

## **MIDI Edit Help Index**

MIDI Edit is a Windows program which is used to manipulate MIDI data. It allows you to record and playback songs, send and receive MIDI data, and edit the MIDI events. It stores all songs using the standard MIDI file format, so it can share files with many other MIDI software packages, including software for other machines.

MIDI Edit is not a free program, but is being distributed under the **Shareware** concept. This allows you to test the program to determine whether it is worth anything, and then buy it if you are going to use it. You must register the program if you are going to use it. See the help topic [Registration](#) for registration instructions.

MIDI Edit is also under continuing development. If something doesn't work correctly or behaves strangely, please let me know. I am also open to suggestions for improvements to MIDI Edit.

This index contains a list of all Help topics available for MIDI Edit. For information on how to use Help, press F1 or choose Using Help from the Help menu.

<a href="#">Quick Start</a>	Quick start up help for first time users.
<a href="#">Commands</a>	Information on a particular command.
<a href="#">Procedures</a>	Answers to "How do I..." questions.
<a href="#">Keys</a>	List of various keys used in MIDI Edit.
<a href="#">Registration</a>	How to Register MIDI Edit

## Quick Start

Welcome to MIDI Edit. We will try to get you up and running as fast as possible by describing how to play one of the sample songs. In case you don't have a Roland MT-32 attached, we will also describe how to re-voice the sample songs for your setup.

### Playing a Song

Let's start by playing one of the sample songs packaged with MIDI Edit. Three steps are required to load and play the song.

1. Load the song. Select the File Open command through the menu, **Ctrl+O** key or by clicking on the icon (picture of diskette with arrow down). Using the dialog box displayed, select one of the sample songs and press Ok. The song will be loaded into memory, and the main window will be updated to show a list of the tracks in the song.
2. Open the Play Controls Window. All song playing and recording is done using this window. Start the Play Controls window by selecting it using the menu, pressing **F4** or by clicking on the icon (picture of a pair of headphones).
3. Play the song. This part is easy, simply click on the Play button. For more information check out Playing for how-to information.

### Adjusting the Song

The sample songs that come with MIDI Edit are voiced for a Roland MT-32 (or one of its brothers: LAPC-1, CM-32L or CM-64). What happens if you don't have one of these? It's fairly easy to change the MIDI channels and patches used in a song, as you will see below.

1. Switch back to the main window. If there are any pop-up windows on top of the main window, they can be closed by selecting them and using their system menu to close the window. For more information see Closing Windows.
2. Select the track to modify. The main window makes it easy to determine what changes you need to make, because the patch number and MIDI channel are displayed for each track. Select the track you want to modify by clicking on it with the mouse or moving the select bar using the up/down cursor keys. See Selecting a Track for more information.
3. Change the MIDI channel. The channel number can be changed temporarily using the Track Information command, or permanently using the Track Change Channel command. Choose Change Channel from the Track menu, and complete the dialog. This will then change the channel number of all MIDI events in the track to the entered value.
4. Change the Patch. The patch number is changed using the Track List window. This window is opened using the **F2** key, clicking on its icon (picture of a window) or by selecting it off the Window menu. Edit the program change event by double clicking on it with the mouse or selecting the event and pressing Enter. You can then either select another track from the main window, or close the Track List window by pressing **F2** again.

You can now play the song, using the procedure listed above. You should probably also save your changes to the songs (use the File Save command).

## Commands

This index contains a list of the Help available on the various MIDI Edit Commands. For information on how to use Help, press F1 or choose Using Help from the Help menu.

<u>File Menu</u>	Create, Load or Save files.
<u>Edit Menu</u>	Copy, Move or Delete tracks in the song.
<u>Track Menu</u>	Perform changes on whole tracks.
<u>MIDI Menu</u>	Control MIDI devices.
<u>Song Menu</u>	Edit Song Parameters
<u>Window Menu</u>	Control the windows.
<u>Options Menu</u>	Customize MIDI Edit.

## Procedures

This index contains a list of the Help available on the various MIDI Edit Procedures. For information on how to use Help, press F1 or choose Using Help from the Help menu.

<u>Copying a Track</u>	How to copy the contents of a track.
<u>Deleting a Track</u>	How to delete a track.
<u>Moving a Track</u>	Moving a track in the song.
<u>Exiting</u>	Returning to Windows.
<u>Recording</u>	Recording a track.
<u>Playing</u>	How to play the song.
<u>Selecting a Track</u>	How to select a track.
<u>Switching Windows</u>	How to switch between active windows.
<u>Opening Windows</u>	Starting one of the windows.
<u>Closing Windows</u>	Destroying one of the windows.
<u>Selecting Events</u>	How to select an event to edit.
<u>Using the Toolbar</u>	Use of the Toolbar.

## Windows Keys

The following keys may be used as short cuts for various commands in the main menu. These keys are active in all windows, except when the song is playing or recording.

<u>F1</u>	Help
<u>F2</u>	Open or Close the Track List window
<u>F3</u>	Open or Close the Piano Roll window
<u>F4</u>	Open or Close the Play Controls window
<u>Ctrl+O</u>	Open a new song
<u>Ctrl+S</u>	Save the current song
<u>Ctrl+A</u>	Save the song after asking for a file name
<u>Ctrl+R</u>	Send Reset sequence to all MIDI devices
<u>F6</u>	Switch to the next window
<u>Shift+F6</u>	Switch to the previous window

The following sets of keys are only supported on some windows. They are grouped by window.

## Main Window

<u>Bksp</u>	Undo the previous track change
<u>Shift+Del</u>	Move track into the paste buffer
<u>Ctrl+Ins</u>	Copy the track into the paste buffer
<u>Shift+Ins</u>	Insert the contents of the paste buffer
<u>Del</u>	Delete the track from the song

## Track List & Piano Roll Windows

<u>Enter</u>	Edit the current event
<u>Del</u>	Delete the current event
<u>Ins</u>	Insert a new event
<u>D</u>	Change the note's duration
<u>R</u>	Insert a rest before current note
<u>C</u>	Make current note part of a Chord
<u>1</u>	Turn current note into a whole note
<u>2</u>	Turn current note into a half note
<u>3</u>	Turn current note into a quarter note
<u>4</u>	Turn current note into a eighth note
<u>5</u>	Turn current note into a sixteenth note
<u>6</u>	Turn current note into a thirty-second note

## Piano Roll Window Only

PgUp	Move the current note up one octave
PgDn	Move the current note down one octave
Up	Move the current note up one semitone
Down	Move the current note down one semitone
Tab	Move to the next note in the track
Shift+Tab	Move to the previous note in the track

## **Registration**

As discussed in the index, MIDI Edit is being distributed as **Shareware**. This allows you to evaluate the program to see if it performs properly, before you have to pay for it. It does not allow you to "evaluate" the program forever - if you use it after evaluating it for a week or two, then you **must** register.

To register MIDI Edit send me a note and a cheque or money order for \$25 US. Please include in your note your name, mailing address, current version number and computer/MIDI setup. The current version information is found in the Help About dialog box. If you would like a copy mailed to you, please add an additional \$5, and I will send you the most recent version available.

I am also interested in knowing what MIDI boxes you have attached, as I am looking into supporting machine specific things like patch names and drum note names. If I know what you have, then maybe I can support it.

Please send all correspondence to:

Dan McKee  
69 Rancliffe Road  
Oakville, Ontario  
L6H 1B1

## **Free Registration Offer**

If you are the first person to tell me about a real bug, I will give you a free registration. I will also listen to reasonable requests for free registrations from people who would like to help me improve and extend MIDI Edit.

## **MIDILIB.DLL**

A substantial amount of the effort that went into MIDI Edit was actually spent developing MIDILIB.DLL - the code that actually runs the MPU-401. If you are trying to develop a Windows program that uses a MIDI device, I may be able to help you out. Just let me know what you are looking for, and I will let you know if I can help.

## **File Menu**

The File menu includes commands that enable you to load or save files, or create a new song.

For more information about a File Menu command, select one of the following topics.

<u>New</u>	Create a new song.
<u>Open</u>	Loads a song file.
<u>Save</u>	Saves the current song.
<u>Save As</u>	Saves the song under a new name.
<u>Merge</u>	Merges a song into current song.
<u>Import</u>	Import a Adlib ROL file.
<u>Exit</u>	Exits MIDI Edit.

## **Edit Menu**

The Edit menu includes commands that enable you to copy, delete and move tracks within the song.

For more information about an Edit Menu command, select one of the following topics.

<u>Undo</u>	Restores the previous contents of a track.
<u>Cut</u>	Deletes track, and moves it to the paste buffer.
<u>Copy</u>	Copies track to the paste buffer.
<u>Paste</u>	Moves track from the paste buffer into the song.
<u>Clear</u>	Clears a track of all events.
<u>Delete</u>	Deletes a track.



## Track Menu

The track menu includes a number of commands which perform global changes to an entire track.

For more information about a Track Menu command, select one of the following topics.

<a href="#"><u>Change Channel</u></a>	Change the MIDI channel of events in a track.
<a href="#"><u>Filter Events</u></a>	Delete selected MIDI event types.
<a href="#"><u>Filter Channel</u></a>	Delete MIDI events on some channels.
<a href="#"><u>Information</u></a>	Edit track parameters, display track information.
<a href="#"><u>Merge</u></a>	Merge events from two tracks into one.
<a href="#"><u>Quantise</u></a>	Adjust timing of events.
<a href="#"><u>Split</u></a>	Split a track into multiple tracks.
<a href="#"><u>Transpose</u></a>	Transpose the notes in a track.
<a href="#"><u>Transform</u></a>	Perform transformation on event values.

## **MIDI Menu**

The MIDI menu includes items that control the way MIDI Edit responds to various MIDI events.

For more information about a MIDI Menu command, select one of the following topics.

<a href="#"><u>Thru</u></a>	Determines whether MIDI events are echoed.
<a href="#"><u>Pitch Wheel</u></a>	Determines whether continuous controller events are recorded.
<a href="#"><u>Exclusive</u></a>	Determines whether System Exclusive events are recorded.
<a href="#"><u>Real Time</u></a>	Determines whether MIDI Real Time messages are ignored.
<a href="#"><u>Internal Clock</u></a>	Timing source is internal
<a href="#"><u>MIDI Clock</u></a>	Timing source is from MIDI clock events
<a href="#"><u>Capture Hex</u></a>	Capture MIDI data stream in a file.
<a href="#"><u>Send Hex</u></a>	Sends a captured MIDI data stream.
<a href="#"><u>Reset</u></a>	Sends MIDI reset sequence on all channels.
<a href="#"><u>Configure</u></a>	Configures the MIDI Device.

## **Song Menu**

The Song menu is used to edit and set some options that effect the entire song.

For more information about a Song Menu command, select one of the following topics.

Timebase

Sets the time base for a new song.

Song Key

Sets the key signature for the song.

## Window Menu

The Window menu controls which windows are displayed.

MIDI Edit contains three pop-up windows in addition to the main window. The main window is the only window active when MIDI Edit is started, and shows a list of the tracks in the song. It's used to select a track.

The Track List and Piano Roll windows are used to display or edit the events in a single track. The Track List window displays the events in a text format, while the Piano Roll window displays MIDI Note events in a format similar to standard musical notation.

The Play Controls window is used to play the song or record a track. It can also be used to control a song while recording or playing.

For more information about one of the MIDI Edit windows, select one of the following topics.

<a href="#"><u>Track List</u></a>	Display or Edit MIDI Events in list format.
<a href="#"><u>Piano Roll</u></a>	Display or Edit Note Events in Piano Roll format.
<a href="#"><u>Play Controls</u></a>	Play the song or Record a track.

The Windows Menu is used to open or close one of the three MIDI Edit windows. If a check mark is shown beside the window's name, then selecting that window will cause it to be closed. If no check mark is shown, the window will be opened.

For further information about how to open and close the windows, select one of the following topics.

<a href="#"><u>Switching Windows</u></a>	How to switch between active windows.
<a href="#"><u>Opening Windows</u></a>	Starting one of the windows.
<a href="#"><u>Closing Windows</u></a>	Destroying one of the windows.

## Options Menu

The Options Menu occurs in three windows: Track List, Piano Roll and the main window. In each window, the menu contains a different set of options.

Most of these options are stored when you exit MIDI Edit so that next time you use MIDI Edit you do not have to customize MIDI Edit again.

For more information about one of the Options Menu commands, select one of the following topics.

Preferences

Set preferences for MIDI Edit.

Relative

Control the interpretation of time changes.

Velocity

Display or hide the velocity scale.

Dashed Lines

Display or hide dashed staff lines.

Clef Switches

Display selected clef staff lines.

Sound Event

Sound events as they are selected.

## Copying a Track

In order to duplicate the contents of a track, the following steps must be performed.

1. Select the track you would like to copy by selecting it in the main window. See [Selecting a Track](#) for more information.
2. Perform an [Edit Copy](#) command (key: **Ctrl+Ins**) to copy the track into the paste buffer.
3. Select the location to insert the new copy of the track. This is done by selecting the track that the new track should be inserted before.
4. Perform an [Edit Paste](#) command (key: **Shift+Ins**) to insert the track into the song.

If another copy of the track is desired, repeat steps 3 and 4.

## Deleting a Track

In order to delete a track perform the following steps.

1. Select the track you would like to delete. See [Selecting a Track](#) for more information.
2. Perform an [Edit Delete](#) command (key: **Del**) to delete the track from the song.

## Moving a Track

In order to move a track to another position in the song, perform the following steps.

1. Select the track you would like to move. See [Selecting a Track](#) for more information.
2. Perform an Edit Cut command (key: **Shift+Del**) to delete the track and place it into the paste buffer.
3. Select the location to insert the track, remembering that the track will be inserted before the selected track.
4. Perform an Edit Paste command (key: **Shift+Ins**) to insert the track back into the song.



## **Exiting**

To exit MIDI Edit and return to Windows, choose either Close from the main window's system menu or Exit from the File menu. You can also close MIDI Edit by pressing the **Alt+F4** key combination.

If you have not saved your last set of changes, MIDI Edit will ask you if you want to save them before exiting.

## Recording

The following steps are required to record a track.

1. Select the track in the song to record into. If the track chosen is not empty, the recorded track will replace it in the song.
2. Start the Play Controls window (key: **F4**) or switch to the Play Controls window if it's already started (key: **F6**). You can also click on the play control window's icon (picture of a pair of headphones).
3. Press the **Record** button to start recording.
4. Press the **Stop** button when recording is finished.

If you inadvertently record over a track which you did not want to lose, the Edit Undo command (key: **Alt+Bksp**) will restore the original track. If you also want to keep your recorded track, use the Edit Copy (key: **Ctrl+Ins**) or Edit Cut command (key: **Shift+Del**) to copy the recorded track into the paste buffer before restoring the original track.

## Playing

A song is played using the Play Controls window. This window is started by selecting it on the Window menu, pressing **F4** or clicking on its icon (picture of a pair of headphones).

Play is started by pressing the Play button.

While the song is running, window is updated to show the elapsed time in seconds and the current beat number. As tempo changes or patch changes are encountered, these are also displayed.

The tempo of the song can be changed while it's playing using the tempo scroll bar. There may appear to be a lag when changing the tempo.

The current patch number is also displayed for each MIDI channel. If you want to experiment with different patches while the song is playing, simply change the patch number. As you make each change, a MIDI Program Change message is sent on the selected channel. This can also be done in stop mode.

## **Selecting a Track**

The current track is used in the two edit windows, and all of the commands in the Track menu. To change the current track, perform the following steps.

### **Using the Keyboard**

1. Switch to the main window by pressing **F6** one or more times.
2. Use the cursor Up/Down keys to change the selected track.

### **Using the Mouse**

1. Switch to the desired track by clicking on it in the main window.

See [Switching Windows](#) for more information on how to switch to the main window.

## Switching Windows

With the multiple windows approach used by MIDI Edit, a method of rapidly switching between active windows is needed.

### Using a Mouse

To switch to another window using the mouse, simply click somewhere on the window you wish to switch to. If the window is not active, you can start it using the Window menu of the main window.

You can also switch windows by clicking on an icon on the toolbar. These icons open the window if it is closed, close the window if it is the active window and switch to the window if it is not the active window.

### Using the Keyboard

Two keys have been provided which will cycle through the active windows. The **F6** key switches to the next window, while the **Shift+F6** key will switch to the previous window. The order of the windows is: Notes List, Piano Roll, Play Controls and Main Window.

The window menu (or short cut key) may also be used to switch control. These commands open the window if it is closed, close the window if it is the active window and switch to the window if it is not the active window.

## Opening and Closing Windows

The various windows are opened and closed in three ways. You can use the Window menu of the main window, various short cut keys or the icons on the toolbar.

### Using the Mouse

Use the mouse to execute the correct command from the Window menu of the main window. If the window is closed, it will be opened. If it's open and the active window, it will be closed. If it's open and not the active window, it will be made the active window.

You can also click on the appropriate icon on the toolbar. This performs the same way as is described above. The various icons on the toolbar are listed below along with the short cut keys.

### Using the Keyboard

Each window has been assigned a function key which is used to open, close or switch to the window. The short cut keys are listed below.



**F2** Track List Window



**F3** Piano Roll Window



**F4** Play Controls Window

## Selecting an Event

To edit or delete an event from a track, you must first select it in either the Track List window or Piano Roll window. This can be done with either the keyboard or the mouse.

### Track List Window

This window behaves like a normal Windows list box. Select an event by clicking on it with the mouse, or using the cursor keys to move your selection. The event can then be edited by double clicking or using the **Enter** key. The event can be deleted using the **Del** key.

### Piano Roll Window

To select a note in this window with the mouse, simply click on the desired note. With the keyboard, use the **Tab/Shift+Tab** keys to move to the next or previous note. The note can be edited by double clicking or using the Enter key. The event can be deleted using the **Del** key.

## Using the Toolbar

If you have a mouse, the toolbar is a handy short cut to using the menus, just as short cut keys provide abbreviation for keyboard users. In order to use the toolbar you must have a mouse. The various controls on the toolbar are described below.

### Track Name

The currently selected track's name and number is shown in the "combo box" on the left side of the toolbar. You can select a new track using this instead of the list box in the main window. Clicking on the down arrow on the right side of the track name will cause a list box to appear. You can then scroll this list, and select the desired track by clicking on it.

### File Open & File Save



This icon is used as a short cut for the File Open command, which is used to load a song from disk.



This icon is a quick way of saving the current song. It is identical to the File Save command.

### Track Information



The Track Information command is used to edit global information about a track or to view additional information about a track.

### Track List, Piano Roll and Play Controls

The next three icons start up, shut down and switch to any one of the three pop-up windows that are used for track editing and playing.



This icon is used to start up, switch to or close down the Track List window. This window is used to edit a track's data in a list format.



The Piano Roll window is started, switched to or closed down with this icon. It is used to edit a track's note data in a format similar to standard musical notation.



The Play Controls window is used to record or playback MIDI data, and can be started, switched to or closed down by clicking on this icon.

### Help



The last icon is used to start up the help system that you are presently using to view this with. It is equivalent to the Help Index menu item or the **F1** key.



## **File New Command**

The File New command is used to clear the current song from memory. It deletes all tracks, and reinitialises the system to its start up state.

If you have not saved the last changes you made to the current file, MIDI Edit ask you if you would like to save them before clearing the song.

After clearing the song from memory, before any recording is done, you should always set an initial tempo and time signature in track zero. See [Track List Window](#) and [Recording](#) for details.

**Short Cut Key: Ctrl+N**

## **File Open Command**



The File Open command is used to load a song from disk. It replaces the current song in memory.

If you have not saved the last changes you made to the current file, MIDI Edit ask you if you would like to save your changes before loading the new song.

This command will load standard MIDI files from a number of sequencers as well as files saved from MIDI Edit. For more details on the supported files, see [MIDI File Format](#).

**Short Cut Key: Ctrl+O**

## **File Save Command**



The File Save command saves the current song using the current file name. If there is no current file name, the File Save command is the same as the File Save As command. If a song was previously named using the File Save As command or if the file was loaded using the File Open command, then the file on disk is overwritten by the song.

Files created by MIDI Edit can be loaded by many other MIDI software packages. For information on the file format used, see MIDI File Format

**Short Cut Key: Ctrl+S**

## **File Save As Command**

The File Save As command saves the current song, after prompting for a file name. If the entered file name exists, MIDI Edit will prompt before overwriting the file.

Files created by MIDI Edit can be loaded by many other MIDI software packages. For information on the file format used, see [MIDI File Format](#)

**Short Cut Key: Ctrl+A**

## **File Merge Command**

The File Merge command is used to load a song into memory without losing the contents of memory. This can be used to merge two songs together.

Each track from the merged file is added as a new track. If the timebase of the merged song is different from the current song in memory, the merged song's timebase is adjusted to match. This means that you should make sure that the current song's timebase is reasonable before performing the merge. Use the Song Timebase command to do this.

Once the song has been merged into memory, you should edit and/or merge the tempo and time signature events into track zero using the Track Merge command.

The song key of the merged file is ignored. The two songs are not adjusted to make sure they are in the same key signature. You will have to do this yourself, using the Track Transpose command.

## **File Import Command**

The File Import command is used to import an Adlib ROL file into memory. A dialog box is displayed allowing you to select the file to load. Once a file is selected, the ROL file is read into memory.

A second dialog box is displayed after the song has been loaded. Using this dialog box, you can select appropriate MIDI patch numbers to match the instruments in the ROL file. Once you assign patch numbers to all ROL instruments, all of the patch numbers will be added to the converted file.

After the import operation is complete, track zero will contain time signature and tempo change events only. The track name of this track will be the same as the ROL file name.

Each track converted will be named after the first instrument found in the track. The second instrument found will be used as the instrument name. The output track is monophonic, and is assigned to channel one. The only possible events that will be produced are note events, pitch wheel changes and patch changes. Since the track volume commands from the ROL file are translated into velocity, you may need to adjust the velocity scale of the tracks using the Track Transform command. You may wish to filter the pitch wheel changes using the Track Filter Events command. Finally, you should assign appropriate channels to the tracks using the Track Change Channel command.

## **File Exit Command**

The File Exit command will terminate MIDI Edit, and return to Windows. If the last changes to the current file have not been saved, MIDI Edit will ask if you would like to save them before exiting.

## **Edit Undo Command**

The Edit Undo command is used to undo the previous operation on a track.

All commands which cause a track to be changed will copy the original track into the undo buffer before making any changes.

The Edit Undo command will switch the contents of the undo buffer and the original track. A second Edit Undo command will undo the previous undo.

**Short Cut Key: Alt+Backspace**



## **Edit Cut Command**

The Edit Cut command copies the contents of the current track into the paste buffer. The previous contents of the paste buffer are lost. The track is then removed from the song.

This command can not be reversed using the Edit Undo command, however the Edit Paste command can be used to insert the track back into the song.

**Short Cut Key: Shift+Delete**

## **Edit Copy Command**

The Edit Copy command copies the contents of the current track into the paste buffer. The previous contents of the paste buffer are lost.

This command can not be reversed.

**Short Cut Key: Ctrl+Insert**

## **Edit Paste Command**

The Edit Paste command inserts the contents of the paste buffer into the song **before** the current track. All tracks from the current track to the last track are shifted down to make room for the new track.

A track is placed into the paste buffer using either the Edit Copy or Edit Cut commands.

**Short Cut Key: Shift+Insert**

## **Edit Clear Command**

The Edit Clear command will clear the contents of the track. It removes all events from the track. The original track is not available for an Edit Paste operation, however it can be recovered using the Edit Undo command.

## **Edit Delete Command**

The Edit Delete command will delete the contents of the track, without copying the track into the paste buffer. The deleted track is not available for an Edit Paste operation, however it can be recovered using the Edit Undo command.

**Short Cut Key: Del**

## Track Change Channel Command

The Change Channel command will change the channel number of selected events in a track.

A dialog box is displayed prompting for a channel range and the new channel number. All MIDI events in the track which have a channel number in the entered range will have their channel number set to the new value.

For example, assume there were two events in the track:

```
1:000 Note On      3      C 5   64   0:059
2:000 Note On      4      E 6   64   0:119
```

If a change channel command were carried out, selecting a range of 4 to 16, with a new channel of 1, the following would result:

```
1:000 Note On      3      C 5   64   0:059
2:000 Note On      1      E 6   64   0:119
```

In the event that you make a mistake performing this command, the Edit Undo command can be used to restore the track.

## **Track Filter Events Command**

The Filter Events command is used to delete certain MIDI events from a track.

A dialog box is displayed, which is used to select which event types are to be deleted from the track. Selecting an event causes an "x" to be displayed in the check box, which will cause any events of this type to be deleted from the track.

In the event that you make a mistake performing this command, the Edit Undo command can be used to restore the track.

## **Track Filter Channel Command**

The Filter Channel command is used to delete all MIDI events in a channel range from a track.

A dialog box is displayed, which is used to select the range of channel numbers to delete. All events with a channel number in the specified range will be deleted.

Non MIDI events such as tempo and time signature events will never be deleted.

In the event that you make a mistake performing this command, the Edit Undo command can be used to restore the track to its original value.



## Track Information Command



The Track Information command is used to edit global information about a track, as well as display useful track information.

The following is a list of the fields that can be modified using this command.

**Track Name** is the name that is assigned to the track. It's displayed in the main window, used to identify the track in dialog boxes and saved in the file.

**Instrument** is the name of the type of instrument used in the track. It's displayed in the main window and saved in the file.

**Force to Channel** is used to force all events in the track to be output on a single MIDI channel. The forced channel is not saved in the file when the song is saved.

**Mute Track** is used to mute a track during playback. The muted status of a track is not saved.

**Velocity Adjust by** is a quantity to be added to the velocity of all MIDI Note On events. This is often used to control the volume of the notes. Negative adjustments are supported by simply entering a negative value. Velocity adjustments are not saved, however the Track Transform command can be used to perform a permanent velocity adjustment.

**Semitones to Transpose** is used to transpose the track during playback. Negative transpose amounts can also be used. The transpose amount is not saved. See the Track Transpose command for a permanent transpose command.

### Information Displayed

If all events in the track occur on the same MIDI channel, that channel number is displayed. If more than one channel is used, the message "MIDI Events on Multiple Channels" is displayed instead. If there are no MIDI events in the track, the message "No MIDI Events" is displayed.

The total track time length is displayed, along with the number of events in the track and the number of bytes required to hold the track.

The maximum number of simultaneous notes that are on at any given time is displayed. If only one note is on at a time, the message is "Monophonic Track". If no note events are found in the track the message will be "No Notes in Track".

The range of note events is displayed. This is often useful when converting drum tracks between different drum machines. The note range is shown by both note name and decimal MIDI note number. The octave number displayed can be adjusted using the Options Preferences command.

If a MIDI Program Change event occurs in the track, the selected patch number will be displayed. If multiple patches are used, a message will indicate this as well. The patch base can be adjusted using the Options Preferences command.

## **Track Merge Command**

The Track Merge command is used to combine the contents of two tracks into one. All events from both tracks are placed into the destination track, in the appropriate order.

Since only the destination track is changed, the Edit Undo command will restore the previous contents of the destination track.

## Track Quantise Command

The Track Quantise command is used to globally alter the timing of all events in a track.

The starting time for all events in the track will be adjusted so that they start on a time which is an even multiple of the entered time.

The note lengths can also be quantised if desired. The three possible actions that can be performed on the note lengths are:

<b>Unaffected</b>	do not adjust any note lengths
<b>Aligned</b>	quantise note lengths
<b>Equal</b>	set all lengths to the quantisation time

In the event that you make a mistake performing this command, the Edit Undo command can be used to restore the track to its original value.

For example, assume that the track contained the following:

0:118	Note On	3	C 5	64	0:073
1:112	Note On	3	E 6	65	1:010
2:049	Note On	3	F 5	40	0:080

Quantisation with lengths **Unaffected** and a **Time Interval** of 60 (eighth note) will produce:

1:000	Note On	3	C 5	64	0:073
2:000	Note On	3	E 6	65	1:010
2:060	Note On	3	F 5	40	0:080

With lengths **Aligned**, result would be:

1:000	Note On	3	C 5	64	0:059
2:000	Note On	3	E 6	65	0:119
2:060	Note On	3	F 5	40	0:059

With lengths **Equal**, resulting track is:

0:118	Note On	3	C 5	64	0:059
1:112	Note On	3	E 6	65	0:059
2:049	Note On	3	F 5	40	0:059

## Track Split Command

The Track Split command is used to split a track into one or more tracks. There are four different ways that a track can be split.

**Channel:** specifies that each output track should only contain events on one MIDI channel. If the source track also contains non-MIDI events such as a tempo change, an additional track will be created for these non-MIDI events.

**Event:** each different event type will be split into a separate track. For instance a track containing note events and program changes would be split into two tracks.

**Individual Note:** each output track will only contain one note's events. This would primarily be used when converting a song from one drum machine to another. This will in general create a large number of tracks.

**At:** performs a split at a specified note. The source track will be split into two tracks.

Since only the source track is changed, the Edit Undo command will only restore the previous contents of it. The split tracks must then be manually deleted.

## Track Transpose Command

The Track Transpose command is used to transpose all note events in the track. There are two types of transpositions supported.

A Normal Transposition is performed by adding a number of semitones to each note. This corresponds to a change in the key signature of the track. To transpose up one octave, you must transpose 12 semitones. To transpose down one octave, use -12 instead.

**In Key** transposition is a special type of transposition, where the track is moved up or down without changing the key of the track. For example if a standard C scale is moved up one tone, you get a C scale from D to D.

When performing an **In Key** transposition, you must enter the current key of the song and the number of tones to transpose. A transposition of 7 tones is equivalent to a normal transpose of one octave.

**Suggestion:** A song written in a major key can be converted into a minor key by performing an In Key transpose of -2 tones, followed by a normal transpose of 3 semitones.

The Track Information command can be used to temporarily transpose a track for playback.

In the event that you make a mistake performing this command, the Edit Undo command can be used to restore the track to its original value.

## Track Transform Command

The Track Transform command is used to transform all events in a track according to the formula:

$$\text{new} = ( (\text{old} + \text{add}) * \text{mult} ) / \text{div}$$

In other words, the original data has an amount added to it (which may be negative). The result is multiplied by a number, and this result is divided by another amount. The resulting value is range checked to ensure it is valid, and this result becomes the new value.

The event data to be transformed can be any of the following: Note Velocity, Key Pressure, Control Change, Channel Pressure, Pitch Wheel, Song Tempo, Event Start Time or Note Length.

This command can do some very powerful things to your data, such as: adjusting the velocity of a track, evenly adjusting the tempo of a song, quantising events etc.

Consider the following problem. You have a track which has velocities between 0 and 127 which you want to adjust into the range 0 to 100. You could adjust these by adding  $-27$  (multiply by 1, divide by 1), which would probably make some notes too soft. A better way would be to add zero, multiply by 100 and divide by 127. This will evenly remap the velocities.

A similar process can be used to adjust a song's tempo. If there are a few tempo events, you might find it easier to edit them. If there are a large number of tempo events, and you want to speed up the tempo by 5% as an example, then add zero, multiply by 105 and divide by 100.

## **MIDI Thru Switch**

This switch determines whether MIDI events received are echoed. If this switch is on (checked), all MIDI events received by the MIDI hardware are echoed to all output devices. This effectively changes the MIDI Out ports into MIDI Thru ports.

## MIDI Pitch Wheel Switch

This switch determines whether MIDI continuous controller information is recorded. If the switch is on (checked), MIDI continuous events will be recorded. Otherwise these events are ignored. The following table shows the effect that this switch has on each event type:

<b>Event Type</b>	<b>On</b>	<b>Off</b>
0x8n Note Off	recorded	recorded
0x9n Note On	recorded	recorded
0xAx Key Pres	recorded	ignored
0xBn Ctrl Chg, 0-63	recorded	ignored
0xBn Ctrl Chg, 64-95	recorded	recorded
0xCn Pgm Chg	recorded	recorded
0xDn ChnlPres	recorded	ignored
0xEh PitchWhl	recorded	ignored

This switch only operates when recording. The MIDI continuous controller events are always sent during playback if they are found in a track.



## **MIDI Exclusive Switch**

This switch will be implemented in a future release.

## **MIDI Real Time Switch**

This switch determines whether MIDI Edit responds to or ignores MIDI real time messages: Start (0xFA), Stop (0xFC) and Continue (0xFB).

If the switch is on, a MIDI Stop will cause playing or recording to stop.

If the switch is on, a MIDI Start or MIDI Continue will cause recording to start MIDI Sync mode is active. Otherwise a Start or Continue message is ignored. MIDI Edit makes no distinction between Start and Continue.

## **MIDI Internal Clock Switch**

This switch is used when the source of all timing events is internal to the MIDI controller. Normally this switch should be on.

When Internal clocking is used, the MIDI processor on the interface card generates its own tempo events. This means that the song's tempo is determined by the tempo commands contained in the song.

The other currently supported clock source is described in [MIDI Clock](#).

## **MIDI Clock Switch**

This switch is used when an external MIDI device is to be used as the "master". This external master device must send MIDI clock events 24 times per beat. This is used to control the tempo of all recordings and playbacks.

When MIDI Clocking is used, any tempo events in the song are ignored. The tempo bar in the Play Controls window is also ignored.

**Caution:** If recording or playback is started when MIDI clock mode is active, MIDI Edit will wait for one beat before starting. **The program will appear to hang if no MIDI clock commands are being received.**

Under normal circumstances the Internal Clock should be used.

## **MIDI Capture Hex Command**

This command is used to capture a stream of MIDI data in a file. Normally this would be used to record MIDI System Exclusive messages.

This command causes MIDI Edit to start recording all raw MIDI events into a buffer. When this recording is stopped, the contents of the buffer may be saved in a file in an ASCII hex format. This allows for the file to be edited using normal editors (such as NotePad).

All raw MIDI events are recorded in the buffer, except for MIDI Active Sense events (FE). These are always filtered.

No timing information is kept during this recording process, so this command is useless for recording normal note events. It is primarily intended as a means for capturing MIDI System Exclusive messages in a format where they may be edited for future playback using the MIDI Send Hex command.

## **MIDI Send Hex Command**

This command is used to send an ASCII hex file out the MIDI port. Normally the input ASCII hex file would have been created using the MIDI Capture Hex command, then edited and saved for future use.

The input file may contain comments and blank lines as required to make the file more understandable by humans. The following is an example of a valid file.

```
;
;   The following will set the master volume of a MT32 to 100
;   Comments are from a semicolon to the end of the line
;

;   Blanks, Tabs and New Lines are ignored
;   UPPER and lower case are allowed in hex numbers

F0 41 10 16 12 10 00 16 64 76 F7

;   the following repeats the previous command

f0 4110161210 0 166476 f7
```

## **MIDI Reset Command**

This command causes a MIDI reset sequence to be transmitted on all channels. The reset sequence is as follows:

```
Bx 7B 00      ;all notes all  
Bx 01 00      ;modulation wheel to zero  
Bx 07 7F      ;volume to max (127)  
Bx 40 00      ;sustain pedal off  
Ex 00 40      ;centre pitch wheel
```

**Short Cut Key: Ctrl+R**

## **MIDI Configure Command**

This command is used to configure MIDI Edit for the hardware on your particular machine. You must do this before you can play or record.

The dialog box displayed is used to select the proper I/O base address and interrupt number for the MIDI adapter. At this point, MIDI Edit only supports a Roland MPU-401 (or compatible).

Once you have successfully configured MIDI Edit, this configuration information is remembered in the MIDIEDIT.INI file, so you should only have to configure once. The configuration is also tested whenever MIDI Edit is started, to make sure your equipment has not been changed.

### **Choose Default First**

The original Roland MPU-401 came fixed at one spot: base I/O port of 330H and interrupt number 2. There were no switches or jumpers that could be used to change this configuration - you had to cut traces and use your soldering iron. Roland's current adapters are similar, and don't really let you move the board around.

For this reason, the vast majority of machines with MIDI ports have them installed at this default location. Unless you know for certain that the MIDI device had to be moved, choose Default in the dialog box. This will probably work correctly.

### **Configuring for Non-Standard Installations**

If you know what your configuration is, simply select the appropriate settings and press Ok. When Ok is pressed, the device will be tested (a reset is performed), and if all is well, the device is configured.

If you don't know what your configuration is, you will have to resort to the old trial and error approach. You can try various settings until you find the correct one. Note that MIDI Edit will probably detect an incorrectly set base I/O port address, and give you the message: "Configuration Failed." If your machine simply hangs without giving you any warning (big red switch time), then the base I/O port is probably correct but the interrupt number is wrong. Try again with the same base I/O port address and another interrupt number.

### **As a Last Resort**

In the event that the base I/O address you are listed is not in the dialog box, you can manually edit the file MIDIEDIT.INI to set the base address. MIDIEDIT.INI is normally found in your C:\WINDOWS directory.

There are two entries in MIDIEDIT.INI which are used to determine the configuration of the MIDI device. Both must be correct (and non-zero) for things to work.

The entry "IOBase=???" contains the base I/O address of the device - as a DECIMAL number. You can enter your base I/O address here. The entry "IRQ=" contains the interrupt number. Simply enter the correct interrupt number in here.

When MIDI Edit starts up it will test the MIDI device and let you know if it disagrees with your settings. If the machine hangs, you have probably configured for the wrong interrupt number.



If you had to use this to configure MIDI Edit, please send me a note telling me about your setup so that the next guy will not have to do the same thing.

## **Song Timebase Command**

This command sets the number of "ticks per beat" used in a song. This effects the resolution of a song's timing. In standard time (4/4), the number of ticks per beat is the number assigned to a quarter note.

The song's timebase can be set or changed at any time. When the timebase is changed, all events are adjusted to conform to the new timebase. A note that was a quarter note before will start at the same time, and still be a quarter note.

When a ROL file is imported, or when you load a file from another sequencer, you may get an error message when you try to play the song saying that the timebase is invalid. If this occurs, simply adjust the timebase to one of the values listed in the Song Timebase dialog box. If in doubt as to what to choose, try 120.

The default timebase is 120. The Roland MPU-401 supports timebases from 48 to 192. The other supported timebases are mapped internally by MIDI Edit to one of these timebases. The normal minimally acceptable timebase is 96.

## **Song Key Command**

The Song Key command is used to specify the current song's key signature. Currently only a single key signature can be used for a song, although it can be changed anytime.

The key signature is used to determine the name of each note in the Track List window. It is also used to determine the colour and placement of the note on the staff in the Piano Roll window.

For example, if the key signature was G (one sharp), then the names of any accidentals would be changed to reflect a sharp rather than a flat (C# instead of Db). In the Piano Roll window, an F# would now be displayed as a normal note in grey rather than a note in grey.

This command has no effect on anything other than how the notes are displayed. Changing the key signature will not cause tracks to be automatically transposed.

## Track List Window



This window is used to edit the contents of the current track. The track events are displayed in a list format, so all events in the track can be edited and viewed in this window.

Events are selected in the track list window by moving the select bar to the desired event. The list can be scrolled using the scroll bar or normal Windows scrolling keys.

There are various commands available when using the Track List window. These are fully explained in the following topics.

Event Menu                      Used to insert/delete/edit single MIDI events  
Options Menu                    Customize MIDI Edit.

The following topics will help to describe how to perform various tasks in the Track List window.

Switching Windows      How to switch between active windows.  
Opening Windows        Starting one of the windows.  
Closing Windows        Destroying one of the windows.  
Selecting Events         How to select an event to edit.

## Track List Abbreviations

In the track list screen different abbreviations are used to depict the various event types. The following is a list of the abbreviations used and where appropriate, their MIDI status byte.

**Tempo**                    set of new tempo for song  
**TimeSig**                  change in time signature

**Note On**                  MIDI Note On event: 0x9n  
**KeyPres**                  MIDI Key Pressure (Key After Touch): 0xA<sub>n</sub>  
**CtrlChg**                  MIDI Control Change: 0xB<sub>n</sub>  
**Pgm Chg**                  MIDI Program (patch) Change: 0xC<sub>n</sub>  
**CnlPres**                  MIDI Channel Pressure (After Touch): 0xD<sub>n</sub>  
**PtchWhl**                  MIDI Pitch Wheel (Bender): 0xE<sub>n</sub>

## Piano Roll Window



This window is used to display and edit the contents of the current track. The track's note events are displayed in a graphical format, similar to both standard musical notation and "piano roll" notation.

Each note event is shown in a standard musical staff as a rectangle. The vertical position of the rectangle is the correct location on the staff, depending on the Song Key. The note's starting time determines the start of the rectangle, and the width of the rectangle is determined by the length of the note. Accidentals (sharps and flats) are shown in a second colour.

The screen can be scrolled horizontally using either the scroll bar or the cursor keys. If some notes are not being displayed because the window is too small, the window can be resized so that they may be seen.

There are various commands available when using the Track List window. These are fully explained in the following topics.

<u>Event Menu</u>	Used to insert/delete/edit single MIDI events
<u>Options Menu</u>	Customize MIDI Edit.

The following topics will help to describe how to perform various tasks in the Track List window.

<u>Switching Windows</u>	How to switch between active windows.
<u>Opening Windows</u>	Starting one of the windows.
<u>Closing Windows</u>	Destroying one of the windows.
<u>Selecting Events</u>	How to select an event to edit.

## Play Controls Window



The play control window is used to record a track or play the song. It also contains various controls that can be used to change the behaviour of the song as it is playing.

Whenever recording or playing is in progress, some commands are disabled. This is necessary to protect the integrity of your data. In addition, the [Track List](#) and [Piano Roll](#) windows will follow along with the song as it plays. You may find this helpful when trying to determine where to make your changes.

The various controls and procedures available when using the Play Control window are fully described in the following topics.

<a href="#">Play Controls Overview</a>	Quick explanation of the controls
<a href="#">Playing</a>	How to play the song.
<a href="#">Recording</a>	How to record a new track
<a href="#">Opening Windows</a>	Starting one of the windows.
<a href="#">Closing Windows</a>	Destroying one of the windows.
<a href="#">Switching Windows</a>	How to switch between active windows.

## **Play Controls Overview**

The Play Controls Window is used to play a song, and record a track. It consists of three groups of controls, each of which is used to control different aspects of the playback.

### **Metronome**

The controls contained in the Metronome box are used to control the metronome and the count-in at the start of the playback. The buttons are used to turn the metronome off, on or on with accents at the start of each measure. The number of beats of initial delay is entered as the count in amount.

The metronome is only active while playing or recording.

### **Patches**

The patches section is used to display the last patch (MIDI program change) sent on each MIDI channel. Every time a patch is sent on a channel, the screen is updated.

If you would like to experiment with different patches while the song is being played, you can edit the patch number for any MIDI channel. Simply input the new patch number, and it's sent out the correct channel.

You can also change the patch number for any channel when the song is not playing, because any patch number entered is immediately sent. When playing is restarted however, the original patches will be sent again.

### **Song Status**

As the song plays, the current beat number and elapsed real time is displayed in the window.

The current tempo is displayed as the number of beats per second. The tempo scroll bar may be used to adjust the tempo while the song is playing.

The buttons are used to play, record and stop the song. The pause, rewind and forward buttons are not implemented at this time.

While the song plays, the Track List and Piano Roll windows will follow along. You can watch any track as the song plays by simply selecting the track you want to see. Sometimes notes will be skipped in the windows when things get busy. This is normal in a busy section of a song, depending on how busy your machine is.

## Event Menu

The Event Menu on the Track List and Piano Roll windows is used to edit, insert and delete events in a track. It contains the following commands.

<u>Edit</u>	Edit the currently selected event.
<u>Insert</u>	Insert a new event into the track.
<u>Delete</u>	Delete the currently selected event.
<u>Duration</u>	Change the length of the note and adjust next note.
<u>Rest</u>	Add rest before current event.
<u>Chord</u>	Create a chord with two events.
<u>1</u>	Turn current note into a whole note
<u>2</u>	Turn current note into a half note
<u>3</u>	Turn current note into a quarter note
<u>4</u>	Turn current note into a eighth note
<u>5</u>	Turn current note into a sixteenth note
<u>6</u>	Turn current note into a thirty-second note



## **Event Edit Command**

This command is used to edit the currently selected event.

A dialog box will be displayed containing the current event. Any changes can then be made to the event. Whenever a change is made, it is validated, and if the entered value is illegal then a valid value is substituted.

The middle C octave number and patch base can be set using the Options Preferences command. The current setting of the Options Relative switch will also effect the way a change in time is handled.

**Short Cut Key: Enter or Double Click**

## **Event Insert Command**

This command is used to insert a new event into a track.

A dialog box is displayed asking what type of event you want to insert. Once you have selected an event type, a second dialog box is displayed to allow entry of the event. This second dialog box will be filled in with as much information as is possible from the currently selected event.

There is no requirement to insert events in sequence in the track as MIDI Edit will automatically find the appropriate location in the track for your new event.

The middle C octave number and patch base can be set using the [Options Preferences](#) command.

**Short Cut Key: Ins**

## **Event Delete Command**

This command is used to delete the currently selected event from the track.

While it is not possible to undo an event that was deleted by accident, you can undo all of your changes to the track by closing the Track List or Piano Roll window, then selecting Edit Undo from the main menu.

**Short Cut Key: Del**

## Event Duration Command

This command is used to adjust the length of the current note, and the start time of all subsequent events.

A dialog box is displayed asking for the duration of the current note. Enter the note's desired length in ticks, depending on the current Timebase, which is displayed for you. The length of the note will be set to one tick less than the entered time, and the start time of all events following it in the track will be adjusted to the entered time.

For example, assume that the current timebase was 120, and the track contained the following:

```
0:118 Note On      3      C 5   64   0:073
1:112 Note On      3      E 6   65   1:010
2:049 Note On      3      F 5   40   0:080
```

If a duration command was performed on the first event, setting the duration to 1:000 (one beat), the result would be:

```
0:118 Note On      3      C 5   64   0:119
1:118 Note On      3      E 6   65   1:010
2:055 Note On      3      F 5   40   0:080
```

## Short Cut Key: D

There are also short cut keys for some of the common duration commands. These are:

- 1 Turn current note into a whole note
- 2 Turn current note into a half note
- 3 Turn current note into a quarter note
- 4 Turn current note into a eighth note
- 5 Turn current note into a sixteenth note
- 6 Turn current note into a thirty-second note

## Event Rest Command

This command is used to add time to the current start time of the current event.

A dialog box is displayed asking for the length of the rest. Enter the desired rest length in ticks, depending on the current Timebase, which is displayed for you. The amount entered will be added to the start time of the current event, and all subsequent events in the track.

For example, assume that the current timebase was 120, and the track contained the following:

0:118	Note	On	3	C	5	64	0:119
1:118	Note	On	3	E	6	65	1:010
2:055	Note	On	3	F	5	40	0:080

If a rest command was performed on the first event, entering a value of 0:2, the result would be:

1:000	Note	On	3	C	5	64	0:119
2:000	Note	On	3	E	6	65	1:010
2:057	Note	On	3	F	5	40	0:080

**Short Cut Key: R**

## Event Chord Command

This command is used to adjust the start time of the current event to be the same as the start time of the previous event, thus creating a chord.

If this command is executed on the first event in a track, the start time of the event is set to zero.

For example, assume that the current timebase was 120, and the track contained the following:

1:000	Note On	3	C 5	64	0:119
2:000	Note On	3	E 6	65	1:010
2:057	Note On	3	F 5	40	0:080

If a rest command was performed on the first event the result would be:

0:000	Note On	3	C 5	64	0:119
1:000	Note On	3	E 6	65	1:010
1:057	Note On	3	F 5	40	0:080

## Short Cut Key: C

### **Event Whole Note Command**

This command is a quick way of specifying a Duration of 4 times the current Timebase for the currently selected note. In 4/4 time, this would equal one whole note.

**Short Cut Key: 1**

### **Event Half Note Command**

This command is a quick way of specifying a Duration of two times the current Timebase for the currently selected note. In 4/4 time, this would equal one half note.

**Short Cut Key: 2**



### **Event Quarter Note Command**

This command is a quick way of specifying a Duration equal to the current Timebase for the currently selected note. In 4/4 time, this would equal one quarter note.

**Short Cut Key: 3**

### **Event Eighth Note Command**

This command is a quick way of specifying a Duration of half the current Timebase for the currently selected note. In 4/4 time, this would equal one eighth note.

**Short Cut Key: 4**

### **Event Sixteenth Note Command**

This command is a quick way of specifying a Duration of one quarter of the current Timebase for the currently selected note. This is normally equal to one sixteenth note.

**Short Cut Key: 5**

### **Event Thirty-second Note Command**

This command is a quick way of specifying a Duration of one eighth of the current Timebase for the currently selected note. This is normally one thirty-second note.

**Short Cut Key: 6**

## Options Preferences Command

The Options Preferences Command is used to customized MIDI Edit to your machine and preferences. The following changes can be made.

**Patch Base** controls the first patch number used by your MIDI instrument. This only effects the way patch numbers are displayed and entered. Some companies such as Roland and Yamaha number their patches from 1 through 128, while other manufactures number patches from 0 through 127. Default is 1.

**Middle C Octave** controls the octave number assigned to middle C. Again different manufactures have chosen to use different notation, so MIDI Edit allows you to choose which ever octave is better for you. For example Yamaha uses C3 for middle C, while Roland uses C4. Default is C5.

**Note Width** controls the number of beats that can be fitted onto one maximized Piano Roll window. A higher number will show more beats on the screen, although each note will be narrower. Default is 16.

**Note Height** controls the height of a note in the Piano Roll window. This is actually the number of pixels used to draw the note's rectangle on the screen, and must be an odd number. Default is 5. A value of 5 is suggested for a VGA screen.

**Velocity Scale** is an amount used to divide a note's velocity by to determine the height of the line to display. A scale amount of 1 will cause the velocity area of the Piano Roll screen to be larger than it would be with a scale of 4. Default is 4.

## **Options Relative**

This switch controls the interpretation of a change in an event's starting time when the Edit Event command is used.

If the switch is off, a change in the start time of an event will cause the event to be moved to a new location in the track.

If the switch is on, MIDI Edit moves this event to the new starting time, and shifts all events following it in the track as well. If the new time entered is before the start time of the previous event in the track, the time is considered to be invalid, and no change is made.

With the switch on, it's very easy to insert a rest into a track, or perform a bit of manual quantising.

## **Options Velocity Switch**

This switch determines whether the velocity of each note is shown in the Piano Roll window.

If the switch is on, each note will cause a vertical line to be displayed showing a graphic representation of the note's velocity. The longer the line, the higher the velocity. For reference purposes, a horizontal line is drawn representing the height of a velocity of 64.

## **Options Dashed Lines Switch**

This switch determines whether or not dashed lines are drawn in the Piano Roll Screen.

If on, dashed lines are drawn wherever a line would normally go. For example, if the Alto Clef is not displayed and dashed lines are on, Middle C would have a dashed line drawn through it.

Dashed lines are intended to help locate a note that is off the normal staff lines.



## Options Clef Switches

MIDI Edit will display three different types of clefs in the Piano Roll screen.

Most piano music uses a "grand" clef, which includes a treble and bass clef. Guitar music, "fakebooks" etc often only contain a treble clef. Some orchestral instruments such as a Viola use the Alto clef, which has Middle C as its middle line.

You can select which clefs you would like to see in the Piano Roll screen. Regardless of the clef chosen, middle C is always located in the centre of the screen. If an Alto clef is chosen, neither a Treble or Bass clef can be shown as they would overlap.

## **Options Sound Event**

This switch is used to determine whether MIDI Edit should play each note as it is selected in either the Track List or Piano Roll windows.

If this switch is on, as each event is selected in the Track List or Piano Roll windows, the event is sent as well. If the event is a note event, the length of the note will be about half a second. If you move rapidly between notes, the last note will be cut off to avoid slowing your movement down.

## MIDI File Format

MIDI Edit will read and write standard MIDI format song files. This is a common format supported by most of the music programs on the market today. It is also standard format between different machines and operating systems.

MIDI Edit will read MIDI files, any format. Reading a format other than 0 or 1 will cause a warning to be displayed, because these are the only formats MIDI Edit understands. The only other currently defined format is type 2, which consists of multiple tracks which play one at a time. It should be possible to edit a format 2 file into a valid song using MIDI Edit.

MIDI Edit always saves files as format 1. The maximum number of tracks in the file is 64. If a format 0 file must be created, merge all tracks into track zero and save the file. Then patch the 10th byte with a binary editor (debug will do) to turn the 10th byte from a 1 into a 0. An option to save as a format 0 file may be added in a future release of MIDI Edit.

All MIDI channel events are supported (status bytes from 0x80 through 0xEF). None of the MIDI non-channel events (status bytes from 0xF0 through 0xFF) are supported in a track. In particular this means that tracks cannot contain a System Exclusive message. Support may be added for this at a later time. MIDI Edit does support System Exclusive messages in the Capture Hex and Send Hex commands.

MIDI Edit supports only a subset of the possible meta events which can occur in a file. MIDI Edit is capable of reading files containing any meta event, however only a few are recognised (the rest are ignored). The only supported meta events are:

0x03	Track Name
0x04	Instrument Name (patch name)
0x2F	end of track
0x51	Tempo
0x58	Time Signature
0x59	Key Signature

All tracks containing MIDI Note Off messages (status byte 0x80 through 0x8F) will have these events mapped into Note On commands with a velocity of zero. This will normally result in a smaller track because a new status byte does not always have to be output (MIDI running status). Files can be further compressed by using a different track for each MIDI channel, and possibly using separate tracks for continuous events (pitch wheel, channel after touch, note pressure).

MIDI Format type 0 files contain only one track, which has all of the meta events as well as the data streams for each MIDI channel. Whenever a type 0 file is loaded, it's suggested that the track should be split in order to form a valid type 1 file. This will also assist in editing/voicing the song.

MIDI Format type 1 files are supposed to contain only non-note events in track 0 (tempo changes, time signature changes etc). All other tracks are only supposed to contain MIDI events. While MIDI Edit does not require this to be true, it is a good way to organize your song's tracks. You should certainly follow this rule if you expect to use the saved file with any other sequences.