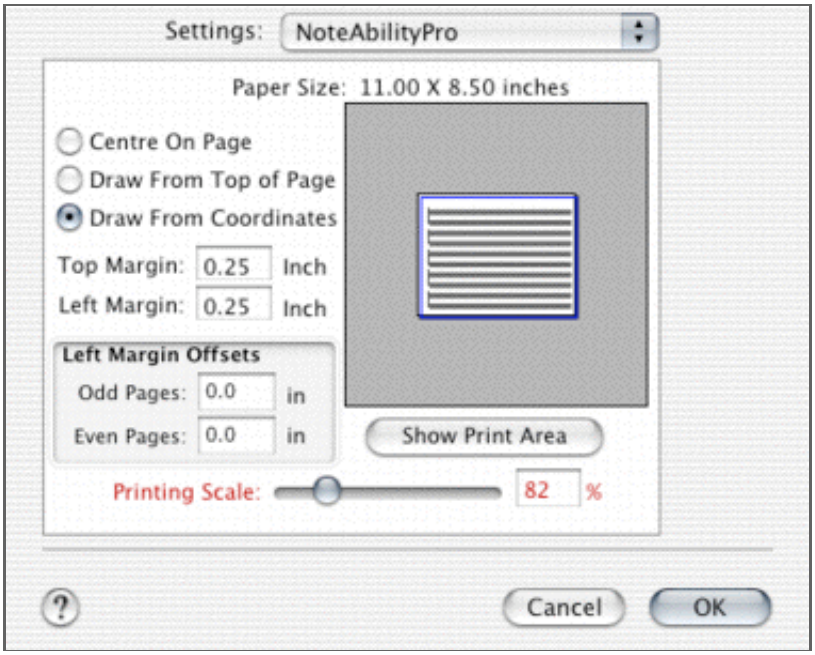
There are several items under the **Settings:** pull-down menu that you should be familiar with. Each item displays a different pane in the Page Setup panel:

- *Page Attributes* allows you to choose paper size and orientation,
- *Custom Paper Sizes* allows you to add customized paper sizes to those currently supported by your printer, *(only on Mac OS 10.2 and later)*
- *NoteAbilityPro* allows you to set margins and reduction/enlargement percentages, and to view the music layout on the paper,
- *Summary* displays all the current page setup information.

Some changes were made to the way Page Setup is handled in Mac OS 10.2, so if you are using Mac OS-10.2 or later use the following procedure for performing page setup:

Page Setup Procedure using Mac OS-10.2 or Later

1. Select the paper size from the pull-down menu of available paper sizes. The paper sizes are taken from printer the document is formatted for and from any custom paper sizes that you have added under the *Custom Paper Size* menu item near the top of the panel next to **Settings:**.
2. Select the orientation you want your document printed in (Portrait or Landscape) using the buttons at the bottom of the panel.
3. Click on the **OK** button to store these settings.
4. If you want to change the print reduction/enlargement percentage or the position of the music on the paper, then choose the **Page Setup...** menu item again and this time select the *NoteAbilityPro* item from the **Settings:** pull-down menu located near the top of this panel. A customized page setup panel will appear:

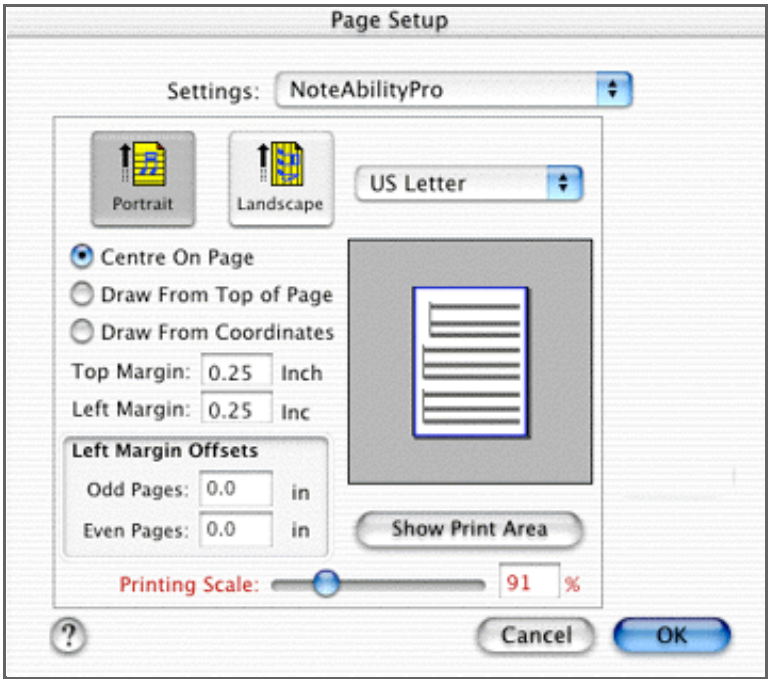


5. Set the position of the music on the page with the radio buttons and margin settings. You can choose to have your music centred on the paper, positioned at from the top-right corner of the paper, or with right and top margins specified in some measurement units (eg. inches, centimeters).
6. Use the slider to adjust the percentage reduction/enlargement of your print job.
7. If desired, you can also set left margin offsets for odd and even pages.
8. Once you have finished setting up your page, click **OK**.

If you are using Mac OS 10.1.5 or earlier, use the following procedure for setting up your page:

Page Setup Procedure using Mac OS-10.1.5 or Earlier

1. With the Page Setup panel visible, choose *NoteAbilityPro* from the **Settings** pull-down menu located near the top of the Print panel. A customized page setup panel will appear:

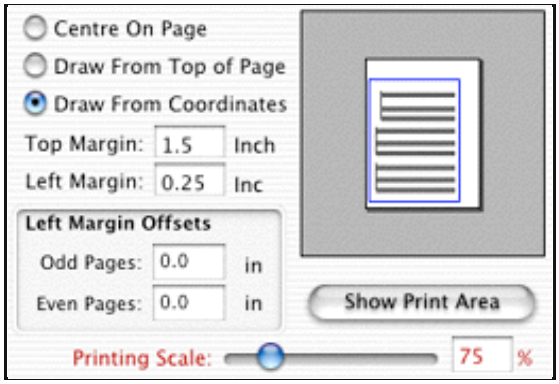


2. Choose a paper size from the Paper Size pull-down menu.
3. Click either the **Portrait** or **Landscape** button to set the page orientation.
4. Set the position of the music on the page with the radio buttons and margin settings. You can choose to have your music centred on the paper, positioned at from the top-right corner of the paper, or with right

and top margins specified in some measurement units (eg. inches, centimeters).
5. If desired, you can also set left margin offsets for odd and even pages.
6. Use the slider to adjust the percentage reduction/enlargement of your print job.
7. If desired, you can also set left margin offsets for odd and even pages.
8. Once you have finished setting up your page, click **OK**. job.

NoteAbility extends the standard Page Setup panel with extra controls which provide additional format settings and which displays the first page of your score showing the positions of the staff lines. When you change most of the settings on the Page Setup panel, the page display will be altered to show you where your music will appear on the paper. To update the display, you can click on the **Show Page** button.

After setting the Scale to 75% and selecting Draw from Coordinates Top Margin: 1.5 inches and Left Margin: 0.25 inches, and clicking on the Show Print Area button, the page display will now appear as:



This page display gives you a accurate representation of what will appear when the document is printed.

When you are finished setting all the characteristics of your page, click **OK**. All of the page layout settings are saved with your document, so they will be remembered when you open the document again.

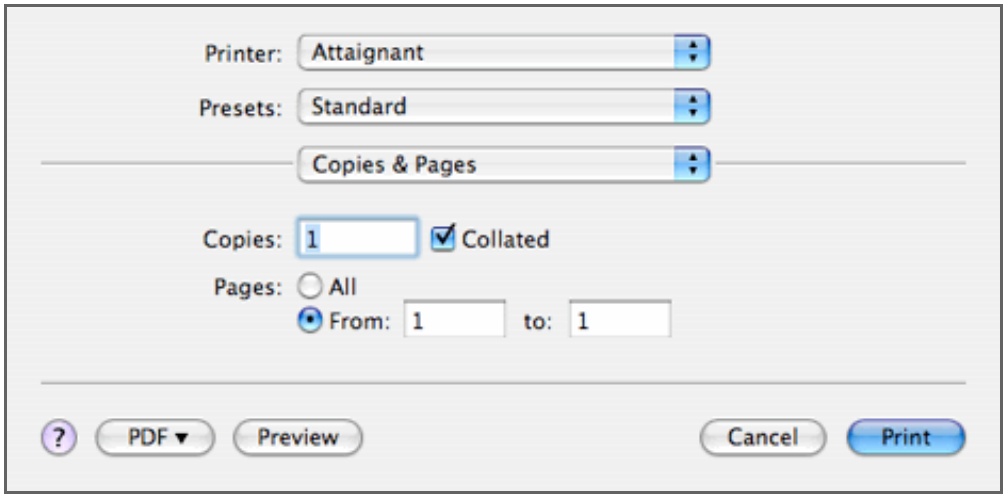
– When you reduce or enlarge printed pages by changing the percentage in the Scale field the actual contents of the document doesn't change – only the size of the printed images is altered.

See also

- Print a document

Print a Document

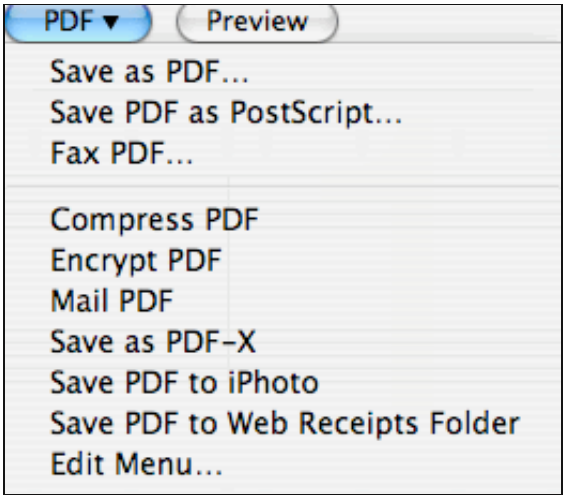
1. Choose **Print...** from the **File** menu. The Print panel should appear.



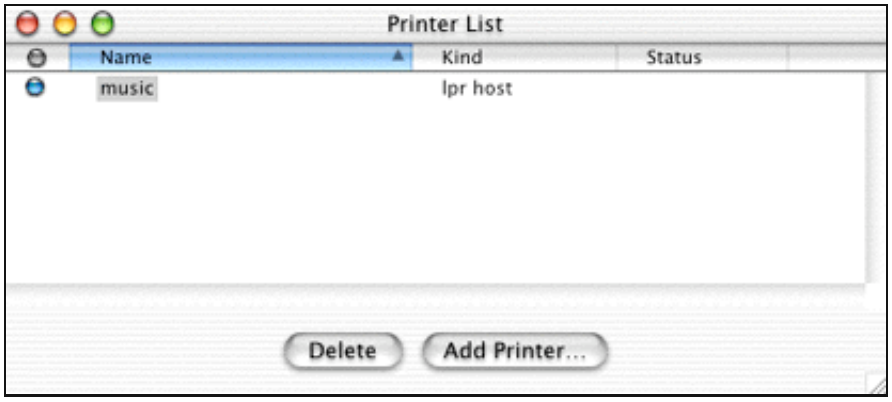
2. Select the printer you want to use from the Printer: pull-down menu.
3. Set the number of copies and the page range you want to print.
4. Choose any other printing options you want from the third pull-down menu on this Print panel (i.e. the Copies and Pages menu).
5. Click the **Print** button.

You can see what your document will look like with the current settings by clicking on the **Preview** button located on the print panel. This action launches the Preview application with a copy of your document in it.

You can save your print job as a PDF file, by selecting the **PDF** pull-down menu on the print panel, and choosing one of the avaialble PDF or PostScript file formats.



If you do not have a printer set up for use on your computer, use the Print Center application to set up your printer. You can launch the Print Center by selecting "**Edit Printer List...** which is located in the **Printer:** pull down menu on the Print panel



In addition to the standard **Print...** menu item NoteAbility provides a second menu item – **Print All...** in the **File** menu which prints all the pages of all open NoteAbility documents one after another. **Print All...** allows all the files associated with a score (eg. the score and instrumental parts) to be printed with one menu command.

– You should ensure that the Page Setup has been performed for each document before using the **Print All...** menu item.

See also

- Page Setup

Audio and Playback

This chapter covers the various playback options available in NoteAbilityPro. Panels for setting playback tracks and for controlling the internal synthesizers are also discussed.

- Audio Options
- Track Setup Panel
- Midi Ports Panel
- Audio Units Panel
- Adding Audio Files
- Breakpoint Functions

See also

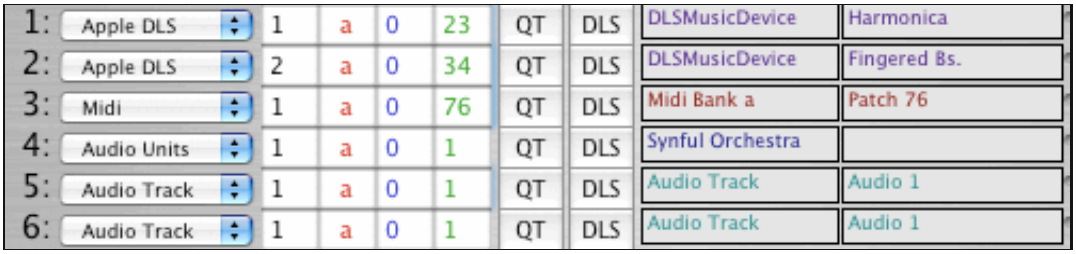
- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 12 – Reference
- 13 – Example Scores and Tutorials

Audio Options

NoteAbilityPro can playback scores using a variety of sound playback methods.

1. via MIDI to external synthesizers
2. using Apple's built-in DLS Synthesizer
3. using Apple's built-in Quicktime Musical Instruments
4. using installed Audio Unit sythesizer plugins
5. playing audio files inserted in the score
6. sending remote messages to interactive performance software (such as MaxMSP or Pd)

The Track Setup panel in the Audio/MIDI menu can be used to change the sound output method used on each track (staff) of the score. Different staves of the score can use different output methods. For example if you are setting the first 2 staves to play using Apple DLS, the third via MIDI, the fourth using Audio Units and the fifth and sixth containing embedded audio files, your Track Setup will look something like:



MIDI

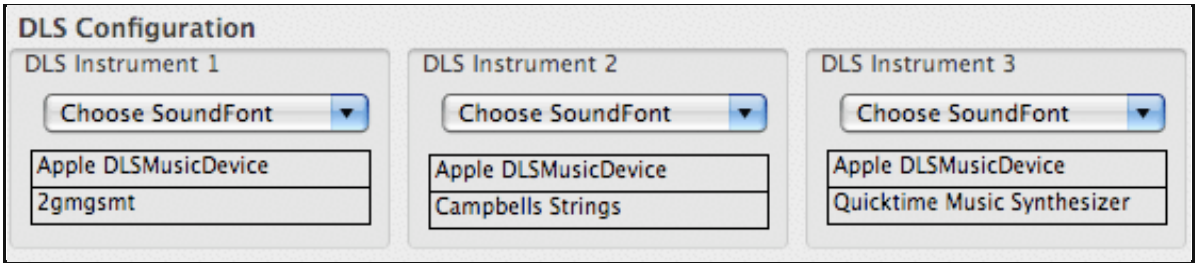
Notes can be sounded on a MIDI synthesizer connected to your computer. In this case, the staves should be set to MIDI and a MIDI channel (1 - 16) and a MIDI bank (a - h) should be selected in the Track Setup panel. The desired bank should be matched to MIDI Port configuration that you have specified in the Midi Ports Panel.

When using MIDI, notes along with their velocites (volumes) as well as patch changes will be sent on the specificed MIDI channel to the MIDI device on the corresponding MIDI bank - MIDI setups that use only one synthesizer should have all tracks set to Bank "a". Midi has limited ability to playback quartertones, so you are advised to use one of the other playback options if your music uses a lot of microtones.

Apple DLS

The Apple DLS (Downloadable Sounds) Synthesizer is the default playback device used with NoteAbility. There are 6 separate DLS Synthesizers available in NoteAbilityPro. All the DLS synthesizers are initially set to use the Quicktime Music Synthesizer which conforms to the General Midi Instrument configuration. The Quicktime Music Synthesizer includes synthetic versions of most common music instruments (piano, strings, percussion, winds, brass, pads, etc.).

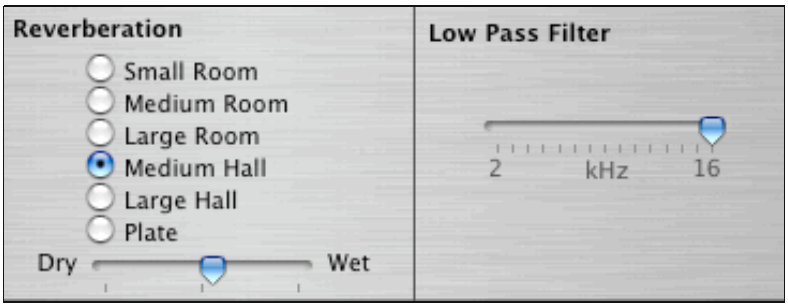
If desired, each DLS synthesizer can be set to use a different bank of sounds by selecting the sound bank from the the pull-down menu for each DLS player in the Audio Units Panel. These pull-down menus display all the available sound banks in your computer system. You can add banks to your computer by downloading SoundFonts - many of which can be downloaded free on the internet. SoundFonts have a .sf2 extension and they should be placed in the */Library/Audio/Sounds/Banks* directory. All ".sf2" files place in this location will appear in the pull-down menus in the Audio Unitls Panel and will be available for use by the DLS synthesizers in NoteAbilityPro.



To select a particular instrument (or patch) for a specific track (staff) from the available sounds in the sound bank, click on the DLS buttons associated for each staff on the Track Setup panel in the Audio/MIDI menu. All patches set for your score will be saved with your document. There are some general settings for reverb type and reverb mix on the DLS Synthesizers. These controls are set in the Audio Units Panel located in the Audio/Midi menu.

- SoundFonts can include complete banks of instruments (128 or more) or they can include only one or a few instruments. In cases when only a few instruments are contained in the sound font, you should ensure that you do not use patch numbers beyond the range of the instruments.

Some basic effects have been added to the DLS synthesizer. The type of room reverberation and the amount of reverberation can be set in the Audio Units panel. These effects can be used to make the synthesizer sound warmer and richer.



Quicktime Musical Instruments

Quicktime Musical Instruments are the collection of General MIDI instrumental sounds that were available in the early versions of OS-X. While the instrumental samples are the same as those used in the Apple DLS, Quicktime Musical Instruments have no effects added to them and sound less "natural" than the sounds produced by the Apple DLS sythesizer. The option of using Quicktime Musical Instruments is available so that older NoteAbilityPro files can be opened and played back with the same instrumental sounds they originally had. New files should probably use Apple DLS or Audio Units for their sound output.

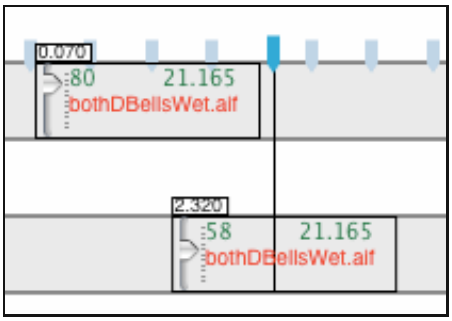
Audio Units

Audio Units are a collection of audio components that can be downloaded and installed on your computer. Audio Units can be either sythesizer and effects components, and these components can be joined together in a variety of ways. In NoteAbilityPro, 1 synthesizer component and up to 2 effects components can be connected together in the Audio Units panel. You can also display the interface of any of these components so that you can configure or modify them. Many different kinds of audio units are available, some of which are free to download and others which must be purchased.

Embedded Audio

Audio files in any standard format may be dragged and dropped onto your score. There is a new staff type (available in the Staff Attributes pane of the Score Structure panel) that is designed to hold audio files

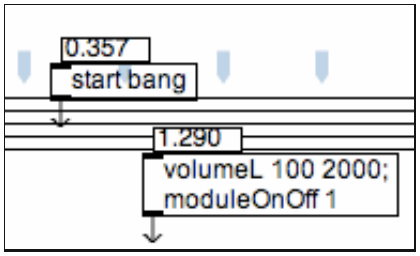
(although files can be dragged and dropped on any staff type). When audio files are placed in the score, the location of the soundfile start time (i.e. the beat position in the measure) is indicated along with the name of the audio file and its duration.



In the example above, an audio files has been dragged onto the score twice (on the new staff type designed to hold audio files). The slider at the left edge of the rectangle sets the playback volume (max. 127). In this example, one audio file is set to play at a volume of 80, the second at a volume of 58. You can also see the name of the audio file, the duration (21.165 seconds). The starting beat positions of the audio files (0.70 and 2.320 beats of the measure) are displayed above the rectangle -- if the boxes are dragged around the score, the starting location will be updated. Only the starting point of the audio file is notated in the score -- the rectangle does not show where (in the score) the audio file ends. You can add as many audio files (in any reasonable audio format) to your score as your computer's CPU can handle during playback. If playback becomes choppy then you are trying to play back too many audio files.

Network Messages

Network messages are, technically-speaking, not audio, but allow you to remotely control interactive performance software such as MaxMSP or Pd (Pure data). In order to send network messages, you must use the Network Connections panel located in the Track Setup Panel to identify the IP address and port to which you want to connect and assign the staff to send messages to that network connection. It is up to the receiving software to be structured to receive UDP network messages on the specified port. MaxMSP or Pd messages are entered on the score with the Max tool (located at the end of the Tool Palette in the score window). You can include single messages or a series of messages (each separated by a semicolon) or you can create continuous messages using a NoteAbilityPro breakpoint function. The example below shows some MaxMSP messages embedded in a NoteAbilityPro score.

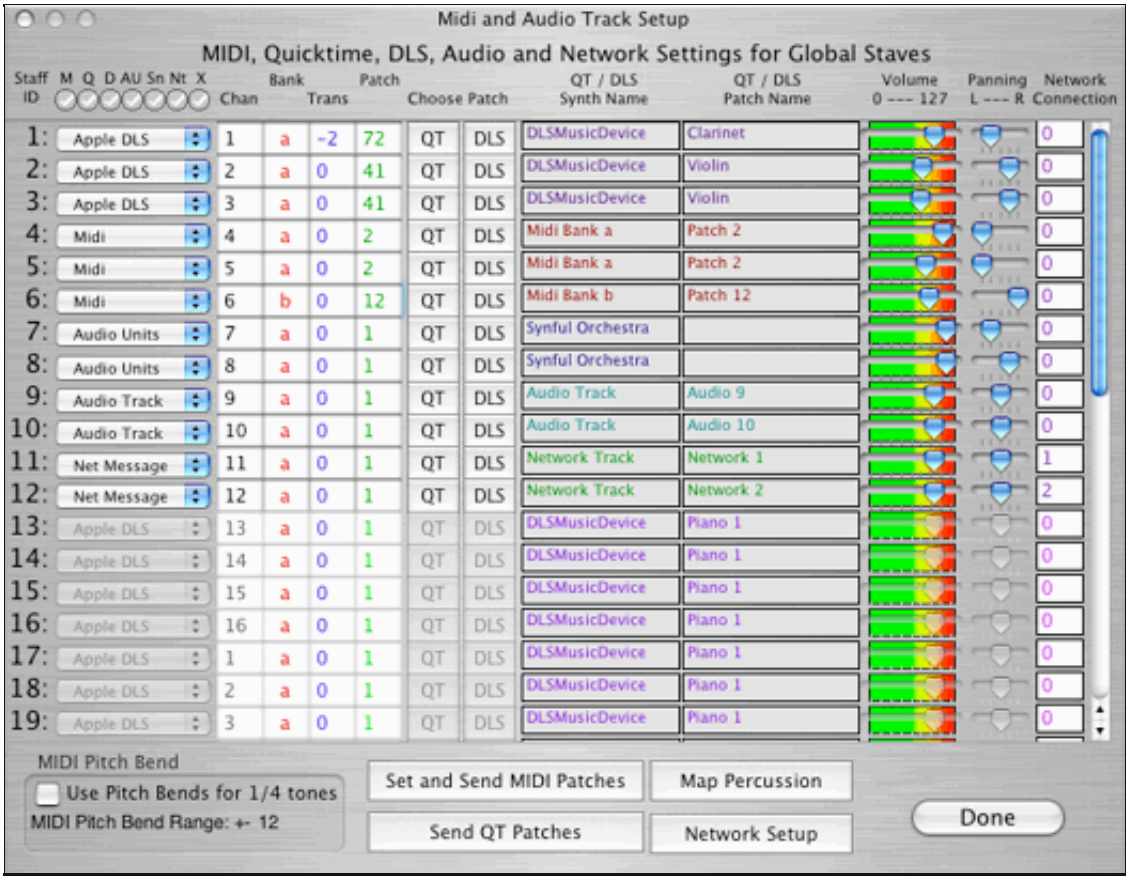


See also

- Track Setup Panel
- Midi Ports Panel
- Audio Units Panel

Track Setup Panel

1. Choose **Audio-MIDI** from the main menu.
2. Choose **Track Setup...** from the **Audio-MIDI** menu.



The main purpose of the Midi and Audio Track Setup panel is to specify the audio method used for playback on each staff of your score along with playback channel and/or bank, playback transposition, starting patch number, stereo position and track volume. All tracks in this panel are referenced to the corresponding staff ID (which is the number that appears at the right edge of each staff).

When you create a new score, the Audio method specified in the Sound/MIDI pane fo the Preference panel is used for all staves in the score. You can open the Track Setup panel at any time in order to change the audio output method or to modify any of the other playback setting.

For each Staff ID, you can set the Midi/Quicktime channel that the notes on the staff will be sent to, the playback transpositon for that staff, the MIDI bank that the staff i s associated with and the patch number that will be sent when that staff is played back. The MIDI bank is indicated by a letter "a" through "h", and corresponds to the MIDI out ports that have been set up in the Sound/MIDI pane of the preference panel - if desired each output port can be designated as a different MIDI bank. Each row also has a button which allows a Quicktime patch to be set from the panel that allows you to choose the Quicktime instrument, and the Quicktime instrument name is displayed.

Choose the Playback Method

First you should choose which playback method you would like to use for each track (i.e. staff) of your score. Use the pull-down menu at the right of the panel to choose one of the following choices:

MIDI	play sounds on an external MIDI device (or through interapplication MIDI)

Quicktime	use Quicktime Musical Instruments
Apple DLS 1 – Apple DLS 6	use one of the 6 Apple DLS Players (with Quicktime sounds or other installed sound banks)
Audio Units	use Audio Unit components as setup in the Audio Units panel
Audio Track	playback embedded audio files
Net Message	send messages through a network to a computer running MAX/MSP
Off	no playback will occur on that track

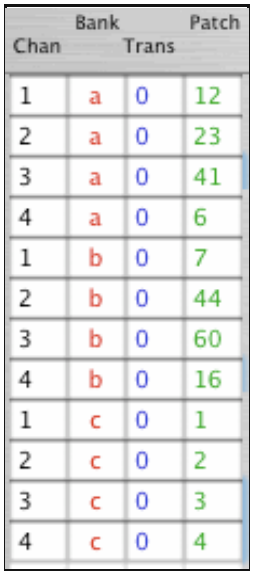
If you want to change all tracks to a different playback method, click on the corresponding check button above the column of pull-down menus.



Set Channels and Banks

For each track using MIDI, Quicktime, Apple DLS or Audio Units, set the playback channel. Some Audio Unit synthesizers will only support 1 channel, so in this case, keep your channel set to 1. All tracks set to the same channel and the same playback method will use the same sound for playback. However, if you are using a separate DLS Player (eg. Apple DLS 1 or Apple DLS 2), you can set each channel on each player to have a different instrument (patch).

For every MIDI track, you should set the bank number (a through h) which corresponds to the MIDI port configuration in your MIDI Ports panel. If you are using only one MIDI device, it will likely be set to bank a. Using banks allows you to send 16 channels of MIDI to each of up to 8 connected synthesizers. If you are not using MIDI for playback, the bank settings are ignored.



Chan	Bank	Trans	Patch
1	a	0	12
2	a	0	23
3	a	0	41
4	a	0	6
1	b	0	7
2	b	0	44
3	b	0	60
4	b	0	16
1	c	0	1
2	c	0	2
3	c	0	3
4	c	0	4

In the example above 3 MIDI devices are used on banks a, b, and c and each MIDI device is using channels 1 through 4.

Set Playback transposition

The playback transposition is set in numbers of semitones (above the written note being positive and below being negative). The most common transpositions used by orchestral instrument are:

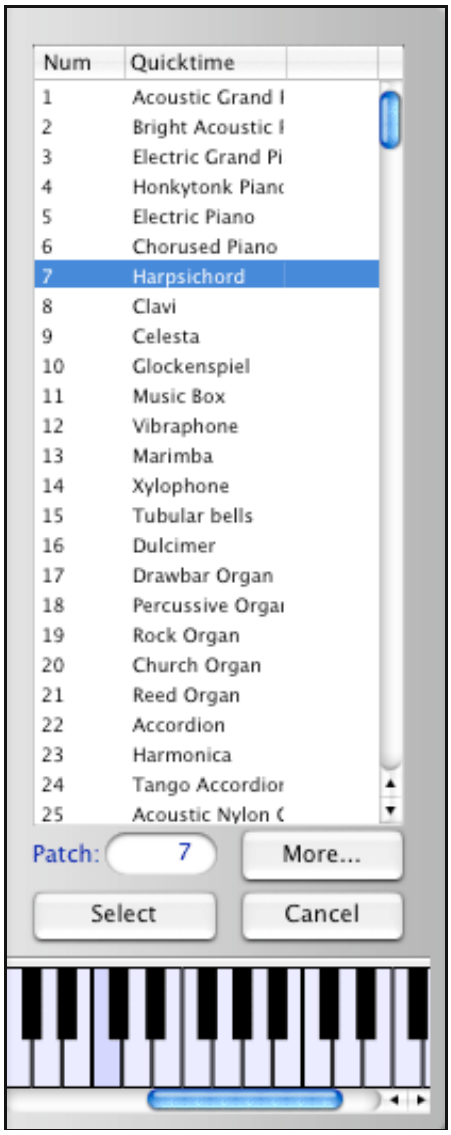
24 semitones	Up two Octaves
12 semitones	Up one Octave
5 semitones	Up a Perfect Fourth
3 semitones	Up a Minor Third

2semitones	Up a Major Second
-2 semitones	Down a Major Second
-3 semitones	Down a Minor Third
-5 semitones	Down a Perfect Fourth
-7 semitones	Down a Perfect Fifth
-12 semitones	Down one Octave
-14 semitones	Down a Major Ninth

The playback transposition settings affect the pitch output for tracks using MIDI, Quicktime, Apple DLS, and Audio Units.

Set Patch Number

You can set the patch number to be used at the beginning of the score by entering the number in the Patch field and typing Return. The instrument name (if known) will appear in the QT/DLS Patch Name field. If you do not know the patch number of the sound you want, click on either the **QT** or **DLS** buttons on each track. This brings up a panel which allows you to choose a Quicktime or DLS instrument and to hear the instrument by playing on the keyboard. The DLS button will display the instrument choices for the sound font currently set to that DLS Player (eg. Apple DLS 1).

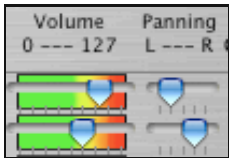


Standard Quicktime or DLS instruments are displayed in a table for easy access. There is a **More...** button in the Quicktime instruments panel which allows you to choose extra sounds (including drum sets and sound effects). Once you have chosen your Quicktime or DLS instrument, click on the **Select** button to

load your choice into the Track Setup panel.

Set Volume and Panning

The volume slider on each track can be used to adjust for different output levels that may occur from different audio methods you are using. Changes to the volume of a track have no effect while the score is playing back - you must stop the score before changing the track volume.



The stereo position sliders can be used to place tracks in various positions in stereo space. All sounds in that track will play in one of 5 stereo positions: Hard Left, Mid Left, Centre, Mid Right, and Hard Right.

Set Network Connection

If you are sending messages to other computers across a network, enter the network ID number in Network field. This is only necessary if the track is set to **Network Message** and you are performing interactive music using Max/MSP or PD across a network.

Other Buttons

The **Send QT Patches** button should be clicked after new patch numbers have been entered in the Patch Number field of this panel. This button passes the new values to the front score so that the correct patches will be heard when the score is played.

Once you have set all the necessary controls for each track in your score, you can close this panel and all the settings will be saved with your document.

If you have checked the **Send Patch Number On Playback** button, and are playing back through MIDI, then the patch number set for each staff will be sent before the first note of the score is played.

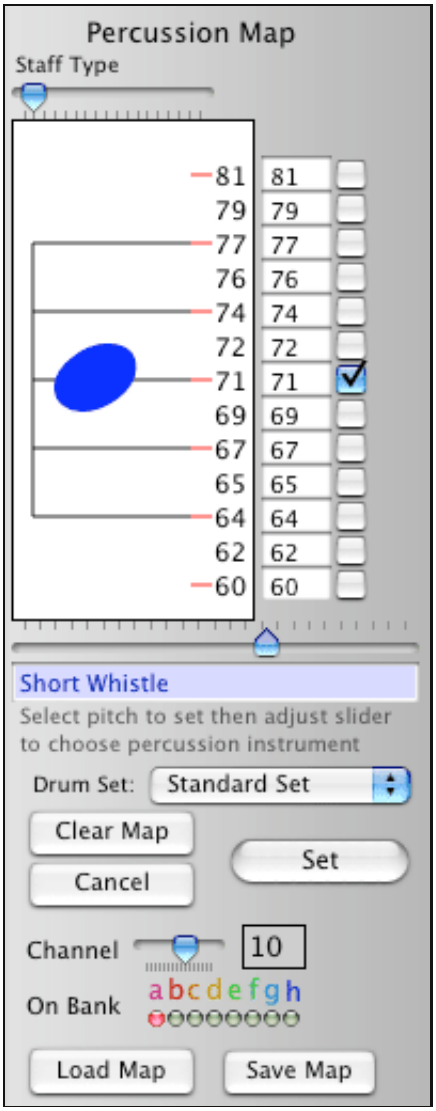
If you have used quarter-tones in your score and you want them to be played back on your MIDI synthesizer, check the **Use Pitch Bends for 1/4 tones** button and set the Midi Pitch Bend range to match the setting on your synthesizer. Since Midi pitch bend shifts all notes on the Midi channel, a single line involving quarter tones will play correctly, but chords containing quarter tone chords may not sound correctly using Midi. Quarter-tone playback is always active when using Quicktime or DLS playback.

The **Set and Send MIDI Patches** button displays a second panel along the right side of this panel.



This panel allows patches to be sent to a connected MIDI synthesizer in order to configure any desired voices you want in the instrument. Indicate the bank that the synthesizer is on along with the MIDI channel and patch number you want sent. Click on the **Send Patch To Channel** button to send the patch number. Once you have finished sending patches, click on the close button to remove the panel.

The Percussion Map panel appears when you click on the **Map Percussion** button on the Track Setup panel.



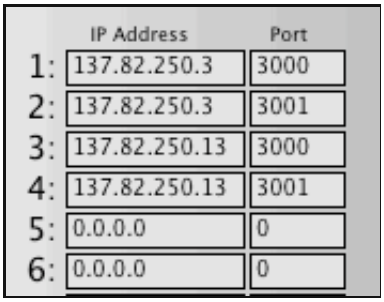
The purpose of the Percussion Map is to map the lines and spaces of the staff to specific percussion sounds. To do this, use the following steps:

1. Choose the staff type you are using for the percussion part in your score by moving the Staff Type slider.
2. Choose the Channel and Bank that the percussion mapping will be applied to. (All staves using this channel and bank will be affected). If you are using a General MIDI synthesizer for playback, select Channel 10.
3. If you are using Quicktime, select a Drum set from the **Drum Set** pull-down menu.
4. Select the Check box that corresponds to a line or space on the staff for which you would like to choose a percussion instrument. (The pitch numbers that appear at the right side of the staff display correspond to the pitches on either a treble clef, a percussion clef, or when no clef is displayed).
5. Use the slider below the staff display to select the sound that you want on the selected pitch.
6. Continue steps 3 and 4 for each pitch you want mapped to a percussion sound.
7. Click on the **Set** button to apply the percussion map to your score.

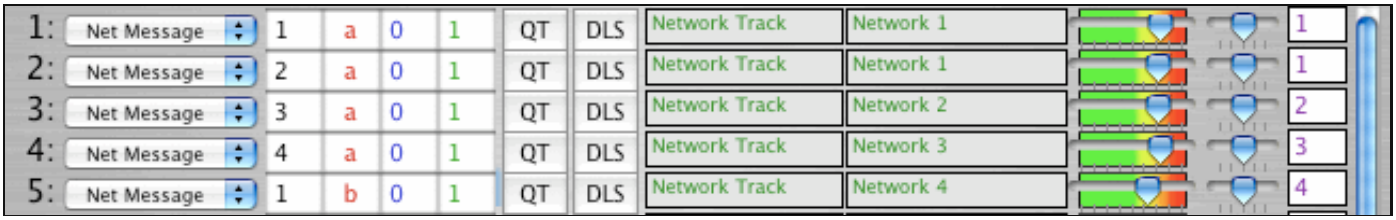
The **Clear Map** button returns the panel to its default state, and the **Cancel** button closes the panel and makes no changes to your score.

The **Load Map** and **Save Map** buttons are used for saving and loading your percussion map setting on your harddrive. Percussion maps have the extension .npm.

The **Network Setup** button displays a panel which allows you to enter up to 16 IP address and ports for network connections. In the example below 2 IP address each with 2 ports have been setup. These addresses and ports are identified as numbers 1 through 4. Any tracks containing network messages which are set to use network IDs 1 through 4 will send messages to the remote machine at this address and port.



The following tracks are setup to send messages to each of the 4 address-port configurations. The first 2 staves will send messages to network configuration 1 while staves 2, 3 & 4 will send messages to network configurations 2, 3 & 4.



- All settings in the Track Setup panel are saved with your document and loaded into this panel whenever you document becomes the front-most score

- You can set the patches of all staves by clicking on one of the **Set In Score** buttons on the Sound/MIDI tab of the NoteAbilityPro Preferences panel. These button passes the selected patch number to all QT or DLS staves of the front-most score.

See also

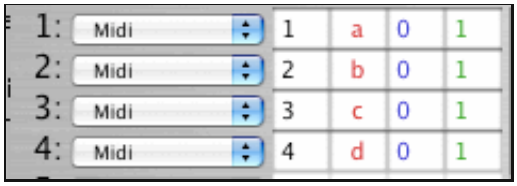
- Midi Connections
- NoteAbility Preferences
- Midi Ports Panel
- Audio Units Panel

MIDI Ports Panel

1. Choose **Audio-MIDI** in the menu bar.
2. Choose **Midi Ports...** from the **Audio-MIDI** menu.



The MIDI Ports panel allows you to configure your MIDI input device and to configure your MIDI output ports to different banks. In the example above a MIDIMan 2 X 2 interface is connected to the computer and the Max/MSP application (which can send and receive MIDI) is running. MIDI input is set to Port A of the Midiman 2 X 2, and each of the 4 output devices is set to a different bank (a through d). MIDI input will be received by whatever keyboard device is connected to Port A of the interface. The Track Setup panel can be configured to send music to each of the 4 output ports.



NoteAbilityPro supports up to 16 input and output MIDI devices. Some devices (such as USB piano keyboards) my have only inputs, and some applications have outputs but no MIDI inputs.

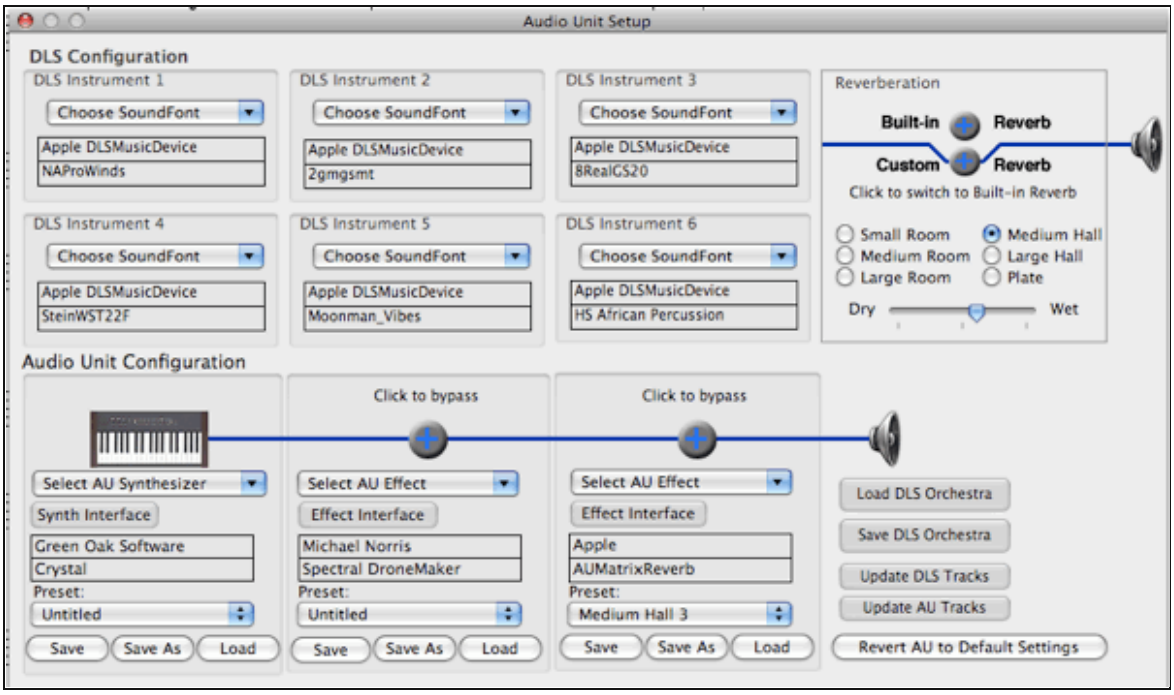
Once you have configured your input and output ports, click on the **Set Midi Ports** button. The **Reload Ports** button can be used to refresh the lists of available ports. The **Cancel** button closes the panel without making any changes to the MIDI Port configuration.

See also

- NoteAbilityPro Preferences
- Track Setup panel

Audio Units Panel

1. Choose **Audio-MIDI** from the main menu.
2. Choose **Audio Units...** from the **Audio-MIDI** menu.



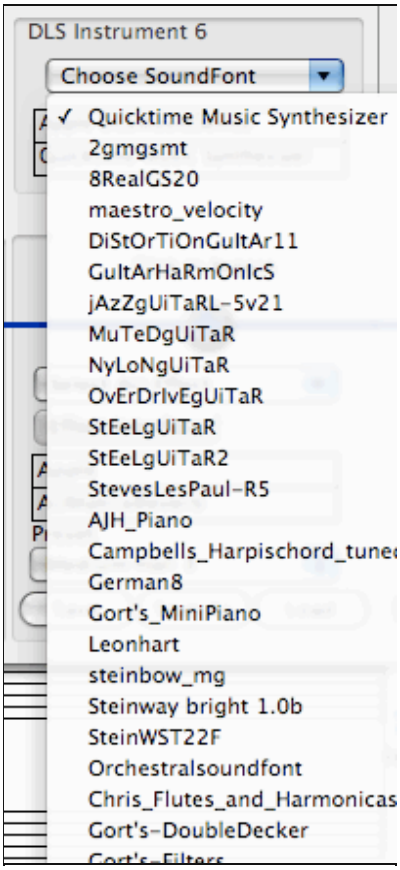
The Audio Units Panel is used for configuring both the Apple DLS synthesizer and Audio Units.

Configuring the DLS Synthesizer

The top half of the Audio Units panel relates to the Apple DLS synthesizer. As you can see from the panel, there are 6 separate DLS Players (each using the Apple DLSMusicDevice internal synthesizer.) You can use the Apple build-in reverberator or you can create custom reverberation by settng the reverb type, the mix between wet (reverberated) and dry (original) sounds. To switch between these two options, click on the icon showing the signal path.

- There is a significant CPU cost when using the custom reverberator (and when using as some of the Audio Unit effects mentioned below). If you are operating a slow computer, you probably want to use the built-in reverberation option.

You can also use this panel to choose new soundfonts for each of the DLS Players. To do this, click on the **Choose SoundFont** pull-down menu in one of the DLS Instrument areas. Any soundfont (.sf2) files that have been installed in your system will appear in the pull-down menu. In the example below, you can see that there are many sound fonts installed in this computer.



Once you have selected your soundfont, then click on the **Update Tracks** button on the Audio Units panel to update the displays in the Track Setup Panel.

If you want to save our DLS Orchestra (i.e. the 6 soundfonts currently selected), click on the **Save DSL Orchestra** button. If you want to load an existing DLS Orchestra into the front-most score, click on the **Load DLS Orchestra** button.

- In order for soundfonts to be loaded by the Audio Unit editor, then need to be installed in your *~/Library/Audio/Sounds/Banks* folder or in the system */Library/Audio/Sounds/Banks* folder.

To change the custom reverberation characteristics of your DLS synthesizer, click on the radio button beside the desired reverb room type. Next, adjust the mix between the reverberated (wet) signal and the original (dry) signal. In the example below *Medium Room* was choosen and the reverb mix was set to 75%.



Configuring Audio Units

Audio Units are audio components which can be downloaded or purchased and installed in your computer. Some audio units (such as the Apple DLS and the Apple effects units) are already installed in your computer - others you will need to install. Audio Units are stored in the */Library/Audio/Plug-ins/Components* directory.

With the lower half of the Audio Units panel, you can choose 1 Audio Unit synthesizer and you can engage or bypass 2 effects units linked in a series. To engage or bypass an effects unit, click on the + sign along the blue signal line. In the example below, the first effects unit (AUMatrixReverb) is engaged while the second effects units (AUDelay) is not.

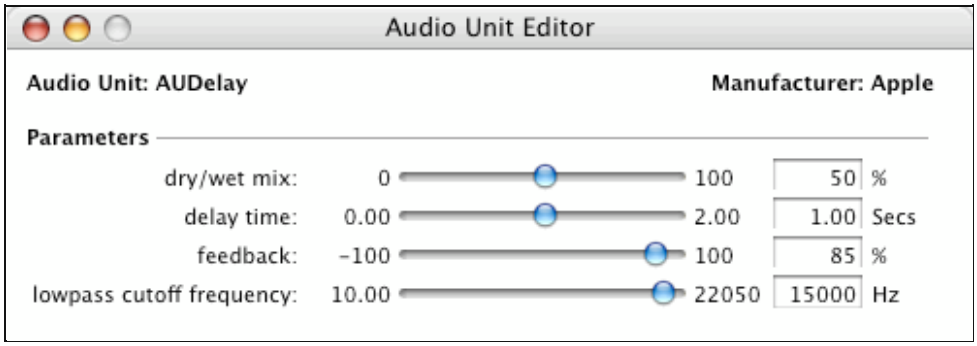


To select a AU synthesizer, use the Select AU Synthesizer pull-down menu - all available AU synthesizers should be displayed in the pull-down menu.

Each AU synthesizer has its own interface which can be displayed by clicking on the **Synth Interface** button. The interface will allow you to make adjustments and customized configurations to the synthesizer. You can save your settings in a preset by using the **Save** and **Save As** buttons, and you can load previously saved presets either with the **Load** button or by using the Preset pull-down menu.

The **Update AU Tracks** button is used to update the displays in the Track Setup panel. You should click on this button after you have selected a new AUSynthesizer.

To select a new effects unit, use one of the **Select AU Effect** pull-down menus to choose your effect. All available effects units can be accessed from these menus. If you want to modify the characteristics of the effects unit, click on the **Effect Interface** button. In the example below, the AUDelay interface is shown:



You can use the **Save**, **Save As** and **Load** buttons to create or load presets, or you can use the pulldown menus to select any previously saved presets. When you save a preset, you are given a choice (in a pull-down menu) of whether you want to save the preset in your **User** preset location I>(~/Library/Audio/Presets)or in the **Local** preset location *(/Library/Audio/Presets)*. Presets saved into your **User** preset location will only be available to you. Those saved in the **Local** preset location will be available to you and to other users on your computer.

- – At the moment, Audio Unit configurations are saved as preferences rather than as part of the score file. The last configuration of Audio Units you created will be loaded next time NoteAbilityPro is launched.
- – Since most Audio Units and soundFonts are created by other developers, there can be no guarantee that they will be stable. If you discover that an installed Audio Unit is crashing the program, remove it from its installed location.

To revert to the default Audio Unit settings, click on the **Revert to Default Settings** button at the bottom of the panel.

See also

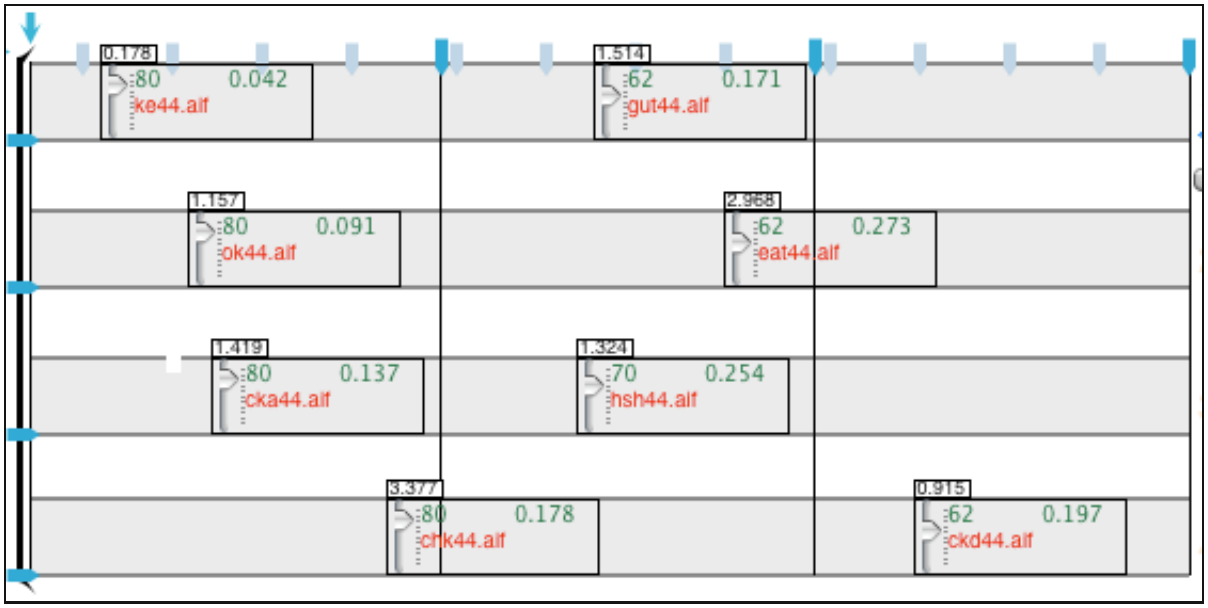
- Track Setup Panel
- Midi Ports Panel

Adding Audio Files

Beginning with NoteAblityPro version 2.0, it is possible to insert Audio files into your score. Virtually all 1 or 2 channel audio formats (including compressed format such as mp3) can be played by NoteAbilityPro. To add audio files to your score:

1. set the staves to **Audio Track** using the Track Setup panel
2. use the here Staff Attributes pane to change the staff type to the one that is designed for audio files - this is the last staff type available through the Staff Types slider.
3. drag the audio files from the Finder to the score, and adjust their positions by dragging them.

The name of the soundfile appears in the rectangle along with its duration (in seconds) and a volume slider. The number above the audio file rectangle shows the current position in the measure. The volume slider located on the left side of each rectangle allows you to adjust the volume of individual audio files.



Use the Select tool to adjust the location of the soundfile in your score. Audio files can be dragged anywhere on your score. The beat location indicated above the rectangle shows the starting position of the audio file within the score, but it does not indicate where the audio file ends - the duration located in the top-right corner of the rectangle) tells you how long the audio file is in seconds.

Embedded udio files are referenced from your hard drive, so if you alter the soundfile, it will be altered when you play it back in NoteAbilityPro. If you change the location of your original soundfiles, NoteAbilityPro will present you with a dialog box when the file is being opened so that you can locate the missing audio files.

See also

- Midi Setup Panel
- Staff Attributes Pane
- Audio Options

Using Breakpoint Functions

Using Breakpoint functions (BPFs) in NoteAbilityPro

Breakpoint functions can be used to represent continuous control data which can be sent to MaxMSP or PD during score playback. In order to do this, NoteAbilityPro must be connected to MaxMSP through a network connection (either remotely or locally) and the staff on which the BPF is placed must be designated in the Track Setup panel as a network staff with the appropriate IP address specified in the Network Connections pane. Rather than being restricted to sending individual messages, the embedded BPF can send continuous data to the designated receiver.

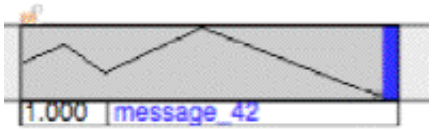
1. Importing BLPs

1. The file containing the BFP data must have the extension .bpf
2. Drag the file onto an open NAPro score. The BFP will be attached to the nearest staff at the drop location. The domain of the BPF is automatically adjusted to the last X value in the BPF data.

2. Data Format of BPF files

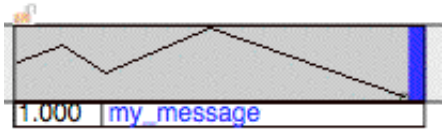
1. The minimum data format is a series of pairs of floating point numbers (or ints) separated by "white space" characters. These are read as the X and Y values of the BPF. A BPF message label of the form "message_#" is automatically generated and included in the BPF.

   0.0 0.5 23.0 0.75 45.0 0.35 100.0 1.0 200.0 0.0



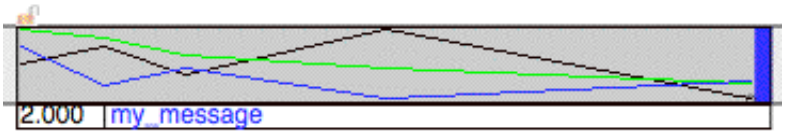
2. The BPF message label can be included in the first line of the BPF file Ð it should be a single continuous sequence of non-white-space characters.

   my_message 0.0 0.5 23.0 0.75 45.0 0.35 100.0 1.0 200.0 0.0



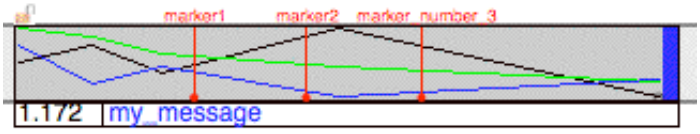
3. The BFP may include multiple break point functions (to a maximum of 4.) In this case, the number of layers must be stated in the line after the message label using the format "numLayers #". In this format, the data should consists of 1 X value followed by # Y values.

   my_message
   numLayers 3
   0.0 0.5 1.0 0.75
   23.0 0.75 0.88 0.21
   45.0 0.35 0.63 0.45
   100.0 1.0 0.44 0.03
   200.0 0.0 0.22 0.27



4. Any of the above BPF formats may include markers at the end of BPF data list. The markers are separated by the string "markers". Markers are 2 numerical values (ints or floats) which are the startX and endX values of the marker followed by a marker name. The marker name should be a continuous series of non-white-space characters and may include quotation marks around it Ð these are ignored. Currently the endX value is not used, but it could be used later to represent a marker range.

   my_message
   numLayers 3
   0.0 0.5 1.0 0.75
   23.0 0.75 0.88 0.21
   45.0 0.35 0.63 0.45
   100.0 1.0 0.44 0.03
   200.0 0.0 0.22 0.27
   markers
   55.0 55.0 marker1
   90.0 90.0 "marker2"
   126.0 126.0 marker_number_3

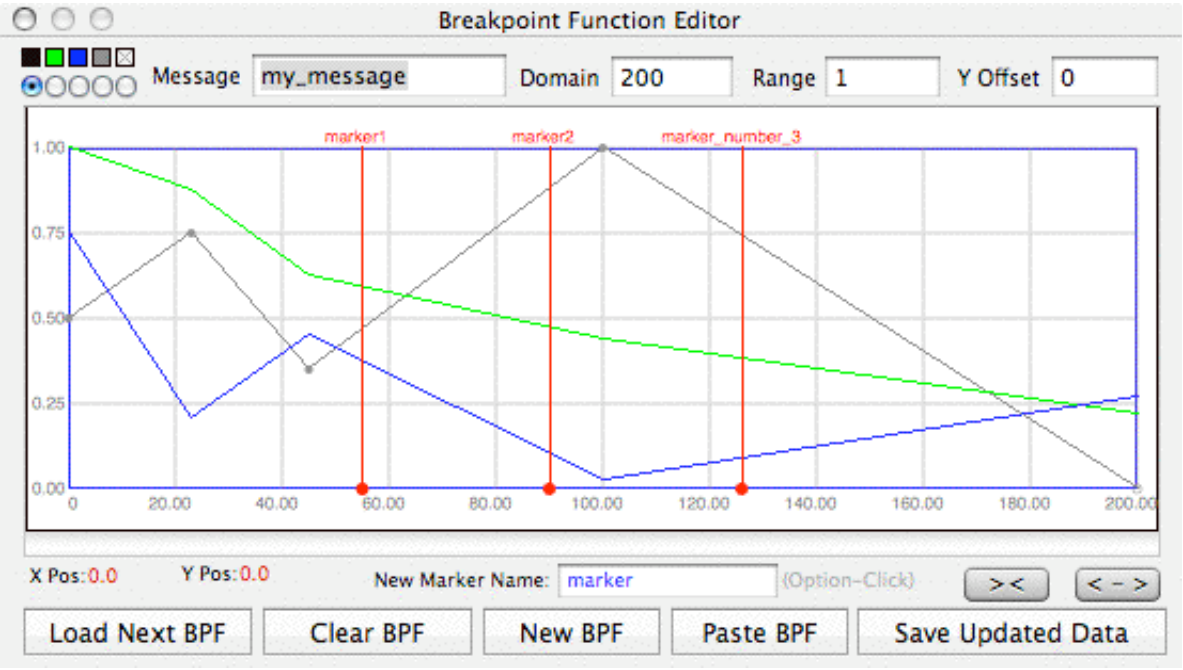


3. Moving and Adjusting the BPFs in NoteAbilityPro

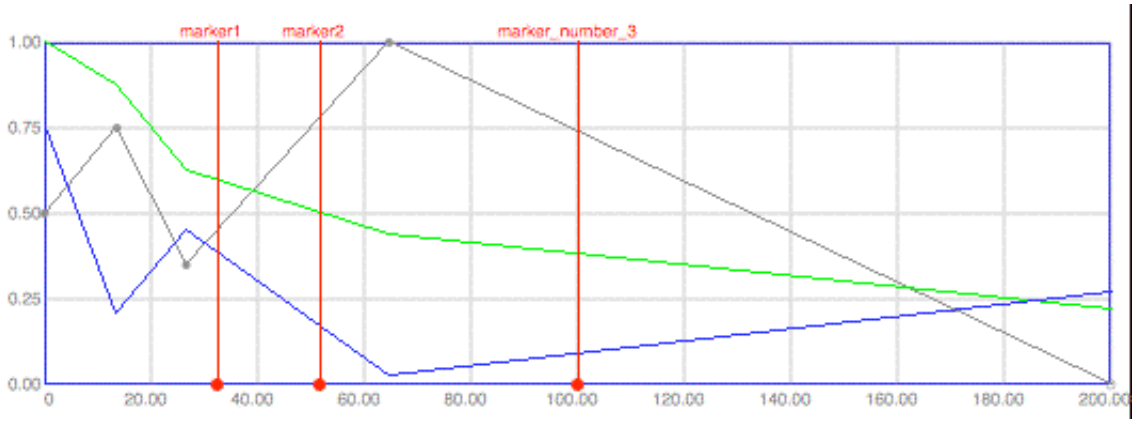
1. The BPF can be freely dragged around the score by choosing the Selection Tool from the Tool Palette, clicking in the body of the BPF, and dragging the mouse. The size of the BPF can be altered by clicking in and dragging the blue bar on the right side of the BPF. The starting beat location of the BPF is indicated in the top-left corner of the BPF (each measure starts at 0.0)
2. BPFs can be selected, copied and pasted like any other NAPro image. In paste operations they are positioned with the left edge of the BPF at the Entry Cursor.
3. It is also possible to adjust the position of the markers directly on the score. This is done by holding down the Option key while clicking on the red circle at the bottom of the marker and dragging the marker to a new location. The points in the BPF are adjusted as you move the markers.

4. Editing the BPF in NoteAblityPro

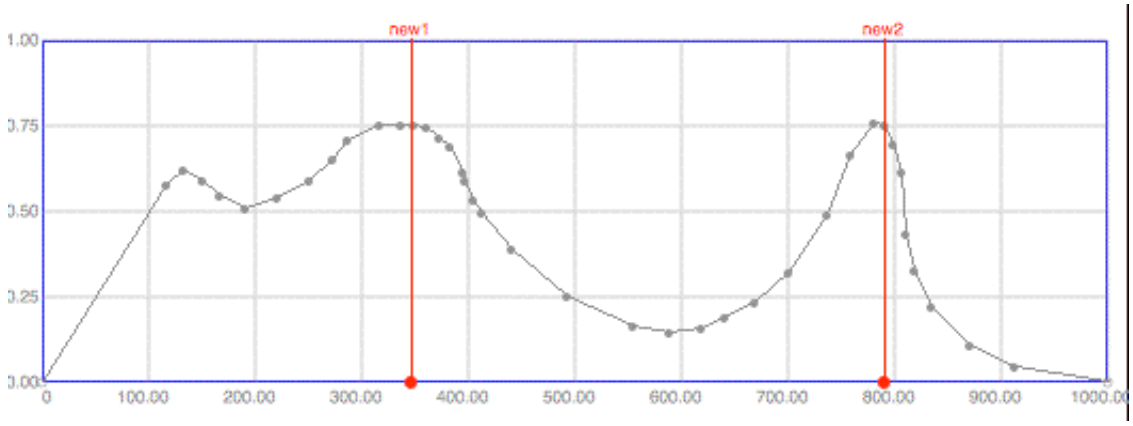
1. BPFs can be selected in NAPro using the Selection tool from the tool palette and drawing a rectangle which includes the bottom-left corner of the BPF image. Once selected, the BPFs can be viewed in the BPF Editor which can be opened by selecting the BPF EditorÉ item in the Tools menu. Click on Load Next BPF button in the editor to load the selected BPF into the Editor. If you have selected more than 1 BPF, you can click on the **Load Next BPF** to load the next selected BPF into the editor. Once loaded, the message label, domain, range, y-Offset and all the points of the BPF should be displayed.



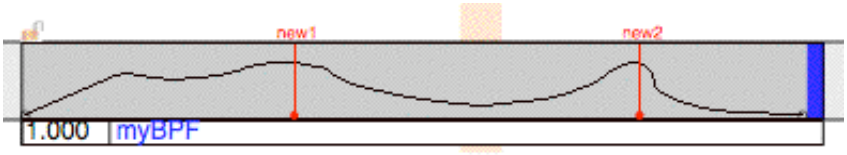
2. The two buttons on the bottom right corner of the Editor compress and enlarge the editor view. The small coloured buttons in the top left corner of the Editor allow you to specify which layer of a multi-layered BPF is editable. The 4 colours refer to the colours of the BPFs (black, green, blue, gray) with the last one indicating that none of the BPFs are editable.
3. You can alter the message label, domain, range or y-Offset (i.e. value of the bottom line of the graph) of the BPF by entering new values in the fields along the top of the editor window and typing *Return*. The BPF is re-displayed with the new graph values, but the actual points of the BPF are not altered.
4. To alter the position of an existing point in the BPF, click the cursor onto the circle around the point and drag it, To remove an existing BPF, hold down the Shift key and click on the circle around the point. To enter new points click the cursor in an empty area of the window and drag the point into position. (N.B. Only 1 BPF of a multi-BPF can be editing at a time.)
5. To add markers to a BPF, type the desired marker name into the field below the BPF, then hold the Option key down and click in the window. To remove a marker hold the Shift key down and click on the red circle at the bottom of the marker. To move a marker drag the red circle to the right or left. When you drag the markers, all point between the marker and previous and next markers are adjusted linearly. In the BPF below, the markers have been adjusted:



6. To save the altered BPF, click on the Save Updated Data button and the original BPF in the NAPro score will be updated.
7. To create a new BPF from scratch, clear the Existing BPF using the Clear BPF button. Then click on the New BPF to create a new empty BPF (with the indicated message label, domain, range and range Offset. Add points and markers to the BPF as described above. In the example below a new BPF has been created with two markers: new1 and new2.

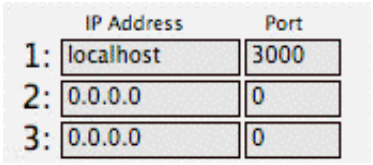


8. To enter the BPF into the score, click on the Paste BPF button. It will appear at the current location of the Entry Cursor in the score, where it can be moved and stretched.

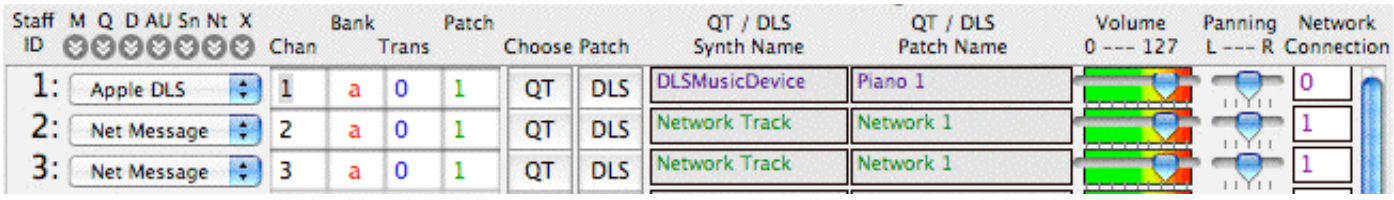


5. Sending BPF Data to MaxMSP or PD

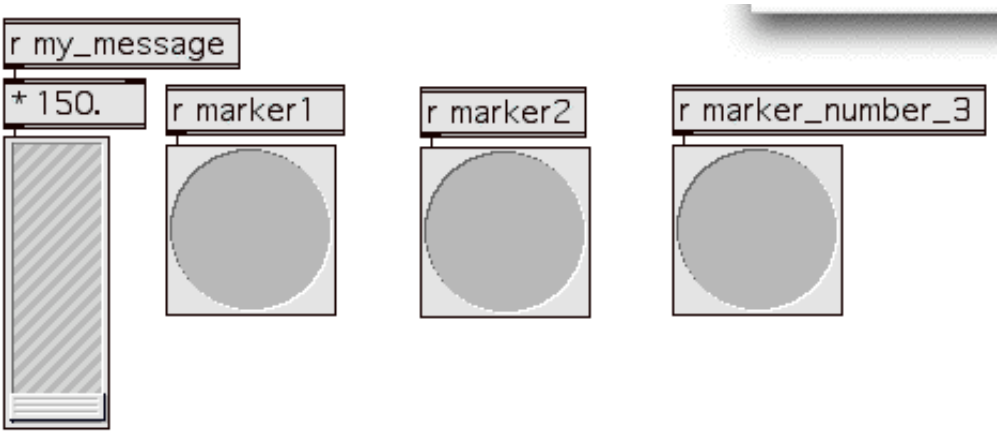
- The staff on which the BPF is located must be designated as a network track. This is done through the >B?Track SetupÉ item in the **Audio/MIDI** menu. Click on the **Network Setup** button and enter the IP address and port that Max will be receiving data on. If it the same machine use localhost or the IP address 127.0.0.1 and if you are using the netReceiverBP from the UBC Max/MSP toolbox, set the port to 3000 or 3001. If you are using the Pd netReceiver objects from the UBC Toolbox set the port to 3002 or 3003.



- If you are not using the UBC Max/MSP Toolbox, then use the netreceive object set to receive UDP messages on the specified port. The UBC Toolbox can be downloaded from: http://www.opusonemusic.net/muset/toolbox.html. Once you have setup your network connection in the Network setup panel, set each of the staves to connect to one of those channels by typing the network number (1-16) in the last field of the Track Setup panel. On the left side of the panel, set the pop-up menu of the desired staves to Net Message. In the example below, the top staff is an Apple DLS track and the remaining 2 tracks are being sent to Network connection 1 (which was set to localhost 3000).



- During performance, the BPF data will be sent to a receive that corresponds to the message label in Max/MSP or Pd - in the example above, the data will be received by the Max/MSP or pd object [receive my_message] or [r my_message]. The markers will be sent as a bang to the receive of the same name [r marker 1] [r marker2] and [r maker_number_3]. In the case of a multiBPF, only the first BPF is sent out during performance in this version. A Max/MSP patch set to receive this data would look something like:



See also

- NoteAbility menus
- Track Setup Panel

Reference

This Chapter includes references for NoteAbilityPro commands, shortcuts and definitions as well as information on several advanced topics such as techniques for using QuickScrawl and for entering Figured Bass symbols.

- QuickScrawl
- QuickKeys
- Figured Bass symbols
- Command list
- Hot Button
- Control Points
- Cursors
- Questions and answers
- Keyboard alternatives and shortcuts
- Music Font layout
- NoteAbilityPro definitions
- Music Performance Terms
- Glossary
- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro system requirements
- NoteAbilityPro registration
- NoteAbilityPro licensing agreement
- About the Author
- Acknowledgements
- Release Notes

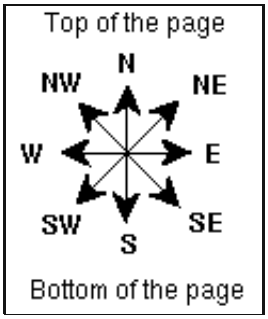
See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 13 – Example Scores and Tutorials

Quickscrawl Routines

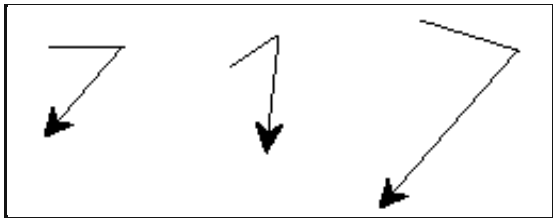
QuickScrawl is an input method that allows gestures to be drawn on the score with the mouse and interpretted as music images. This input method can be used at any time by simply holding down the Command and Alternate keys together (which changes the cursor to a pencil), placing the mouse at the desired location and holding down the the mouse button as you draw the gesture for the desired image. Although the starting position of the drawing will determine the placement of the image, the gesture can be drawn as small or are as large as you want.

QuickScrawl is essentially a short hand and works by reducing the drawing to a series of direction vectors (which can be thought of as compass directions.)

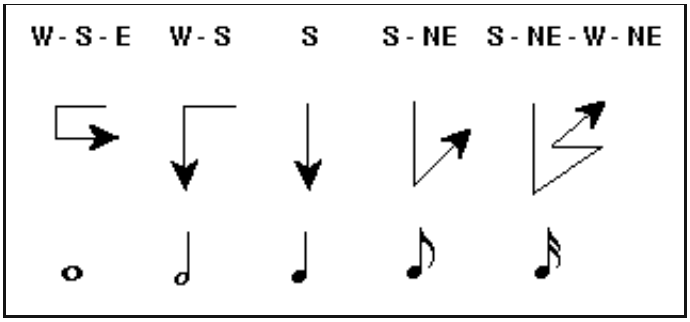


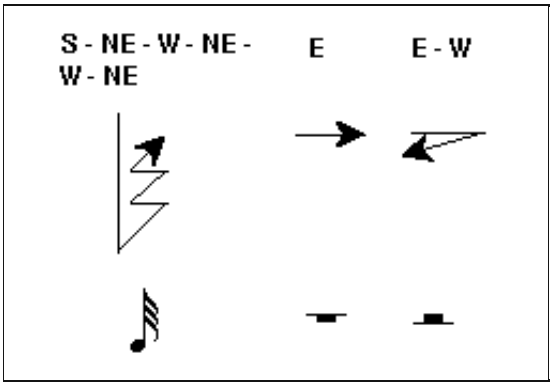
If your drawing matches one of the templates for NoteAbilityPro images, the image is placed where you started drawing (or in the case of notes, at the beat position of the Entry Cursor and at the pitch where you starting the drawing). When notes are entered, the stem direction is determined by the pitch of the note and the current voice, and beams will automatically be formed if Auto Beam is on.

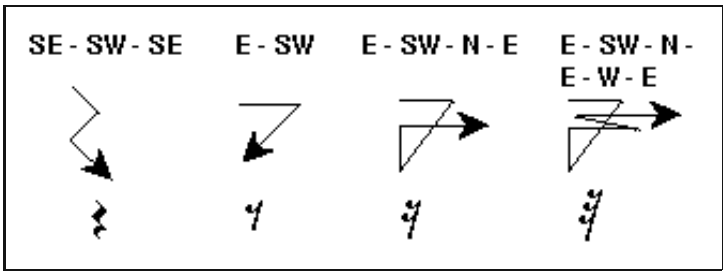
There is some flexibility in the matching of your drawing to the template, so that even though an eighth rest has the template **E** followed by **SW**, all three of these drawings will result in an eighth rest appearing at the Entry Cursor.

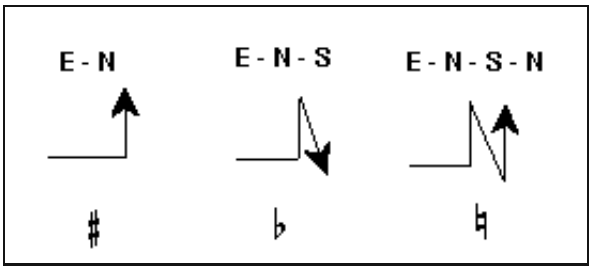


The templates for NoteAbilityPro images are:

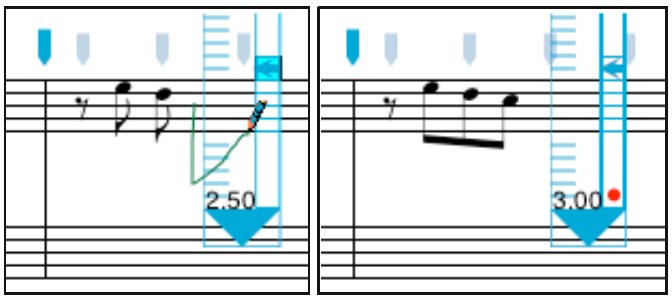








Drawing this QuickScrawl gesture -- results in an eighth note



See also

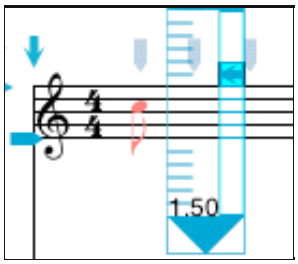
- Keyboard alternatives and shortcuts
- QuickKeys

QuickKeys

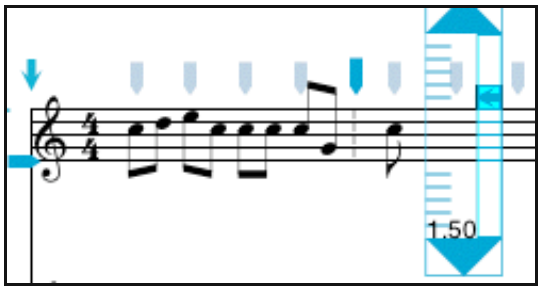
QuickKeys is an input method that allows the numeric keypad on your computer to be used to enter notes. Basically, the numbers on the keypad 1 – 9 refer to the diatonic interval between the previously entered note and the next note to be entered. The *Shift* key causes the interval direction to be down, otherwise it is up.

Normally you should enter the first note using another input method (such as mouse entry) so that a starting pitch has been set. For subsequent notes on the same staff, simply set the new rhythmic value (if the value is different from the previous one) and type the interval number on the keypad – the new note will appear on the score. If you want add an accidental to the note just entered, you can use the *+* and *–* keys on the keypad to increase or decrease the pitch by a semitone. The following example should make this clear:

Begin by typing *e* to set the Command to enter eighth notes and entering the note C4 with the mouse.
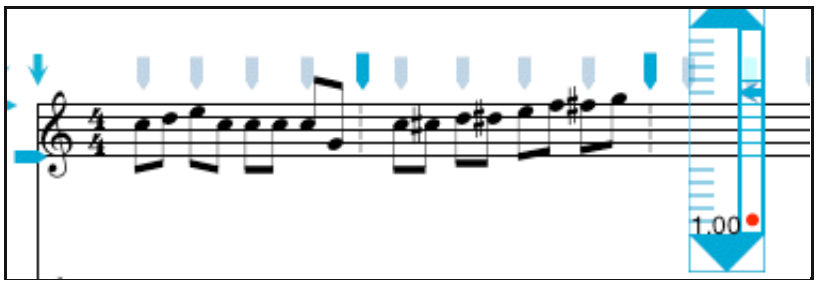


Next type the following keys on the numeric keypad:
2 2 shift–3 1 1 1 shift–4 4 The following notes will appear:



Next, type the following keys on the numeric keypad:
1 + 2 1 + 2 2 1 + 2

The following notes will appear:



- In order to use QuickKeys, you should make sure that the **Enable QuickKeys** check box in the Preferences panel is selected.
- after changing to a new staff, it is safest to enter the first note using the mouse, then continue adding subsequent

notes using QuickKeys.

– while using QuickKeys, you can enter rests using Command-r, and you can adjust any incorrect pitches using the keyboard arrow keys.

See also

- Keyboard alternatives and shortcuts
- QuickScrawl

Entering Figured Bass

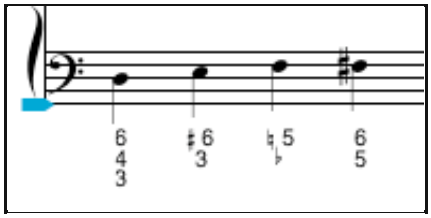
Figured bass symbols (basso continuo) can quickly and easily be added in NoteAbilityPro. Figured bass symbols are a subclass of lyrics, so they are entered and adjusted in a similar way. However, rather than using the Lyric tool, the Insert Image tool is used, and a Figured Bass command is typed followed by the Return key.

To enter figured bass symbols place the Entry Cursor on the desired staff and starting beat position and type the figured bass command followed by return. After the Figured Bass is entered, the Entry Cursor is incremented to the next note in the current voice.

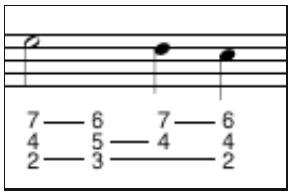
The Command for figured bass begins with "F" (an uppercase F) and is followed by the figures (with each row in the figure separated by a comma). The available commands are numbers (1 through 9) and "#", "n" "b" or "/" for sharp, natural, flat or a slash through the number, and "-" to create an line that extends to the next figure. (Extension lines are connected to the next figure which could be a number or another line extension). There can be up to 4 rows of numbers in each figured bass symbol. NoteAbilityPro looks after proper alignment and positioning of the figures.

The examples show the sequence of commands and the figures that result. The first example shows a variety of figures, while the second shows how line extensions can be used.

F6,4,3 F#6,3 Fn5,b F6,5



F7-,4,2- F6,5-,3- F7-,4,- F6,4,2



- The font (and font size) of figured bass symbols can be changed by setting the Lyric font in the Preferences panel or by setting a new font in the Lyric pane in the Music Images panel and the distance of the figured bass from the staff can be adusted using the Lyric position button.
- Although extension lines will not extend to the next figure when they are first entered (since the next figure does not yet exist), they will be drawn correctly when the measure is later redrawn.

See also

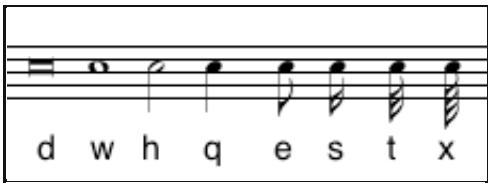
- Entering Lyrics
- Lyrics Pane

Command List

The following is a complete list of NoteAbility commands along with their corresponding images. Except for lyrics and figured bass symbols all commands should be entered as lower case characters (ie. "fp" is a correct command, "FP" is not.)

Regular Notes
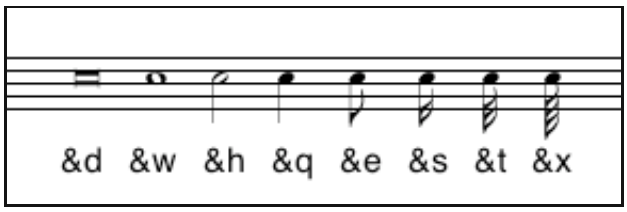
(placed at the Entry Cursor and affixed to the rhythmic spine)



Commands for regular notes can be extended by half their duration with a "." (eg. "q." = a dotted quarter note). They can also be combined to create tied groups of notes (eg. "he." = a half note tied to dotted eighth note.)

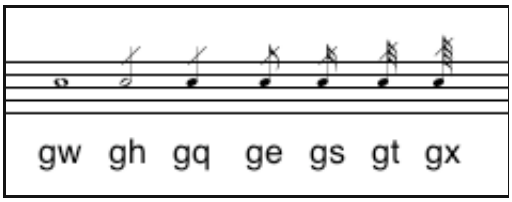
Graphic Notes

(placed at the mouse cursor independent of the Entry Cursor)
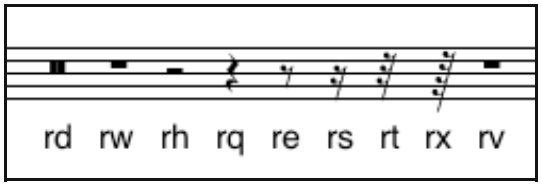


Grace Notes

(placed at the mouse cursor independent of the Entry Cursor)



Rests

(placed at the Entry Cursor and affixed to the rhythmic spine)

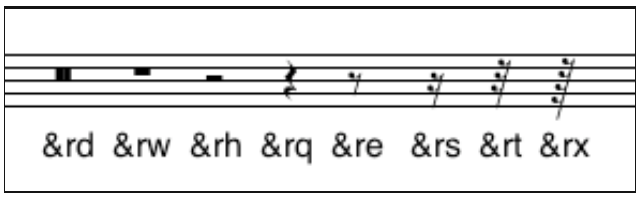


As in the case of regular notes, dots can be added to rest commands and the commands can be used in combination to produce a series of rests (eg. "rhqe." = a half rest followed by a quarter rest followed by an dotted eighth rest.)

- The command "rw" is a full measure rest (and will be centred in the measure) while the command "rv" is a 4-beat rest for use in 4/2 or 3/2 meters.

Graphic Rests

(placed at the mouse cursor independent of the Entry Cursor)



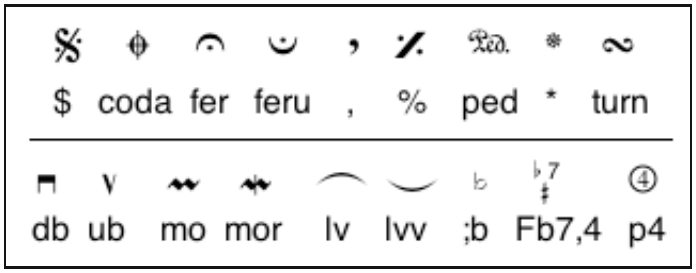
Dynamic Marks

(placed at the mouse cursor independent of the Entry Cursor and associated with the closest staff **above** the image)

pppp	*ppp*	*pp*	*p*	*mp*	*mf*	*f*	*ff*	*fff*	*ffff*
pppp	ppp	pp	p	mp	mf	f	ff	fff	ffff
ffffp	*fffp*	*ffp*	*fp*	*fffpp*	*ffpp*	*fpp*	*fffppp*	*ffppp*	*fppp*
ffffp	fffp	ffp	fp	fffpp	ffpp	fpp	fffppp	ffppp	fppp
			sf	*sfz*	*sffz*	*sfp*	*fz*		
			sf	sfz	sffz	sfp	fz		

Symbols

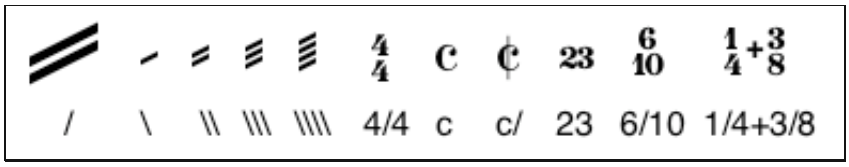
(placed at the mouse cursor independent of the Entry Cursor associated with the closest staff to the image)

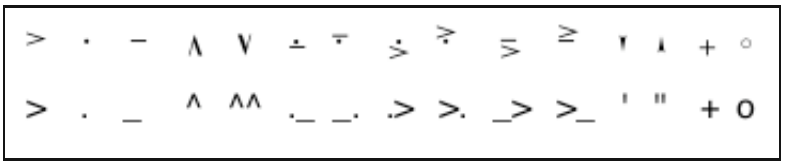


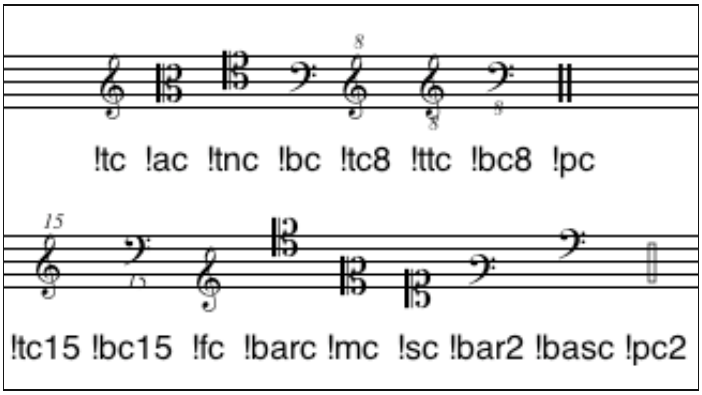
(N.B. The command "p" followed by a number inserts a patch change to the indicated MIDI program number on the closest staff.)

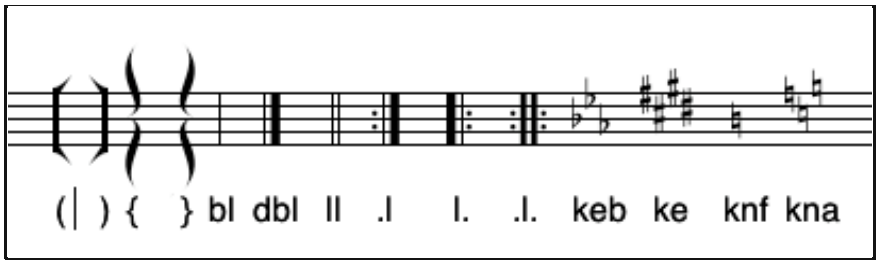
Other Images
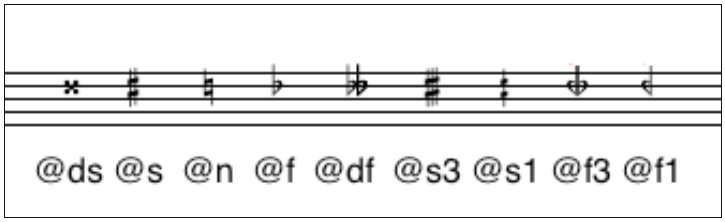
(All of the images below are graphical versions of images that are usually added to the score through Inspector panes or menu items)











Alternative key signatures commands are comprised of "k" followed by the major key signature name ("cb", gb", "db", "ab", "eb", "bb", "f", "c", "g", "d", "a", "e", "b", "f#", "c#"). If you want the key signature to be drawn with naturals (which is sometimes used to cancel a previous key signature), the command is "kn" followed the the major key signature name (eg. "knf#").

See also

- Image List panel

Hot Button

NoteAbilityPro allows any button to be designated as the "Hot Button" and provides a temporary keyboard shortcut for that button. The current Hot Button is indicated by a small red circle located at the top-left corner of a button -- instead of clicking on this button, you can type Command-spacebar. To make a different button the Hot Button, click on the small circle on the new button. The new circle will now be highlighted and the action of the new button will occur when you type Command-spacebar. (Since only one button can be the Hot Button at any one time, the highlight is removed from the previous Hot Button.) In the example below, the Hot Button is changed from the **Slur Notes** button to the **Insert Rest** button.

Hot Button is the **Slur Notes** button (the default).



Hot Button is changed to the **Insert Rest** button.



You should set a button to be the Hot Button whenever you are going to be performing an operation repeatedly - especially if it involves selecting material and then moving the mouse to click on the button, then moving the mouse back again to select more material, etc.

- When NoteAbilityPro starts up, the **Slur Notes** button is the default Hot Button.

See also

- Keyboard alternatives and shortcuts

Control Points

Control Points are the handles by which NoteAbilityPro images can be moved and adjusted. Some images have one control point, some have two, and a few (eg. slurs and curves) have three.

Simple images such as dynamic marks, ornaments have one control point. Clicking on this control point, or including this control point in a selection rectangle allows the entire image to be moved.

Images with two dimensions such as notes (whose stem height changes), crescendo marks, trills, lines, etc. have two control points. Generally, the two control points are located at either end of the image (eg. at the note head and tip of the stem or flag on a note). Clicking on one of these Control Points will adjust the size or shape of the image (eg. dragging the right edge of a trill makes it longer.)

Slurs and curves have three control points, one at the start of the image, one at the top or bottom point of the curve, and one at the end of the image. Depending on the shape of the slur or curve, the middle control point may not be exactly in the centre.

The following example shows the Control Points of various NoteAbility images:

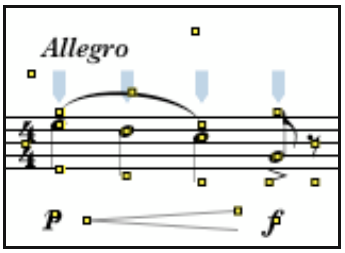
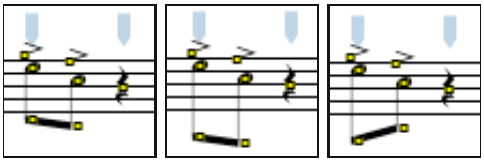


Image	No. of Control Points	Point 1	Point 2	Point 3
Time Signature	1	centre of image		
Dynamics	1	centre of image		
Text	2	bottom-left of text box	top-right of text box	
Note	2	notehead	end of stem or flag	
Crescendo	2	left edge	right edge	
Rest	2	centre of image	beam location	
Slur	3	left edge	centre	right edge

Adjusting Images using their Control Points

Images with one Control Point can be adjusted by simply selecting the Control Point and dragging the image. Images with two control points can be adjusted by selecting and moving either of the control points. For example, the stem of a note can be extended by grabbing and dragging the second control point (located at the tip of the stem directly above or below the middle of the note.) In beamed notes, adjusting any but the last note's second control points adjusts the height of the beam while adjusting the control point on the stem of the last note adjusts the angle of the beam. In the case of slurs and curves you can alter the shape of the image by selecting and adjusting any one of the Control Points. In the example below, the second control point of the first note has been dragged lower, then the second control point on the second note has been dragged higher.



Normally, all selected images are adjusted when the mouse cursor is placed in the selected area and the mouse is dragged. However, there are a couple of exceptions: articulations which have been attached to notes, symbols and fermati which have been attached to notes, and tuplet brackets must be adjusted individually.

- To move the entire image rather than only adjusting one part of the image hold down the Option Key when clicking on the control point. (Notes are an exception, since their length is automatically adjusted according to their position on the staff.)

- To show the Control Points on images, use the **Show Control Points** item in the **Format** menu. While you are first becoming familiar with NoteAbilityPro you may want to show Control Points while editing your score.

See also

- Format Menu

Cursors

	The *Target cursor* is used for entering most images on the score (including notes, rests and dynamic marks)
	The *Arrow cursor* is used for selecting images and for drawing selection rectangles.
	The *Entry Cursor Placement cursor* is used to re-position the Entry Cursor on your score.
	The *Cross cursor* is used for entering graphic images such as slurs, trills, lines, rectangles and ovals.
	The *I-Beam cursor* is used for entering and editing text on your score and when using the Select Score tool.
	The *Pencil cursor* is used for drawing QuickScrawl gestures. (Hold down the Option and Command keys down to enter images using QuickScrawl.)

See also

- Keyboard alternatives and shortcuts

Questions and Answers

Below are a few of the common questions that users have when first using NoteAbilityPro.

All of the notes I enter have their stems up or all of the notes I enter have the stems down no matter where I put them on the staff.

Check to see if you have the Stem Direction radio button set to up or down - this will set the stems automatically. The Stem Direction buttons are located in the top-left of the Score Controls. You can always change incorrect stem directions by selecting them and using the *Flip Stems* command or by setting the correct stem direction and clicking on the *Set Voice* button.

- Stem Direction buttons
- Flip Stems command

I have the Insert Image tool selected but when I click in the document no note appears.

Make sure you have a valid command in the Command field at the top of the score window. Secondly, make sure you have positioned the Entry Cursor at the location you want to enter the note. When entering notes, you cannot click the mouse above or below the Entry Cursor.

- Score Controls
- Using Control panel tools

I press the Play button or select the Play Score menu item but there's no sound.

Check the Track Setup panel to make sure your tracks (i.e. staves) are set to the correct sound output method. If this is set properly and you are using MIDI you may wish to check the MIDI connections of your equipment and the settings in the Midi Ports panel. If you are using another sound method, check to see that the volume on your computer is turned up. You should also check the *Start At Measure* field on the Playback Setting pane in the Music Images Panel - it is possible that the starting measure is higher than the highest measure you have data in. It is also possible you have the *Play This Staff* or *Play Staff ID* buttons the Playback Setting pane checked and set to a staff with no notes on it. If there still is no sound, check the *Playback Map* to ensure that you are not repeating a section of the score with no notes in it.

- Play Score menu item
- Set NoteAbilityPro Preferences
- MIDI Connections
- Track Setup panel
- Playback Map panel

Part of the screen disappears when the page is redrawn.

An image has probably been dragged out of position. Use the *Refresh Page* button on the Panic panel and remove or adjust the offending image.

- Panic panel

The final barline on the system seems to have moved off-screen and I can't drag it back into position.

The rhythmic spine on that system has been incorrectly formed. Use the *Rebuild Spine on This System* button on the Panic panel to reset the rhythmic spine.

- Panic panel

Although I can move notes up and down, I am not able to change notes to a new beat position.

Notes must be cut and pasted in order to move them to a new beat location.

- Cut, Copy and Paste operations

See also

- Keyboard alternatives and shortcuts

Keyboard Alternatives and Shortcuts

Many NoteAbilityPro menu commands can be invoked by using the keyboard instead of using the mouse. Using keyboard alternatives can radically speed up the operation of NoteAbilityPro.

Keyboard alternatives for NoteAbilityPro menus

NoteAbilityPro

Preferences...	Command-CTRL - **p**	Show NoteAbilityPro's Preferences panel
Hide NoteAbilityPro...	Command - **h**	Hide NoteAbilityPro and its windows
Quit	Command - **q**	Quit NoteAbilityPro application

File

Close Command-OPT - **k** Close the active score Revert to Saved Command-CTRL - **r**Revert score to saved state Import Guido Command-CTRL - **g**Import a Guido file into the active score Print... Command - **p**Print the active score Print All... Command-CTRL -**P**Print all open scoresPlay score Command-OPT - **,**Play the active score Play selection Command-OPT - **.**Play the currently selected passage

New	Command - **n**	Create a new document
Open...	Command - **o**	Open a document
Save	Command - **s**	Save current document
Save As...	Command - **S**	Save current document under a new name
Save Selection As PDF	Command-OPT - **9**	Save current selection as a PDF file
Save Selection As EPS	Command-OPT - **0**	Save current selection as an EPS file
Page Setup...	Command - **P**	Display the Page Setup panel

Edit

Undo	Command - **z**	Undo the last operation
Redo	Command - **Z**	Redo the last undo
Cut	Command - **x**	Cut data to pasteboard
Copy	Command - **c**	Copy data to pasteboard in NoteAbilityPro format
Copy All Types	Command - **C**	Copy data to pasteboard in various formats
Paste Into	Command - **v**	Paste data from the pasteboard into the score
Paste Exact	Command - **V**	Paste an exact copy of the data from the pasteboard into the score
Paste Over	Command-OPT - **v**	Paste data after removing images at the destination
Insert	Command-CTRL - +	Paste data after shifting music to the right to make room
Delete	Command-CTRL - -	Delete the selected data
Select Page	Command - **A**	Select the current page
Select Document	Command - **a**	Select the entire document
Change Staff	Command-OPT - **S**	Change selected data to current staff
Set Voice	Command-OPT - **V**	Set selected data to current voice
Jump Back	Command - **g**	Jump back to previous Entry Cursor position
Previous Page	Command - <	Move to previous page in the score
Next Page	Command - >	Move to next page in the score

Format

Grid On/Off	Command – **G**	Turn the NoteAbilityPro grid on or off
Show/Hide All Buttons	Command – \	Show or Hide all Score Layout buttons
Show/Hide Control Pts	Command – **D**	Show or Hide Control Points
Show/Hide Ruler	Command – **R**	Show or Hide the NoteAbilityPro page ruler
Clear Tuplet Button	Command – **e**	Clear the Control panel tuplet buttons
Refresh Page	Command – **L**	Redraw the current page
Show Colors	Command–CTRL – **c**	Show the Color Panel
Align Vertical	Command–OPT – <	Align Selected Images Vertically
Align Horizontal	Command–OPT – >	Align Selected Images Horizontally
Change Document Size...	Command–CTRL–OPT – **d**	Change the dimensions of the current document.
Insert Blank Measure	Command–OPT – **m**	Insert a blank measure immediately following the current measure
Delete This Measure	Command–OPT – **M**	Delete the current measure along with all images contained in the measure

Tools

Music Images Panel...	Command – **K**	Displays the Music Images panel
Score Structure Panel...	Command – **I**	Displays the Score Structure panel
Keyboard...	Command – **k**	Displays the Keyboard panel
Overview...	Command – **O**	Displays the Overview panel
Toggle Insert <–> Select	Command–OPT – **x**	Toggles between Insert and Select modes
Toggle Entry Cursor	Command–OPT – **z**	Toggles the Entry Cursor on and off
Toggle Auto Increment	Command–OPT – **w**	Toggles the Entry Cursor Auto Increment on and off
Part Extraction...	Command – **X**	Displays the Part Extraction panel

Modify

Cautionary Time Signatures	Command–OPT – $	Create cautionary time signatures throughout the score

Modify ▸ Notes

Flip Stems	Command – **f**	Flip the stems of selected notes
Hide/Show Stems	Command–OPT – **s**	Hide or show stems on selected notes and rests
Hide/Show Ledgers	Command–OPT – **l**	Hide or show ledgers on selected notes
Slur Notes	Command – **W**	Slur selected notes or groups of shift selected notes
Tie Notes	Command – **T**	Tie selected notes or chords
Tie Each Group	Command–OPT – **T**	Tie each selected group of notes
Untie Notes	Command–OPT – **u**	Remove ties from selected notes
Flip Tie Direction	Command – **F**	Flip the tie direction of selected notes
Swallow Tie	Command–CTRL – **T**	Remove tie and adjust note durations
Merge Note Values	Command–OPT – **Z**	Merge multiple notes and rests into single notes or rests
Build Chord	Command–OPT – **c**	Build a chord from selected notes
Build Grace Chord	Command–OPT – **C**	Build a grace chord from selected grace notes
Add Grace Slash	Command–OPT – \	Add a grace slash to selected notes
Remove Grace Slash	Command–OPT – |	Remove the grace slash from selected notes

Modify ▸ Accidentals

Enharmonic Above	Command – =	Change note to the enharmonic equivalent above
Enharmonic Below	Command – -	Change note to the enharmonic equivalent below
Force Accidental	Command – **1**	Force the accidental to be visible
Don't Force Accidental	Command–OPT – **A**	Don't force accidentals on selected notes
Force Sharps and Flats	Command–OPT – #	Force all sharps and flats on selected notes to be visible
Parentheses On/Off	Command – {	Turn Parentheses around accidentals On or Off
Ficta On/Off	Command – **7**	Turn Ficta accidentals On or Off
Double Sharp	Command – **2**	Change accidental to double sharp
Sharp	Command – **3**	Change accidental to sharp
Natural	Command – **4**	Change accidental to natural
Flat	Command – **5**	Change accidental to flat
Double Flat	Command – **6**	Change accidental to double flat
Quarter Flat	Command – **9**	Change accidental to quarter flat
Quarter Sharp	Command – **0**	Change accidental to quarter sharp

Modify ▸ Tuplets

Show/Hide Tuplets	Command –]	Show or hide the selected tuplet
Show/Hide Bracket	Command – [	Show or hide the tuplet bracket
Show/Hide Ratio	Command–OPT –]	Show or hide the tupet ratio (eg. 3:2)
Straighten Tuplets	Command–OPT – [	Align the tuplet to the beam angle
Flip Tuplet Direction	Command–OPT – **f**	Flip the tuplet above or below notes
Form Tuplet	Command–OPT – **t**	Form a tuplet on selected notes

Modify ▸ Beams

Unbeam Notes	Command – **H**	Remove beams from selected notes
Beam Notes	Command – **b**	Form the selected notes into a beam group
Beam On Beat	Command–OPT – **b**	Form beams according to beat groupings in measures
Beam Each Group	Command – **B**	Form each shift-selected group of notes into a beam
Straighten Beam	Command – **Q**	Make beam horizontally straight

Modify ▸ Rests

Insert Single Rest	Command – **r**	Insert a rest of current duration
Insert Rests In Selection	Command–OPT – **r**	Fill rests in selected score area
Build Measure Rests	Command–OPT – **R**	Build multiple measure rests in selected score area

Modify ▸ Barlines

Mensurstrich On/Off	Command – **8**	Turn mensurstrich barlines on or off in current measure
Tick Barlines On/Off	Command–CTRL – **9**	Turn tick barlines on or off in current measure

Modify ▸ Text

Make Text Global	Command-OPT - **g**	Mark selected text/images as global for inclusion in parts
Add/Remove Frame	Command-OPT - **[**	Add or remove frame from selected text
Make Header	Command-OPT - **h**	Mark text as Header text so that it appears on each page
Remove Header	Command-OPT - **H**	Unmark text as Header text so that it no longer appears on each page
Make Font Smaller	Command-CTRL - **,**	Make selected text boxes 1 point size smaller
Make Font Larger	Command-CTRL - **.**	Make selected text boxes 1 point size larger

Modify ▸ Page

Hide/Show System Dividers	Command-OPT - /	Hide or show system dividers on current page
Hide/Show Page Numbers	Command-OPT - **P**	Hide or show page numbers on current page
Add Cautionary Time Sigs	Command-OPT - **%**	Show cautionary time signatures on current page

Audio/Midi

Track Setup	Command-CTRL-OPT - **t**	Show the Track Setup panel

Font

Show Fonts	Command - **t**	Show the Font panel
Italic	Command-CTRL - **b**	Change selected text to Bold
Italic	Command-CTRL - **i**	Change selected text to Italic
Italic	Command - **u**	Change selected text to be underlined

Window

Minimize Window Command - **m** Minimize the front window

Close Window	Command - **w**	Close the front window

IIMPE

Play From Cursor	Command-CTRL - **3**	Play the score from the Entry Cursor measure
Pause/Restart	Command-CTRL - **4**	Pause playback or restart when paused
Reset Tempo	Command-CTRL - **5**	Reset the tempo after adjustments from the Transport Controls
Tempo Jump Up	Command-CTRL - **6**	Increase playback tempo by 10 beats per minute
Tempo Jump Down	Command-CTRL - **7**	Decrease playback tempo by 10 beats per minute

Help

NoteAbilityPro Help...	Command - **?**	Display on-line help files
Image List...	Command - **d**	Display a list of NoteAbilityPro images

Other Keyboard shortcuts

Option Key:

- While dragging a Control Point, the entire image is moved if the Option Key is held down
- While the Option Key is held down, the cursor is changed to the Select Image tool so that editing can be performed without having to switch tools.

Command Key:

- While the Command Key is held down, pressing the mouse button will move the Entry Cursor to the location of the mouse cursor.

Option & Command Keys

- When the Option and Command keys are held down together the cursor changes to a pencil and Quickscrawl gestures can be drawn on the screen and interpreted as music images.

Control Key:

- When the Control Key is held down and you click the mouse on the score window a pop-up menu appears and makes some of the most common editing operations available. This can also be done by using a left-button click on a two button mouse.

Shift Key:

- When using the Selection tool, holding down the Shift Key allows multiple selection areas to be drawn.

Return Key:

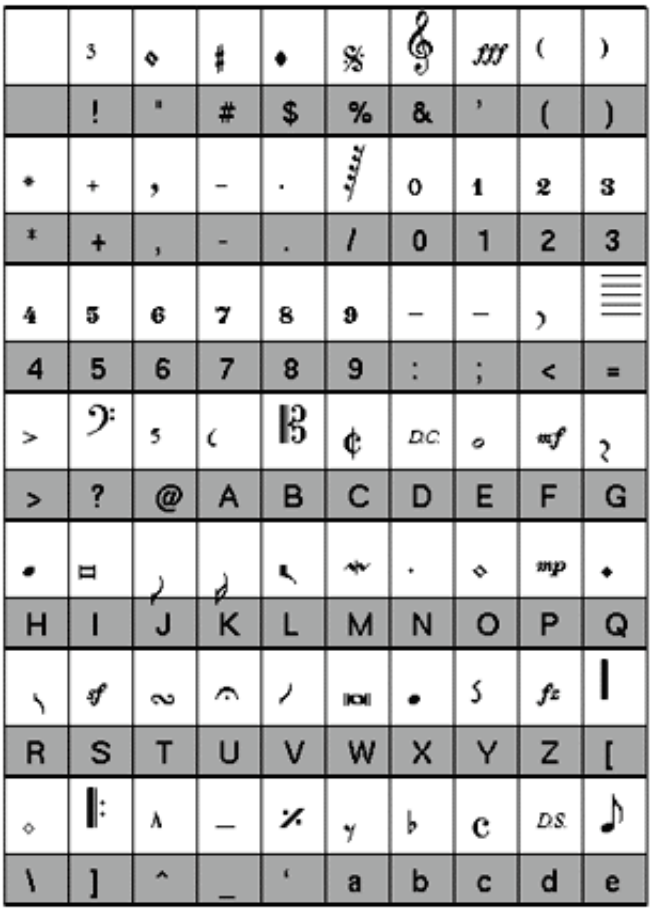
- Changes to the Insert Image tool (except when you using one of the text tools.)

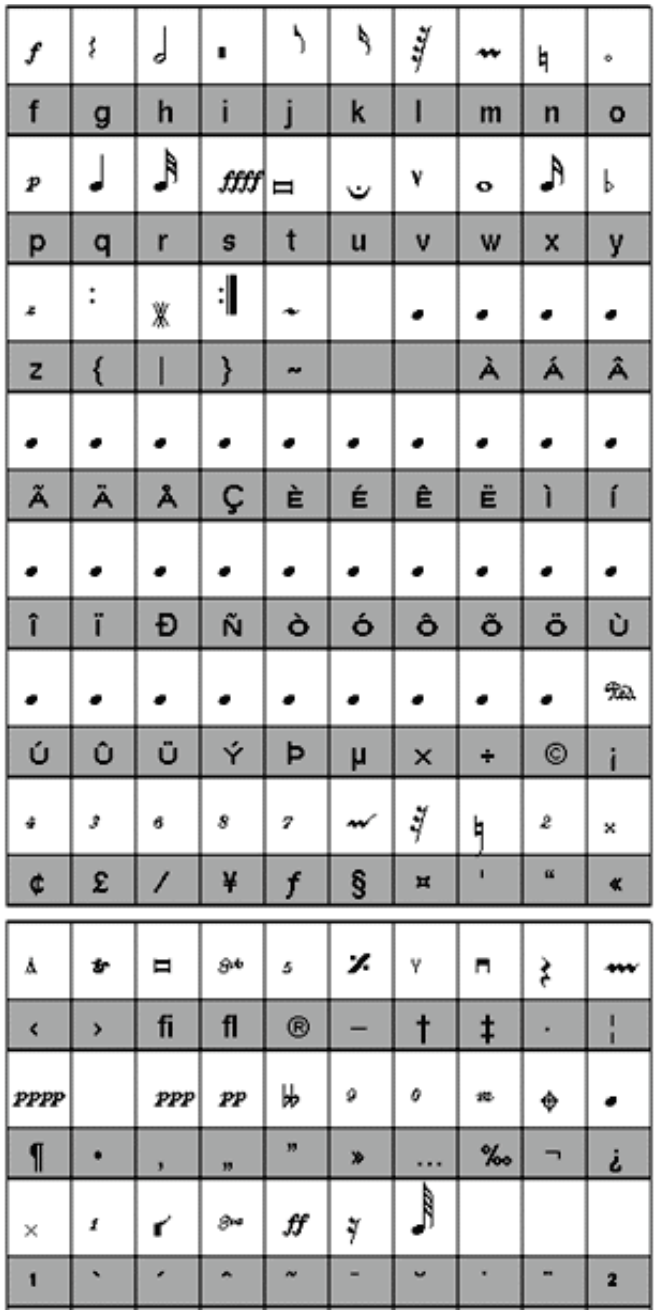
See also

- Score Controls

Music Font Layout

Below is the layout of the the Scriabin font from Opus 1 Music Inc. This display may help you when you need to add customized music symbols as text or in EPS files.





See also

- Music Performance Terms
- NoteAbility Overview
- NoteAbility Introduction

NoteAbility Pro Definitions

The following definitions refer to the NoteAbilityPro data structure and the way that images are organized in a NoteAbilityPro document.

Music Structure	The structure of staves, measure and beats on which music images are placed. The music structure can be altered, but its components cannot be cut and pasted.
Music Image	An object placed on the music structure at a beat location and associated with a staff. All music images can be adjusted, moved, cut, copied or pasted.
System	A group of staves that are intended to be played at the same time. Staves in the system are often joined by braces and barlines.
Staff ID	A number which identifies a particular staff across systems which may have different numbers of staves. The Staff ID appears at the right edge of the staff.
Rhythmic Spine	the horizontal position of measures, beats and subbeats in each system. All images are aligned to the rhythmic spine and their horizontal position is adjusted when the spine is altered.
Staff Association	Each music image is associated with a staff. When the vertical position of the staff is altered, the position of the image is adjusted with the staff.
Voice	Each music image belongs to a voice. There are normally three voices available on each staff – one with stems in both directions, one with stems up, and one with stems down.
Step	The vertical distance from a staff line to the staff space above or below.
Note	A music image with a specific beat location and duration.
Chord	A group of notes in the same voice at the same beat location are formed into a chord.
Beam group	a series of notes, chords and/or rests that belong to the same voice and are joined together by a beam.
Tuplet group	a series of notes, chords and/or rests that belong to the same voice and form a tuplet group.
Control Point	The handles by which images are moved and adjusted. All images have 1, 2 or 3 control points. The main control point is the main drawing position of the image (eg. the notehead of a note). The other Control Points are used for adjusting the size or shape of the images.

See also

- Music Performance Terms
- Glossary

Music Performance Terms

Tempo Terms

Presto	Very rapidly
Vivace	Quickly; spirited
Allegro	Fast; lively
Allegretto	Moderately fast; slower than Allegro
Moderato	Moderately
Andantino	Somewhat faster than Andante
Andante	At a walking pace
Adagio	Rather slow; leisurely
Lento	Slow
Largo	Slow; broad
Grave	Very slow; solemn

Change-of-Tempo Terms

A tempo	Return to original tempo
Accelerando (*accel.*)	Gradually increasing in tempo
Meno mosso	With less movement or motion
Piu mosso	With movement or motion
Rallentando (*rall.*)	Gradually slowing in tempo
Ritardando (*rit.*)	Gradually slowing in tempo
Ritenuto (*riten.*)	Immediately slowing in tempo; also used synonymously with rallentando and ritardando

Dynamic Levels

Crescendo (*cresc.*)	Gradually becoming louder
Decrescendo (*decresc.*)	Gradually becoming softer
Diminuendo (*dim.*)	Gradually becoming softer
Pianissimo (*pp*)	Very soft
Piano (*p*)	Soft
Mezzo piano (*mp*)	Moderately soft
Mezzo forte (*mf*)	Moderately loud
Forte (*f*)	Loud
Fortissimo (*ff*)	Very loud
Sforzando (*sf., sfz.*)	Strongly accented; with an emphatic stress

Other Music Terms

Animato	Animated; with spirit
Cantabile	In singing style
Coda	A concluding section of a composition
Con moto	With motion
Da capo (*D.C.*)	Repeat from the beginning

Da capo al fine (*D. C. al fine*)	Repeat from the beginning to *Fine* (the end)
Dal segno (D. S.)	Repeat from the sign 𝄋
Dal segno al fine	Repeat from the sign 𝄋 to *Fine* (the end)
Dolce	Sweetly; delicately
Espressivo	Expressively
Fine	The end of a composition
Giocoso	Humourously; playfully
Grazioso	Gracefully
Legato	Smoothly; connected
Leggiero	Lightly; nimbly
Maestoso	Majestically; with dignity
Marcato	Marked; stressed
Meno	Less
Molto	Much
Mosso	Motion
Pesante	Heavily
Piu	More
Poco	Little; a little
Scherzando	Playfully
Sempre	Always
Simile	In the same manner
Sostenuto	Sustained
Troppo	Much

See also

- NoteAbility Definitions
- Glossary

Glossary

Accent	Emphasis put on a note to make it stand out against the surrounding notes.
Accidental	A sharp, flat, natural or other symbol appearing in front of a notehead. An accidental indicates how the pitch is to be altered when played.
Application	A program with a graphical user interface that you my run from the Finder, such as NoteAbilityPro.
Arpeggio	When the tones of a chord are sounded successively rathr than simultaneously.
Articulation	A mark placed above or below a note to indicate how it should be played. Staccato marks, accent marks and tenutos are examples of articulation.
Audio Units	components installed in OS-X to create or modify sounds. Audio Units can be patched together to create complex audio systems.
Button	A control that you must click on to make something happen, or press to cause a continuous action. Buttons are labeled with text, graphics, or both.
CD-ROM	A Compact Disc containing files and/or applications that your computer can read from but is unable to write onto.
Clef	A sign usually found at the befinning of each line of written music, and used fo fix the relative position of notes on the staff.
Chord	Combination of several tones sounded simultaneously. In NoteAbilityPro, chords are defined as a group of notes that belong to the same voice and are positioned at the same beat location.
Click	To position the cursor on a object and, without moving the mouse, press and release a mouse button.
Click track	A rhythmic guide track consisting of a series of clicks (on each beat of the measure) used to assist in time-keeping during recording.
Command	Word or phrase in a menu that describes an action an application may take, or names a submenu or panel it may open. Also, a command is a sequence of typed characters that refers to a specific music image that will be added to the score.
Control Point	These are the handles by which images are moves and adjusted. All images have 1, 2, or 3 control points. The main control point is the main drawing position of the image (eg. the notehead of a note). the other control points are used for adjusting the size or shape of the image.
Crescendo	Gradually becoming louder.
Cursor	The image on the screen that moves as you move the mouse; usually a target, an arrow, a cross, or an I-beam. When the computer performs an operation that requires completion before you may continue your work in the application, the cursor appears as a rotating disk.
Decrescendo	Gradually becoming softer.
DLS Synthesizer	A built-in synthesizer which use downloadable sounds - normally in the form of soundFonts.
Double-click	To click twice in quick succession on the same object. A double-click extends the kind of action accomplished by a click.
Double Flat	A symbol placed in front of a note to indicate that it should sound 2 semitones lower.
Double Sharp	A symbol placed in front of a note to indicate that it sould sound 2 semitones higher.
Drag	To position the cursor on something, press and hold down a mouse button, move the cursor to a new location (by moving the mouse), and then release the mouse button.
Extension	The last period in a file name and all characters that follow. A file's extension indicates the type of information in it. The OS-X Finder uses the extension to associate a file with a particular application. NoteAbilityPro scores have a .na extension, NoteAbilityPro text libraries have a .nl extension, NoteAbilityPro templates have a .nt extension, GUIDO files have a .gmn extension, and NoteWriter files have a .nwr extension.
Finder	The application which manages your computer's desktop.
Flat	A symbol placed in front of a note to indicate that it should sound 1 semitones lower.

Floppy disk	Plastic disk, encased in a protective cartridge, that holds digital information.
Floppy disk drive	Mechanism that may store and retrieve data from a floppy disk.
Folder	Place in the file system that contains files and other folders. Opening a folder displays the names of the files and folders it contains.
Icon	Small pictorial representation of an applicaiton, file, folder, disk, or other item.
Insertion point	The place where text, and graphics may be entered; usually represented by a blinking vertical I-beam.
Key signature	A series of sharps of flats that indicates which notes in following measures should be played with sharps or flats. In tonal music, the key signature usually indicates the key of the music.
Key window	The window or panel that currently receives keystrokes. Its title bar is highlighted and the window title appears in black. You make a window the key window by clicking in it. There can only be one key window at a time.
Measure	A group of a certain number of beats of a certain size as determined by the time signature.
Menu	Window that contains a vertical list of commands or sub-menus that contain additional commands.
MIDI	**M**usic **I**nstrument **D**igital **I**nterface. A protocol that lets musical instruments communicate with one another and with computers.
Mouse button	The buttons on the mouse is clicked to select buttons and menus while running NoteAbilityPro.
Notehead	The part of a note that indicates the pitch.
Open	To load a file into an application and make it visible to the user.
Panel	Window that typically appears in response to a command and lets you control what the application does or provides information about the application.
Pasteboard	Place where the computer stores the data that you last cut or copied with the Cut or Copy commands.
Quartertones	Although the smallest musical interval in a piano keyboard is the semitone, it is possible to divide each semitone into two quartertones. Special accidentals can be used to indicate 1/4 sharps or 1/4 flats.
Quicktime Musical Instruments	the built-in instrumental sounds that can be used without an external synthesizer
Real time	Method of recording music by playing it on a MIDI keyboard in tempo.
Rest	A symbol indicating a duration of silence in music.
Scroll	To move through data in a window or section of a window when there's more than can be displayed at one time, so that a different part of the information is visible.
Scale Step	The distance between one pitch name and the next higher or lower pitch name. There are 8 scale steps in a diatonic octave.
Semitone	The smallest step on a piano keyboard between one key and the next white or black key. There are 12 semitones in an octave.
Shell	A window in which you may enter UNIX commands. You may open a shell window with the Terminal application.
Slur	A graphic image that connects a group of notes and indicates that they should be played in a smooth or connected manner.
Staff (Staves)	The lines (usually five) on which musical notation is written. Most instruments require only one staff, while some (eg. piano) require two or more.
Stem	The vertical line attached to a notehead.
Step time	A recording method whereby a rhythmic value is specified and only the pitch is indicated on a MIDI keyboard.
Tempo	The rate of speed of a musical piece indicated by a text marking (eg. largo, presto) or by metronome marking (i.e. the number of beats per minute).
Time Signature	Two numbers (eg. 4/4) which indicate the number of beats in a measure and the type of note that gets a beat (eg. a quarter note).
Transpose	To alter the key of a piece of music or to shift notes a set number of semitones up or down.
Tremolo	Rapid repetition of a single note.

Trill	Rapid alteration of two notes that are usually a step apart.
Window	A rectangular area in which information is presented on the screen.

See also

- Music Performance Terms
- NoteAbilityPro definitions

NoteAbility Pro Features

NoteAbility has many features that make it the most powerful and easy-to-use music notation application available today. Many of these features are listed below.

Document Specifications

- Unlimited number of pages per document
- Unlimited page size (width and height)
- User-specified margins
- Up to 40 systems per page
- Up to 40 staves per system
- Up to 16 measures per system (expandable after setup)
- Standard clefs (treble, alto, tenor, bass, soprano, treble-tenor, octave-bass, percussion as well as all transposed clefs)
- Variable number of lines in staff (0 - 6)
- Number of lines in staff can change mid system
- Standard key signatures
- All time signatures from 1/1 to 32/32
- Standard and custom braces on each system (including nested braces)
- Standard & custom barlines on each system
- Staff labels (right or left justified,any font & font size)
- Automatic addition of pages as needed
- Document display from 25% to 200% with Custom size (up to 1000%)
- Adjustable page size
- Flexible print setup (with overview)

System & Page Formatting Specifications

- On-screen adjustment of all beat positions in all systems
- On-screen adjustment of all margins, vertical & horizontal positioning of systems, vertical position of staves, vertical position of lyrics (relative to staff) & horizontal position of the staff labels
- Re-position page numbers (locations, font, etc.)
- Re-position measure numbers (frequency of appearance, location, font, etc.)
- Change number of systems on the page
- Change the number of measures in the system
- Change the number of staves in the system (insertion, deletion, hiding, & showing of staves)
- Change the size of any staff
- Change key signature (all staves in the system or single staves)
- Change the time signature (automatic realignment of notes)
- Change the barline type and format
- Change the brace type and format
- Change clef (at any beat location within the score)
- Add partial measures (e.g. upbeat measures)

Input Methods

- Mouse input (image drags while the mouse is down)
- On-screen piano keyboard
- Step-time entry from MIDI keyboard
- Real-time entry from MIDI keyboard (via MIDI Recorder)
- Quickscrawl entry (gesture recognition)

Audio Specifications

- Audio through Quicktime Musical Instruments, MIDI synthesizers, DLS synthesizers, or Audio Units.
- Audio during note entry (all methods)
- Audio during single note adjustment
- Staves may be freely linked to outgoing MIDI or Quicktime channels
- Score playback (starting at any measure in the score - tempo map can be specified)
- Playback of individual staves
- Playback of selected notes
- Playback map allows repetitions of scores sections
- Transposition of staves on playback can be specified
- Transposition of selected notes on playback can be specified
- Soundfiles can be embedded in scores

Music Specifications

- Complete set of standard music symbols (from double whole to 128th notes and rests)
- Supports all accidentals (including quarter sharps and flats)
- Basic graphics (rectangles, circles, lines in colours, filled or framed)
- Any image can be any size
- Any image can be any colour
- Unlimited number of voices per staff (default set at 3)
- Unlimited number of notes per chord
- Permits extreme rhythmic complexity
- Flexible beaming of notes (e.g. across staves and barlines)
- Correct placement of notes in chord clusters
- Correct placement of accidentals in chords
- Correct vertical alignment of all music images
- Correct beaming of notes (beam angle and vertical position)
- Correct system formatting according to an adjustable spacing algorithm
- Automatic tieing of notes which exceed the measure duration

Text Specifications

- Text can appear in any font and size and can be freely edited, copied and pasted
- Page Text: is fixed on the page
- Measure Text: adjusts to the staff and measure position
- Header Text: appears on each page of the document
- Max Text: for encoding Max messages
- Lyrics: Are aligned to metrical positions and may have dashes and underscores connecting them to other lyrics or notes
- Text can be made global so that it is gathered by all parts during part extraction
- Frames can automatically be drawn around Text
- Unlimited number of verses of lyrics (leading between verses can be specified)
- Provides a user definable Text Library

Editing Facilities

- Image selection by graphical area or staff section across multiple systems and/or pages
- Cut and copy of all selected images
- Paste over, merge, and insert options
- Paste to other NoteAbility documents or other applications via pasteboard (as NoteAbility, TIFF, PDF, MIDI, GUDIO, or Score)
- Can import PDF, TIFF, MIDI, GUIDO, RTF and Score via pasteboard
- Local adjustments to the position of all images
- Adjust secondary positions of images (e.g. length of stem, arc or slur, etc.)
- Change the point size of images

- Change the colour of images
- Beam note groups (by beat or by group)
- Automatic insertion of rests
- Transpose notes by interval or key
- Shift images from one voice to another
- Flip stems of notes
- Flip direction of ties
- Add accidentals to notes
- Add and remove ties from notes
- Merge tied notes into a single note of greater duration
- Form and alter the display of tuplets (showing bracket, ratio etc.)
- Merge multiple rests into a single rest
- Add & remove articulation markings from notes
- Modify the duration of notes and rests
- Change notehead type
- Change playback velocity and duration
- Edit tie shape
- Increase the value of notes by eliminating following rests
- Reduce the duration of notes by converting to a note and a rest
- Change beam format
- Change line width and type
- Part extraction of specified staff into a new editable document
- Unlimited Undo and redo operations

MIDI Recording Specifications

- Sixteen (16) channels of MIDI recording
- Built-in metronome (supporting standard meters)
- Adjustable metronome speed
- Reads .mid files
- Reads .score files
- Quantize at standard rhythmic values
- Re-quantize of recorded or imported data
- Insert into score at any location on any staves or voices

File Specifications

- Unlimited number of open documents
- Standard Open, Save, and Save As menu commands
- Imports .mid and .score files (through MIDI Recorder)
- Exports .mid, .score, NoteWriter (Macintosh), Max qlist, Max explode, GUIDO, TIFF, and PDF formats
- Loads and saves score templates
- Loads and saves text libraries
- Loads and saves image libraries
- Loads and saves percussion maps
- Loads and saves speech dictionaries

Printing Specifications

- Uses a customized page setup panel with a page overview
- Prints to all compatible OS-X printing devices

System Specifications

- Macintosh computer with G3, G4, or G5 processor and at least 96 Mbytes of memory, running Mac OS-X 10.2 or higher.

- MusicKit 5.5.0 or higher (provided with NoteAbilityPro)
- The Scriabin™ font from Opus 1 Music Inc. as well as any other supported music font. (Sonata™ from Adobe Systems Inc.™ Jazz, Swing fonts from Sigler Music, Petrucci, Engraver, Maestro fonts from Coda Music Inc.)
- USB MIDI Interface (Midiman or other OS-X compatible interface) (optional)

See also

- NoteAbility package contents
- NoteAbility system requirements
- NoteAbility registration

NoteAbility Pro Package Contents

The installation package for NoteAbility installs the following files:

- NoteAbilityPro.app (the application)
- NoteAbilityProHelp.help (on-line help files in HTML format)
- NoteAbilityProHep.pdf (on-line help files in pdf format)
- MusicKit.framework (framework required for sound/MIDI playback)
- SndKit.framework (framework required for sound/MIDI playback)
- MKDSP.framework (framework required for sound/MIDI playback)
- MKPerformSndMIDI.framework (framework required for sound/MIDI playback)
- NoteAbilityExamples (example scores)
- NoteAbilityLib (library of PDF images)
- NoteAbilityTemplates (score templates)
- Scriabin6 music font (main music font)
- Tablature font (font for lute tablature)

- The MusicKit frameworks are available for use with NoteAbility with the permission of the copyright owners. The MusicKit frameworks were originally developed by David Jaffe for Next Computers Inc. and were ported to Macintosh OS-X by Stephen Brandon and Leigh Smith.

- Be sure you register your copy of NoteAbility so that you will then receive notices of future upgrades. You may register on-line at http://debussy.music.ubc.ca/~opus1/NoteAbility/registration.html

See also

- NoteAbility features
- NoteAbility system requirements
- NoteAbility registration
- NoteAbility licensing agreement

NoteAbility Pro System Requirements

To use NoteAbility you need the following:

- Macintosh computer with G3, G4, or G5 processor and at least 96 Mbytes of memory, running Mac OS-X 10.2 or higher.
- A CD-ROM (internal or external) for installation.
- MusicKit 5.5.0 or higher (provided with NoteAbilityPro)
- The Scriabin™ font from Opus 1 Music Inc. (provided with NoteAbility). Other supported music fonts are optional: (Sonata™ from Adobe Systems Inc., Jazz™ font from Sigler Music, Petrucci™ or Engraver™ from Coda Music Inc.)
- USB MIDI Interface (Midiman™ or other OS-X compatible interface) **(optional)**

See also

- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro registration
- NoteAbilityPro licensing agreement

NoteAbility Pro Registration

Make sure you register your copy of NoteAbilityPro by filling out your contact information on-line at: http://www.opusonemusic.net/NoteAbility/registration.html.

The information you enter into our user database will not be given to anyone, and will be used exclusively to notify you of upgrades as well as the availablility of additional files that can be used with NoteAbilityPro (eg. graphic files, templates files and scores.) Upgrades to NoteAbilityPro will be posted on our web site at:

http://www.opusonemusic.net/download.html

You will require your original license code to authorize upgrades to NoteAbilityPro.

Please contact Opus 1 Music if you have any questions about NoteAbilityPro or about our other music notation programs:

info@opusonemusic.net

Opus 1 Music Inc.
3456 Dunbar St.
Vancouver, B.C.
Canada V6S 2C2

phone/fax: (604) 221-1121



See also

- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro system requirements
- NoteAbilityPro licensing agreement

NoteAbility Pro Licensing Agreement

1. License

The application, demonstration and other software accompanying this License, whether on disk, in read only memory, or on any other media (the "NoteAbilityPro Software") and the related documentation are licensed to you by Opus 1 Music Incorporated. You own the disks on which the NoteAbilityPro software and documentation is recorded, but Opus 1 Music Inc. retains title to the NoteAbilityPro software and related documentation. This License allows you to use the NoteAbilityPro Software on a single computer and make one copy of the NoteAbilityPro Software in machine- readable form for backup purposes only. You must reproduce on such copy the NoteAbilityPro copyright notice and any other proprietary legends that were on the original NoteAbilityPro disks. You may use the NoteAbilityPro Software in a networked environment so long as each computer in such environment is the subject of a license for the NoteAbilityPro Software; however, you may not electronically transmit the NoteAbilityPro Software from one computer to another over a network. You may also transfer all your license rights in the NoteAbilityPro Software and documentation, the backup copy of the NoteAbilityPro Software and a copy of this license to another party, provided the other party reads and agrees to accept the terms and conditions of this License.

2. Restrictions

The NoteAbilityPro Software contains copyrighted material and other proprietary material and in order to protect them you may not decompile, reverse engineer, disassemble or otherwise reduce the NoteAbilityPro Software to a human-perceivable form. You may not modify, network, rent, lease, loan, distribute or create derivative works based upon the NoteAbilityPro Software in whole or in part, except for the limited networking described above in Section 1.

3. Termination

This License is effective until terminated. You may terminate this License at any time by destroying the NoteAbilityPro Software and related documentation and all copies thereof. This License will terminate immediately without notice from Opus 1 Music Inc. if you fail to comply with any provision of this License. Upon termination you must destroy the NoteAbilityPro Software and related documentation and all copies thereof.

4. Upgrade Policy

Opus 1 Music Inc. may create from time to time, updated version of the NoteAbilityPro Software. At its option, Opus 1 Music Inc. will make such upgrades available to the Licensee.

5. Miscellaneous

This agreement is governed by the laws of the Province of British Columbia, Canada.

6. Disclaimer Of Warranty and Limited Warranty

The NoteAbilityPro Software and accompanying documentation are provided "as is" without warranty of any kind. Further, Opus 1 Music Inc. does not warrant, guarantee or make any representations regarding the use or the results of the use, of the software or documentation in terms of correctness, accuracy, reliability, currentness or otherwise. The entire risk as to the results and performance of the software is assumed by you. If the NoteAbilityPro Software or documentation are defective you, and not Opus 1 Music Inc. or its dealers, distributors, agents or employees, assume the entire cost of all necessary servicing, repair or correction.

Opus 1 Music Inc. warrants to the original Licensee that the disks on which the NoteAbilityPro Software is recorded are free from defects in materials and workmanship under normal use and service for a period of ninety (90) days from the date of delivery as evidenced by a copy of the receipt. Further, Opus 1 Music Inc. hereby limits the duration of any implied warranty on the disks to the period stated above. Some states do no not allow limitations on duration of an implied warranty, so the above limitation may not apply to you.

Opus 1 Music's entire liability and your exclusive remedy as to the disks shall be replacement of the disk that does not meet Opus 1 Music's limited warranty and which is returned to Opus 1 Music Inc. with a copy of the receipt or warranty. If the failure of the disk has resulted from accident, abuse or misapplication, Opus 1 Music Inc. shall have no responsibility to replace the disks or refund the purchase price. Any replacement disks will be warranted for the remainder of the warranty period of thirty (30) days, whichever is longer.

See also

- NoteAbilityPro registration
- About the Author

About the Author

NoteAbilityPro was conceived, designed, and written by Dr. Keith Hamel at the University of British Columbia. Dr. Hamel is a Professor of Composition at the UBC School of Music and is Director of the UBC Computer Music Studio. He holds a Ph.D. in Music from Harvard University and has written extensively for both acoustic and electroacoustic media. His works have been performed by many of the finest soloists and ensembles both in Canada and abroad. In recent years, he has received commissions from IRCAM in Paris, Ensemble Intercontemporain, Vancouver New Music, Vancouver Symphony Orchestra, the Elektra Women's Choir, Hammerhead Consort, Standing Wave Ensemble, as well as soloist such as Jean-Guy Boisvert (clarinet), Jesse Read (bassoon), Julia Nolan (saxophone), Douglas Finch (piano), and Robert Cram (flute).

Keith Hamel is President of the Canadian Music Centre, a board member of the Canadian League of Composers, a member of the Canadian Electroacoustic Community and of the International Computer Music Association. He is currently the Vice-President of the International Society of Contemporary Music (ISCM).

As a software developer, Dr. Hamel is also the author of NoteWriter, a graphics-based music notation program for Macintosh computers.



See also

- Acknowledgements
- NoteAbilityPro Overview
- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro system requirements
- NoteAbilityPro registration
- NoteAbilityPro licensing agreement

Acknowledgements

Special thanks to my wife Liz for her love, support, and assistance throughout the seemingly endless task of developing the various versions of NoteAbilityPro.

Thanks also to Marc Petitmermet for all the time and energy he put in as a beta tester, and for the many, many helpful suggestions and bug reports he sent in.

MusicKit is used by NoteAbilityPro for sound and MIDI playback as well as for MIDI file conversion and numerous other music-related tasks. Special thanks to David Jaffe for designing and implementing MusicKit on NeXTStep and to Stephen Brandon and Leigh Smith for porting MusicKit to OpenStep and eventually to Mac OS-X. Special thanks to Leigh Smith for his patience in dealing with all my MusicKit questions and problems.

Keith Hamel, January 2001

See also

- NoteAbilityPro Overview
- NoteAbilityPro features
- NoteAbilityPro package contents
- NoteAbilityPro system requirements
- NoteAbilityPro registration
- NoteAbilityPro licensing agreement
- About the Author

Release Notes

Below are the modifications, enhancements and bug fixes for all versions beginning with NoteAbilityPro version 2.100

Version 2.103

- Some minor problems concerning Audio Unit playback were fixed. Notes should no longer "hang" when scores are stopped while playing.

Version 2.104

- An Auto-save feature was added to NoteAbilityPro-2. Auto-save can be enabled using the Other pane of the NoteAbilityPro Preference panel. You can also set the time interval between saves (between 1 and 60 minutes). When auto-save is enabled, files with changes made to them are stored in the /tmp folder of your system disk. The /tmp folder is cleared out during a system restart, so these files will no longer be available after your computer has been shut down. To recover auto-saved files, use the **Recover Auto Saved Files** menu item in the File menu.
- 5 preset buttons were added to the top of the Music Images and Score Structure panels. The presets buttons allow you to store and recall the configuration of loaded panes in the panels. T o store a preset, click on one of the buttons while holding the Shift key down, to recall the preset, click on the button. Presets are stored as preferences.

Version 2.105

- A bug that caused extra ledger lines to appear when systems were shifted around was fixed.
- A menu item -- Flip Slur Direction -- was added to the Modify/Notes menu. This menu causes selected slurs to be flipped to the other side of (i.e. above or below) the note groups.

Version 2.106

- Some disconnected menu items for accidentals were re-connected
- A 10.4 problem with PDF copy and paste within NoteAbilityPro was fixed.
- A problem with new documents being created using the multi-Page display preference was fixed.

Version 2.107

- The new slurs (connected to notes) did not always print when they crossed pages -- this problem was fixed
- Some DLS and AU configurations allowed notes to hang during note entry and playback -- this problem was fixed.

Version 2.108

- Some major optimization improvements were made. Several users on slower machines commented on the

CPU usage of NAPro, and it was discovered that some of the Audio Unit effects are serious memory hogs. The Apple Matrix Reverb is one of the worst offenders. In the default configuration, a matrix reverb was set up for both DLS Synthesizer and the Audio Units. By default, the DLS Synthesizer uses a built-in reverberator and the reverberator for the Audio Units is disabled by default. If you want to engage the Custom Reverb for either of these players you can do so in the Audio Units panel. Users who are running slow machines are advised not to use the Custom Reverb or Audio Unit effects - this should improve performance dramatically.

Version 2.302

- This is the first version of NoteAbilityPro compiled for both PPC and Intel processors (i.e. using Universal Binaries). The code for the MusicKit frameworks has been compiled within NoteAbilityPro so that the program no longer needs to use the external frameworks. As well, the entire MIDI environment was reworked and a number of annoying bugs were fixed.
- The user interface was completely redone - it is now cleaner, clearer, and less metallic.
- It is now possible to save Standard MIDI files either with the tempo changes evaluated in the midifile or not. When exporting MIDI files that are to be read by sequencers, you normally do not want the tempo changes evaluated (since the sequencer will interprete the tempo changes during playback. When you are exporting a midi file to be played from a website or by the Quicktime Player, you should have the tempo changes evaluated when the file is created, so that it will sound the same way it does when played back from NoteAbilityPro.
- A number of bugs dealing with smart slurs were fixed.
- A bug which caused pages to print in the wrong order was fixed.
- When new staves are added to a document, the Track Setup panel is now updated properly.

Version 2.319
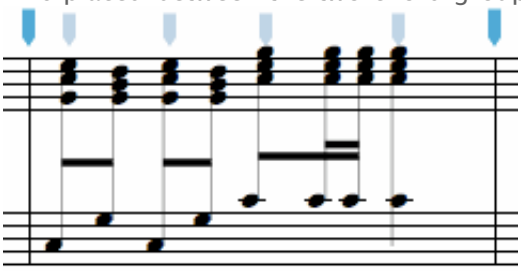
- It is now possible to chords across two staves beamed properly. The beam can be place between the two staves and stems are now drawn properly both directions.
- A playback counter has been added as an optional item to be included in the main score toolbar. The counter can be added by selecting the Customize Toolbar item from the Windows menu and dragging the counter to the area near the top of the the score window. The advantage of having the counter appear on the score toolbar is that the last playback duration will remain visible after a performance has ended. Some users found it annoying that the main counter disappeared as soon as playback was finished and they were unable to make note of the final performance duration.
- The problems with frames around Text boxes was fixed. Previously, text was not centred in the boxes and did not print properly.
- A **Select Next Image** menu item was added to the Edit menu. This menu item allows you to select a portion of the score and to step one-by-one through the selected images. As each image is selected, you can perform any editing operation on the image, then click the **Select Next Image** menu to move to the next image. For efficiency, this operation has two shortcuts: Command-Control-a or Control- (right arrow key). This editing function is very useful for iterating through your score and making fine adjustments, or when used in conjunction with **Paste and Select** - the newly pasted images can be altered one-by-one without the images having to be re-selected.

Version 2.320
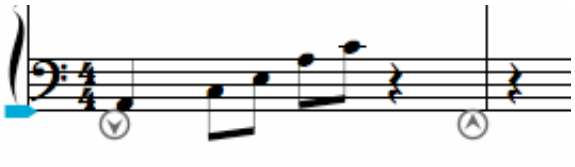
- A problem with entering unicode (extended characters) as Lyrics was fixed. In order to enter Lyrics in other languages or to access the extended characters and symbols, make sure the font used for lyrics (as set in the Preferences panel) supports the characters you want to represent. You may have to click the cursor in the command field on the score window and Insert the desired character from the Character pane of the Font panel in order to load the character as a lyric character.

Version 2.323

- Some problems with text wrapping in strange places when files were re-opened was fixed.
- Chord alignment across staves was fixed. It is now possible to join notes on multiple staves and have the stems aligned even when the beam is placed between the two chord groups:



- Symbols were added to NoteAbilityPro so that sustain pedals (down and up) could be included for score playback. The command '~' is used for these symbols. Clicking on the score adds a pedal down symbol below the closest staff. To add a pedal release symbol, hold the Shift key down while you click the mouse button. Pedal performance symbols appear as a grey arrow inside a circle pointing either down (pedal down) or up (pedal release). During score playback these pedal performance symbols will simulate the sustain pedal being depressed and released. Normally these symbols are not printed, but there is a setting in the **Other** tab of NoteAbilityPro Preferences which allow the symbols to be printed if desired.

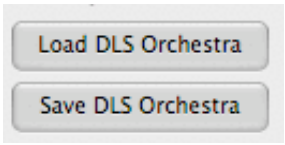


Version 2.338

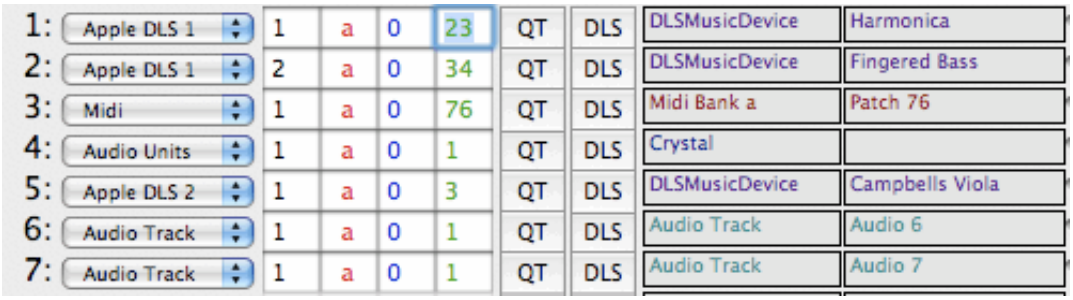
- This version of NoteAbilityPro is compatible with Macintosh OS-X 10.5 (Leopard).
- The DLS audio system has been substantially enhanced. It is now possible to have 6 independent DLS channels operating, with each DLS using a different soundfont. There will be a number of NoteAbilityPro soundfonts created with high quality samples of many standard orchestral instruments. As well, it is possible to extend your palette of available soundfonts by downloading some of the many free soundfonts from the internet. To support the new audio system, the Audio Units panel has been re-designed so that the soundfonts for the 6 DLS players can be selected easily.



It is also possible to save your collection of soundfonts with the **Save DLS Orchestra** button and to load a previously saved orchestra with the **Load DLS Orchestra** button.



To support the new audio options, the Track Setup panel was also modified so that you can direct the music on each staff to any one of the DLS players (as well as the other playback options.)



- NoteAbilityPro can now import NoteWriter files using the **Import NoteWriter...** menu item in the **File** menu. Currently, there is limited editing support for imported NoteWriter files, but the files can be printed (or saved as PDF files through the print panel) and minor changes can be made to the imported images. A panel with some basic controls for NoteWriter images can be displayed using the **Tools/NoteWriter Controls...** menu item. More controls will be added over time. In this release of NoteAbilityPro it is possible to alter accidentals and the accidental position of selected NoteWriter notes, and to perform some simple editing operations such as changing the staff association of selected notes. Imported NoteWriter files can be saved as NoteAbilityPro files for later editing and printing. In order for NoteAbilityPro to recognize your NoteWriter files, add the extension .nwr to these documents.
- NoteAbilityPro can now import MusicXML files using the **Import XML...** menu item in the **File** menu. MusicXML files can be exported from other music notation programs and imported into NoteAbilityPro. Many of the layout and formating features of the original score are re-created when the score is imported into NoteAbilityPro.
- An interface for creating nested tuplets (a tuplet inside a tuplet) has been added to NoteAbilityPro. The nested tuplet pane was added to the Graphics & Line area of the Music Images panel. This pane allows you to input the rhythm necessary to create nested tuplets and provides buttons to convert a complex tuplet into a nested tuplet.
- Breakpoint functions were added to NoteAbilityPro. These graphical objects are designed to interface with MaxMSP and PD during score playback. Detailed information on Breakpoint functions and the BPF editor can be found in the Helpfiles.
- Support for Open Music's OM data format has been added. It is possible to export music data from Open Music and paste it directly into NoteAbilityPro.
- Support for score following using the antescofo system developed by Arshia Cont has been added to NoteAbilityPro. This system and its interface to NoteAbilityPro are still in the testing stage. Composers interested in working with this system should contact the author.

Version 2.346

- It is now possible to insert a blank system and Insert a blank page berfore the current system or page. Menu items to perform these tasks have been added to the Format menu.
- Playback of chords or beamed passages that cross staves now use the correct playback voice.
- 4 new line types were added to the Line Types pane -- these are lines for adding octava signs, octava below signs, 15ma above signs and 15ma below signs -- the first two duplicate the images already available through the Image Palette. (A new version of the Scriabin font is required for the 15ma image - this is included in the installation.)
- It is possible to add arrows on the end of curved lines (using the curve tool) by holding down the Shift key while the image is being drawn. The arrow appears at the end of the curved line.

Version 2.365

- Midi file reading and recording has been improved. It is now possible to extract triplets, quintuplets and septuplets from MIDI files and from recorded MIDI performances. As well a number of bugs in the MusicKit were fixed and NoteWriter import bugs were fixed.
- A playback metronome was added since some people requested a metronome that could be used during score playback. The metronome can be turned on and off using a button located at the bottom of the score window:

OFF:  ON: 

Version 2.370

- This version of NoteAbilityPro includes some playback enhancements which include LED displays for visualization of playback levels, re-design of the embedded soundfile playback system and support for recording audio directly from NoteAbilityPro. Two menu items have been added to the File menu: **Record To Disk...** and **Record To Disk From Cursor...**. Selecting these menu items brings up a panel which enables you to choose the audio format you want to record in and choose the location on disk you want the file stored. You have a choice of 4 audio formats:
    - Mpeg-4 audio Format - .m4a (a compressed format)
    - Core Audio File format - .caf (a compressed format)
    - AIFF - .aif (a high quality audio format common on Macintosh computers)
    - WAVE - .wav (a high quality audio format common on Windows computers)

  All these formats are compatible with Quicktime and ITunes. The first 2 formats are highly compressed, so the file size will be approximately 1/10th the size of the AIFF or WAVE files. However, some media players on other computers may not be able to read these compressed formats.

  Recorded files should sound identical to the score playback since all attributes of the performances (volumes, tempo, patch changes, embedded soundfiles etc.) will be captured in the recording. If you want to burn your recording onto an audio CD, use the Record To Disk menu and select any one of the file formats. Once the recording has completed, drag the file into a new playlist in ITunes, click on the **Burn Disc** button, and insert a blank disc.

  On some computers, when recording a particularly complex score you might experience short dropouts in the recording. If this occurs, try quitting any other running applications and changing your preferences so that the score does not scroll from page to page during playback.

- It is now possible to have dashed staff lines as well as solid staff lines using the buttons on the Staff Lines pane. The change from solid to dashed lines operates both on complete staves and on segments of staves (using the **Change At CursorB setting.)**
- It is now possible to include non-standard key signatures in NoteAbilityPro. Up to 2 different key signatures can be created in each score and added freely throughout the document. Custom Key signatures can also be saved and loaded into other scores.

See also

- NoteAbilityPro Overview
- NoteAbilityPro features

Example Scores and Tutorials

This chapter contains example files which demonstrate some of the score production capabilities of NoteAbilityPro and 2 tutorials with step-by-step instructions on how to use the program.

- Example Scores
- Tutorial 1
- Tutorial 2

See also

- 1 – Getting Started
- 2 – Overview
- 3 – Basic Program Operation
- 4 – Entering Music Into the Score
- 5 – Adjusting and Editing the Music
- 6 – Music Images Panel
- 7 – Score Structure Panel
- 8 – NoteAbilityPro Menus
- 9 – Other NoteAbilityPro Panels
- 10 – Page Setup and Printing
- 11 – Audio and Playback
- 12 – Reference

NoteAbility Pro Examples

The following PDF files where generated directly by NoteAbilityPro. The files can be viewed or printed using Adobe Acrobat Reader. The MIDI files were generated directly by NoteAbility and can be played by your computer's MIDI player or by Quicktime.

- Mädchenlied for Voice and Piano by Johannes Brahms - 4 pages
- Mädchenlied MIDI file
- String Quartet Op.130 Mvt. 5 by Lugwig Van Beethoven - 6 pages
- String Quartet Op.130 Mvt. 5 MIDI file
- Piano Prelude Op.28 No.6 by Frederic Chopin - 1 page
- Prelude Op.28 No.6 MIDI file
- Song of The Wind for Violin and Piano (Anonymous Folk Song) - 1 page
- Song of The Wind MIDI file

Other examples of NoteAbilityPro files which demonstrate the programs graphical flexibility:

- Complex notation example
- Imported PDF graphics
- Imported graphics in other formats
- Example of Contemporary music

NoteAbilityPro currently supports several music fonts. The examples below show a sample page using some of the fonts supported by NoteAbilityPro:

- Scriabin6 font from Opus 1 Music Inc. (included with NoteAbilityPro)
- Sonata font from Adobe Systems Inc.
- Petrucci font from Coda Music Inc.
- Engraver font from Coda Music Inc.
- Jazz font from Segler Music Fonts

See also
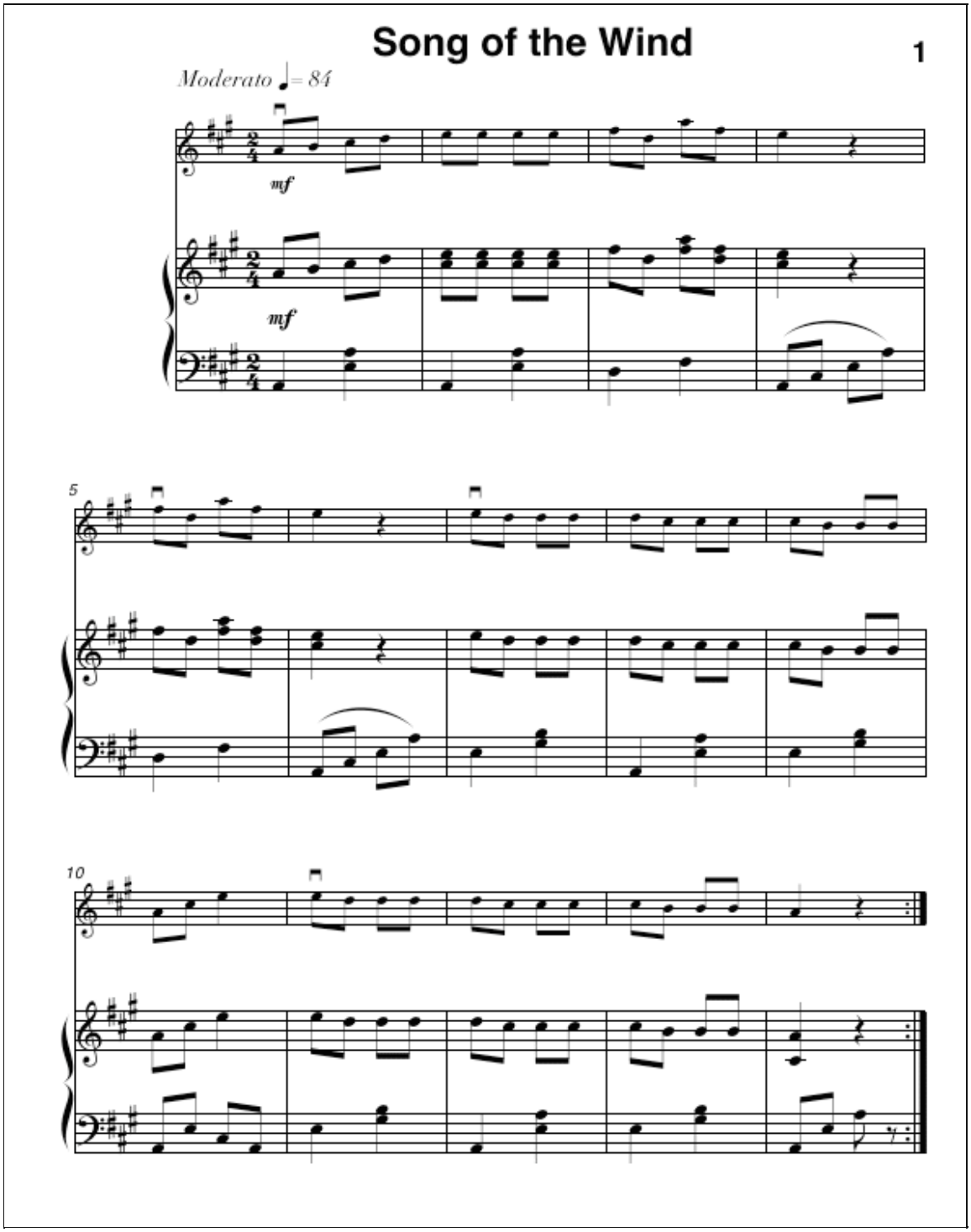
- Tutorial 1
- Tutorial 2

Tutorial 1

The first tutorial will take you through the steps needed to create a simple 1 page composition for violin and piano. It introduces:

1. Document Setup panel
2. Keyboard Entry of Images
3. Mouse Entry of Images
4. Building Chords
5. Simple Copy and Paste
6. Reformating of System Layout
7. Simple Slurs
8. Different Staff Sizes
9. Page Text and Measure Text
10. Repeat Barlines
11. Setting Tempo and DLS instruments
12. Page Setup and Printing

The first composition is short folk song for violin and piano entitled *Song of the Wind.* It will be familiar to all those who have studied the Suzuki violin method. The finished composition is shown below.

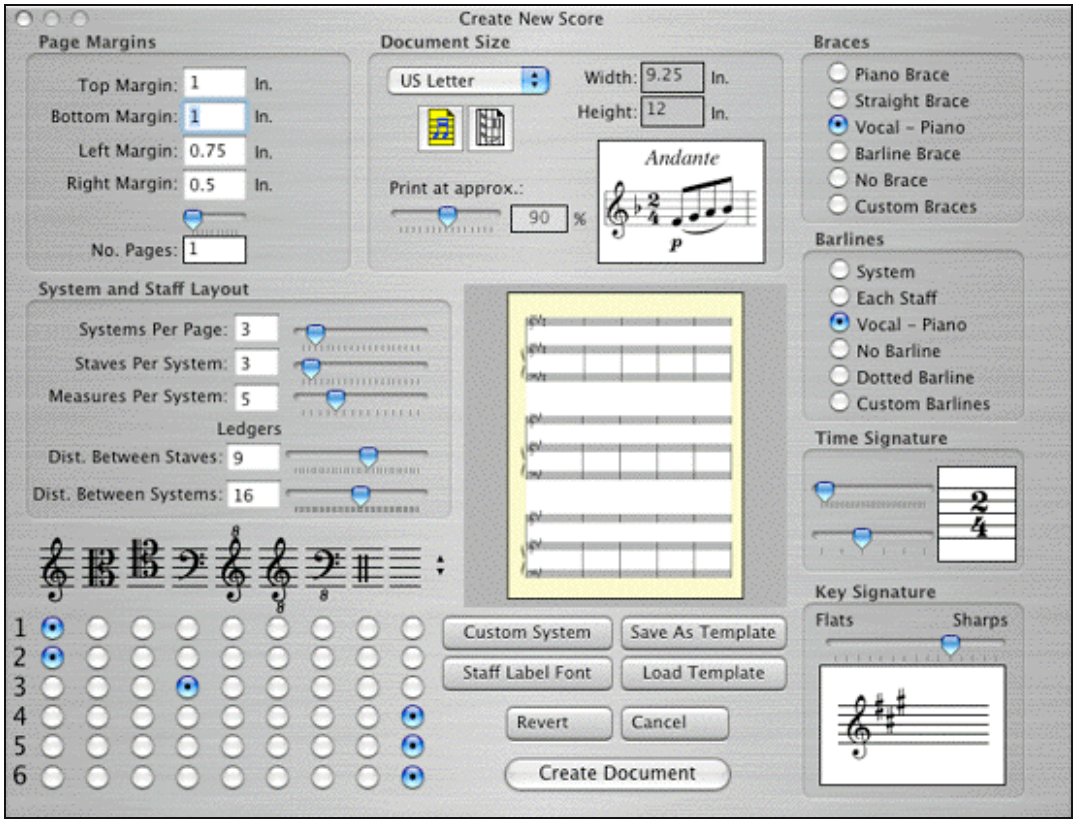


Step 1: Launch NoteAbility and create a new empty document

Launch NoteAbility by double-clicking the NoteAbilityPro.app icon. Once the program has loaded, choose **New** from the **File** menu. In the Document Setup panel that appears on the screen, alter the following settings by adjusting the sliders and setting radio buttons:

- Print size - 90%
- Staves Per System: 3
- System Per Page: 3
- Measures Per System:5
- Distance between Staves - 9
- Distance between Staves - 16
- Key signature: A Major (3 sharps)
- Time signature: 2/4

- Barline Format: Vocal-Piano
- Brace Format: Vocal-Piano
- Clefs: 1 - treble, 2 - treble, 3 - bass



Once the Document Setup panel looks the same as the example above, click on the **Create Document** button.

A blank score should appear with the format you just specified. If the format is incorrect, close the document by clicking on the close button (red button in the top-left corner of the window), choose **New** once again from the **File** menu and try again.

When the layout looks correct, choose **Save** from the **File** menu to give the score a name and to save it onto your hard drive in a convenient location. While you are working on the score, it is recommended that you save the document periodically by selecting the **Save** menu or typing *Command-s*. You can play back the score at any time while you are working through the tutorial by clicking on the Play button at the top of the score window.

Step 2: Enter the Violin Part using the On-screen Keyboard.

If you are familiar with the piano keyboard, choose **Keyboard...** from the **Tools** menu to bring up the Keyboard panel. If you prefer not to use the Keyboard panel, then you can enter notes by clicking the mouse at the correct pitch position close to the Entry Cursor. While enteing images, you should make sure that the Insertion tool  is selected in the NoteAbilityPro Tool palette at the top of the score. As you enter notes, the Entry Cursor will increment to the next beat location. If you make a mistake, choose **Undo** from the **File** menu (or type *Command-z*) to remove the last note. If necessary, you can select incorrect notes (with the Selection tool ) and delete them or select them and drag them to a change their pitch. If you need to adjust the position of the Entry Cursor while you are entering notes, you can either use *Spacebar* or *Shift-Spacebar* to move the Entry Cursor, or you can drag it to a new location by grabbing the rectangular area on the right of the Entry Cursor. Remember that the Insertion tool must be selected in the NoteAbilityPro Tool palette (located at the top of the score window) while you are entering notes.

Since the top line of the music starts with eighth notes, type *e* on your typewriter keyboard so that the

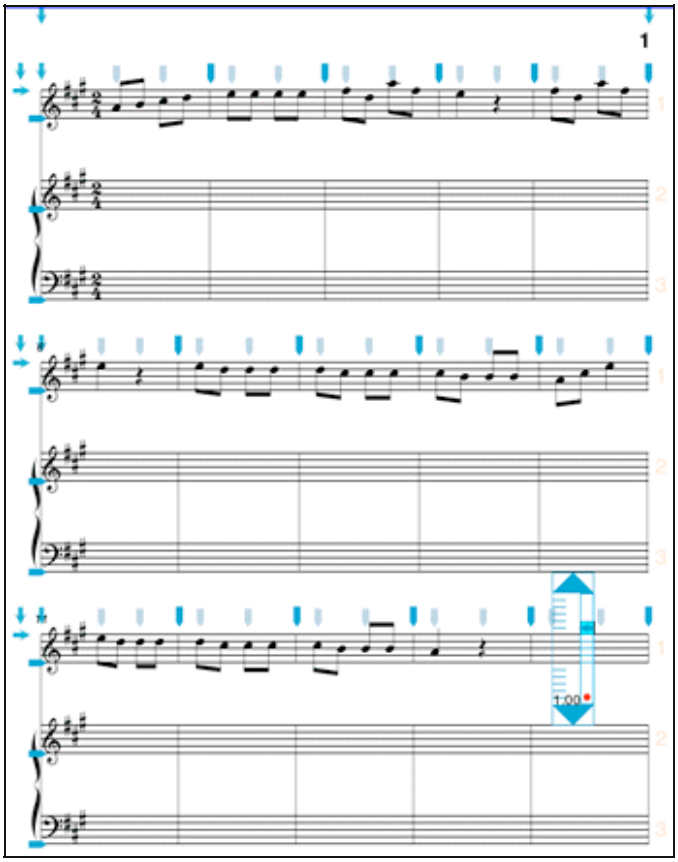
program will enter eighth notes. On the on-screen keyboard, locate middle C (C3) - it is slightly shaded, and click the first few notes of the piece on the on-screen keyboard (A3, B3, C#4, D4, E4, E4, E4, E4, F#4, D4, A4, F#4).

> - When refering to notes in this tutorial, the convention of naming notes along with their octave is used. Octaves run from C to B, with middle C being octave 3. Thus, middle C is refered to as "C3", the B below middle C is "B2", and the top line of the treble clef is F4.

The Entry Cursor should now be located at the beginning of measure 3. Since the next note is a quarter note, type *q* on the typewriter keyboard and click on (E3) on the on-screen keyboard. To enter a quarter rest, you can either change the command to *rq* and click the mouse close to the Entry Cursor, or (as a short-cut) you can type *Command-r* while keeping your Command as *q*. The Entry Cursor should now be located at the beginning of the fourth measure. Change the Command between *e*, *q*, and *rq* and continue entering the correct pitches and rests until you have reached the last measure of the piece.

> - When you are more familiar with NoteAbilityPro, you will probably used the Copy and Paste procedures for the repeated passages in this melody.

The score should now look something like this:



Step 3: Enter the Piano Part using the Copy/Paste and Mouse Entry.

You will notice that the right hand of the piano part is almost identical to the violin part - this is a good opportunity for Copy and Paste.
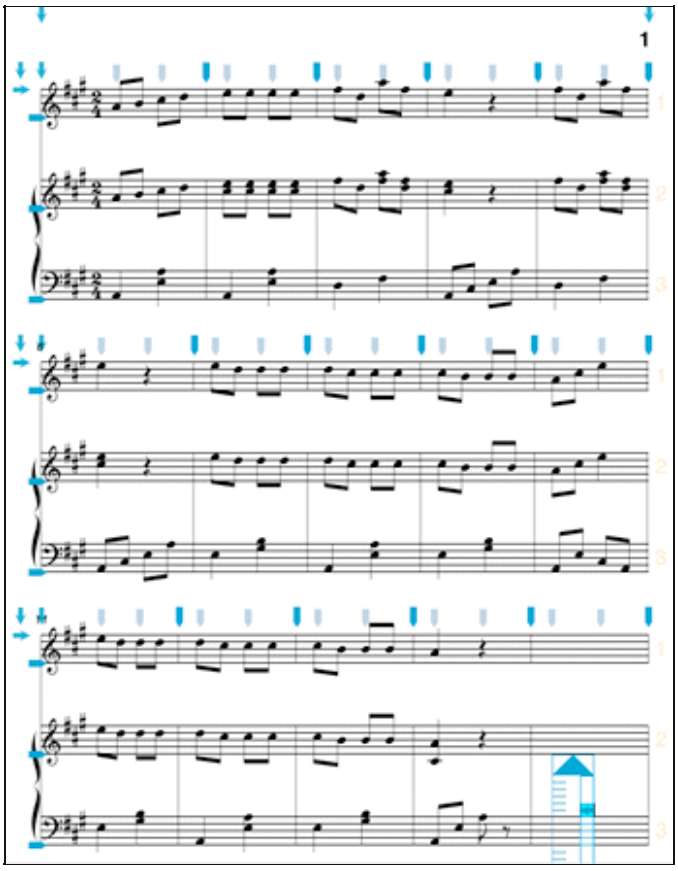
Choose the Selection tool (arrow icon) from the NoteAbilityPro Tools. When you move the mouse cursor back onto the score, the cursor should be an arrow. Drag a rectangle so that it includes all the notes in the violin part. (Start at the top right corner of the score and drag the mouse to the bottom-left corner of the score.) Later on, you will learn that you can also use the Selection tool to Shift-Select multiple rectangles or you can select portions of the score with Select-Score tool. The images within the rectangle

are displayed in a different colour to indicate that they are selected. Choose **Copy** from the **Edit** menu or type *Command-c*. The images have now been loaded into memory are ready to be pasted into the score. Images are pasted beginning at the position of the Entry Cursor, so before we paste, we must position the Entry Cursor on the first beat position in the first measure of the piano right hand staff (i.e. the second staff in our system.) Move the Entry Cursor by dragging the rectangle on the right side of Entry Cursor. The beat location will appear inside the Entry Cursor, so you will know when you at beat 1.0. Once the Entry Cursor is in the correct location, choose **Paste Into** from the **Edit** menu (or type *Command-v*). The copied music should appear on the top staff of the piano part.

There are some additional notes that need to be entered in the piano part (eg. 4-C#4 eighth notes in measure 2, an F#4 and a D4 in the second half of measure 3 and the second half of measure 5, and a C#3 in measure 14. Type *e* so it appears in the Command field, and move the Entry Cursor to the beginning of measure 2. You can move the Entry Cursor by depressing the Spacebar or by dragging the Entry Cursor as you did earlier. Once you are at the correct measure and beat location, click the mouse near the Entry Cursor at the C#4 pitch level. While you hold the mouse down, you can move the note up or down. Release the mouse when you see the correct pitch displayed. Continue entering these additional pitches in measures, 2, 3, 5, and 14. (Remember to change the Command to *q* before entering the C#3 quarter note in measure 14.

You can enter the piano left hand with either entry method (on-screen keyboard or directly with the mouse. In order to build chords, you can move the Entry Cursor back by clicking on the small back arrow located on the Entry Cursor or you can click on the **Go Back** button on the Keyboard panel or you can type Command-g. Remember to change the Command from *q* to *e* as needed. Notice that the last measure contains an eighth rest - the command for an eighth rest is *re*.

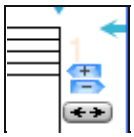
Once you have entered all the notes for the piano part, the score should look something like this:



Step 4: Adjust the Page Layout

Although there are still a few images to enter (dynamic markings, text, slurs, down bow marks), it is usually better to set your final page layout before adding these images. Lets adjust the layout now. Since we want the first system indented slightly, lets have only 4 measures in that system. To change the number of measures in the system, click on the small arrow with a minus sign on it located to the right of

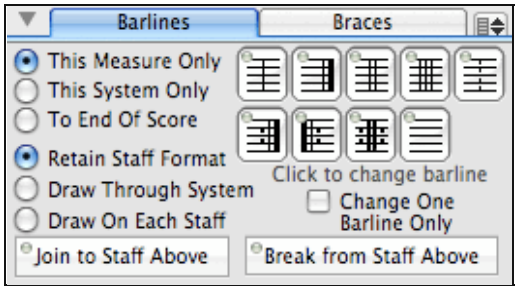
the top staff on the page. This will reduce the number of measures on that system, passing the extra measure to the next system, which in turn passes its extra measure to the third system.



– it is also possible to change the number of measures in a system by using the controls on the Measure In System pane in the Score Structure panel.
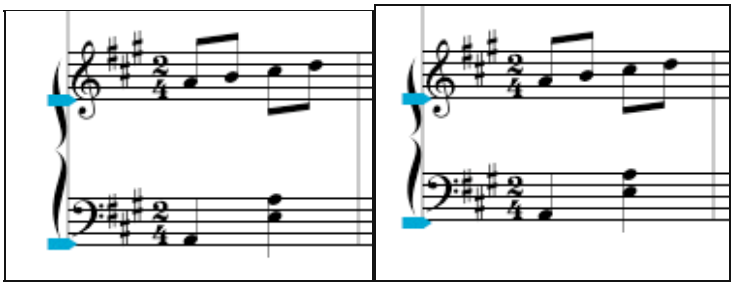
The final barline of the composition is a repeat barline, so you should position the Entry Cursor in this measure and locate the **Barline & Braces** pane from the pull-down menu in the Score Structure panel.

– if the Score Structure panel is not visible, you can show this panel by selecting **Score Structure Panel…** from the **Tools** menu. If the **Barlines & Braces** pane is not available in the Score Structure panel, you can choose it from the **Available Panes** pull-down menu at the top of the Score Structure panel.
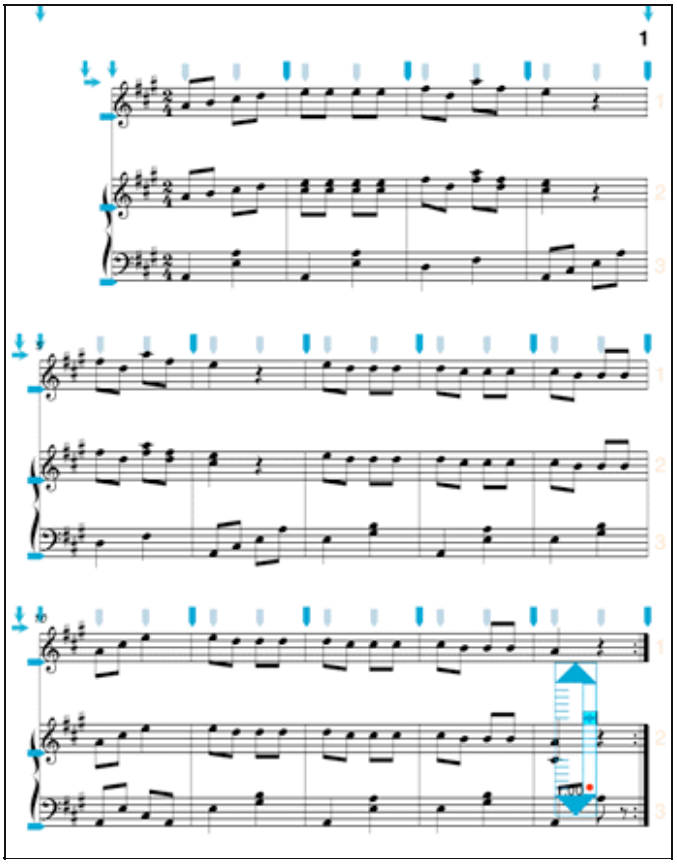


Click on the Repeat-End barline in this panel (the first button in the second row of barline types.) The radio buttons should be set as in the example above. The barline should now be changed in your score.

You might also want to adjust the distances between two piano staves in your score. This can be done several different ways in NoteAbilityPro, but we will start with the simplest and most direct way. You can manually adjust the position of the second piano staff (in each system) by grabbing and dragging (in an upward direction) the button which is at the right edge of the bottom staff line. As you drag the staff, the position of the images on this staff will adjust. Move the bottom staff closer to the staff above in each of the three system



Your formatted score should now look like this:



Step 5: Add Additional Images and Text

There are a few images that now need to be added to the score. There are two 'mf' symbols at the beginning of the score, some slurs, some down bow signs and some text.

First, add the 'mf' symbols by typing mf (which should appear as the Command in the Score Controls).

Make sure the Insert tool is selected  in the NoteAbilityPro Tool palette and move the mouse cursor (which has a target icon) to the location you want the first 'mf' to appear (below the first measure of the violin staff) and click on the mouse button. While the mouse button is depressed, you can drag the mf symbol until you have placed it exactly where you want it. Add a second 'mf' symbol between the two staves of the piano (in measure 1). Since the Command is already 'mf' you can just click the mouse in the new location to add the second image. If you are not happy with the position of these symbols, choose the Selection tool  from the NoteAbilityPro tools, make a rectangle around the symbol, place your mouse cursor inside the rectangle and drag the image to a new location.

Next, add the down bow signs which appear above the violin part in measures 1, 5, 7, and 11. The Command for a downbow is 'db'. Type this command and click the mouse cursor at the desired location (as you did with the 'mf' symbols). You should take care not to click your mouse directly on the Beat Markers (since NoteAbilityPro will think you are trying to adjust the beat location). However, once the downbow sign appears on the screen, you may move it (while the mouse button is down) on top of the Beat Marker or any where else on the page you would like it to appear. You can enter all four down bow symbols without changing the Command.

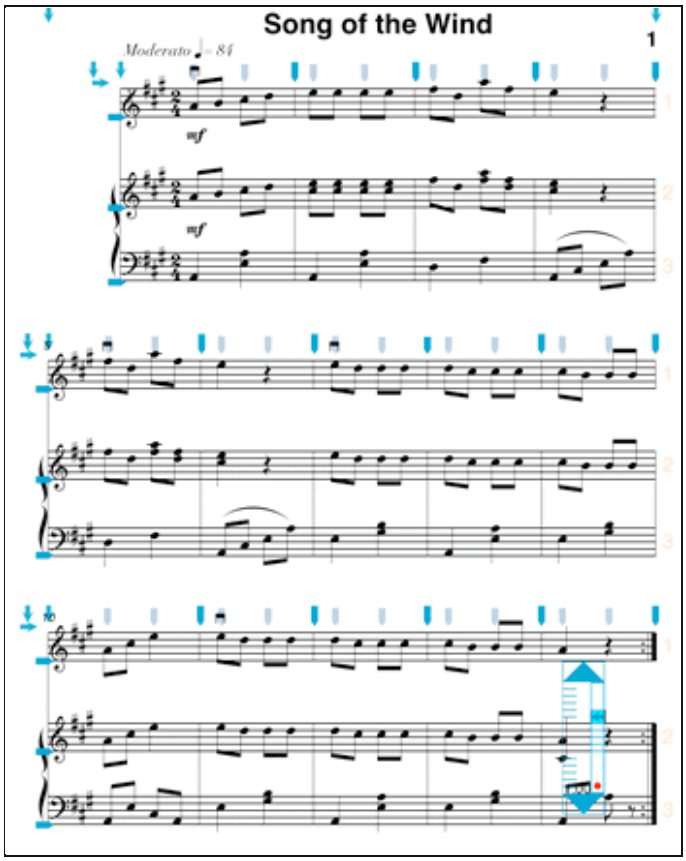
There are several ways to enter slurs, but the simpliest method is to select the group of notes to be slurred and click on the **Slur Notes** button. To select the notes to be slurred, use the Select tool  in the NoteAbilityPro Tool palette and drag a rectangle around the four notes in the fourth measure of the second staff of the piano. These notes should change colour to indicate that they are selected. Click on the **Slur Notes** button  located located in the top-right corner of the Score window or type the shortcut Command-Shift-w.

Repeat this procedure with the four notes in the sixth measure of the second staff of the piano. The start,

end and middle points of these slurs can be adjusted if desired. To adjust them, grab one of these points (with the Selection tool chosen) and drag the point to adjust the shape of the slur.

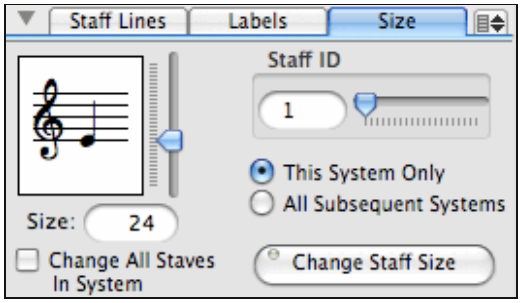
There are actually four different types of text in NoteAbility, but for now we will only ook at two. The first type of text is Page Text which is fixed at a location on the score page. This type of text is used for titles, copyright notices, and any other text that is not part of the musical score. To enter the title of this composition, choose the Page Text tool  from the NoteAbilityPro Tool palette and click the mouse at the location on the page that you would like the title to start. An I-beam cursor should appear at this location, and you may now type in the title. If you want to change the size or font, select the characters (still using the Page text tool) and bring up the Font panel (Command-t) from the **Font** menu. You can adjust the location of the title by choosing the Selection tool, clicking the mouse somewhere in the body of the text and dragging the text to the new location. The second type of text we need to enter is called Measure Text. This type of text is considered to be part of the music and will adjust as the music around it is adjusted. Choose the Measure Text tool  in the NoteAbilityPro Tool palette and click the mouse cursor above the first measure of the composition. Type "Moderato q = 84". Select the text and change the font by bringing up the Font panel from the **Font** menu and choosing a new font. Select the "q" in the text and change it to a music font (such as Scriabin6) by finding this font in the Font panel. (A "q" in a music font will appear as a quarter note.) As before, you can adjust the location of your text by dragging it with the Selection tool.

Now that all the notes and other images have been entered into the score, it should appear as below:



Step 6: Change the Size of the Violin Staff

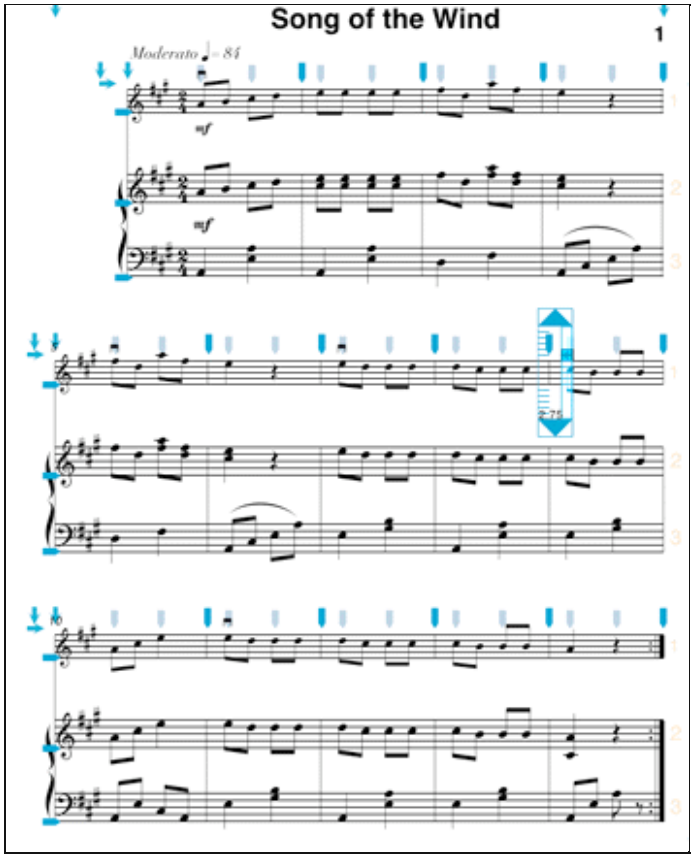
As the final editing step, we want to make the violin staff slightly smaller than the piano staves. To do this, move the Entry Cursor to the first measure of the piece, and locate the Staff Attributes pane in the Score Structure Panel and click on the **Size** tab to display the controls of changing staff sizes.



– if the Score Structure panel is not visible, you can show this panel by selecting **Score Structure Panel…** from the **Tools** menu. If the **Staff Attributes** pane (which has tabs labeled Staff Lines, Labels, and Size) is not available in the Score Structure panel, you can choose it from the **Available Panes** pull-down menu at the top of the Score Structure panel.

Make sure the Staff ID display shows 1 (since it is the first staff in the system we want to modify). Adjust the Staff Size slider until the display shows 18. (Since 24 points is the default image size, 18 points is about 75% of the original size). Since we want the entire violin part to be adjusted, make sure the **All Subsequent Systems** radio button is selected. Click on the **Change Staff Size** button.

Congratulations, you score is now completed, and should appear similar to the one below:

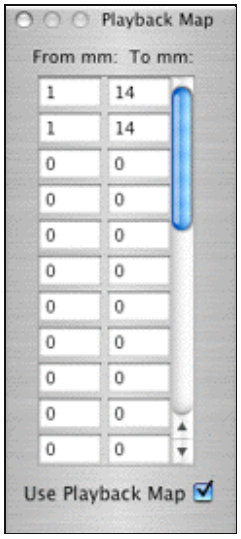


Step 7: Add Playback Settings

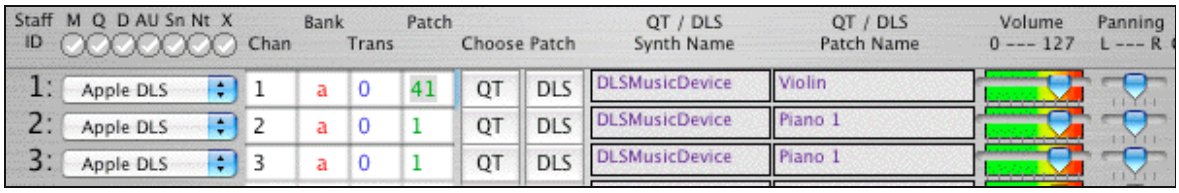
Although not a necessary step in creating and printing the score, you might like to have a more realistic performance of this score. To achieve this, we must set the tempo, the playback map (i.e. which measures are repeated), and the DLS synthesizer or MIDI instruments to be used.

To set the tempo, adjust the tempo slider in the Playback Controls pane of the Music Images panel so that the tempo field displays **84**. This will be the fixed tempo for the composition. Later on, you can learn how to create tempo changes during playback.

To set the composition to repeat (since there is a repeat sign at the end of the measure 14), choose **Playback Map** from the **Tools** menu. In the Playback Map panel, enter the values 1, 14, 1, 14 in the respective start and end fields (as shown below).



To set the DLS Synthesizer Instruments (or MIDI channels) for playback, Choose **Track Setup...** from the **Audio-MIDI** menu. In the Track Setup panel, you can set the patch number for DLS, Quicktime or MIDI playback. The General Midi patch for violin is 41 and for piano is 1. Set staff 1 to use Patch 41, and set staves 2 and 3 to use Patch 1. If you would like to choose a different DLS instrument, click on the **DLS** button for each of the staves, and a list of all available instruments will appear. Once set, the top of the Track Setup panel should look similar to the example below:



Once you have set the patches, click on the **Done** button in order to close the panel. You can now play your score by clicking on the Play button in the Score Controls at the top of the score window or by clicking on the Play button in the Playback Controls pane in the Music Images panel.



Play Complete Score -- Play From Entry Cursor

The correct tempo, correct patches and the repeats should all be audible now.

Step 8: Print the Score

Since this score fits nicely on a standard page size at the 90% reduction size you set up when you created the document, it is probably not necessary to alter these settings. If you would like to do so anyway, choose **Page Setup...** from the **File** menu. In the pull-down menu in the Page Setup panel, select **NoteAbilityPro** to show the NoteAbility Page Setup options. Choose the paper type, orientation, printing scale, etc., and click the **OK** button when you are done. To print the score, choose **Print** from the **File** menu. If you have a compatible printer connected to your computer, the score should now print.

Congratuation, you have completed the first tutorial. Save your composition, and when you are ready, begin working on a new composition, or work through Tutorial 2.

See also

- Tutorial 2

Tutorial 2
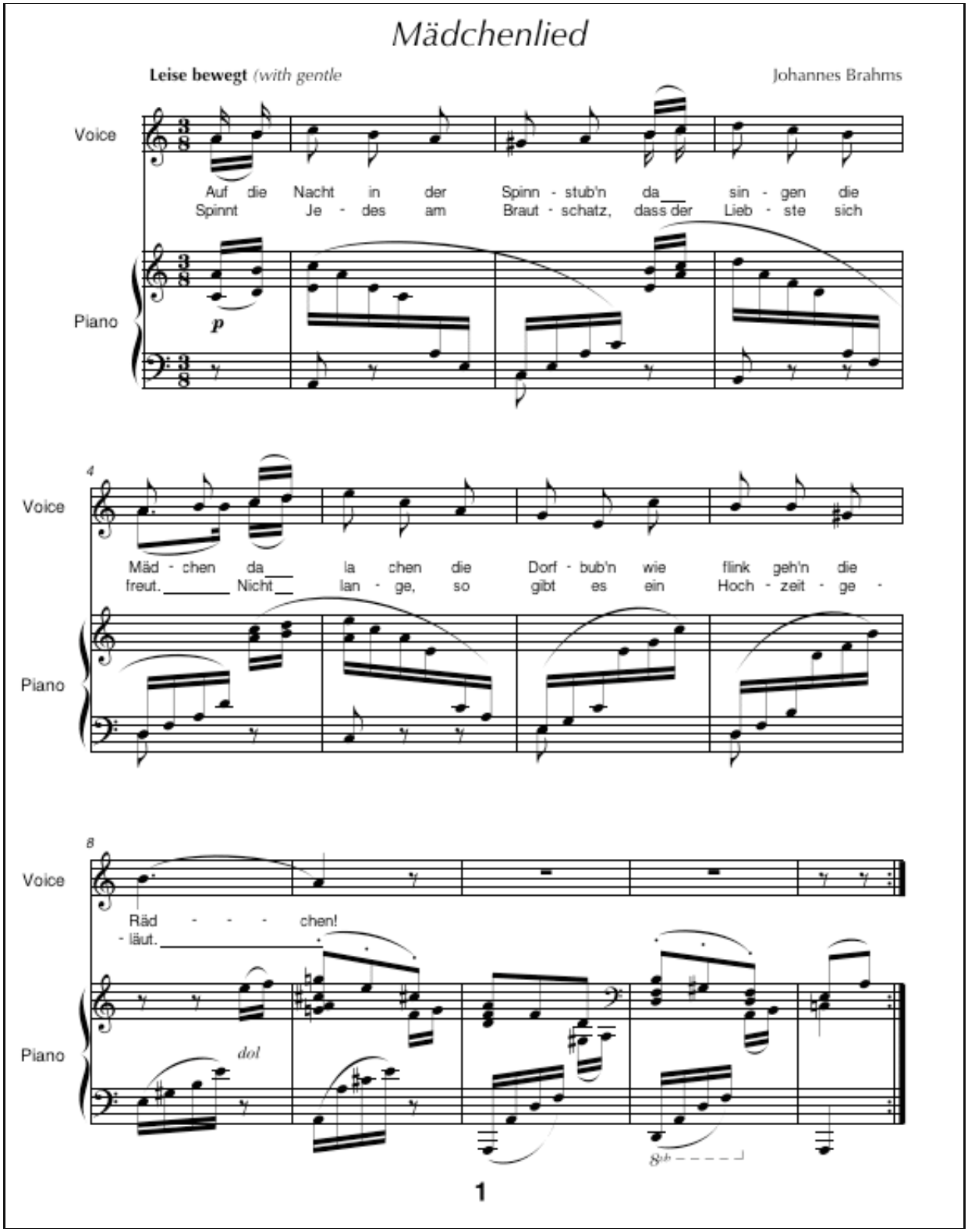
The second tutorial will take you through the steps needed to create a moderately complex composition for voice and piano – Mädchenlied by Johannes Brahms

In addition to the features you have already learned, Tutorial 2 introduces:

- upbeat measures
- multiple voices per staff
- lyrics (multiple verses)
- accidentals
- beaming across staves
- articulations
- slurs
- clef changes
- page layout for printing

Since the complete composition is about 45 measures long, the tutorial will focus on the first page of the score. You may complete the remainder of the piece on your own – a copy of the completed composition can be found in the NoteAbilityExamples folder (in the */Library/Application Support/NoteAbilityPro* folder).

The completed first page of the composition should look as follows:



– Remember to save periodically as you work through the tutorial.

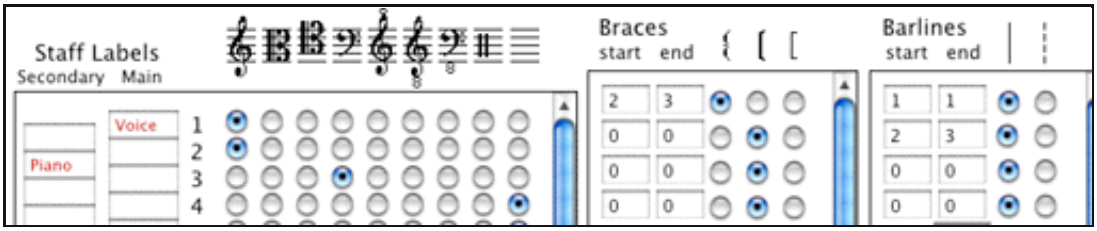
Step 1: Set up the score format.

As before, the first step is to create the basic score layout. Mädchenlied is a song in 3/8 time in the key of A minor (no sharps or flats). Choose **New** from the NoteAbilityPro **File** menu, and in the Document Setup panel, set the following values:

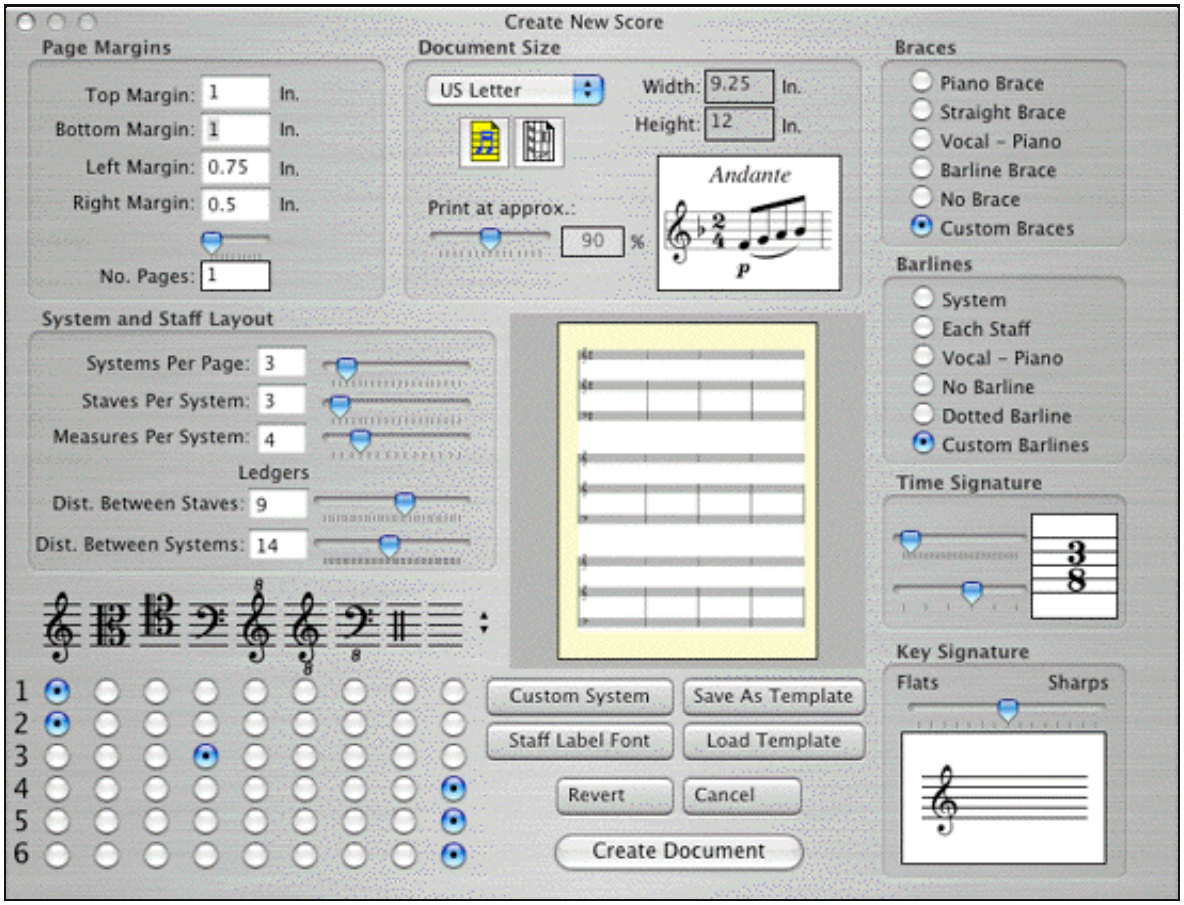
- Paper Size: US Letter
- Paper Orientation: Portrait
- Print Reduction: 90%
- Systems Per Page: 3
- Staves Per System: 3
- Measures Per System: 4
- Distance Between Staves: 9 Ledgers
- Distance Betweeen Systems: 14 Ledgers
- Time Signature: 3/8
- Key Signature: no sharps or flats

Other settings can be left at their default settings. Remember to hit return after entering new values in the editable fields in this panel, so that the miniature score page is updated with the correct values.

Since we want to add staff labels to this score, click on the Custom System button, and enter "Voice" as the first Main label, and "Piano" as the second Secondary label (which will cause the label to be centred between staves 2 and 3). Set the clefs to: staff 1 – treble, staff 2 – treble, staff 3 – bass. Enter "2" and "3" in the first two fields of the Brace list and click on the button below the piano brace icon (to have a piano brace drawn between staves 2 and 3, and enter "1", "1", "2", and "3" in the first four fields of the Barline list (to have barlines drawn on staff 1 and between staves 2 and 3.) Click on the **Done** button.

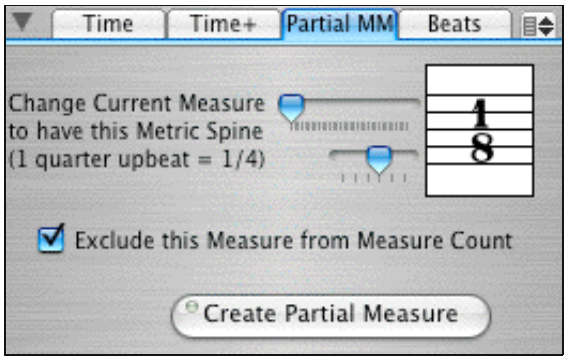


You should again see the Document Setup panel. Notice that the Brace and Barline settings have switched to *Custom* since we are now using the information entered in the Custom System panel.



Click on the **Create Document** button and a blank score should appear. If the document does not look correct (i.e. there are missing staves, braces, or barlines) choose **New** again from the **File** menu and check that all the correct values have been entered,

Since this score has an pickup measure at the beginning, we should first create this partial measure. To create partial measures, we must first understand that NoteAbilityPro counts every bar and partial bar as if it were a complete measure. We can exclude the partial measures from being counted with measure numbers if we want to, but internally, the program still counts all measures (partial or complete) from the beginning. To create a 1/8 pickup (or upbeat) measure, check that the Entry Cursor is in measure 1 and select the **Partial MM** tab from the Time Signature pane in the Score Structure panel.



– if the Score Structure panel is not visible, you can show this panel by selecting **Score Structure Panel...** from the **Tools** menu. If the **Time Signature** pane is not available in the Score Structure panel, you can choose it from the **Available Panes** pull-down menu at the top of the Score Structure panel.

Set the meter sliders so that 1/8 is indicated, check that **Exclude this from Measure Count** is selected, and Click on the **Create Partial Measure** button. You should notice that measure 1 only has 1 beat button in it and that the measure numbers on the score have been adjusted.

– Notice that the Measure Number display at the top of the score window shows both the structural measure number and the notated measure number. The first full measure of the composition structurally is measure 2, but numerically is measure number 1.



Step 2: Enter the Notes in the Voice Part

You can enter notes either with the mouse and/or with the on-screen Keyboard. Remember to enter the correct rhythmic value before adding the note. The rhythmic value can be indicated by typing a letter (*q*, *e*, *s*, etc) or by selecting the note value from the Note palette along the top of the score window.



Notice that portions of the voice and piano parts have two voices on the same staff.

– In NoteAbility a voice is considered to be a note or chord on a separate stem. Normally, there are three voices allowed on each staff. The first voice has stems which go either up or down depending on the pitches, the second voice has stems that go up, and the third voice has stems that go down.

In places where there is only one voice on the staff, use Voice 1. Where there are 2, enter the second voice either in Voice 2 (stems up) or in Voice 3 (stems down). The voice number is set with the radio buttons in the Score Controls at the top of the score window.



In order to simply adding lyrics, we should enter most of the vocal part in Voice 1, and only switch to Voice 2 or Voice 3 when necessary. Also, since the voice part in this edition uses the convention of not beaming notes unless they are sung to the same syllable, we should temporarily turn Auto-Beaming off. To do this, choose the **Preferences** menu item from the **NoteAbilityPro** menu, and uncheck the **Auto Beam On** button in the **Formatting** tab of the Preferences panel. Close the panel when you are done.

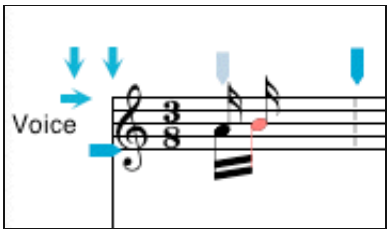
Two keyboard shortcuts that we will useful while entering the voice part are:

- Command-f which will flip the selected note's stem direction
- Command-b which will beam the selected notes.

> -If you enter the wrong pitch, use the up and down arrow keys on your typewriter keyboard to adjust the pitch.

The first measure of the voice part has two voices (both on the same pitches). With the Insertion tool selected type *s* to indicate that a sixteenth note will be entered and click the mouse so that the notes A3 and B3 are entered. With auto-beaming turned off, these notes should appear with flags on them. Drag the Entry Cursor (or type Shift-Spacebar) to return the Entry Cursor to the beginning of the score and select the Voice 3 radio button (stems down). Enter the notes A3 and B3 again. The note heads of these new notes will be aligned with the previous notes, but the stems will be drawn in a downward direction.
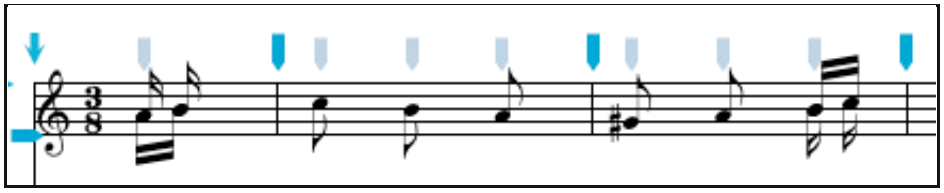
Switch to the Selection tool , make a rectangle around the stems/flags of these notes, and type command-b to beam the notes.
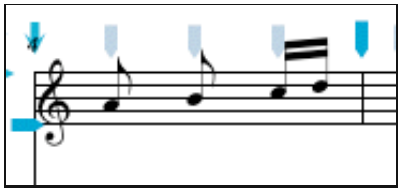


Switch back to the Insertion tool, select Voice 1 (stems both direction), type *e* to change the Command (since we want to add some eighth notes), and enter the next 5 notes. C4, B4, A4, G#4, A4. After the G has been entered, type Command-3 or click on the Sharp button on the Toolbar to add a sharp to the G. Enter the last beat of this measure as follows:

1. type *s* to set the Command, and enter the note B3.
2. type command-f to flip the stem of this note so it is drawn in a downward direction
3. Enter C4.
4. Drag the Entry Cursor back to the third beat of this measure and switch the Voice to 2 (stems up).
5. Enter the notes B3 and C4 again.
6. Switch to the Selection tool and select the stems of these notes (i.e. the ones with the stems in an upward direction) and type command-b to beam these notes.
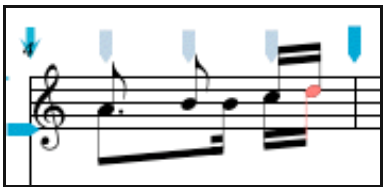
The first three measures should look as follows:



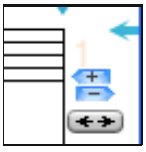
The fifth measure (mm. 4) has two different rhythms in the two voices, but the procedure is the same. Enter Voice 2, (eighth notes A3 and B3, sixteenth notes C4 and D4). Select the last two notes (using the Selection tool and choose the **Beam Notes** item from the **Modify/Beams (Command-b)** or click on the **Beam Notes** button in the Score Controls. The last two sixteenth notes will be beamed and the measure should looks as follows:



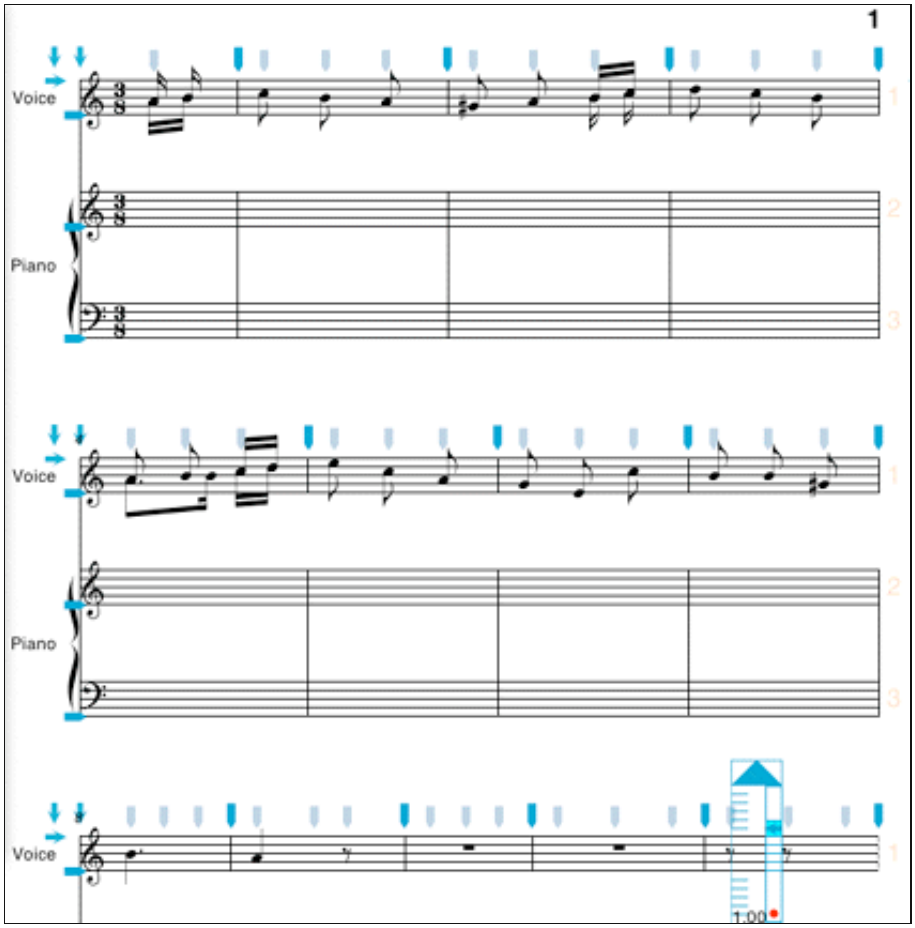
Move the Entry Cursor back to the beginning of this measure and enter Voice 3 (dotted eighth note A3, sixteenth notes B3 C4 D4) To enter the dotted eighth, use the command *e.* or click on both the eighth note button and the dot button in the Note palette above the score. Here, two beam groups have to be created. Select the first two notes using with the Selection tool. Since the noteheads of both voices are in the same locations, select these notes by dragging a rectangle around the bottom of the stems. Use the **Beam Notes** menu item (command-b), then select the last two notes in this measure (select the stems of these notes for the same reason) and beam these notes as well. This finished measure should look like this:



Complete the remainder of the voice part; there are no more beamed groups in the voice part on the first page. To enter the rests (beginning on the third beat of Measure 10 (mm.9), type the command *rewwee* - this will enter the series of rests. If you have scrolled to page 2, return to page 1 by clicking on the left page arrow on the Score Controls at the top of the score window. In order to have all of this music on one page, click on the + arrow located to the right of the last system on the page -- this will increase the number of measures in that system.



The score should now look as follows:



Step 3: Enter the Lyrics

To Enter the lyrics, choose the Lyric tool  from the NoteAbilityPro Tools (located along the top of the score window). Move the Entry Cursor to the beginning of the score (on the top staff) and type each syllable of the first verse. Type return after each syllable. Because of the changing voices in this part, the Entry Cursor may not always move to the correct place for the next syllable. Adjust it with the mouse if it is not properly aligned. To join syllables with a dash, add a dash "-"at the end of the syllable. To add an underscore after a syllable, add an underscore "_" at the end of the syllable.

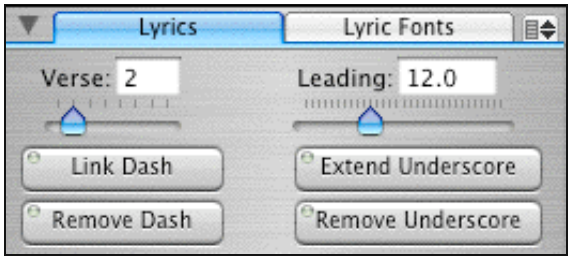
Enter the following syllables with a return after each:

Auf die Nacht in der Spinn- stub'n da_ sin- gen die Mäd- chen da_ la- chen die Dorf- bub'n wie flink geh'n die Räd- chen!

- the "ä" is created using option-u followed by a.

To move the vertical position of the lyrics, show the **Preferences panel** (under the **NoteAbilityPro** menu) and check the box beside **Lyric Buttons**, in the **Format** tab. The lyric buttons will appear on your score and you can drag these buttons down so that the lyrics are not colliding with the notes.

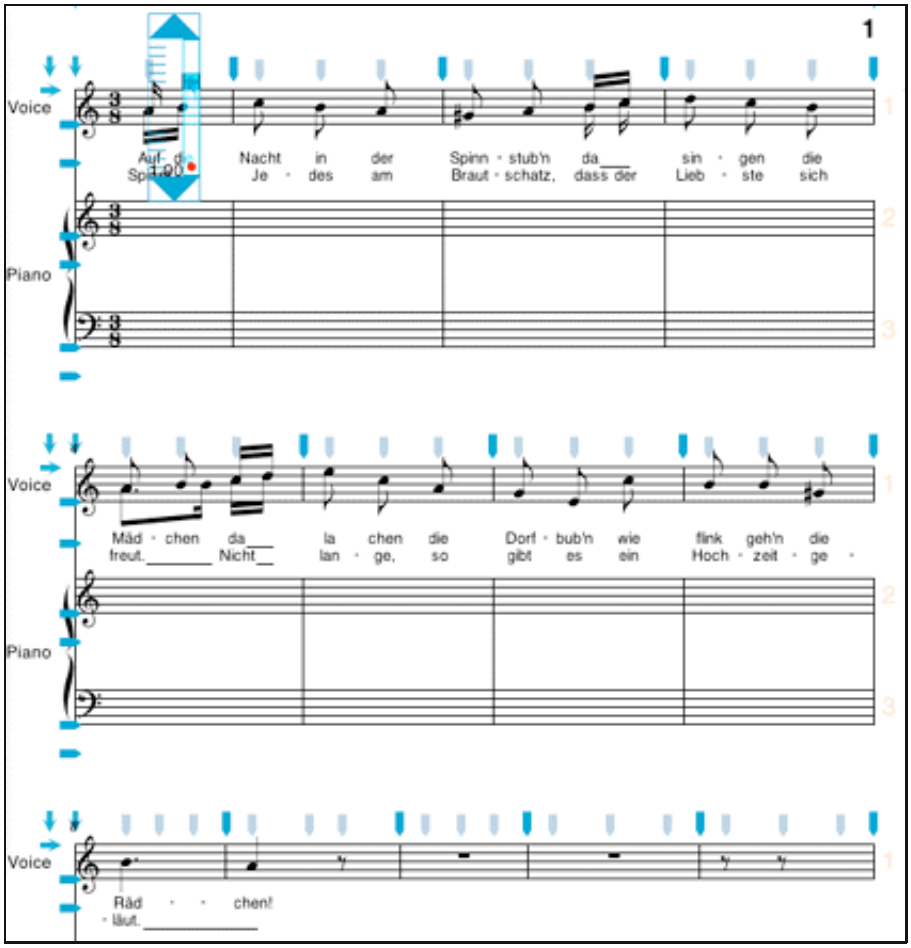
To enter the second verse, show the **Lyrics** Pane in the Music Images panel and set the verse field to 2.



Beginning in the first measure, enter the second verse lyrics:
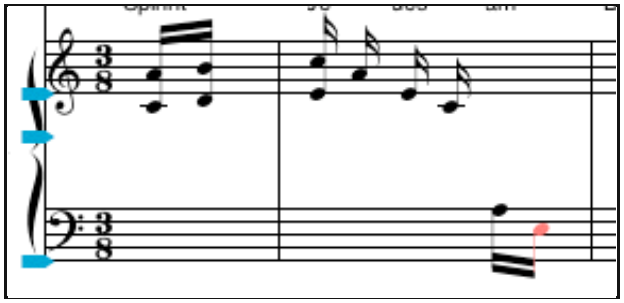
Spinnt Je- des am Braut- schatz, dass der Lieb- ste sich freut._ Nicht_ lan- ge, so gibt es ein Hoch- zeit- ge- läut._

The score should now look as follows:
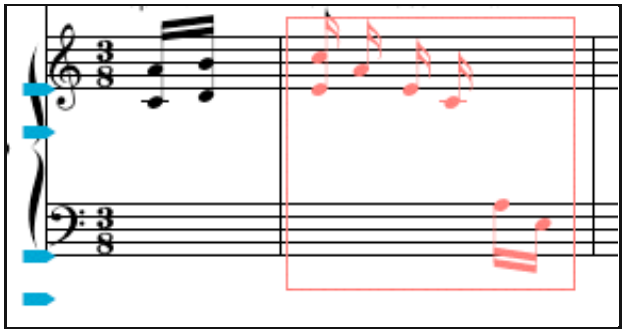


Step 3: Enter the Piano Notes and Rests

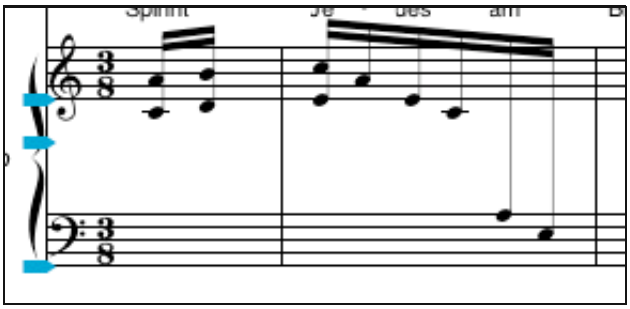
The piano part now needs to be entered. Use either the on-screen keyboard or the mouse, moving the Entry Cursor back to create chords as needed. The majority of the piano part is straight-forward, but there are a several measures (2, 4, 6, 7, and 8) which have beaming across staves, and we should look at that process more carefully. Enter the main line of the piano part for the first two measures. Remember to position the Entry Cursor on the correct staff - you can click on the up and down arrows at the top and bottom of the Entry Cursor to move it up or down within the system.



To beam the notes in the second measure, switch to the Selection tool (arrow icon) and make a rectangle around these notes:



Choose **Beam Notes** (from the menu or Toolbar button), and the notes will be beamed.



Adjust the vertical position of the beam by grabbing the control point just to the left of the beam. With this control point selected (either by clicking on it and making a rectangle around it), drag the beam down so that the beam appears between the two staves:
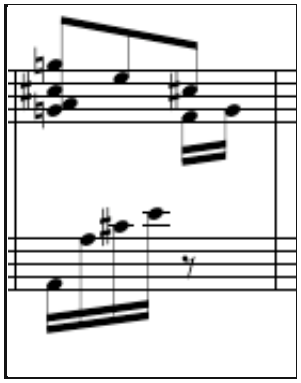
> – If you would like to see where the control points for all images are, select the **Show Control Points** item in the **Format** menu. You may turn them off by using the same menu item.

Once the beam has been added, you can add the missing notes and rests, and continue adding the remainder of the notes. Notice that in certain measures there are two voices, and you should remember to switch to Voice 2 (stems up) or Voice 3 (stems down) for these passages. The first 9 measures of the piano part can now be entered.

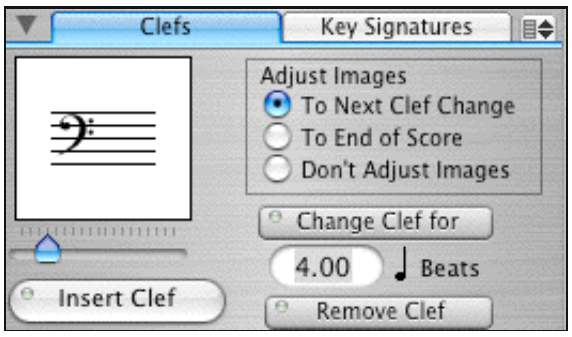
> – If you need to adjust the angle of the beam at any time, you can adjust the control point at the right side of the beam (just to the left of the last stem).

The chord in Measure 10 (mm.9) includes two cautionary G-naturals. Since these are not absolutely necessary, the naturals will not appear automatically. Select the noteheads of these two notes (G3 and G4) using the Selection tool - you can shift-select both noteheads if you want to, or select them one at a time. Once the noteheads are selected, click on the **Show Cautionary** button in the **Accidentals &**

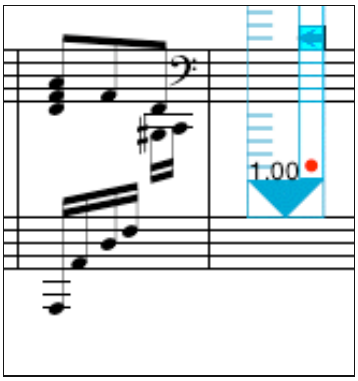
Articulations pane of the Music Images panel. The completed measure should appear as follows:
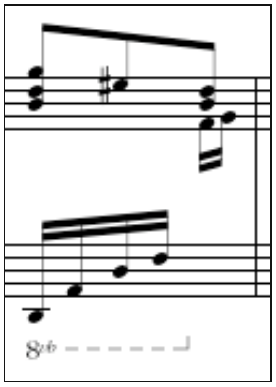


At the end of Measure 11 (mm.10) there is a clef change in the piano right hand. Place the Entry Cursor on this staff on the first beat position (1.00) of the following measure. In the **Clef & Key Signature** pane of the Score Structure panel, adjust the slider until a bass clef is displayed, and click on the **Insert Clef** button.



A bass clef will be inserted, and the measure should look as follows:

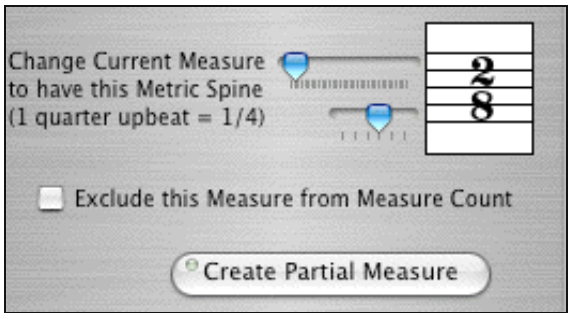


Continue entering the piano part for the last two measures. The 8va basso in Measure 12 is entered using the Octava tool  from the NoteAbilityPro Tools. This tool is used for drawing both 8va and 8vb (octava basso) symbols. To draw an 8vb symbol with this tool, hold down the shift key while you drag the mouse from left to right below the notes. You do not have to position the Entry Cursor when entering images of this kind. The result should look something like this:
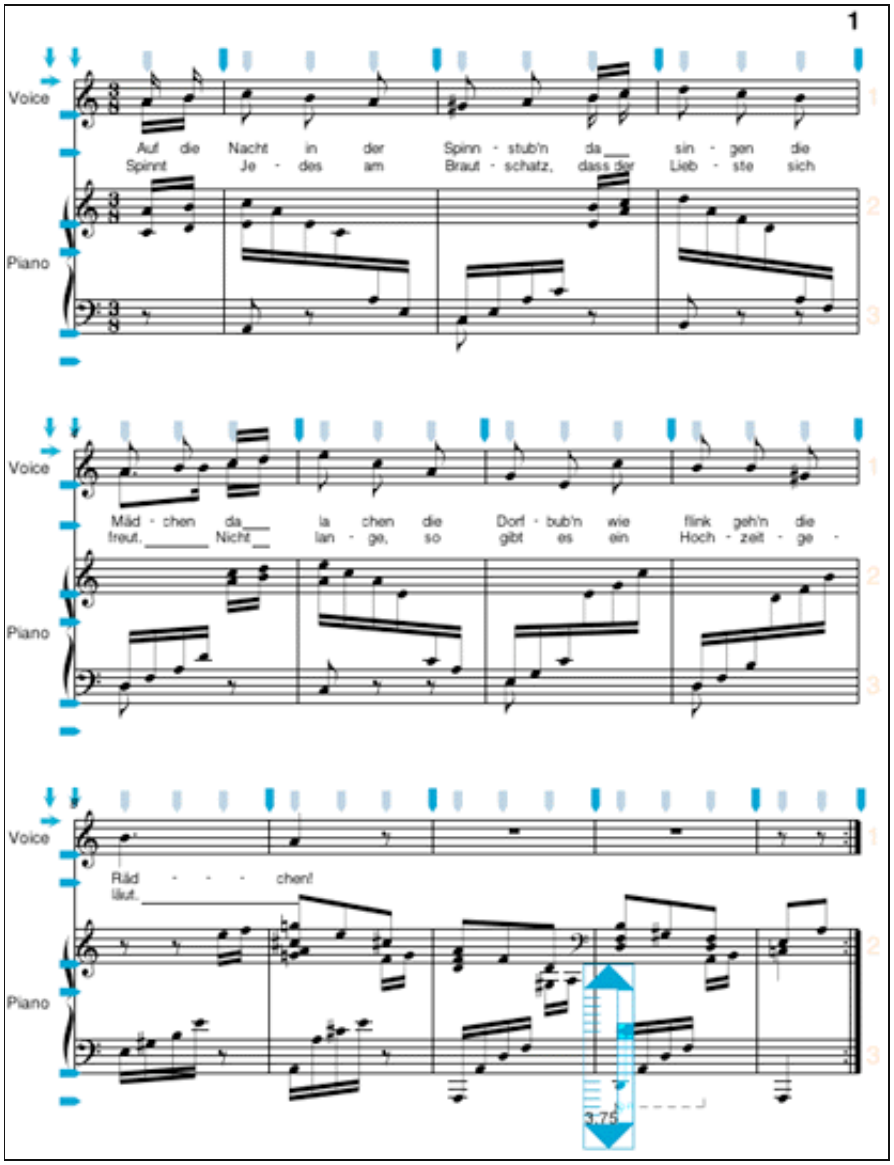


– if you would like the score playback to be accurate, you should select the four notes in the bass clef (above the 8vb sign) and go to the Transpose tab in the **Transpose/Shift Images** pane in the Score Structure panel. Set the transposition interval to be Down a Perfect 8ve and click on the **Alter Playback Only** button. These notes will be transposed down an octave when played.

Measure 13 (mm.12) is a partial measure – a 2/8 measure with a repeat sign at the end. With the Entry Cursor in this measure, use the **Partial MM** tab in the **Time Signature** pane in the Score Structure panel. Set the sliders in this pane to 2/8 and uncheck the **Exclude this Measure from Measure Count** box. Click on the **Create Partial Measure** button in order to set this measure to have only 2 beats.



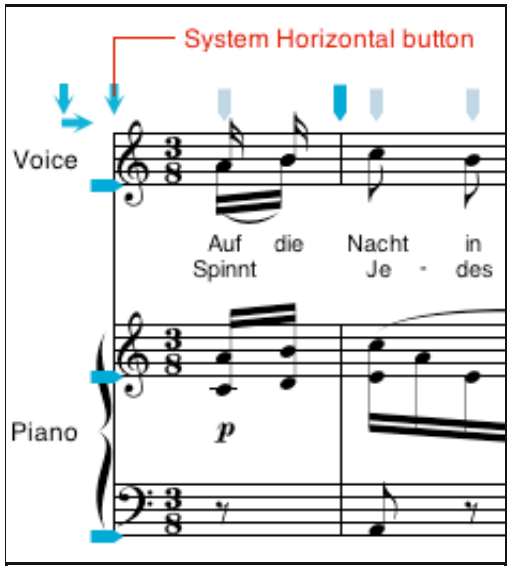
Use the Barline tab in the **Barline & Brace** pane of the Score Structure panel to add a Repeat barline at the end of this measure – click on the Repeat-End barline type to change the barline in this measure. All notes and rests should now be entered in the score.



Step 4: Adjust the Page Layout

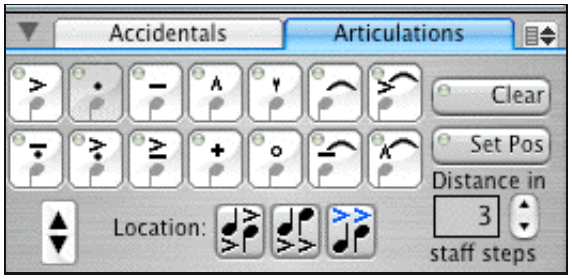
Now that the basic music has been entered, you might want to adjust the positions of the staves and/or systems. To do this, move the blue arrows located at the bottom-left corners of the staves or at the top-left corners of the system. For example, in order to give more space for the lyrics, you might want to move the first piano staff down slightly. You may find that slight adjustments to the beam angles are also necessary after you move the staves. As before, to adjust the height of the beam, adjust the left control point and to adjust the angle adjust the right control point.

To indent the first system slightly, drag the System Horizontal button of the top system to the right.



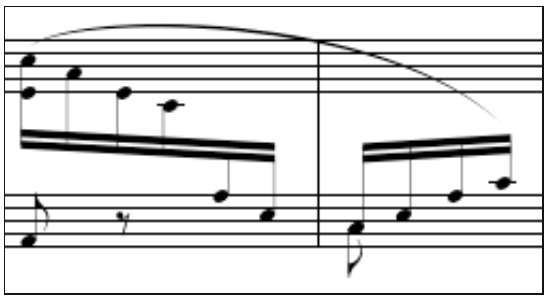
Step 5: Add Slurs and Articulations

There are staccato marks above the eighth notes in Measure 10 and 12 (mm. 9 and 11). Select these notes (using the Selection tool) and click on the Articulation tab of the **Accidentals & Articulation** pane in the Music Images Panel.
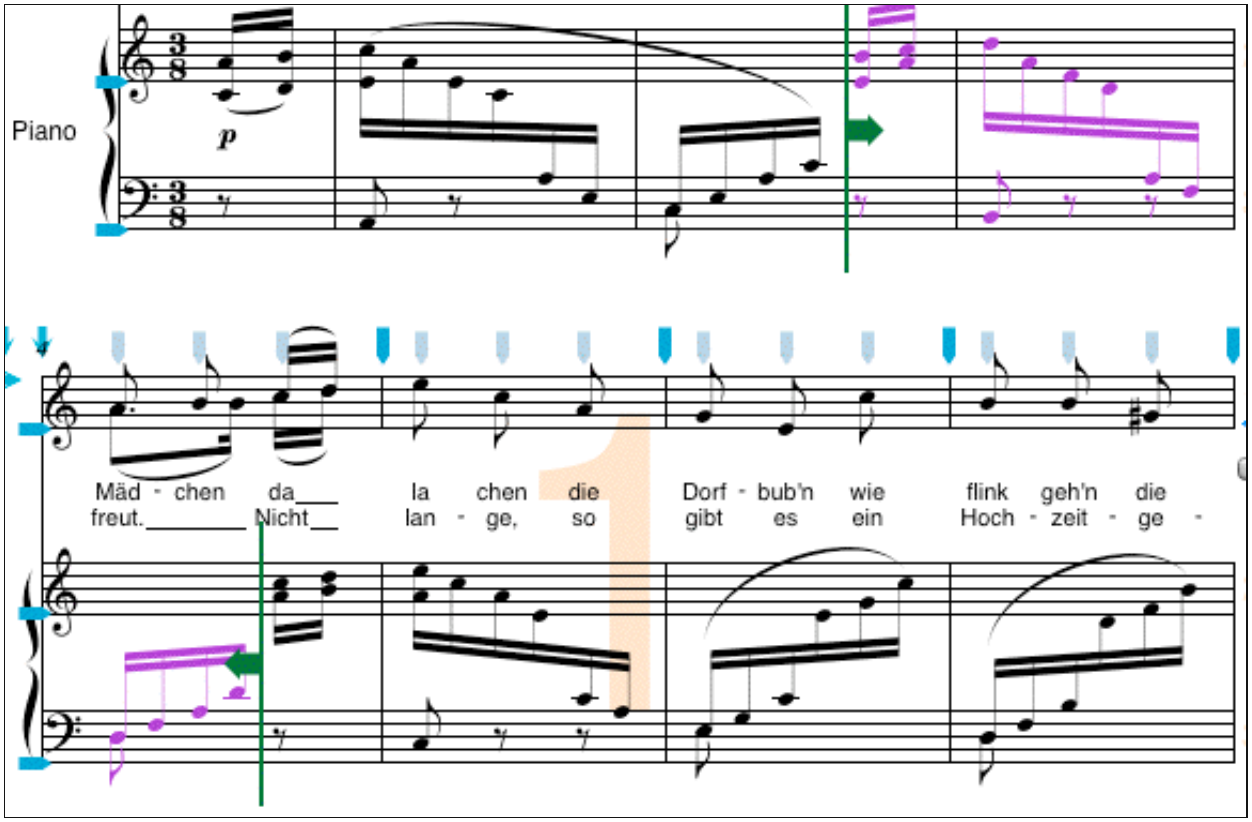


Set the Location to the third button (articulation marks always above) and click on the staccato button. Staccato articulations will be added above all the selected notes.

Slurs can either be added by manually drawing them or by selecting groups of notes and having slurs automatically added to the selected notes. In instances where you want the slur to appear in the normal or default location, you can use the second method; select the notes you want the slur to encompass, and click on the **Slur Notes** button  in the Score Controls at the top of the score window (or use the Hot Button shortcut - Command-Spacebar). For example, the slur in mm.1 - 2 and many of the slurs in the piano part can be done this way:
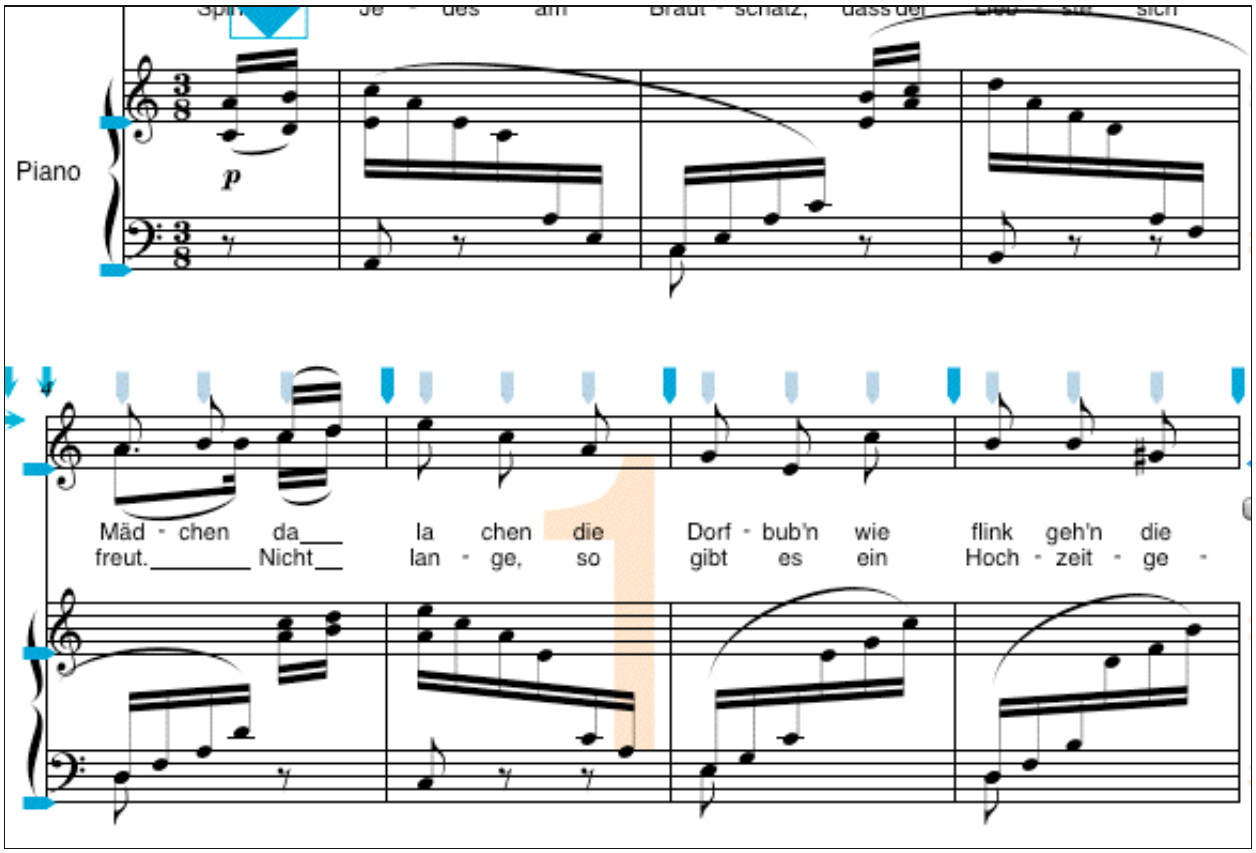


For the slur that crosses from one system to another in the piano part (measures 3 - 5), you must use the Select-Score tool  and indicate the starting and ending points of the slur. Click the mouse just before the first note in the slur group (on the top piano staff) and just after the last note to be slurred (on the

bottom piano staff). The selection:
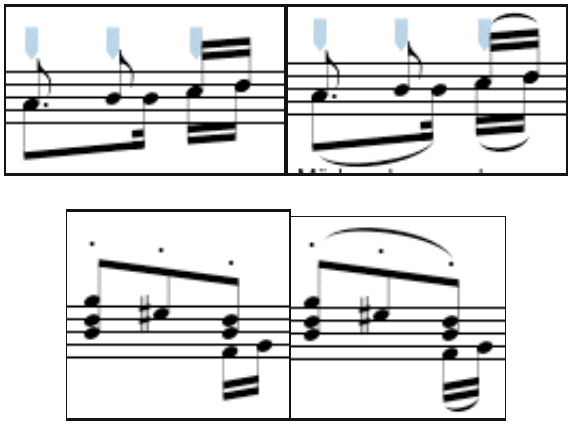


will produce a slur that is broken across two systems:



Slurs that are drawn in non-standard locations (i.e. above or below beams rather than between noteheads) must be drawn freehand (as graphic slurs). This is the case for some of the slurs in the vocal part and a couple of the slurs in the piano part (top staff -- mm.9 & 11): To draw slurs freehand, select the Slur tool

 from the NoteAbility Tool palette. Hold down the mouse button at the location you want the slur to begin, and (with the mouse button still down) move the mouse to the midpoint of the slur. Now, release the mouse button, and continue moving the mouse to the end position of the slur. When you arrive at the end of the slur, click the mouse button once again to indicate that you have finished drawing the slur. It may take you a few attempts before you get familiar with this entry method, but very soon you will be drawing slurs quickly and accurately. Some examples of freehand slurs and where they are drawn are shown below:



Step 6: Add Text and Other Images

There is some text on this document – a tempo indication at the beginning of the score "Leise bewegt (with gentle motion)", and a "dolce" indication in the piano part in Measure 9. These texts should be entered using the Measure Text tool 

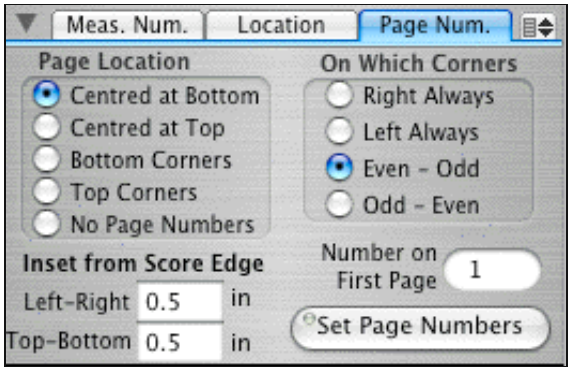
. After selecting this tool, click the mouse at the location you want the text to begin an type the text. Select the text you have just entered and choose the **Font/Show Font Panel...** menu item to change the font size, face or style. The title of the composition and the composers name should be entered using Page Text 

since we want these texts to be fixed at specfic locations on the page, and they should not move as the music is formatted.
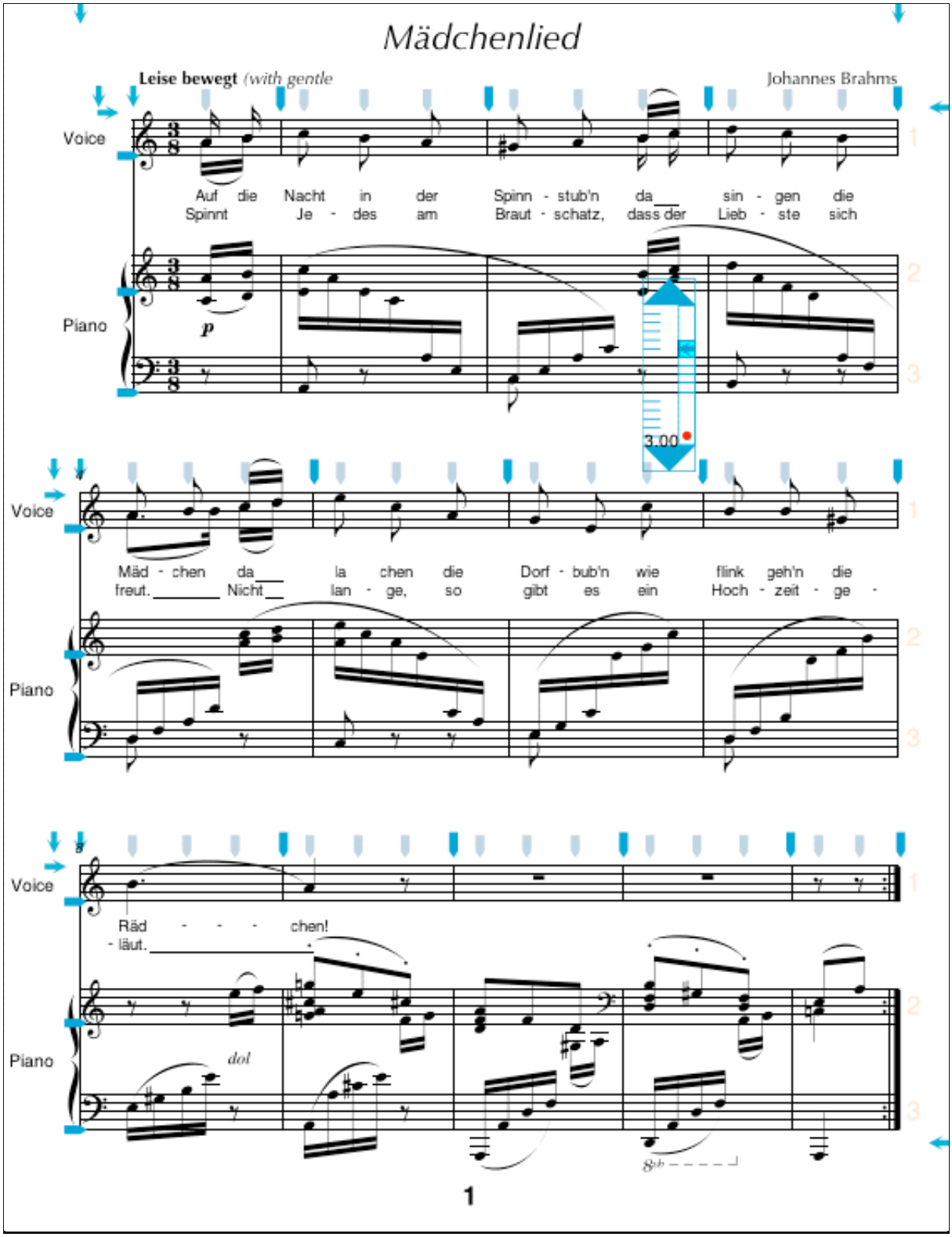
With the Page Text tool selected, click the mouse at the top of the page and type the title "Mädchenlied". Once this text has been entered, select the text and centre it using the **Font/Text/Center** menu item, and choose the desired fonts and sizes. You can adjust the position of the text by dragging it with the Selection tool. Enter "Johannes Brahms" in another text box just above the right corner of the music. Again, select the text once it has been entered, and choose a font using the **Font/Show Font Panel...** menu item.

There are only a couple more markings to be added: a piano dynamic mark in the piano part (Measure 1) – command *p* and breath commas – command , which appear above the voice part in Measures 5 and 7 (mm.4 and 6). In both of these cases, you do not need to move the Entry Cursor since these images are neither notes nor rests. Just click the mouse at the desired location, and adjust the position of the image while the mouse button is down.

Finally, we should move the page number so that it is centred at the bottom of the page. To do this, choose the Page Num. tab in the **Measure/Page Numbers** pane in the Score Structure panel. Check the **Centred at Bottom** button, and click on the **Set Page Numbers** button.

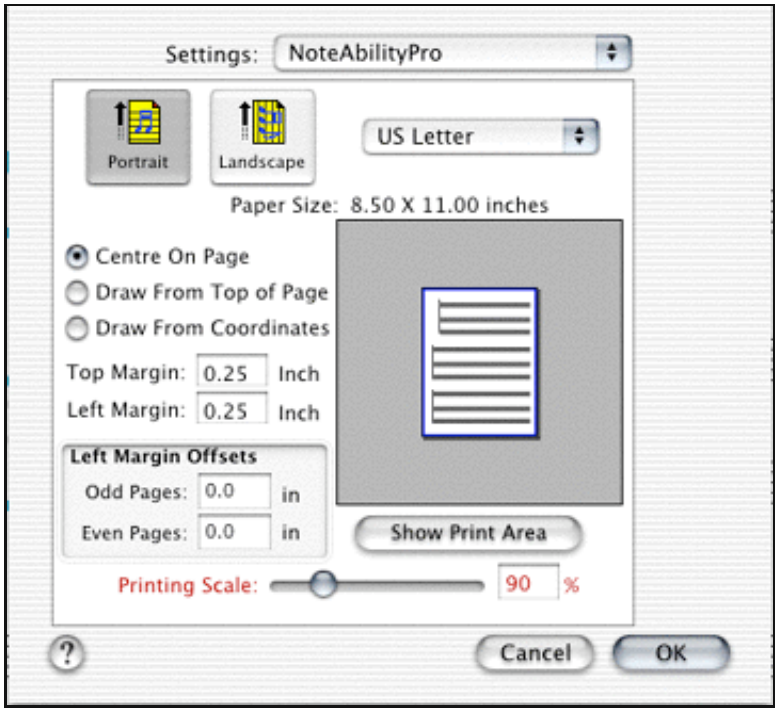


The finished score should look as follows:



Step 8: Alter the Page Setup and Print the Score

Since this score was setup to be larger than the standard US Letter or A4 size, you will need to reduce it in order for it to fit on this paper size. NoteAbility will already have calculated a reduction size for you, but you may want to alter it. Choose **Page Setup...** from the **File** menu. In the panel that appears, use the pull-down menu on this panel to show the NoteAbilityPro page setup controls. You can adjust the reduction slider and/or alter the orientation of the print job.



Click **OK** when you done. Now, choose **Print** from the **File** menu and print the score on your printer.

Congratulations, you have completed Tutorial 2. Save the score, and feel free to refer to other chapters of this manual to see more of the many features available to you in NoteAbilityPro.

See also

- Tutorial 1

Interfacing Max/MSP and NoteAbility Pro

Contents

- A. Controlling Max/MSP with NoteAbility
    1. Setting up NoteAbilityPro to send Max/MSP messages
    2. Setting up Max/MSP to receive from NoteAbility
    3. Entering Max/MSP data into a NoteAbility track and receiving data in Max/MSP
    4. Extended Notes
- B. Controlling NoteAbilityPro with Max/MSP
- C. Non-Real-Time Interaction between NoteAbilityPro and Max/MSP
    1. Max/MSP qlist objects
    2. Max/MSP detonate objects

A. Controlling Max/MSP with NoteAbilityPro

Setting up NoteAbility to send Max/MSP messages

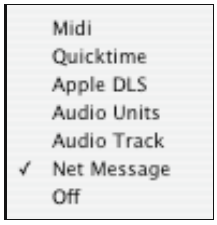
The first part of this tutorial describes how NoteAbility can be used as a real-time sequencer to control Max/MSP. Max/MSP messages can be placed on NoteAbility tracks to be sent to Max patches during playback.

1. Go to **NoteAbilityPro** Preferences > Sound/MIDI, and check the box beside "Play Messages on Max" under Playback Settings. Click **OK**.



Ex. 1-1

2. Create a new NoteAbility document with the desired number of staves, including at least one that will be used exclusively for Max/MSP data.
3. Click Audio/MIDI > Track Setup to open the MIDI and Audio Track Setup window, shown in Ex. 1-3. Down the left side of this window are listed the Staff ID numbers in your score, each of which corresponds to a MIDI or Audio track. If you click on the dialog box for a given track, you can select the output for the data contained on that track:



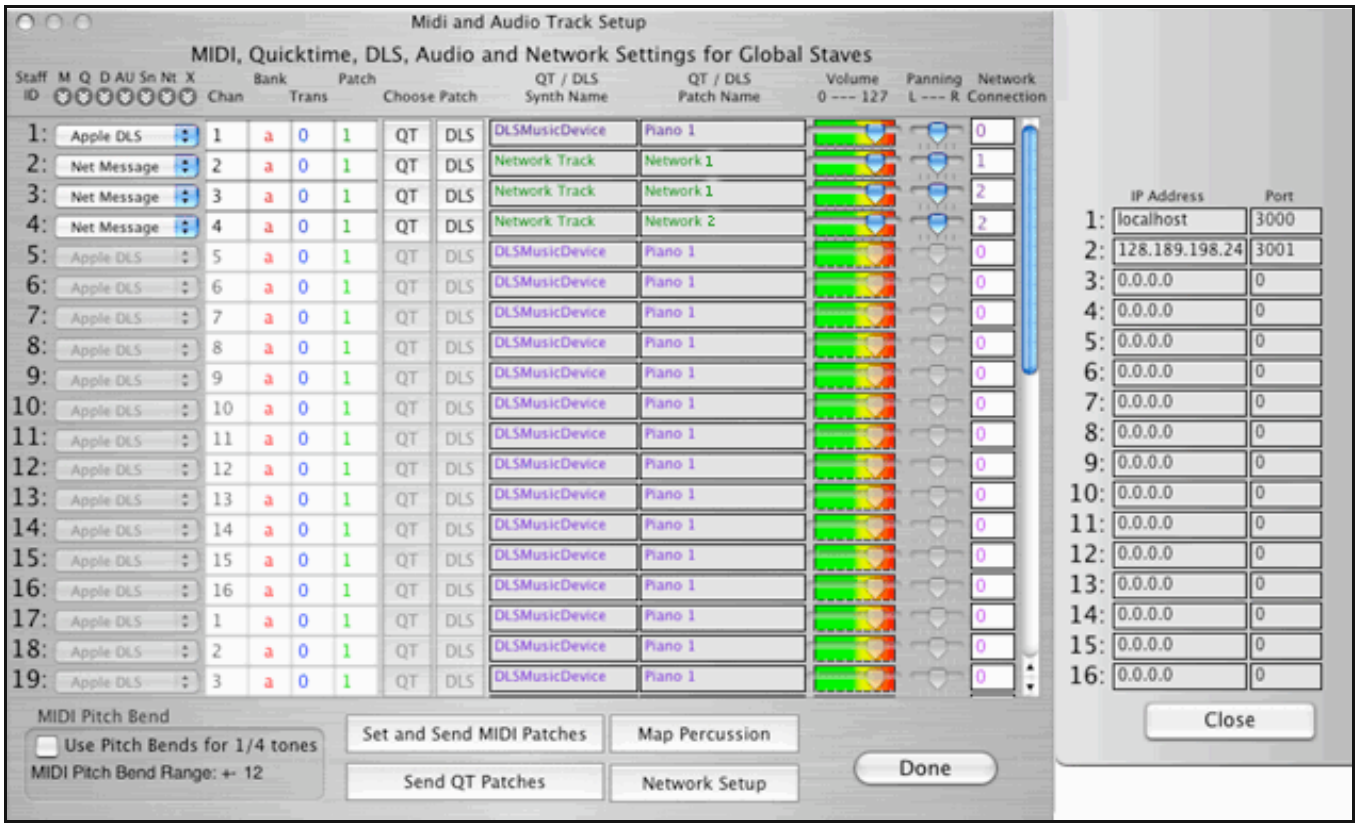
Ex. 1-2

Set the track(s) that you want to use for Max/MSP messages to Net Message. Now that one of your tracks will be sending data to a network port, it is necessary to set up the network configuration.

4. Still in the MIDI and Audio Track Setup window, click on the Network Setup button. This opens a drawer that displays the 16 possible network connections, their IP addresses and Port numbers. If you are running Max/MSP and NoteAbility on the same computer, you can either enter your computer's IP address or simply type "localhost" under the IP address heading. If you are controlling Max/MSP on another computer, enter that computer's IP address. You can find a computer's IP address under **System Preferences** > Network. The port numbers used by Max/MSP and NoteAbilityPro are 3000 and 3001 (using UDP protocol); you should check to make sure that your access to these ports is not restricted by a firewall.

   Once you have specified the IP address and Port number for a particular network connection, you need to specify which network connection is to be used by your Net Message tracks. Down the right side of the MIDI and Audio Track Setup window are listed the Network Connections for each track; by entering the number of a network connection into one of the boxes, you can specify which connection a given track will send its data on. Note that several tracks can use the same connection.

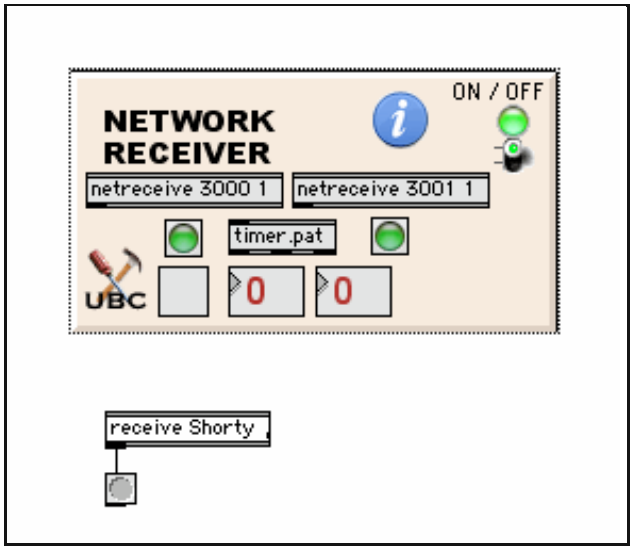
   In the example below, two network connections have been made. The first is to the same computer that NoteAbility is running on (localhost), and is utilizing port 3000. The second connection employs another computer to run Max/MSP (at IP address 128.189.198.243) and uses port 3001. Three tracks have been set to use these connections: track 2 is sending through network connection 1, while tracks 3 and 4 are both sending through network connection 2.



Ex. 1-3

Setting up Max/MSP to receive from NoteAbilityPro

Create a bpatcher in your Max/MSP patch, and use the Get Info... dialog box under Options to load "netReceiverBP.pat" from the UBC Toolbox. This module accepts data from network ports 3000 and 3001 and sends it to Max/MSP objects the way a "Send" object would. (A detailed description of the Net Receiver module can be found by clicking the cursive "i" icon when the patch is locked.) Turn the module on by either clicking on the On/Off button or by sending the message "1" to its right inlet, and create receive objects that will correspond to the Max Text "sends" in your NoteAbilityPro score (Max Text is described below). Two LEDs will indicate when messages are being received on either of the two ports.



Ex. 2-1

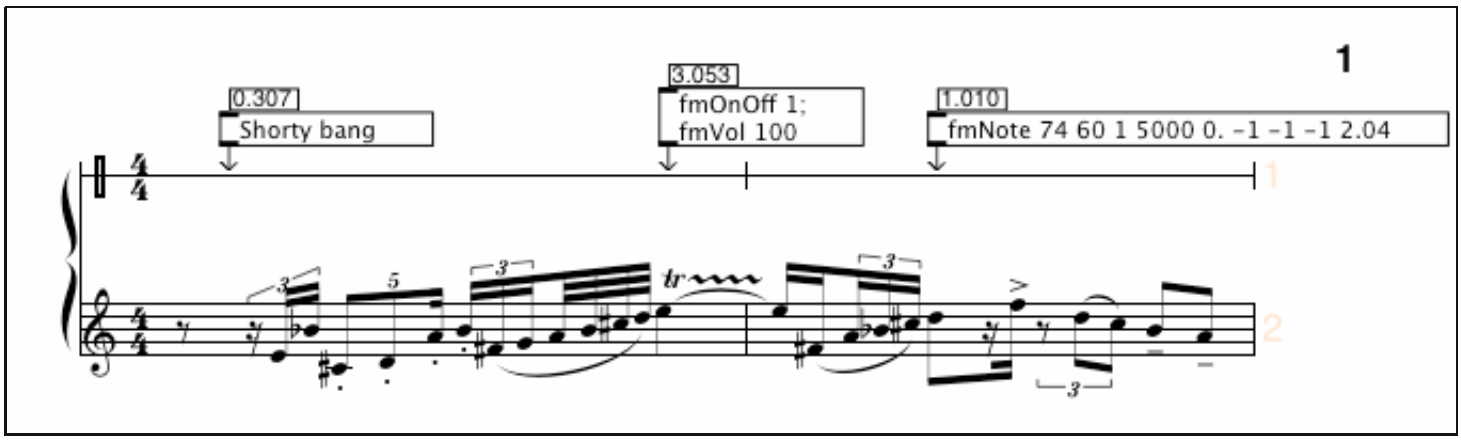
Entering Max/MSP data into a NoteAbilityPro track and receiving data in Max/MSP

Now that at least one track has been set up to send information to Max/MSP, we can enter Max/MSP data into the score. From NoteAbilityPro's toolbar, select the Max Text tool.



Ex. 3-1

This allows you to create a text box at any point in the score, the contents of which will be sent to Max/MSP in the same manner as the "Send" object does within Max/MSP. (Note that neither the send command nor a semicolon is used to preface the contents of a Max Text box, as would normally be the case within Max/MSP. If you want to include multiple message sends in a single text box, however, these must be separated by a semicolon.) In addition to the text that you enter, a Max Text box displays a number indicating the beat location in the measure at which the signal is sent, expressed as a floating-point number where the first beat of the measure is given the value 0. Example 3-1 shows a variety of Max Text boxes entered on track 1.



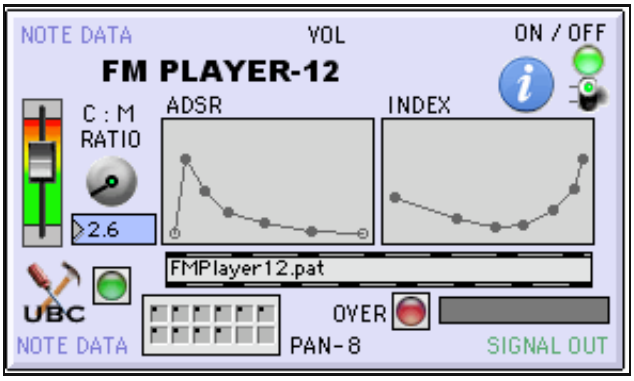
Ex. 3-2

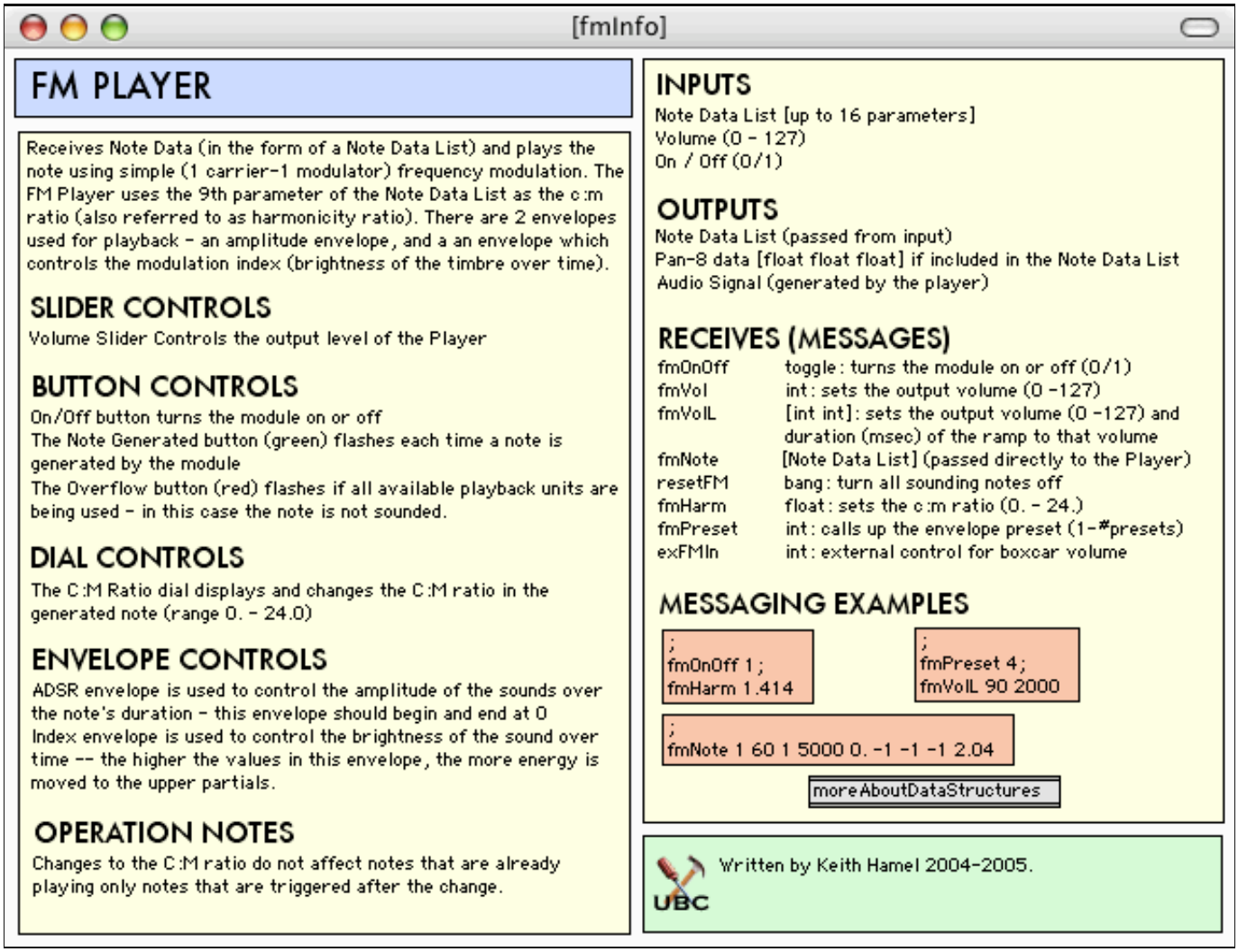
As the above NoteAbility score plays back, the message "bang" will be sent to Max/MSP at beat location 0.307 (the arrow on the text box indicates the position in the measure at which the message is sent), and will be received by a receive object with the name "Shorty" (assuming the Network Receiver bpatch is active in Max/MSP and there exists an appropriately named receive object, as in Ex. 2-1.) Note that the chronological time at which messages are sent is contingent upon NoteAbility's tempo setting. Once

created, Max text boxes can be moved to different positions in the score, either by dragging or by cutting, copying, and pasting. When using the paste function, your Max text boxes will be entered at the position of the entry cursor; this method is useful for placing text boxes at specific points in the score. The appearance of Max text can be altered just as any other type of text: select the text using any text tool (Page Text, Measure Text, or Max Text,) and then click on **Font** > Show Fonts... to open a window that allows you to change the font type, style, size, and colour.

The messages that are sent to Max/MSP can be used to control UBC toolbox modules; Ex. 3-1 includes examples of messages that will be received by the FM player. Just after the fourth beat (beat location 3. 053,) a Max text box will send a "1" to fmOnOff, turning the module on, and will send "100" to fmVol, setting the module's volume at a value of 100. At beat location 1.010 in the second measure, the FM player will receive a note data list via an fmNote message, telling the module to play a note with the specified pitch, velocity, etc. The protocol for the note data list can be found in the file "toolkitProtocols.txt" ?(should I list them? is this file included in the toolbox?)

To find the names of the receives that exist in a particular module, open the module in a bpatcher, lock the patch, and click on the cursive "i" to open the information window about that module. Ex. 3-2 shows the FM player and its information window, listing the kinds of messages that the module can receive.

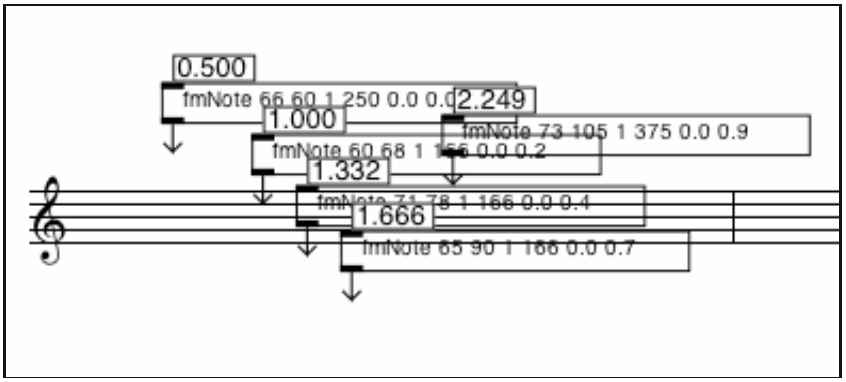




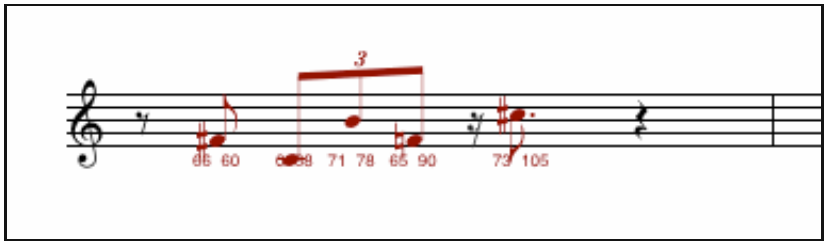
Ex. 3-3

Extended Notes

If you are sending a complicated series of notes to Max/MSP (to be received by a module such as the FM player or the Sample player,) it may be cumbersome to create a Max text message for each note. By using extended notes, pitches can be entered as usual and subsequently assigned values for other parameters (such as velocity, panning, c to m ratio, etc.) that will be sent to Max/MSP during playback. Compare examples 4-1 and 4-2, both of which will send identical messages to Max/MSP (although these messages will be sent to differently named receive objects: "fmNote" in Ex. 4-1 and "naNoteIn" in Ex. 4-2):

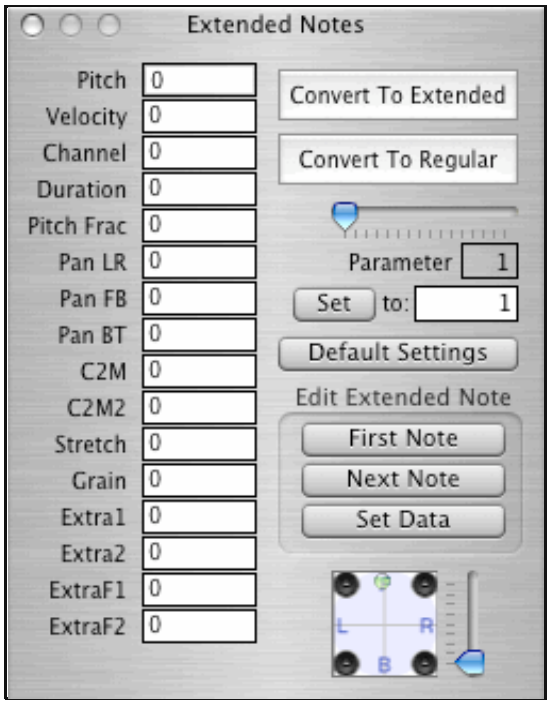


Ex. 4-1



Ex. 4-2

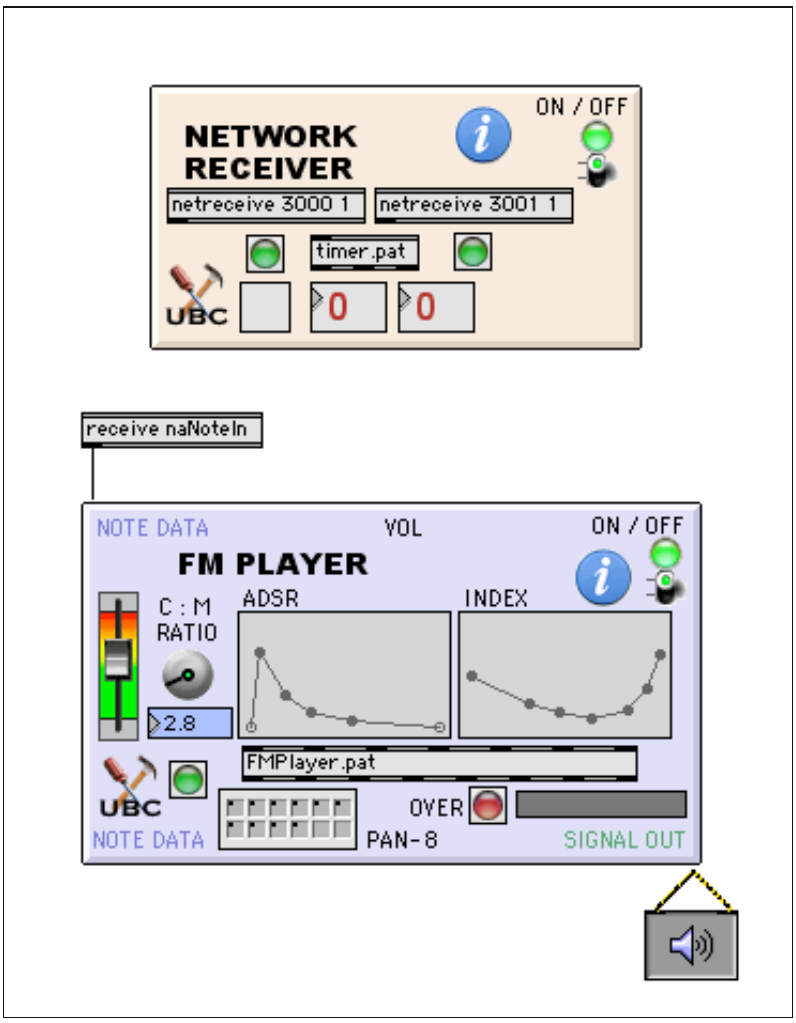
Once you have entered the pitches that you want to be sent to Max/MSP, you will first need to convert them from regular notes into extended notes. Open the Extended Notes Panel under the **IIMPE** menu, select the notes you want to convert, and click Convert to Extended (see Ex. 4-3.) You will notice that the selected notes are no longer black; the colour of the extended notes indicates which channel the note is assigned to. For notes on certain channels, small numbers (showing the pitch and velocity of the note) appear under the notes. This indications are particularly useful when notes are being used to trigger sample numbers.



Ex. 4-3

Now that the passage has been converted to extended notes, the Extended Notes Panel can be used to edit the information attached to each note. With the Extended Notes Panel open, select one or more extended notes in the score. You can view the information assigned to each note in the selection by clicking on First Note and then running through the subsequent notes by clicking on Next Note. (A value of -1 indicates that a parameter will be ignored.) It should be noted that First Note must be clicked even if only one note has been selected. To edit the data for a particular note, enter the desired values for each parameter and then click Set Data; this will assign the values you entered to the current note and then change the display to the data for the next note. To quickly edit the spatialization parameters of a note, use the positional controls in the lower right corner of the panel, remembering to click Set Data to set the values. If you would like to set a particular parameter for each note in the selection to the same value, use the Parameter slider and the Set button. For example, if you want all selected notes to be assigned to channel 5, move the Parameter slider to 3 (since Channel is the third parameter), enter 5 in the message box, and click Set.

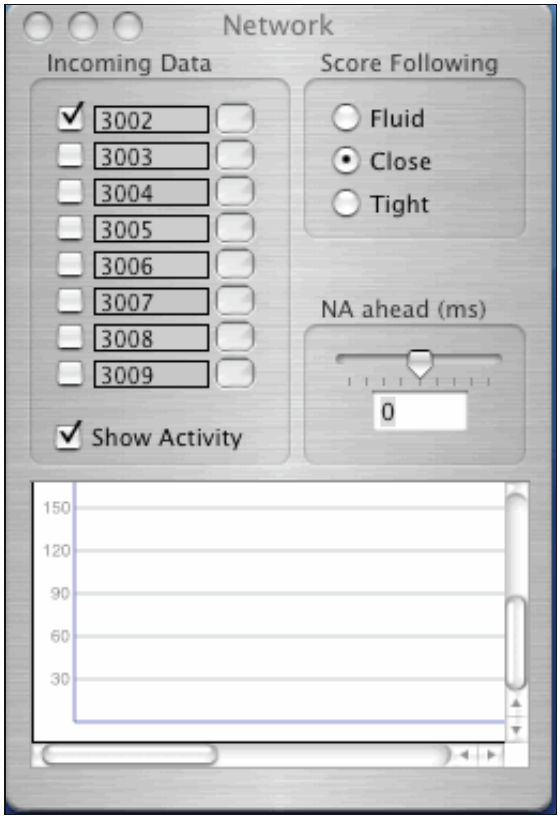
Assuming that the track containing the extended notes is set to transmit Net Messages and that Max/MSP has a NetReceiver bpatcher that is set to receive messages (as described above), the data attached to each note will be sent to Max/MSP when the NoteAbility score is played. In the Max/MSP patch, the note data can be received with a receive object entitled naNoteIn, as shown in Ex. 4-4:



Ex. 4-4

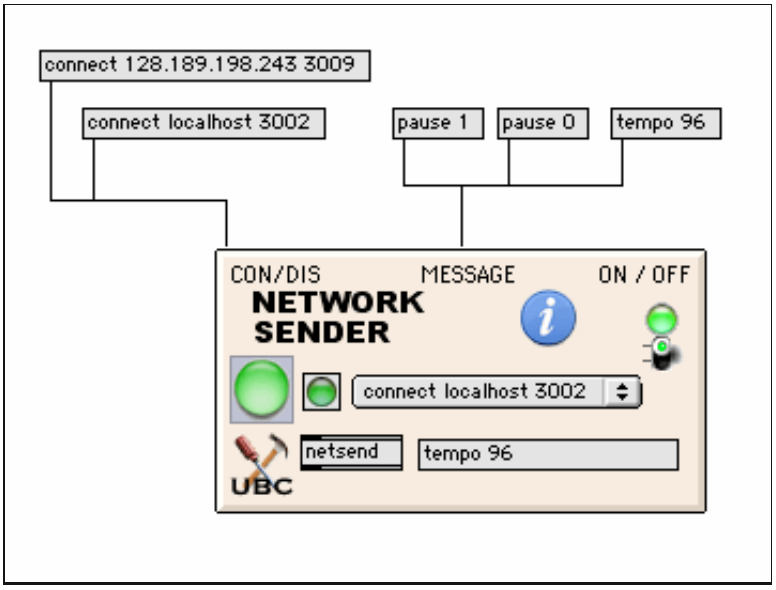
B. Controlling NoteAbilityPro with Max/MSP

NoteAbilityPro can be set to receive messages from Max/MSP using network connections, enabling you to control score playback in real-time. To set up a network connection on which messages can be received, select **Network Port Panel...** from the **IIMPE** (Integrated Interactive Music Performance Environment) pull-down menu. Under the heading "Incoming Data" is a list of the network port numbers that are available for incoming messages, from 3002 to 3009. Select the port numbers that you want NoteAbility to be listening to. If the "Show Activity" option is checked, the light next to each port will flash if there is input at that port (use this option only for setup and troubleshooting, since it consumes unnecessary computing power.)



Ex. 5-1

In a Max/MSP bpatcher, load the "netSenderBP.pat" module. To establish a connection to a particular computer and port, send a "connect" message to the module's left inlet, with arguments specifying the IP address and port number. For example, "connect localhost 3002" will connect to port 3002 if you are running both applications on one computer, and "connect 128.189.198.243 3009" will send to the computer at IP address 128.189.198.243 on port 3009.



Ex. 5-2

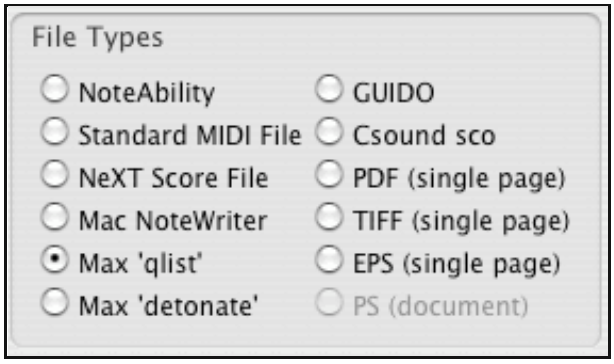
Once a connection has been established, the large LED on the left side of the module will light. Network Sender will then transfer messages from its middle inlet to NoteAbility, enabling control over NoteAbility's playback parameters. At the moment, NoteAbilityPro accepts the following messages:

Message	NoteAbilityPro Response
pause 1	pause playback

pause 0	resume playback
tempo (int)	set the playback tempo to "int"
sync (beat location * 1000)	adjusts the playback position to this beat location (according to score following setting in the Network Port Panel)

C. Non-Real-Time Interaction between NoteAbilityPro and Max/MSP

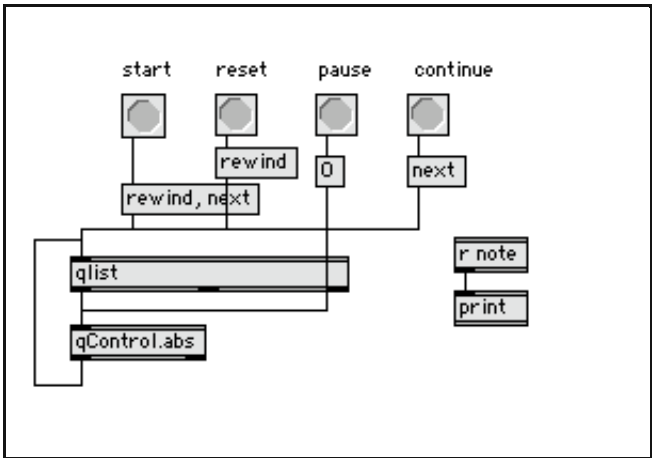
Information contained in a NoteAbilityPro score can be exported in a format that Max/MSP can read independently of NoteAbilityPro, using the Max object "qlist" and the qControl.abs patch (included in the UBC Toolbox.) Clicking on the Save To... option under NoteAbility's File menu opens a window that allows you to save your score in various file types:



Ex. 6-1

Max/MSP qlist objects

Selecting *Max 'qlist'* creates a Max patch that contains a 'qlist' object within a patch that controls its playback, s hown in Ex. 6-2. All of the Max/MSP messages as well as all of the notes in the score are included in the qlist, unless you modify the QList panel (under Tools > Max Settings...) Double-clicking on the 'qlist' object while the patch is locked will open the text file to which this object refers, shown in Ex. 6-3; this file contains the messages from your score, separated by numbers indicating the difference in time (in milliseconds) between each message. Note that these times are calculated relative to the current tempo setting in NoteAbilityPro.



Ex. 6-2



Ex. 6-3

Clicking *start* on this qlist patch will play through the qlist, sending the sequence of messages separated by the specified times. The qlist in Ex. 6-3 will thus play as follows: after 204 ms, a "bang" will be sent to a receive named "Shorty" 239 ms after that, the note data "64 80 4 111" will be sent to a receive named "note" 111 ms after that, another note will be sent, and so on.

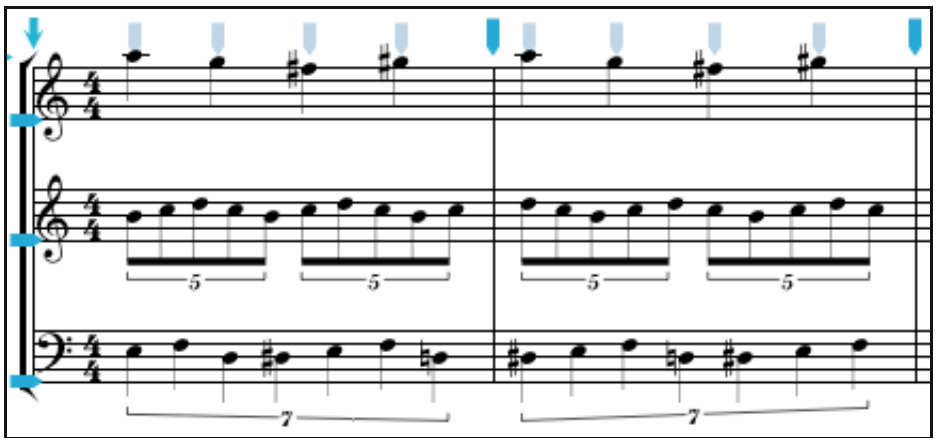
It is also possible to create a qlist containing information from only a portion of the score. Clicking on **Tools** > Copy Types... will open a window that allows you to select the type of information that will be copied when using the "Copy All Types" command from the **Edit** menu. Check the box beside "Max qlist", select a passage from the score using the select arrow, and then click **Edit** > Copy All Types. To place this information into a qlist object in Max/MSP, double-click on the qlist object (when the patch is locked) and paste it into the qlist file at the desired location. In order for your changes to this file to be saved, the patch containing the qlist object must be saved.

Max/MSP detonate objects

It is also possible to save a NoteAbilityPro score as a *detonate* object using the Save To.. menu item in the **File** menu and selecting *Max 'detonate'* as the file type.

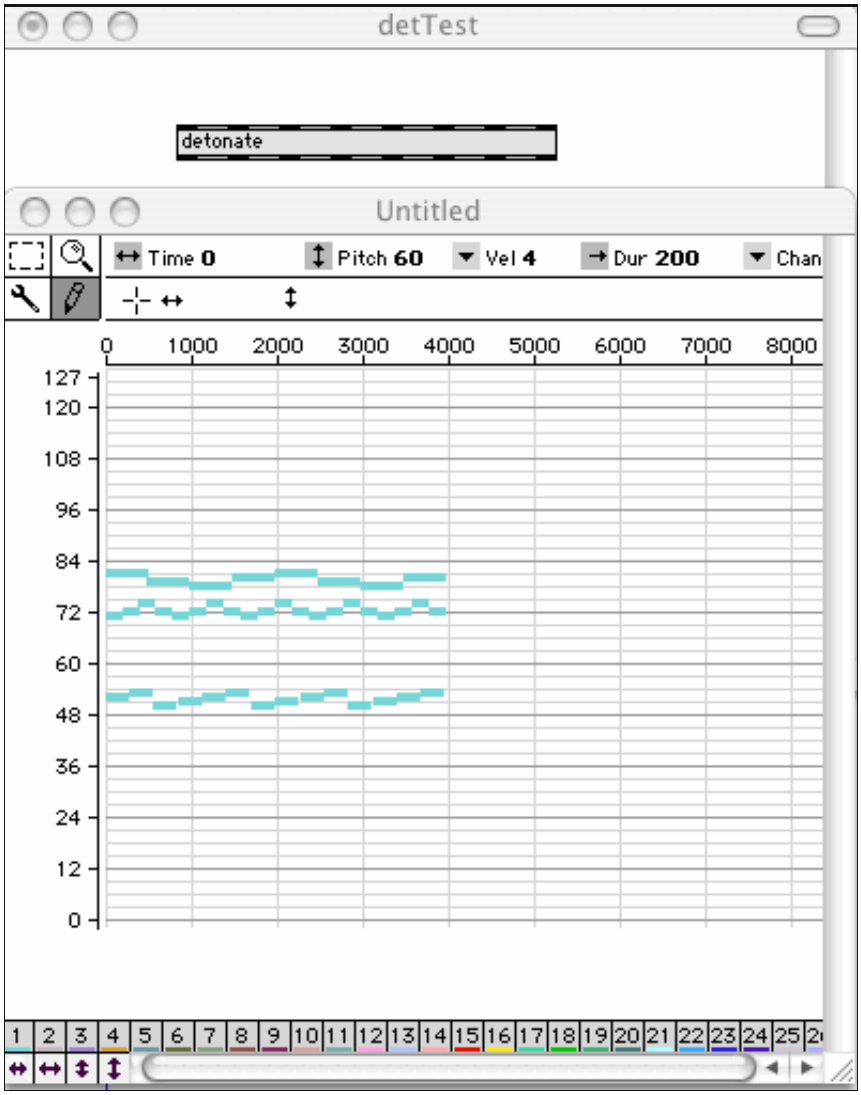
Detonate objects can be used to playback scores from Max/MSP or they can be used for score following. Only the notes in NoteAbilityPro score are converted into the 'detonate' object - Max messages, dynamics and other score markings are ignored. For simplicity, all notes are saved in channel 1. In the example below, a short musical excerpt is saved as a detonate object. The tempo of the score is q=120.

The score in NoteAbilityPro appears as:



Ex. 7-1

In Max/MSP, the detonate object appears as:
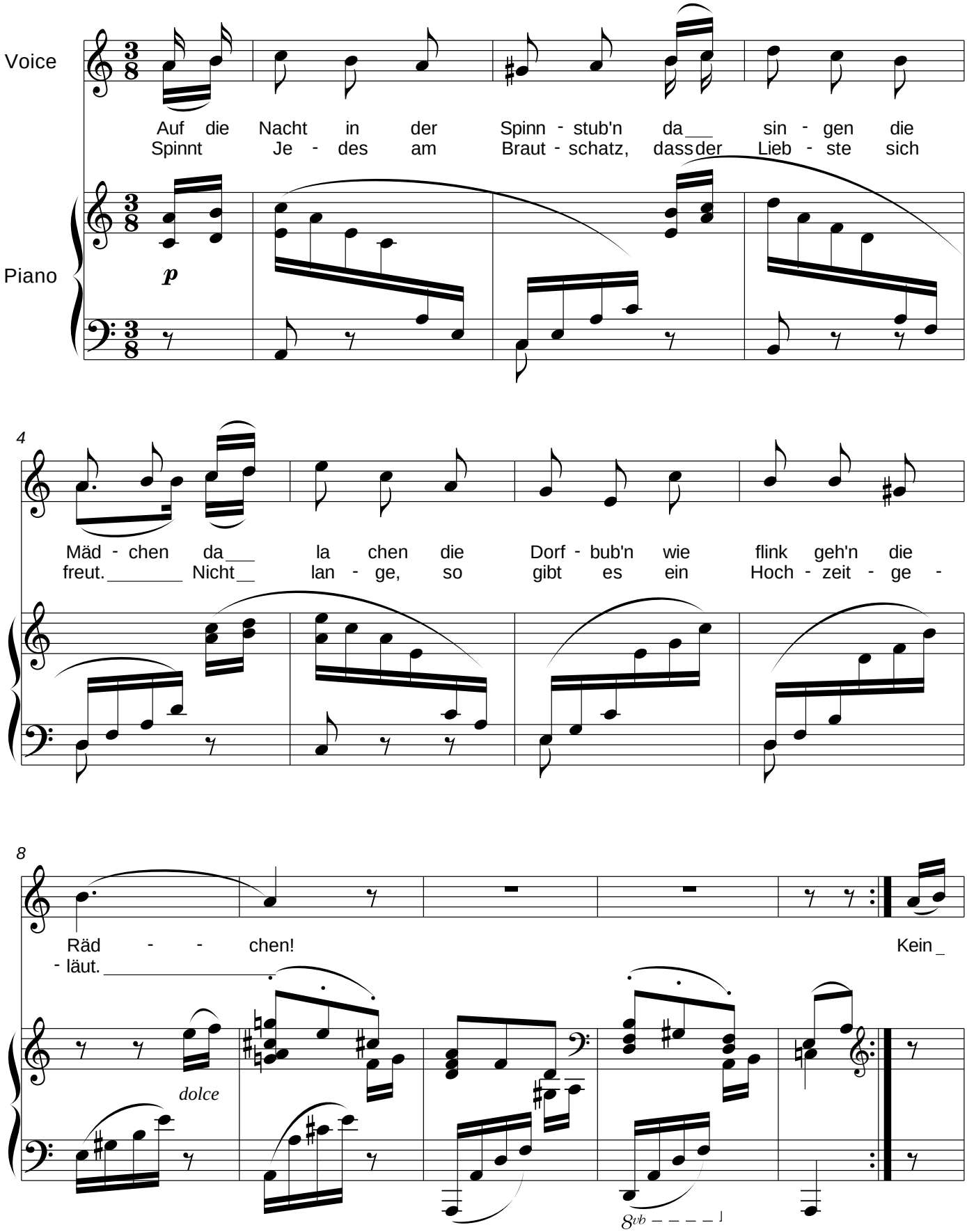


Ex. 7-2
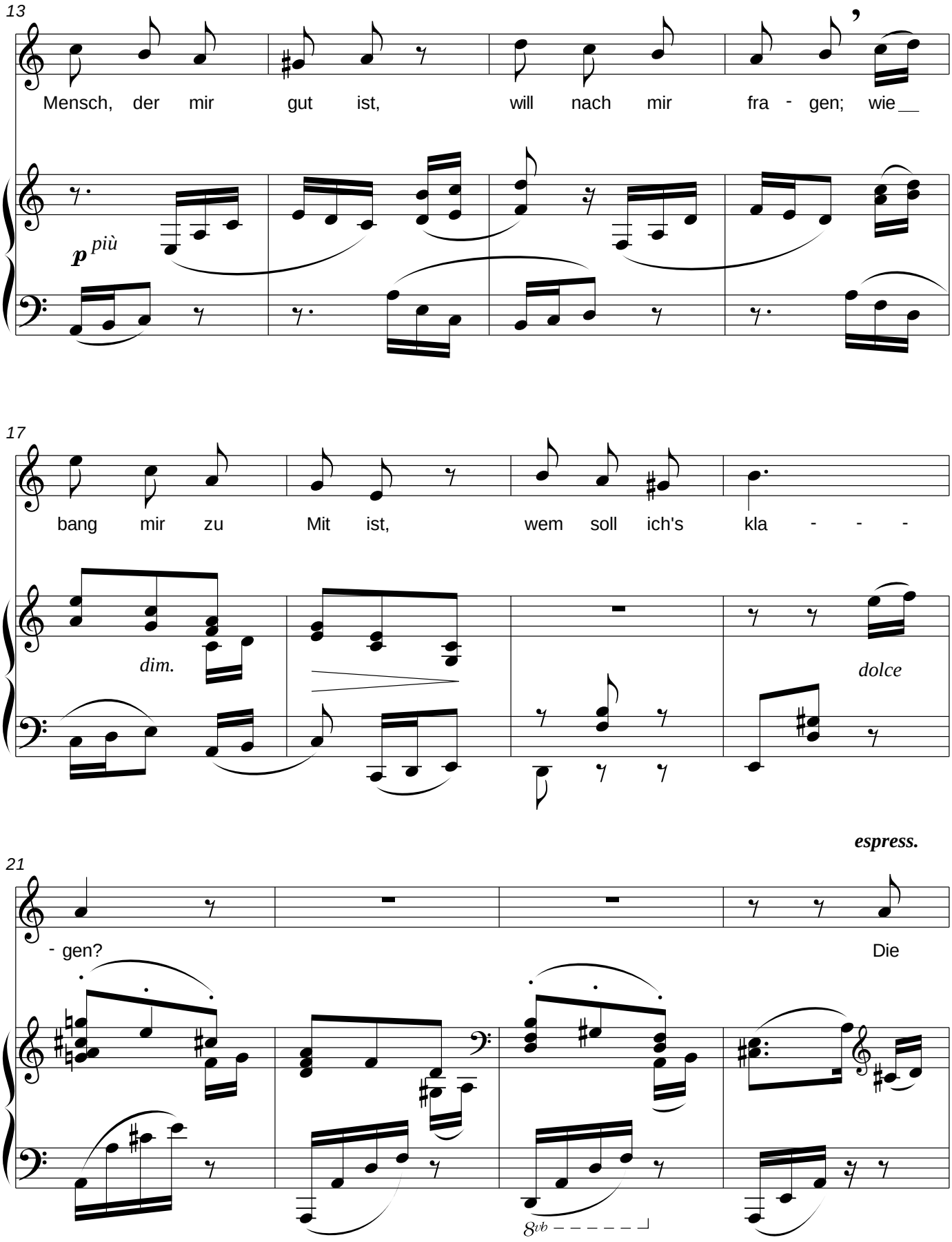
- Max/MSP support in NoteAbilityPro will continue to evolve as better score following strategies are developed. For example Max/MSP patches, example NoteAbilityPro scores and updated documentation, please contact the author.
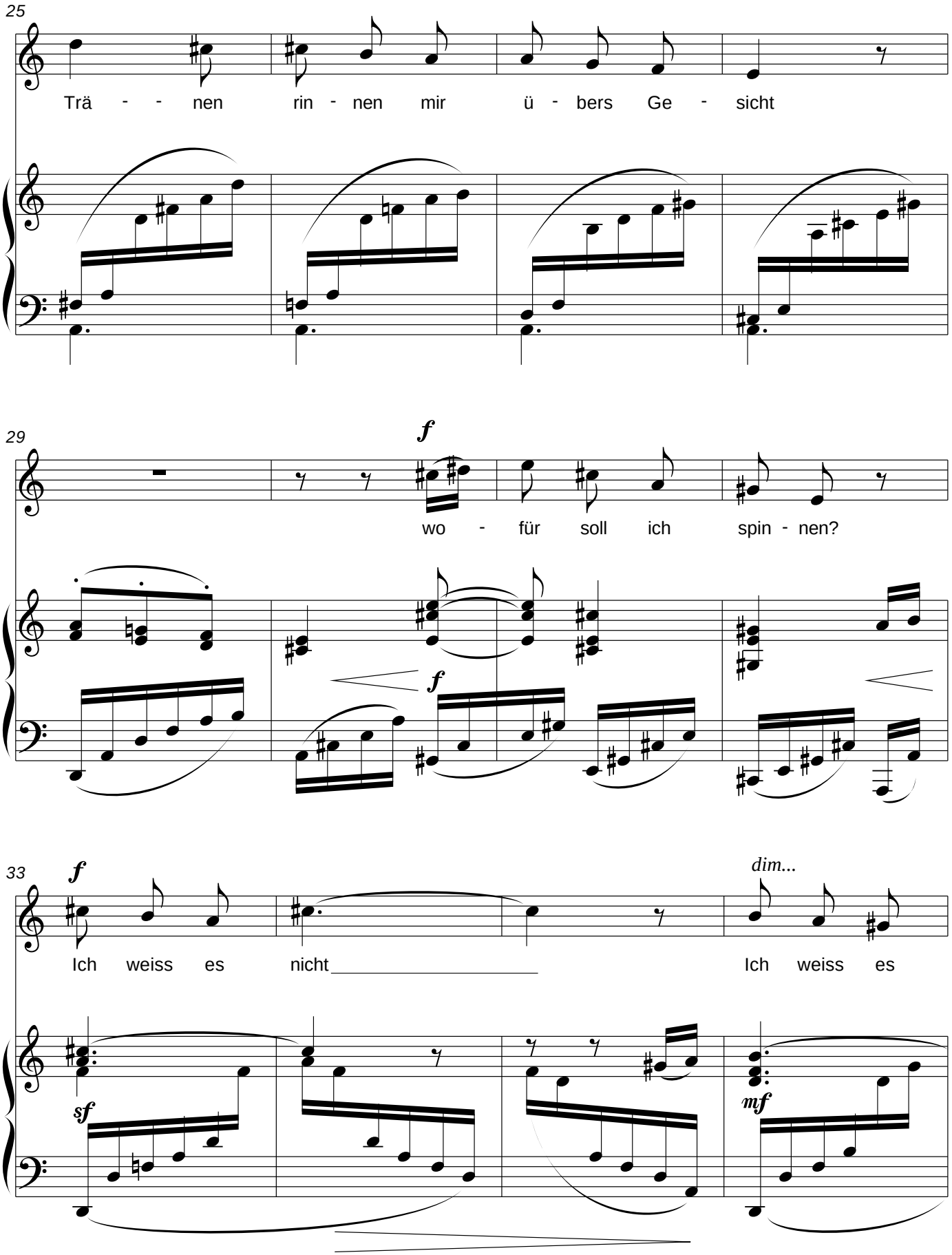
Mädchenlied
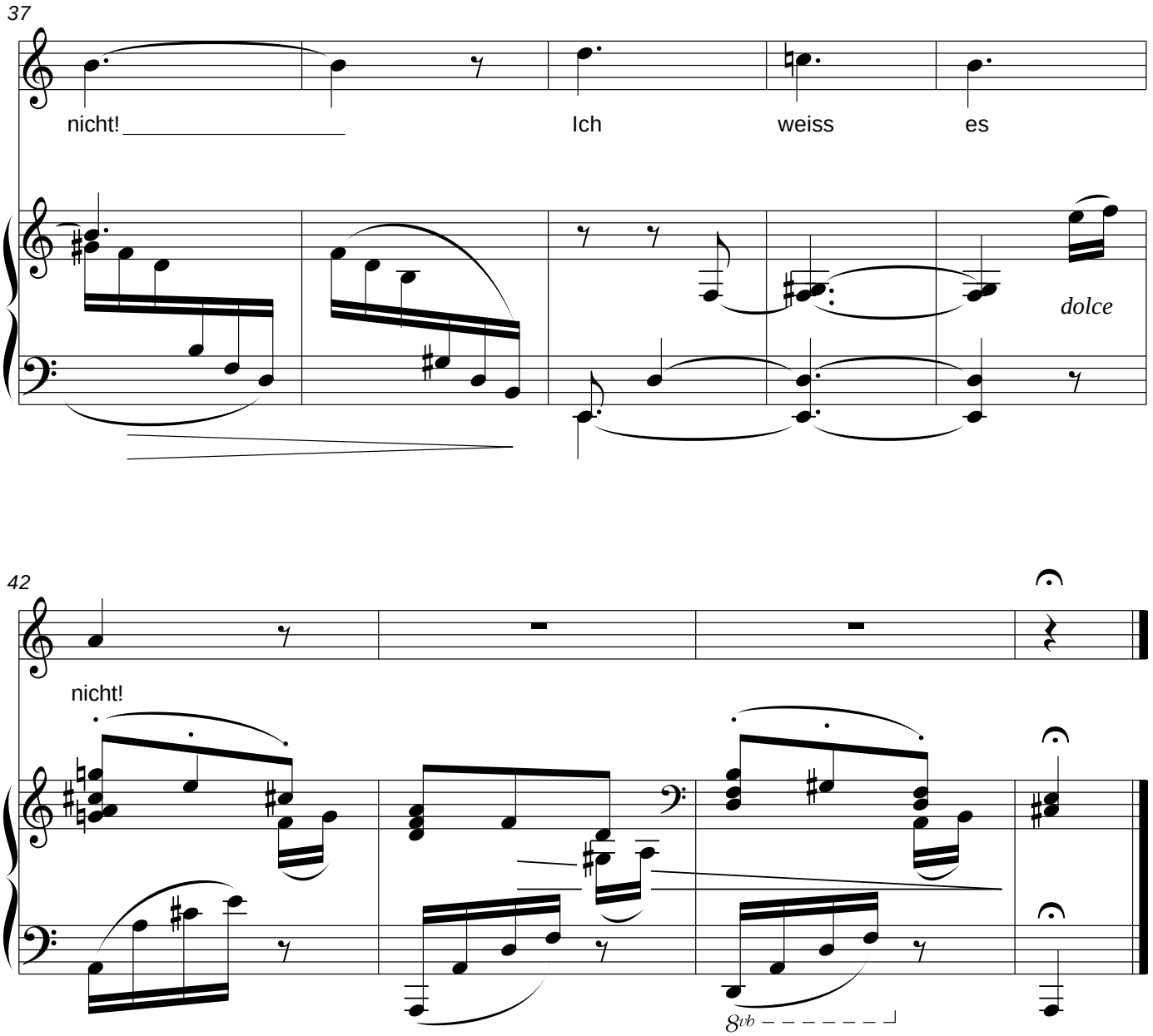
Leise bewegt *(with gentle motion)*

Johannes Brahms
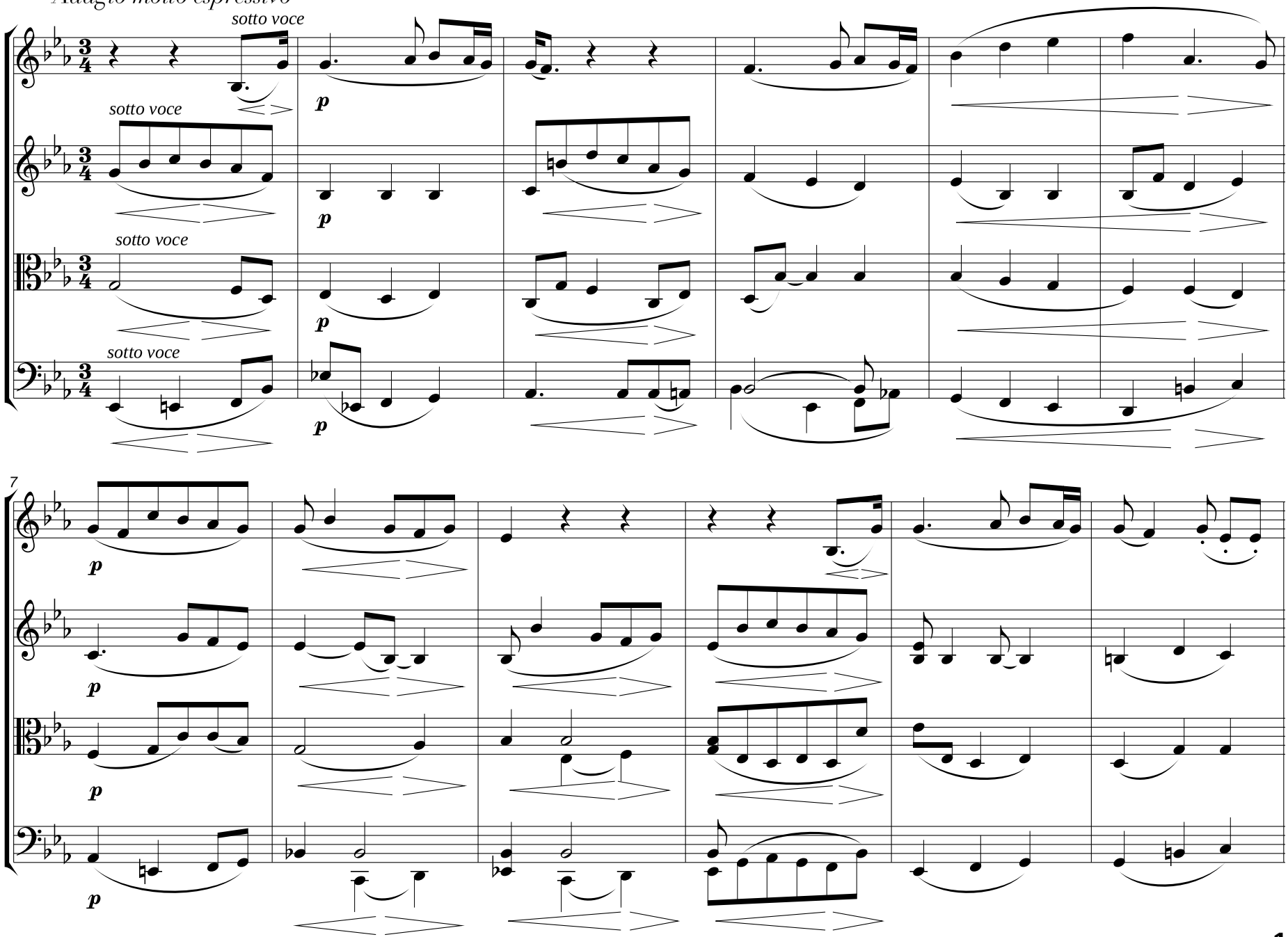



13
Mensch, der mir gut ist, will nach mir fra - gen; wie__
p più
17
bang mir zu Mit ist, wem soll ich's kla - - -
dim.
dolce
espress.
21
- gen?
Die
8vb
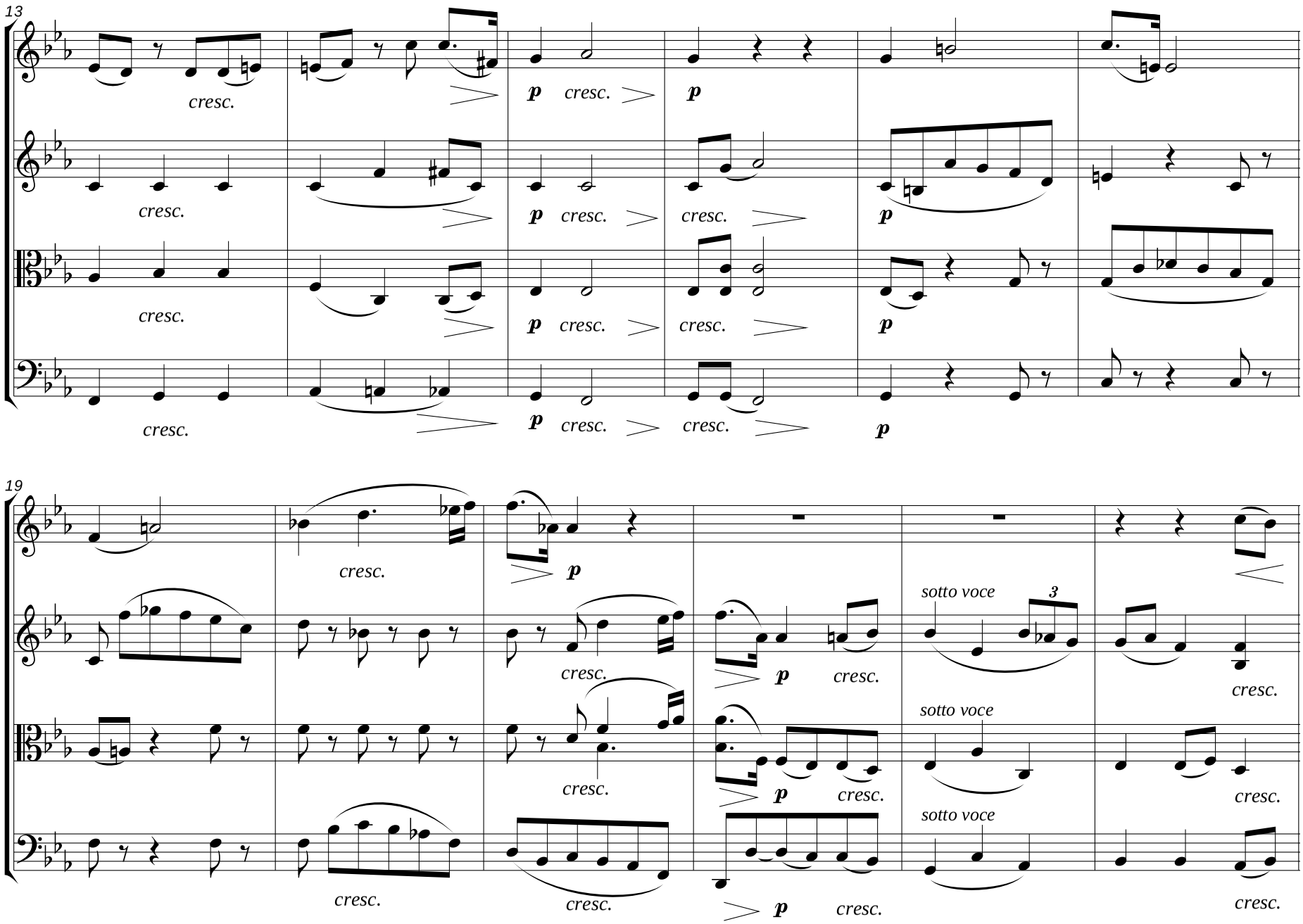

25
Trä - - nen rin - nen mir ü - bers Ge - sicht
29
f
wo - für soll ich spin - nen?
f
33
f
dim...
Ich weiss es nicht
Ich weiss es
sf
mf
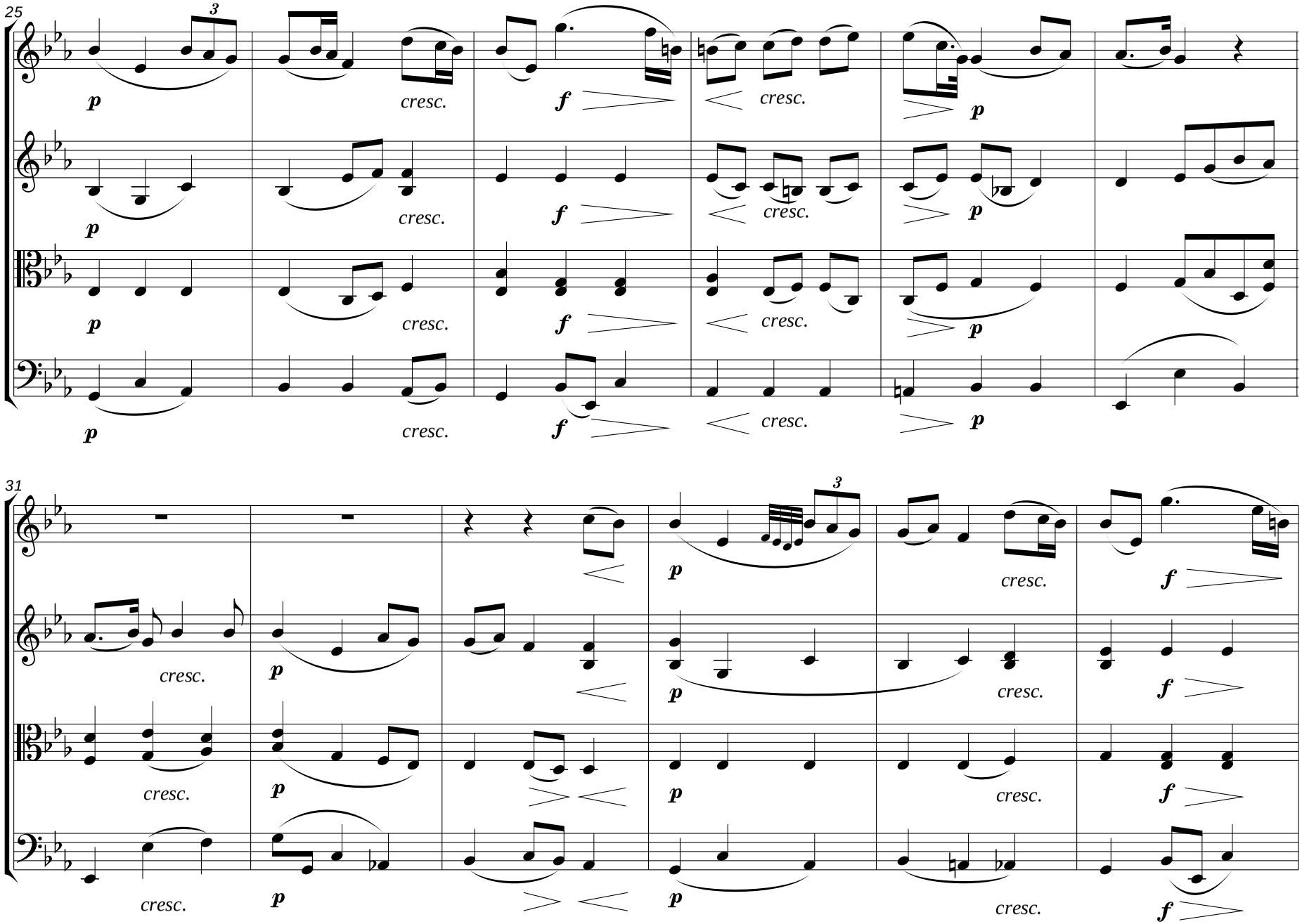

37
nicht!
Ich
weiss
es
dolce
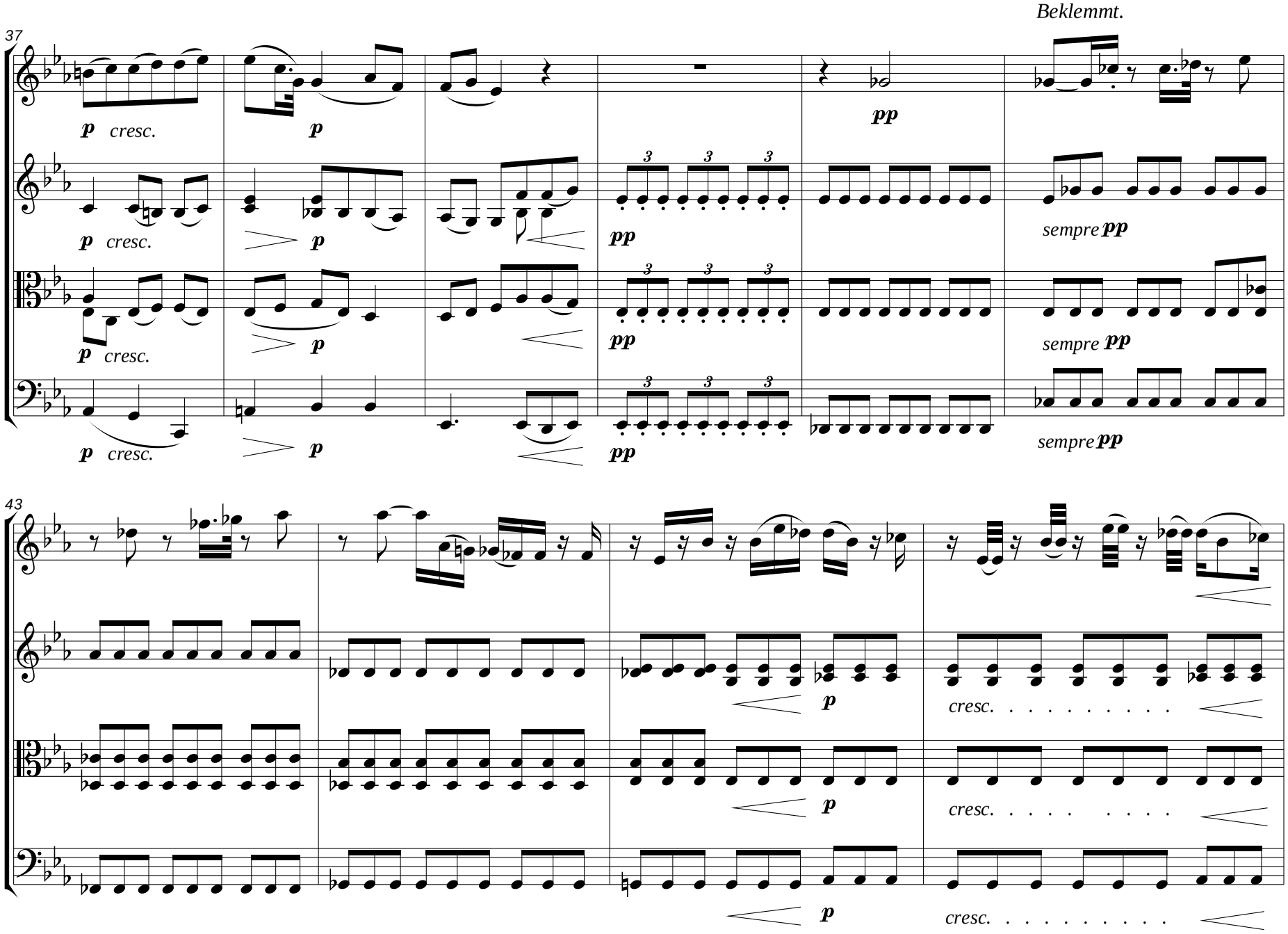
42
nicht!
8vb
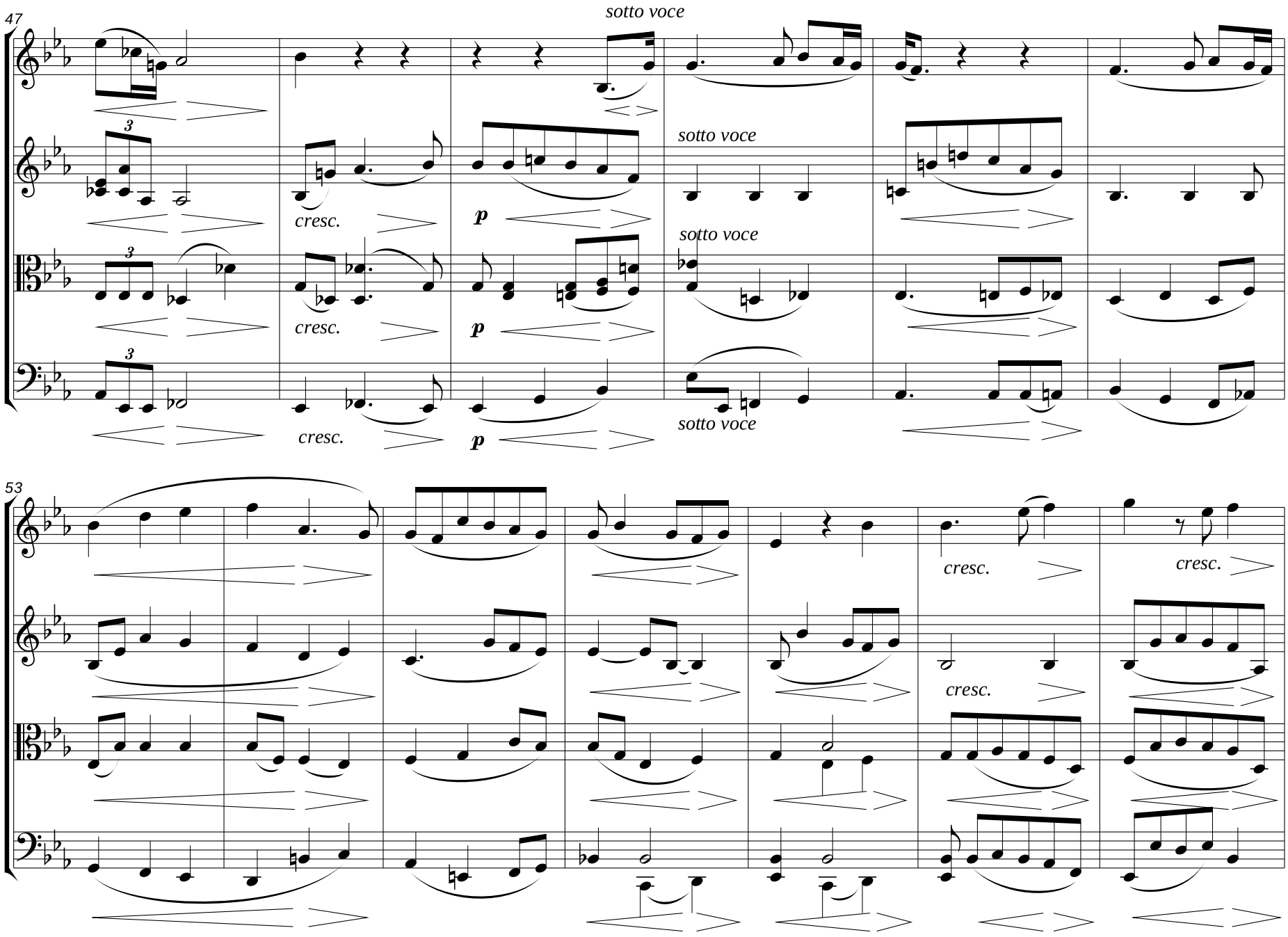
Adagio molto espressivo

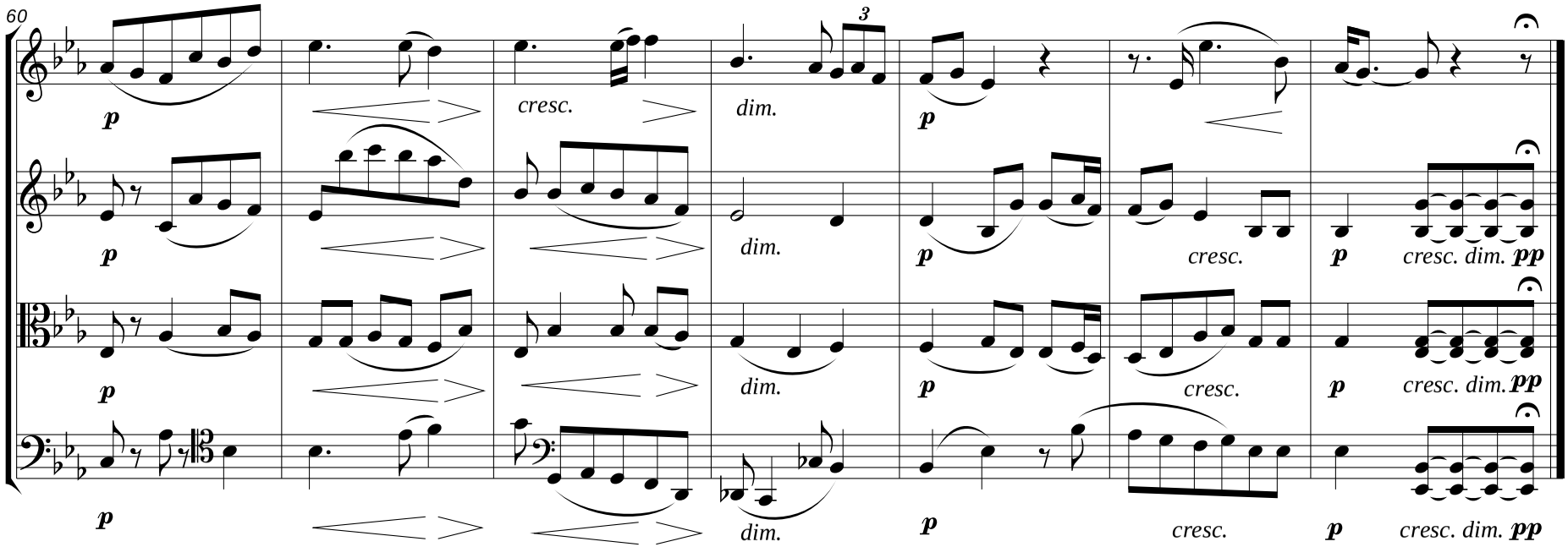



13
cresc.
p
19
sotto voce
3


25
31
3
p
cresc.
f


Beklemmt.
37
p cresc.
p
pp
sempre pp
43
cresc.
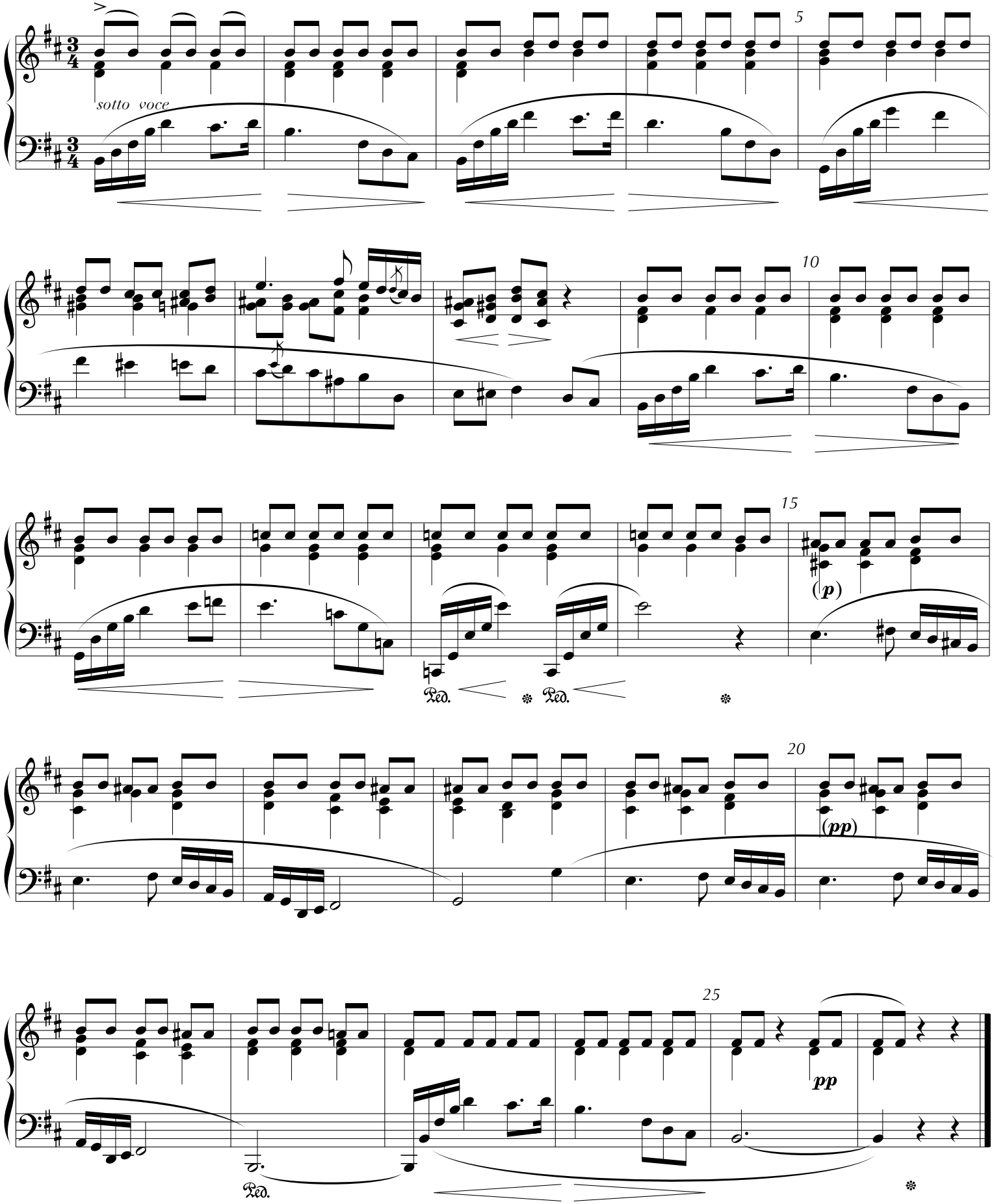

47
sotto voce
sotto voce
sotto voce
sotto voce
cresc.
cresc.
cresc.
p
p
p
53
cresc.
cresc.
cresc.


60
3
p
cresc.
dim.
p
p
dim.
p
cresc.
p
cresc. dim. pp
p
dim.
p
cresc.
p
cresc. dim. pp
p
dim.
p
cresc.
p
cresc. dim. pp
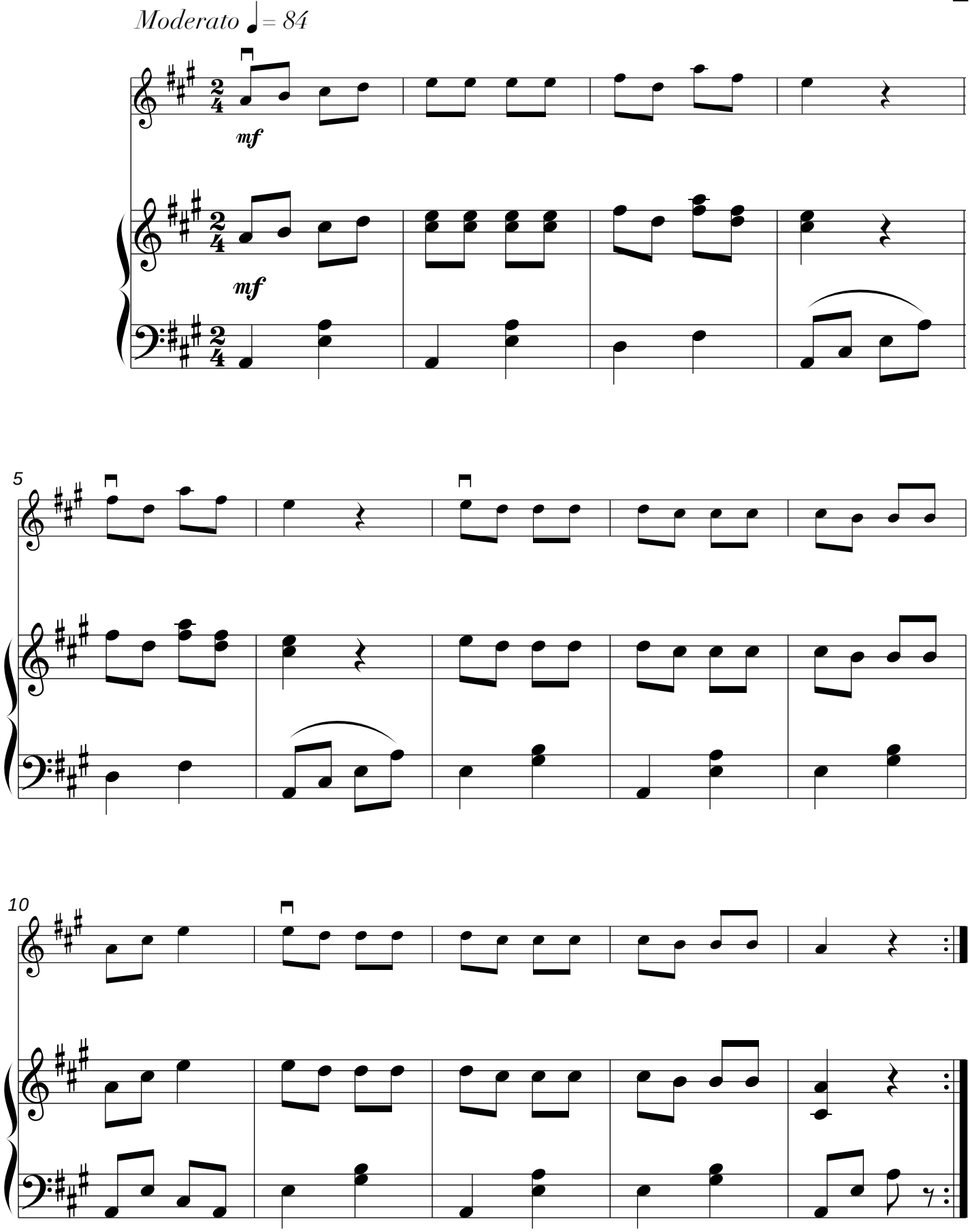
Prelude Op. 28, No. 6

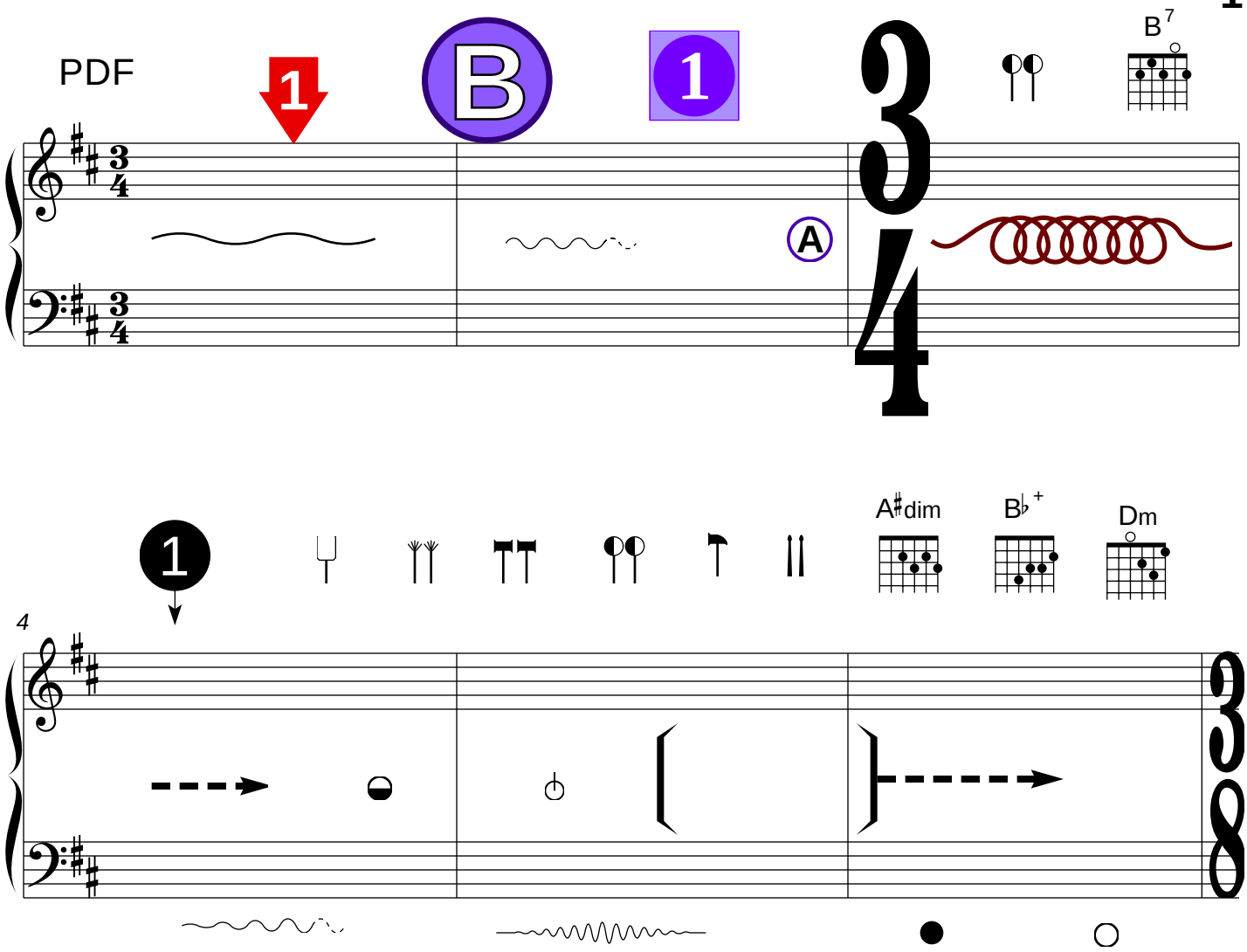
Lento assai

Frederic Chopin



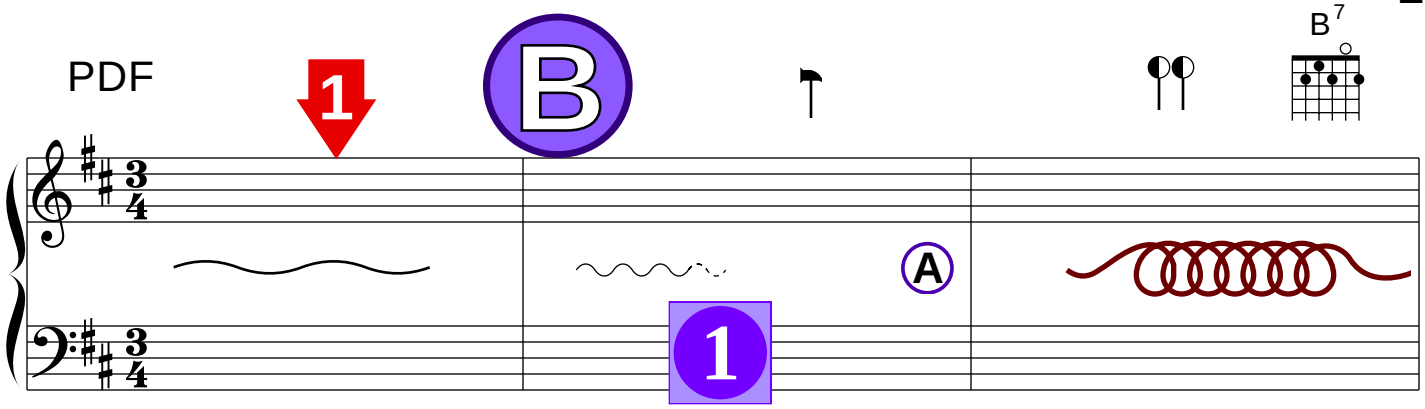
Song of the Wind

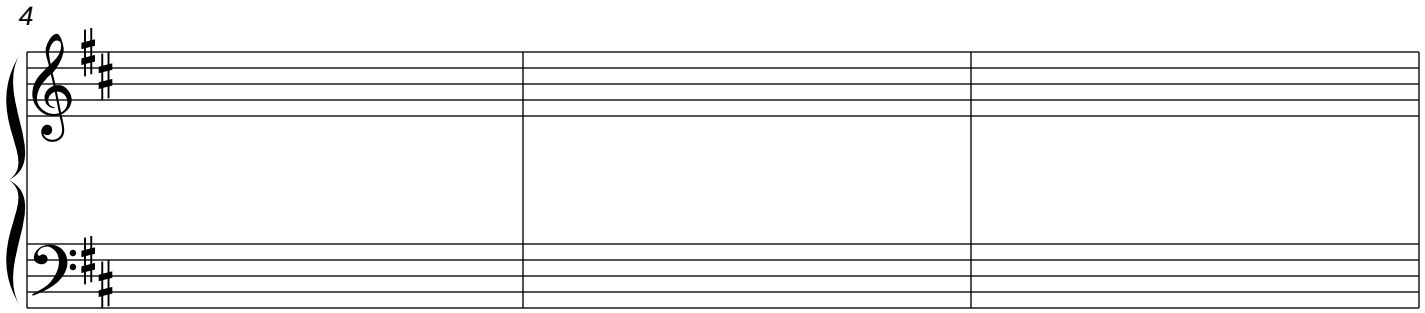



PDF
1
B
1
B7
A
1
A♯dim
B♭+
Dm
4

SUPPORTED GRAPHIC FORMATS

PDF





TIFF



BMP



JPG

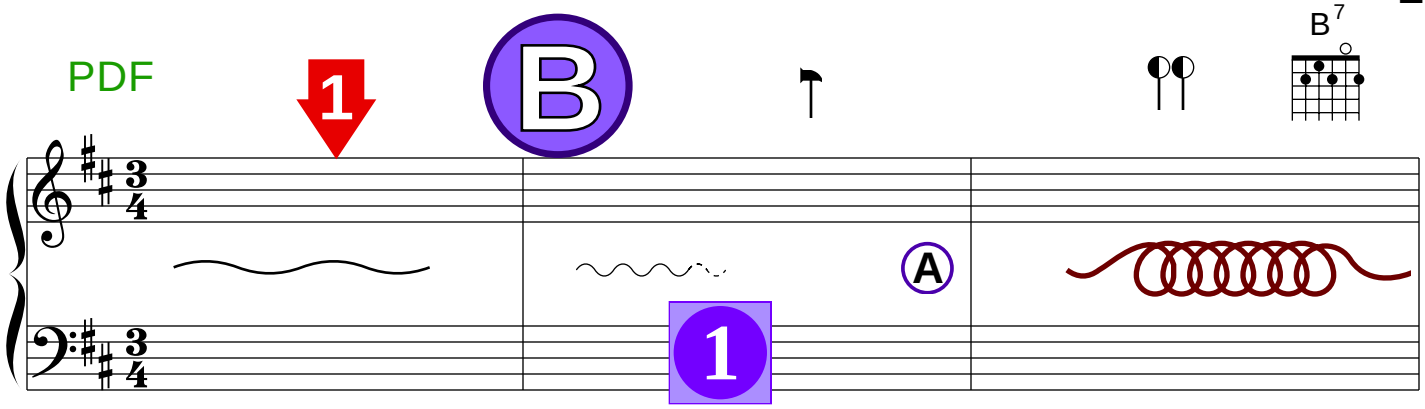


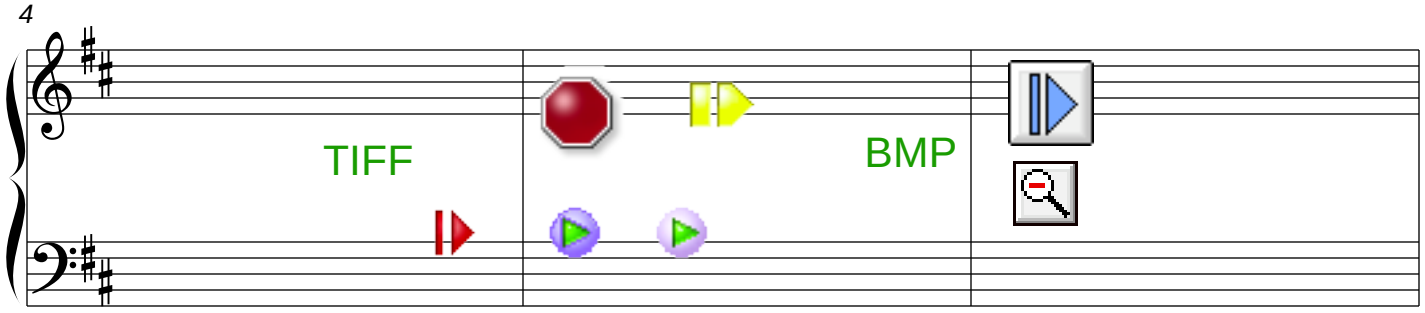
GIF



SUPPORTED GRAPHIC FORMATS

PDF





TIFF

BMP
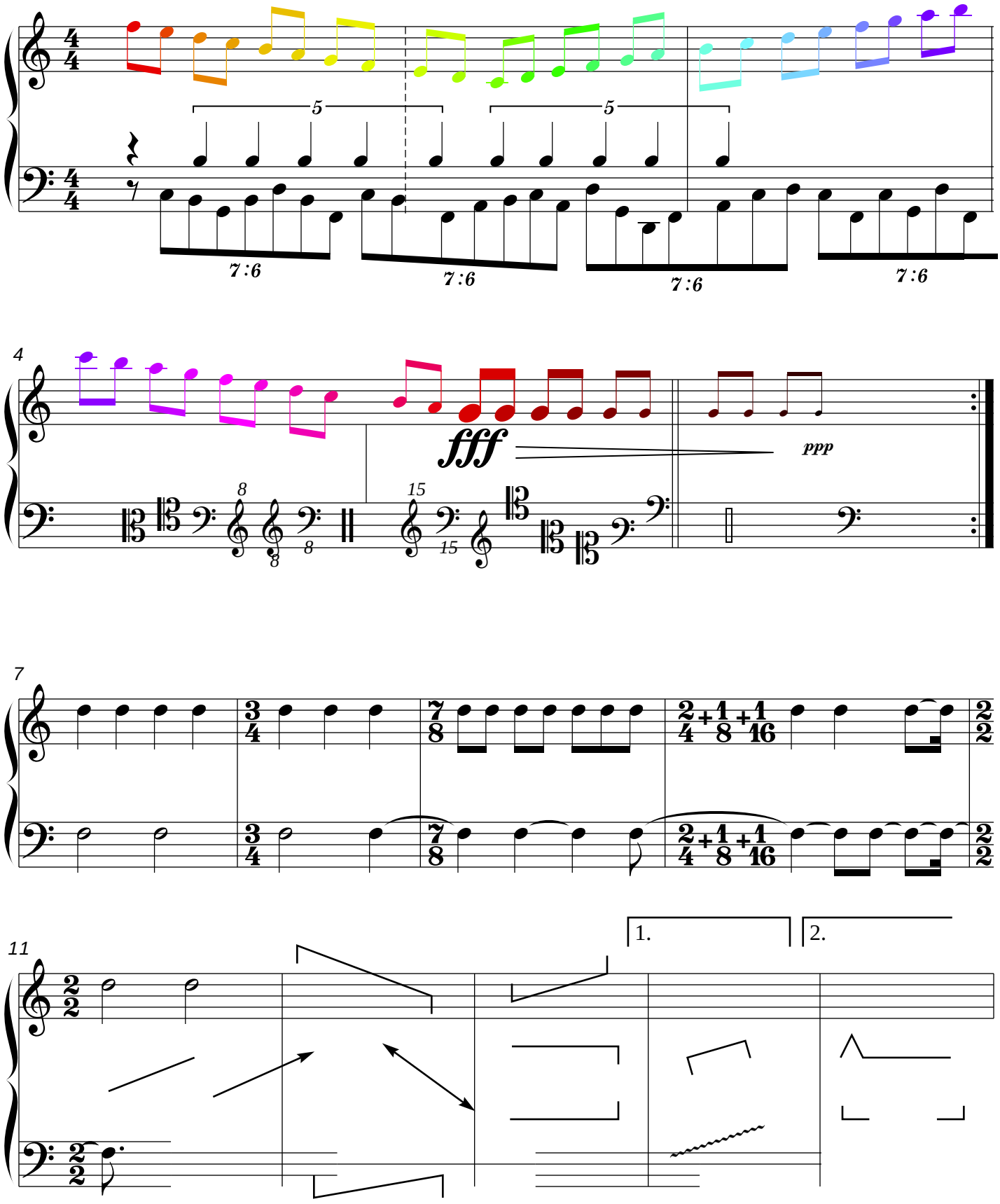
JPG
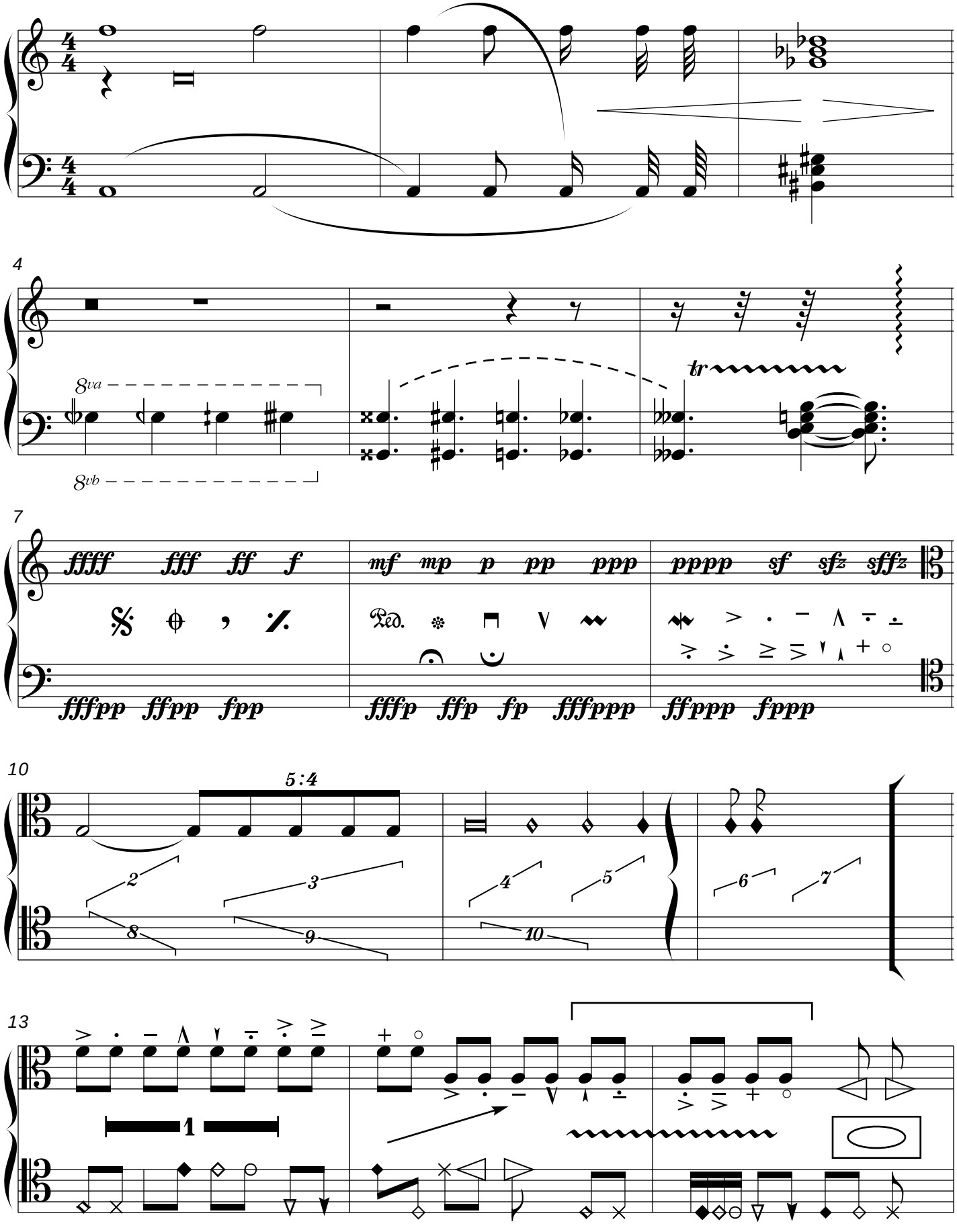
GIF
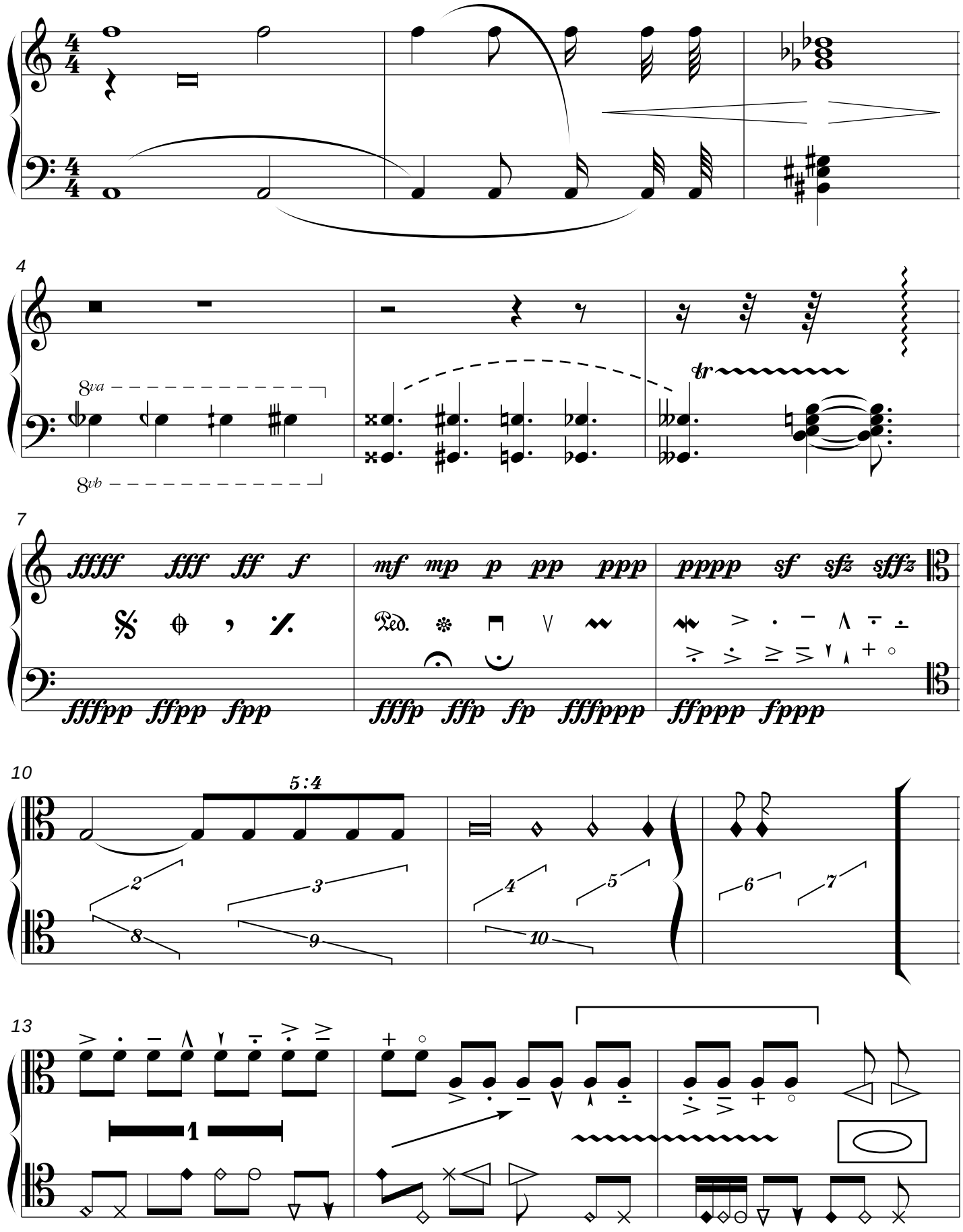
Opus 1 Music
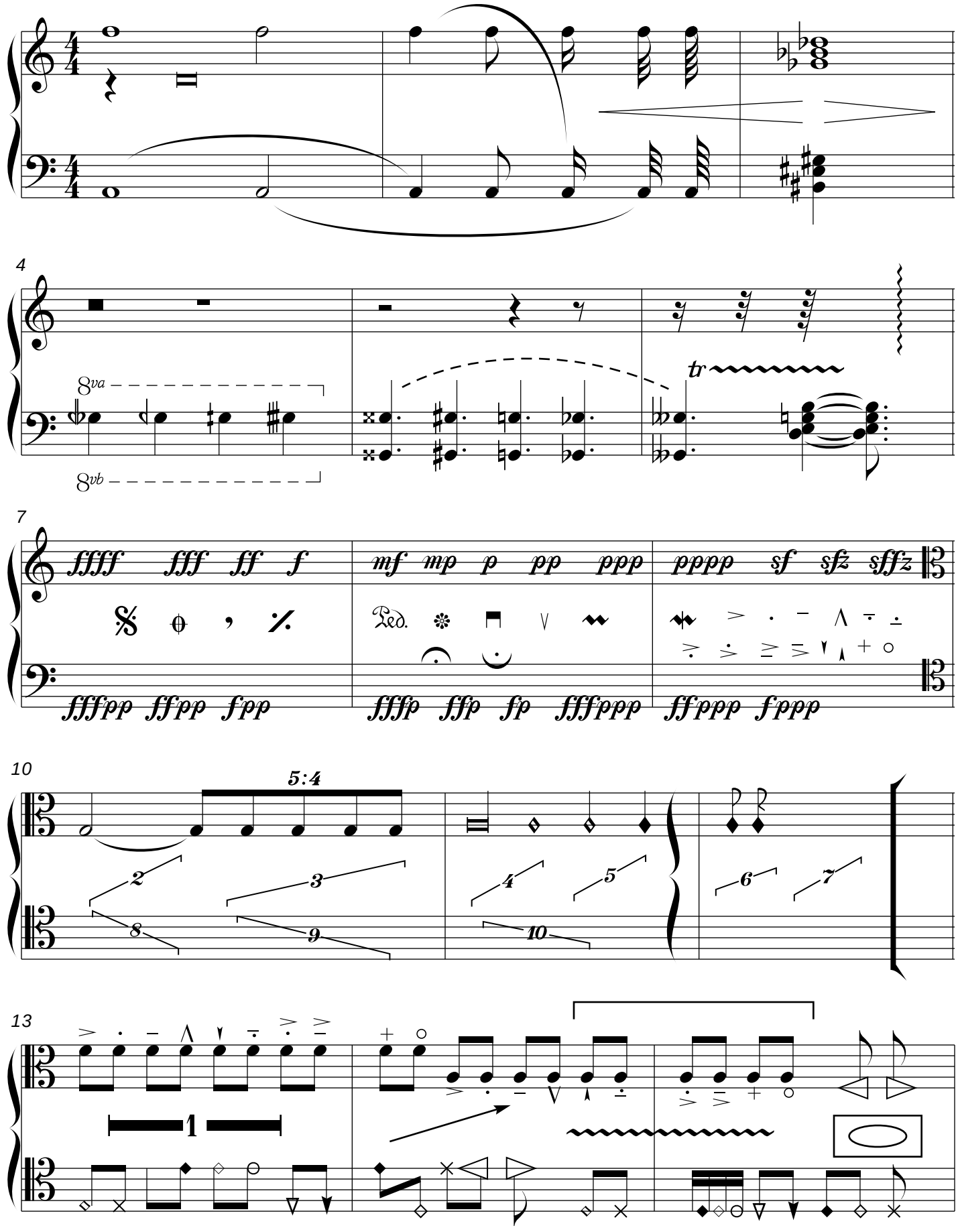
Index
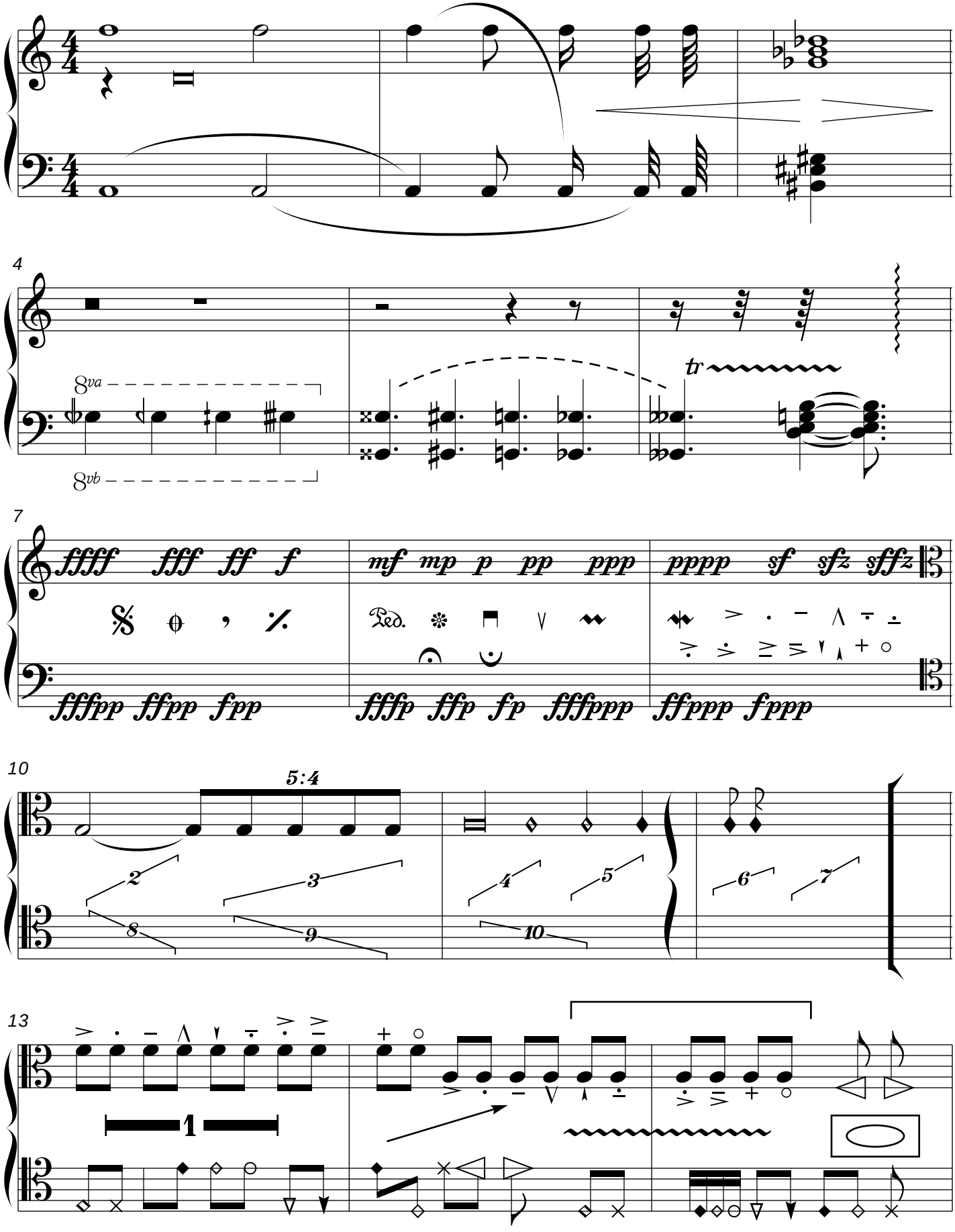
any image can be any size or any colour...
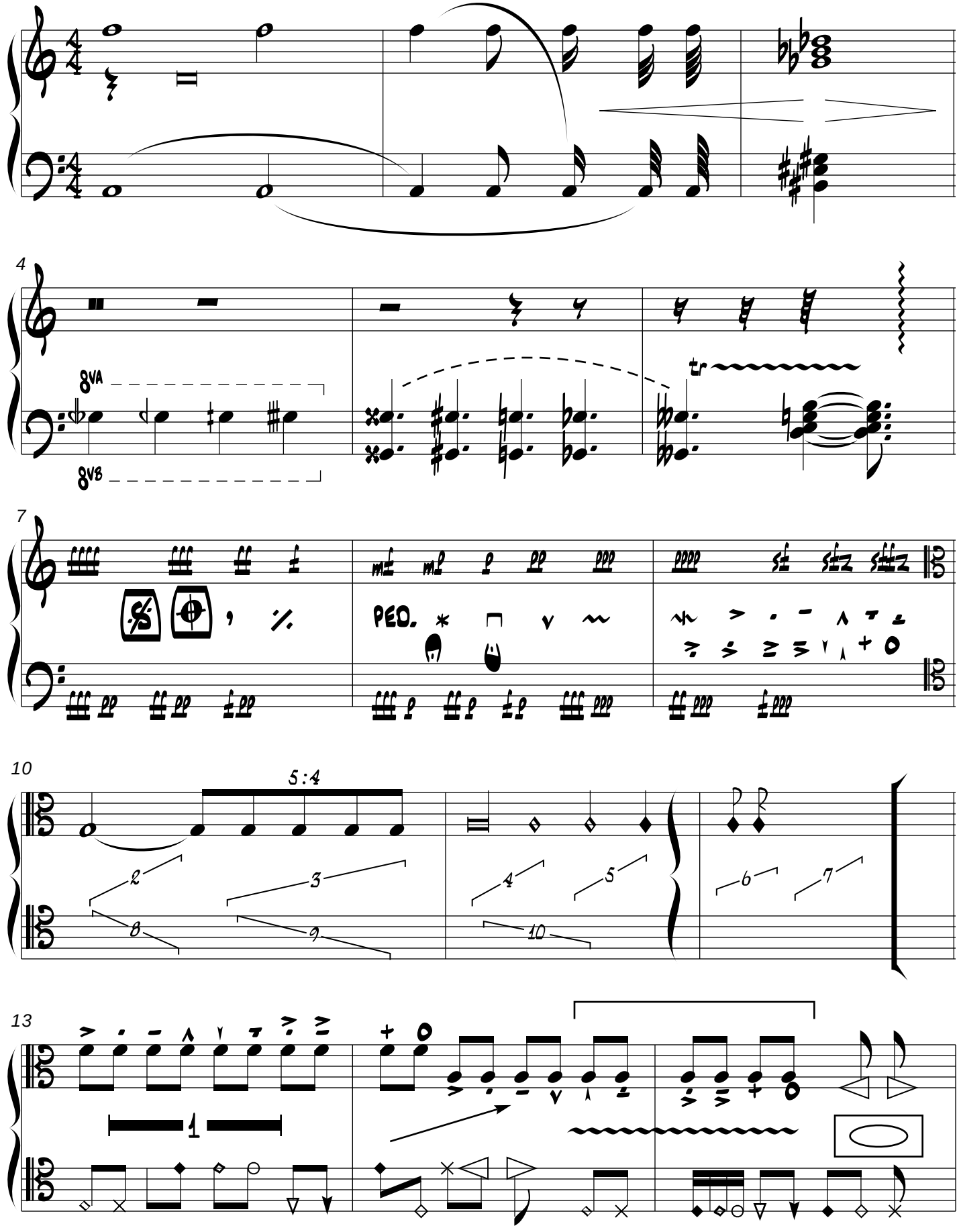



4
8va
8vb
tr
7
ffff fff ff f
mf mp p pp ppp
pppp sf sfz sffz
fffpp ffpp fpp
fffp ffp fp fffppp
ffppp fppp
10
5:4
2
3
4
5
6
7
8
9
10
13
1


4
8va
8vb
tr
7
ffff fff ff f
mf mp p pp ppp
pppp sf sfz sffz
fffpp ffpp fpp
ffff ffp fp fffppp
ffppp fppp
Ped.
10
5:4
2
3
4
5
6
7
8
9
10
13
1


4
8va
8vb
tr
7
fffff ffff fff ff f
mf mp p pp ppp
pppp sf sfz sffz
Ped.
fffpp ffpp fpp
ffff ffp fp fffppp
ffppp fppp
10
5:4
2
3
4
5
6
7
8
9
10
13
1


4
8va
8vb
tr
7
ffff fff ff f
mf mp p pp ppp
pppp sf sfz sffz
Ped.
fffpp ffpp fpp
fffp ffp fp fffppp
ffppp fppp
10
5:4
2
3
4
5
6
7
8
9
10
13
1


4
8va
8vb
7
ped.
10
5:4
13