# Music Master Professional

## Sequencing, Notation and Audio software

Manual Revision 1.3


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This manual was prepared using Corel Ventura

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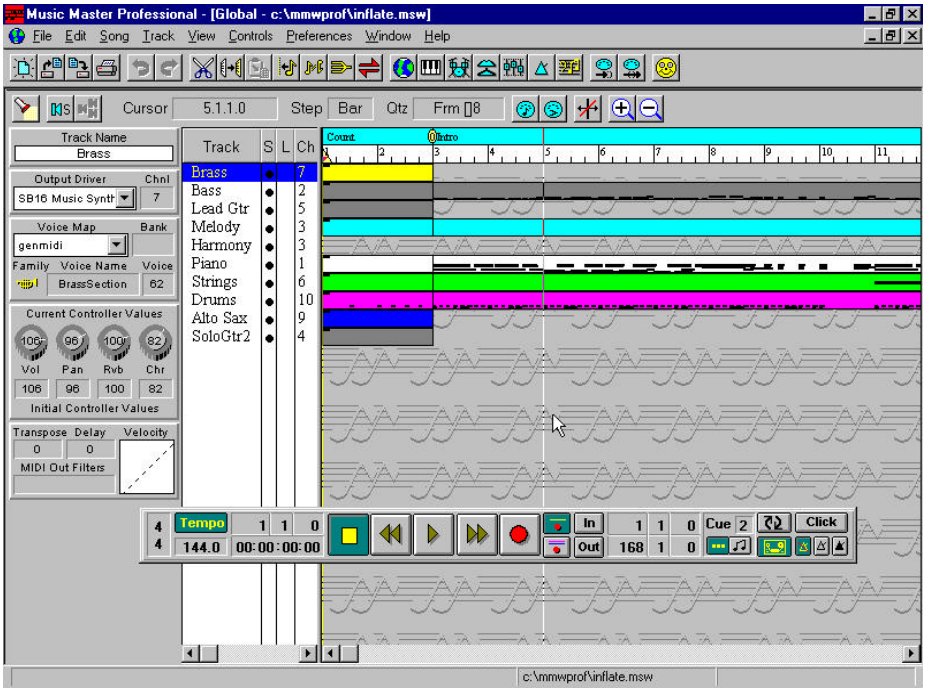
# Preliminaries

# Introduction




Music Master was created to satisfy a need in the marketplace for MIDI software that integrates both sequencing and notation. When Music Master was designed, there were many excellent programs available that could perform one or the other, but there was little available that provided full integration of MIDI data with the manuscript.

Music Master has been designed by musicians with a view to make it easy to progress from notes played or entered, to a finished manuscript and sequenced song. It provides powerful editing and layout tools designed to be easy to use with as much commonality between editors as possible.

## Software Features

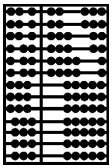
Music Master is powerful, intelligent user- friendly software which offers a wide range of features, including -

- Intuitive sequencing operations using a transport panel and object-oriented editing
- Highly flexible MIDI performance editing in 5 formats -
    - Global
    - Keyboard
    - Drum
    - Event
    - Notation
- Special purpose song editors for -
    - Tempo
    - Mixdown
- Intelligent interactive MIDI / notation editing and printing
- Powerful user-defined notation interpretation rules to minimise editing
- Comprehensive interactive song structure
- Voice maps and drum maps provided for a wide range of sound modules
- Full implementation of voice map bank switching - just select the voice / instrument by name.
- Remapping of voice and drum maps
- Context-sensitive on-screen help

# Hardware Requirements

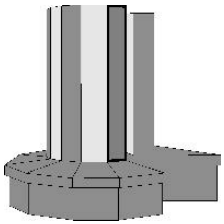
Music Master is a standard Windows application, and therefore requires a computer that is Windows compatible. To run Music Master, you must first run Windows 95, Windows 98 or Windows NT.

## Minimum Hardware



- Pentium™ 200 MHz processor
- 32 Megabytes (32Mb) RAM
- Mouse
- VGA screen (640 x 480)
- Minimum 10 Megabytes (10Mb) free hard disk space

## Recommended Hardware



- Pentium™ 400 MHz processor
- 64 Megabytes (64Mb) RAM
- Mouse
- SVGA screen (800 x 600)
- Minimum 10 Megabytes (10Mb) free hard disk space

The sequencing functions of Music Master will perform satisfactorily with either of the above hardware types. However, if you plan to do a lot of audio, the program will perform much better with a faster processor and more RAM. If you wish to have more than one song open at a time, or have very long songs, you will also benefit from extra RAM.

Unless your computer is of a high specification, we recommend that before running Music Master, you close all other Windows applications to free up system resources.

# Installing Music Master

The following instructions are for installing the Music Master software on your computer.

## Software Installation

1 To install Music Master you must be first running Windows.

2 Close all other applications when installing the software.

3 This software is provided on a CD-ROM. Insert it in the CD drive of your computer.

4 Choose [RUN] from the [START] menu. (Note CD versions should autorun with Windows 95, 98 and NT 4.0, so you shouldn't need to do steps 4 and 5).

5 In the Command Line Text Box, type **D:SETUP**, then click on [OK].

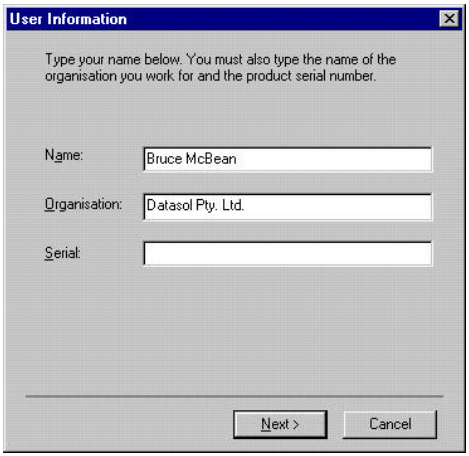
6 The installation program will then take you through the steps to install the software on the hard disk.

After the Welcome window the next window advises you of the directory into which this software will be placed. The default is C:\Program Files\Datasonics\Music Master. By clicking on Browse you can select a different directory if desired. Click on [Next] when ready.

During the installation you may get a window advising you of the need to install DirectX on your computer. If the option is "Reinstall" or indicates that you have a later version of DirectX already installed, then you should not proceed with this installation option, but if the option is "Install" then this is required to allow audio to be recorded and played back andyou MUST install this option.

Next appears a window that displays the name and organization for your computer. Music Master uses this

when displaying the License information. You can change the default if desired. To prevent software piracy, this software uses a software keylock. In the serial number box, type in the serial number of your software. Enter the number exactly, including the dashes. Click on the [Next] button to proceed with the installation. If you entered the serial number wrongly, you will not be able to proceed.




- A window will now appear allowing you to select the Program Folder into which the icons will be placed.
- Music Master will then install to the hard disk.

7 Once the software transfer has finished,Music Master may ask you to look at a READ.ME file. This file contains information about features that have been added or changed in the software that are not covered in the manual. You may find it useful to print this file and put it in your manual for future reference.

## Registering your Software

We suggest you register as soon as you have purchased Music Master. Any information provided will be treated in strict confidence. By registering, you are able to obtain telephone and email support for this software. Registered users are also able to obtain software updates at prices much less than the price of a new copy.

# Windows Basics

## Using Windows

This section is intended for people who have little or no experience with Windows. It is not meant to be a complete tutorial on Windows, but should give the user sufficient guidance to run applications under the Windows environment.

## Using the Mouse

Most Windows functions can be performed using the mouse. Moving the mouse makes the mouse cursor move around the screen. Each editor has a section of the display that shows the position of the mouse cursor in the song (displayed in measures i.e. bars, beats and clocks) whenever the cursor is positioned over MIDI data.

Most Windows procedures are performed by clicking with the left mouse button. Select different functions by moving the mouse cursor over the appropriate screen button, then click (i.e. quickly press and release) with the left mouse button. You can move or select multiple objects by clicking and dragging. To do this click and hold down the left mouse button then drag the object to where you want it.

To select a number of objects, position the mouse cursor at one side of the objects to be selected, press and hold down the left mouse button, and drag the cursor across the objects to be selected. As you move the mouse cursor, the objects will be highlighted or surrounded by a box (depending on the software you are using and the function being performed).

Moving a single object is done in a similar way. For example, to move an icon in Program Manager, click on it with the left mouse button, drag it to where you want it, and then release the button.

## Working with Windows

Everything that you do in Windows is done in a window. To open a window, you must initiate a command. For example, this application runs inside a window, which opens when you click on the icon on the Desktop. Resize a window on the screen by moving the mouse cursor to the edge of the window. You will see the mouse cursor change shape to a double-headed arrow. Click and drag the window's border using the left mouse button.

To move a window, click on the title bar at the top of the window, and drag the window to where you want it. Windows can arrange a number of windows automatically for you. You can "tile" a number of windows by selecting Tile from the Window menu. This will lay the windows out side by side. Likewise you can Cascade windows. This will layer the windows one on top of the other, with the title bar of each window showing at the top.

To bring any window to the top (i.e. to display it), simply click on the title bar of the window that you want.

To close a window, click on the [X] button at the right end of the window's title bar. You can also minimize most windows, which means that they are reduced and placed on the Start Bar at the bottom of your screen

## Optimizing Windows

There are a few things you can do to make this application work better. Each is detailed below-

Make the Start Bar auto hide. Go to Start | Settings | Task Bar and tick auto hide. This will maximize the space available to this and other programs. When you move the mouse to the bottom of the screen the Start Bar will reappear.

Make sure your display is set to the highest resolution available. Again this will allow you to see more. Right click on a blank section of the desktop, select Properties

then Settings and slide the Desktop Area slider to the right.

When running this program it is usually best to close other programs. Sequencing is “real time” and uses a lot of processor power, so it is best to give the full power of your processor to this application.

Every few months you should defragment you hard disk. This will speed up disk access, so you can load your songs a bit quicker.

The Windows menu contains a number of items which help you organize the layout of your screens.

**Cascade** all opened editors are placed in smaller windows and stacked overlapping.

**Tile** all opened editors are enlarged so all fit on the screen without white space.

**Arrange Icons** any editors that are iconised have their icons tidied at the bottom of the screen

**Close All** all editors and songs are closed

**Main Tool Bar** toggle the Main tool bar on or off

**Edit Tool Bar** toggle the Edit tool bar on the current editor on or off

**Transport Bar** toggle the transport bar on or off

**Status Bar** toggle the Status bar (at the bottom of the window) on or off

**Window list** all opened editors are listed. The current editor is ticked. Click on a different window name to bring it to the top of a stack of windows

# Using On Line Help

This program has a powerful context-sensitive help system. Context-sensitive means that the program knows where you are working, and will bring up the help topic appropriate to what you are currently doing.


To get **context-sensitive help**, simply press **F1** on the keyboard. Alternatively, many windows have a help button that you can click on with the mouse.


In addition to the context-sensitive help, there is a **help menu system**. This works the same as help in most Windows applications. To access the help system, pull down the help menu at the top right of the menu, or type **Alt H**. You can look at the contents of the help system, search for help on a topic, get help by referring to a key word, or see an overview of the program.

The help menu allows you to access all the functionality provided in the Help System.

**Contents** A list of all the topics in the Help System

**Search** You can search for a word in the Help System, then jump to topics containing that word

**Overview** This will jump to the Help topic “Overview of Application”

**How to Use** This will jump to the Help topic “The Application Help System” which gives you a brief tutorial on how to use the help system

**About** This option will display a screen showing the version of thhis program you are running

# Mouse Cursor

As you move the mouse around the screen, the cursor changes shape over different sections. This tells you what things you can do.

The arrow is the standard point and select cursor. When you move it over a note or other event in the editors, you can double click to edit the event. This cursor is also used to select Windows objects such as menus and scrollers.

The hand symbol means you can move the object under the cursor. Click and drag the object with the left mouse button to the desired location.

The double-headed arrow tells you that you can directly alter a numeric field. Click with the left mouse button to decrease the value or with the right button to increase it. If you double-click on the field, a box will open, into which you can directly type the desired value.

This cursor will appear when there is a drop-down list available. If you click with the right mouse button, you can move to the desired item in the menu and release - all in one step.

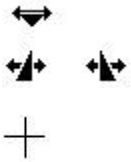
This symbol means that a window will open if you click here.

The I Beam appears wherever you can enter text. Click, then type your text. When you have finished, press **Enter** to close the box

This cursor appears when the mouse is over a locator. You can click and drag the locator to a different position..

This cursor allows you to move a Part Boundary. Click and drag the Part Boundary to the desired location.

The pen cursor appears when you draw a note velocity curve in the grid editors. Also it appears when you drag the length of a note in the grid editors.



The Song Position, In Locator and Out Locator cursors allow the moving of these items by clicking and dragging along the Ruler.

The Paste cursor shows where you are about to paste some MIDI data.

## Mouse Cursor Position


The top of each editor has a box that displays the position of the cursor whenever it is in your song. It is displayed in measures, beats, steps and clocks. (Clocks are the smallest unit of time in a MIDI system).


Note that the cursor position display reflects the “step” that has been selected in the box just next to the cursor position display. Step determines how fine the placement of the cursor is in your MIDI data, and is useful when moving notes and sections of your song around.

For example, if you set the step to BAR, you can accurately move a section to an exact bar boundary. To set the Step, click inside the step box and the Step Value window will appear. Click on the desired step, or [OFF] then click on [OK].

In the Notation Editor, the mouse cursor often changes to the symbol you are about to insert e.g. D.S. al Coda - this is to help you to know what step you are up to.

# Menu System


As with all Windows applications, a menu system is used to access all of its functions. You can also use the toolbars to access some of the features.

The menu system is built dynamically based on the product that you have purchased. It contains menu entries for those functions which are available to you.

Some of the menu entries contain a keyboard shortcut that assist you in moving quickly to the desired function.

The menu bar is located at the top of the application window. It contains the following menus - file, edit, song, track, view, controls, preferences, plug-ins (optionally), window and help. To access a menu, click on it with the left mouse button. Alternatively, press **Alt** plus the first letter of the menu you want e.g. to access the File menu, press **Alt F**.

Listed below is a brief comment on each drop-down menu.

The **File** menu is similar to other Windows programs, and gives you access to file saving and loading, printing (if notation present) and the Exit point.

The **Edit** menu does not link you to the different types of Editor... see View menu or use the Tool Bar. In Edit, you can access the normal Cut, Copy and Paste functions, plus other special functions to help you alter your MIDI data and / or audio data.

A **Song** consists of MIDI data in one or more tracks. Each song is a separate file on disk. The items in this menu affect the *current song* (showing on the status bar and ticked at the bottom of this menu). The settings you create will be saved and loaded with the song, and can be different in each song you have open on the screen.

A **Track** is like a track on a tape deck: a row of notes and data that can be edited and heard separately to the other tracks in your song. These menu items affect only the tracks you apply them to. Each track can have different settings. These settings are saved and loaded with the song.

The **View** menu gives you access to the different editors. Each gives a different "view" of the raw MIDI data. One might edit only drum sounds, while another is designed to help you control volume information. You can access these editors from the Tool Bar as well, or by using the keyboard shortcuts. This menu also contains a list of Roland VS Workstations connected to your system.

This menu gives you access to all of the sequencer **controls**. It provides an alternative to the Transport Bar for most items. Also you can go to the Syncronization window for "syncing" with external devices.

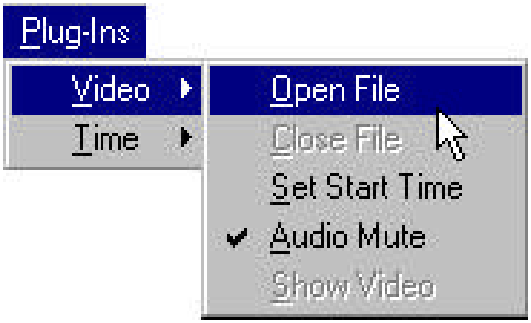
With **Preferences** you can adjust the way the system works. These settings do not affect MIDI data directly. These settings are saved with the program, and will be available next time you open the application.

This menu will only be present if you have one or more **Plug Ins** installed such as the Large Time Code Display or Video plug in for synchronising with AVI and MPEG files.

You can quickly adjust the layout of your screen and move and close **windows** with this menu. Tiling causes the current editors to fill the screen completely. Cascading puts them in same sized windows stacked like overlapping cards from the top left.

The **Help** menu lets you get context-sensitive help on the function you are currently doing.

## Plug Ins




If you have installed any Plug Ins, such as the Large Time Code Display, or Video Plug In, this menu will appear. Otherwise it will not be present on your screen. Note the Large Time Code Display Plug In is available free from the Datasonics web site - www.datasonics.com.au

# Toolbars

As with most Windows programs, this application comes with a menu system that allows you to access all functions of the program. It also contains a main toolbar, which is a faster way to access commonly used functions. Using this toolbar will speed up your work noticeably. The main toolbar is dynamically allocated depending on the product that you purchased. The one shown above is “fully loaded” based on the highest level product.

Each editor has its own toolbar with buttons specific to it. Each editor toolbar is fully described in the chapters on that particular editor.


## Hint Text & Toolbars

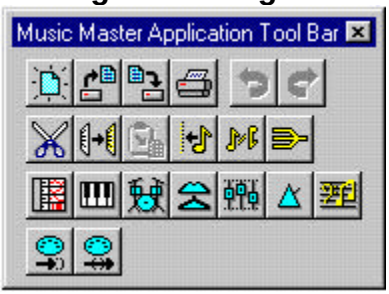
When you point the mouse cursor at any button and leave it for a moment, a small “balloon text” will appear under the cursor containing the name of the function that the button will perform or the toolbar it will open, also a hint text will appear on the lefthand end of the status bar at the bottom of the screen containing similar information.

When working in the various editors it is sometimes desirable to create extra work space. This can be achieved by means of floating, dockable toolbars. All the toolbars in every editor can be moved, reshaped, and or “docked” to allow you to customise the work space to your requirements. A docked toolbar is one that has been placed along any frame edge of the work area and becomes part of the work area frame.

If you are working in a window which is smaller than the screen size it is even possible to place your toolbars outside the window without affecting their function.

However you can only dock a toolbar to the frame of the editor to which it pertains.

## Moving & Docking Toolbars




When you first enter this program or any of its editors all the toolbars will be docked at the top of the editor frame. To move any toolbar using the left mouse button click and hold just inside the edge of the toolbar. A border or outline will appear around the toolbar, you may now drag the toolbar outline to any location on the screen you desire. As you drag the toolbar outline away from the top edge of the frame it will automatically change shape, when you release the mouse button the toolbar will be filled in at the location and shape in which it was left.

To dock a toolbar to any frame edge of the editor drag it right onto the edge, the outline will change to the shape necessary and when you release the mouse button it will dock onto that edge, it may be necessary to drag the toolbar sideways, or up, or down to align the tools within the frame. Note that in smaller screen modes docking to the side frame of the editor will make some buttons inaccessible at the bottom of the frame.

## Changing Floating Toolbar Shapes

Once the toolbar has been moved if it is not docked it is a floating toolbar and will probably require reshaping. This is done by placing the mouse pointer on the very edge of the toolbar, a double arrow will appear. When the double arrow appears click and drag with the left mouse button, an outline of the toolbar will appear and change shape as it is dragged.

Note that the groups of buttons and windows in the toolbar will remain in their groups. This is done for ease of locating the various items but it does restrict the amount of shapes you can use for your toolbars.

## Hiding & Closing Toolbars

The Window menu contains a section to allow you to hide and show the various toolbars. These are:

- Main Tool Bar
- Editor Tool Bar
- Transport Bar
- Status Bar

The main toolbar is the one at the top of the application window. It can be shown or hidden by ticking or de-ticking it on this menu.

The editor toolbar is for the currently focussed editor. It can be shown or hidden in the same manner as above.

The status bar is the small bar at the bottom of the application window which displays hint text and the currently active song for sequencing. This can be shown or hidden in the same manner as above.

Any floating toolbar can be closed or hidden by clicking on the [X] box in the top right hand corner of the toolbar. A docked notation toolbar can only be turned off by first making it a floating toolbar.

# Section Two

# Sequencing

# Loading and Saving

## File Types

Songs are normally saved on the computer's hard disk as a file with the extension "MSW" e.g. demo.msw. Files with this extension are stored in a propriety format. This software can also load and save MIDI files.

## Creating a New Song

If you want to start with a "fresh sheet", you can open a new song. This loads the default song called "default.msw". It is a song that has no note information in it. If no default is present, a blank song is created.

To create a new song, select **File | New Song** or click on the [New Song] button on the toolbar.

## Opening a Song

To open a song, select **File | Open** from the pull down menu (keyboard shortcut **Ctrl O**). A window will appear from which you can choose from the songs on your computer's hard disk. You can look in a different drive by clicking on the drive button at the bottom right of the window. Click the cursor over the desired song, then click on **[OK]** and your song will load.

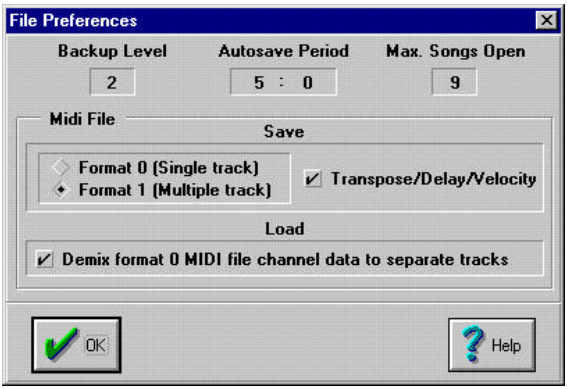
One of the songs stored in the installation directory is called default.msw. This is the default song and is an empty song that is loaded each time you load this application. This song contains no MIDI or audio data, but all the default settings.

When you want to record a new song, load the default song, then immediately save it with a new name (see below). This way, you will not affect the default song when you perform a save.

## Saving a Song

To save your song, chose **File | Save** from the pull down menu (keyboard shortcut **Shift S**). You can also use the [Save] button on the toolbar. The song will be saved with the same name. If you want to save your song with a different name, select **File | Save As** from the pull down menu in the window that appears, enter a new name, and click on [OK].

You have the option to save as a song file (this is what you would normally use) or a MIDI file in Format 0 (single track) or 1 (multiple track). Of course, saving as a MIDI file will lose any audio data present in the song. The **Preferences | File** menu selects the MIDI file type.




Please note that this window is only available in the products with an integrated MIDI sequencer. This menu allows you to set the time between auto-saves. You can set the autosave to, say 15 minutes and your songs will be saved every 15 minutes. Note that the autosave is stored on your hard disk as separate files to the song files. If there is a problem, you will be prompted to recover the saved files next time you run this program. You can also set the file backup level and the maximum songs open. Both of these can be set from 0 to 9. File backups are written as *filename.~b1*, *filename.~b2* etc. and are available in the Open dialog depending on the backup level set here. The Max. Songs Open field will prevent you from opening more songs simultaneously

than the number shown here. This only becomes an issue when you have a small amount of RAM for loading songs.

The File Preferences window also has a number of settings for loading and saving MIDI files. You can set whether MIDI files are saved as Format 0 (single track) or 1 (multi-track), and whether they save Transpose / Delay / Velocity settings. When you load a MIDI file that is Format 0, you can demix the MIDI channels to all 16 tracks.

## Close

Choose close when you have finished with a song. The keyboard shortcut is **Shift C.** You will be prompted to save it if you have made changes since the last save. If you wish to discard the song, simply select [No] when asked if you wish to save the changes. Note if you have several editors open on a song, they will all be closed.

## Recently opened songs

In the File menu is a list of the 5 most recently opened songs or MIDI files. Simply click on one to open it.

## Exit

Closes the application and returns you to Windows. If you haven't saved your work since making changes, you will be prompted to do so. You can also exit by typing **Alt F4**, or by clicking on the [X] box at the top right corner of the application window.

# Moving Around the Program

There are a number of editors with which to create and edit MIDI songs. Wherever possible, all editors use similar commands to make learning and using the program as easy as possible.

## Moving Between Editors

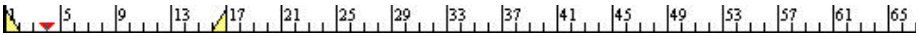
To open other editors, you can click on the appropriate icon in the toolbar, access the View menu, or press the keyboard shortcut.

## Moving Around Your Song

Each of the sequencing editors is a “grid editor”.

Though they perform different tasks, they all operate in the same way. Each Grid Editor comprises a Song Position Ruler, a Locators and Parts Ribbon and an Edit Grid Area. Also, the Toolbar for each editor has a cursor position display.

### Song Position Ruler

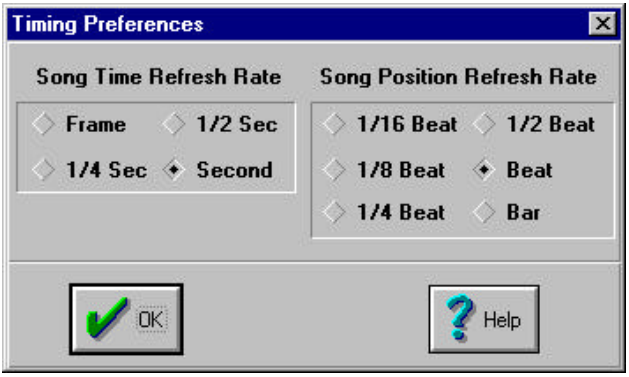



The song position ruler is displayed at the left side of the Keyboard Editor, and at the top of other editors. It is divided into measures (i.e. bars). Zoom in (magnify the data) by pressing **Shift Z**, or zoom out by pressing **Alt Z**.

On the song position ruler is a red triangle which is the current song position. When you play the song, the triangle will move, and the edit grid will be updated each time the pointer reaches the edge of the window.

You can directly jump to a position and play by double clicking in the Song Position Ruler.

## Timing




The timing preferences dialog allows you to set two items -

- Song Position Refresh Rate - sets how frequently the song position display on the Transport Bar is updated. This also sets how frequently the red song position arrow in the editors is updated.
- Song Time Refresh Rate - sets how frequently the song time display on the Transport Bar is updated.

## Locators and Parts Ribbon

The Locators and Parts ribbon is shaded in blue and placed adjacent to the Song Position Ruler. Locators are a quick way to move through your song, while parts are used for editing in each grid editor.

## Locators

In the locators and parts ribbon, the locators are shown as yellow ovals with a number inside them. The locators are numbered from 1 to 9 and 0. When you load the default song, they will be spaced evenly over the first 72 measures (unless you have changed them in the default song). You can move them by clicking on them with the left mouse button and dragging them to the desired position. (Note that the step value will cause the locator

to “snap” to the chosen steps). Each locator can also be set by pressing Ctrl 0 - 9 and that locator will be set to the current song position.

When playing the song you can press a number on the keyboard and in order to jump to that location and continue playing. It will do this immediately unless you have enabled Delay Locator in the Sequencer Preferences dialog. When this is the case, the sequencer will jump to that location only when the currently playing section is complete. Additionally the start and end of the song can be located with the **Home** and **End** keys.

## Parts

Parts are defined on the locators and parts ribbon. Clicking with the right mouse button in this area allows you to insert a part boundary, which appear as a vertical black line. You can drag these lines with the left mouse button to adjust their position. Parts are used for editing.

If you drag a part over another part boundary, the one “underneath” will be erased if the Preferences are set to Replace Mode. In Overdub Mode, the two sets of data would be combined.

To delete a part boundary, move the cursor over it until the cursor changes to a special part boundary shape. Now drag the part boundary onto an adjacent boundary or to the edge of the song and release.

You can name Parts. Simply double click on the part in the locators and parts ribbon, and a window will appear into which you can type the part names.

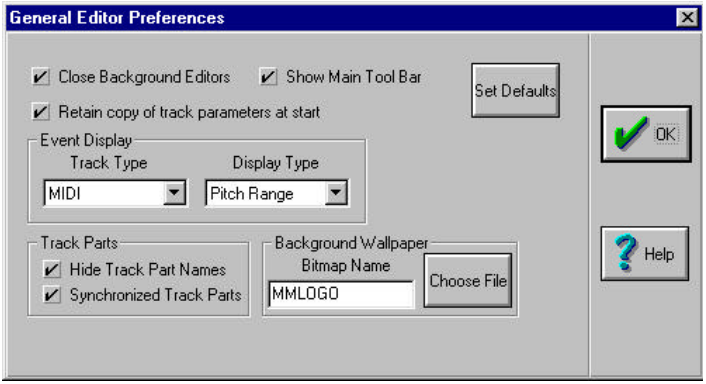
Before you can edit a section, you must first define it as a part. Clicking with the left mouse button inside a part will highlight it ready for editing.

Clicking on the Locator and Parts Ribbon, will cause the same section in all tracks to be highlighted. Clicking on a track will highlight the track part only. Hold down the **Shift** key and click on other parts to include them in the edit. Hold down the **Shift** key and click on highlighted

parts to remove them from the list to be edited. The parts do not have to be in the same bars as each other.

### Edit Grid Area

This area contains the events and parts to be edited. The format of this area varies depending on the particular editor. The background of some of these grids is dependant on the bitmap chosen from the Editor Preferences window.




## Moving Between Windows

You can have a number of Windows open at once. You may not be able to display all the windows at once due to the size of your computer screen. Some windows may be reduced and others will be partially or fully hidden.

There are a couple of ways to move between edit windows. You can use the editor buttons on the Toolbar. If the [Close Background Editors] box is ticked in Editor Preferences then the current editor will be closed as the new one is opened. Another way to move between the open editor windows is to click on the desired one in the Window pull down menu. Here you will find a list of the open windows. You can also use the standard Windows command **Ctrl Tab** to flip between the editors.

## Handling Multiple Songs

You can have more than one song open at a time. This allows great power and flexibility in editing. You can even play one song while editing another. It is quite easy to manage more than one song at a time once you understand a couple of concepts.

Note that the **Preferences | File** window allows you to set the maximum number of songs open at any time.

### Current Song

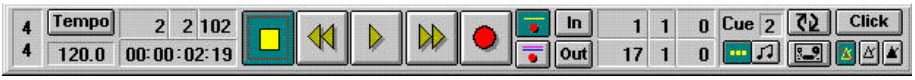
The current song is the one that the sequencer portion operates on i.e. the one you will hear when you press Play. The current song is identified with a tick next to it in the Song menu. To make a different song the current one, simply click on it in the Song menu or select it from the Window menu. The active song for sequencing will not change if you are playing. It will switch as soon as you press stop.

### Editing Across Songs

A major advantage of being able to open more than one song simultaneously, is that you can easily copy tracks or song segments from one song to another. This is done using the standard operations of Copy, Cut and Paste.

For example, if you wanted to copy a part from one song to another, click on the desired part to highlight it, and select Copy from the Edit menu (or type **Ctrl C**). Then go to the other song (you may have to display it by clicking on its name in the Window menu) and Paste the part where you want it. This will only work with MIDI tracks.

# Transport Bar




The Transport Bar is a window that contains the buttons needed when recording or playing MIDI songs. Just like a tape recorder, you will find buttons for Stop, Rewind, Play, Fast Forward and Record.

## Hiding the Transport Bar

As most of the buttons on the Transport Bar have a direct keyboard command, you may wish to hide the Transport Bar. Pressing **F3** on the keyboard will alternately hide and display the Transport Bar. Otherwise, you can use the pull down menu labelled "Window" and turn it on and off from there.

Please note that when displayed, the Transport Bar is always on the top of your Windows screen (i.e. it covers over all other windows).

Note - the Transport Bar affects the current song - this is not necessarily the song that has its window highlighted. The current song is shown with a tick in the Song pull down menu. This application is designed this way so that you can edit one song while playing another.

## Moving the Transport Bar

If you wish to move the Transport Bar, position the mouse over the border of the Transport Bar so that the mouse cursor changes to a hand. Then click and drag the Bar to the position you want it.

## Transport Bar Functions

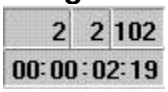
The Transport Bar is divided into a number of sections. They are covered in order from left to right below.

## Time Signature


At the left of the Transport Bar you will find the Time Signature Box. You can set the time signature for the current song directly here. Move the mouse cursor over the upper or lower time signature number and the cursor will change to a double headed arrow. Click with the left mouse button to decrease or the right mouse button to increase the number. You can also double click the mouse button to open a box that allows you to directly type in the desired value.

Your song may have time signature changes in it. If this is the case, the time signature display will show the time signature for the current song position. If you want to enter more than one time signature for your song, you must do this in the Notation Editor.

## Song Position




To the right of the tempo area is the song position area. The song position tells you where the song position pointer is (the little red triangle at the top or side of the editor(s) containing the current song). The song position is shown in measures (i.e. bars), beats and clocks.

Clocks are the smallest unit of time in MIDI systems. They are defined as “pulses per quarter note”, or “PPQ”. This program sets the clocks to 192PPQ.

The song position is also displayed in hours, minutes, seconds and frames. A frame is 1 / 24th, 1 / 25th or 1 / 30th of a second as determined by the time code type in the Synchronization dialog, which you will find under the pull down menu Controls.

The synchronization window also allows you to set the time display as Absolute or Relative. Normally, you would use relative. The absolute time is used when you are synchronizing to a tape recorder etc. and the external time code has a value other than zero at the start of the song. (For more information on time code see the chapter on Starting a Song.)

**Note**: The song position displayed here is different to the cursor position shown at the top of the editors. The song position shows where the sound would start if you clicked on the Play button, while the cursor position is the location of the mouse cursor whenever it is over part of your song.

## Tempo


At the top of the tempo area is the Tempo Enable Button. Clicking on this button enables the tempo map set in the Tempo Editor to operate. (See the chapter on the Tempo Editor for a full description.)

If the tempo enable button is not pressed, the tempo displayed beneath the button determines the speed the song is played at. You can change the tempo by moving the mouse cursor over the tempo value and click with the left mouse button to decrease the tempo or the right mouse button to increase it. Alternatively, if you double click on the area, a box will appear that allows you to directly type in the tempo you want. Press the enter key after you have typed in your tempo.

Another way to change the tempo is by using the + and - keys on the keyboard.

## Transport Buttons

From left to right the transport buttons are Stop, Rewind, Play, Fast Forward, Record. These work just like the buttons on a tape recorder.

Each of the transport buttons has a keyboard shortcut -

- Stop **Space bar**
- Rewind (previous screen) **Page Up**
- Rewind (fast) **[**
- Rewind (slow) **{**
- Play **Enter**
- Fast Forward (next screen) **Page Dn**

- Fast Forward (fast) **]**
- Fast Forward (slow) **}**
- Record *****

Additionally, pressing **Home** and **End** on the keyboard will take you to the start and end of the song respectively.

## Recording

To the right of the transport buttons are the record mode buttons. The top one is the Replace mode button. When you are recording on a track with this button selected, the MIDI data on that track will be replaced with the new MIDI data that you just recorded i.e. the old data is lost. When you record with the Overdub button selected, the new MIDI data is added to the data already on the track. In this way, you can "build up" your track with more and more notes or other types of MIDI data.

To monitor and record on a track, you must first prepare the track that you wish to record on. For example, we have a MIDI module as our sound source and a synthesizer is used as our keyboard. First activate the track you wish to record on by clicking on it. Now set the Output Device in the output box at the left of the window, and set the MIDI channel next to it.

With your keyboard and sound module patched correctly to your computer's MIDI ports, you will now be able to audition the sounds in the module when you play the keyboard.

When you are ready to record, check that the IN and OUT locators described below are set to the measure (i.e. bar) numbers that you wish to record on, and confirm that the Out button is down. Then simply press the [RECORD] button followed by [PLAY].

## Rehearsing a Drop-in

Suppose you have recorded your track but wish to re-record a couple of measures because they are not

quite right. You can rehearse a drop-in to see if you can play that section better.

First set the IN and OUT locators to the measures that you want to re-record (see below). Check that the [OUT] button is down. Ensure the Rehearse Mode box is ticked in Sequencer Preferences.

Now instead of pressing the [RECORD] button, press the [IN] button followed by [PLAY]. The song will pre-roll a couple of measures (as set by the number of measures in the Cue box). You will hear the previously recorded track up until the IN point. The previously recorded track will mute during the measures between the IN and OUT points, then you will again hear the MIDI recorded on the track until you press stop.

After practising a few times you will be ready to actually record the drop-in. Just press the [RECORD] button followed by [PLAY].

You should detick the Rehearse Mode box in Sequencer Preferences after completing the drop-in, so that the active track will play when looping between the in and out positions (see below).

## IN and OUT Locators


This area has a dual role. When you are recording, you can use the IN and OUT locators to drop a track or tracks in and out of record for a predetermined time. You can also use the locators to set the start and end for "looping" i.e. playing a section then jumping back to the beginning of the section repeatedly.

### Setting the IN and OUT Locators

To set the IN and OUT times, move the mouse cursor over the area you want to change. Then click with the left mouse button to decrease the number or the right button to increase. Alternatively, you can double click and a box will appear into which you can directly type the desired value.

Another way to set the IN and OUT locators is to **Ctrl** click with the left and right mouse buttons respectively in the song position ribbon at the top or left of the editors (the area the little red triangle moves along when playing). Depending where you clicked, a new In or Out point will be set.

You can enable the IN and OUT locators directly from the keyboard. Press **I** to enable the IN locator and **O** to enable the OUT locator.

## When recording....

Press the record button and you will see that the [IN] button automatically goes down. At the same time the Song position jumps to the In point and the Song position ribbon at the top or side of the editor highlights to show the section of the song that will be recorded on.

If you want to automatically stop recording at a particular point, click on the Out button, and you will see the song position ribbon indicate the section of the song that will be recorded on.

Press the play button and recording will commence after the Cue (see below) on the tracks that you have armed.

## When looping....

To use the IN and OUT locators as the start and end points of a loop, click on the [LOOP] button near the right end of the transport bar (keyboard shortcut **l**). You will see the IN and OUT buttons go down and the song position ribbon in the editor will highlight to show you the section that will loop.

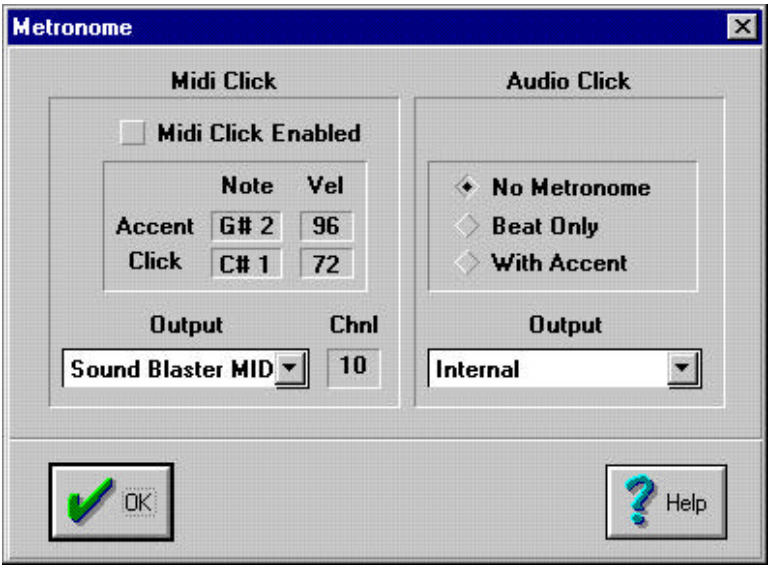
Looping can be useful if you are having difficulty recording a section of your song. Arm the appropriate track and loop while recording (in replace record mode). When you manage to play the section correctly, just press stop before the next loop is completed, and your perfect performance will be the one added to the song.

## Cue


This section allows you to set the count-in prior to playing or recording. It is displayed in bars. To set the cue, click with the left mouse button on the number or decrease it, or the right button to increase the number of bars. You can also double click and type in directly the value you want (up to a maximum of nine).


There are two buttons - CLICK mode and PLAY mode. These are used to set the type of cue you hear. CLICK will give you MIDI click prior to the music starting, while PLAY will play the number of previous measures set in the Cue box. If you are at the start of the song, you will hear a click for that number of measures.

## Metronome




This area allows you to turn the metronome on and off. At the bottom are three buttons - metronome off, metronome on, metronome on with accentuated beat. The metronome will sound through your computer's speaker.

Above the metronome buttons is the Click button. This enables MIDI click, which makes a sound each beat to help you play in time. The keyboard shortcut for Click is

**k**. The MIDI notes and velocities used for accent and beat can be set in the Metronome dialog in the Song menu for those products which have this option. You can also set the MIDI channel and output driver.

## Synchronization Button

You can synchronize to MIDI Song Position Pointer (MIDI clock), and MIDI Time Code (MTC).

When you press the [SYNC] button, the program will wait for an external signal before playing. For normal use, make sure this button is not pressed. The keyboard shortcut for toggling in and out of sync mode is **j**.

For Music Master Performa and Prelude users, the synchronization method used when the [SYNC] button is pressed is MIDI clock, which is a tempo based synchronization method. This allows you to synchronize to other sequencers as the slave. For other products there are a number of options and full information on this is in the Synchronization chapter.

## Controls Menu

The Controls menu gives you access to all the Transport controls. Most of the options in this menu are "direct action" ie selecting them will directly perform the function rather than open a window.

### Record Mode

You can choose to replace existing MIDI data as you record (replace mode), or to add the new MIDI to what is already on the track (overdub mode).

### Metronome

The metronome can be turned off here. You can choose from accented beat or normal beat.

### Cue Mode

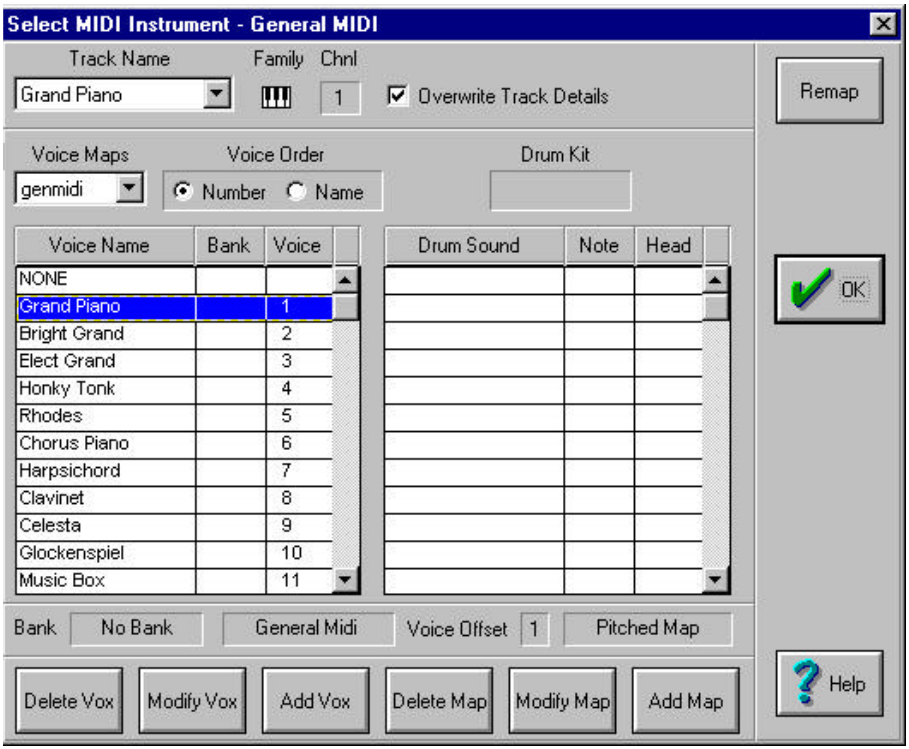
The Cue mode determines what cue in you get when you start recording. Cue Click will give you a

metronome cue in, while Preroll will allow you to hear some bars of what you have already recorded. You can set how many bars of Click or preroll on the Transport Bar.

## Synchronization

Synchronization In will enable you to sync to an external timing reference. The Synchronization menu option will open the Synchronization window - refer to the Synchronization chapter for more information on this.

# Getting Sounds




One of the first tasks when using you MIDI system is to choose the appropriate sounds for all the tracks in your song. This can be a bit tricky. Even though General MIDI is bringing some standardisation to selection of sounds, every synth has a different “voice map” for selection of sounds. This chapter shows how to select the voice map and voices for your setup (we can’t tell you what sounds best though!).

## Voice Maps

This program provides you with powerful tools to make accessing the sounds in your keyboard or sound module quick and easy. The program includes voice maps for

most of the common devices, and new ones are available from Datasonics via the Internet.

## How Voice Maps Work

Virtually all modern keyboards and sound modules have a number of sounds in them. The list of sounds, and the details on how to access or enable these sounds is known as a Voice Map. Typically, each track of a song contains MIDI notes that are sent out on one MIDI channel (channels range from 1 to 16).

When you select a Voice Map for a track, this tells the sound module that all the notes on a particular MIDI channel are to be played in a certain voice. This command is sent to the sound module(s) each time you start playing, or whenever you change the voice in the Voice Map window or the Active Track Details area of the Global Editor.

If you have Polyphonic Voicing on a track, it just means that there are MIDI notes on more than one MIDI channel on that track. The sound module can still play each note with the correct voice because the MIDI channel of the note determines its voice.

A Voice Map contains the following information -

- Bank Type - if the sound module or synthesizer has more than 128 sounds, this defines how they are accessed
- General MIDI flag - if the sound module is General MIDI compliant, this flag will be set to on
- Voice Offset - defines whether the voices in each bank start at 0 or 1
- A List of Voice Entries - each voice entry equates to one instrument in the MIDI device

Each voice entry contains: -

- Voice Name - the name of the voice e.g. Grand Piano
- Bank - the MIDI standard allows for up to 128 voices in a bank. If the sound module has more than 128

voices, they will be spread across more than one bank.

- Voice Number - this is the number that is sent out to the sound module to tell it what voice to use.
- General MIDI Number - many modern sound modules use the General MIDI standard for allocating voices to their voice numbers

## Setting the Default Song

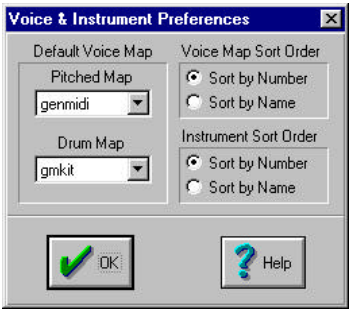
The default song is what is loaded each time you open the program. It does not contain any music, but can be used to store the information about your MIDI setup. This saves having to enter the voices each time you run the application.

When you install this software on your computer, it is configured to use the General MIDI Voice Map. You should choose the voice map that suits your sound modules and remap all tracks on the default song then save this to the hard disk. Do this in the following order

- run the application - the default song will automatically be loaded
- open the Voice Map dialog - available from the Track menu
- click on the [REMAP] button and the Remap Voice Map dialog will open
- select the correct voice map from the drop-down list under “Remap To”
- tick the “All tracks with same map” check box
- click on the [OK] button
- close the Voice Map dialog by clicking on its [OK] button
- open the Voice and Instrument preferences dialog - available in the Preferences menu
- choose the same voice map that you have just remapped to. This is the voice map that will be allocated when you add a new track to a song
- close the Voice and Instrument Preferences dialog by clicking on its [OK] button

- save the default song to the hard disk - select **File | Save** or click on the [SAVE] button on the main toolbar. Save it with the name “default.msw”

## Voice/Instrument Preferences




This menu entry opens a window that allows you to set the Default Voice Map. You can use the voice map to select different sounds in your sound module. You can also set whether the voices are listed by number or name in the window they are displayed in.

When you carry out the above operation, it is best to exit then restart to allow the settings to be used in your work.

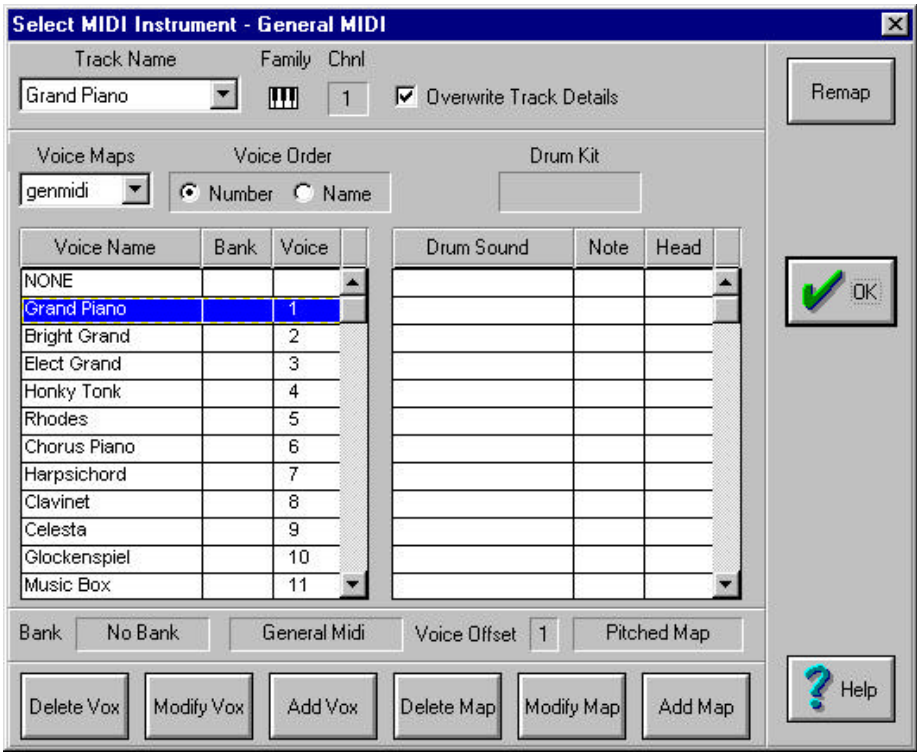
## Remapping a Track


If you load a song or MIDI file that was made for another type of sound module, it is likely that the voices will be incorrect, and your song will sound rather strange. You can remap the song to suit your sound module using the Remap facility.

The program can intelligently remap voices. It does so by relating every voice map to the standard General MIDI Voice Map.

To remap a track, click on the [REMAP] button in the Voice Map dialog. A new window will open, that shows the currently selected Voice Map, and a pull down menu allowing you to choose a new Voice Map. Also there is a Check Box that allows you to automatically remap all tracks in the song that have the same Voice Map as the track you are currently on. Once you have selected the correct map, click on the [OK] button and it will be done!

## Selecting the Voice




If there is a voice map for your keyboard or sound module (most likely), you can quickly access the voices in it with the Voice Map window. Select the Voice Map option from the Track menu, or use the keyboard shortcut **Ctrl U**. You can also open the Voice Map window by clicking on the Voice Name box in the Active Track Details area of the Global Editor. The Voice chosen

will become part of your song, so next time you open the song, the same Voice will be loaded.

If there is no Voice Map for your keyboard, see below for how to create one.

### Overwrite Track Name

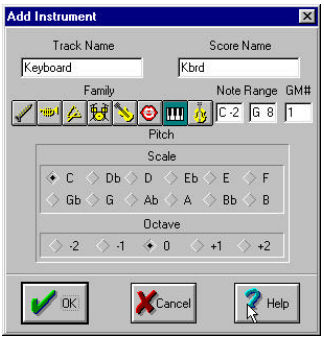
If you select this option, the name of the track you are working on will be changed to match the name of the voice you select. You can rename the track later in the Track Details area if necessary. It is usually best to leave this option selected so that the Family, Instrument Transposition and Note Range settings for the track can be automatically updated.

## Musical Instrument

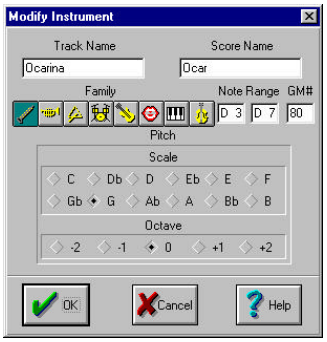

| Track Name | Family | Pitch | Score Name | Note Range | | GM# |
|---|---|---|---|---|---|---|
| Orchestra Hit | Keyboard | C | OHit | A -1 | C 7 | 56 |
| Trumpet | Brass | Bb | Tpt | E 2 | C 5 | 57 |
| Trombone | Brass | Bb | Tbon | E 2 | C 5 | 58 |
| Tuba | Brass | C | Tuba | E 0 | A# 2 | 59 |
| MutedTrumpet | Brass | Bb | MTpt | E 2 | C 5 | 60 |
| French Horn | Brass | F | FrHn | E 0 | F 4 | 61 |
| Brass Section | Brass | Bb | BrSe | E 2 | C 5 | 62 |
| Synth Brass 1 | Brass | Bb | SBr1 | E 2 | C 5 | 63 |
| Synth Brass 2 | Brass | Bb | SBr2 | E 2 | C 5 | 64 |
| Soprano Sax | Woodwind | Bb | SSax | G# 2 | D# 5 | 65 |
| Alto Sax | Woodwind | Eb | ASax | C# 2 | G# 4 | 66 |
| Tenor Sax | Woodwind | Bb+1 | TSax | G# 1 | D# 4 | 67 |

Choosing the Musical Instrument option from the Track Menu will open the Musical Instrument window. This window also allows you to select an instrument from a list. When you change the instrument, it will change on the track and you will hear that change if you are playing. The keyboard shortcut to open this window is **Shift T**.

## Adding, Modifying and Deleting An Instrument

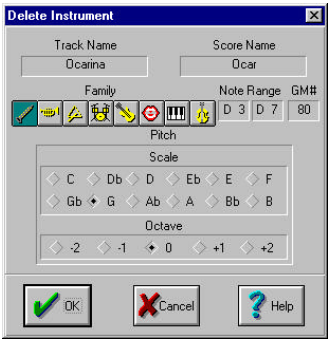



You can add an instrument to the instrument library by clicking on the “Add Inst” button. This will open a window where you can give the new instrument a name, a Score Name which will be used as the start of the line in notation when this instrument is selected, a family, a note range, and a General MIDI voice number (GM#). The note range is the range of MIDI notes that the instrument can play. The GM# is the voice number that this instrument is in the General MIDI set of instuments. (See Appendices.)




You must also supply a Pitch which is made up of a Scale and Octave. This tells the Notation Editor what written transposition to use when this track is taken into notation eg a Trumpet is Bb.

To modify an instrument, select the desired instrument and click on the “Modify Inst” button. This will open a window with the same fields as mentioned above. Modify the desired field(s) and press [OK]. If you press [CANCEL] the instrument will not be modified.

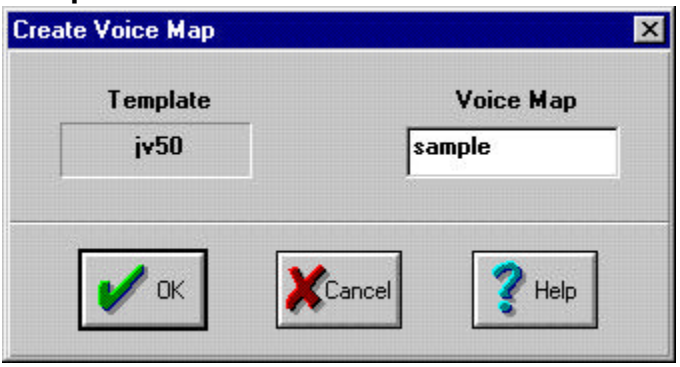



To delete an instrument, select the desired instrument and click on the “Delete Inst” button. This will open a window with the same fields as mentioned above. To delete this instrument press [OK]. If you press [CANCEL] the instrument will not be deleted.

## Deleting a Voice Map


If you need to delete a Voice Map from your computer's disk drive, select the map from the Voice Map dialog box in the Voice Map window. Then click on the [DELETE MAP] button adjacent. Note that the voice maps are typically only a few kBytes in size, so you will save very little disk space by removing unwanted maps. Normally you would only remove a Voice Map if it is corrupt or totally incorrect.

## Creating a Voice Map



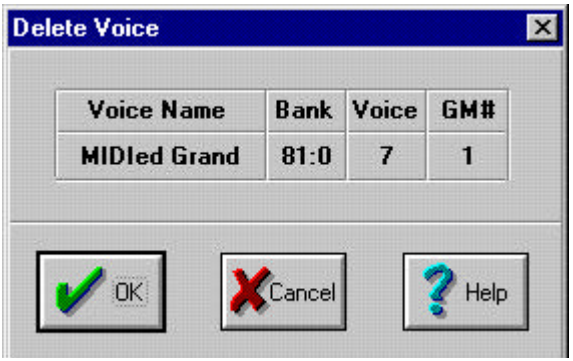

If you need to create a Voice Map, there are tools provided to help you to do so. Note that before you do this, it is worthwhile checking Datasonics' Internet site, as the Voice Map you want to create may have already be done for you.

To create a new Voice Map, click on the [CREATE MAP] button in the Voice Map window. The template will be set to the voice map currently showing in the voice map drop down list. The new Voice Map will be copied from

the template, and then you can edit the voices as appropriate. For this reason, it is best to make the template a keyboard or sound module that is as similar as possible to the device you are creating the new Voice Map for. When possible use a map for the same brand, and a model of similar age. This will usually minimize the editing to be done on the new map. In particular the three items that should match are the Bank Type, General MIDI Flag and Voice Offset.

Once you have created the new Voice Map, you will probably need to edit the voices, add some and/or delete some. See below on how to do this.

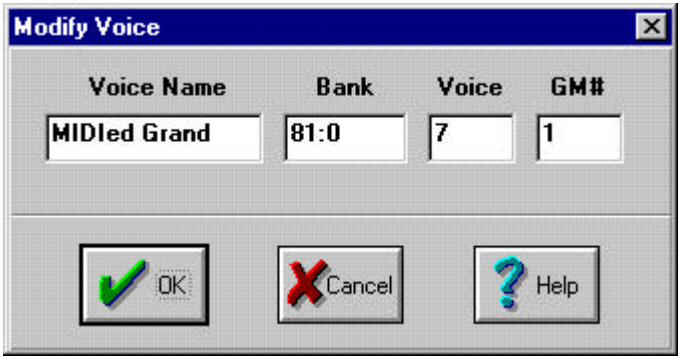
## Deleting a Voice




If you have created a new Voice Map, you will have copied the map from a template. In this case some of the Voices in the template may not exist in the new sound module so you may need to remove them from the map.

To remove a voice, simply click on the voice in the list that you wish to remove, then click on the [DELETE VOX] button. A window will appear confirming the details of the voice to be removed from the map. Click on the [OK] button and the voice will be removed. Note that the Undo function does not extend to Voice Map editing, so take care.

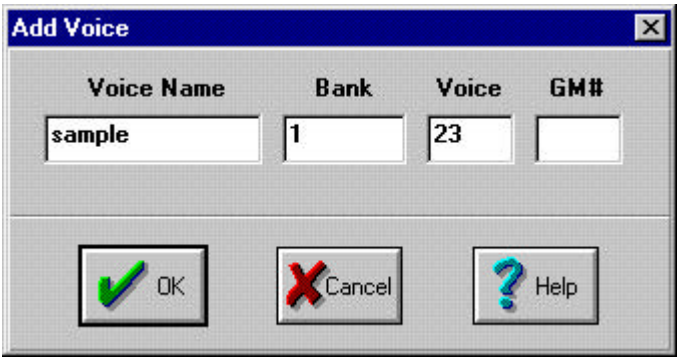
## Modifying a Voice




After creating a new Voice Map from a template, you will probably need to change the details on a number of voices.

To modify a voice, click on the desired voice in the list to highlight it, then click on the [MODIFY VOX] button. A window will appear that shows the current details of the voice. When you move the cursor over the details of the voice, it changes to a text entry cursor. You can enter the new details directly. Then click on the [OK] button and the changes will be saved.

## Adding a Voice




If your new Voice Map does not contain all the voices in the sound module, you will need to add the extra voices.

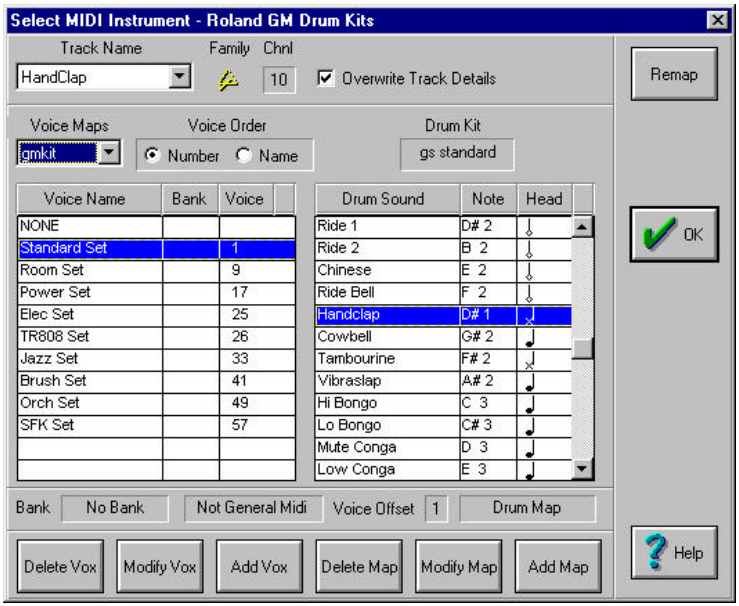
To add a voice, click on the [ADD VOX] button. A window will appear with spaces for you to enter -

- Voice Name
- Bank
- Voice Number
- General MIDI Voice number

The program is able to intelligently remap voices. It does so by relating every voice map to the standard General MIDI Voice Map. Therefore when adding a voice, you should identify the closest voice in the General MIDI Voice Map and place its voice number in the General MIDI Voice Number field.

When you have finished, click on the [OK] button to save the new voice. Do this operation as many times as necessary to complete the Voice Map for the sound module.

## Drum Sounds




You may want to assign one or more tracks to be drum or percussion tracks. For some synthesizers this is done by selecting a voice as described above. For all General

MIDI, GS and XG synths channel 10 is assigned to drums and percussion and you can choose a drum kit of sounds for each song. To do this you must select a voice map, not with a set of tuned instrument, but with a set of different drum kits. For General MIDI synths, choose gmkit as your voice map. When you choose a map file that is for drum sets, there is a link for each to a particular drum kit that contains the set of drum sounds and their corresponding played notes. As you select a different drum set from the voice map, the drum kit will change in the right hand window. This allows you to select a particular drum sound for naming a track and for entering drum / percussion notes directly in notation format. It also defines the staff required for that drum or percussion sound.

# Recording MIDI

The application gives you two ways of recording MIDI data into a song - real time and step time. This chapter describes how to use both methods. Of course, you can also create a song purely by inserting notes in one of the editors - some users who are proficient with music manuscripts are able to rapidly and accurately create songs purely in the Notation Editor.

## Real Time Recording

Recording in real time means playing the track or track segment that you want to record in time with the other tracks. You are provided with a number of tools to make this as easy as possible.

## Replace and Overdub Modes

When recording notes onto a track, you may want to replace the data that is already there because it is not right, or you may want to add some extra notes e.g. cymbal crashes, to the fine performance already recorded. The Replace and Overdub modes give you control over this.

Replace mode - click on the Replace Mode button on the Transport Bar to enable this mode. When you record on a track, the notes already there will be erased as the song moves along. Any new MIDI data received will replace the old data.

Overdub mode - likewise to select Overdub Mode, click on its button on the Transport Bar. In this mode, when recording on a track, the existing data will be unchanged. Any new notes or other events will be added to the track.

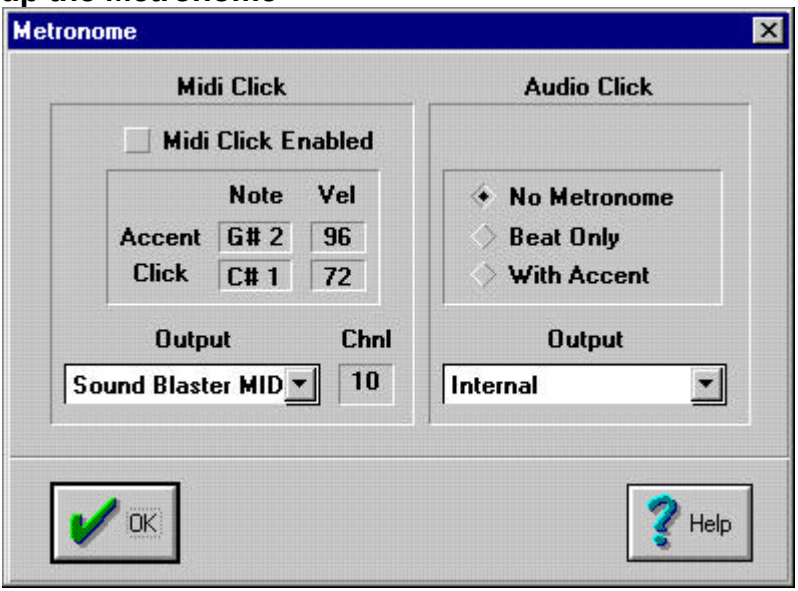
## Cue Click


This field is used to select how many bars of cue are played before the record function drops in, and whether they are to be played as preroll (music) if any exists or as metronome clicks. To toggle between metronome click or preroll, click on the desired button. To select the desired number of bars edit the value in the value window to the desired quantity of bars.

## Metronome

At the bottom right of the Transport Bar you can see three metronome symbols. These are, from left to right, Metronome Off, Metronome On and Metronome On with Accented Beat.

## Setting up the Metronome




To set up the metronome for your MIDI system, select the Metronome option from the Song pull down menu.

To set the MIDI Click, you must select a note each for normal and accented beats. Choose short percussive sounds, such as woodblock. (Note that the defaults

provided will suit most sound modules.) The note velocity must also be set for each - set them so they have the same apparent loudness. You will also need to set the MIDI Output Port and Channel so the notes are sent to the appropriate sound module in your MIDI setup.

The Audio Click can be set up independently of the MIDI Click. At the right of the Metronome window, are the choices of No Metronome, Metronome, or Metronome with Accented Beat. At the bottom is a pull down list of the available sound producing devices in your computer - click on the appropriate one.

Once you have set the metronome and click options, click on the [OK] button to exit the dialog. These settings will be stored in the currently active song.

## In and Out Locators


In and Out Locators are used to set the portion of your song that are played or recorded. They operate in conjunction with the Song Position ribbon (shaded in blue) located at the top or side of the various editors. The In and Out buttons are located on the Transport Bar.

## Setting the In and Out Positions

To the right of the In and Out buttons are their respective song position settings. They are displayed in measures, beats and clocks. When you move the mouse cursor over the numbers, it changes to a double headed arrow.

You can click with the left mouse button to decrease the value or the right button to increase it. Alternatively, you can double click and type in the value directly from the keyboard - press **Enter** when done.

Another way to change the In and Out Locators is to simply click and drag them on the Song Position Ribbon. They are yellow triangles and the cursor will change to a black triangle when over the pointers.

Note that you must always set the Out Position to a later value than the In Position.

## Using the In and Out Locators

You can operate the In and Out buttons singly or together.

Dropping In - when you click on the In button you will see a section of the Song Position Ribbon from the selected In point to the end change color. Also you will see the current song position jump to the In point. (the current song position will jump to a position ahead of the In point if a preroll is in use.)

## Loop Mode

Loop mode operates in conjunction with the In and Out Locators described above. In loop mode, the song will play between the In and Out points, then jump back to the In point and instantly start playing, over and over.

Loop mode can be useful if you want to critically listen to a section, but its main use is loop recording. If a section is very hard to "get right", you can arm the track, and set record in loop mode until you play the piece correctly. As long as you click on the Stop button (or press **Space bar**) before the end of the next loop, your perfect playing will be saved. Best of all, no-one need know this is how you did it !

## Recording a Track

Before commencing recording, you must ensure that the MIDI setup is correct. Refer to the chapter Getting Sounds. It is good practice to have only the Global Editor open when recording as you can see and set the various track parameters, in particular, the voice sound and MIDI channel.

To record a track in real time, click on the track that you wish to use. Check that the In position (described above) is set to the correct location. Then click on the record button (or press *****). When you are ready to start recording, click on the Play button (or press **Enter**).

If you have set a cue then you will get a count in (described above). Then the program will drop into

record mode. As you play the notes, they will appear on the open editor(s). The other tracks in the song will be heard from the sound module, and you can play in the new notes in time. (If this is the first track being recorded in the song, use the click facility described above to ensure that you play in time.)

Once you have played in the section, click on the Stop button (or press **Space bar**). Note if you have set an Out point, the program will drop out of record mode, but keep playing.

## Step Time Recording

The alternative to real time recording is Step Time recording. In this method, you play one note or chord at a time. Tempo is ignored, and the program will step to the next song position when you release the note. Step Time recording is ideal if your playing is not perfect, and very handy if you want to create manuscripts, as notes will be just where they should be.

You can record in Step Time mode in the Global, Keyboard, Drum, Event and Notation Editors. At the right of the toolbar on each of these editors is two buttons - Step Time Key and Step Time Velocity. Clicking on just the Key button will enable step time recording, and each note will have a set velocity. Clicking on the Velocity button will allow the velocity as you play the note to be recorded. If you record Step Time with the Velocity button off, each note will be assigned a velocity of 95.

## Recording a Track in Step Time

To record a track using step Time before leaving the Global Editor set the channel number to the required value in the channel window of the active track details panel. This is especially important if you intend to insert drum notes or tracks of different channels for polyphonic voicing purposes. Enter the desired editor. Activate either the [KEY STEP TIME] button, or both the [KEY STEP TIME] and [VELOCITY STEP TIME] buttons on the editor toolbar. Place the song position cursor at

the position you require the MIDI data to start. Pressing **Shift <** or **Shift >** will move the song cursor to the nearest Bar line in either direction. Pressing **,** and **.** will move the song cursor by one "step" in either direction. This is also helpful for inserting a rest into your data. Select the required note length. This can be done in two ways :

- Click in the step box on the editor toolbar to bring up the step value dialogue box. Click on the desired note length then click OK . The chosen note length will now appear in the step box on the editor toolbar. Now when you press a note or chord on your synth a note or chord of the chosen step length will appear.
- The function buttons F5 to F12 correspond to each of the available step lengths. F5 = BAR, F6 = 2, and so on up to F11= 64, F12 = OFF. Now when you press a note or chord on your synth a note or chord of the chosen step length will appear. If you require a dotted or triplet note this can be achieved by holding the Shift key while pressing the function key to get a dotted note, or holding the **Ctrl** key while pressing the function key to get a triplet note. When the last synth key or keys are released the song position will automatically be advanced to the end of that note or chord. If you need to undo a note or chord the entire chord will be removed but the song position will not return. This must be done manually.

## Sequencer Preferences

The Sequencer Preferences dialog allows you to set the preferences the way the sequencer functions -

- Record Type - when recording on a track, you can replace the MIDI data on the track with new data, or in overdub mode the new data is added to what is already there.
- Chase Events on Playback - if you jump to a point on a track and then play, the sound module may not have the correct voice or controller information for that point in the song. Selecting Chase Events will enable the program to search back through the song and send all the correct controller and voice change com-

mands to the sound module. Note this will cause a slight delay before playback commences on slower computers.

- Local Off - When activated, this will send a local off command to your connected MIDI devices.
- Rehearse Mode - When activated, this will mute the active track between the in and out positions.
- Delay Locator - When activated, this will delay the jumping to the locator selected until the current section is complete during playback.
- Sysex Buffer Size - This allows you to set the size of each Sysex buffer for recording in real time

# Filtering

Filtering is a process of removing unwanted objects from a flow. In MIDI setups, unwanted MIDI data is filtered from the signals being sent between MIDI devices. The program allows you to filter certain types of data as they are received into your computer (MIDI In filtering), and to filter certain types of MIDI data that are sent directly to your sound modules as you play on the keyboard (MIDI Thru filtering). You can also filter MIDI data that is sent out from the program to your sound modules when you play a song (MIDI Out filtering).

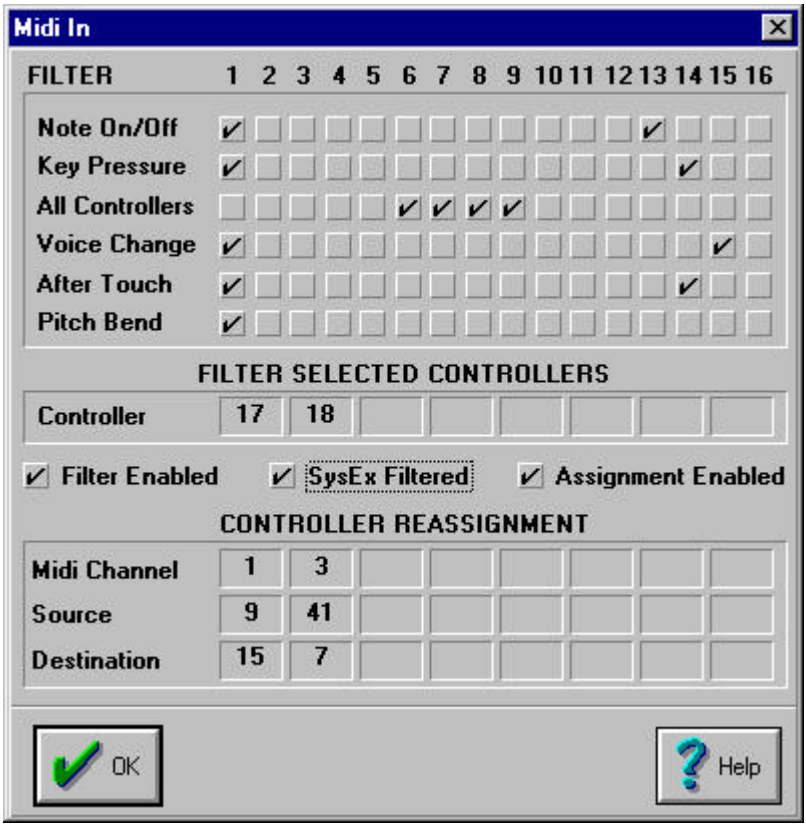
Also, the program lets you modify the velocity of notes as they are sent from your computer to the sound module (Note Velocity Output). This is more of a modifying function, but is also covered in this chapter.

## MIDI In Filtering

To turn MIDI In filtering on and off, use the keyboard shortcut **x**, or click on its button on the main toolbar.

MIDI In filtering is used to remove unwanted information from the MIDI flow coming into the program e.g. you may have a keyboard that sends Aftertouch information, but don't want this recorded as part of your song. You can choose what types of MIDI events are filtered in the MIDI In window. This window can be opened by choosing it from the Song pull down menu or by the keyboard shortcut **Ctrl F**.

## Events




At the top of the window are the MIDI channel specific filtering options. The MIDI In dialog contains the MIDI channels from 1 to 16 across the top, and various MIDI events down the left, thus allowing you to specify what data is filtered. For example, you could have two keyboards connected to the computer, with each sending on a particular MIDI channel. You could then filter certain types of MIDI event from one keyboard, and different events from the other keyboard.

To filter, say, Pitch Bend information from MIDI channel 3, click on the third box from the left in the Pitch Bend row. It will then show a tick, and the program will then not store any Pitch Bend data coming in on MIDI channel 3 when recording. Note that to enable filtering,

you must also tick the button in the middle of the window marked [Filter Enabled]. This is a “master on/off” control.

## Controllers

In the middle of the MIDI In window is an area that allows you to filter any MIDI controller information being received. For example Controller 7 is Main Volume, and your keyboard may send this signal out, but you don’t want to record it. Filtering controllers here will do so regardless of the MIDI channel they are on.

To filter a controller, you must know the number of the MIDI controller you wish to filter. See the appendix at the back of this manual for a listing. Move the mouse cursor over one of the eight controller boxes in the middle of the window (the cursor will change to a double-headed arrow), then you click with the left or right button to decrease or increase the number. Alternatively you can double click in one of the boxes, type in the number, and then press **Enter** on your keyboard. MIDI controllers are numbered from 0 through to 127. You can filter up to eight controllers simultaneously.

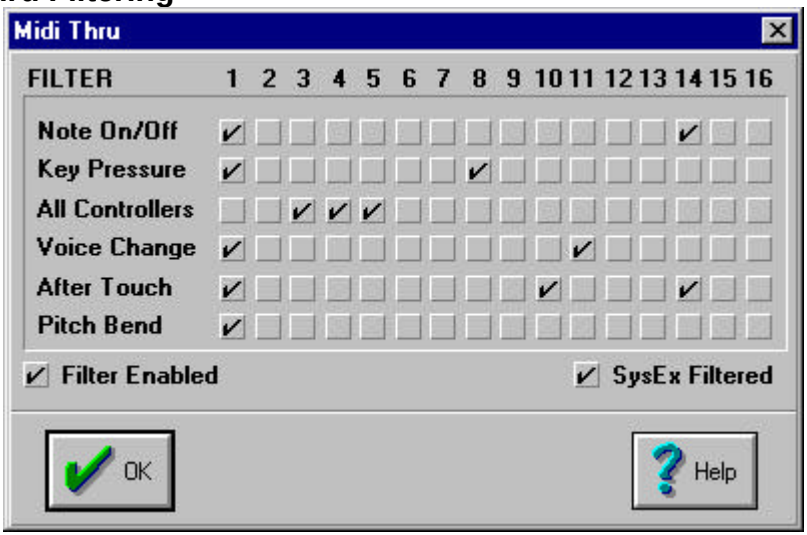
## Reassigning Controllers

The program allows you to convert one type of controller event into another type.

To reassign controllers, you must first know what controllers you want to operate on. See the appendix in the back of the manual for a list of MIDI controllers. Up to eight controllers can be reassigned. First, select the MIDI channel the controller is on, by clicking in the MIDI Channel box with the left or right mouse button to decrease or increase the value. Then select the source controller and the destination controller in a similar fashion. Finally reassign the controller by clicking on the box marked Assignment Enabled in the middle of the window.

For example you may wish to reassign controller 1 which is modulation to controller 7 which is main volume thereby enabling the use of the modulation wheel of your synth (if it has one) to record volume changes.

## MIDI Thru Filtering




To turn MIDI Thru filtering on and off, use the keyboard shortcut **y**, or click on its button on the main toolbar.

When the program is running on your computer, any MIDI data received is passed through to the MIDI output port. This is important, as you may, for example, connect the keyboard to the computer's MIDI input and the sound module to the MIDI output of the computer.

MIDI Thru filtering determines which type of MIDI events pass through to the sound module. The MIDI thru dialog, which is accessed from the Song menu or its keyboard shortcut **Ctrl H**, allows you to control what gets filtered.

For each of the 16 MIDI channels, you can filter the following event types

- note on / off

- key pressure
- controllers
- voice change
- after touch
- pitch bend

Also, you can filter system exclusive events, which are independent of MIDI channel number.

## MIDI Out Filters


Here you can filter any unwanted controller information from being sent out. There are direct options for the most common controllers and you can numerically select any other -

- Note On / Off
- Key Pressure
- Controllers - all controllers filtered or up to four can be selected numerically at the bottom of the window
- Voice change
- After Touch
- Pitch Bend
- System Exclusive

Click on the box and a window will appear. In this window you can select the desired controllers to be filtered. Click the check boxes next to the desired controllers or use the left and right mouse buttons to scroll through controller numbers in the boxes at the bottom of the window. Note to enable filtering of just these controllers, you must **not** have a tick in the box marked [Controllers].

## Note Velocity Output

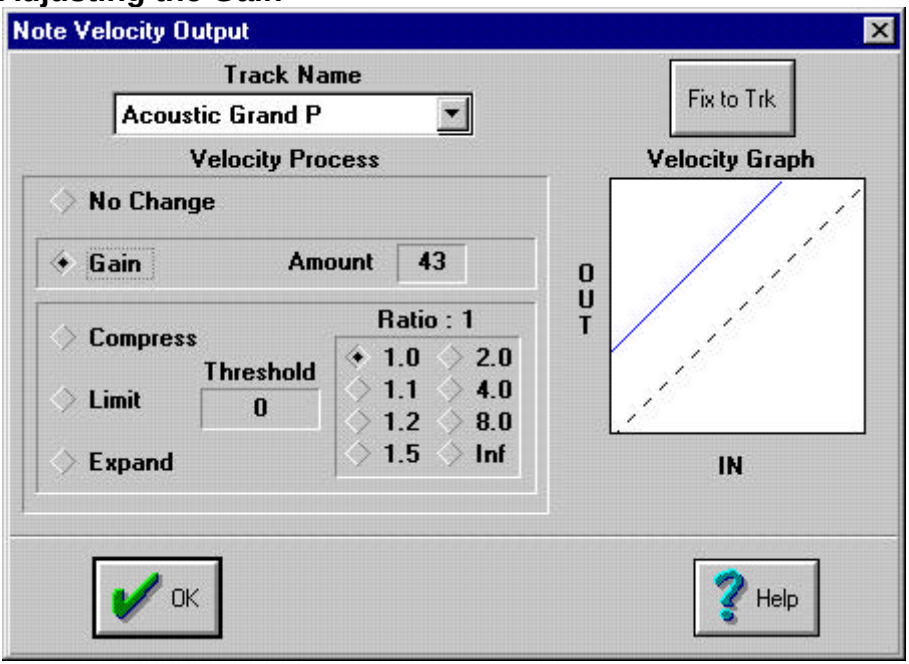
Every MIDI note contains information regarding the note's velocity. When you first played the note on a keyboard, thet velocity of the note is recorded along with the pitch and duration. Sound modules use the

note velocity to vary the sound of the note. Some sound modules simply set how loud the note is played, while more advanced units will also change the tonal characteristic to mimic a lead instrument such as a piano.

The program can control the note velocities as they are sent to the sound module. This is done in the Note Velocity Output window, which is accessed in the track pull down menu, or by the keyboard shortcut **Shift V**. The Note Velocity Output window will operate on the current track, but you can scroll through the tracks using a selection menu within this window.

The Note Velocity Output window performs one of two processes on your track - gain adjustment or dynamics processing.

## Adjusting the Gain




If all notes in the track were recorded too softly, you can increase their velocity by a fixed amount. Likewise you

could reduce the velocity of all the notes if they were recorded too loudly.

To change the velocity of all notes on the track, first enable the function by clicking on the diamond marked [Gain]. Move the mouse cursor over the adjacent box marked [Amount], and the cursor will change to a double-headed arrow. Click with the left mouse button to decrease the gain or the right mouse button to increase it. Note velocities range from 0 to 127, so each unit represents slightly less than 1% change. If for example, you had a note with a velocity of 120 and a gain set to 10, the note would end up with a velocity of 127 as this is the maximum.

If you are playing the song, you will hear the effect of the changes in real Time. You can do this with the track Soloed, but this adjustment is usually best done while listening to all tracks simultaneously. Note that this function only operates as you play the song - your MIDI data remains unchanged in the song file.

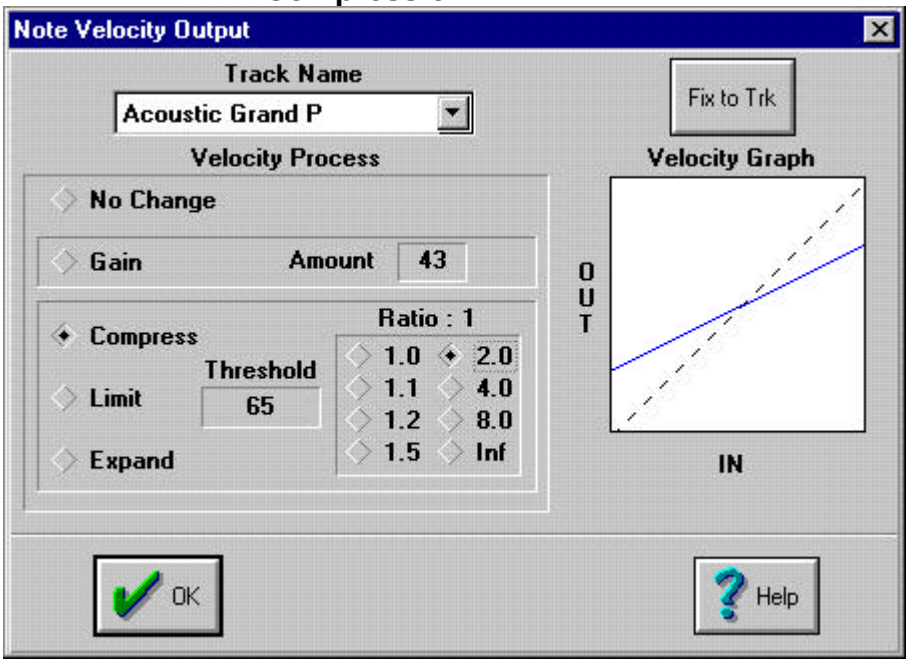
## Changing the Dynamics

Changing the gain as described above will perform the same operation on all notes regardless of their velocities. Dynamic Processing is a more powerful method of controlling the sound. Here the amount of gain change depends on the initial note velocity. There are three types of Dynamic Processing - Compression, Limiting and Expansion.

Dynamic processing involves two related concepts - ratio and threshold. The ratio is simply “how much” the note velocity is changed, and the threshold is the note velocity value about which the change is made. This is easily seen in the graph at the right of the Note Velocity Output window.

The next pages show examples of each type of dynamic processing.

## Compression

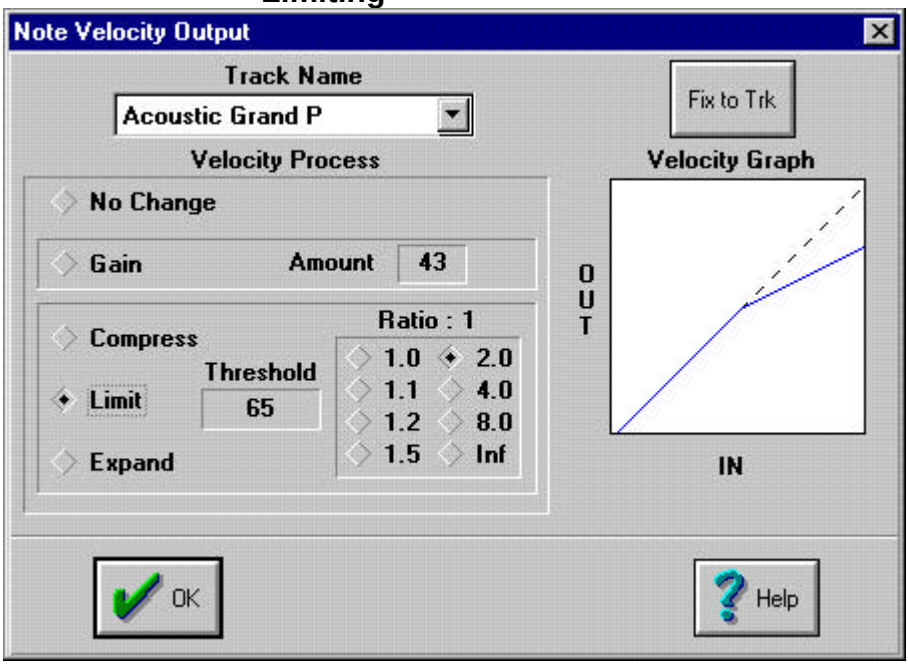



Compression reduces the dynamic range of the track (the variation from softest to loudest note). If you record a track, and the loudest note was too loud or the softest note was too soft, then compression would solve this problem.

To carry out compression, click on the diamond named Compression, then select a ratio by clicking on one of the eight choices available. As you do so, you will see the graph change. This graph shows the change from input to output values of note velocity that are being done. If you are playing the track, you can hear the effect immediately.

When the threshold and ratio are set, the graph indicates what is happening to the note velocities. Note velocities below the threshold will be increased, while note velocities above the threshold will be reduced. The extreme of this is to set the ratio to [Inf] or infinity, where all note velocities will be set to the threshold value.

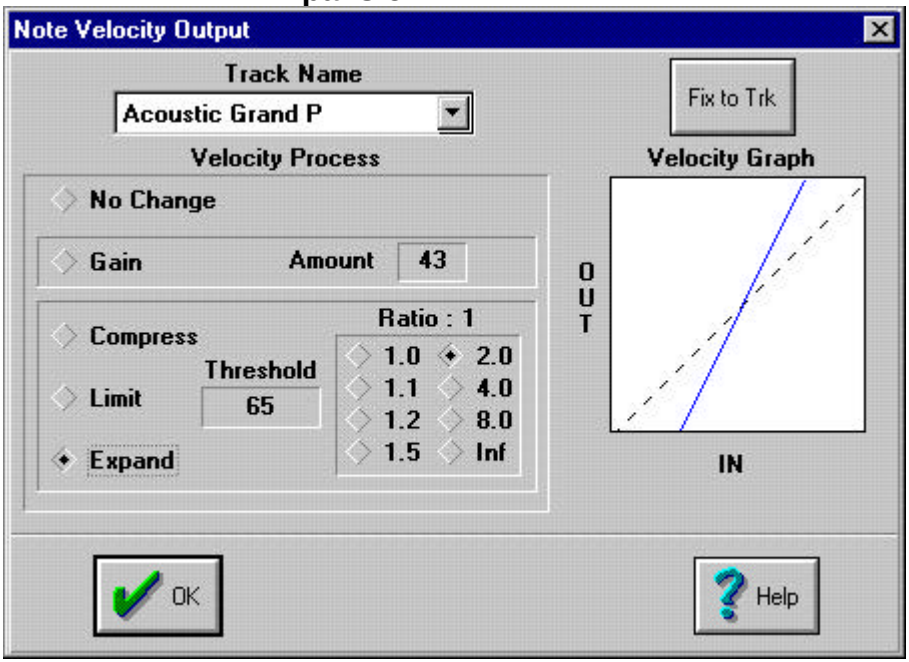
## Limiting




Limiting is a bit like compression, except that it only modifies note velocities that are above the threshold. Sections that are played softly will not be affected, while you can set the limiting to control a section that was played a little too enthusiastically.

To enable limiting, click on the [Limit] button. Set a threshold around half way (65) to begin with, then experiment with different ratios to achieve the desired result.

## Expansion



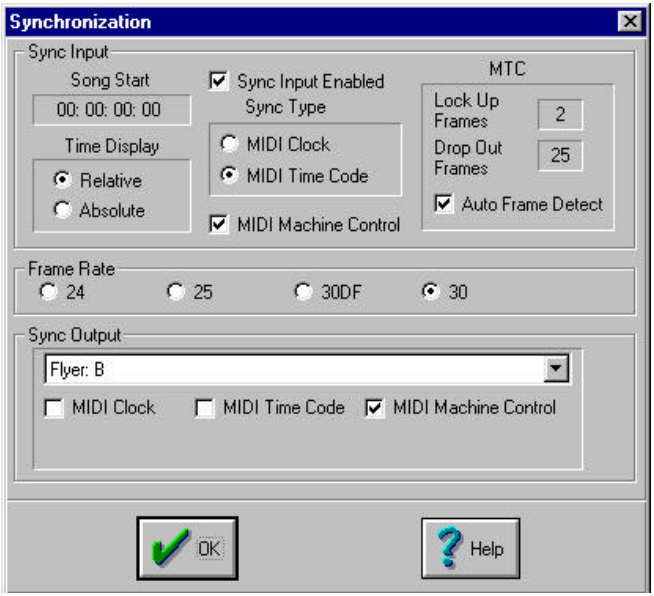

Expansion is the opposite of compression. You can use expansion to add more dynamics to a track. Note velocities below the threshold will be decreased, and those above the threshold will be increased.

To enable expansion, click on the [Expand] button, then set a threshold. Try around half way to begin with. Then try a few different ratios and listen to the effect it has on the track.

## Fix to Track

As mentioned above, all the functions performed in the Note Velocity Output window are done as the song is being played i.e. it does not affect the MIDI data in your song file. If you are sure you have made the right changes, click on the [Fix to Track] button. This will change the song data to reflect the note velocity changes you want. This is handy if you want to save the song as a MIDI file, because the Note Velocity Output window changes are not saved in MIDI file format unless this option is ticked in the File Preferences dialog.

# Synchronization




Often you may wish to play (or record) your song simultaneously with some other device such as your VS Workstation. This is done by synchronization. There are two ways of synchronizing to an external device:

- MIDI Clock
- MIDI Time Code

In each case, the idea is to ensure that the program starts playing at the same Time as the external device providing the reference signal, and that it keeps exact Time. A device that sends the synchronizing signal is known as a Master, while the device that locks to a synchronizing signal is a Slave. You can have several Slaves in MIDI or audio-visual setup, but only one Master at any Time. The various options for synchronization are available in the Synchronization window, which can be opened in the [Controls] pull down menu, or by the keyboard shortcut **Ctrl J**.

## MIDI Clock

MIDI clock is used to synchronize to other sequencers. It is a code that is included in the MIDI data stream. You can lock to incoming MIDI Clock or generate MIDI Clock so that another device can lock to your software. MIDI Clock comprises basically of a message identifying the start of the song, and subsequent messages identifying the number of pulses (a small portion of a usical beat) from the start of the song. As MIDI Clock is beat related you are able to record the tempo if you wish. This method is the preferred method of synchronization to another sequencer.

### Locking to External MIDI Clock

Firstly, enable external MIDI Clock by enabling the check box marked “Sync Input Enabled” and the button “MIDI Clock” under “Sync Type”. Also you must set the source of the MIDI Clock by selecting the appropriate input from the pull down menu, thus allowing the software to lock to MIDI Clock. When you are ready just put the sending device into Play mode and it will automatically start when it detects the MIDI Clock signal. If the sending device has sent a MIDI Clock Song Position Pointer message then the software will jump to the correct location in the song before it “locks up”.

### Sending MIDI Clock

Rather than lock to external MIDI Clock, you may wish the program to be the Master, and generate the MIDI Clock to send to some other MIDI device. To do this, select the MIDI port through which you want to send the clock, and enable the sending of MIDI Clock by selecting it at the bottom of the Synchronization window. Once enabled, the program will send out MIDI Clock whenever it is playing your song. MIDI Clock is a part of the MIDI standard, so other MIDI devices will not have a problem locking to your internal MIDI clock.

## MIDI Time Code

MIDI Time Code (MTC for short) is a more sophisticated method of synchronizing devices via MIDI. MTC is a System Real Time message that is sent many times per second containing a Time identification. MTC is divided into Hours, Minutes, Seconds and Frames, where frames can be 1/24, 1/25 or 1/30 of a second. Unlike MIDI Clock, MTC is not dependent on tempo.

### Locking To External MTC

To lock to an external source of MTC, the program must be enabled to receive MTC, and it must know at what value of hours, minutes, seconds and frames the song is to commence.

To enable locking to external MTC, select the MIDI port that will receive the signal from the pull down menu, check the "Sync Input Enabled" button and select MIDI Time Code as the sync type. Then set the Song Start Time - move the mouse cursor over the numbers and it will change to a double-headed arrow. Click with the left mouse button to decrease the value or the right button to increase it. You must set the start Time to match the value of MTC that the Master will send to the program at the beginning of the song. This song start Time is often known as an offset.

As soon as MTC is received, the program will jump to the location of the incoming Time code and commence playing. To stop, you must stop the MTC code from the sending device.

### Lock Up Frames

This is an option to set how long the program waits until locking to the incoming Time code and playing. Some devices constantly send the same Time code value when stopped, so setting the lock up to 1 frame may cause problems. Setting the lock up to a high value will cause a significant delay before play starts. The best value for this is 2 or 3 frames.

## Drop Out Frames

If there is a "drop out" on the tape supplying the Time code or a dirty cable connection, the code sent to your computer will be momentarily interrupted. When this happens, the program is able to "flywheel" to maintain lock.

The Drop Out Frames value sets how long the application will flywheel after incoming code ceases. This value will directly affect how long the application keeps playing when you deliberately stop the source of Time code, so don't set it too high. A value of 6 to 25 frames is usually appropriate.

## Sending MTC

As with MIDI Clock, the program can send out MIDI Time Code whenever it is playing. To do this, you must enable the function and set the Time code value for the start of the song.

To enable your program to send MTC, you must select the MIDI port from which it will be sent out. In the Synchronization window, select the output port from the pull down list of available MIDI ports at the bottom of the window, then click on the enable button marked MIDI Time Code.

## MIDI Machine Code MMC

MMC is a set of commands for controlling the transport of audio and video recorders. It allows commands such as Play, Record, Rewind etc, but does not contain a synchronizing signal. You can send or receive MMC. As an example of use - you have a multitrack such as a Fostex G24S, which uses MMC. You can set the application to send MMC and lock to MTC. This way you can control the multitrack from your computer, while "slaving" your software to the Time code. To enable your program to send MMC, select the MIDI port from which it will be sent out from the pull down list of available MIDI ports at the bottom of the window, then click on the enable button marked MMC.

# Handling System Exclusive

## Filtering System Exclusive

Music Master is able to filter System Exclusive information from the MIDI data stream at three locations

- MIDI In
- MIDI Thru
- MIDI Out

You can individually filter Sysex data at these points by clicking on the check box in the appropriate dialogs. The MIDI In Filter dialog is accessible from the Song menu, or by its keyboard shortcut **Ctrl F**, and the MIDI Thru Filter dialog is also accessible from the Song menu or its keyboard shortcut **Ctrl H**. The MIDI Out Filter dialog is accessible in the Track menu or by its keyboard shortcut **Shift F**. (Note there is a separate MIDI Out Filter dialog for each track in the song).

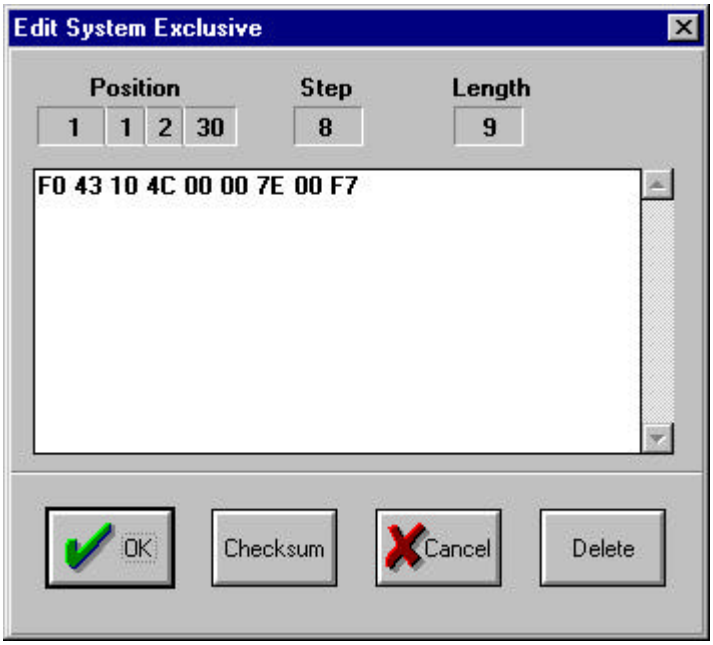
## Editing System Exclusive

**Note** - System Exclusive messages can only be edited in the Event Editor. This editor is not available in Music Master Prelude, Performa or Publisher.

You can record system exclusive messages from your MIDI devices in real Time in Music Master. It is recommended that you should not be doing other real Time recording simultaneously as you may overload your MIDI input driver. These Sysex messages appear in the Event Editor as small transparent rectangles. You can click on these with the left mouse button and drag them to a new location in the same manner as all other events in the Event Editor.

You can double click on a Sysex message (in the Event Editor) and this will open a Sysex Edit dialog where you can edit the actual message. You should exercise extreme caution when editing this data. Each byte of information is shown as two hexadecimal characters

and apart from the start and end characters can only be in the range 00 - 7F. The first character must be an F0 and the last character must be an F7.




Note the Ckecksum button - this will calculate the checksum of the Sysex message and overwrite the 2nd last pair of characters in the message with the calculated value.

If you are unsure of the editing procedure and protocol for Sysex messages you should not be editing this data as you may corrupt information in your MIDI device when you play the edited data back to it.

# Editing Basics

When you use a computer to do sequencing, the two main tasks are getting MIDI data into the computer, and editing it into a satisfactory final form. This chapter covers the philosophy of editing within this software and the most basic forms of editing that you can do on groups of data (Copy, Cut and Paste), as well as moving Parts around your song.

## Editing Philosophy

Most sequencing and notation software packages have a palette of 'tools' e.g. scissors, rubber, pencil that you select from when you want to do an edit on some data. We find this approach to editing very tedious and time-consuming because you are constantly changing tools to do various operations. To simplify and speed up this process we have designed a methodology which does away with the need to change tools to do your operations. This program uses a consistent philosophy across all its editors: the **left** mouse button is used to **select** objects (double click to open them) for editing, and the **right** mouse button is used to **insert** new events into your data. Using this technique we have found that any operation can be done without needing to change tools to accomplish the required task. **Deleting** an object is achieved by double clicking on the object and then selecting Delete.

## Clipboard

As with many Windows applications, this software uses a clipboard when editing. This is simply an area of the computer's memory that is set aside as a temporary place to hold data. (Note - Our own clipboard is used, not the Windows clipboard).

To put MIDI data into the clipboard so that you can subsequently place it elsewhere in the song, you must perform a Copy or a Cut function.

The **Copy** function makes a copy of the selected MIDI data and places it into the clipboard. The data that is copied is not affected in any way.

The **Cut** function also puts the data into the clipboard, however the data you copied is deleted from its position in your song. In this case, the data actually moves from its place in the song to the clipboard.

The **Paste** function puts whatever MIDI data is in the clipboard to the position that you nominate when you select Paste.

## Moving Parts

Moving a Part around in an editor uses the clipboard - you simply click and drag the Part to where you want it and the moved part is also placed in the clipboard for future pasting. See further on in this section for how to divide your song into parts.

To Copy a part, hold down the **Ctrl** key whilst dragging.

To move a Part, click on it with the left mouse button (the cursor changes to a hand while the button is held down), then drag the part to where you want it. If there is existing MIDI data at the place to where you dragged the part, it will be replaced if the Transport Bar has replace mode selected, or merged (i.e. added together) with the moved part if the Overdub mode is selected.

Note that in the Global Editor parts are displayed on the tracks, while in other editors they are displayed on the Locators and Parts ribbon (adjacent to the Song Position ribbon). In the Global Editor, you can use the same method to drag Global Parts, just click and drag in the Locators and Parts ribbon.

## Editing in Grid Editors

When using the grid editors the methods for basic editing are the same in each case.

In the grid editors, you can click and drag Parts. Click the left mouse button on the Part in the Locators and Parts ribbon, and drag it to wherever you want it.

When using Copy, Cut and Paste functions, you must create a selection box containing the MIDI data you want to work on. Click and drag with the left mouse button to make a box in the data area. The box will hold all data between two song positions. To select certain MIDI data only in the Keyboard or Drum editors, hold down the **Ctrl** key while clicking and dragging - you can then select a specific range of notes.

Once you have created a selection box, Copy or Cut the enclosed MIDI data. Choose the appropriate button on the main toolbar, or use the keyboard shortcuts **Ctrl C** for Copy and **Ctrl X** for Cut. In either case, the selected data will be placed onto the clipboard.

Note that the Tempo Editor uses a different clipboard to the MIDI data, as tempo data cannot be mixed with MIDI data.

To paste the contents of the clipboard, choose the Paste button from the toolbar or use the keyboard shortcut **Ctrl V**. Move the mouse cursor to the desired position and click with the left mouse button; the clipboard contents will then be placed at that point.

To **paste multiple times**, click at the desired position with the **right** mouse button and a window will appear. Click on the number with the left mouse button to decrease or the right button to increase the number of pastes, then press **Enter** on your keyboard. The clipboard contents will be pasted back to back as many times as was selected.

Tthe record mode selection determines what happens to the existing data when pasting. In Replace mode the pasted data will replace the existing data, while in Overdub mode, the existing and pasted data are merged. (This does not apply to tempo data - it is always replaced).

## Undo

All of the editing that you do is stored. By clicking on this button, you can undo, step by step, as many edits as you like since you opened the song. This is known as "infinite undo". The keyboard shortcut for undo is **Alt Backspace**. There is also a button for undo on the toolbar at the top of the Music Master window.

## Redo

If you performed an undo, then realized you didn't mean to do that, selecting redo will reverse the undo. Just like the undo function, the program has an infinite redo capacity. The keyboard shortcut for redo is **Ctrl Backspace**, and there is a button on the toolbar for redo.

## Cut

As with most Windows applications, this program uses the standard functions of Cut, Copy and Paste. These functions are used to move and copy MIDI data, and form the basic editing tools used when putting together a song.

The Cut function is used to remove a section of data. The selection is removed from your MIDI track or tracks, and held in a section of memory called the Clipboard. You can then place the cut data elsewhere in your song, or simply do nothing with it. The data in the Clipboard is replaced when you next do a cut or copy.

To cut a section from your MIDI data, you must first select the portion of the track or tracks you want to cut. Click and drag with the left mouse button over the desired area, then select cut. The keyboard shortcut is **Ctrl X**, and there is a toolbar button as well.

## Copy

The copy function is carried out in a similar way to cut. Copy will make a copy of the selected MIDI data and place it in the Clipboard, but the data you copied will not be affected. Click and drag across the area you want to

copy, then select copy. The keyboard shortcut is **Ctrl C**, and there is a copy button on the toolbar.

Use the copy function when you want to duplicate a section of your song. Once the Clipboard has some information in it, you can place that information as many times as you like using the paste function.

## Paste

This function is used to place the information in the Clipboard into your song. Click on the Paste button, or use the keyboard shortcut **Ctrl V**, then move the mouse cursor to the desired position and click with the left mouse button to paste the MIDI data once, or the right mouse button to paste several times.

## Insert/Remove Space

The Insert / Remove space function allows you to "push along" your song data e.g. to make space for a lead break. You can also "close up" your data to remove a verse or similar. You can do this on a single track or across all tracks at once. The keyboard shortcut is **Alt I**.

To insert some space in a song, firstly create a track or global Part boundary if necessary by right clicking on the appropriate point. (To create a global part boundary, right click in the Locators and Parts ribbon just above the measures ribbon). Then select the Insert / Remove Space button. Click on the Part boundary and drag it to the right, to the place desired. As you drag it, you can see the space to be opened as a bold line in the Locators and Parts ribbon.

Removing space is done in the same manner as inserting space, except that you drag the mouse to the left. Note any MIDI data that you drag over will be deleted.

## Delete Track

To delete a track, highlight it by clicking on it, then select Delete Track from the menu, or press **Alt D** on the

keyboard. VS audio tracks for one VS Workstation will all be deleted in one group.

# Editing MIDI Events

There are seven types of MIDI event that Music Master can edit -

- note
- key pressure
- controller
- voice change
- after touch
- pitch bend.
- system exclusive

## Editing Events

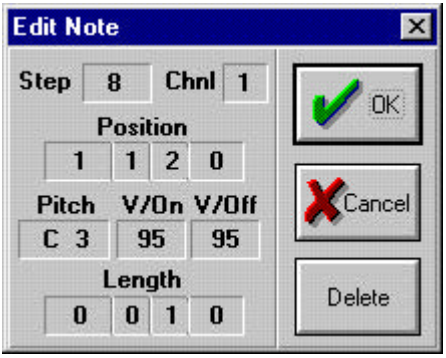
You can edit MIDI events in the following editors

- Keyboard
- Drum
- Event
- Notation

Note that Music Master Prelude and Performa do not contain a Drum Editor or Event Editor.

To select an event for editing, double click on it with the left mouse button.

## Note



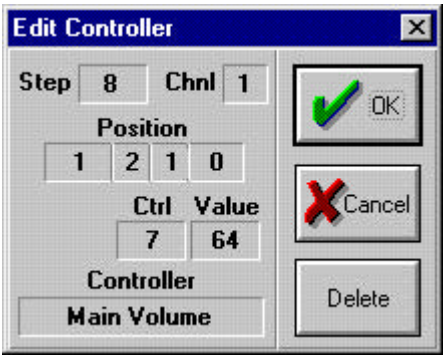

Double click on a note event, and the Edit Note dialog will open. Here you can set the position, velocity and length of the note. These are affected by the step value, which defaults to the Step value for the editor that you are in.

You can also set the note's pitch, velocity on and velocity off.

## Key Pressure


To change the key pressure, double click on the event to open the Edit Pressure window. Here you can set the Step, MIDI Channel, Position, Pitch and Value of the event.

## Controller

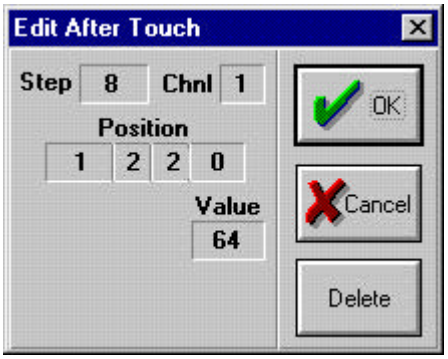



To edit a controller event, double click on it and the Edit Controller dialog will open. Here you can set the Step, MIDI Channel, Position, Controller Number and its value. At the bottom of the window is a box that tells you the function if the controller number has a standard use.

## Voice Change

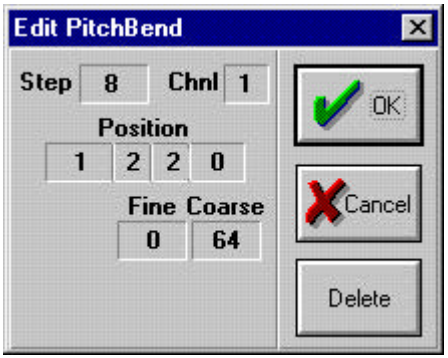

The Edit Voice Change dialog allows you to modify the Step, MIDI Channel, Position and Voice Number of the event. Remember that the voice change will be related to the sound module selected for the track you are editing.

## After Touch



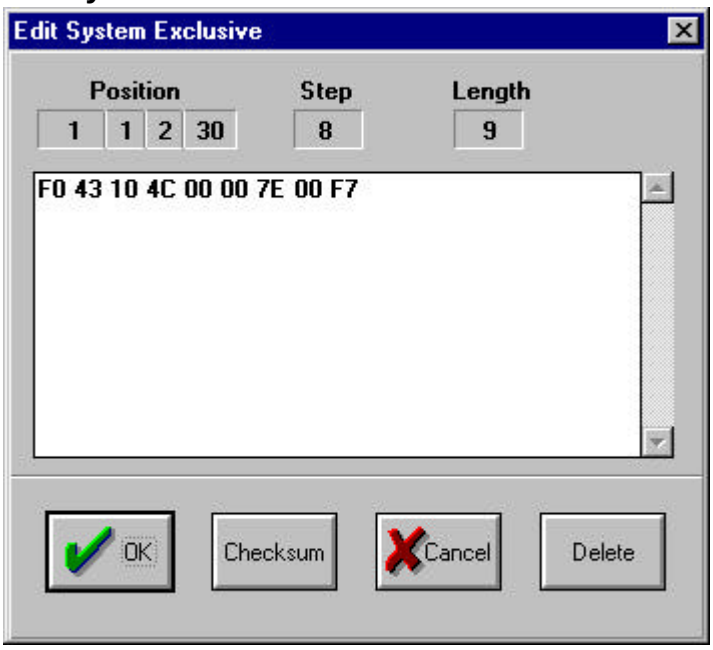

Double clicking on the event will open the Edit After Touch dialog. Here you can set the Step, MIDI Channel, Position and Value.

## Pitch Bend




To edit a pitch bend event, double click on it and the Edit Pitch Bend dialog will appear. Here you can set the Step, MIDI Channel, Position and Fine and Coarse values. A good example of what can be done with Pitch Bend is the Lead Guitar track on the song Inflate.Mid provided with Music Master.

## System Exclusive




You can record system exclusive messages from your MIDI devices in real Time in Music Master. It is recommended that you should not be doing other real Time recording simultaneously as you may overload your MIDI input driver. These Sysex messages appear in the Event Editor as small transparent rectangles. You can click on these with the left mouse button and drag them to a new location in the same manner as all other events in the Event Editor.

You can double click on a Sysex message and this will open a Sysex Edit dialog where you can edit the actual message. You should exercise extreme caution when editing this data. Each byte of information is shown as two hexadecimal characters and apart from the start and end characters can only be in the range 00 - 7F. The first character must be an F0 and the last character must be an F7.

Note the Ckecksum button - this will calculate the checksum of the Sysex message and overwrite the 2nd last pair of characters in the message with the calculated value.

If you are unsure of the editing procedure and protocol for Sysex messages you should not be editing this data as you may corrupt information in your MIDI device when you play the edited data back to it.

# Special Editing Functions

This chapter covers the program's special music editing features - Quantize, Transpose, Merge, New MIDI Track and Explode MIDI Track. Unlike Copy Cut and Paste, which work similarly in most Windows applications, these functions are specifically for music.

## Quantizing

The program enables you to quantize the notes in your song. Quantizing is the process of making adjustments to the timing of notes. For example, you could quantize such that a sloppily played piece is quantized to perfect timing. This is not completely desirable though, as music that is perfectly timed may sound too mechanical. The program gives you powerful control over the quantize process.

### Quantize Value Box


The Quantize Value box displays the type of quantize selected. Clicking on it will open the Quantize Basis window. The keyboard shortcut for this is **Ctrl Q**. In this window you will see a number of options. Note - this window is for setting the quantize parameters. Once the parameters are set, to perform a quantize, you must select the area to be quantized, then click on the quantize button in the main toolbar.

**Condition** You can set which notes are quantized

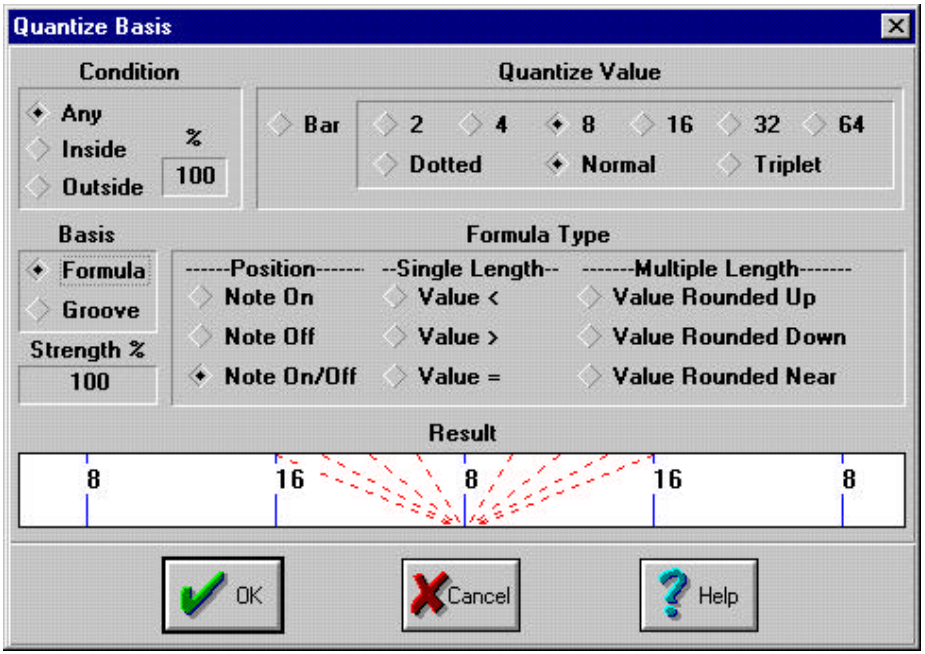
- Any - all notes in the piece are quantized according to rules set in the Quantize Basis dialog
- Inside - only notes that are within a set percentage of their correct position are quantized. Set the percentage with the % box by clicking with the left or right mouse button to change the number. As you change the percentage, you will see the result graph indicating which notes will be moved
- Outside - only notes that are more than a certain Time from their "correct" position will be moved. This is

very useful, as small variations which are the "signature" of the performer are not changed, but any notes that are significantly out will be fixed.

**Quantize Value** - set this box to the timing of your song so that the program knows what notes are to be moved. For example, setting the Quantize Value to [8] will quantize notes to 8th note (quaver) boundaries.

**Basis** - You can quantize in two main ways -

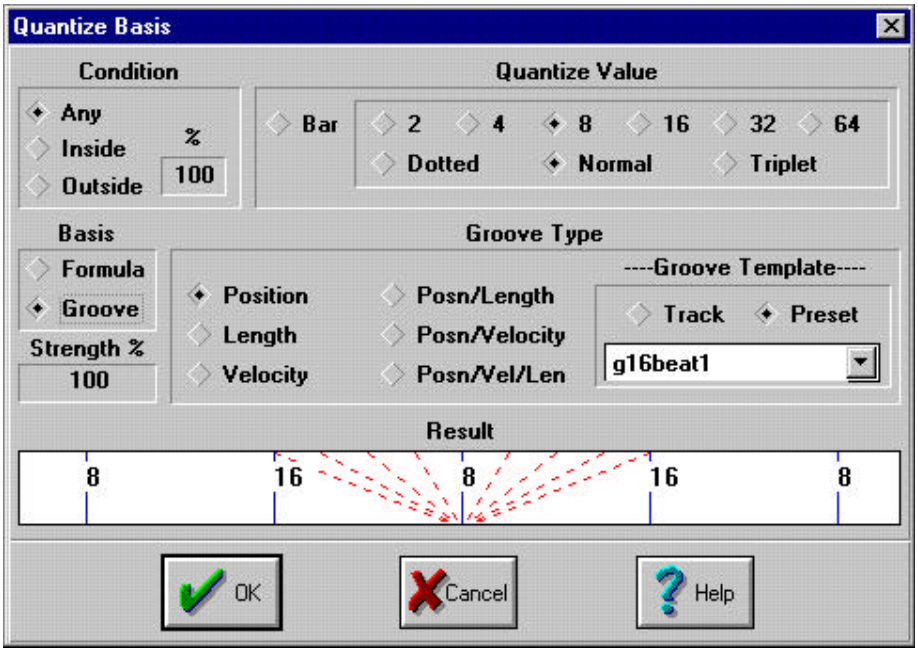
**Formula** - the notes are moved according to a mathematical formula to the desired location. This method gives precise and predictable quantizing of your song. Set the rules in the Formula Type box.




Formula Type - here you can set the rules, or formula, for quantizing the notes. Firstly you can set whether you want to quantize Note On position, Note Off position or both.

Single length will set each note to the exact note length selected. Multiple length will set each note to the nearest multiple of the selected value either rounded up, rounded down, or rounded near.

**Groove** - this will quantize your notes to a pre-determined groove template. There are templates for many different styles of music such as ballad, country, rock etc. Alternatively, you could quantize a track to make it the same as another track. Groove quantize will give the piece a certain "feel".




**Groove Type** - this box allows you to set the type of groove and which of note position, length and velocity are modified.

**Strength** - this sets how much quantizing is actually done to the notes. Setting the strength to 100% will move the notes to the exact position dictated by the formula or pattern and will remove any of the performer's "signature". If the strength is set to a lesser amount, some of the original feel of the song will be retained. If the strength is 0%, no notes will be moved.

Once you have set the quantize method, click on the [OK] button at the bottom of the window. To actually perform the quantize, select an area by clicking on a part or clicking and dragging across the area to be quantized,

then click on the quantize button on the main toolbar. If you click on the quantize without selecting an area the whole track will be quantized.

## Transposing


Transposing is the process of changing the pitch of all the notes on a track up or down by a set number of semitones.

To perform a transposition, select the part or parts to be transposed (hold down the **Shift** key when clicking to select more than one part), then click on the transpose button on the main tool bar (or use the keyboard shortcut **Alt O**). A window will open prompting you for the number of semitones the selection is to be transposed. Click with the left mouse button to decrease or the right mouse button to increase the value, then click on the [OK] button and the transposition will be performed. If you don't like the change you just made, you can undo it using the Undo button on the main tool bar.

**Note** - don't transpose a drum track as each note represents a particular instrument in the drum kit. Transposing will drastically alter the sound !

## Merging Tracks

It is easy to merge tracks or parts of tracks. This can be useful as you may wish to initially work on a polyphonic part on two tracks then merge them after editing, or you may wish to merge drum instruments that have been recorded on separate tracks.

To perform a merge, select tracks or parts to be merged by clicking on them with the left mouse button (hold down the **Shift** key for multiple selections). Then click

on the merge button on the main tool bar (or use the keyboard shortcut **Alt M**). The selections will be merged and placed on the Clipboard. From there you can place the merged data onto a new track or back over an existing one.

Remember that when pasting MIDI data from the clipboard over data on a track that the existing data will be replaced if the program is in **replace** mode. Otherwise the clipboard data will be merged with the data on the track if the application is in Overdub mode. Overdub and Replace mode are selected on the Transport Bar (press **F3** if it is hidden).

## New MIDI Track

This menu option allows you to add extra MIDI tracks to the song. Select New MIDI Track from the menu, or type **Alt N** on the keyboard. You can also add a new MIDI track by double clicking in the track details area of the Global Editor. The output driver assigned will be the default output driver in the Driver Preferences window. The voice map assigned will be the default voice map shown in the Voice / Instrument Preferences window. To add VS audio tracks, select New VS Tracks from the Track Menu. They are added in groups based on the VS Workstation(s) attached.

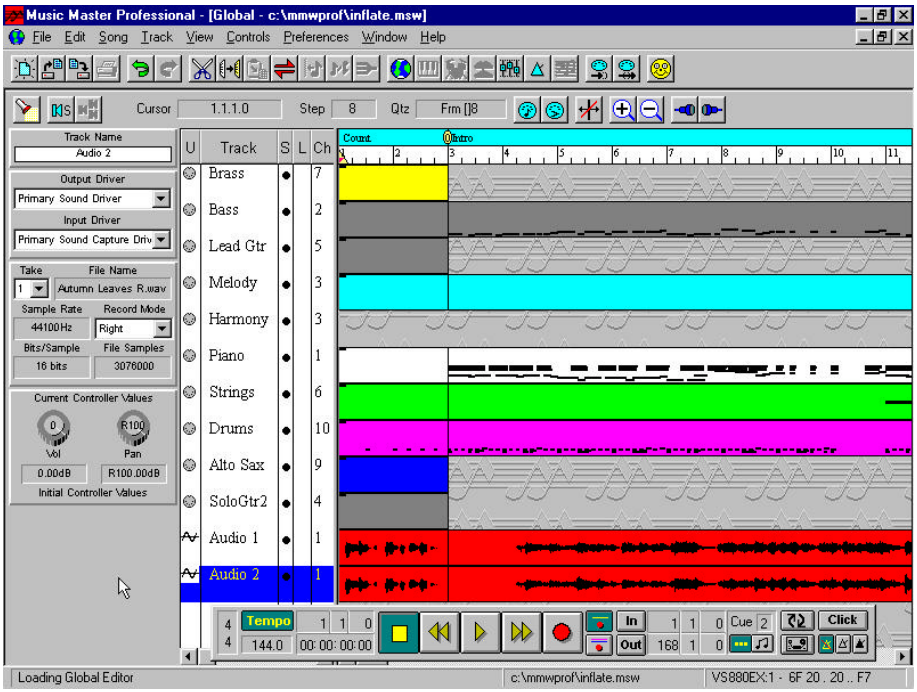
## Exploding MIDI Track

This function is dynamite if you need to separate the MIDI in a track or Part to separate tracks, based on channel. The most frequent time you would do this is when you want to create SATB (Soprano, Alto, Tenor Bass) Parts from a single polyphonised track (see Notation - Chords chapter).

The Explode function will copy the MIDI to new tracks, with events assigned by channel. For example if the highlighted track or part contains notes on four channels, then four new tracks will be added and the events copied to these tracks, with only one MIDI channel on each track. The Explode function will not change the highlighted MIDI, so you may wish to Mute or Delete the track once you are happy with the result.

**Note:** if you explode a track that has notational elements (ie non MIDI), such as lyrics or chord symbols, an extra track will be created when you perform the Explode function. This track will contain a copy of the notation elements only. You can use this feature to easily paste chord symbols etc to another track. (Don't forget to change the Record Mode to Overdub on the Transport Bar before pasting over a MIDI track).

# Global Editor




The Global Editor is the main editor used when sequencing. It appears first each time you run Music Master. In this editor you can quickly re-arrange a song, or set the details for the tracks such as MIDI channel and voice map etc.

The Global Editor is divided into a number of sections (note that the menu bar and main toolbar appear in all editors and are described in their own chapters) -

- the Global Editor Toolbar
- the Active Track area
- the Track Details area
- the Parts and Ruler area
- the Edit Grid area

## The Global Editor Toolbar


The toolbar for the Global Editor has a number of items on it -

### MIDI Consistency Check Button

Music Master can perform a consistency check on the song - this checks each track for conflict of the bank, voice and volume, pan, reverb and chorus controllers on output driver / channel combinations.

If a duplication is found it presents you with a dialog showing you the first conflict. You should then perform the consistency check again and continue doing so until all consistency errors are eliminated.

It is a good idea to do a MIDI consistency check when you first load a MIDI file or a song not recorded on your computer. Any errors will be reported and you may be able to fix them in the Event Editor or in the Active Track Details.

### Solo Active Track Button


Clicking on Solo will mute all tracks but the active one (it is highlighted in the Track Details area). When you are playing a song, select solo will allow you to listen to just the one track with the others turned off. The Solo button is latching i.e. select it once to enable Solo mode and again to disable the Solo. The keyboard shortcut for the Solo button is **S**.

If you want to Solo more than one track at once, make one of the tracks the active track (by clicking on its details area) and solo it, then make another track active by clicking on its track information area and click on its solo button.

### Play All Tracks Button

You may wish to solo more than one track, then switch between that and the whole performance. When you

turn off the solo button, your soloed tracks will be "reset". The way to switch between several soloed tracks and the whole song is to use the Play All Tracks button. Once you have finished the comparison, click on the solo button and it will return to normal.

## Mouse Cursor Position Box


This will show you the position of the mouse cursor whenever it is over your song data. It is displayed in measures (bars) beats, steps and clocks. Clocks are the smallest unit of time in a MIDI system.

As you move the mouse cursor over the MIDI data in your song, you will see the value in the Mouse Cursor Position Box constantly indicating the position of the mouse.

The resolution (i.e. how precisely the position is displayed) is determined by the Step Value, described below.

## Step Value Box


As mentioned above, the mouse cursor position has its resolution determined by the Step Value box. You can select from a range of step values or turn off the step. Setting a step is very useful, as you can enter or move notes and they will "snap" to the step you have set. Also, in the Global Editor, setting the Step Value to, say, bars, will allow you to define and move Parts easily and accurately.

Note that you may wish to turn off the Step momentarily, as you do an edit. Rather than change the Step Value to "Off" in the Step Value box, hold down the shift key and the step will be temporarily disabled.

## Quantize Value Box


Music Master is able to quantize the notes in your song. Quantizing is the process of making adjustments to the timing of notes. For example, you could quantize such that a sloppily played piece is quantized to perfect

timing. This is not completely desirable though, as music that is perfectly timed may sound too mechanical. Music Master gives you powerful control over the quantize process.

The Quantize Value box displays the type of quantize selected. Clicking on it will open the Quantize Basis dialog. In this window you will see a number of options. Note - this window is for setting the quantize parameters. Once the parameters are set, to perform a quantize, you must select the area to be quantized, then click on the quantize button in the main toolbar.

The Quantize function is fully described in the chapter on Quantizing, Transposing and Merging.

## Step Time Note Key Button

Instead of recording in real time, you can record your notes in “step time”. Each note or chord you press on your keyboard, no matter how long it is played, will be recorded as a note or chord into Music Master, with a length equal to the step value in the Step box. There will be no gap between the notes. If you enable the Step Time Note Key button, but not the Step Time Note Velocity button, each note will be registered in Music Master with a velocity equal to the highest allowable no accent velocity as set in the Song Notation Interpretations dialog.

## Step Time Note Velocity Button

This button is used in combination with the Step Time Note Key button. If the Step Time Note Velocity button is pressed simultaneously, the velocity of each note will be recorded along with its pitch.

## Join Parts

**Alt J** The Join Parts button allows you to join two or more adjoining parts, and it will assume the name of the first part. Firstly, highlight the parts you want to become one (hold down the shift key to select more than one). Then click on the button and the parts will become one.

Note that the parts must be adjoining. Also you can double click on the Track name at the left of a track to highlight the whole track in one step.

### Vertical Zoom

The vertical zoom buttons allow you to expand and compress the vertical depth of all the tracks to see more detail or more tracks in the display grid.

## Active Track Details Area


This section of the editor shows you the details of the active track (the one that is highlighted in the Track Details Area). You can turn the Active Track Details Area on and off in the Track pull down menu, or by the keyboard shortcut **Shift A**.

### Track Name

The first box down from the top is the Track Name. Double click here to enter or change the name, then

press **Enter** to close. You can have up to 16 characters for the track name.

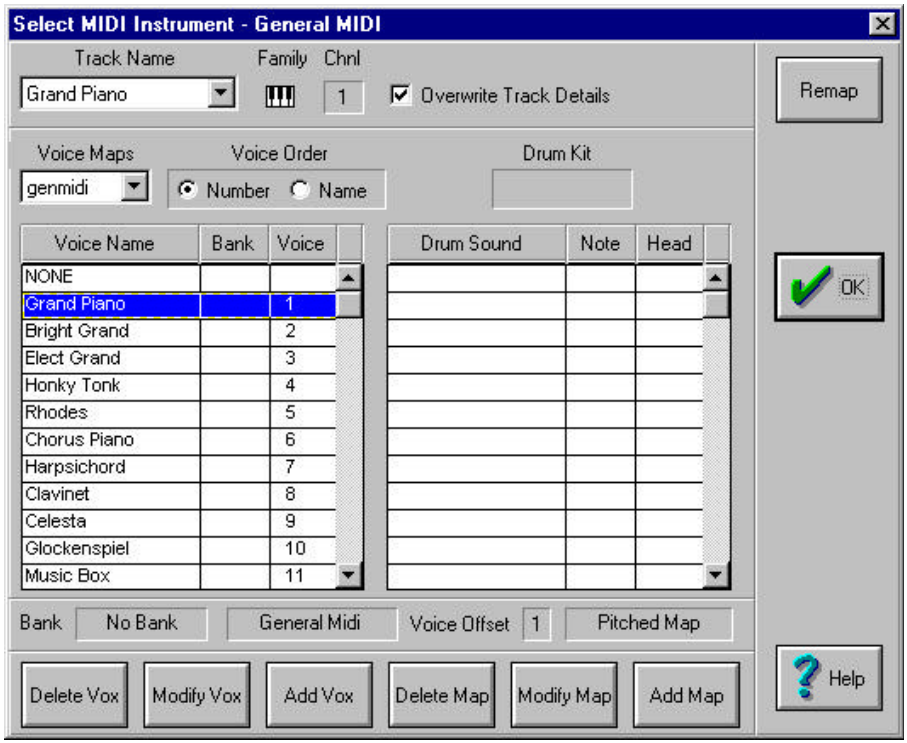
## Output Driver

Here you can select the MIDIoutput device that the track is to be sent to. Click on the arrow and a list will appear that shows all of the MIDI devices currently available to Windows. Then click on the desired MIDI device, and it will be selected.

## Channel

This is the MIDI channel that the track's data will be sent on. Click inside the box with the left mouse button to decrease the channel number or the right button to increase it. You can also double click on it and type in the channel number with the keyboard (press **Enter** when done). If the channel is set to "blank", the MIDI data will be sent out on the same MIDI channel it was originally recorded on.

## Voice Map




Select here the type of sound module the track is connected to. Click on the arrow and a menu will appear. Then click on the appropriate sound module. Note if you hold down the **Ctrl** key while doing this, the same voice map will be applied to all tracks simultaneously.

Setting the voice map, bank and voice number (below) is important as Music Master sends voice bank and number information each time the play button is pressed. This programs your sound module to play the correct sounds when it receives note information.

## Voice Name

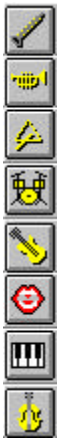
This box displays the name of the voice in the bank and voice number selected for the track (as appropriate to

the sound module selected for the track). You can click with the mouse on this box and the Voice Map dialog will appear which allows you to select the voice from a list. If Music Master is playing the song, you can listen to the different sounds directly as you select them.

## Bank and Voice

Once you have selected the correct voice map, you must also select the bank and voice numbers to get the right sound from the sound module. Click with the left and right mouse buttons to decrease and increase the values. As you change the numbers, you will see the voice name box just below showing the voice name. If you are playing the track as you scroll through the voices, you can hear the sounds changing.

## Family



Underneath the word Family will appear a symbol, being one of -

- Woodwind
- Brass
- Percussion
- Drums
- Guitar
- Vocals
- Keyboard
- Strings

The Family is of importance in the Notation Editor. Each family is grouped for printing a conductor score, and accent interpretation rules can be different for each family.

When you select an instrument for the track, the family will be automatically set, however if you wish to change it, you can do so in the Track Notation Interpretations dialog. This is opened by selecting it from the Track pull down menu, or by its keyboard shortcut **Ctrl I**. In the Track Notation Interpretations dialog, click on the appropriate family button and it will be applied to the track.

## Controllers

**Volume Pan Reverb Chorus**

This section allows you to set four common MIDI controllers for the track. The **boxes** show the initial value for the track. To change the initial value, left or right click to decrease or increase respectively. If the boxes are blank, there are no controllers in the track - left click to decrease to the desired value and a controller event will be added to the start of the track. This is very handy for getting MIDI files to play correctly.

The **knobs** vary to indicate values as the song plays. You can right click on the knobs and record changes in real time.

## Transpose

This window allows you to transpose notes as they are sent out to the sound module. The value shown here indicates how many notes up or down the track will be transposed.

To set or change a value, click on the box with the left or right mouse button to decrease and increase the value respectively. If you hold down the button the numbers will scroll automatically, or you can double click and type in directly the desired number (press **Enter** to register it).

**Note** - this transposition will not be reflected in the display of the notes in each of the MIDI editors - it is playback only.

## Delay

This allows you to advance or retard the track relative to other tracks. The value is in clocks. A negative value means that the track will be ahead of other tracks.

Setting the delay value is done in the same way as with the controller and transposition boxes above.

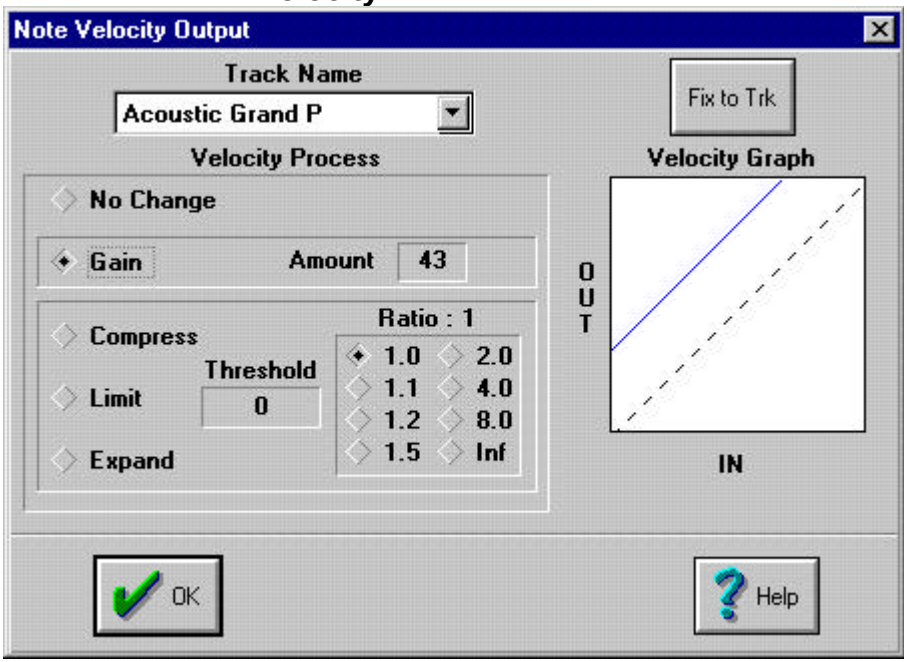
## MIDI Out Filters


Here you can filter any unwanted information from being sent out. There are direct options for the most common controllers and you can numerically select any other -

- Note On / Off
- Key Pressure
- Controllers - you can filter all controllers or up to four can be selected numerically at the bottom of the window
- Voice change
- After Touch
- Pitch Bend
- System Exclusive

Click on the box and a window will appear. In this window you can select the desired controllers to be filtered. Click the check boxes next to the desired controllers or use the left and right mouse buttons to scroll through controller numbers in the boxes at the bottom of the window. Note to enable filtering of these controllers, you must **not** have a tick in the box marked [Controllers], as this will filter out all controllers.

## Velocity




Clicking on this box will bring up a window that allows you to modify the note velocities as the song is played. You can choose from -

- changing gain - boost or attenuate all notes on the track
- compression - reduce the dynamic range
- limiting - reduce the loudness of the loudest notes
- expansion - increase the dynamic range

There is a button marked [Fix To Track]. If you like the effect you have created on the track, selecting Fix to Track will modify all the note velocities in the track permanently.

See the chapter Filtering for more information on Note Velocity Output.

## The Active Track Details Area - Audio Tracks


This section of the screen gives you information about the selected track. You can select a track by clicking on it just to the right of the Active Track Details area - the current track will be highlighted in Blue. You will see it change completely as you move from Audio to MIDI tracks, as it presents the appropriate information for each type of track. To add an Audio track, select "New Audio Track" from the Track menu.

Starting at the top, the various items are described below.

### Track name

This is the name you give to the current track. To change the name, double click on it and type in a new name, then press Enter. The track name is saved with the song.

### Drivers

This next section contains the output and input audio driver that will be used to playback and record to this track. Click on the drop down list to change it.

### File Details

This next section contains information about the current take, and the file details of the first audio file contained on this track.To switch between takes, select it from the dropdown list. To add an extra take, select "New V Track" from the Track menu. The additonal information contains the filename, sample rate, bits per sample and the size of the audio file. The record mode is used when recording new audio to this track.

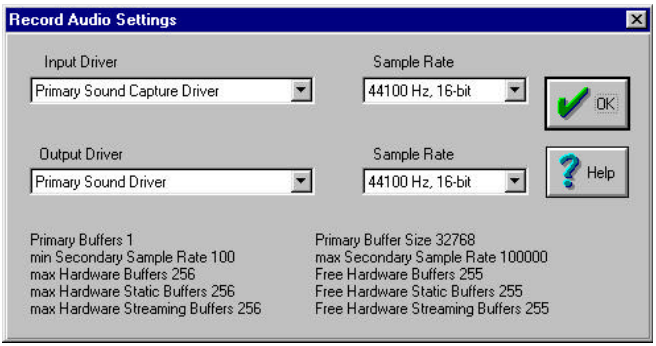
### Controller Values

This section contains the initial and current volume and pan values for the track. The initial values are set in the recessed boxes by double clicking and typing in a

valueor by scrolling the values up and down using the right and left mouse buttons. The current values can be altered by turning the pot. If you want to automate these changes, right click to turn the pot red. This arms the pot, and while playing turn the pot as required. When you press stop it will remember the changes and replace any movements that were previously at this location. This can be undone by selecting the undo button on the main toolbar.

## Recording Audio Track(s)

To create an audio track, select "New Audio Track" from the Track menu. This will create an extra track in the Global Editor with Mono record mode. If you wish to record a stereo recording, create a second track in the same manner, and set the record modesto Left and Right respectively. Use the standard Windows volume controls to select the input and to set the record levels for the microphone and / or line inputs.




To set the audio record and play settings to the correct values, open the Audio Preferences window from the Preferences | Audio menu. Set the sample rates for the input and output drivers to the desired values for recording and playback.


Then place the track(s) into record mode by right clicking in the status column and selecting “Record”.

Then set the cue on the transport bar to 0 and press the record button so that it turns yellow. Press play on the transport bar and start recording. When you press stop it will take a short while to draw the wave forms.

To record additional “takes” on an audio track, select “New Audio Vtrack” from the Track menu. This will create a second virtual track on the same audio track. Obviously once this has been selected the first virtual track will not play until reselected from the active track panel. Record this virtual track in the same manner as described above. You can flip between virtual tracks to decide which take you prefer. You can even “cut and paste” between takes to select different sections of each.

## Import and Export Audio Files

You can import an audio file into the song by selecting this option from the File menu. This will open a window from which you can select an audio file to import. If the file is a mono file, a single audio track will be created, while if the audio file is a stereo file, two audio tracks will be created and the two new mono audio files will be created from the single stereo file. This allows you to edit the left and right channels independently as well as together as you desire.

To export an audio file you must have one or two audio tracks highlighted in the track details area. If one track is highlighted only, a mono .wav file is created, while if two are highlighted a stereo .wav file is created. This new file reflects the editing that has been performed on it within this editor.

## Track Details Area

| Track | S | L | Ch | Output Driver | Voice Map | Bnk | Vce | Ctrl 1 | Ctrl 2 | Ctrl 3 | Ctrl 4 | Tpos | Dly | Vel | Filters |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Track 1 | ● | | 1 | Sound Blaster MID | genmidi | | 68 | Vol/121 | Pan/48 | Rvb/80 | Chr/0 | 0 | 0 | | |
| Track 2 | ● | | 2 | Sound Blaster MID | genmidi | | 67 | Vol/108 | Pan/64 | Rvb/80 | Chr/0 | 0 | 0 | | |
| Track 3 | ● | | 3 | Sound Blaster MID | genmidi | | 40 | Vol/100 | Pan/64 | Rvb/0 | Chr/0 | 0 | 0 | | |
| Track 4 | ● | | 4 | Sound Blaster MID | genmidi | | 26 | Vol/122 | Pan/64 | Rvb/59 | Chr/29 | 0 | 0 | | |

To the right of the Active Track Details Area, is the Track Details Area. This section displays information for each track in the song. You can click and drag the border between this area and the edit grid area to see more information, and scroll the area horizontally using the arrow boxes at the bottom left and right of the area. You can also click and drag the track names vertically to change the track order in this editor.

The Track Details Area displays all of the information available in the Active Track details area except that you can see all tracks at once. (Note if there are more tracks in the song than can fit in the editor window, a vertical scroll bar will appear at the right of the window.) Additionally, there is a level meter for each channel that responds to velocity information in the MIDI being played. The various sections from left to right are detailed below. Note that these are basically the same as in the Active Track Details Area.

### Track Name

Shows the name of each track. You can change a track name in the Active Track Details Area.

### Solo

Shows the solo status of the tracks. There are three modes -

- on - a solid dot
- mute - a hollow circle
- solo - the letter “S”

To mute or unmute a track, make it the active track (use**Up Arrow** or **Down Arrow** or click on the track anywhere in the Track Details Area). Then click on the

track in the solo column and it will change from muted to unmuted or visa versa.

## Level

This column contains a level meter for each track. Level is displayed in green during playback. The level meters respond to velocity information in the track's MIDI data.

## Output

Shows the Windows driver that MIDI data on each track will be sent to. If you want to change the driver, do so in the Active Track Details Area.

## Channel

This shows the MIDI channel that data for each track will be sent out on. Click with the left mouse button to decrease the channel number or the right button to increase it. If the channel is set to "blank", the MIDI data will be sent out on the same MIDI channel it was originally recorded on.

## Voice Map

Shows the type of sound module the track is connected to. Use the Active Track Details Area to change this entry.

## Bank and Voice

Once you have selected the correct voice map, you must also select the bank and voice numbers to get the right sound from the sound module. Click with the left and right mouse buttons to decrease and increase the values. If you are playing the track as you scroll through the voices, you can hear the sounds changing.

Note - it is preferable to select the voice and bank from the Voice Name dialog (click on the Voice Name box in the Active Track Details Area) as you can then see the name of each voice.

## Controllers

Volume - Pan - Reverb - Chorus

These boxes allow you to set four common MIDI controllers for the track. Each time you start playing the song these controller commands will be sent to the sound module, if chase events is ticked in the Sequencer Preferences dialog.

To set or change a value, click with the left or right mouse button to decrease and increase the value respectively. If you hold down the button the numbers will scroll automatically.

## Transpose

This allows you to transpose notes as they are sent out to the sound module. The value shown here indicates how many notes up or down the track will be transposed. Click with the left mouse button to decrease or the right mouse button to increase the value.

## Delay

This allows you to advance or retard the track relative to other tracks. The value is in clocks. A negative value means that the track will be ahead of other tracks.

Setting the delay value is done in he same way as with the controller and transposition boxes above.

## Velocity

If you wish to change the velocity output, do so in the Active Track Details area. This allows you to modify the note velocities as the song is played. You can choose from -

- changing gain - boost or attenuate all notes on the track
- compression - reduce the dynamic range
- limiting - reduce the loudness of the loudest notes
- expansion - increase the dynamic range

There is a button marked [Fix To Track]. If you like the effect you have created on the track, selecting Fix to Track will modify all the note velocities in the track permanently.

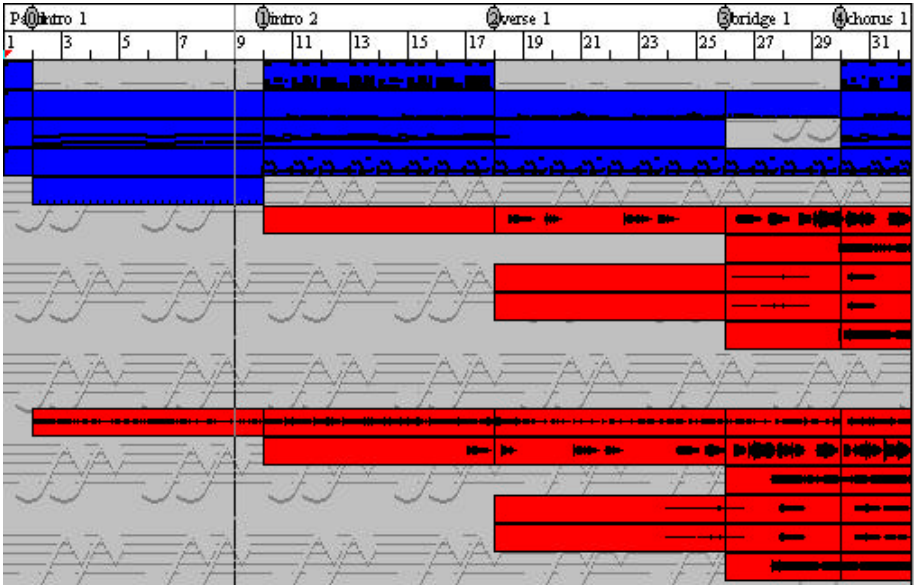
## MIDI Out Filters

Shows which MIDI controllers have been filtered from the MIDI output for each track (selection is done in the Active Track Details Area).

- **N** Note On / Off
- **K** Key Pressure
- **C** Controllers - up to four can be selected numerically at the bottom of the window
- **V** Voice change
- **A** After Touch
- **P** Pitch Bend
- **X** System Exclusive

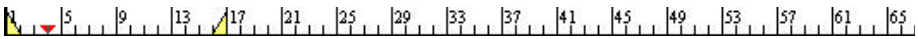
Click on the box and a window will appear. In this window you can select the desired controllers to be filtered. Click the check boxes next to the desired controllers or use the left and right mouse buttons to scroll through controller numbers in the boxes at the bottom of the window. Note to enable filtering of these controllers, you must **not** have a tick in the box marked [Controllers], or all controllers will be filtered out.

## Edit Grid Area




At the right of the Global Editor is the Edit Grid. Here you can see the MIDI data on the tracks, as well as the Song Position Ruler and the Locators and Parts areas at the top.

## Song Position Ruler



The song position ruler is divided into measures (i.e. bars). You can zoom in (magnify the data) by pressing **Shift Z** or zoom out by pressing **Alt Z**. On the song position ruler is a red triangle. This is the current song position. When you play the song, the triangle will move, and the edit grid will be updated each time the pointer reaches the edge of the window.

**Note** you can directly locate and play from any position by double clicking at the desired position on the Song Position Ruler.

## Locators and Parts

Just above the Song Position Ruler is the Locators and Parts ribbon. Locators are a quick way to move through your song, while parts are used for editing in the Global Editor.

### Locators

In the locators and parts ribbon, the locators are shown as yellow ovals with a number inside them. The locators are numbered from 1 to 9 and 0. When you load the default song, they will be spaced evenly over the first 72 measures (unless you have changed them in the default song).

You can move the locators by clicking on them with the left mouse button and dragging them to the desired position. (Note that the step value will cause the locator to “snap” to the chosen steps). Each locator can also be set by pressing Ctrl 0 - 9 and that locator will be set to the current song position.

When playing the song you can press a number on the keyboard and Music Master will jump to that location and continue playing. It will do this immediately unless you have enabled Delay Locator in the Sequencer Preferences dialog. When this is the case, the sequencer will jump to that location only when the currently playing section is complete. Additionally the start and end of the song can be located with the **Home** and **End** keys.

### Parts

Global Parts are defined on the locators and parts ribbon. By clicking with the right mouse button in this area, you will insert a part boundary. These appear as vertical black lines. You can drag these lines with the left mouse button to adjust the position.

Parts are used for editing. You can define Global Parts as shown above, which apply to all tracks, and you can

define track parts in the same manner by clicking at the desired position on a track. See the section below on editing for more information.

If you drag a part over another part boundary, the one "underneath" will be erased if the Preferences are set to Replace Mode. In Overdub Mode, the two sets of data would be combined. To delete a part boundary, move the cursor over it until the cursor changes to a special part boundary shape. Now drag the part boundary onto an adjacent boundary or to the edge of the song and release.

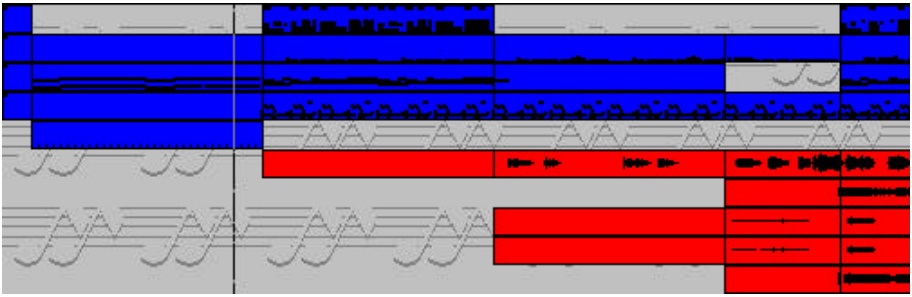
You can name Global Parts. Simply double click on the part in the locators and parts ribbon, and a window will appear into which you can type the part names.

Track Parts work similarly, but you click on the track data area to set them, drag them and delete them. They apply to that track only. You can also name track parts by double clicking with the left mouse button. These names will only appear if Hide Track Part Names is deticked in Editor Preferences.

All editing in the Global Editor is done either on whole tracks, or on parts. Before you can edit the section you are interested in, you must first define it as a part. You may do this at the global level if you have only one track (or if the section and editing apply to all tracks). Otherwise, do this on the track itself.

Clicking with the left mouse button inside a part will highlight it ready for editing. On the Global Part bar, the same section in all tracks will be highlighted. Clicking on a track will highlight the track part only. Hold down the Shift key and click on other parts to include them in the edit. Hold down the Shift key and click on highlighted parts to remove them from the list to be edited. The parts do not have to be in the same bars as each other.

## Edit Grid



The main part of the Global Editor is the edit grid, located at the right of the window. Here is displayed the MIDI data for the tracks in the song. There is a horizontal row for each track, starting near the top of the window. If there are too many tracks to fit in the window, a vertical scroll bar will appear at the right of the window.

Each track shows the presence of MIDI data by dark boxes. The vertical position of the shaded boxes indicates the pitch, while the width is directly proportional to the length of the event. Note On / Note Off pairs are shown as a single event for clarity.

## Editing

Editing in the Global Editor is different from all other editors. In other editors you can freely select a note or group of notes. In the Global Editor, selection is done using Parts. As mentioned above, there are Global Parts covering all tracks, and Track Parts specific to one track. The Global Editor is structured in this way to allow Music Master to quickly build up a song using Parts.

For example, you may record a few bars and define them as a part named “verse”, then record a section and name it “chorus”. Then by copying the parts you can build up a song with three verses and three choruses in just a few seconds. Once this is done, you can add musical embellishments to individual parts.

(Note - if you are proficient with musical notation, you can achieve a similar result with song structure elements

in the Notation Editor. Music Master allows you to work in the way most convenient to you.)

## Selecting and Editing Parts

To select a Global Part, click with the left mouse button in the locators and parts ribbon at the top of the global editor. The part will be highlighted on all the tracks. You can then move, delete or copy the part (see below).

To select a Track Part, click on it with the left mouse button. If you want to select more than one part, hold down the shift key while clicking on the parts. Clicking on a selected part while holding down the shift key will de-select it.

## Standard Editing - Copy, Cut, Paste and Move

Once you have selected a part or parts, you can use the Music Master Clipboard to copy, cut or paste the MIDI data. Note that the parts do not have to be at the same position in the song. Music Master will retain the relative positions of the parts when you move, copy or paste them. Also if you make a big mistake, you can use the Undo feature to reverse your mistake.

### Copying Parts

(keyboard shortcut **Ctrl C**) will place a copy of the selected part or parts into the Music Master clipboard. At this stage the song is unaffected.

### Cutting Parts

(keyboard shortcut **Ctrl X**) will delete them from the song and place them into the Music Master clipboard. You will see blank spaces replace the MIDI data.

### Pasting Parts

This will place the contents of the clipboard onto the song. When you select the paste button (or use the keyboard shortcut **Ctrl V**) the cursor will show where the start of the clipboard contents will be placed. Setting

the step value to a value of BAR will usually be of assistance in getting the data placed where you want it.

What happens to your MIDI data when you paste depends on whether Music Master is in overdub or replace mode. In replace mode, the MIDI data "underneath" what you pasted will be lost i.e. the pasted notes are all that you will hear at that point. In overdub mode, the pasted data will be combined with the data already on the track or tracks you pasted to.

Moving parts is as simple as clicking and dragging them to a new position. You could move a part to a different point on the same track or to a different track. Again, setting the Step value to, say, BAR will help you to accurately position the part. Also, when moving parts, the same rules described above regarding overdub and replace modes apply.

Holding down the **Ctrl** key during this operation will copy rather than moving a part.

## Quantizing

Quantizing is the process of adjusting the timing of notes - to "tidy up" less than perfect playing, or to give the composition a certain "feel".

The procedures for quantizing are described in an earlier section in this chapter.

## Transposing

Transposing is the process of changing the pitch of all the notes on a track up or down by a set number of semitones.

To perform a transposition, select the part or parts to be transposed (hold down the **Shift** key when clicking to select more than one part), then click on the transpose button on the main tool bar (or use the keyboard shortcut **Alt O** ). A window will open prompting you for the number of semitones the selection is to be transposed. Click with the left mouse button to decrease or the right mouse button to increase the value, then

click on the [OK] button and the transposition will be performed. If you don't like the change you just made, you can undo it using the Undo button on the main tool bar.


**Note** - don't transpose a drum track as each note represents a particular instrument in the drum kit. Transposing will drastically alter the sound !

## Merging Tracks

Music Master can merge tracks or parts of tracks. This can be useful as you may wish to initially work on a polyphonic part on two tracks then merge them after editing, or you may wish to merge drum instruments that have been recorded on separate tracks.

To perform a merge, select tracks or parts to be merged by clicking on them with the left mouse button (hold down the **Shift** key for multiple selections). Then click on the merge button on the main tool bar (or use the keyboard shortcut **Alt M**). The selections will be merged and placed on the Music Master Clipboard. From there you can place the merged data onto a new track or back over an existing one.

Remember that when pasting MIDI data from the clipboard over data on a track that the existing data will be replaced if Music Master is in replace mode. Otherwise the clipboard data will be merged with the data on the track if Music Master is in Overdub mode. Overdub and Replace mode are selected on the Transport Bar (press **F3** if it is hidden).

## Insert/Remove Space

Sometiemes you may want to add or delete a chorus or verse from your song. The Insert/Remove Space function allows you to do this easily.

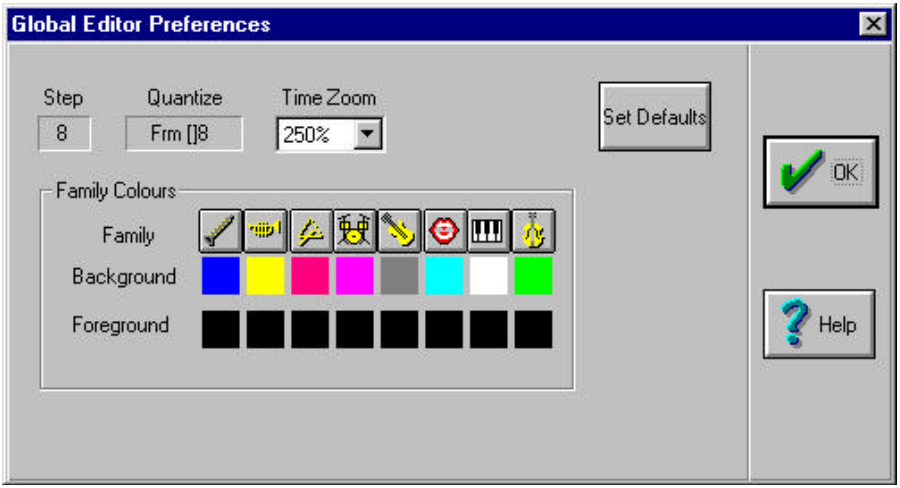
### To make a space in your song

Click with the right mouse button in the Locators and Parts Ribbon (above the measures ribbon) to create a Global Part boundary where you want to “break” the song. Then select the Insert/Remove Space function. Click and drag (with the left mouse button) the Global Part boudary to the desired place. You will see the amount of space to be created as a bold line on the measures ribbon.

### To remove some space in your song

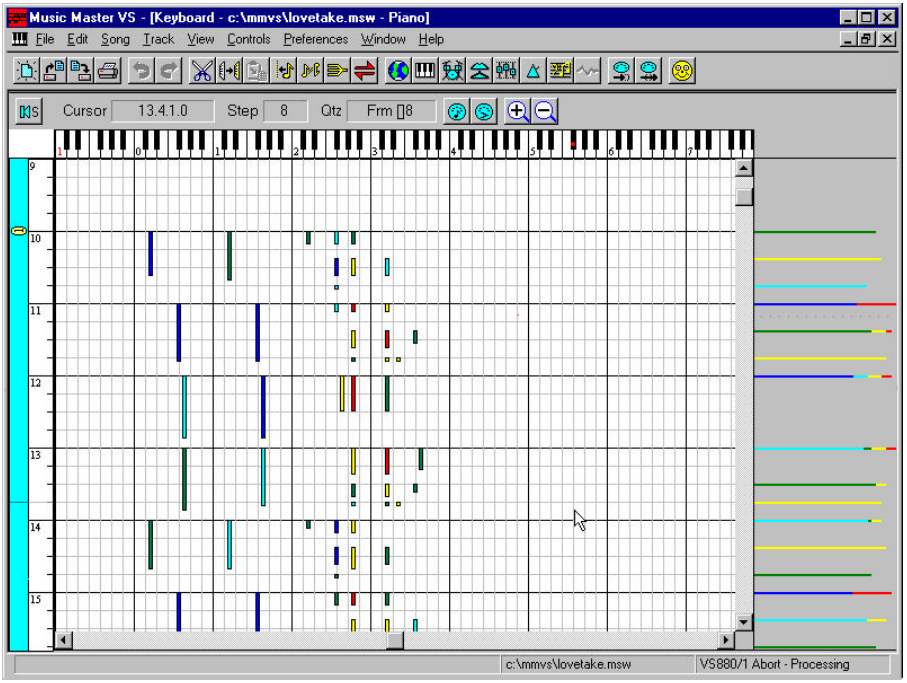
Click with the right mouse button in the Locators and Parts Ribbon (above the measures ribbon) to create a Global Part boundary where you want to “break” the song. Then select the Insert/Remove Space function. Click and drag (with the left mouse button) the Global Part boudary to the desired place. You will see the amount of space to be removed as a bold line on the measures ribbon. Note any MIDI that you drag over (ie the bars that you close up) will be deleted from your song.

## Editor Preferences




The Global Editor has a number of default settings that you can set in the Editor Preferences window. You can open the Editor Preferences window from the Preferences | Editors | Global menu, or jump directly to it with the “smiley” button.

# Keyboard Editor




The Keyboard Editor presents your MIDI data in a piano roll fashion. Notes are represented as rectangles down the screen. To the right of the editor is displayed the note velocities of all the notes, lined up with the edit grid.

## Entering the Keyboard Editor

To enter the keyboard editor, first select the track or tracks you wish to edit. Do this by clicking on the track name in the global editor with the left mouse button. To select more than one track, hold down the **Shift** key while clicking on the tracks. Then click on the keyboard editor button on the main toolbar, or use the keyboard shortcut **Ctrl K**.

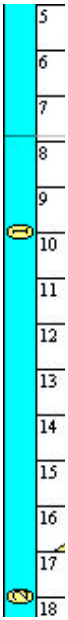
The Keyboard editor allocates one editor window per track. If you have selected several tracks, they will be cascaded one above the other.

As with most editors, this application allows you to zoom in and out i.e.. to expand and contract the display of the MIDI data. Zoom in by using the keyboard shortcut **Shift Z**, and zoom out by using the command **Alt Z**. This will affect only the editor window which is currently active.

In the data area, the notes are displayed in different colors. This is determined by each note's velocity. The color ranges can be set for each family in the Song Notation Interpretations dialog.

To the right of the edit grid, you can see the Note Velocity display. Here the velocity of each note is shown and you can edit the values individually or over a group of notes.

## Moving Around the Editor




### Song Position Ruler

The song position ruler is divided into measures (i.e.. bars). Zoom in (magnify the data) by pressing **Shift Z**, or zoom out by pressing **Alt Z**. On the song position ruler is a red triangle, which indicates the current song position. When you play the song, the triangle will move, and the edit grid will be updated each Time the pointer reaches the edge of the window.

**Note** you can directly locate and play from any position by double clicking at the desired position on the Song Position Ruler.

### Locators and Parts

To the left of the Song Position Ruler is the Locators and Parts ribbon. Locators are a quick way to move through your song, while parts are helpful for editing.

### Locators

In the locators ribbon (shaded in blue), the locators are shown as yellow ovals with a number inside them. The locators are numbered from 1 to 9 and 0. When you load the default song, they will be spaced evenly over the

first 72 measures (unless you have changed them in the default song).

You can move them by clicking on them with the left mouse button and dragging them to the desired position. (Note that the step value will cause the locator to "snap" to the chosen steps). Each locator can also be set by pressing Ctrl 0 - 9 and that locator will be set to the current song position.

When playing the song you can press a number on the keyboard and the program will jump to that location and continue playing. It will do this immediately unless you have enabled Delay Locator in the Sequencer Preferences dialog. When this is the case, the sequencer will jump to that location only when the currently playing section is complete. Additionally the start and end of the song can be located with the **Home** and **End** keys.

### Parts

Parts are a convenient way to divide your song into sections which you can easily move or copy. To move a part in the Keyboard Editor, simply click and drag with the mouse cursor in the Locators and Parts ribbon.

## Selecting and Editing Notes

As already mentioned, the keyboard editor represents notes as rectangles, with their size showing the note length and their color representing the note velocity.

To **select** a note for editing, simply click on it with the left mouse button. You will hear the note play as you select it if your sound module is turned on.

As you hold down the mouse button, the note's pitch, Note On velocity, Note Off velocity and length are displayed at the bottom right of the window.

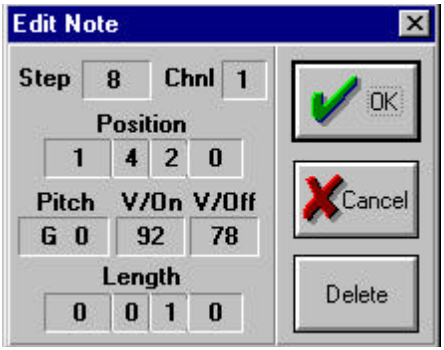

If you want to **move** the note, simply drag it around the screen.

To graphically change a note's **length**, click and drag the end of the note. You may find it easier to zoom in first (Shift Z).

If you want to **modify** a note's length or velocity, double click on it and the Edit Note dialog will open, displaying all the available information for the note selected. You can change any parameter by clicking with the left mouse button to decrease the value or the right mouse button to increase it.

To **delete** a note, double click on it and the Edit Note dialog will open. Then click on the [Delete] button. The Edit Note dialog will automatically close and the note will be deleted.

## Edit Note Window




The Edit Note dialog gives you information about the note you have selected. This includes the step value currently selected, the MIDI channel for the note, its start position (in measures, beats, steps and clocks), pitch, initial and final velocities (in values from 0 to 127), and note length (in measures, beats, steps and clocks).

You can numerically edit the various parameters. When you move the mouse cursor over an editable area, the cursor changes to a double-headed arrow. Click with the left mouse button to decrease the value or the right mouse button to increase it. If you hold down the button, the numbers will scroll automatically. Alternatively, you can double click on the number, then type in the new value, followed by **Enter**.

## Selecting Groups of Notes

To select a group of notes, click and drag in the grid area to create a box enclosing the notes you wish to select using the left mouse button. Simply click on the point where the notes begin that you want to edit, then drag the mouse down the screen to create a box enclosing the desired notes. When you release the mouse button, the program will invert the rectangle selected based on the current step to show you the area selected.

You can also click with the left mouse button in the parts ribbon to select a part and the program will invert that part across the whole pitch range.

If you want to select only notes of a certain pitch range, hold down the **Ctrl** key while clicking and dragging. You will then be able to open a box of any desired size and proportion.

Once you have selected notes in this way, use the standard editing functions of copy, cut and paste to move your data around. You can also perform the quantize and transpose functions on the events selected.

## Inserting Notes

Using the philosophy as set out in Editing Basics, to insert a note use the right mouse button. Click at the desired pitch and position and drag for the length of the desired note. Remember that the step set in the editor toolbar will affect your starting position and the length of the note.

**Note Velocities:** As you insert notes with the mouse, you can set their velocities with the Ctrl and Shift keys. Ctrl will set the velocity to Sostenuto. Shift will set it to Emphasize and Ctrl + Shift will set it to "Hat". Each velocity value is determined in the Song Notation Interpretations window.

## Copying, Cutting and Pasting Notes

Copying, cutting and pasting in the Keyboard Editor is done in a similar way to these functions in most Windows applications. Firstly, select the range of notes

to be edited by clicking and dragging as described above. Then select Copy or Cut as appropriate.

You can select these functions from the main toolbar, from the Edit pull down menu, or by their keyboard shortcuts -

- **Ctrl C** for Copy
- **Ctrl X** for Cut.

In each case, a copy of the selected notes will be placed in the Clipboard. To paste MIDI data from the Clipboard, select the Paste function from the main Toolbar, the Edit pull down menu or by its keyboard shortcut **Ctrl V**. Then move the cursor to the area into which you want to paste.

Note that the cursor represents the top left corner of the rectangle of notes held in the Clipboard. At the correct place, click the left mouse button and the MIDI data will be pasted. Note that when pasting, the Step value can either be a help or a hindrance depending on its settings, so remember it will affect the way you can place the data.

## Quantizing

To quantize a range of notes in the keyboard editor, first select the type of quantize to be performed. Open the Quantize window by clicking in the box marked Qtz. Select the type of quantize you want to do - for a full explanation of the various quantizing options, see the chapter Special Editing Functions.

Once you have selected the quantize type, select the range of notes to be quantized by clicking and dragging as mentioned above. Then select Quantize from the Edit pull down menu or from the main toolbar (or use the keyboard shortcut **Alt Q**), and the notes inside the edit box will be quantized.

## Transposing


Select the range of notes to be transposed by clicking and dragging as described above, then select Transpose from the Edit pull down menu, the main toolbar or the keyboard shortcut **Alt O**. The Transpose window will open and here you must select the number of semitones up or down for the transposition. Click on [OK] and the transposition will be performed. If you make a mistake, click on the Undo button on the main Toolbar.

## Editing Note Velocities

To the right of the Keyboard Editor is displayed the note velocities of all the notes in the track. You can change the velocity of an individual note or the velocity of a group of notes. This is a convenient alternative to double clicking on the note in the edit grid and changing the velocity numerically.

### Changing the velocity of one note

To change the velocity of a single note, simply right click and drag across the desired note at the desired velocity.

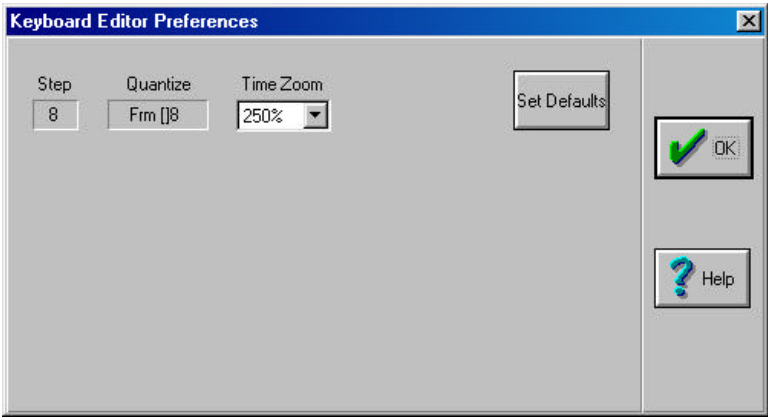
### Changing the velocity of several notes

You can click and drag with the RIGHT mouse button over a range of notes in the velocity area, and the notes will change to the new values.

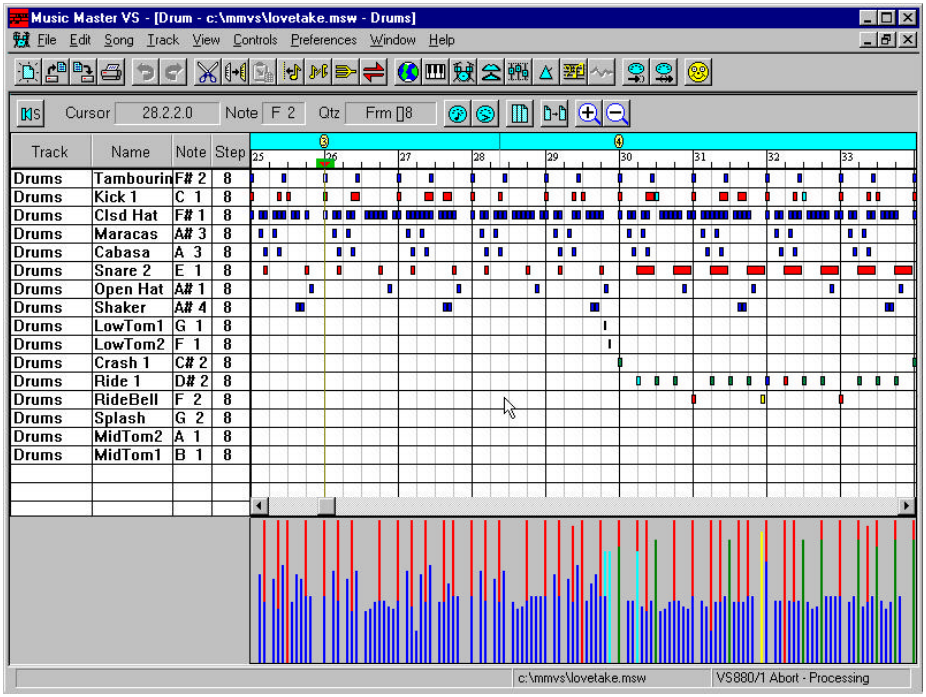
If you hold down the **Shift** key while doing this, you will get a straight line. Note also that you can drag beyond the currently displayed bars - the screen will “move” in the appropriate direction.

## Keyboard Editor Preferences

You can set a number of preferences, or defaults for the keyboard editor. This is available in the menu Preferences | Editors | Keyboard.



# Drum Editor




The Drum Editor is a special grid editor with features to make editing drum tracks easy. The program lists the sounds used down the screen and uses the Drum Kit you have loaded to determine the name of the sound. Your drums can be on one or several tracks, and the drum editor will handle it just the same.

**Note**: Don't take tracks other than a drum track into the Drum Editor as the program will apply the drum map to the notes in the track. The result will be that the Drum Editor will show lots of strange drum sounds that you aren't using!

## Using the Drum Editor

To enter the Drum Editor, select the track or tracks that contain the song's drum sounds. To select more than one track, hold down the Shift key while clicking on the

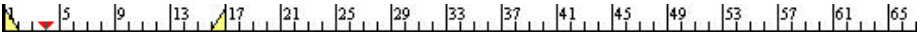
track names in the Global Editor; then click on the Drum Editor button on the main toolbar or use the keyboard shortcut **Ctrl D**, and the Drum Editor will open.

At the left of the Drum Editor is a list of all the different drum sounds. Each note number found will be placed on the track(s) selected, and the program looks up their name in the Drum Kit you have selected. (See the following section on using and selecting Drum Kits.) If there are more sounds than can fit in the window, a vertical scroll bar will be placed at the right of the editor window.

## Edit Grid Area

At the right of the Drum Editor is the Edit Grid. Here you can see the MIDI data on the track(s), as well as the Song Position Ruler and the Locators and Parts areas at the top.

### Song Position Ruler




The song position ruler is divided into measures (i.e. bars). You can zoom in (magnify the data) by pressing **Shift Z** or zoom out by pressing **Alt Z**. On the song position ruler is a red triangle. This is the current song position. When you play the song, the triangle will move, and the edit grid will be updated each Time the pointer reaches the edge of the window.

You can directly locate and play from a position by double clicking at that point.

### Locators and Parts


Just above the Song Position Ruler is the Locators and Parts ribbon, shaded in blue. Locators are a quick way to move through your song, while parts are used for editing in the Drum Editor.

## Locators

In the locators and parts ribbon, the locators are shown as yellow ovals with a number inside them. The locators are numbered from 1 to 9 and 0. When you load the default song, they will be spaced evenly over the first 72 measures (unless you have changed them in the default song). You can move them by clicking on them with the left mouse button and dragging them to the desired position. (Note that the step value will cause the locator to "snap" to the chosen steps). Each locator can also be set by pressing Ctrl 0 - 9 and that locator will be set to the current song position.

When playing the song you can press a number on the keyboard and the program will jump to that location and continue playing. It will do this immediately unless you have enabled Delay Locator in the Sequencer Preferences dialog. When this is the case, the sequencer will jump to that location only when the currently playing section is complete. Additionally the start and end of the song can be located with the **Home** and **End** keys.

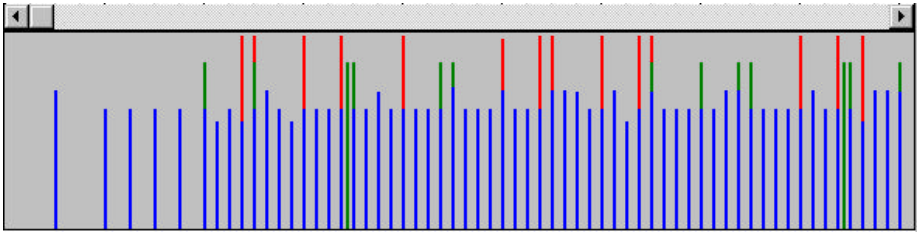
## Parts

Track Parts are defined on the locators and parts ribbon. By clicking with the right mouse button in this area, you will insert a part boundary. These appear as vertical black lines. You can drag these lines with the left mouse button to adjust the position.

Parts are used for editing. You can define Track Parts as shown above.

If you drag a part over another part boundary, the one "underneath" will be erased if the Preferences are set to Replace Mode. In Overdub Mode, the two sets of data would be combined. To delete a part boundary, move the cursor over it until the cursor changes to a special part boundary shape. Now drag the part boundary onto an adjacent boundary or to the edge of the song and release.

## Note Velocity Area



At the bottom of the Drum Editor is the Note Velocity display. Each drum note has its velocity shown here by a vertical line. You can see the colors vary for different velocities.

When you open the Drum Editor, the Velocity area shows all notes on the track(s). You can click on a single sound (or more than one by holding down Ctrl or Shift while clicking) and get the velocities of just the sound(s) you selected.

### Changing the velocity of one note

To change the velocity of a single note, simply RIGHT click and drag across the note at the desired velocity. You will see the color change to reflect the new velocity. Alternatively, double click on the note and change values in the Edit Note window.

### Changing the velocity of several notes

You can click and drag with the RIGHT mouse button over a range of notes in the velocity area, and the notes will change to the new values.

If you hold down the **Shift** key while doing this, you will get a straight line. Note also that you can drag beyond the currently displayed bars - the screen will scroll in the appropriate direction.

## Selecting and Editing Notes

As already mentioned, the drum editor represents notes as rectangles, with their size showing the note length and their color representing the note velocity.

To select a note for editing, simply click on it with the left mouse button. You will hear the note play as you select it if your sound module is turned on.

As you hold down the mouse button, the note's pitch, Note On velocity, Note Off velocity and length are displayed at the bottom left of the window.


If you want to move the note, simply drag it around the screen. As you change rows you will hear it sound the drum sound for that row.

If you want to change a note's length or velocity, double click on it and the Edit Note dialog will open, displaying all the available information for the note selected. You can change any parameter by clicking with the left mouse button to decrease the value or the right mouse button to increase it.

To delete a note, double click on it and the Edit Note dialog will open. Then click on the [Delete] button. The Edit Note dialog will automatically close and the note will be deleted.

## Edit Note Window

The Edit Note dialog gives you information about the note you have selected. This includes the step value currently selected, the MIDI channel for the note, its start position (in measures, beats, steps and clocks), pitch, initial and final velocities (in values from 0 to 127), and note length (in measures, beats, steps and clocks). You can numerically edit the various parameters. When you move the mouse cursor over an editable area, the cursor changes to a double-headed arrow. Click with the left mouse button to decrease the value or the right mouse button to increase it. If you hold down the button, the numbers will scroll automatically. Alternatively, you can double click on the number, then type in the new value, followed by **Enter**.

You can also change the Velocity On and Velocity Off for the note. The MIDI channel is alterable, but usually best not adjusted here. Likewise the pitch shown is the MIDI note number for the note's drum sound. If you change this, the note will have a different sound.

## Selecting Groups of Notes

To select a group of notes, click and drag in the grid area to create a box enclosing the notes you wish to select using the left mouse button. Simply click on the point where the notes begin that you want to edit, then drag the mouse across the screen to create a box enclosing the desired notes. When you release the mouse button, the program will invert the rectangle selected based on the current step to show you the area selected.

You can also click with the left mouse button in the Parts ribbon to select a part, and that part will be highlighted across the whole editor.

If you want to select only notes of a certain pitch range, hold down the **Ctrl** key while clicking and dragging. You will then be able to open a box of any desired size and proportion. Yet another way is to double-click on the sounds in the Name column at left (hold down Ctrl or Shift to select more than one). This is particularly useful when you want to change one drum sound to another. Select just that row and then use the transpose function to make it the new drum sound, or cut and paste the notes to a different row.

Once you have selected notes in this way, use the standard editing functions of copy, cut and paste to move your data around. You can also perform the quantize and transpose functions on the events selected.

## Inserting Notes

Using the philosophy as set out in Editing Basics, to insert a note use the right mouse button. Click on the desired drum sound (row) and position and drag for the length of the desired note. Remember that the step set in

the desired drum sound toolbar will affect your starting position and the length of the note.

**Note Velocities:** As you insert notes with the mouse, you can set their velocities with the Ctrl and Shift keys. Ctrl will set the velocity to Sostenuto. Shift will set it to Emphasize and Ctrl + Shift will set it to "Hat". Each velocity value is determined in the Song Notation Interpretations window.

## Copying, Cutting and Pasting Notes

Copying, cutting and pasting in the Drum Editor is done in a similar way to these functions in most Windows applications. Firstly, select the range of notes to be edited by clicking and dragging as described above. Then select Copy or Cut as appropriate. You can select these functions from the main toolbar, from the Edit pull down menu, or by their keyboard shortcuts

- **Ctrl C** for Copy
- **Ctrl X** for Cut.

In each case, a copy of the selected notes will be placed in the Clipboard.

To paste MIDI data from the Clipboard, select the Paste function from the main Toolbar, the Edit pull down menu or by its keyboard shortcut **Ctrl V**. Then move the cursor to the area into which you want to paste. Note that the cursor represents the top left corner of the rectangle of notes held in the Clipboard. At the correct place, click the left mouse button and the MIDI data will be pasted. Note that when pasting, the Step value can either be a help or a hindrance depending on its settings, so remember it will affect the way you can place the data.

## Quantizing

To quantize a range of notes in the drum editor, first select the type of quantize to be performed. Open the Quantize dialog by clicking in the box marked Qtz. The keyboard shortcut is **Ctrl Q**. Select the type of quantize you want to do - for a full explanation of the various

quantizing options, see the chapter Special Editing Functions. Once you have selected the quantize type, select the range of notes to be quantized by clicking and dragging as mentioned above. Then select Quantize from the Edit pull down menu or from the main toolbar (or use the keyboard shortcut **Alt Q**), and the notes inside the edit box will be quantized.

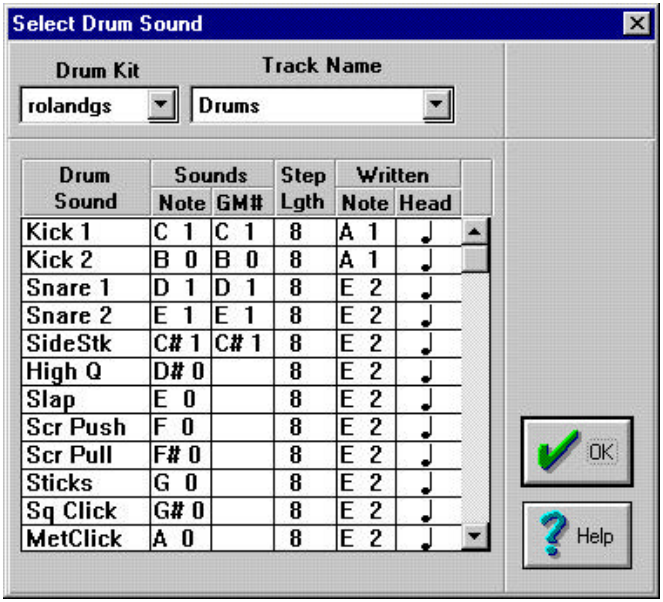
## Transposing

Select the range of notes to be transposed by clicking and dragging as described above, then select Transpose from the Edit pull down menu, the main toolbar or the keyboard shortcut **Alt O**. The Transpose window will open and here you must select the number of semitones up or down for the transposition. Click on [OK] and the transposition will be performed. If you make a mistake, click on the Undo button on the main Toolbar.

## Special Functions

The Drum Editor has two special buttons on its toolbar - Select New Drum Sound and Remap Drum Kit.

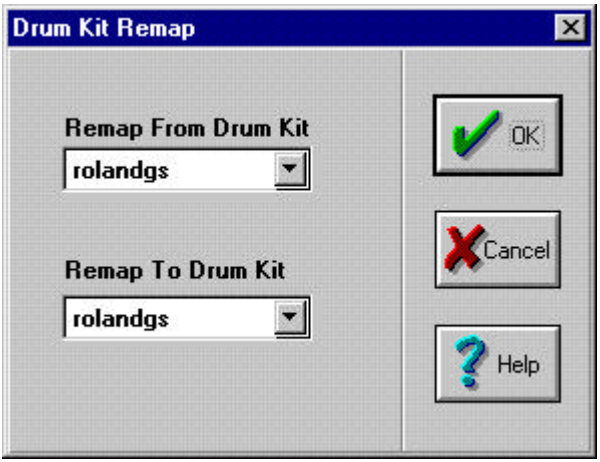
## Select New Drum Sound




The Drum Editor displays all of the different sounds found on the track in a vertical column at the left of the window. If you want to insert a different sound in the Drum Editor, this button allows you to select it from the choices available in the drum kit you are using.

Clicking on the button opens the Select Drum Sound window. To add a sound to the list, just click on the ones you want and they will be immediately added to the list in the Drum Editor. When you have finished, click on [OK]. You can then insert sounds of the new type in the editor.

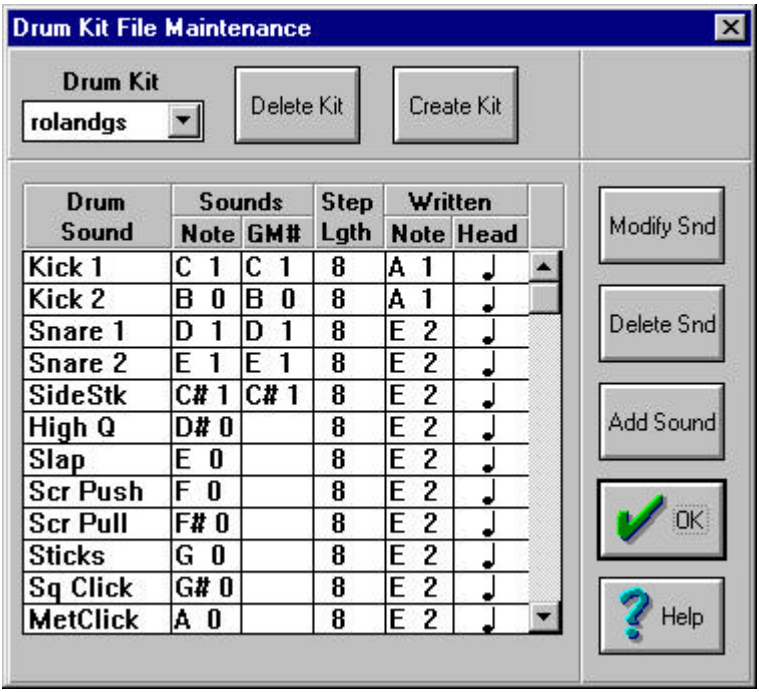
## Remap Drum Kit




This button remaps the sounds in the kit selected to a new kit that you nominate. As different drum kits use different note numbers for the same sound, the program will change the note numbers to match the drum sounds as closely as possible. This function is used if you change your sound module, or if you are given a song that is set up to use a different type of drum module.

To remap, click on the button and the Drum Kit Remap window will open. At the top is a pull down list, which normally shows the drum kit currently being used. Underneath is a pull down list of the available drum kits. Click on the arrow button, scroll through the list, and click on the kit to which you want to remap. Finally, click on the [OK] button and the remap will be done.

## Drum Kits




Most drum modules contain a number of sounds. This program gives you an easy way to select the appropriate drum sounds for your song. Most drum machines currently on the market are directly supported by this program in the form of drum kits, and you can create your own kit as well. As new models come onto the market, Datasonics makes drum kits for them available on its Internet site.

## How Drum Kits Work

All drum modules contain a number of sounds e.g. kick, snare, crash cymbal etc. Each sound in the kit is activated by a particular MIDI note value. For example, a Roland GS drum kit will play a kick drum sound when sent a C1 note and a snare drum sound when sent a D1 note. This "mapping" of note values to sounds is what is used to make the drum kit.

Each type of drum module on the market has a different drum kit to others i.e. there is no universal standard. (Note that General MIDI, or GM, is becoming popular, but it is not supported by all manufacturers at this time). You are provided with a drum kit library which contains drum kits for most drum modules currently available.

A Drum Kit contains the following information for each sound available:

- Name of the sound e.g. Snare Drum.
- MIDI note number: This is the MIDI note that is sent to the drum module to trigger the sound.
- Step length This sets the length of the rectangle that represents the note in the various grid editors. Note this only affects the display of the note and not how it will sound. It also affects the length of the note in the Notation Editor.
- Written note value. This represents the pitch the note will appear as, in a drum score.
- Scored note head type. The note head type that will be displayed on a manuscript.

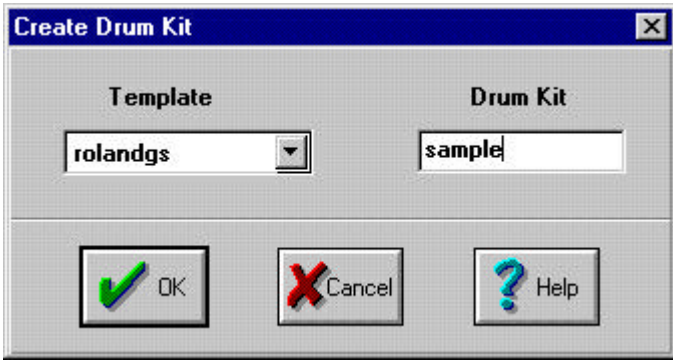
## Selecting the Drum Kit

The program contains a Drum Kit Library. You can choose a drum kit for the song by opening the Drum Kit File Maintainance window from thePreferences menu or by its keyboard shortcut **Ctrl Y**. At the top left of the Drum Kit File Maintainance window is a pull down list of all the available Drum Kits. Click on the Up or Down scroll buttons to scan through the list, then click on the Drum Kit you want. The program then loads the Drum Kit. In the middle of the window you will see a scrollable list of all the sounds, or instruments, in the Drum Kit.

## Deleting a Drum Kit


If you are certain you will never use a particular Drum Kit, you can delete it from the library. Simply select it from the list by highlighting it, then click on the [Delete Kit] button. When a window appears to confirm the deletion, click on the [OK] button. However, in most cases there is little point in deleting a Drum Kit. Each kit only take 2 or 3 kBytes of disk space, so you will save very little by deleting kits.

## Creating a Drum Kit




You can create a new drum kit with the “Create Kit” option. Before doing so, first check on Datasonics’ Internet site whether the Drum Kit you want is available. As new drum modules become available, Datasonics creates drum kits and makes them available to you free, via the Internet. This can save you Time and effort because you don’t have to do it yourself.

To create a drum kit for a particular drum module, you will need to have available the information on the module that maps the MIDI note numbers to the sounds in the module. To create a drum kit, click on the [Create Kit] button in the Drum Kit window. A window will open, in which you can select a template on which to base the new kit.

Select a template kit of the same brand and a similar age if possible, as this will minimize editing of the individual instruments, or sounds, in the kit. Once you have selected the template, type in a name for the new kit in the space under "Drum Kit", then click on the [OK] button.

The new kit will then be created, and at this stage it is an identical copy of the template kit. Next you have to correct the sounds in the kit by adding, deleting and modifying the sounds.

## Modifying a Drum Sound

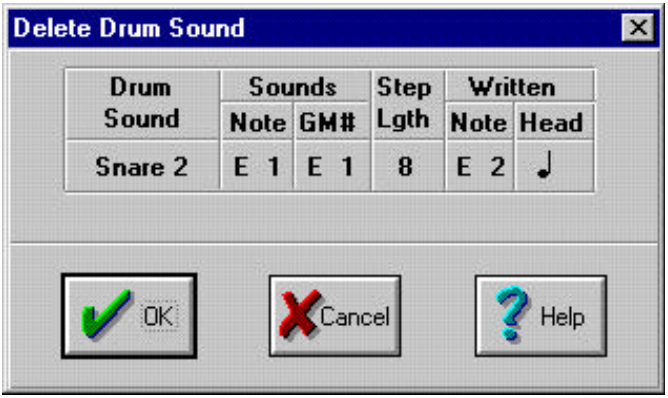

To modify a sound in the drum kit, click on the sound in the list (use the up and down scroll buttons to move through the list), and the sound will be highlighted. Then click on the [Modify Sound] button and a window

will open in which you can edit information regarding that sound.

To change the name of the sound, click the mouse in the box displaying the name, then edit by typing the new name. To change the MIDI note value for the sound, the General MIDI note value or the Written note value, move the cursor over the value, thus changing the cursor to a double arrow. Then click with the left mouse button to decrease the value or with the right button to increase it.

The manuscript note head and Step value (which determines the size of the note's rectangle in the grid editors) are selected by clicking on the appropriate diamond. Once you have finished editing the sound, click on the [OK] button to save the changes.

## Deleting a Drum Sound




To delete a sound from the drum kit, highlight the sound in the list, then click on the [Delete Sound] button. A window will open confirming the deletion. Click on the [OK] button and the sound will be deleted from the drum kit.

## Adding a Drum Sound


To add an extra sound to the drum kit, click on the [Add Sound] button, and a window will open allowing you to enter the details of the new sound. Type in a name for the new sound in the box under "Drum Sound Name", then select the MIDI note value, General MIDI note value and the Written note value by moving the cursor over the data boxes and clicking with the left or right mouse buttons to change the values. Finally select the manuscript note head type and step length (for display of the note in the grid editors) by clicking with the mouse on the appropriate diamonds.

## Using more than one Drum Module simultaneously


For most MIDI setups, one Drum Kit is all that is required: however some users may have more than one drum module attached to the computer. The program can handle an unlimited number of drum modules. The only limit is the number of MIDI ports available, with a maximum of sixteen drum modules per MIDI port.

Each drum module on a MIDI port is assigned its own MIDI channel. You must program the drum module to receive on the same MIDI channel on which the program is sending. If the drum module has a fixed MIDI channel, adjust the program to send on that MIDI channel.

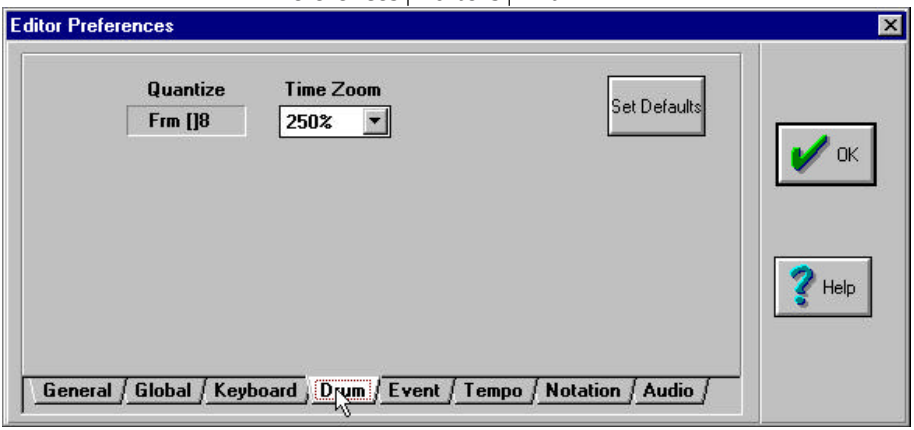
To set up multiple drum modules, open the Drum Kit Device Routing window. The default drum kit will be used when no specific drum kit has been specified for a MIDI port/channel combination. Click on the arrow

under “Default Drum Kit” and a list will appear. Scroll through this list and click on the drum module that you want to be the default.

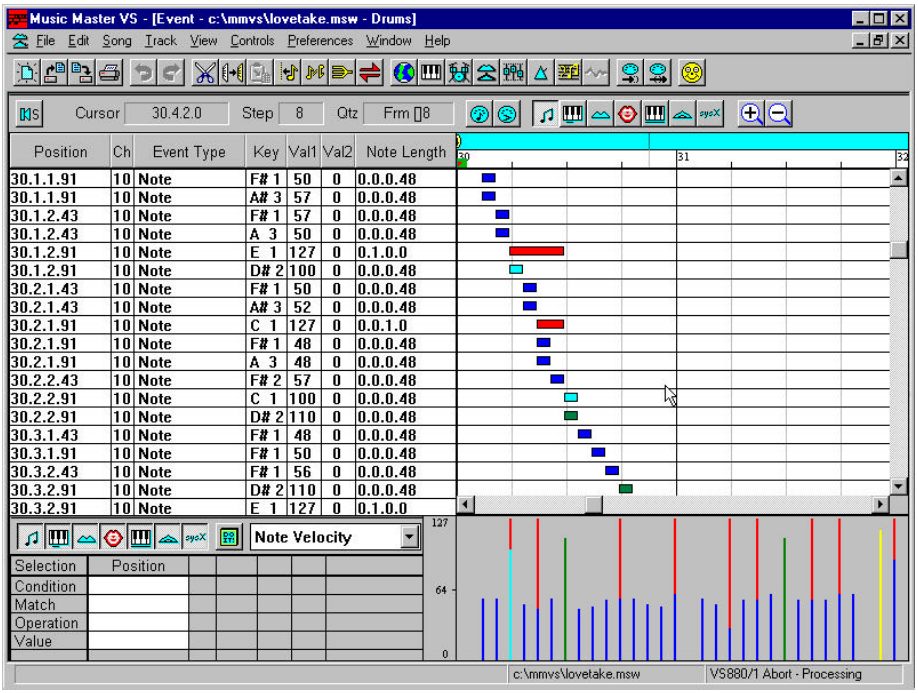
This window also allows you to assign a different drum module to each MIDI channel on a MIDI port. First select the MIDI port that your drum modules are connected to, by choosing it from the “Output Driver” list. Then select your drum module from the menu for each MIDI channel that there is a drum module connected to. Once you have finished, click on the [OK] button to save the settings. Note that these settings become part of the setup, so you don’t have to do them for each song.

## Drum Editor Preferences

You can set a number of preferences, or defaults for the keyboard editor. This is available in the menu Preferences | Editors | Drum



# Event Editor



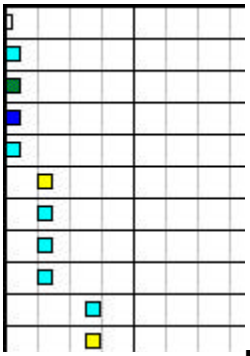

The Event Editor is similar to the other grid editors, with two exceptions. It can display and edit all types of MIDI events, not just notes; and the edit grid effectively displays Time (i.e. song position) on both axes.

## Opening the Event Editor

To open the Event Editor, select the track you want to edit by clicking on it in the Global Editor. Then click on the Event Editor button on the main toolbar, or use the keyboard shortcut **Ctrl E.** As the Event Editor can only display one track, if you select more than one track, the program will open multiple instances of the Event Editor.

You can see that the Event Editor is divided into a number of sections, each of which is described below.

## Edit Grid



In the Event Editor, the edit grid is laid out differently to the other grid editors. The Locators and Parts ribbon as well as the Song Position ribbon are at the top of the grid. The events in the track progress from left to right across the grid. Each event is separated vertically down the grid in such a way that they line up with the rows of event information at the left of the editor. This means that Time, or song position, is displayed both across and down the grid. Also it means that sometimes as you scroll through the track, it may appear that there is no information displayed on the grid.

## Event Information Area

| Position | Ch | Event Type | Key | Val1 | Val2 | Note Length |
|---|---|---|---|---|---|---|
| 1.1.1.0 | 2 | Voice Change | | 0 | | |
| 1.1.1.0 | 1 | Note | C 2 | 100 | 41 | 0.0.1.0 |
| 1.1.1.0 | 1 | Note | E 3 | 106 | 65 | 0.0.1.0 |
| 1.1.1.0 | 1 | Note | G 3 | 94 | 63 | 0.0.1.0 |
| 1.1.1.0 | 1 | Note | B 2 | 99 | 43 | 0.0.1.0 |
| 1.2.1.0 | 1 | Note | E 3 | 114 | 80 | 0.0.1.0 |
| 1.2.1.0 | 1 | Note | G 3 | 100 | 62 | 0.0.1.0 |
| 1.2.1.0 | 1 | Note | B 2 | 103 | 57 | 0.0.1.0 |
| 1.2.1.0 | 1 | Note | C 2 | 103 | 52 | 0.0.1.0 |
| 1.3.2.0 | 1 | Note | G 3 | 102 | 62 | 0.0.1.0 |

The event information area is at the left of the Event Editor. It displays from left to right the position (for notes, this is the start of the note), MIDI channel, event type, key (pitch), two event values (for notes, this is the Note On Velocity and Note Off Velocity) and note length. Note that what types of MIDI events are displayed here depends on what is selected for display in the Alter Area below. When you open the editor, it defaults to all event types displayed - from there you can turn off and on Notes, Key Pressure, Controller, Voice Change, After Touch, Pitch Bend and System Exclusive events.

## Alter Area

In the Alter Area, you can mathematically alter your MIDI data. More detail is provided below.

**Note: The buttons at the top of the Alter Area allow you to turn on and off display of the various types of events.**


## Controller Value Area

At the bottom right of the Event Editor is the Controller Value Area. Here you can view and modify controller values (as well as After Touch and Pitch Bend).

To the left of the Controller Value Area is a pull down list where you can select a controller to be displayed.

### Changing the value of one event

To change the controller value of a single event, simply right click and drag across the event at desired controller value. You will see the color change to reflect the new value.

### Changing the value of several events

You can click and drag with the RIGHT mouse button over a range of events in the value area, and they will change to the new values.

If you hold down the **Shift** key while doing this, you will get a straight line. Note also that you can drag beyond the currently displayed bars - the screen will “move” in the appropriate direction.

## Editing Events

There are three ways to edit events in the Event Editor

- groups of event
- individual events
- alter function

## Editing Groups of Events

To select a group of events, click and drag across the Edit Grid. When you release the mouse button, the selected area will darken. You can then use the standard editing functions of Copy (Ctrl C) and Cut (Ctrl X), then Paste (Ctrl V) to position the data elsewhere. If you only wanted to operate on a certain type of event e.g. Voice Change, you can hide the other types of event using the 6 buttons in the Alter Area below. Only the events you can see will be cut or copied.

## Editing Individual Events

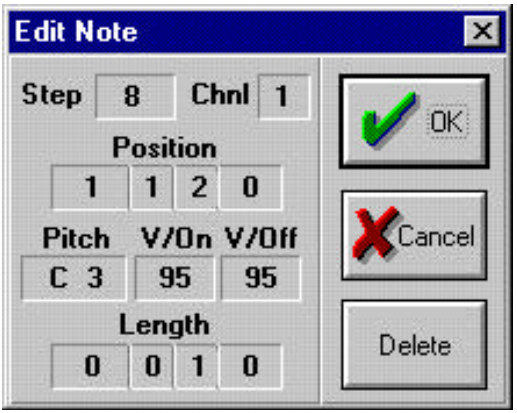
As in all of the editors, you can move an event by clicking and dragging it to the desired position. Note the placement will depend on the Step Value chosen. To modify an event, simply double click on it and an Edit Event window will open. In the window you can modify all the parameters appropriate to that type of event.

There are seven types of MIDI events you can edit -

- note
- key pressure
- controller
- voice change
- after touch
- pitch bend.
- system exclusive

To select an event for editing, double click on it with the left mouse button.

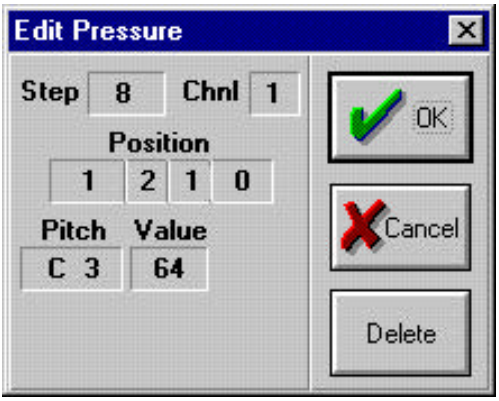
## Note




Double click on a note event, and the Edit Note dialog will open. Here you can set the position, velocity and length of the note. These are affected by the step value, which defaults to the Step value for the editor that you are in.

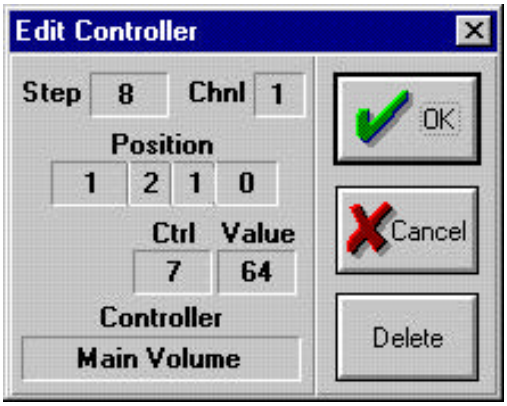
You can also set the note's pitch, velocity on and velocity off.

## Key Pressure




To change the key pressure, double click on the event to open the Edit Pressure window. Here you can set the Step, MIDI Channel, Position, Pitch and Value of the event.

## Controller

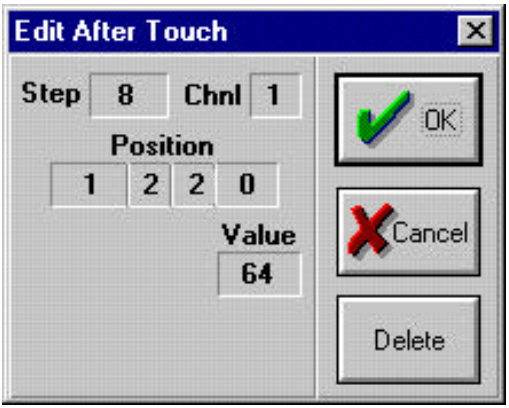



To edit a controller event, double click on it and the Edit Controller dialog will open. Here you can set the Step, MIDI Channel, Position, Controller Number and its value. At the bottom of the window is a box that tells you the function if the controller number has a standard use.

## Voice Change

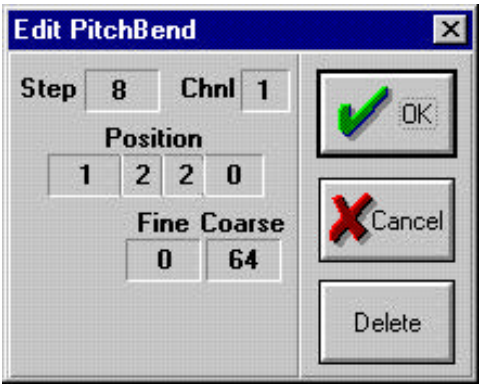

The Edit Voice Change dialog allows you to modify the Step, MIDI Channel, Position and Voice Number of the event. Remember that the voice change will be related to the sound module selected for the track you are editing.

## After Touch



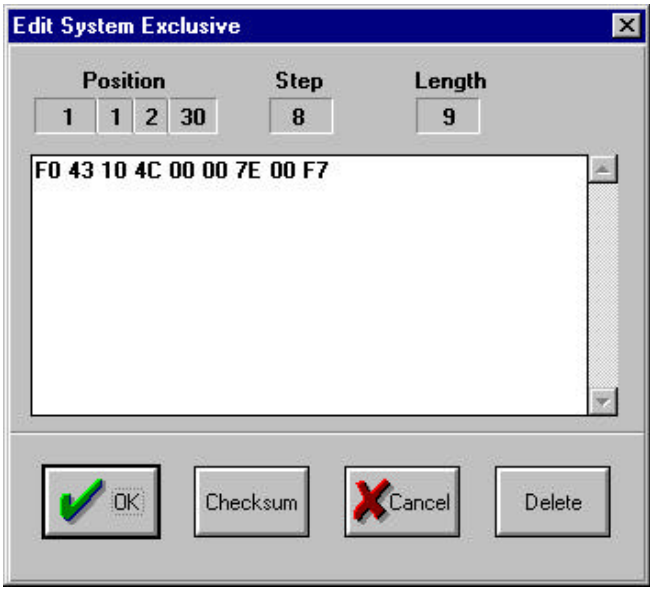

Double clicking on the event will open the Edit After Touch dialog. Here you can set the Step, MIDI Channel, Position and Value.

## Pitch Bend




To edit a pitch bend event, double click on it and the Edit Pitch Bend dialog will appear. Here you can set the Step, MIDI Channel, Position and Fine and Coarse values. A good example of what can be done with Pitch Bend is the Lead Guitar track on the song Inflate.Mid.

## System Exclusive




You can double click on a Sysex message and this will open a Sysex Edit dialog where you can edit the actual message. You should exercise extreme caution when editing this data. Each byte of information is shown as two hexadecimal characters and apart from the start and end characters can only be in the range 00 - 7F. The first character must be an F0 and the last character must be an F7.

You can record system exclusive messages from your MIDI devices in real Time. It is recommended that you should not be doing other real Time recording simultaneously as you may overload your MIDI input driver. These Sysex messages appear in the Event Editor as small transparent rectangles. You can click on these with the left mouse button and drag them to a new location in the same manner as all other events in the Event Editor.

Note the Ckecksum button - this will calculate the checksum of the Sysex message and overwrite the 2nd last pair of characters in the message with the calculated value.

If you are unsure of the editing procedure and protocol for Sysex messages you should not be editing this data as you may corrupt information in your MIDI device when you play the edited data back to it.

### Alter Function


The Alter function is a powerful way of mathematically manipulating your MIDI data. For example you could add 10 to the note velocity and halve the note length of all notes on MIDI channel 6 between measure 3 and 22 in a single step (phew!)

To use the Alter function, firstly select the event type(s) you want to operate on by clicking on the Event Type buttons above. As you do so you will see the Edit Grid and Information areas above update. Then select the functions you want. As you move the mouse over the boxes in the Alter area, the cursor will change. Here you can click and select the function from a list or click with the left mouse button to decrease or the right mouse button to increase as appropriate.

Once you have set your formula (which can be quite complex), click on the [Do It!] button to make it happen. If you got it wrong, you can click on the Undo button (Alt Backspace).

## Inserting Events


The Event Editor allows you to enter seven different types of MIDI events into the track. Click on one of the buttons on the Event Editor Toolbar-

- note
- key pressure
- controller
- voice change
- after touch

- pitch bend
- System Exclusive

## Note

To insert a note, click on the Insert Note button on the Event Editor toolbar, then move the mouse cursor to the desired song position. The vertical position of the cursor is not important. The note may not appear directly under the cursor, but will be placed "in order" depending on the song position of nearby events. When you place a note, the default pitch is C3 and the default velocity on and off are determined by the non accented value for the current track's family as defined in the Song Notation Interpretations dialog. The length defaults to the step value. You can click and drag a note to multiples of the step value.

**Note Velocities:** As you insert notes with the mouse, you can set their velocities with the Ctrl and Shift keys. Ctrl will set the velocity to Sostenuto. Shift will set it to Emphasize and Ctrl + Shift will set it to "Hat". Each velocity value is determined in the Song Notation Interpretations window.

## Key Pressure

As with inserting notes, click on the Key Pressure button on the toolbar, then move the mouse cursor to the desired position and click with the right mouse button at the desired song position. You will see a small rectangle appear. When you insert a key pressure event, it defaults to C3 for pitch and 64 for its pressure value.

## Controller

With this function you can insert a controller of any type. Click on the Controllers button on the toolbar, then click with the right mouse button to place the controller at the desired place. When you insert a controller event, it defaults to Controller 7 (Main Volume) and a value of 64.

## Voice Change

These can be inserted and edited in the same manner as described above. When you insert a voice change, it defaults to a value of 64.

## After Touch

This event can be inserted in the same manner as other types. Click on the Aftertouch button, then click with the right mouse button at the desired position to insert it. When you insert an after touch event, it defaults to a value of 64.

## Pitch Bend

To insert a Pitch Bend event, click on the button on the toolbar. Move the mouse cursor to the desired song position, click with the right mouse button, and the event will be inserted. When you insert a pitch bend event, it defaults to 64, 0, which are the coarse and fine values respectively. This is the centre position and equates to no pitch bend.

## System Exclusive


You can create and insert System Exclusive events. When you insert the event, an “empty” Sysex will be placed at the chosen location. Double click on it to open the edit window. You can then enter the desired message. There is even a button to calculate and insert the checksum.

# Filtering System Exclusive

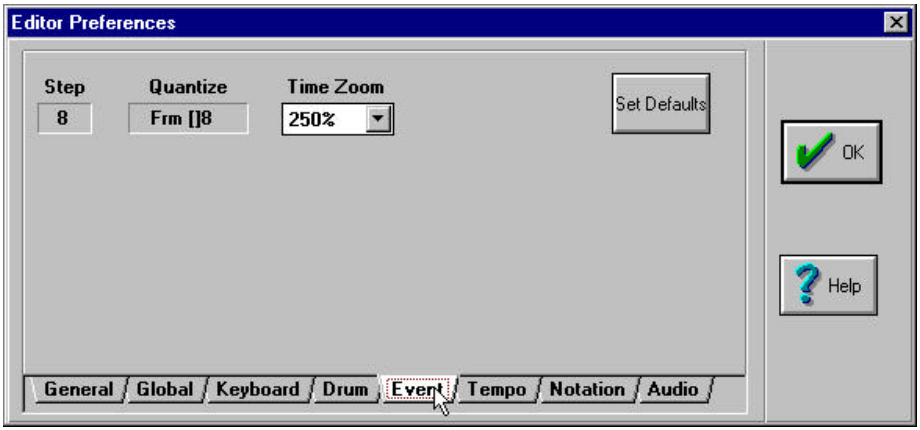
You can filter System Exclusive information from the MIDI data stream at three locations — MIDI In, MIDI Thru and MIDI Out.

You can individually filter Sysex data at these points by clicking on the check box in the appropriate dialogs. The MIDI In Filter dialog is accessible from the Song menu, or by its keyboard shortcut **Ctrl F**, and the MIDI Thru Filter dialog is also accessible from the Song menu or its

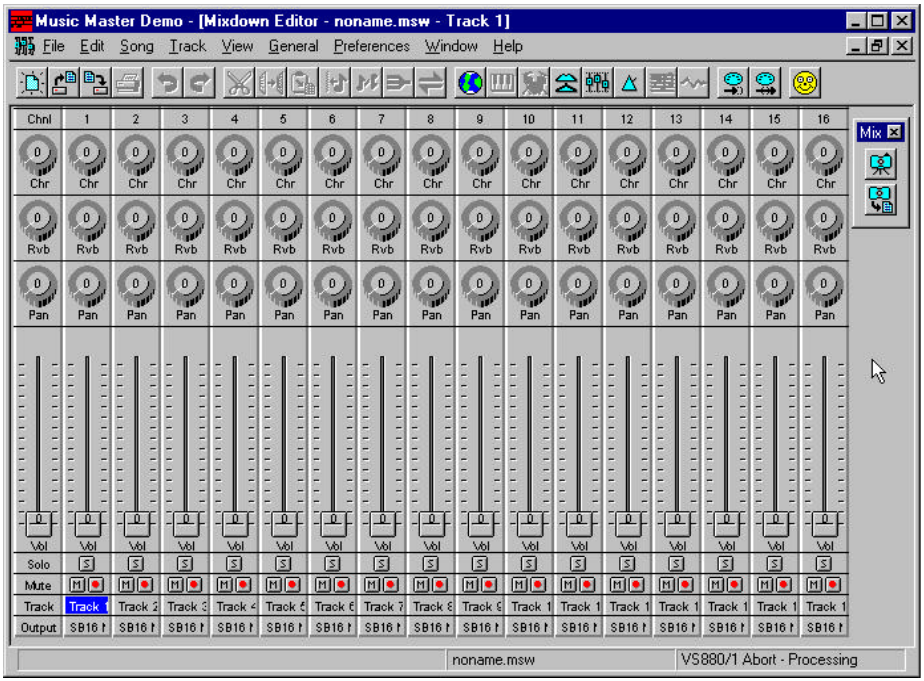
keyboard shortcut **Ctrl H**. The MIDI Out Filter dialog is accessible in the Track menu or by its keyboard shortcut **Shift F**. (Note there is a separate MIDI Out Filter dialog for each track in the song).

## Event Editor Preferences

You can set a number of preferences, or defaults for the Event editor. This is available in the menu Preferences | Editors | Event.



# Mixdown Editor




The Mixdown Editor gives you an easy means of controlling, in real time, the main parameters that determine the sound when combining or mixing song tracks. It allows you to control Volume, Pan (left to right balance), Reverb and Chorus for each track, plus a Master that controls all tracks together. The Mixdown Editor is laid out like a standard analogue mixing console with one “channel strip” per track. One major advantage that it has over an analogue mixer is that every function is automated, so you can record movements of faders and knobs as a part of your song.

To enter the Mixdown Editor, click on its button on the main toolbar, or use the keyboard shortcut **Ctrl M**. Like the Global Editor, it displays all of the tracks in the song.

## Solo and Mute


Like the Global Editor, you can use the Mixdown Editor to Solo and Mute channels. Both editors work the same way. To solo a track, click on the Solo button for the appropriate track. Both the Solo and the Master Solo buttons will change colour, and at the same time all the other tracks will mute. To turn off the solo, click on the Master Solo button to release the solo. If a track is soloed, you can unmute other tracks by clicking on their solo buttons. To mute a track when playing, simply click on its mute button (with the M in it !) . You can mute as many tracks as desired. To unmute them, click on their mute buttons again.


## Setting Values


### Volume

To move the volume fader, click and drag the “knob” to the desired position. The middle of the fader knob displays the MIDI value for the volume, with values ranging from 0 to 127.


### Pan

The pan control adjusts the “balance” from left to right. To adjust it, click inside the square around the knob, and drag the cursor around the knob. You can move it just like a real knob - watch the pointer move - it always points towards the mouse. As you move the knob, the value in the middle changes within the range from 0 to 127.


### Reverb

Above the pan knob is the reverb knob, which adjusts the reverb controller of the sound module. As with the pan knob, adjust by clicking inside the square and drag the mouse around. The pointer and numerical indicator tell you the value.

### Chorus


At the top of the Mixdown Editor window is the Chorus knob. This adjusts the value of the chorus controller value sent to the sound module. Just like the other knobs, click the mouse inside the square and drag it around the knob - the pointer will always point towards the knob.

## Audio Tracks

### Mix Level and Pan

Each channel has a fader and pan control for sending signal to the output audio driver for that track.

### Solo and Mute

Towards the bottom of each channel is a Solo button and two Mute buttons - one to perform mutes and the other to automate mutes. When you click on Solo, all other channels (VS, audio and MIDI) will mute. You can Solo a number of channels at once.

The Mute button will mute the channel. Automating mutes is described below.

## Automating your mix

Rather than using the Mixdown Editor as a “static” setting tool, you can record the movements of faders, mutes and knobs in real time and store them as part of the song. Further, the Mixdown Editor is fully interactive with other parts of your song. Any fades will be registered on the manuscript as dynamic markings (as set in the Song Notation Interpretations dialog) and visa versa.

There are two ways to automate a mix -

- Music Master scene (snapshot) automation
- Music Master dynamic automation

## Scene Automation

On the Mixdown Editor Toolbar, you will see two buttons with a camera in each. Click on the first one (Get Mix Snapshot) to capture a mixer snapshot - i.e. all the knobs and button settings are copied to a special clipboard. Then move the song position (if necessary) to the desired place and click on the other button (Paste Mix Snapshot). Each time the song is played, all mix parameters will be set to these values at that song position.

You can paste the mixer snapshot as many times as you want. For example you have one setting for the choruses and another for each verse. By using the Capture and Paste buttons, you can set your mix settings in a few seconds for the whole song.

When using scene automation, it is a good idea to place a snapshot right at the start of the song. This will ensure that it starts playing correctly, regardless of any previous settings of the mixer.

## Dynamic Automation

Music Master provides real time automated mixing of MIDI tracks in the Mixdown Editor. All faders and knobs can be automated, along with mutes. You cannot automate other switches such as Off / Pre / Post or EQ On / Off in the current version.

To automate a knob or fader, right click on it and it will turn red - the control will now record your movements when Music Master is playing. You can simultaneously record as many controls as you want.

To automate Mutes, click on the Mute Record button next to the Mute button. Mute on / off commands will be recorded as you play.

Before automating your mix, it is best to save the song in Music Master then save again with a new name. Then if you find you are not happy with your mix, you can quickly start again.

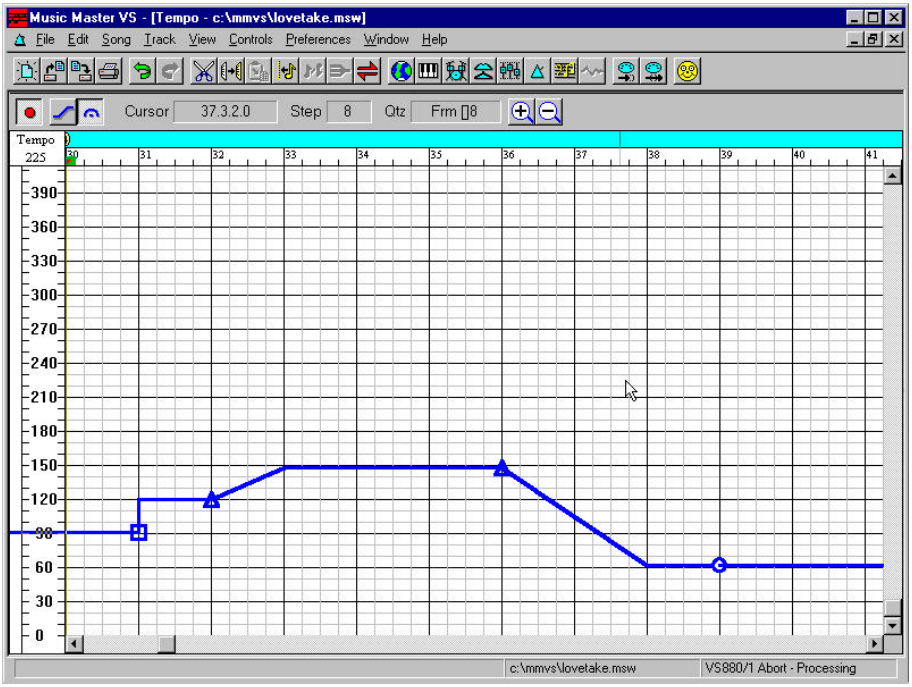
You can Undo or Redo one step at a time if necessary.

Note - You cannot record movements on the master channel at the left of the window. However you can arm several tracks and use the Master to change all of them simultaneously. Music Master will move the knobs proportionately so that they all reach 0 or 127 at the same time. To make them move linearly, hold down the **Ctrl** button as you move the mouse. You can also hold down the **Shift** key to move the master knobs without affecting any tracks. This enables you to get a wider effect on the controller being recorded.

## Editor Preferences

Because there are no Mixdown Editor Preferences, the “smiley” button will take you to the General tab on the Editor Preferences window.

# Tempo Editor




The Tempo Editor is different to all other editors in that you are not working on a track. Think of tempo as a "hidden" track that affects the way your song is played. You can use the tempo editor to insert or modify tempo changes, accelerando and rallentando and tempo pauses.

To open the Tempo Editor, click on its button on the main tool bar or use the keyboard shortcut **Ctrl T**. The program will only allow you to open one instance of the Tempo Editor at a Time. The main part of the window is a grid area. Tempo is the vertical axis, and you can use the scroll bars to move over a range from 1 Beat Per Minute (BPM) to 960 BPM. The designers of the program felt that this range of tempi would not cause too severe a restriction on composer's creativity. The horizontal axis represents Time, or song position. As

you move the mouse cursor over the grid area, the tempo is indicated at the top left of the grid, while the song position is indicated in the box near the top left of the window named “Cursor”.

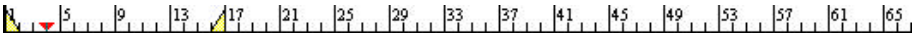

### Setting the Step Value


As with other editors in the appilcation, the Step value displayed will determine the resolution of song position for edits (i.e. the smallest variation in song position as you move the cursor). To change the Step value, move the mouse cursor over the Step box and click with the left mouse button. A window will open that allows you to select the step value you want, or turn it off. For most music, it is likely that you would only want tempo changes on bar boundaries, so click on the button marked “Bar”. Otherwise click on the desired Step then click on the [OK] button. As you move the mouse around the grid area, you will see the Cursor box changing in the steps that you selected.

## Edit Grid Area

At the right of the Tempo Editor is the Edit Grid. Here you can see the tempo data, as well as the Song Position Ruler and the Locators and Parts areas at the top. To move up and down over the available range of tempi, use the vertical scroll bar at the right of the Tempo Editor window.

### Song Position Ruler




The song position ruler is divided into measures (i.e. bars). You can zoom in (magnify the data) by pressing **Shift Z** or zoom out by pressing **Alt Z**. On the song position ruler is a red triangle. This is the current song position. When you play the song, the triangle will move, and the edit grid will be updated each Time the pointer reaches the edge of the window.

Note you can directly locate and play from any position by double clicking at the desired point.

## Locators and Parts

Just above the Song Position Ruler is the Locators and Parts ribbon, shaded in blue. Locators are a quick way to move through your song, while parts are used for editing in the Tempo Editor.

## Locators

In the locators and parts ribbon, the locators are shown as yellow ovals with a number inside them. The locators are numbered from 1 to 9 and 0. When you load the default song, they will be spaced evenly over the first 72 measures (unless you have changed them in the default song). You can move them by clicking on them with the left mouse button and dragging them to the desired position. (Note that the step value will cause the locator to "snap" to the chosen steps). Each locator can also be set by pressing Ctrl 0 - 9 and that locator will be set to the current song position.

When playing the song you can press a number on the keyboard and the song will jump to that location and continue playing. It will do this immediately unless you have enabled Delay Locator in the Sequencer Preferences dialog. When this is the case, the sequencer will jump to that location only when the currently playing section is complete. Additionally the start and end of the song can be located with the **Home** and **End** keys.

## Parts

Global Parts are defined on the locators and parts ribbon. By clicking with the right mouse button in this area, you will insert a part boundary. These appear as vertical black lines. You can drag these lines with the left mouse button to adjust the position.

Parts are used for editing. You can define Global Parts as shown above, which apply to all tracks

If you drag a part over another part boundary, the one "underneath" will be erased. To delete a part boundary, move the cursor over it until the cursor changes to a special part boundary shape. Now drag the part boundary onto an adjacent boundary or to the edge of the song and release.

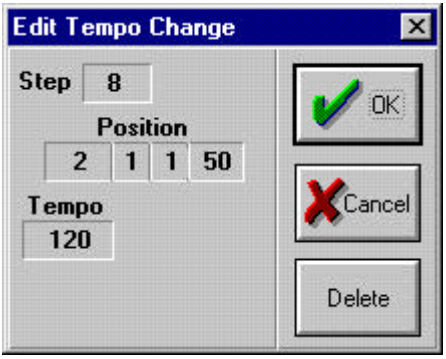
You can name Global Parts. Simply double click on the part in the locators and parts ribbon, and a window will appear into which you can type the part names.

All editing in the Tempo Editor is done only on the tempo data. Clicking with the left mouse button inside a part will highlight it ready for editing. This will highlight that vertical section of the Tempo Edit Grid.

## Entering and Editing Tempo Changes

There are three types of tempo changes allowable - a straight tempo change, a tempo grade (accelerando and a rallentando) and a pause.

## Tempo Change




To enter a tempo change, select the tempo change/ grade button on the editor toolbar move the mouse cursor to the Time and tempo position desired, then click with the right mouse button.

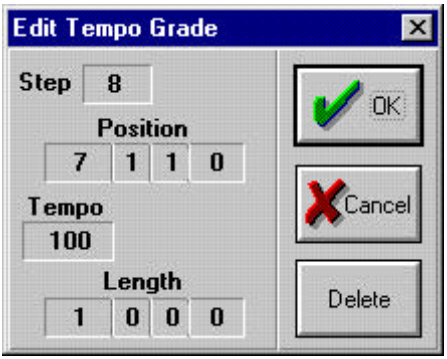
The change you have entered will affect the song until the next tempo change is encountered. As mentioned above, don't forget that the Step setting will affect how you are able to position the mouse cursor.

A vertical line will be drawn to indicate the movement from the old to the new tempo. There will also be a square placed on the line to indicate that this is a tempo change.

## Editing Tempo Changes

To edit a tempo change, double click on it and the Edit Tempo Change dialog will open. Here you can change the position and value of the tempo change. The Step value determines the "resolution" when positioning the change, and is initially the same value as the Step value for the Tempo Editor.

## Tempo Grade



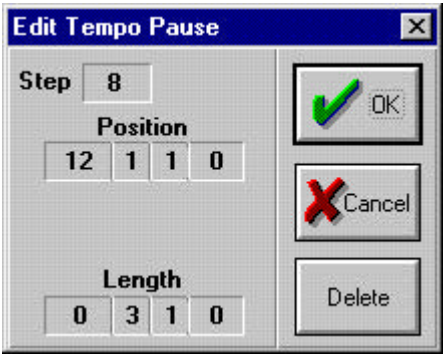

To enter an accelerando or rallentando, select the tempo change/ grade button on the editor toolbar and click and drag with the right mouse button for the desired length of the tempo grade to the chosen tempo then release the mouse button.

The starting tempo will be calculated at the button down and draw a sloping line to the end tempo. Any tempo changes, grades or pauses which occur between the start and end of the grade will be deleted. Any overlapping tempo grade will be modified accordingly. The tempo grade will now be inserted into your tempo data starting from the prevailing tempo and ending at the chosen tempo. A triangle will be placed on the line at the point where the grade starts to indicate a tempo grade.

## Editing Tempo Grades

To edit a tempo grade, double click on the triangle and the Edit Tempo Grade dialog will open. Here you can edit the length and final tempo for the grade as well as the position. The Step value determines the resolution of position and length of the grade. Step is initially the Step value for the Tempo Editor.

## Tempo Pause




To enter a pause select the pause button from the editor toolbar. Click and drag with the right mouse button over the desired area for the length of the pause. A circle will be placed on the line at the point where the pause exists to indicate a tempo pause.

This will cause the sequencer to pause at that position for the length of the pause provided that the tempo button on the transport bar is highlighted to activate the tempo map.

## Editing Tempo Pauses

To edit a tempo pause, double click on the circle and the Edit Tempo Pause dialog will open. Here you can edit the length and the start position. The Step value determines the resolution of position and length of the pause. Step is initially the Step value for the Tempo Editor.

## Tempo Record

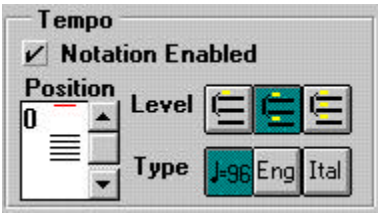
You can also record tempo changes in real Time by clicking on the tempo record button on the editor toolbar and while the sequencer is playing click and/or drag with the left mouse button in the tempo ruler area on the left of the window to record the tempo changes. When you have recorded the desired section then press stop and the recorded tempo changes will appear in the tempo editor. You may desire to "smooth" these out manually using the right mouse button in the edit grid.

## Using the Tempo Map


Once you have entered your tempo map in the Tempo Editor, you must tell the program that you want to use it. On the Transport Bar (press **F3** to display it) is the Tempo button at the left end. If you enable tempo here, the tempo map will be applied to your song i.e. it will play with all the tempo changes added. If the Tempo button on the Transport Panel is not down, the song will simply play at the tempo set in the box under the Tempo button.


You can, of course, set the tempo to a fixed amount by clicking with the left or right mouse button to decrease or increase the tempo respectively, on the tempo value in the Transport panel. The choice is to use the Tempo Editor, or the fixed tempo displayed.

## Tempo and Manuscripts

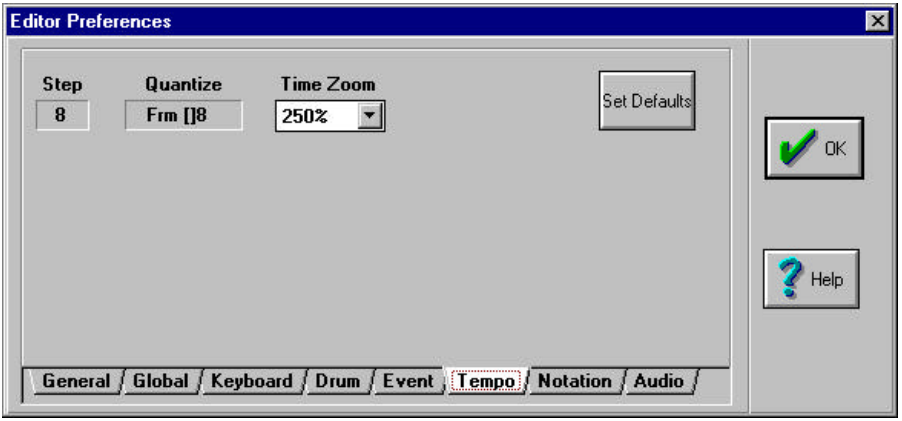



The notation editor and its printed pages will display any tempo changes entered in the Tempo Editor if the Notation Enabled box is ticked in the Song Notation Interpretations dialog and the tempo button is enabled on the transport bar.

Whenever a tempo grade occurs the symbol “Accel” or “Rall” will be displayed on the manuscript. A pause will cause a fermata to be displayed.

## Editor Preferences

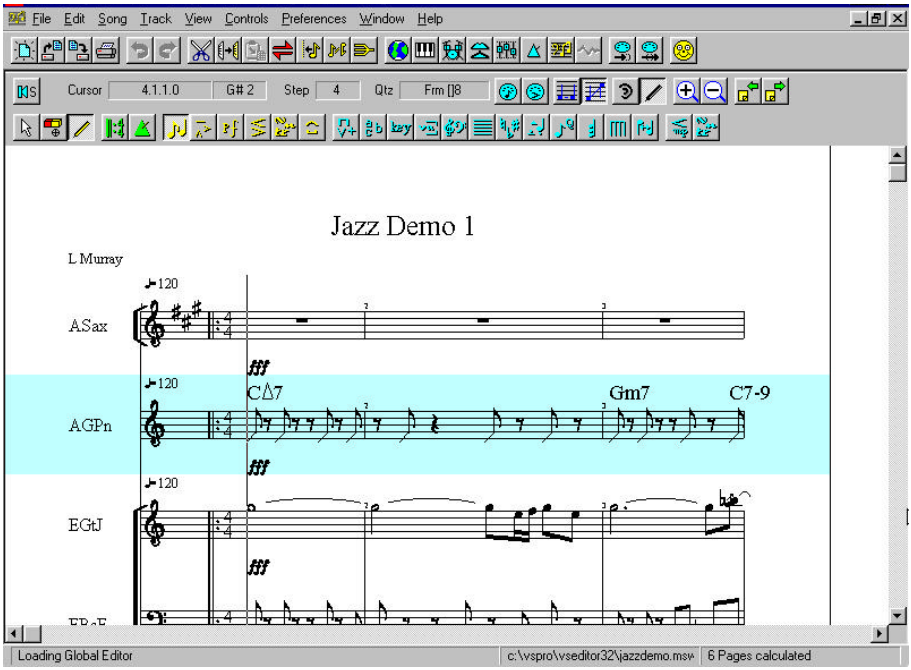
There are some defaults for the Tempo Editor - Step, Quantize and Display Zoom. You can access these from the Preferences|Editors menu and select Tempo. Alternatively, you can go direct to the Tempo Preferences by clicking on the “smiley” button.



# Section Three

# Notation

# Notation Editor




The notation editor allows you to edit your music in the form of manuscript. It will display your data as notation and is the only editor from which you can print your music. The notation editor will handle as many tracks from your song as you desire - just highlight the required track(s) in the global editor, click on the "Notation Editor" icon or press **Ctrl N** and all the selected tracks will be loaded into the Notation Editor. Note that only the active track will accept step Time or real Time input.

## Track Order

When several tracks are taken into the Notation Editor, they are arranged in family order. This can be set in the Page Layout window (see Page Layout chapter). Within any one family multiple tracks will be arranged in the order in which they were selected in the Global Editor.

## Once you have arrived...

The first things you notice as you move the cursor around the work area of the screen are as follows:-

- the cursor position is being monitored in the Cursor box (divided into measure number / beat number / step number / clock pulse)
- its position is being monitored according to the value in the step box, and
- its pitch is being monitored in the note box (chromatically)
- one of the tracks (the active track)has a blue background (if you have more than one track in the editor)

Next you will notice three toolbars. The Application toolbar is the same as that in all the other editors.

The second contains the cursor, pitch, step, boxes and the next page, previous page and notation mode buttons. This is called the editor toolbar.


The third contains all the function groups i.e.-

- Song functions (green buttons)
- MIDI Active functions (yellow buttons)
- MIDI Passive functions (blue buttons)

This is called the Notation Category Bar.

When any of these function buttons is selected a Notation toolbar appears containing all the sub functions for that button.

## Moving Around in the Notation Editor

There are several ways to move around in the Notation Editor. One way is to scroll through using the Page Up

and Page Down keys on your Keyboard, or by clicking the “Previous Page” and “Next Page” buttons on the editor toolbar. These two methods will move between pages. To move around the page that is currently displayed you can click and drag in the scroll bars to the right and at the bottom of the work area.

As with the other editors the zoom setting of the work area can be changed by using the zoom buttons or Shift Z and Alt Z keys. If the width of the notation is initially too wide when you first enter the Notation Editor, you can adjust the zoom level in the Editor Preferences appropriate to your screen resolution. Each Time you adjust this zoom level you will need to exit and re-enter the Notation Editor for these new settings to take effect.

## Editing Mode

The notation editor has three editing modes to choose from - the selection tool, the eraser and the insert. The selection tool lets you select existing objects and move them around (arrow), while the eraser lets you click on individual objects and erase them (circle with a cross), and the insert tool lets you insert the object currently selected on the notation toolbar. The cursor shape will match the object to be inserted. You can use the right mouse button to toggle between these different tools.

## Event Editing and Moving

Selecting, editing, moving and deleting an event (an event is any object that appears on your manuscript) is carried out in the same way as for all other editors. Using the left mouse button double click on the event to open the edit dialogue box - different types of events have different edit dialogue boxes. For example, the Edit Note Dialog.

As well as the OK, Cancel and Delete buttons this dialog also contains a Step box, a Position box Pitch, Velocity on, Velocity off and Length boxes. Each of these boxes have a numeric value in them which can be altered either by scrolling with the left or right mouse buttons,

or by using the left mouse button, double clicking and typing in the new value. Once the new value is entered press enter on your keyboard then click the OK button and the changes will be made. If however you wish to delete the event then click on the delete button and the event will be removed. (Note some types of events or function do not have edit dialogues).

It is also possible to move an event in pitch or position without opening an edit dialogue. Simply click and hold the left mouse button on the event and then drag it to the new position. However it may be necessary to change the value in your step window as the program will snap the event to the nearest step boundary.

A third option also exists for performing the various functions in the Edit menu. Using the left mouse button click and drag to draw a box around the event or events you wish to edit, then selecting the function you wish to perform from the Edit menu (above the application toolbar) or clicking an icon in the application toolbar.

Everything within the drawn box will be altered, according to which function you chose. If while you are drawing the box you hold down the Ctrl key on your keyboard you will be able to select the pitch range as well as the position and length of the box. Without holding the Ctrl key your box will encompass the entire track, or, if there are several tracks in the editor all of the tracks.

The final option that exists is to use the Undo and Redo buttons on the Application toolbar. But remember every Time you save your work the memory from these transactions is flushed and the transactions cannot be undone.

## Highlighting Tracks for Editing

When editing, a number of the toolbars have an “Apply to Track” button, which will do the function on highlighted tracks. To highlight more than one track, hold down the **Ctrl** button and click on the desired tracks.

## Notation Modes

All of the Notation Mode functions will recalculate the notation pages by clicking the desired button.

### Concert and Transposed Pitch

Also on the Editor toolbar to the right of the “Previous and Next Page” buttons are the “Concert Pitch and Transposed Pitch” buttons. Using these buttons will allow you to edit and display tracks in either actual pitch (or concert pitch - i.e. the note you see is how it will sound) or transposed pitch modes (for transposing instruments).

For example, in transposed pitch mode, the program will automatically display a B flat clarinet track two semitones higher than concert pitch, but as you play the track it will still play them in concert pitch to line up with the other tracks.

### Sounds and Written Mode

Next to the “Concert and Transposed Pitch” buttons are the “Sounds and Written Modes” buttons. The concept of these buttons is that your notation is shown either as it would be written and printed or in its raw form to match the way the music sounds. This affects the following four areas in the display of notation - key signatures, note ornaments, song structure and drum notation display. This can best be described in the following table.

In sounds mode, all notes are shown with accidentals as no key signatures are shown. If the instrument is a transposing instrument, it will be shown as transposed or not, based on the state of the previous pair of buttons.

Note ornaments are written out in full in sounds mode and the ornament symbol is not displayed. In written mode, the ornament notes are hidden and replaced with the ornament symbol.

In Sounds Mode the song structure is unravelled to allow different verses to have their lyrics entered and then shown underneath each other when returning to Written Mode. You will need to edit drum and

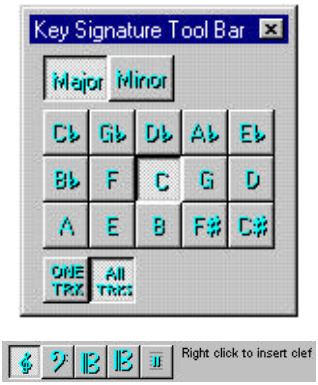
percussion tracks in sounds mode, because of the translation of the sounds note to the written note. Dragging a note to a new pitch would be very confusing if the editing was being done in written mode, as the note being displayed in the cursor position is the sounds note.

See the chart below for a tabular description.

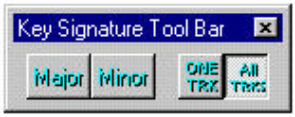
| | Key Signatures | Note Ornaments | Song Structure | Drum Notation |
|---|---|---|---|---|
| **Sounds Mode** | No Key Signatures | Notes shown in full | Linear i.e. continuous | Sounds note with normal head |
| **Written Mode** | All Key Signatures | Ornament symbols only | Structure as per written music | Written note with Drum Head |

## Positioning Toolbars

When working in the Notation Editor provided that the toolbars are not docked to the top of the frame it is possible to have more than one notation toolbar open.



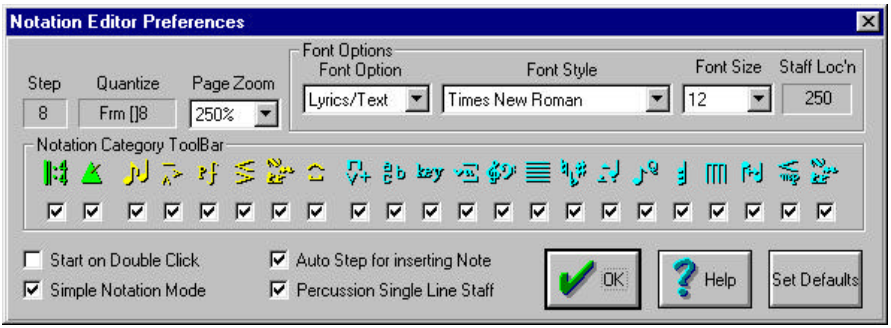

For example, if you had the key signature toolbar open and reshaped at one side of the work area and then needed to insert a note into your manuscript, you could open the notes toolbar without closing the key signature toolbar. However the key signature toolbar will become inactive and the fifteen key buttons will disappear when you open or click on a tool in the notes toolbar. You will notice that the major and minor buttons and the one track all tracks buttons are still visible and either the one track or all tracks button will be depressed, these are secondary functions of the toolbar and are essentially inactive even though depressed.




There are several notation toolbars that behave in this manner. These features apply to all notation toolbars open at the time, only the one with the tool being used is active. To reactivate the key signature toolbar click on one of its buttons and it will reactivate and all its buttons will become available again and the notes toolbar will become inactive with no buttons depressed.

Note that both the notation category, and notation toolbars are only available in the notation editor and will only work in the notation editor.

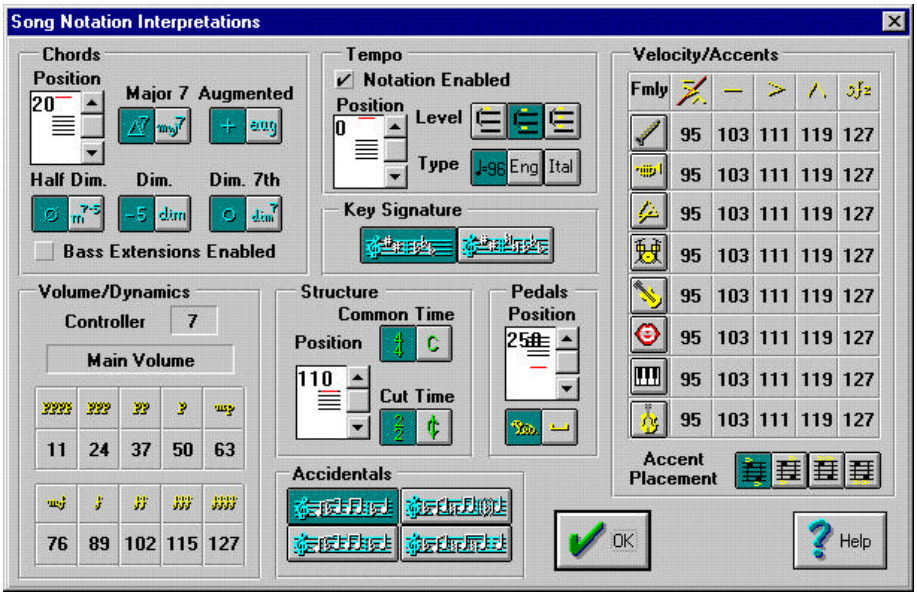
## Notation Editor Preferences




You can edit your notation editor preferences by clicking on the 'smiley face' on the main toolbar. This lets you set the default step value, quantize basis and page zoom, and also lets you set the default font for lyrics, tempo markings, bar numbers and fingering. It also lets you set whether or not you want the step to automatically change when different note values are chosen for insertion. The large section in the middle lets you choose which notation categories you will see on the notation category toolbar. Detick those you feel you will never use. The 'Simple Notation Mode' checkbox is to give you the option of the way you want to work in the Notation Editor. When it is ticked, it will give you the three edit tools already mentioned in this chapter, using always the left mouse button to edit objects, changing tools using the right mouse button. When it is not ticked, the Notation Editor will work in the same manner as the other editors, right mouse button to insert, and left

mouse button to select. This also affects the way in which notes are inserted (see Notes chapter for details).

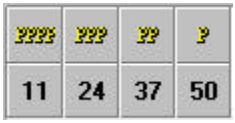
# Song Notation Interpretations




This dialog contains various fields with functions that deal with the interpretation of your MIDI data on the song level i.e. all tracks. They are as follows:-

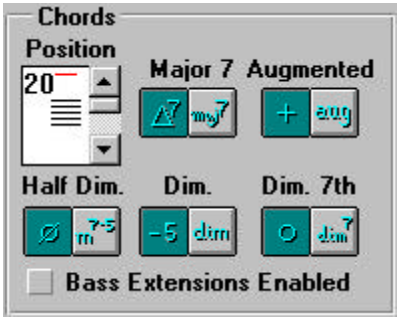
- Chords
- Tempo
- Velocity / Accents
- Key Signature
- Volume / Dynamics
- Structure
- Pedals
- Accidentals

## The Value Windows




Numerical values which occur quite commonly in this dialog can be altered in two ways. You may scroll the value in the selected window with either the left or right mouse buttons or you can double click on the window type in the new Value and then press Enter.

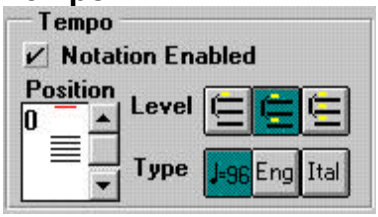
## Chords




You can also set the position for all auto and manual chords. Click on the up and down arrows to modify this position. The marker line will move up and down as you do this and the numerical value of the position will be displayed as well. The available range is 0 to 600, with 0 being above the top staff and 600 being below the bottom staff. Note that the chord position will not alter existing chord positions. It will only apply to new chord insertions.

You can also choose whether you want to display symbols or words for each of Major 7th, Augmented, Half Diminished, Diminished and Diminished 7th's. You can also toggle bass notes on or off as required by clicking in the check box. Having selected the desired options click on the O.K. button at the bottom of the dialog and the software will reinterpret the data in the manuscript.

## Tempo




Tempo display can be turned on and off by clicking in the Notation Enabled check box. The position box works in the same way as in the Chords function and determines the vertical position for all your tempo markings. The level buttons allow you to choose your tempo display frequency between, top track only, family groups only, or every track. The type buttons allow you to choose between, Numeric, English, or Italian markings. The corresponding English and Italian expressions for the tempo ranges are described in Appendix 5 at the rear of the manual. Having selected the desired options click on the O.K. button at the bottom of the dialog and The application will reinterpret the data in the manuscript.

## Velocity / Accents


This is where, for each family of instruments, you can set up accents to display automatically in the Notation Editor, and therefore work more efficiently towards printing. There are five categories of accents:-

- Nil
- -
- >
- ^
- sfz ('sforzato' or 'sforzando')

As you can see, each family has its own accents categories. There are a number of reasons for this, such as:-

(i) the way you play for some sounds is often very different to others (for example, compare the attack velocities of your brass stabs with your string pads);

(ii) the size, construction and resultant sound of instruments in different families in real life is such that there is a great deal of variation between differing instruments playing from the same page of music. Accents on one instrument sound different to those on another. At the bottom of this function field are four buttons that allow you to select the placement of the accent mark in relation to the notes. They are next to the note head, note tail, always above or always below each note. Having selected the desired options click on the O.K. button at the bottom of the dialog and The software will reinterpret the data in the manuscript.

As each note has an attack velocity anywhere between 0 to 127, it is possible to set up a great variety of ranges for displaying these accents, including locking some accents out altogether, by-passing them for more preferred ones.

As an example, let's say, for the brass family, you wanted

to include all accents except " ^ ". The table could look like this:-

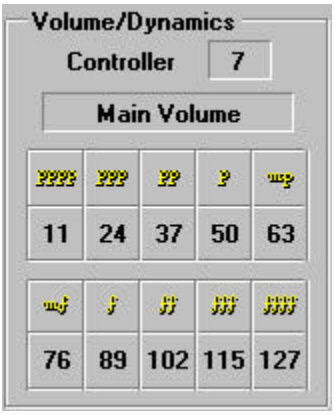

To translate these figures, it means that any note with an attack velocity between 0 and 95 gets no accent displayed. Then, any note with an attack velocity between 96 and 115, gets the " - " accent displayed above or beneath it. Next, any note with an attack velocity between 116 and 124 gets the " > " accent displayed.

Now, because the " > " accent and " ^ " both have the same maximum velocities in their range set at 124, and because the application reads first from the lower then to the higher categories in order to link notes with accents, you can see that the " ^ " accent category doesn't actually have any range at all. Any note with a velocity of 124 will be placed in the " > " accent category, and any note with a velocity of 125 will be placed in the sfz category, being one up from the 124 maximum of the " > " accent (or the redundant " ^ " category, if you like). Either way you look at it, " ^ " will not display.

How do you prevent any accent from showing ?

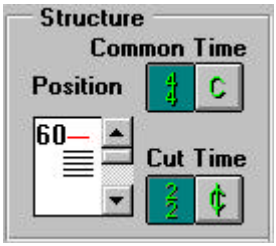
There is a simple way to do this - de-highlight the appropriate family button in the Velocity / Accent Interpretation box.

## Volume / Dynamics




This table works in much the same way as the Velocity / Accents table. You may set your Volume ranges (not to be confused with velocity ranges used in the Velocity / Accents function) to whatever sustain volume levels you want. These dynamics will then automatically display in the Notation Editor. You may define which controller will be interpreted as Dynamics. Controller 7 is defined as Main Volume, but some synthesizers use controller 11 (Expression) to create Dynamics. If you wish to place Dynamic markings on your manuscript without affecting the volume levels during playback, choose a controller number which has no affect on your synthesizers. Having selected the desired options click on the O.K. button at the bottom of the dialog and The software will reinterpret the data in the manuscript.

## Structure




Here you are able to choose how you want the only two Time signatures with a display option (common and cut common) to appear. Either as a fraction or as a symbol. Those structural symbols (e.g. repeat variations, coda, fine) which are placed above the staff can be moved higher or lower by altering the position in that field. This works in the same manner as Chords. Having selected the desired options click on the O.K. button at the bottom of the dialog and the program will reinterpret the data in the manuscript.

## Pedals


The program allows you to set the pedal marking positions on your manuscript. Click on the up and down arrows to vary this position. You also have a choice of whether you see them as lines or Ped and *. If shown as lines, both the pedal on and off are moved simultaneously as they are dragged around the screen, while they are moved independently if shown as Ped and *. Having selected the desired options click on the O.K. button at the bottom of the dialog and the program will reinterpret the data in the manuscript.

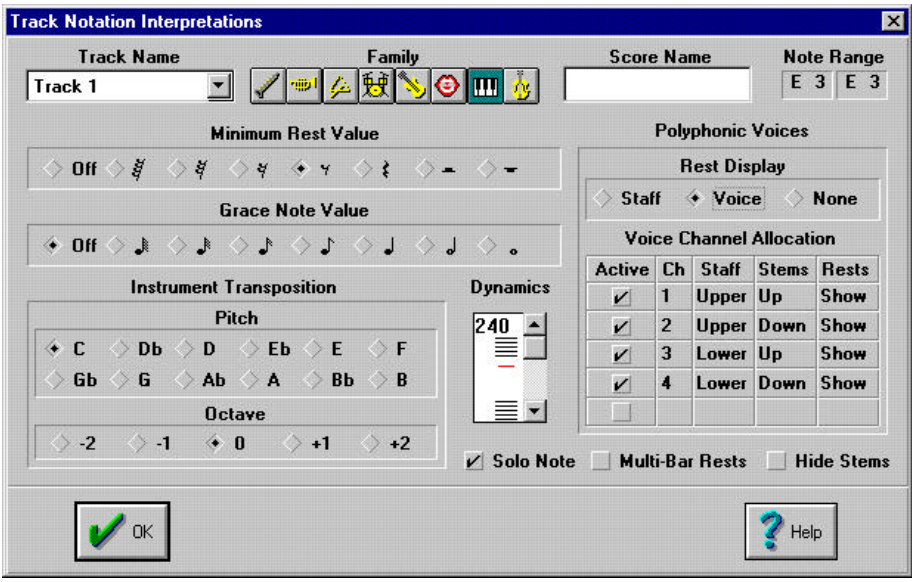
## Accidentals


You are given 4 options for displaying your accidentals - traditional, reminder, no key, and not in key. Accidentals set in a bar apply until the next barline at which point the accidentals are cancelled and return to their original status.

Traditional accidentals means that accidentals are only marked on their first occurrence in any bar. This is also true of reminder accidentals, however, this also puts brackets around the first occurrence of this pitch when it reverts in subsequent bars.

**No key accidentals** means that every note will be treated as if it has a key signature of C Major. Not in key accidentals means that every accidental (regardless of the number of times it occurs in a bar) will be shown with the appropriate accidental symbol. Having selected the desired option click on the O.K. button at the bottom of the dialog and the program will reinterpret the data in the manuscript.

# Track Notation Interpretations

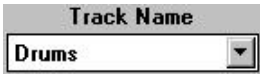



This Window contains various fields with functions that deal with the interpretation of your MIDI data on the track level i.e. one track at a Time. They are as follows:-

- Track Name
- Family
- Score Name
- Note range
- Minimum Rest Value
- Polyphonic Voices
- Grace Note Value
- Instrument Transposition
- Dynamics
- Solo Note
- Multi Bar Rests
- Hide Stems

We will deal with each field separately below.

## Track Name Window




This window displays the Name of the current track so that any changes made will be assigned to that track. If you click on the down arrow a list of all the tracks in your current song will be displayed. Simply click on the track name that you wish to alter and the program will assign any changes made in the Track Notation Interpretations dialog to that track. This allows you to make changes on multiple tracks without having to close the dialog and re-open with another track.

## Family

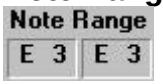

This field of buttons are used for selecting the instrument Family which is to be assigned to the chosen track. When you record a track, the program will allocate a family to the track using the most sensible choice based on the voice name. This may not be the family you wanted. Simply click on the desired family button and the chosen family will be assigned to that track.

The family affects how note accents will be displayed as these are family-related. Also when you print a conductor score, the tracks are grouped according to family, rather than just in the order in which they appear in the Global Editor. The family order can be changed in the Page Layout dialog [see Page Layout chapter].

## Score Name

This Window is for displaying the score name assigned to the chosen track. In order to change the score name, click in the window and type in the new name. When you return to the Notation editor the new score name will be displayed providing that Score Name is activated in the Page Layout Menu, [see Page Layout chapter].

## Note Range



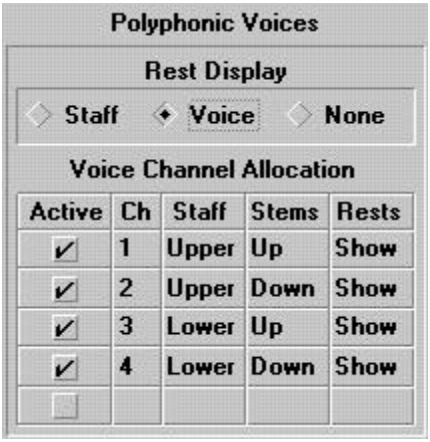

These two Value Boxes are used to display the note range for the chosen track. The values are usually set as part of the Musical Instrument dialog under the track menu but can be altered here if you desire. Simply scroll the value with the right or left mouse button to achieve the desired note range. The left hand box is for lowest note, and the right hand box is for highest note. At this point they are for information only, but are planned to produce warnings in the future if you attempt to write outside the range of the instrument.

## Minimum Rest Value


When you record a song the data will be shown in the Notation editor extremely accurately. However you may wish to tidy up the appearance of the song without altering the actual data. This set of fields will allow you to select the shortest rest value that you would like to have applied to the chosen track.

Once you have made this selection, the program will not display a rest shorter than the value you have chosen in this field. It will move some notes, lengthen others, but a fast run of short notes with no rest between will remain unaffected.

## Polyphonic Voices




You can record more than one voice on a track. You can assign MIDI channel, Staff, Stem, and Rest rules to each track. At the top of the field is the rest display box containing three mutually exclusive options

- Staff
- Voice, or
- None

If you choose Staff all rests in the chosen track will be calculated on an overall staff basis. If you choose Voice, the rests will be calculated for each Voice in the track. If you choose None, no rests will be displayed in the track.

You may have up to five Polyphonic voices in each track. To activate these voices you must first click on the check boxes in the active column. These voices are distinguished by their MIDI channel number. To assign these numbers click in the channel column for each voice to scroll them to the desired value.

The staff column allows you to control which staff a note will appear in, thus allowing you to display crossovers. The options here are Upper, Lower or Auto. The Stem column allows you to choose the stem direction either Up, Down, or Auto, for each voice. If, in the chosen track, a note exists with a different MIDI channel number to those selected in the Channel column the

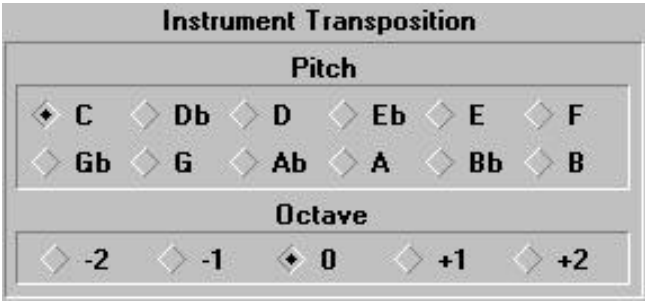
program will assume a stem direction of Auto. If **Auto** is chosen the program will assign a stem direction according to the pitch of the note and which staff it appears on.

For each voice you can also choose to Show or Hide Rests. This column only applies if the rest Display box shows Voice rests. When inserting notes using the mouse change the out channel in the global editor for that track to the MIDI channel corresponding to the voice you wish to insert, the program will then insert all the notes according to the settings in the Polyphonic Voice field.

## Grace Note Value


This function is similar to the Minimum Rest function but deals with notes instead of rests. It will allow you to select a note length below which all notes will appear as Grace notes or acciaccaturas. Simply click on the check box for the desired note length and all notes shorter than that length will be reinterpreted as grace notes.

## Instrument Transposition




This field is used for displaying and setting pitch for transposing instruments. If you have selected the instrument for the track using either Musical Instruments or the Voice Map dialog the settings for this box will be set automatically. However if you wish to, you can change the settings here.

Let's say you decided to change a track from a Keyboard track to a Tenor Sax track you would choose a transposition setting of B flat in the Pitch section and +1 in the Octave section as a tenor sax is written up a major 9th from where it sounds. Tthe manuscriptwill now be displayed in this track in the correct key for a Tenor Sax.

## Dynamics


This field allows you to set the display position for your dynamics. Click on either the up or down arrow to change the display position of your dynamics. The available range is 0 to 600, where 0 is above the top staff and 600 is below the bottom staff. The program automatically chooses a value which is just below the top staff. For vocal tracks which have lyrics, you should set this value to a small value so that the dynamics will be placed above the top staff and avoid clashes with the lyrics.

## Solo Note

This check box allows you to display single line tracks with no overlapping notes, without having to change the MIDI data. This function is primarily designed to assist in the display and printing of music for single line instruments that are not able, by conventional means, to have two notes sounding at once, and would therefore not want multiple notes or chords showing on the music. To sweep such indiscretions under the "visual" carpet click on solo note and that track will not show any note overlaps; thus eliminating the need to alter your MIDI data.

## Multi Bar Rests

This check box allows you to select Multi Bar Rests for your chosen track. If you have a section of manuscript which contains several bars of rest clicking on this box will redisplay them as a single bar, containing a number signifying the quantity of bars to the next note. However this only occurs when you are displaying a single track. If more than one track is in the Notation editor the Multi Bar Rest option will be ignored.

If a structure event is encountered e.g. repeat, the program will split the Multi Bar Rest at that point. To enter notes into the blank bars Multi Bar Rests must be turned off.

## Hide Stems

This option allows you to display your notes in the chosen track without stems. This could be useful when you are wanting to teach music and have your students enter the stems to ensure the bar adds up to the correct number of beats according to the Time signature.

# Notation Category Bar

The functions in the “notation Editor” are generally divided into three categories:

- Song functions (Green Buttons), will affect all of your tracks simultaneously.
- MIDI active functions (Yellow Buttons), will affect the way the MIDI data plays.
- MIDI passive functions (Blue Buttons), will affect the display and printing of your MIDI data but will not affect the way it plays.

## Song Categories

These are the group of green buttons on the Notation Category Bar that are used to insert structure and tempo data into your song. From left they are:

- Structure
- Tempo

Each of these categories will be dealt with in its own chapter.

## MIDI Active Categories

These are the group of yellow buttons on the Notation Category Bar that are used to insert MIDI information into your notation and therefore affect the way the song plays. From the left they are:

- Notes
- Note Accents
- Dynamics

- Dynamic Grade
- Note Ornaments
- Other Ornaments

Each of these categories will be dealt with in its own chapter.

## MIDI Passive Categories

These are the group of blue buttons on the Notation Category Bar that are used for interpreting the information in your manuscript and do not affect your song as it plays. From the left they are:

- Playing Techniques
- Lyrics / Text
- Key Signature
- Octaves
- Clefs
- Staves
- Enharmonic Shift (accidentals)
- Articulation
- Display Quantize
- Chords
- Rhythmic Beaming
- Resizing Measures
- Re-interpret Dynamics
- Re-interpret Ornaments

Each of these categories will be dealt with in its own chapter.

# Song Structure Toolbar


The first button on the Notation Category Bar is the Song Structure button. The structure acts as a transparent overlay on all your tracks which will affect the way your manuscript is displayed and printed, but does not affect the way your music plays. This function is used to insert Song Structure information into your manuscript such as Time Signature, Codas, Repeats, etc. for display and printing purposes only.

The functions on this toolbar are divided into two types:- single step and multi-step. Single step functions insert only one structural event e.g., Time signature, double bar line. Multi-step functions insert multiple structural events to complete that function e.g., D.S. al Finé. They are navigational in nature and are entered in the order in which they are processed.

When you are inserting multi-step functions e.g. Codas and Repeats, you CAN NOT switch to another function until the current one is completed.

## How do you set up a Song Structure ?

Basically, you select the desired function, move the mouse pointer to the bar into which you wish to insert the structural event and using the right mouse button (left in 'Simple Notation Mode') click on that bar. Of course there are some extra details that will be helpful to know about and these will be dealt with as we proceed. You may notice that as you move the mouse pointer around that it is being followed, (depending on which function is selected) by a variety of symbols. This will remind you which function is active and, for multi-step functions, which step you are up to.

AN IMPORTANT NOTE ABOUT DELETING STRUCTURES. When you go to delete a structural event

which is part of a multi-step function all of the structural events which made up that function will be deleted to maintain the data integrity. This occurs because all the events in any multi-step function are inseparably linked together.

AN IMPORTANT NOTE ABOUT SONG STRUCTURE. Remember that when you insert information on this screen:-

- You are not inserting MIDI data
- The information you do insert is calculated and memorized in “bars”, not in “measures”.

In Song Structure, you are dealing with just that - a “structure”, not a sequence of MIDI events like notes, pitch bends and pedals. Unlike all other editors in the application where your data appears as a continuous stream, the notation editor allows you to insert repeat markings to display identical repeated sections of MIDI data once.

An example here may help remove confusion. Let’s say you have recorded a song that is 16 bars long, but those 16 bars are repeated 3 times. When you play the song in any other editor you will finish the song at the end of the 48th “measure”. That is, as far as the MIDI data is concerned, the song keeps on going as if there was no repeated material at all. BUT, you have ended at the 16th “bar” for the 3rd Time if you have inserted repeat markings in the notation editor. Therefore, think of the structural information you insert in the notation editor as a “transparent” overlay on your MIDI data.

When you select the Song Structure button from the Notation Category Bar the Notation toolbar opens containing the following buttons. Starting from the left they are -

- Time Signature (single step)
- Anacrusis (single step)
- Section (single step)
- Section End (single step)
- Repeat (multi-step)
- Variation Repeat (multi-step)

- D.S.. al Coda (multi-step)
- D.C.. al Coda (multi-step)
- D.S.. al Finé (multi-step)
- D.C.. al Finé (multi-step)
- Double Bar (single step)

We will deal with each of these buttons separately below.

## Time Signature

(MIDI Passive) This function is used to insert Time Signature marks into your manuscript. When you select this button a Value Window and six numbered buttons, 1, 2, 4, 8, 16, and 32 will open on the right hand end of the toolbar. These are used to select Time signature.

To insert a Time Signature into your manuscript select the Time Signature button. Edit the number in the Value Window to achieve the desired beat quantity (the top number) and then select one of the numbered buttons for the beat length (the bottom number). When you have the desired Time Signature move the mouse pointer to the beginning of the bar you wish to put the Time Signature into. Using the right mouse button (left in 'Simple Notation Mode') click once. Your new Time Signature will be inserted at that point. This will cause the software to recalculate the pages in the notation editor as the position of each bar line needs to be changed.

There is no Edit function associated with Time Signatures, if you wish to change an existing Time Signature select the new one and insert it on top of the old. The program will delete the old Time Signature and insert the new.

## Anacrusis

(MIDI Passive) An Anacrusis should only be placed in the first bar of a song to prevent the display and printing of any information including rests prior to that point. For example if your song starts on the fourth beat of the first bar you would place an Anacrusis on the beginning of the fourth beat so that the first three beats of the bar would be

empty space. Inserting an Anacrusis automatically deletes one already existing in the song. Events prior to the Anacrusis will not be displayed or printed.

To insert an Anacrusis, select the Anacrusis button from the Notation toolbar. Move the mouse pointer to the point in the manuscript where it is to be applied. Check the Step Value as this can affect the placement. Using the right mouse button (left in 'Simple Notation Mode') click once and the Anacrusis will be inserted. An Anacrusis cannot be deleted. If you wish to remove one, just insert one at the beginning of the first bar and the old one will be removed. If you have already inserted a double bar line, the corresponding portion of the final bar will not be displayed.

## Section

(MIDI Passive) This function is used to insert Section markers into your manuscript for ease of navigation especially if it is a very long work such as an Oratorio or Opera. To insert Section marks choose the Section button from the Notation toolbar. Select the letter you want by editing the display in the Value Window. You can choose any letter from A onwards. Move the mouse pointer to the point where you would like the marker placed. Using the right mouse button (left in 'Simple Notation Mode') click once and the chosen letter will be inserted into your manuscript.

To Edit a Section mark double click on it to open an event edit box containing an O.K. button and a delete button. Hit delete and then reinsert a new mark.

## Section End

(MIDI Passive) This function is used to insert Section End bar lines into your manuscript for display and printing purposes. Section End bar lines are thin double bar lines and can be placed anywhere you desire.

To insert a Section End bar line select the Section End button from the Notation toolbar. Move the mouse pointer to the bar line that you wish to convert to a

Section End. Using the right mouse button (left in 'Simple Notation Mode') click on the chosen bar line and it will be converted to a Section End bar line.

To delete a Section End double click on it to open the edit event dialogue and press the delete button.

## Repeat

(MIDI Passive) This function is used to insert standard Repeats into your manuscript. Remember that this is a MIDI passive function so you must first have created a repeated set of MIDI data to apply it to. When you select this button a Value Window and two buttons will appear on the right hand end of the toolbar. The value in the window can be edited to select the number of times you want the section repeated. The two buttons indicate which symbol is to be inserted next. Remember also that this is a multi-step operation and you must not change functions before completing all the steps.

To insert a Repeat select the Repeat button from the Notation toolbar. Set the number of times you want to repeat the section. Move the mouse pointer to the beginning of the section to be repeated. Using the right mouse button (left in 'Simple Notation Mode') click once, then move to the end of the section to be repeated and click again. As you insert the symbols into your manuscript you will notice that the symbol following the pointer changes to indicate which symbol is to be inserted next. Also the two buttons next to the value window on the Notation toolbar will change their highlighting. When you have inserted the Repeat symbols if the section is to be repeated more than once a small number in parentheses will appear above the first bar of the repeat indicating the amount of times the section is to be repeated.

To edit a Repeat double click on one of the Repeat bar lines this will open an Edit event dialogue box containing an O.K. button and a delete button. When you delete a Repeat all elements of the Repeat will be deleted at once.

## Variation Repeat

(MIDI Passive) This function is used to insert Variation Repeats into your manuscript. When you choose this function a Value Window and two buttons will appear on the right hand end of the Notation toolbar. The window is for selecting the number of repeats to be inserted into your manuscript. The two buttons which cannot be selected manually will automatically display which step of the repeat process is to be inserted next.

To insert a Variation Repeat into your manuscript you must first select the number of repeats required. This is done by editing the number in the Value Window. Move the mouse pointer to the bar in your manuscript where the start repeat bar line is desired. Using the right mouse button (left in 'Simple Notation Mode') click once, the start repeat bar line will appear. The number of repeats will show in brackets over the bar line. Next move to the bar where the 1st Time bar sign is required. Using the right mouse button (left in 'Simple Notation Mode') click once and the first Time bracket will appear over that bar. Next, insert the 2nd Time bar beginning point. If it is after the 1st Time bar, the 1st Time bar bracket will automatically end at the previous bar and will add a repeat sign, as well as prepare the 2nd Time bar bracket. Continue this process until repeats have been inserted.

Be careful where you choose to place the repeat symbols. If, for example, you attempt to enter the 3rd Time bar before the 1st Time bar, the program will bring up an Error message telling you it cannot be done. You can, of course, enter a variation Time bar at the same bar as another variation Time bar, and if you enter three or more successive Time bars at the same bar, they will be displayed as a "range", e.g. 3-5. You cannot enter the last variation Time bar in the same place as any other Time bar, for the simple reason that it is the "last Time" any repeating is done - the music continues on from that point. You will notice as you move the mouse pointer round your manuscript, that each Time you insert a step, the symbol following the pointer changes to display the next symbol to be inserted, as do the two buttons to the right of the Value Window.

As Variation repeat is a multi-step process involving several insertions to complete the function, it may not be edited other than by deleting it and starting again. If you make an error while inserting the marks, you must complete the process then double click on on one of the elements to bring up an Edit Event dialogue box. This will allow you to delete the entire Repeat structure and start again.

## Codas and Finés

These functions are a form of repeat. There are four buttons representing the four combinations of Da Capo, Dal Segno, al Coda and al Finé. In English, these are From the Beginning, From the Sign, To the Coda and To the Finish Sign. After you select the desired button move the mouse pointer down to the manuscript. You will see the various symbols involved in the function following the pointer. This will prompt you to enter the structure events in the order in which they will be processed. Point to the bar line and using the right mouse button (left in 'Simple Notation Mode') click once. The appropriate symbol will appear.

As with variation repeats you must follow the process to its conclusion, you may not elect to skip a step. The symbol with the pointer, is the next step you are expected to insert. The application will help you if you try to insert the symbols in the wrong order by bringing up an error message dialogue box explaining in general where the symbol may be placed. Following is a brief description of the steps involved in inserting the various codas and finés, in the order the software will expect to insert them.

### D.S. al Coda

Firstly insert the **D.S. al Coda** sign, then insert the **S** sign. The S sign must be in front of the D.S. al Coda sign. Finally insert the **To Coda** sign. The To Coda sign must be between the S sign and the DS al Coda sign.

## D.C. al Coda

Firstly insert **D.C. al Coda** sign, then insert the **To Coda** sign. The To Coda sign must be before the D.C. al Coda sign.

## D.S. al Finé

Firstly insert the **D.S. al Finé** sign then insert the **S** sign. The S sign must be in front of the D.S. al Finé sign. Finally insert the **Finé** sign. The Finé sign must be between the S sign and the DS al Finé sign.

## D.C. al Finé

Firstly insert **D.C. al Finé** sign then insert the **Finé** sign. The Finé sign must be before the D.C. al Finé sign.

As with all other multi-step functions you cannot edit them. If you make an error complete the remaining steps of the function, then double click on one of the elements of the function. This will open an Edit Event dialogue box which will allow you to delete the entire structure, you may then start again.

## Double Bar

(MIDI Active) This button is used for inserting double bar lines into your manuscript. Double Bar lines are used to signify the end of a piece of music. This is MIDI active in that when the sequencer encounters a Double Bar line, playing of the song stops.

To insert a Double Bar line select the Double Bar button from the Notation toolbar. Move the mouse pointer to the bar line in the manuscript that you wish to convert to a Double Bar line. Using the right mouse button (left in 'Simple Notation Mode') click once, and that bar linewill be changed to a Double Bar line.

To edit or change a Double Bar line you must double click on it to open an Edit Event dialogue box. This will allow you to delete the Double Bar line and then you may insert a new one at the correct position. It is

important to note that as this is a MIDI active function, if you insert a Double Bar line before the end of your music it will not play past that point.

# Song Tempo Toolbar


Selecting this button from the notation category bar will open the tempo toolbar. This toolbar allows you to insert various tempo markings into your manuscript without having to open the tempo editor. The tempo toolbar contains three buttons for tempo related functions. These are:

- Tempo Change
- Tempo Grade
- Tempo Pause

**Note** - The tempo button on the transport bar must be highlighted for changes to be visible on your manuscript.

Each button will be dealt with separately below, however each of the functions described below can also be performed in the tempo editor if you so desire. It must also be remembered that for any of these functions to work when you are playing a song or appear on your manuscript the tempo button on the transport bar must be highlighted.

## Tempo Change

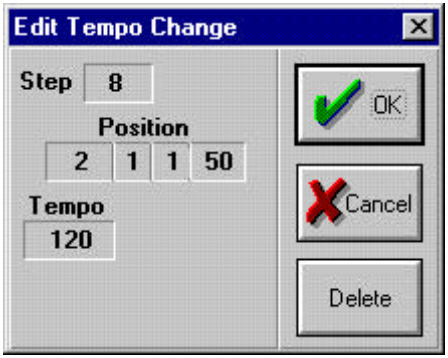
(MIDI Active) The tempo change button allows you to insert immediate changes of tempo into your tempo data and manuscript. When this button is selected a value window will open to allow editing of the tempo value.

To insert a Tempo change first set the value in the value window to achieve the desired tempo. Next move the mouse pointer to the position in your manuscript where the tempo change is desired. Using the right mouse button (left in 'Simple Notation Mode') click once and the tempo will be set to the chosen value at that point.

If the value in the value window is the same as the current tempo at that point of the song, no tempo marking will appear on your manuscript.

It is also important to note that if you insert a tempo change within the bounds of an existing tempo grade that tempo grade will be terminated at that song location and tempo, and the chosen tempo change will be inserted.

### Editing Tempo changes




To move a Tempo Change, simply click and drag it to its new position.

To edit a tempo change, double click on it and the Edit Tempo Change dialog will open. Here you can change the position and value of the tempo change. The Step value determines the "resolution" when positioning the change, and is initially the same value as the Step value for the Notation Editor.

## Tempo Grade


(MIDI Active) The tempo grade button allows you to insert rallentando and accelerando into your manuscript and tempo data. When this button is selected a value window will open to allow editing of the tempo grade end value.

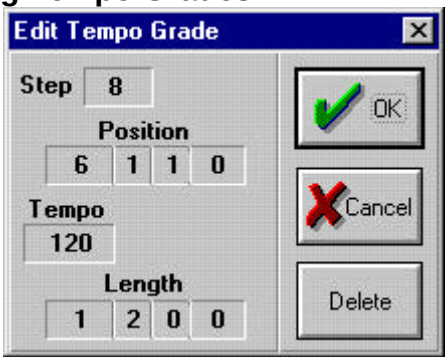
To insert a tempo grade first edit the value in the value window to the desired tempo for the end of the tempo

grade. Next move the mouse pointer to the point in your manuscript where you desire the tempo grade to commence. Using the right mouse button (left in 'Simple Notation Mode') click and drag for the desired length of the tempo grade then release the mouse button. The tempo grade will now be inserted into your tempo data starting from the prevailing tempo and ending at the chosen tempo.

If you choose a decrease in tempo, the program will automatically insert a Rall sign as well as the chosen value. Likewise if you choose an increase in tempo the software will automatically insert an Accel sign and the chosen tempo value. If the chosen value for the end of the grade is the same as the value at the beginning of the grade no markings will appear.

Remember that for the tempo grade marking to appear on your manuscript the tempo button on the transport bar must be highlighted.

## Editing Tempo Grades



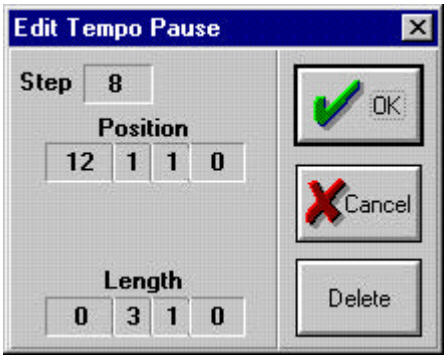

To move a Tempo Grade, simply click and drag it to its new position. Note its length will not change if moved this way.

To edit a tempo grade, double click on it and the Edit Tempo Grade dialog will open. Here you can edit the length and final tempo for the grade as well as the position. The Step value determines the resolution of position and length of the grade. Step is initially the Step value for the Notation Editor.

## Tempo Pause

(MIDI Active) The tempo pause button is used to insert pauses into your manuscript and tempo data. To insert a Pause select the pause button , move the mouse pointer down to the place in your manuscript where the pause is required. Using the right mouse button (left in 'Simple Notation Mode') click and drag for the desired duration of the pause then release the mouse button. The pause will now appear on your manuscript, and the sequencer will pause during playback provided that the tempo button on the transport bar is highlighted.

### Editing Tempo Pauses




To move a Tempo Pause, simply click and drag it to its new position. Note its length will not change if moved this way.

To edit a tempo pause, double click on it and the Edit Tempo Pause dialog will open. Here you can edit the length and the start position. The Step value determines the resolution of position and length of the pause. Step is initially the Step value for the Notation Editor.

# Notes Toolbar

The notes toolbar you will see is dependant on whether you have 'Simple Notation Mode' ticked in Notation Editor Preferences. Each of these will be dealt with in turn.

## Normal Editing Mode


(MIDI Active) This toolbar is used to insert notes of any length into your manuscript using the mouse only. The functions in this toolbar are divided into two groups. The first group is the actual note value. The second group is for the type of note i.e. dotted note, normal note and triplet note. The triplet "Note Group" is included here as it is the most commonly used note group, if you require a different note group these can be inserted from the Note Ornaments Toolbar [see Note Ornaments chapter].

## Inserting Notes

This software works slightly differently to other notation software. Firstly, rests are automatic - you never have to insert rests. Also, notes are inserted at the position that you click with the mouse (not as the "next" note position in the bar).

When inserting notes, you should refer to the Cursor box on the Editor Toolbar - this shows the position and pitch value of the mouse cursor as you move it over the manuscript. Also, note the Step value shown on the toolbar will determine where the notes can be placed. Step defines the resolution or "snap" of the insert position when placing notes. As you select different note lengths to insert, the Step value will automatically change to suit. However sometimes you may have to change the Step to enter syncopated rhythms (see below for more detail).

The Cursor box shows the current mouse position in Measures (bars), beats, steps and clocks. The length of each beat in a measure is equal to the denominator (bottom number) of the Time signature e.g. in 3/4 and 4/4 Time, each beat is a 4th note (crotchet) and in 6/8 Time, each beat is an 8th note (quaver). The Steps in the Cursor box is determined by the Step Value box to the right. For example - if the Step Value is set to 8, there are two steps per beat in a 4/4 measure, or if the Step value was 16, then there are 4 steps per beat. The Clocks value is normally Zero unless you set the Step Value to Off (clocks are the smallest unit of time in this software).

To insert a note into your score, select the desired note value i.e. 1/8th note, 16th note etc., and the desired note type i.e. dotted, normal or triplet, then move the mouse cursor to the position on your manuscript (remembering to check the position in the cursor and pitch windows on the toolbar). Then click with the right mouse button to place the note - if your keyboard is turned on, you will hear it sound as you insert. The selected note will now appear on your manuscript.

**Note Velocities**: As you insert notes with the mouse, you can set their velocities with the Ctrl and Shift keys. Ctrl will set the velocity to Sostenuto. Shift will set it to Emphasize and Ctrl + Shift will set it to "Hat". Each velocity value is determined in the Song Notation Interpretations window.

In the Track Notation Interpretations window, the Minimum Rest Value is set initially to an 8th note (quaver). This means that you cannot insert notes less than an 8th note in length without them appearing as 8th notes. They will play correctly, but the application will change how they look to obey the rule established in this window. If you wish to see single 16th notes on the notation with 16th note rests, change the minimum rest value in the Track Notation Interpretations window.

A helpful tip for inserting notes this way especially if the type of note is to be a triplet, is to set the step Time to match the note value so that the cursor readout will measure in increments of that value [see Basics chapter]. When you insert notes, the rests around the inserted

note are calculated and displayed automatically, and the screen will adjust to allow the correct amount of space for the new note and it's accompanying rests. The Edit Box for notes was dealt with in the Editing MIDI Events chapter.

## Simple Notation Mode


In this mode, each of the note and rest values are shown individually on the notes toolbar except for triplets. In this mode triplets will be entered using the Note Ornaments toolbar (see that chapter for more details). Notes and rests are entered sequentially in the bar and 'butt up' to the note or rest preceding it. If you place a note at an existing location it will be added to the chord and will take on the duration of the notes already in that chord. This has the advantage that you don't have to be too accurate ensuring the mouse cursor is reading the correct insert location before inserting the note, allowing notes to be inserted more rapidly. If a note value smaller than the minimum rest value is chosen, the minimum rest value is automatically adjusted. Similarly if syncopated rhythms are entered, the rhythmic beaming is automatically adjusted to show the notes as they have been entered. You insert the note using the left mouse button, and you need to ensure that the insert tool is selected.

**Note Velocities**: As you insert notes with the mouse, you can set their velocities with the Ctrl and Shift keys. Ctrl will set the velocity to Sostenuto. Shift will set it to Emphasize and Ctrl + Shift will set it to "Hat". Each velocity value is determined in the Song Notation Interpretations window.

## Inserting Drum Notes

An important (but perhaps initially confusing) feature of inserting drum notes in written mode is that the notes in drum tracks still appear as the notes on which they were originally played (i.e. in sounds mode). The reason for this is to avoid confusion in cases where an instrument which has only one option for its written

note (as would be read by a live drummer from a chart) may be played by sounds accessed from different notes from your drum machine.

For example, let's presume your drum machine has three kick drums, their played notes being G#3, A3 and A#3 respectively. Let's also presume that in this particular song you have all three kick drums playing (not simultaneously) at different parts of the song, to suit the moods of the song. Then, whilst you were in WRITTEN mode, you wanted to insert a kick drum note in a bar (bearing in mind that the kick drum is normally notated in the lowest space (A) of the bass clef). You must insert the PLAYED NOTE, not the WRITTEN note i.e. insert the G#3, A3 or A#3.

One method to overcome this complication is to select the desired drum sound to be inserted from the right hand drop down list (drum kit) in the Select MIDI Instrument window. This will "lock" the pitch to be only this pitch for inserting notes, so that no matter where you enter these vertically they will always be inserted at the correct pitch. All you have to do then is ensure that you are entering them at the correct time location in the bar. When you are ready to insert a different drum sound, reopen the "Select MIDI Instrument" window in the Track menu and select the desired drum sound from the list. This will "lock" the pitch to be this drum sound and insert notes as shown above.

Selecting percussion sounds (as opposed to drum sounds) will cause the staff to be changed automatically to a single line percussion staff. If this is not what you desire, you can change it back to a 5 line staff by selecting this from the staves button (see Staves Chapter for more details).

# Note Accents Toolbar


(MIDI Active) This toolbar is used to insert Note Accents into your manuscript, the selected symbol will be inserted into your manuscript and the MIDI data for that section will be altered.

**Note** Note Accents will modify the Velocity of the notes in your song.

It is important to note that in order for the chosen accent to be displayed on your manuscript, you must first activate the Family button in the Velocity / accents section of the Song Notation Interpretations dialogue that is appropriate for the instrument assigned to that track i.e. if the track you are working on is a piano track and you choose to insert note accents you must ensure that the keyboard family button is activated in Velocity / Accents section of the Song Notation Interpretations dialogue.


To insert a note accent, select the desired accent from the Notation toolbar. The choices are no accent, emphasize accent, medium, hard and sforzando. Now move the mouse pointer to the section of manuscript to which it is to be applied and using the right mouse button (left in 'Simple Notation Mode') click and drag for the desired length. Note if you insert accents on a track, the relevant Family will be enabled for accent display in the Song Notation Interpretations window.

Alternatively, you can use the Apply To Track Button on the Toolbar. This will display accents over the whole track, and every note will change to the relevant velocity as determined in the Song Notation Interpretations

window. If you have highlighted more than one track, accents will display on those tracks and all notes will be set to the appropriate velocity.

There is also an Accent Off button for the purpose of removing accents from your manuscript, which works in the same way. There is no Edit Box associated with note accents, the value attached to a given accent may be altered in the velocity / accent section of Song Notation Interpretations window (see Song Notation Interpretations chapter).

# Dynamic Toolbar

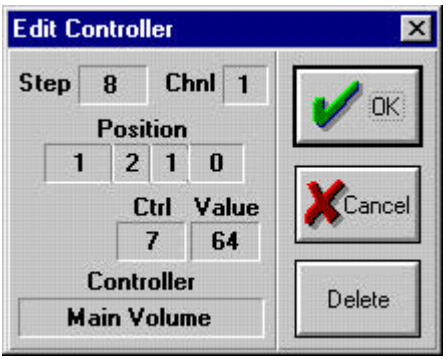

(MIDI Active) This toolbar will allow you to add dynamic or volume changes of a sudden or immediate nature to your work. This toolbar functions in two ways, it is a MIDI Active toolbar but it is also used to place dynamic markings into your manuscript for display and printing purposes.

**Note** Dynamics are typically MIDI Controller 7 (Main Volume), but you can change this in the Song Notation Interpretations window.

To insert a dynamic marking select the desired Dynamic from pppp (extremely soft) to ffff (extremely loud).

Note the window to the right hand end of the toolbar displaying the MIDI Controller value for the selected dynamic, this value can be altered in the Song Notation Interpretations window [see Song Notation Interpretations chapter].

Now move the mouse pointer to the desired location on your manuscript for the Dynamic Marking (checking the cursor for exact location) and click with the right mouse button (left in 'Simple Notation Mode') . The selected Dynamic will be inserted into the manuscript



and the MIDI Controller value for that track or section of the track will be altered.

The Edit Box associated with this function is called Edit Controller. This box contains the usual OK, Cancel and Delete buttons. It also contains Step, Channel, Position, Ctrl and Value windows. These last five are numeric windows and can be altered in the same way as for the Edit Note window values [see Editing MIDI Events chapter]. There is also a Controller window which shows a written description of the controller selected in Ctrl window. The value in the Ctrl window refers to the MIDI controller i.e. Main volume, Pan, Pedal etc.

Remember, the vertical placement of the dynamics is controlled by the value in the Track Notation Interpretations dialog.

# Dynamic Grade Toolbar


(MIDI Active) The Dynamic Grade toolbar allows you to insert gradual dynamic or volume changes to your manuscript, starting from one dynamic and evenly changing to another either louder or softer. This toolbar functions in two ways, it is a MIDI Active toolbar but it is also used to place Dynamic Grade markings into your manuscript for display and printing purposes.

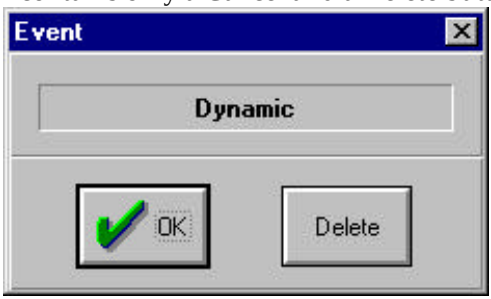
**Note** Dynamics are typically MIDI Controller 7 (Main Volume), but you can change this in the Song Notation Interpretations window.

To insert a dynamic grade into your music select either crescendo (louder) or diminuendo (softer) at the left-hand end of the toolbar. Then in the “End Dynamic” section select the desired dynamic for the end of the grade i.e. pppp extremely soft to ffff extremely loud. (A Dynamic Grade always starts with the value of the previous dynamic event on the track ).

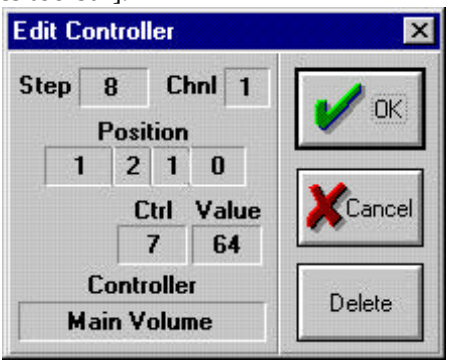
Note the small window to the right hand end of the toolbar that displays the actual MIDI Volume Controller value, this value can be altered in the Song Notation Interpretations window [see Song Notation Interpretations chapter]. Next move the mouse pointer to the position on your manuscript for the start of the Dynamic Grade, (remembering to check in the cursor window for exact placement) then using the right mouse button (left in ‘Simple Notation Mode’) click and drag to the end of the grade. Note the volume of the track will now follow the dynamic grade. Remember this is a MIDI Active function so it will affect the way your song sounds.

There are two types of Edit Box associated with Dynamic Grades, the first is for the grade symbol itself,

double clicking on this will open an Edit Event box which contains only a Cancel and a Delete button.




The second is for the actual Dynamic marking, double clicking on this will open an Edit Controller box which is dealt with in the Dynamics Toolbar section [see dynamics toolbar].




The dynamic grade can be clicked and dragged to a new location using the left mouse button. Remember, the vertical placement of a dynamic grade is controlled by the value in the Track Notation Interpretations dialog.

# Note Ornaments Toolbar


(MIDI Active) This toolbar is used to insert various ornaments into your manuscript such as Mordents, Trills, Turns etc. The various functions are as follows and each will be described separately. Starting on the left they are:-

- Upper Mordent
- Lower Mordent
- Turn on a Note
- Turn after a Note
- Inverted Turn on a Note
- Inverted Turn after a Note
- Note Group
- Trill
- Repeat Notes (different notes)
- Repeat Notes (same note)

Some of these functions will open a value window on the right hand end of the toolbar, and some of them will open a further panel of buttons on the right hand end of the toolbar.

## Upper and Lower Mordent

(Both MIDI active) The Upper Mordent is an ornament that plays the original note, moves to the next pitch up and then returns to the original pitch. The Lower Mordent plays the original pitch, moves to the next pitch down then returns to the original pitch.

To insert an Upper Mordent or a Lower Mordent into your manuscript select the appropriate button from the Note Ornaments toolbar, move the mouse cursor to the point in your manuscript where you wish to insert the Mordent, check the position and pitch in the cursor and pitch windows on the Editor toolbar and using the right

mouse button (left in 'Simple Notation Mode') click and drag for the duration of the mordent you require.

It is helpful to set the step value to match the length of the required mordent [see Editing Basics chapter]. In order to see the newly inserted mordent as it would appear written out with the symbol displaying, the "Written Mode" must be active. This is done by clicking on the pencil button in the Editor toolbar.

To edit a mordent, the sounds mode (ear) must be active so that the individual notes making up the mordent appear. Then it is a simple matter of double clicking on the note to open the Edit Note dialogue box. There is no specific edit dialogue associated with Mordents.

To delete a mordent, open a box around the note(s) and symbol and select cut. To retain the notes, but delete the symbol see [Reinterpret Ornaments Toolbar chapter].

## Turns

The four functions dealt with next are variants of the Turn. Firstly we will describe each variation and then describe the process of inserting and deleting Turns. In the following descriptions the expression "original note" will be taken to mean the pitch of a given Turn as it appears when viewed in Written Mode.

## Turn on a Note

(MIDI Active) This is an ornament that plays the pitch above the original note, then the original note, then the pitch below the original note and then the original note. Each of the pitches will be one quarter of the total length of the turn.

## Turn after a Note

(MIDI Active) This is an ornament that plays the original note, then the pitch above the original, then the original, then the pitch below the original and then the original again. The first pitch is half the total length of the

original turn and the last four pitches are an eighth of the total length of the turn.

## Inverted Turn on a Note

(MIDI Active) This is an ornament that plays the pitch below the original note, then the original note, then the pitch above the original pitch and then the original note. Each of the pitches will one quarter of the total length of the turn.

## Inverted Turn after a Note

(MIDI Active) This is an ornament that plays the original note, then plays the pitch below the original, then the original again, then the pitch above the original and then returns to the original again. The first pitch will be half the length of the turn and the last four pitches will be one eighth of the total length of the turn.

## Inserting and Deleting Turns

Firstly ensure that the Written Mode button is activated on the Editor toolbar. To insert any of the above Turns it is a simple matter of selecting the desired type of Turn then move the mouse pointer to the position on your manuscript where you would like to insert the Turn.

Then checking the position and pitch in the cursor and pitch boxes on the Editor toolbar, use the right mouse button to click and drag for the desired length of the Turn. Your Turn will now be displayed. There is no specific edit window associated with Turns.

In order to edit a Turn, activate the Sounds Mode button on the Editor toolbar. Your Turn will now be displayed as individual notes which can now be edited as normal notes.

To delete a turn, open a box around the note(s) and symbol and select cut. To retain the notes, but delete the symbol see [Reinterpret Ornaments Toolbar chapter].

## Note Groups

(MIDI Active) This function is used to insert complex groups of notes into your manuscript for example, sextuplets, quadruplets, triplets etc. When you select this function you will see a value window open up on the right of the function buttons. This is used to select the quantity of notes you require in your Note Group.


To insert a Note Group select the required number of notes in the value window then move the mouse pointer to the position on your manuscript for the Note Group. Remember to check the pitch and position in the cursor and pitch windows on the Editor toolbar. Then using the right mouse button (left in 'Simple Notation Mode') click and drag for the length of the Note Group.

For example, if you want a group of five notes in the space of one beat, set the value window to five then click and drag on your manuscript with the right mouse button for the duration of one beat. A Note Group of five notes will now appear with the Note Group bracket automatically displayed either underneath or on top depending on the pitch. All the notes will all be on the same pitch.

DO NOT click and drag the notes to a new pitch as it will be snapped to the nearest note boundary as set in the step window. To change the pitch of any of the notes in the Note Group double click on the note with the left mouse button to open an Edit Note box. Scroll the pitch in the Pitch window. Note Groups can only be edited in this way. There is no specific Edit dialogue associated with Note Groups.

To delete a note group, open a box around the note(s) and symbol and select cut. To retain the notes, but delete the symbol see [Reinterpret Ornaments Toolbar chapter].

## Trill

(MIDI Active) This is an ornament that plays a repetition of two notes rapidly. To insert a Trill, select the Trill

button from the Notation toolbar. A new panel of buttons will appear to the right. This panel will allow you to select the length of the notes for your Trill; 1/8th note, 1/16th note etc., and whether or not you would like normal or dotted note values.

Move the mouse pointer to the section of manuscript where you would like the Trill to go. Check the exact position and pitch in the cursor and pitch windows on the Editor toolbar, and using the right mouse button (left in 'Simple Notation Mode') click and drag for the required duration of the Trill. Your Trill will now appear provided that you are in Written Mode.

There is no specific edit dialogue for Trills. In order to edit your Trill click on the Sounds Mode button in the Editor toolbar. The Trill will now be displayed as individual notes which can be edited using the Edit Note window.

To delete a note group, open a box around the note(s) and symbol and select cut. To retain the notes, but delete the symbol see [Reinterpret Ornaments Toolbar chapter].

## Repeat notes (different notes) and Repeat notes (same note)

(MIDI Active) The first Repeat Note option allows you to insert and display repeated notes of alternating pitch for whatever duration you desire. For example semiquavers alternating between C and E for the duration of one bar.

To insert Repeat Notes (different notes) select the button on the Notation toolbar and a new panel will appear to the right.

This panel is used to select the length of notes you require repeated; 1/8th note, 1/16th note, etc., and the type of note; dotted or normal.

Having chosen the required note length and type, move the mouse pointer to the section of manuscript where the Repeat Notes are to appear. Checking position and pitch in cursor and pitch windows on the Editor toolbar, with the right mouse button (left in 'Simple Notation Mode') click and drag, starting on the first pitch and ending on the second pitch for the duration of the Repeat Notes. Provided that Written Mode has been selected on the Editor toolbar, the Repeat Notes will appear as the repeat note symbol commonly encountered in music.

In order to edit repeat notes Sounds Mode must be selected from the Editor toolbar. Then the Repeat Notes will appear as individual notes and can be edited by double clicking to open an Edit Note dialogue box. There is no specific editor for Repeat Notes.

The second Repeat Note option is the same in function as the first, with the exception that only one pitch is used. When inserting you need only click and drag on the same pitch instead of ending on a different pitch.

To delete repeat notes, open a box around the note(s) and symbol and select cut. To retain the notes, but delete the symbol see [Reinterpret Ornaments Toolbar chapter].

# Other Ornaments Toolbar


This is the last yellow button on the Notation Category Bar. Selecting this button will open the Notation toolbar with two functions in it, they are:

- Phrase Mark
- Pedal Sustain

## Phrase Mark

(MIDI Passive) This function is used to insert Phrase Marks or slur markings into your manuscript. When you select this function a panel of four buttons will appear to the right on the toolbar. These buttons are -

- Shallow Down
- Shallow Up
- Deep Down
- Deep Up

Phrase Marks will only have a cosmetic affect i.e. they do not alter the MIDI information. To insert a Phrase Mark choose the Phrase Mark button and select the type of Phrase mark desired. For example, a shallow Phrase Mark may look better if the two notes to be slurred are of a widely differing pitch. Next move the mouse pointer down to the first of the two notes to be slurred. Using the right mouse button (left in 'Simple Notation Mode') click and drag to the second note.

When you release the button the Phrase mark will be inserted into your manuscript. To edit a Phrase Mark you can double click on it. This will open an Event edit dialogue box that contains only a Delete button and an OK button.

You can also click and drag a Phrase Mark, but you may need to change your step value as the event wil be snapped to the nearest step boundary. To get neat

looking phrase marks you will probably want to set your step to OFF, to get more accurate placement of the starting and ending points.

## Sustain Pedal

(MIDI Active) This function is used to insert pedal marks into your manuscript. The type of mark is selectable in the Song Notation Interpretations dialog [see Song Notation Interpretations chapter] as is the position that it will appear on your manuscript.

To insert a Pedal mark select the Sustain Pedal button from the Notation toolbar and move the mouse pointer to the section of manuscript you wish to apply it to. Using the right mouse button (left in 'Simple Notation Mode') click and drag for the desired duration.

To edit a Sustain Pedal mark you can either click and drag it (remembering that step value may need to be altered), or you can double click on it to open the Edit Controller window, described in [Dynamics Toolbar]. If shown as lines, the pedal on and off positions are moved independently as they are dragged around the screen.

# Playing Techniques Toolbar

(MIDI Passive) This function is used to insert Playing Technique markings into your manuscript for display and printing purposes. When you select this button the Notation toolbar opens containing seven buttons.


From the left they are -

- Down bow
- Up bow
- String harmonic & open mute
- Closed mute
- Half closed mute
- Breath mark, and
- Fingering .* (see below)

To insert any of the above Playing Techniques into your manuscript select the desired marking. Move the mouse cursor to the desired position on your manuscript. Using the right mouse button (left in 'Simple Notation Mode') click once to insert the marking. Remember that the setting in the step box will affect the exact position the mark goes to.

Editing a Playing Technique can be achieved by either clicking and dragging or by double clicking to open the Event Edit dialogue box .

* The Fingering Button, if selected, will open a panel containing five buttons numbered one to five. Use these to select the actual number that you wish to appear on your manuscript.

# Lyrics and Text Toolbar


(Midi Passive) You can use the Lyrics/Text toolbar to enable you to insert lyrics and expression text into your manuscript for display and printing purposes. When you select this function the Notation toolbar will open containing three fields. They are, Font Style, Font Size, Staff Location, and two buttons for selecting whether you are inserting lyrics or expression text.

When expression text is selected the Staff Location field disappears, as expression text can be entered at any vertical location. The Font Style field is used to select the desired font for your lyrics or expression text. All the fonts that you have loaded into your operating system are available from this field. The Font Size field allows you to select an appropriate size for your font.


The Staff Location field will show the current vertical position for lyrics to be entered. By clicking on this field the Staff Location window will appear, and you can then select the desired position for your lyrics in relation to the staff. It is quite helpful to set your step value to match the shortest note value used in your song, or even to OFF, when inserting and editing lyrics or expression text .

To insert lyrics or expression text into your manuscript first select either the lyrics button or the expression text button. Then select the font style, size, and location to suit your needs. Move the mouse pointer to your manuscript, just beneath the first note that you want your Lyrics to start on, or to the position you desire expression text and using the right mouse button (left in 'Simple Notation Mode') click once. A flashing cursor will appear directly beneath the note if

inserting lyrics, or at the chosen position if inserting expression text. You can now start typing in your lyrics or expression text on the computer keyboard.

**Note** - each lyric or text is limited to a maximum of fifteen characters.

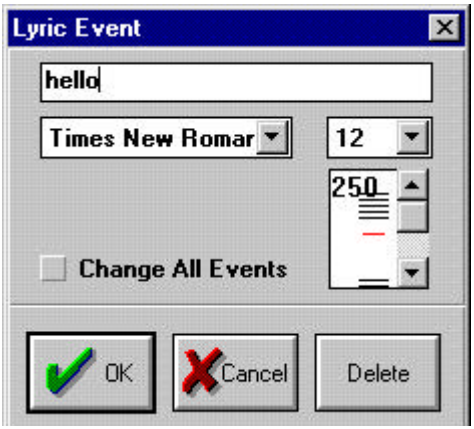
If you are inserting lyrics whenever you hit either the space bar or the hyphen the cursor will automatically jump to the next non-tied note in the track. As you type in your lyrics you may notice that some of the words overlap each other. Do not be concerned at this as you can come back after you have finished typing and correct this.

If you make a mistake whilst entering lyrics you can correct the word you are currently entering by using the Backspace key. However, you cannot correct a word once you have moved onto the next word. (See editing lyrics below.) As you come to the end of a line there is no need to hit the Enter key as the application will automatically jump to the next line and indeed the next page when necessary.

If you are entering lyrics for multiple verses and you have already entered your repeats and codas using the structure toolbar, you should enter your lyrics in sounds mode. This will unravel your song structure to allow the lyrics to be entered under the notes for each verse. When you have finished entering your lyrics return to written mode and the application will ravel your song structure back up and place the multiple verses under each other automatically.

When you have finished typing your lyrics or expression text, then hit the Enter key, the program will now recalculate and redraw the screen. Now you can return to the beginning of the lyrics and click and drag them into new positions if necessary. It may be necessary to resize some of the bars, or parts of the bars to accommodate longer words. You will find it much easier to relocate lyrics if the step value is set to OFF allowing very fine adjustments of position.

To edit a lyric or expression text, after you have hit the Enter key double click on the word you wish to edit. This will open the Lyric or Text Event window. Select delete and then when the word has been removed click under the note again with the right mouse button and retype the word.




You can also change the font, font size and vertical placement. By ticking the Change All Events check box you can modify all lyric or text events in the manuscript to be the same.

You can also delete all lyrics by ticking the check box and clicking on the [DELETE] button. This will warn you that all lyrics will be deleted and you must confirm this by clicking on the [YES] button.

## Copying Lyrics to another track

This function can be performed by using the Explode function. Follow the steps below -

- Return to the Global Editor and select the track with lyrics
- From the Track menu, choose Explode track
- The last new track added will contain the lyrics, along with any other “notation only” elements, such as chords
- Make sure the record mode on Transport Bar is set to Overdub ie bottom button in

- Copy the track - click on the Copy button
- Paste the lyrics on the desired track at the beginning of the track - click on the Paste button then right click at the start of the track

# Key Signature Toolbar


(MIDI Passive) This function is used to insert Key Signatures into your manuscript for display and printing purposes. Note that this is a MIDI passive function so changing the key here will not transpose your song automatically. You must first transpose the data with the Transpose Function [see Editing Basics chapter].

Firstly select the Key button from the Notation Category Bar. The Notation toolbar when first opened, contains all key signatures for major keys, Major and Minor buttons, and One Track and All Tracks buttons.


Choose Major or Minor first, and then select the appropriate Key Signature. If you choose Minor, the major key signatures will be replaced with the relative minor keys. Choose whether it is to apply to One Track or All Tracks in the song.


Move your mouse to the position in your manuscript that you require the key change to occur, or to the beginning of the track if it is the first Key Signature to appear. Using the right mouse button (left in 'Simple Notation Mode') click once and the chosen Key Signature will appear on the manuscript.

You can insert as many key changes as you require in this way. Double clicking on a Key Signature will open up an edit dialog to allow you to delete it. If you make a mistake, select the correct Key Signature and insert it on top of the incorrect one.

The application will automatically delete the original Key Signature and replace it with the new one. Inserting a key signature will cause your notation pages to be recalculated from that point onwards because of the changes to accidentals.

# Octave Transposition Toolbar

(MIDI Passive) This button will open the octave transposition toolbar. This toolbar enables you to display, for example, violin or piccolo melodies that have been played up in their top notes down to a more easily readable range, with the 8ve or 15ve signs indicating their true pitch. Or, left hand piano parts that are well below the bass clef to be placed up in a more easily identifiable position, with the appropriate sign showing the actual played pitch.


This function is a staff - related function, i.e.. all notes on the staff involved will be shifted up or down. If for two-stave tracks (such as instruments in the keyboard family) you have notes that, whilst displaying in a certain staff, you don't want to include in the transposition, use the split staff function [see Staves chapter] to avoid them being shifted.

To reinterpret notes using 8ve and 15ve, first select the desired button from the toolbar. Move the mouse pointer to the point in the manuscript where the octave transposition is to take effect. Using the right mouse button (left in 'Simple Notation Mode') , click and drag the cursor to the point where it is to finish. The notes in that section of the staff will be reinterpreted in the chosen octave and the appropriate symbol will be inserted to indicate that an octave transposition applies.

To cancel the above process, select the Remove Octave button, and repeat the same methods as for the reinterpret process.

# Clefs Toolbar

(MIDI Passive) This function is used to insert Clefs into your manuscript for display and printing purposes. When you select this function from the Notation Category Bar, the Notation toolbar will appear containing five different Clefs.

They are -

- Treble
- Bass
- Alto
- Tenor
- Drum

To insert a clef change into your manuscript just select the desired clef from the Notation toolbar and move the mouse pointer to the position on your manuscript that you desire the clef to go. Using the right mouse button (left in 'Simple Notation Mode') , click once and the chosen clef will appear on your manuscript.

Note that all the notes after the new clef will be recalculated to appear in correct position for that clef. In order to edit a clef you may either double click on it to open an Edit Event dialogue containing an O.K. button and a Delete button, or you can click and drag the clef to a new position. Remember that the setting in the Step window will affect the accuracy of the placement of your Clef.

# Staves Toolbar


(MIDI Passive) This toolbar allows you to change from single Staff to Grand or double Staff and vice versa, and to change the split position on the Grand Staff. It also lets you change between a five line and single line staff.

**Five Line Staff** When you currently have a single line staff, and you want to change back to a five line staff, click on this button, activate the track to be changed, and then click on the Apply to Track button.

**Single Line Staff** If you want to change the staff for a track to a single line, select this button, then activate the track, and then click on the Apply to Track button.

**Change Split point** When a track is displayed in Grand Staff mode, it will always initially set the Split point to Middle C (C3). You can move the Split point at any position along the track by right clicking (left in 'Simple Notation Mode') at the desired position and pitch. A track can have several Split points if needed.

Remember the position of the inserted Split point will be affected by the Step value. It is best to set the Step to Off when changing the Split point and be sure to insert it before notes as appropriate.

**Single Staff - Treble** This button will change the whole track to a single staff with a Treble Clef. To do this, select the button from the Toolbar. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

**Single Staff - Bass** This button will change the whole track to a single staff with a Bass Clef. To do this, select the button from the Toolbar. If you have just one track in the Notation Editor, clicking on the Apply To Track

button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

**Grand Staff** This button will convert the whole track to a Grand Staff. Initially it will have the Split point at Middle C (C3). You can change the Split point with the Change Split point button described above.

**Note** If you want to change a Grand Staff track to Alto or Tenor Clef, firstly convert it to a single Treble Clef staff, then select and insert the desired Clef from the Clefs Toolbar.

# Enharmonic Shift Toolbar

(MIDI Passive) This function is used to change the way accidentals are displayed. For example if you insert a D flat, a C sharp will automatically be displayed.

**Note** - if you have already inserted a Key Signature that contains a D flat, it will automatically display C Sharp as D flat. In order to make the note display as a D flat the Enharmonic Shift Function is used.

When you select Enharmonic Shift from the Notation Category Bar the Notation toolbar opens containing six buttons.


These are -

- Undo Enharmonic Shift
- Natural
- Flat
- Sharp
- Double Flat
- Double Sharp

Using the above example, to reinterpret an accidental select the correct button from the Notation toolbar. In this case you would select the flat button. Move the mouse pointer onto the head of the note to be reinterpreted (in this case the C sharp). Using the right mouse button (left in 'Simple Notation Mode') click once and the C sharp will be reinterpreted as a D flat.

There is no Edit function related to Enharmonic shift. To undo an enharmonic reinterpretation select the Undo Enharmonic Shift button, using the right mouse button click and drag over the area that you wish to undo and the Accidentals will return to their original state.

# Articulation Toolbar


(MIDI Passive) This function will allow you to reinterpret notes in your manuscript as various types of Staccato for display and printing purposes. When you select this function from the Notation Category Bar the Notation toolbar opens with four buttons on it.They are

- Remove Articulation
- Staccatissimo
- Staccato, and
- Mezzo Staccato

In order to make your music play as staccato notes you must alter the MIDI data first. The Articulation functions only alter the appearance of the manuscript. Articulation markings have the affect of shortening the played value of the written note. Mezzo Staccato shortens the note to approximately 3/4 of the written length, while staccato shortens to ½ of the written length, and staccatissimo to 1/4 of the written length.

For instance if you have a bar containing two crotchets with a crotchet rest between them then you applied a Staccato articulation to them, the program will reinterpret those two crotchets as minims with Staccato articulation marks attached. In order to produce the required result it may be necessary to modify the actual MIDI data by inserting shorter notes with rests in between where any form of articulation is to be used.

To apply any of the above articulation functions to your manuscript select the desired type. Move the mouse pointer to the beginning of the section to be reinterpreted. Using the right mouse button (left in 'Simple Notation Mode') click and drag for the length you wish to reinterpret. There is no edit function for Articulation if you wish to change any Articulation choose the Remove Articulation button and once

again right mouse click (left in 'Simple Notation Mode') and drag over the desired area.

# Display Quantize Toolbar


(MIDI Passive) This function is used to reinterpret notes for display and printing purposes. The chosen note(s) are reinterpreted according to the note length chosen in the Note Palette on the Notation toolbar. When you choose this function the Notation toolbar will open containing four groups of buttons.

These are

- Off
- Note Value Palette
- Note Type Palette
- Apply to Track button

When you choose to Quantize a note or notes two aspects of the note are quantized.

(i) its starting point
(ii) its length

For example, tied crotchets (1/4 notes) can be shown as one minim. Or, if you chose the value of quantizing as the 1/8th note (quaver), all notes would be re-drawn to display as multiples of 1/8th notes. In both cases the start point of the note(s) would be displayed at the nearest boundary for the length chosen.

To reinterpret note(s) using Display Quantize, first select the value of quantization required by clicking on a note value and note type in the palettes on the Notation toolbar. Move the mouse pointer to the section of manuscript you wish to Display Quantize.

Click on the starting point with the right button (left in 'Simple Notation Mode') and drag the cursor through the area to be altered. Release the button at the end point and the notes will change in relation to the chosen display Quantize value.

You can directly apply the Quantize to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

There is no Edit function for Display Quantize, if you wish to undo any quantizing, select the off button, then repeat the above procedure, and the display will be returned to the original configuration.

It must be stressed again that this will not affect any MIDI data, and therefore performance. However it can be very useful when you are preparing a score for printing, for example, to enhance the presentation of the manuscript without having to alter your performance version.

# Chords Toolbar

(MIDI Passive) This function is used to insert chords for display and printing purposes ONLY. Remember that it is MIDI passive and will not insert actual MIDI data. To make the software play chords you must have inserted actual MIDI data first. When you choose this function the Notation toolbar will open containing seven buttons. They are as follows -


- Auto Chords
- Remove Multiple Chords
- Remove Chords
- Chord Chart on / off
- Manual Chords
- Separate Voices
- Combine Voices

We will deal with each function separately below.

## Auto Chords

To insert Auto Chords into existing manuscript select Auto Chords from the Chords Toolbar. Move the mouse pointer to the manuscript. Using the right mouse button (left in 'Simple Notation Mode') , click and drag over the desired area.

The software will analyse the note data and where 3 or more notes occur simultaneously it will determine the appropriate chord at that position and display the chord name following the same rules as set out below for manual chords.

You can directly apply Auto Chords to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

## Remove Multiple Chords

This function is designed to remove repeat Chords where Auto Chords has been used and you have a sequence of the same chord. For example, let us presume the track you are working on begins with two bars of the Chord C Major. When you apply Auto Chords to this it will name every chord as it occurs as a C Major chord. However all you may want is the Chords to be named as they change.

The Remove Multiple Chord function will go through any selected section and remove repeated chord names where they are not preceded by a different Chord.

To use this function select Remove Multiple Chords from the Chord Toolbar. Move the mouse pointer to the section of manuscript where you have multiple chords. Using the right mouse button (left in 'Simple Notation Mode'), click and drag over the area and all repeat chords will be removed except for the first one in each group. You can directly apply Remove Multiple Chords to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

## Remove Chords

To remove Chords, select remove Chords from the Chords Toolbar. Move the mouse pointer down to the manuscript. Using the right mouse button (left in 'Simple Notation Mode') click and drag across the desired area of chords to be undone.

You can directly apply Remove Chords to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

## Chord Chart

This function is used to change a track from normal notation into a Chord Chart, and back again. If a chord exists at any song location, all of the normal note heads will be replaced in the chord with one chord chart note head ( / ) retaining the same stem and tail(s).

This function should be used when preparing a chart for a rhythm guitarist. Choose this button from the Chords Toolbar. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed. Alternatively, using the right mouse button click (left in 'Simple Notation Mode') anywhere on the desired track and it will change to a Chord Chart, click again and it will return to normal notation.

## Manual Chords


To insert a Manual Chord, select the Manual Chords button from the Chords Toolbar. The Chord Toolbar will show a Chord Name. If you wish to modify this chord, click on the Chord name and the Insert Chord window will appear. This contains three sections:- scale, extension, and bass note. You must select a scale, however the extension is optional.

When you change the scale, the bass note will automatically change to the root note of that chord, but you can change that also if you desire.

The extension area is divided into seven columns. You can only select a maximum of one button in any column. 9ths, 11ths and 13ths can only be selected after a 7th has

been selected. These rules have been implemented to indicate the theory of naming chords.

When the appropriate chord has been determined, click the O.K. button and the new chord to be inserted will be shown in the Chord Window. You can choose the type of symbol that will be used to display various chords in the Song Notation Interpretations dialogue [see Song Notation Interpretations chapter]. Move the mouse pointer to the desired position on the manuscript. Using the right mouse button (left in 'Simple Notation Mode') click once and the Chord name you have selected will be inserted into your manuscript.

To edit a chord, double click on it, and the Edit Chord window appears. Edit the values in the same manner as described above for the Insert Chord window.

## Separate Voices

You can display chords (multiple notes) as Polyphonic Voices in standard SATB (Soprano, Alto, Tenor, Bass) format easily with the Polyphonise function. Additionally, this function will change the MIDI channel of the notes, thus allowing you to "Explode" the polyphonic track into separate tracks for printing individual Parts.

To polyphonise the track (we're not sure that's a real word, but what the heck - it describes what it does!), simply select the Polyphonise button, and click on the Apply To Track button. The track will be converted into a double staff and notes redrawn as polyphonic voices. Up to four voices can be automatically handled, with the rules as follows -

- Voice 1 - (highest pitch) top staff, stems up
- Voice 2 - top staff, stems down
- Voice 3 - bottom staff, stems up
- Voice 4 - bottom staff, stems down
- If there are more than four voices, the extra ones will be placed with voice 2.

If there are less than four notes at any point, the notes will be polyphonised to give the most sensible result, based upon pitch.

You can change the appearance of a polyphonised note by double clicking on it and changing its MIDI channel. The rules shown above will determine the placement (i.e. MIDI channel 1 = Voice 1 etc).

Note this function effectively automates the Polyphonic Voicing settings in the Track Notation Interpretations window (Track menu).

## Remove Polyphony (Combine Voices)

This function will convert a polyphonic track to standard notation. All MIDI events will have their channel changed to the Output Channel for the track, and the Polyphonic Voicing option in the Track Notation Interpretations window will be disabled.

## Copying Chord symbols to another track

This function can be performed by using the Explode function. Follow the steps below -

- Return to the Global Editor and select the track with chord symbols
- From the Track menu, choose Explode track
- The last new track added will contain the chords, along with any other “notation only” elements, such as lyrics
- Make sure the record mode on Transport Bar is set to Overdub ie bottom button in
- Copy the track - click on the Copy button
- Paste the chords on the desired track at the beginning of the track - click on the Paste button then right click at the start of the track

# Rhythmic Beaming Toolbar


(MIDI Passive) This function is used to re-group beamed notes (quavers, semiquavers, demisemiquavers and hemidemisemiquavers) in ways other than the normal patterns for a particular Time signature (e.g. changing the grouping of two 1/8th notes (quavers) in a [4/4] bar to three 1/8th notes, three 1/8th notes, and two 1/8th notes beamed together to create a Latin feel).

Your notation will intially be displayed with a beaming pattern strictly according to the beat boundaries specified by the Time Signature.

This function can be useful if you want to stress certain rhythmic patterns not normally associated with a Time signature, and especially if those patterns are repeated over a number of bars. When you select this function from the Notation Category Bar the Beaming Toolbar opens containing -

- Note Value buttons
- selection box for number of beamed notes
- Window to display the actual beaming pattern
- buttons for two common beaming patterns
- Apply to Track button

To create a beaming pattern, you can click on one of the common beaming pattern buttons. Alternatively, you can set your own pattern of up to 16 notes. Select the desired note value, then select the number of notes you wish to include in your new beaming pattern, by editing the number in the Value window (left or right click to decrease or increase the number). When you change this number, the corresponding number of notes will appear in the display window to the right.

To set up your new beaming pattern, using the left mouse button in the display window click, drag and release the mouse over the notes you wish to have

beamed together . As you do this, they will be grouped together in those patterns, with the appropriate number of beams according to their note value.

Once you have set up your groupings, all that needs doing is to apply it to your manuscript. Move the mouse pointer to the section of manuscript where Rhythmic Beaming is to be applied. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the desired area. You can directly apply Rhythmic Beaming to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed.

The program will only apply this function to multiples of the beaming pattern length (e.g.. if your pattern is 1 bar in length and you click and drag for 2.5 bars it will only rebeam for the first two bars). There is no Edit function associated with Rhythmic Beaming. To change any beaming pattern select a new pattern and insert it over the old one. The old one will be deleted anda new one inserted.

# Resizing Measures Toolbar


(MIDI Passive) This function is used to change the size of bars or parts of bars in your manuscript for display and printing purposes. As you insert notes into your manuscript in any way each bar is analysed to find the shortest note value.

Having found the shortest note in the bar, the program then allocates a bar length sufficient to accommodate a full bar of that length note. For example if the shortest note in a 4/4 bar is a 1/16th note (semiquaver), the program will make the bar long enough to hold 16 of the 1/16th notes. However if the bar contains only one 1/16th note, a dotted 1/8th note (quaver) and three 1/4 note (crotchets) the bar length appropriate for 16 of 1/16th notes would be too long and would look too spaced out. This is where Resizing Measures is useful. Going back to our example with the single 1/16th note, we can select a more appropriate bar length and apply it to the section of the bar containing the 1/4th notes.

When you select Resizing Measures from the Notation Category Bar, the Notation toolbar opens containing four groups of buttons.

These are

- OFF button
- Note Value buttons
- Note Type buttons
- Apply To Track button

In order to resize a section of manuscript click on the Note Value button you require then the appropriate Note Type button. Move the mouse pointer to the section of manuscript you wish to resize. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the area to be resized and the program will recalculate the bar sizes in that area.

You can directly apply Resize Measures to the whole track. If you have just one track in the Notation Editor, clicking on the Apply To Track button will convert the track. If there is more than one track in the editor, the highlighted track(s) will be changed. When applying resizing to the whole track, selecting a quaver value will deliver four bars per line given that you are using A4 paper and a scale of 100% in the Page Layout dialog.

There is no Edit function for resizing. Use the OFF button and right mouse click and drag over the area and the automatic settings will be reverted for that area.

All tracks will be displayed with the widest track setting at each song position in order to keep the bar lines across all tracks synchronized. Therefore to compress a Conductor Score, you must apply Resize Measures to all tracks simultaneously (hold down Ctrl and click on each track to highlight it, then click on the Apply to Track button).

# Re-interpret Dynamics Toolbar

(MIDI Passive) This button will open the re-interpret dynamics toolbar. This toolbar will allow you to reinterpret dynamics that you may have recorded either via MIDI or via the fader in the Mixdown Editor. These volume changes will appear in your score as individual dynamics.


To re-interpret these dynamics as graded dynamics select either the crescendo or diminuendo button. Move the mouse pointer to the area to be re-interpreted. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the area to be re-interpreted. The chosen symbol will be inserted in place of the dynamic markings that previously existed.

To return these markings to individual dynamics, click on the individual button then using the right mouse button (left in 'Simple Notation Mode') click and drag over the same area.

# Re-interpret Ornaments Toolbar


(MIDI Passive) This button will open the re-interpret ornaments toolbar. The functions on this toolbar are used to re-interpret MIDI data that may have been played in but does not automatically display in the way you may want. The functions are :

- Repeat one bar
- Repeat two bars
- Upper Mordent
- Lower Mordent
- Turn on a Note
- Turn after a Note
- Inverted Turn on a Note
- Inverted Turn after a Note
- Note Groups
- Trill
- Repeat Note 1
- Repeat Note 2
- Remove Interpretation

We will deal with each of these functionsseparately below.

## Repeat One Bar

(MIDI Passive) This button is used to insert a repeat one bar symbol into your manuscript for display purposes only. Move the mouse pointer to the bar where the repeat is to appear. Using the right mouse button (left in 'Simple Notation Mode') click once and the chosen symbol will be inserted in that bar and existing data will become invisible.

## Repeat Two Bars

(MIDI Passive) This button is used to insert a repeat two bars symbol into your manuscript for display purposes

only. Move the mouse pointer to the barline between the two bars that are the repeat. Using the right mouse button (left in 'Simple Notation Mode') click once and the chosen symbol will be inserted on that barline and existing data in those two bars will become invisible.

## Mordents and Turns

(MIDI Passive) These buttons are used to re-interpret existing MIDI data to be displayed as various types of mordents and turns. All six of the functions work in the same way.

To re-interpret a mordent or turn select the desired function from the toolbar. Move the mouse pointer to the section of manuscript to be re-interpreted. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the area to be re-interpreted, remembering to start at the correct pitch. Your MIDI data will now be displayed as the selected ornament with the appropriate symbol.

## Note Groups

(MIDI Passive) This function is for re-interpreting note groups in your MIDI data. When this function is selected a value window will open on the toolbar. To re-interpret a note group first select the desired number of notes by editing the value in the value window. Move the mouse pointer to the section of data to be re-interpreted. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the area to be re-interpreted. Your data will now be displayed as the chosen note group.

## Trill

(MIDI Passive) This function is for re-interpreting your MIDI data as a trill. To re-interpret a trill click and drag over the desired area using the right mouse button (left in 'Simple Notation Mode') , remembering to start at the correct pitch. The data in that area will be re-interpreted as a trill and this symbol will be inserted.

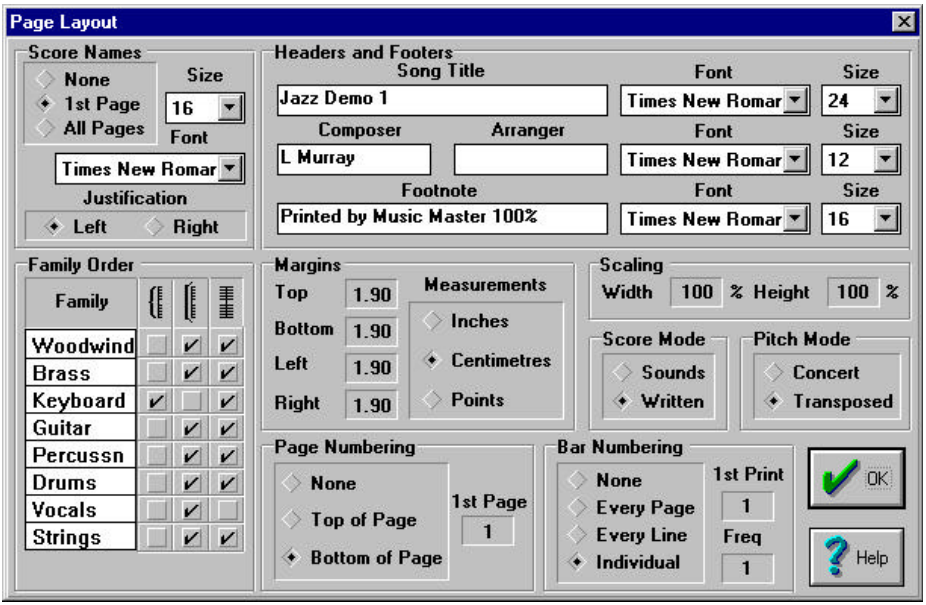
## Repeat Notes 1 and 2

(MIDI Passive) Both these functions are used to re-interpret a section of repeated notes as repeat note symbols. To re-interpret a repeat note section of MIDI data click on the desired symbol. This will open a palette of note values. Select the desired note value from the palette. Move the mouse pointer to the section to be re-interpreted. Using the right mouse button (left in 'Simple Notation Mode') click and drag over the area to be re-interpreted. The repeated notes will now be displayed as repeat note symbols.

## Remove Interpretation

The last button on this toolbar is to remove re-interpretations. If you wish to see individual notes rather than the symbol, you can remove the symbol by clicking and dragging over the desired area with the right mouse button (left in 'Simple Notation Mode') .

# Page Layout

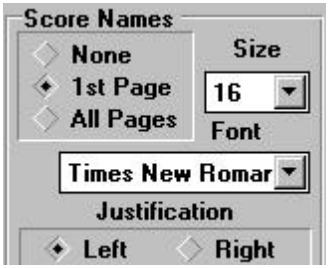



Before you begin printing any of your work you will no doubt want to customize the way the final product looks. Such things as Font Style and Size, Bar numbering, Page numbering, etc. These options and many others can be selected in the Page Layout option of File menu. When you choose this option from the File menu the Page Layout dialog opens containing nine fields relating to the display in Notation Editor, and printing of your music. They are as follows:-

- Score names
- Headers and Footers
- Family Order
- Margins
- Scaling
- Score and Pitch Modes
- Page Numbering
- Bar Numbering

We will deal with each of these fields separately below. All the functions in Page Layout are MIDI Passive i.e. they do not affect the sequencer side of the software.

## Score Names



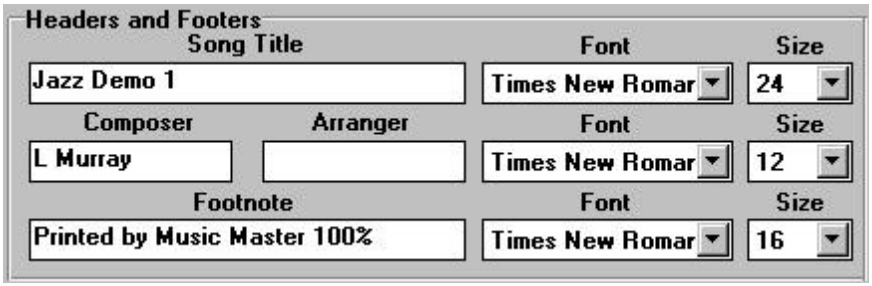

This field is for setting the Selection, Placement, and Font style / size of score names. Score names are the names assigned to individual tracks within your song. They can be anything you desire but are most usually instrument names. They are usually set in the Track Notations Interpretations Dialog.

Firstly you can select whether you desire score names to appear at all, on the first page only, or on all pages, just click in the check box of your choice. Secondly you can select the font size and font style of your choice.

Any fonts that you have loaded into your operating system will be available here. Simply click in the font drop down list and a list will be displayed for you to choose from. Likewise click in the size box to see a list of sizes available for the chosen font then click on the size you require.

Finally choose between left or right justification for your score name by checking either the left or right check box.

## Headers and Footers




This field is for entering, and selecting font style and size of, Song Title, Composer, Arranger, and

Footnotes. The font style and size lists work in the same way as for Score Names.

To insert a Song name, Composer, Arranger, or Footnote click in the appropriate box and type in the Text of your choice. When you next enter the Notation Editor it will appear on the screen and will also appear on your printout.

## Family Order

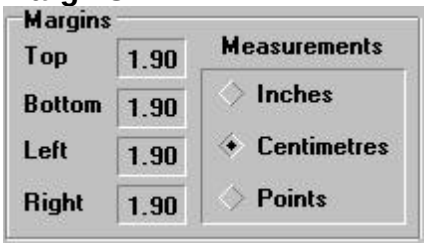

This field gives you considerable control over the way different instruments and families of instruments are dealt with for display and printing purposes. Family allocation of tracks is done in the instrument option of the track menu or the Track Notation Interpretations dialog.

The application will group all tracks of the same family together in display and printout. This field allows you to dictate which families will be in which order on the screen. You can do this by using the left mouse button to click and drag a Family Name to the position on the list in this field that you wish it to appear in. The position in the list corresponds to the position that the Family will appear on your display and printout.

For example if you wanted the printout to display Vocal tracks at the top with Strings under that and then Keyboards under that, you would drag Vocals to the top of the list then drag Strings to the second place on the list and finally drag Keyboards to the third place on the list.

You can ignore all other Families which may not appear in your song as the software only deals with the family groups which actually appear in the song. Next you can decide which style of bracket you wish to apply to the Family group if any, and if the bar lines should connect or not, by clicking in the appropriate check boxes located next to the Family list. Vocal tracks generally do not have connecting barlines vertically as this would clash with the lyrics.

## Margins




This field is fairly straight forward. You can use this field to set the page Margins of your choice and the units of Measure for same. The value for the Margins can be set by editing in the appropriate Value Window. The units of Measure are chosen by clicking in the desired check box.

Remember to check the limitations of your printer first to ensure that you don't select a Margin Value outside the range of its capabilities. An important note in the same vein. Page orientation i.e.: Portrait and Landscape is selectable in the [print setup] option of the file menu.

## Scaling


This field is used to select the scale of your display and printout. You can scroll the Values in the windows with the left and right mouse buttons to any value between 20 and 200. You can also double click on the Value Windows and then enter the desired value on the keyboard.

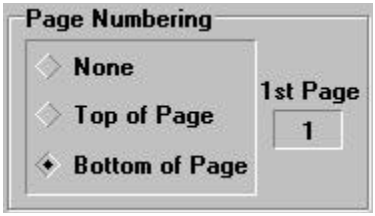
## Score and Pitch Modes


These two fields allow you to select the Notation Modes for your printout and are similar in function to the [Notation Mode] buttons on the Editor toolbar in the Notation Editor. For a fuller explanation of these two fields see [Notation Editor].

Score Mode: This does not affect transposed instruments. It allows you to print out the score of drum tracks showing the MIDI note of the drum sound. Normally you would leave it as "written" to see the drum sounds on their conventional lines (which bear no relationship to the MIDI notes in the drum kit voice).

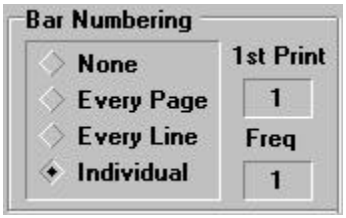
Pitch Mode: This allows you to print your score with transposing instruments parts transposed, or written out as “sounds”. A conductor score or study score may usefully have instruments at “sound” whereas a player’s score should always be transposed. Each selection is made by clicking in the appropriate check box.

## Page Numbering




This field is used to select page numbering. You may have page numbers at the top or at the bottom of the page or you may turn it off altogether. Simply click in the check box of your choice. You may also dictate which number you desire the page numbers to start on by editing the 1st Page Value Window. This option is very useful if you are preparing a song book with many songs and you wish all the pages to be consecutively numbered.

## Bar Numbering

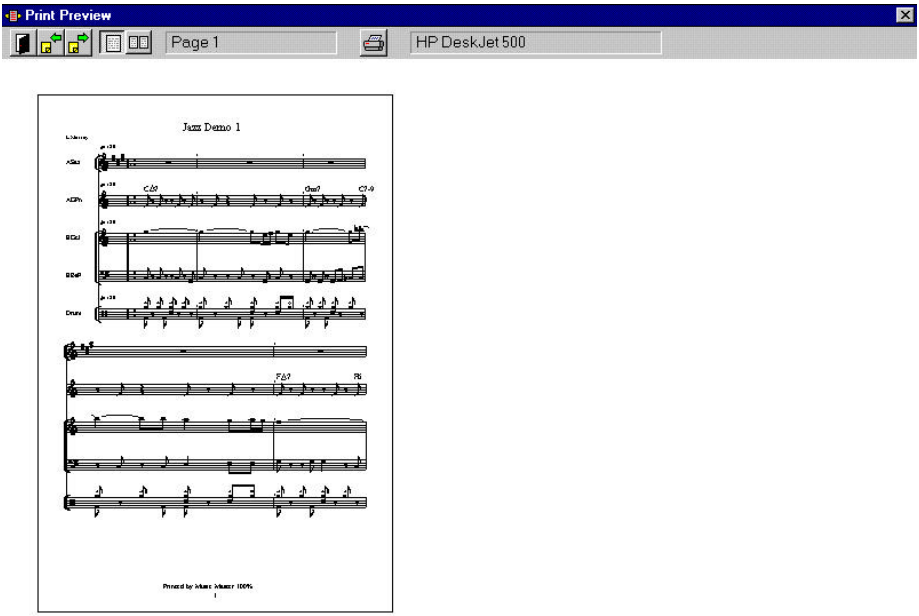



This field operates in the same way as the Page numbering field. You have a choice of

- Every Page
- Every Line
- Individual, and
- None.

If you choose Individual, you select how frequently you would like the bar numbers to appear by editing the value in the Frequency Value window. A frequency of two will give bar numbers every second bar and so on. The First Print Value Window allows you to dictate on which bar to start the bar numbering.

# Printing



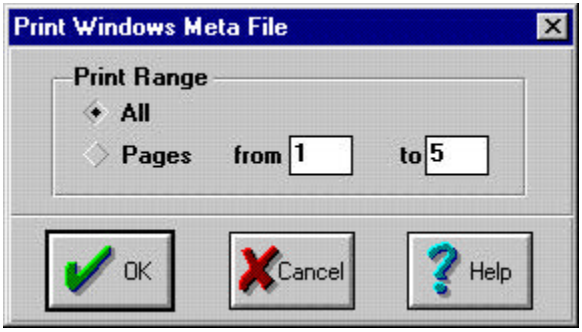

## Print Preview

This option can be found in the file menu and is useful for testing your page layout prior to printing. **Note** - Print Preview is only available if you have the notation editor open and on the screen.

There are six buttons and two Windows on the toolbar. Starting from the left, the first button is the exit or return to Notation editor button. Use this button if you find something in the preview you wish to alter prior to printing. Secondly there are the page selection buttons for moving through songs of more than one page. Thirdly are two buttons for toggling between single and double page display. The last button is the print button which will start the printing of your manuscript if you are entirely satisfied with the preview.

The two Windows display firstly which page or pages are currently displayed in print preview, and secondly which printer is loaded. The display is quite small however this screen is not intended as an editor, only as an indicator of what the finished printout will look like in general.

## Print WMF




When you choose this option from the file menu it opens the Print Windows Meta File dialogue. This dialogue is only available from the notation editor. This option is used to save your work as a windows meta file for importation of manuscript into word processor documents etc.

When using this option you must specify a page range to be saved . If you only want one page the file will be saved to the existing file name but with the three letter suffix of .wmf. If you choose more than one page each page will be saved as a separate file with the last letter of the file name replaced with consecutive numbers i.e.: Jazzdem1.wmf, Jazzdem2.wmf and so on. These files will be saved into the original directory from which the files came, and can be accessed from there or moved to another directory as desired.

## Print

This button will print the manuscript track or tracks that are currently in the notation editor. Note that you can only select the print function when the active window is the notation editor. (You could have more than one

instance of the editor open at one time, and the active one is what will be printed). The keyboard shortcut is **Ctrl P**, and there is also a toolbar button.

## Print Setup

Allows you to select the printer you will print on, as well as the paper size and orientation. Portrait orientation is most common for an instrument score.

# Section Four

# Appendices

# General MIDI

## General MIDI Sound Set

1. Acoustic Grand Piano
2. Bright Acoustic Piano
3. Electric Grand Piano
4. Honky-tonk Piano
5. Electric Piano 1
6. Electric Piano 2
7. Harpsichord
8. Clavi
9. Celesta
10. Glockenspiel
11. Music Box
12. Vibraphone
13. Marimba
14. Xylophone
15. Tubular Bells
16. Dulcimer
17. Drawbar Organ
18. Percussive Organ
19. Rock Organ
20. Church Organ
21. Reed Organ
22. Accordion
23. Harmonica
24. Tango Accordion
25. Acoustic Guitar (nylon)
26. Acoustic Guitar (steel)
27. Electric Guitar (jazz)
28. Electric Guitar (clean)
29. Electric Guitar (muted)
30. Overdriven Guitar
31. Distorted Guitar
32. Guitar Harmonics
33. Acoustic Bass
34. Electric Bass (finger)
35. Electric Bass (pick)
36. Fretless Bass
37. Slap Bass 1
38. Slap Bass 2
39. Synth Bass 1
40. Synth Bass 2
41. Violin
42. Viola
43. Cello
44. Contrabass
45. Tremolo Strings
46. Pizzicato Strings
47. Orchestral Harp
48. Timpani
49. String Ensemble 1
50. String Ensemble 2
51. Synth Strings 1
52. Synth Strings 2
53. Choir Aahs
54. Voice Oohs
55. Synth Voice
56. Orchestra Hit
57. Trumpet
58. Trombone
59. Tuba
60. Muted Trumpet
61. French Horn
62. Brass Section
63. Synth Brass 1
64. Synth Brass 2
65. Soprano Sax
66. Alto Sax
67. Tenor Sax
68. Baritone Sax
69. Oboe
70. English Horn
71. Bassoon
72. Clarinet
73. Piccolo
74. Flute
75. Recorder
76. Pan Flute
77. Blown Bottle
78. Shakuhachi

79. Whistle
80. Ocarina
81. Lead 1 (square)
82. Lead 2 (sawtooth)
83. Lead 3 (calliope)
84. Lead 4 (chiff)
85. Lead 5 (charang)
86. Lead 6 (voice)
87. Lead 7 (fifths)
88. Lead 8 (bass+lead)
89. Pad 1 (new age)
90. Pad 2 (warm)
91. Pad 3 (polysynth)
92. Pad 4 (choir)
93. Pad 5 (bowed)
94. Pad 6 (metallic)
95. Pad 7 (halo)
96. Pad 8 (sweep)
97. FX1 (rain)
98. FX2 (soundtrack)
99. FX3 (crystal)
100. FX4 (atmosphere)
101. FX5 (brightness)
102. FX6 (goblins)
103. FX7 (echoes)
104. FX8 (sci-fi)
105. Sitar
106. Banjo
107. Shamisen
108. Koto
109. Kalimba
110. Bag Pipe
111. Fiddle
112. Shanai
113. Tinkle Bell
114. Agogo
115. Steel Drums
116. Woodblock
117. Taiko drum
118. Melodic Tom
119. Synth Drum
120. Reverse Cymbal
121. Guitar Fret Noise
122. Breath Noise
123. Seashore
124. Bird Tweet
125. Telephone Ring
126. Helicopter
127. Applause
128. Gunshot

## General MIDI Percussion Map (channel 10)

| | | | |
|---|---|---|---|
| Acoustic Bass Drum | B0 | Ride Cymbal 2 | B2 |
| Bass Drum 1 | C1 | Hi Bongo | C3 |
| Side Stick | C#1 | Low Bongo | C#3 |
| Acoustic Snare | D1 | Mute Hi Conga | D3 |
| Hand Clap | D#1 | Open Hi Conga | D#3 |
| Electric Snare | E1 | Low Conga | E3 |
| Low Floor Tom | F1 | High Timbale | F3 |
| Closed Hi Hat | F#1 | Low Timbale | F#3 |
| High Floor Tom | G1 | High Agogo | G3 |
| Pedal Hi Hat | G#1 | Low Agogo | G#3 |
| Low Tom | A1 | Cabasa | A3 |
| Open Hi Hat | A#1 | Maracas | A#3 |
| Low Mid Tom | B1 | Short Whistle | B3 |
| Hi Mid Tom | C2 | Long Whistle | C4 |
| Crash Cymbal 1 | C#2 | Short Guiro | C#4 |
| High Tom | D2 | Long Guiro | D4 |
| Ride Cymbal 1 | D#2 | Claves | D#4 |
| Chinese Cymbal | E2 | Hi Wood Block | E4 |
| Ride Bell | F2 | Low Wood Block | F4 |
| Tambourine | F#2 | Mute Cuica | F#4 |
| Splash Cymbal | G2 | Open Cuica | G4 |
| Cowbell | G#2 | Mute Triangle | G#4 |
| Crash Cymbal 2 | A2 | Open Triangle | A4 |
| Vibraslap | A#2 | | |

# MIDI Controllers

| CONTROL NUMBER DECIMAL | CONTROL NUMBER HEX | CONTROL FUNCTION |
|---|---|---|
| 0 | 00 | Bank Select MSB |
| 1 | 01 | Modulation wheel |
| 2 | 02 | Breath controller |
| 3 | 03 | Undefined |
| 4 | 04 | Foot controller |
| 5 | 05 | Portamento time |
| 6 | 06 | Data entry MSB |
| 7 | 07 | Main volume |
| 8 | 08 | Balance |
| 9 | 09 | Undefined |
| 10 | 0A | Pan |
| 11 | 0B | Expression controller |
| 12-15 | 0C-0F | Undefined |
| 16-19 | 10-13 | General Purpose controllers (#s 1-4) |
| 20-31 | 14-1F | Undefined |
| 32-63 | 20-3F | LSB for values 0-31 |
| 64 | 40 | Damper pedal (sustain) |
| 65 | 41 | Portamento |
| 66 | 42 | Sostenuto |
| 67 | 43 | Soft pedal |

| | | |
|---|---|---|
| 68 | 44 | Undefined |
| 69 | 45 | Hold 2 |
| 70-79 | 46-4F | Undefined |
| 80-83 | 50-53 | General purpose controllers (#s 5-8) |
| 84-90 | 54-5A | Undefined |
| 91 | 5B | Reverb Depth |
| 92 | 5C | Tremelo depth |
| 93 | 5D | Chorus depth |
| 94 | 5E | Celeste (detune) depth |
| 95 | 5F | Phaser depth |
| 96 | 60 | Data increment |
| 97 | 61 | Data decrement |
| 98 | 62 | Non-Registered parameter number LSB |
| 99 | 63 | Non-Registered parameter number MSB |
| 100 | 64 | Registered parameter number LSB |
| 101 | 65 | Registered parameter number MSB |
| 102-121 | 66-79 | Undefined |
| 122-127 | 7A-7F | Channel mode messages |

# Clock Resolution

This software uses a clock resolution of 192 clocks per quarter note (crotchet). This normally means that for each of the note lengths used in the application, the following table applies -

| | Clocks | | |
|---|---|---|---|
| **Note Length** | **Dotted** | **Normal** | **Triplet** |
| Whole Note (semi-breve) | 1152 | 768 | 512 |
| Half Note (minim) | 576 | 384 | 256 |
| Quarter Note (crotchet) | 288 | 192 | 128 |
| Eighth Note (quaver) | 144 | 96 | 64 |
| Sixteenth Note (semi-quaver) | 72 | 48 | 32 |
| Thirty Second Note (demi-semi-quaver) | 36 | 24 | 16 |
| Sixty Fourth Note (hemi-demi-semi-quaver) | 18 | 12 | 8 |

# Keyboard Shortcuts

## File Menu

| | |
|---|---|
| Open | Ctrl O |
| Close | Shift C |
| Save | Shift S |
| Page layout | Ctrl L |
| Print Preview | Shift P |
| Print | Ctrl P |

## Song Menu

| | |
|---|---|
| Notation Interpretations | Ctrl S |
| MIDI Filter In | Ctrl F |
| MIDI Filter Thru | Ctrl H |
| Metronome | Ctrl B |
| In Filter Toggle | x |
| Thru Filter Toggle | y |

## View Menu

| | |
|---|---|
| Global | Ctrl G |
| Keyboard | Ctrl K |
| Drum | Ctrl D |
| Event | Ctrl E |
| Mixdown | Ctrl M |
| Tempo | Ctrl T |
| Notation | Ctrl N |
| Zoom In | Shift Z |
| Zoom Out | Alt Z |

## Editor Toolbars

| | |
|---|---|
| Solo | s |
| Mute | m |
| STEP | |
| Full Note | F5 |
| ½ Note | F6 |
| ¼ Note | F7 |
| 8th Note | F8 |
| 16th note | F9 |
| 32nd Note | F10 |
| 64th Note | F11 |
| Off | F12 |
| Dotted Note | Shift F5-F11 |
| Triplet Note | Ctrl F5-F11 |
| Quantize Dialog | Ctrl Q |
| Step Time Note | n |
| Step Time Velocity | v |

## Edit Menu

| | |
|---|---|
| Undo | Alt Bkspc |
| Redo | Ctrl Bkspc |
| Cut | Ctrl X |

| | |
|---|---|
| Copy | Ctrl C |
| Paste | Ctrl V |
| Quantize | Alt Q |
| Transpose | Alt O |
| Merge | Alt M |

## Track Menu

| | |
|---|---|
| Active Track Details | Shift A |
| Musical Instrument | Shift T |
| Notation Interpretations | Ctrl I |
| Voice Map | Ctrl U |
| MIDI Filter Out | Shift F |
| New Track | Alt N |
| Delete Track | Alt D |

## Preferences Menu

| | |
|---|---|
| Drum Kit File Maint. | Ctrl Y |
| Sequencer Preferences | Ctrl R |

## Controls Menu

| | |
|---|---|
| Synchronization | Ctrl J |
| Play | Enter |
| Stop | Spacebar |
| Record | * |
| Increase Tempo | + |
| Decrease Tempo | - |
| Tempo Map | t |
| Cue Toggle | c |
| Sync Toggle | j |
| Loop Toggle | l |
| Click Toggle | k |
| Set In Point | Shift I |
| Set Out point | Shift O |
| Toggle In | i |
| Toggle Out | o |
| Transport bar | F3 |
| Song Locators | 0-9 |
| Set Song Locators | Ctrl 0-9 |
| Goto In Point | ( |
| Goto Out point | ) |
| Step Back | , |
| Step Forward | . |
| Bar back | < |
| Bar Forward | > |
| Slow Rewind | { |
| Slow Forward | } |

| | | | |
|---|---|---|---|
| Fast Rewind | [ | Song End | End |
| Fast Forward | ] | Rewind Page | Pg Up |
| Song Start | Home | Forward page | Pg Dn |

# Tempo Markings

| Tempo | English | Italian |
|---|---|---|
| 1-45 | Extremely slow | Grave |
| 46-51 | Very slow | Largo |
| 52-55 | Slow | Lento |
| 56-59 | At an easy pace | Adagio |
| 60-65 | Dignified | Larghetto |
| 66-75 | Flowing | Andante |
| 76-79 | Moving along | Andantino |
| 80-85 | Sustained | Sostenuto |
| 86-91 | Majestic | Maestoso |
| 92-103 | Moderate | Moderato |
| 104-115 | Lively | Allegretto |
| 116-125 | Animated | Animato |
| 126-137 | Quick | Allegro |
| 138-147 | Very quick | Allegro-assai |
| 148-157 | Vivacious quick | Allegro-vivace |
| 158-171 | Vivacious | Vivace |
| 172-191 | Fast | Presto |
| 192-215 | Very fast | Presto-assai |
| 216+ | Extremely fast | Prestissimo |

# INDEX

## A



## B



## C



## D

## E



## F

## N



## O



## P

## Q



## R



## S



## T

## U



## V

## W



## Z