WinJammer Help Index

WinJammer 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.

WinJammer 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 <u>Registration</u> for registration instructions.

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

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

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

Quick Start

Welcome to WinJammer.   We will try to get you up and running as fast as possible by describing how to play one of the sample songs.

Configuration

Before you can play a song the MIDI hardware must be configured.   The <u>MIDI Configure</u> command is used to do this.

Playing a Song

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

1. Load the song.   Select the <u>File Open</u> command through the menu, **Ctrl+O** key or by clicking on the icon shown on the left.   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. Play the song.   This part is easy, simply click on the Play icon or press either the <u>Spacebar</u> or the **P** key.   For more information check out <u>Playing</u> for how-to information.

Adjusting the Song

The sample songs that come with WinJammer are voiced according to the General MIDI Specification.   This means they should play properly through the MIDI Mapper, assuming that you have set up a mapping for your equipment.   If you want to change the MIDI channels and patches used in a song, it is fairly easy to do, 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 <u>Closing Windows</u>.

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 <u>Selecting a Track</u> for more information.

3. Change the MIDI channel.   The channel number can be changed temporarily using the Track <u>Information</u> command, or permanently using the Track <u>Change Channel</u> 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 <u>Track List</u> window.   This window is opened using the **F2** key, clicking on its icon as shown on the left, 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 <u>File Save</u> command).

Commands

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

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

Procedures

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

Copying a Track	How to copy the contents of a track.
Deleting a Track	How to delete a track.
Moving a Track	Moving a track in the song.
Exiting	Returning to Windows.
Recording	Recording a track.
Playing	How to play the song.
Selecting a Track	How to select a track.
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.
Using the Toolbar	Use of the Toolbar.
Saving Type 0 Files	Creating a MIDI Format 0 file.

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.

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

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

Main Window

Bksp	Undo the previous track change
Shift+Del	Move track into the paste buffer
Ctrl+Ins	Copy the track into the paste buffer
Shift+Ins	Insert the contents of the paste buffer
Del	Delete the track from the song
Spacebar	Start or Stop Play
P	Start play
R	Start recording
F	Move to the end of the song
W	Move to the start of the song
S	Stop playing or recording
T	Adjust the current tempo
B	Adjust the starting position for playback
M	Mute the current track

Track List & Piano Roll Windows

Enter	Edit the current event
Del	Delete the current event
Ins	Insert a new event
D	Change the note's duration
R	Insert a rest before current note
C	Make current note part of a Chord
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
7	Turn current note into a sixty-fourth note
Spacebar	Start or Stop Play

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, WinJammer 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 WinJammer send me a note and a cheque or money order for **$50 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.   Please note that registration for WinJammer includes registration for WinJammer Player.

I will send your registration keys, which you can then use with the <u>File Register</u> command to unlock the program.   If you have a CompuServe account, I will send the registration keys immediately via CompuServe mail, otherwise I will have to send you an old fashioned letter.

I can be reached at:
> Dan McKee
> 69 Rancliffe Road
> Oakville, Ontario
> Canada
> L6H 1B1

Please ensure that you use the correct postage.   It currently costs 40 cents to mail a letter from the US to Canada.   I know a number of people have had their letters returned because of insufficient postage.

Software Excitement!

The good folks at Software Excitement! will also accept registrations for WinJammer.   They accept Visa/Mastercard, and will accept international orders.   If you want a copy of the program sent to you, they can also do this for a nominal charge.

Software Excitement! can be reached a number of ways.   If you are a member of CompuServe, they have a store in the "Electronic Mall" (GO SE) that you can use for free.   They will also take orders via normal mail, phone or fax at:
> Software Excitement! (Attn: Registrations)
> 6475 Crater Lake Highway
> Central Point, OR 97502

Toll Free Phone: (800)444-5457
Fax Number: (503)826-8090
Non-Toll Free: (503)826-8082

MIDILIB.DLL

A substantial amount of the effort that went into WinJammer 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.

I am selling a developer's kit so that you can write your own Windows based MIDI programs. This kit includes: printed documentation for the library, the needed include/library files, some example programs with source, a registered copy of WinJammer and limited

distribution rights for MIDILIB.DLL.   The price for the kit is $100 US, and any registration fees paid for WinJammer are deductible from this price.

You will be able to distribute your programs through Shareware channels as long as you make a registered copy of your program available to me.   I will advertise your product with all of the Shareware MIDI programs that I produce.   You will have to acknowledge me as the author of MIDILIB.DLL, and place certain information in your program's About box.

If you are interested in distributing MIDILIB.DLL in a commercial product, a separate negotiated license is required.   Please give me a call to discuss this.   If necessary, I will customize a DLL for you.

The*Drums

The first Shareware product using MIDILIB.DLL written by someone other than me has recently been released.   This is a great program called The*Drums, written by Fabio Marzocca.   Fabio's description of his program is:

> The*Drums V3.50 for Microsoft Windows!   Universal Editor/Sequencer for drum parts. Build your own drum patterns and songs, and save them as Standard Midi File Format.

Check it out!

Support (How to contact me)

There are a number of channels that you can use to contact me.   My CompuServe id is 70742,2052.   A message there will reach me if sent via mail or if left in the MIDIFORUM.   I can also be reached on Internet as 70742.2052@compuserve.com.

I monitor the MIDI conferences on SmartNet, Rime, NorthAmeriNet, Intelec, and Interlink. Address messages it to me to be sure I see it.

I can be reached by telephone at (416)844-1821.   Please try to call between the hours of 7 and 9 PM, Eastern Time.   If all else fails, you can always write me at the address above.

Spacebar

The **Spacebar** can be used to start and stop playback from the Track List, Piano Roll or Main window.

If a song is currently playing, pressing the **Spacebar** will cause it to stop.   If nothing is playing, the **Spacebar** will cause play to start.   For more information, see the topic Playing.

Mute

The current track can be muted at any time by pressing the **M** key.   This is often very useful when recording, or while voicing a song.

The Track <u>Information</u> command can also be used to mute a track.

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.

New   Create a new song.
Open   Loads a song file.
Save   Saves the current song.
Save As   Saves the song under a new name.
Merge   Merges a song into current song.
Import   Import a Adlib ROL file.
Exit   Exits WinJammer.
Register   Registers your copy of WinJammer.

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.

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

Change Channel	Change the MIDI channel of events in a track.
Clear Section	Delete events in a time range.
Filter Events	Delete selected MIDI event types.
Filter Channel	Delete MIDI events on some channels.
Information	Edit track parameters, display track information.
Merge	Merge events from two tracks into one.
Quantise	Adjust timing of events.
Replicate	Copy a section of a track.
Split	Split a track into multiple tracks.
Transpose	Transpose the notes in a track.
Transform	Perform transformation on event values.

MIDI Menu

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

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

Thru	Determines whether MIDI events are echoed.
Pitch Wheel	Determines whether continuous controller events are recorded.
Exclusive	Determines whether System Exclusive events are recorded.
Real Time	Determines whether MIDI Real Time messages are ignored.
Send Real Time	Determines whether MIDI Start/Stops are sent.
Send MIDI Clocks	Determines whether MIDI Clocks are sent.
Internal Clock	Timing source is internal.
MIDI Clock	Timing source is from MIDI clock events.
System Exclusive	Send and Receive MIDI System Exclusive data.
Sys Ex Customize	Customize System Exclusive request strings.
Reset	Sends MIDI reset sequence on all channels.
Auto Reset	Automatically send MIDI reset sequence on stop.
Metronome	Configures the Metronome.
Configure	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.

WinJammer contains three pop-up windows in addition to the main window.   The main window is the only window active when WinJammer is started, and shows a list of the tracks in the song.   It's used to select a track.   The main window also contains the toolbar, which is used to control playback and recording.

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 control the metronome and the patches used in a song.

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

Track List   Display or Edit MIDI Events in list format.
Piano Roll   Display or Edit Note Events in Piano Roll format.
Play Controls   Control the Patches and Metronome.

The Windows Menu is used to open or close one of the three WinJammer 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.

Switching Windows   How to switch between active windows.
Opening Windows   Starting one of the windows.
Closing Windows   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 WinJammer so that next time you use WinJammer you do not have to customize WinJammer again.

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

ROL Pitch Wheel   Enable MIDI Pitch Wheel events in ROL files.
ROL Save Patches   Save instrument mapping in ROL files.
Preferences   Set preferences for WinJammer.
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.

If you only want to copy a section of a track, see the Track Replicate command.

Deleting a Track

In order to delete a track perform the following steps.

1. Select the track you would like to delete.   See <u>Selecting a Track</u> for more information.

2. Perform an <u>Edit Delete</u> 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 WinJammer and return to Windows, choose either Close from the main window's system menu or Exit from the File menu.   You can also close WinJammer by pressing the **Alt+F4** key combination.
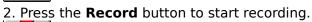
If you have not saved your last set of changes, WinJammer will ask you if you want to save them before exiting.

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.

![Record button]

2. Press the **Record** button to start recording.

![Stop button]

3. Press the **Stop** button when recording is finished.

If you inadvertently record over a track which you did not want to loose, 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.

MIDI Clock and Real Time switches.

If you are recording from another MIDI Sequencer or computer, then the Real Time and MIDI Clock switches may prove to be useful.   The MIDI Clock switch specifies that the tempo is to be taken from the remote MIDI device, rather than using the internal clock.   The Real Time switch allows the remove device to start and stop the recording.   For more information, see the MIDI Real Time Switch and the MIDI Clock Switch.

Playing

A song is played using the toolbar on the main window.

Play is started by pressing the Play button, or pressing **P**.   Play can also be started by using the <u>Spacebar</u> in the <u>Piano Roll</u>, <u>Track List</u> or Main windows.

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.

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 <u>Switching Windows</u> for more information on how to switch to the main window.

Switching Windows

With the multiple windows approach used by WinJammer, 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 control patches and the metronome, and can be started, switched to or closed down by clicking on this icon.

Help

This 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.

Record & Play

Record

This icon is used to start recording on the current track.   This is equivalent to pressing the **R** key on the main window.   See the Recording topic for more information.

Play

This icon starts playing the song.   This can also be done using the **P** key on the main window, or by pressing the Spacebar.   See the Playing topic for more information.

Rewind & Fast Forward

Rewind

This icon rewinds the current song position back to the last position that playing started or back to the start of the song.   This can also be done using the **W** key on the main window, or through the use of the **Beat** scroll bar on the toolbar.

Fast Fwd

This icon fast forwards the current song position to the last place that playing started or the end of the song.   This can also be done using the **F** key on the main window, or through the use of the **Beat** scroll bar on the toolbar.

Stop

Stop

This icon stops the current playback or recording.   Playback will automatically stop at the end of the song, but recording normally needs to be stopped manually.   The **S** key can also be used to stop play.

Beat

The current beat number is displayed while playing or recording.   Whenever play is started, it is started at the current beat number.   The scroll bar can be used to change the starting point as well.   The **B** key can be used to move the focus to the scroll bar, or the mouse can be used to move the scroll position.   The rewind and fast forward buttons are also used to control the starting position for playback.

Tempo

The current tempo is displayed as a number of beats per minute and on the scroll bar. When playing, all tempo changes are reflected here.   The **T** key can be used to move to the tempo scroll bar.   The tempo can be changed while the song is playing using the scroll bar.

Saving Type 0 Files

In order for a song to be saved as a type 0 file, there must be only one track in the song.   If there is only one track in the song, WinJammer will save the file as a type zero file.

Follow the following steps to create a type 0 file.

1. Merge all of the tracks in the song into a single track in track number zero.   This can be easily done using the Track Merge command.

2. Delete all tracks other than track number zero.   This is done by pressing highlighting the track to delete and pressing the **Del** key.   See the Edit Delete command for more details.

3. Save the song using the File Save or File Save As command.

File New Command

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

If you have not saved the last changes you made to the current file, WinJammer will 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, WinJammer 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 WinJammer.   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 WinJammer can be loaded by many other MIDI software packages.   For information on the file format used, see MIDI File Format.

Files are saved as MIDI format 1 files unless only one track exists in the song.   When only one track is in the song, the file is saved as a format 0 file instead.   See Saving Type 0 Files for more details on how to create a type 0 file.

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, WinJammer will prompt before overwriting the file.

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

Files are saved as MIDI format 1 files unless only one track exists in the song.   When only one track is in the song, the file is saved as a format 0 file instead.   See Saving Type 0 Files for more details on how to create a type 0 file.

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 <u>Song Timebase</u> 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 <u>Track Merge</u> 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 <u>Track Transpose</u> 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.   If the ROL Save Patches switch is on, the patch assignments will be saved for the next time you wish to import a 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.   The production of pitch wheel changes is controlled by the ROL Pitch Wheel switch on the options menu.   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.   Finally, you should assign appropriate channels to the tracks using the Track Change Channel command.

File Exit Command

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

File Register Command

The File Register command is used to register your copy of WinJammer.   Once registered, the reminder dialog will no longer appear.   The track name field will also be able to be entered and saved, and the About box will display the registration information.

To register the program, you must carefully enter the registration information.   Please take care to enter the three fields exactly as I sent them to you, or the registration will fail.

For more information on registration, including the cost and how to do it, see the Registration topic.

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 Clear Section Command

The Clear Section command is used to delete all events in a range from a track.

A dialog box is displayed, allowing the entry of the start and ending times.   These times are inclusive, that is if a starting time of 1:000 is specified then an event with a time of 1:000 will be deleted.   This command will not effect any events outside of the specified time range.   Events starting after the end of the range will not have their starting times changed.

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 <u>Edit Undo</u> 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.   The Track Change Channel command can be used to make permanent changes to the track's channel.

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:

<blockquote>

Unaffected do not adjust any note lengths

Aligned   quantise note lengths

Equal   set all lengths to the quantisation time

</blockquote>

In the event that you make a mistake performing this command, the <u>Edit Undo</u> 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 Replicate Command

The Replicate command is used to make one or more copies of a section of a track.

A dialog box is displayed, which is used to select a range to copy from, a starting time for the first copy and the number of times to copy the section.

All events in the source range are copied. The times specified are inclusive, that is if an event starts at one of the boundary times then it will be included in the copy.

The starting time entered is the time that the "from" time is mapped to. When more than one copy of the section is made, the starting time for the new copy is the previous starting time plus the length of the source range.

For example, suppose the original track contained the following:
```
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
```

If a copy was made with source from 2:00 to 3:00, with a starting time of 4:00 and two copies are made, then the following track will result:
```
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
4:000 Note On     3     E 6    65     1:010
4:060 Note On     3     F 5    40     0:080
5:000 Note On     3     E 6    65     1:010
5:060 Note On     3     F 5    40     0:080
```

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

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 <u>Edit Undo</u> 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:

```
new = ( ( old + add ) * mult ) / 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 re-map 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 Thru mode is only active during recording and playback.   System Exclusive messages are never echoed.

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:

Event Type		On	Off
0x8n	Note Off	recorded	recorded
0x9n	Note On	recorded	recorded
0xAn	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
0xEn	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 WinJammer 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 or playback to start. Otherwise a Start or Continue message is ignored.   WinJammer makes no distinction between Start and Continue.

If this switch is on, starting play or record will set WinJammer up for the operation, but not actually start it.   The Toolbar will show "Waiting..." instead of a beat number.   When the MIDI Start or Continue is received, this will change to the normal beat counter.   If a MIDI Stop is then received, play or record will stop.

In order to use this switch, you must have a MIDI input device.

MIDI Send Real Time Switch

This switch controls whether or not MIDI Start/Stop/Continue messages are sent.

If this switch is on, a MIDI Start or MIDI Continue message will be sent when playback or recording is started, and a MIDI Stop message is send when stopping.   A Start message is sent if playback starts at the beginning of the song, otherwise a Continue message is used.

MIDI Send MIDI Clock Switch

This switch controls whether or not MIDI Clock messages are sent.

If this switch is on, MIDI Clock messages are sent during playback or recording.   MIDI Clocks are used to synchronize with external devices during playback.

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 <u>MIDI Clock</u>.

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 <u>Toolbar</u> window is also ignored.

Under normal circumstances the <u>Internal Clock</u> should be used.

MIDI System Exclusive Command

This command is used to send and receive bulk MIDI data.   Normally this would be MIDI System Exclusive messages.

The dialog box displayed will allow you to load and save files from disk, move data into and out of the clipboard and send or receive data from the MIDI device.   Each of these operations is described here.

Receiving data from a MIDI Device

The combo-box and Receive button are used to receive data from an attached MIDI device. The request string currently shown in the combo-box is transmitted, and the program records everything it receives.   The number of bytes received is displayed while recording. To stop recording, press the Stop button.   The request strings can be customized using the Sys Ex Customize command.

Sending data to a MIDI Device

The Send button causes the current contents of the buffer to be transmitted.   A delay is inserted between MIDI System Exclusive messages, which can be adjusted using the Sys Ex Customize command.

Loading and Saving Data

The Load button is used to load a file into the buffer.   The Save button is used to save the current contents of the buffer in a file.   These files are in a standard format, normally known as MIDIEX.   This type of file contains raw MIDI data, without any headers or other information.   This format is widely used, which allows files to be readily shared.

Filtering the Buffer

The Filter button causes the current contents of the buffer to be examined and all data other than MIDI System Exclusive data to be deleted.   This would normally be done after recording a bulk dump.

Clipboard Support

The Copy and Paste buttons are used to exchange data with other programs through the Windows clipboard.   The Copy button causes the current contents of the buffer to be converted into readable ASCII, and placed into the clipboard as a text file.   This can then be edited by a program such as Notepad.   The Paste button performs the reverse, the contents of the clipboard are converted back into raw data, and placed into the clipboard.

The input accepted by Paste may contain comments and blank lines as required to make the file more understandable by humans.   The format used is compatible with the old format accepted by the old MIDI Send Hex command from the previous versions.   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 Sys Ex Customize Command

This command is used customize the settings used in the <u>System Exclusive</u> command.   This includes the various dump request commands, the default MIDIEX file extension and the delay between system exclusive commands when transmitting.

Although the request strings were intended to be used to request dumps from MIDI devices, any string that you wish to send can be entered here.   For example, you may wish to include a reset command which you occasionally need to send.

Whenever this command is executed and there are no request strings stored, the strings will be reloaded from the executable file.

Help!

I would like to expand the default request strings beyond the current MT-32 strings, but I need your help to do this.   If you have some request strings which you would like to see included in a future release of WinJammer I would be happy to add them.   Just send them to me and you'll see them next time around.

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 Auto Reset Switch

This switch causes a MIDI reset sequence to be transmitted on all channels when playback is stopped.   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
```

MIDI Metronome Command

This command is used to customize the MIDI metronome for your equipment.

The dialog box displayed allows you to select two notes to be used for the metronome.   It also allows you to turn the metronome on or off.

In **Accented** mode two notes are used for the metronome.   The note labeled "First Note" is sent as the first beat in a measure, while the other note is sent for the remaining beats in the measure.

In **On** mode the single note in the "Other Beats" box is sent on each beat.

The Record Only switch is used to turn the metronome off during playback.   When this switch is on, the metronome will only be heard while recording.

The Metronome can also be controlled on the Play Controls window.

MIDI Configure Command

This command is used to configure WinJammer 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 devices to be used.   The list of available devices will depend on the drivers you have installed.   Simply select the desired input and output devices, then press Ok.   It is possible to reconfigure WinJammer whenever you choose.

Control Panel

The Windows Control Panel application is used to configure Windows for your equipment. There are two steps required to set up MIDI devices.

1. Install the drivers: The first step is to install drivers for your hardware.   This is done through the Drivers icon in the Control Panel.   When first started, you will be presented with a list of the installed drivers.   Press the Add button to add more drivers to the list. Depending on the driver, you may be asked for the hardware configuration information. Once all of the drivers are added, you will have to restart Windows to make the new drivers available.

2. Configure the MIDI Mapper: The MIDI Mapper is a special MIDI output device that is used to remap songs from the General MIDI Specification to whatever equipment you have.   You can start the MIDI Mapper by clicking on the icon in the Control Panel.   The dialog shown will allow you to select your setup from one of the defaults.   If you get a message saying that the current setup references a device that you don't have installed, then you'll have to either edit the configuration or choose a different one.   See your Windows manual for more details.

WinJammer MIDI Configuration

Now that the proper devices are installed, you can use the MIDI Configure command in WinJammer to select the appropriate input and output device.   Note that the MIDI Mapper is sometimes slow - you'll notice this in particular when editing a track with the Sound Event switch turned on.

If you are simply playing songs, there is no need to specify an input device.   Some operations such as the MIDI Real Time switch require an input device however.

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.

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 gray rather than a note in gray.

This command has no effect on anything other than how the notes are displayed.   Changing the key signature will not cause and 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 WinJammer.

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): 0xAn
CtrlChg   MIDI Control Change: 0xBn
Pgm Chg   MIDI Program (patch) Change: 0xCn
CnlPres   MIDI Channel Pressure (After Touch): 0xDn
PtchWhl   MIDI Pitch Wheel (Bender): 0xEn

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.

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

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.

Play Controls Window

The Play Controls Window is used to control a song while it is playing.   It consists of two 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.   If the Record Only switch is checked, the metronome will only be heard when recording.

The MIDI Metronome command is used to customize the notes used to sound the metronome.

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.

The Lock Patches switch controls whether the patches contained in the song are to be sent. If this switch is on, then the patches in the song are filtered from the tracks as the song is played.   This allows you to easily fiddle with the patches for the song without having to edit the individual tracks.

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.

Edit   Edit the currently selected event.
Insert   Insert a new event into the track.
Delete   Delete the currently selected event.
Duration   Change the length of the note and adjust next note.
Rest   Add rest before current event.
Chord   Create a chord with two events.
Search   Search for an event type.
Next   Search for the next event of the selected type.
Previous   Search for the previous event of the selected type.
Dotted   Make dotted notes.
Triplet   Make triplets.
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.
7   Turn current note into a sixty-fourth 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.

When entering a note name, use either the **+** or **#** keys for a sharp, and either **-** or **b** for a flat.

The middle C octave number and patch base can be set using the <u>Options Preferences</u> command.   The current setting of the <u>Options Relative</u> 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 WinJammer will automatically find the appropriate location in the track for your new event.

When entering a note name, use either the **+** or **#** keys for a sharp, and either **-** or **b** for a flat.

The middle C octave number and patch base can be set using the <u>Options Preferences</u> command.

Short Cut Key: Ins

Event Delete Command

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

While is it 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 <u>Edit Undo</u> 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 <u>Timebase</u>, 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:

<u>Dotted</u>	Make dotted notes
<u>Triplet</u>	Make triplets
<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
<u>7</u>	Turn current note into a sixty-fourth 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 <u>Timebase</u>, 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 Search Command

This command is used to search for an event type in the current track.   When the command is used, a dialog box is displayed asking for the event type to search for.   The track will then be searched for the next event of the selected type.

The <u>Next</u> and <u>Previous</u> commands can be used to quickly search for the next or previous occurrence of the event.

Short Cut Key: S

Event Next Command

This command is used to search for the **next** occurrence of an event in the current track. The event type to search for is selected through the <u>Search</u> command.   This command will search forward in the current track looking for an event of the correct type.   If one is found, then the track is positioned at the event.

Short Cut Key: N

Event Previous Command

This command is used to search for the **previous** occurrence of an event in the current track.   The event type to search for is selected through the Search command.   This command will search backward in the current track looking for an event of the correct type. If one is found, then the track is positioned at the event.

Short Cut Key: P

Event Dotted Switch

This switch modifies the current quick duration commands so that the durations that they specify are increased by half.   If this switch is on, a quick duration of a <u>Half Note</u> is equal to three beats instead of two.

If this switch is on and the <u>Triplet</u> switch is also on, then the quick duration commands are normal.   This is because the Triplet switch decreases the duration by 2/3 and the Dotted switch increases the duration by 1 1/2.

Short Cut Key: .

Event Triplet Switch

This switch modifies the quick duration commands so that the durations that they specify are decreased.   If this switch is on, three notes will fit in the time that two notes would have fit in before.

If this switch is on and the <u>Dotted</u> switch is also on, then the quick duration commands are normal.   This is because the Triplet switch decreases the duration by 2/3 and the Dotted switch increases the duration by 1 1/2.

Short Cut Key: T

Event Whole Note Command

This command is a quick way of specifying a <u>Duration</u> of 4 times the current <u>Timebase</u> 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 <u>Duration</u> of two times the current <u>Timebase</u> 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 <u>Duration</u> equal to the current <u>Timebase</u> 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 <u>Duration</u> of half the current <u>Timebase</u> 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 <u>Duration</u> of one quarter of the current <u>Timebase</u> 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 <u>Duration</u> of one eighth of the current <u>Timebase</u> for the currently selected note.   This is normally a one thirty-second note.

Short Cut Key: 6

Event Sixty-fourth Note Command

This command is a quick way of specifying a <u>Duration</u> of one sixteenth of the current <u>Timebase</u> for the currently selected note.   This is normally a one sixty-fourth note.

Short Cut Key: 7

Options ROL Pitch Wheel Switch

The Options ROL Pitch Wheel switch is used to determine whether MIDI Pitch Wheel events are to be generated when importing a ROL file.

If this switch is on (checked), then Pitch Wheel events will be generated when a ROL file is imported with the <u>File Import</u> command.   All ROL files contain pitch wheel events, which if translated often cause the resulting MIDI file to sound "off".   Under normal circumstances, it is probably best to turn this switch off.   If you wish to remove pitch wheel events after the file has been imported, the <u>Track Filter Events</u> command can do this.

Options ROL Save Patches Switch

The Options ROL Save Patches switch controls whether the patch re-mapping specified when importing a file will be saved in the INI file.

When a ROL file is imported with the File Import command, a dialog box is displayed which allows you to specify MIDI patch numbers for each of the instruments in the original ROL file. If this switch is on (checked), then when Ok is pressed to apply this re-mapping, then the assignments you have made will be kept for next time.   Over time, this will make importing ROL files easier, since the proper assignment of patches is already known.

Options Preferences Command

The Options Preferences Command is used to customized WinJammer 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 WinJammer 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 Switch

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, WinJammer 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 quantizing.

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

WinJammer 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 WinJammer 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

WinJammer 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.

WinJammer 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 WinJammer 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 WinJammer.

WinJammer can save files as either format 1 or 0.   The maximum number of tracks in the file is 64.   To create a format 0 file, merge all tracks into track zero and save the file.   If there are more than one tracks in the file, WinJammer will save it as in format 1.

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.   WinJammer does support System Exclusive messages through the MIDI System Exclusive command.

WinJammer supports only a subset of the possible meta events which can occur in a file. WinJammer is capable of reading files containing any meta event, however only a few are recognized (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 WinJammer 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.