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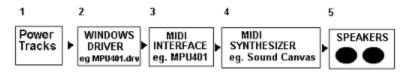Solo Mode
Using the Editing Routines

Driver Setup

Setting up MIDI or Sound Card

PowerTracks Pro uses the Multimedia drivers for your MIDI interfaces or sound cards that are supported by. Windows 3.1. To get PowerTracks Pro's playback working properly you need to have a Driver installed for output. If you plan on recording melodies you will need a driver for input as well.

Connecting PowerTracks Pro to Your MIDI System

Example of connection for MIDI system with Roland MPU-401 & Synthesizer:

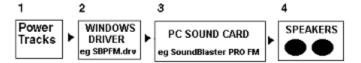**1)**. PowerTracks Pro (PTW.EXE) is run under Windows 3.1

2) The Windows Driver for your MIDI interface either comes with Windows 3.1, is included with your interface, or is available from the interface manufacturer. It is installed into the Windows Control Panel outside PowerTracks Pro. You then choose the driver inside PowerTracks Pro from the MIDI DRIVER menu. There is usually a separate driver for input (from your synth keyboard) and output (to your synthesizer).

3) The MIDI interface transmits information between the computer and your synthesizer(s).

4) The Synthesizer produces the Sounds. PowerTracks Pro tells it what notes to play.

5) Stereo Speakers or Headphones are connected to your synthesizer so that you may hear the music.

> - OR -

Connecting PowerTracks Pro to Your Sound Card

Example: connection of PowerTracks Pro to your Sound Blaster Pro's FM Synth:

The Sound Blaster may be used in 2 ways. You may use the MIDI outputs to connect to your MIDI synthesizer (see above) or you may use the internal FM sounds of the Sound Blaster.

Installing a Driver into Windows 3.1

This is done outside PowerTracks Pro.   It is done in the Program Manager | Main | Control Panel | Drivers
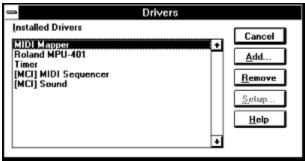
Program. First, go into Control Panel by ☿ double clicking on the Control Panel icon shown below:

Boot up the Drivers program by ☿ double clicking on the drivers icon:

 You will then see a list of any drivers that are installed:

Example #1: Installing a MPU-401 driver setup:

If you are using a MPU-401 MIDI interface you will need to install the "Roland MPU 401 MIDI driver" supplied with Windows 3.1 From the Control Panel | Drivers program, choose ADD to add a driver. Next, choose Roland MPU-401 from the list of standard drivers. You will then be asked to insert your Windows disk that contains the MPU401.DRV file. To complete installation you will be asked for the port address and interrupt # for the MPU-401. The port address usually is 330 and the IRQ interrupt usually is 2/9. If you have set the interrupt incorrectly, you will find that MIDI thru won't work properly.

Example #2 : Installing Sound Blaster driver for MIDI use:

Sound Blaster PRO: Use Sound Blaster 1.5 Driver or higher

Sound Blaster: Use Sound Blaster 1.0 if your Sound Blaster is an old one or 1.5 if it's a newer one (July 91).

Older Sound Blaster cards (pre July 91) are not capable of simultaneous Input and Output If you have an older Sound Blaster you will use the 1.0 driver and will be able to play PowerTracks Pro but not be able to record melodies at the same time. Install the Sound Blaster driver in a manner similar to the MPU-401 driver as above. (The usual settings for the Sound Blaster are port = 220 and Interrupt = 5.)

Example #3: Installing the Sound Blaster for use with FM sounds:

The Sound Blaster has a built in FM synthesizer (11 voices; 22 on the SB Pro). These sounds are also Adlib compatible. If you wish to use the FM synthesizer then install either the Adlib driver (11 voices) or the "Creative Labs Sound Blaster PRO MIDI synthesizer driver".

Setting Up Drivers Inside PowerTracks Pro

If you are running PowerTracks Pro for the first time, the MIDI Driver Setup dialog box will automatically appear. Otherwise, choose Midi Driver Setup from the MIDI pull down menu. You will then see a dialog box with 2 lists; one for the Input drivers and one for the Output drivers.

Select the Input and Output drivers that you wish to use with PowerTracks Pro.   PowerTracks Pro supports multiple ports. Therefore, you may select more than one Input or Output port, assuming you have installed multiple drivers in Control Panel.

Menu Bar

| File | Edit | Track | Action | Block | Options | Window | Help |

Like most Windows applications PowerTracks Pro has a pull-down menu interface. You can access the Menu Commands   by pressing   *ALT-<letter>* with letter being the first letter of the menu you wish to

activate. You can also activate the menu ✎ clicking the left mouse button while the mouse cursor is directly over any of the menu names on the Menu Bar.

When you've selected one of the choices from the Menu Bar, a menu will appear. You may then choose a selection from the menu by one of three methods: 1) Moving the highlight bar over the desired selection and then pressing ENTER; 2) Pressing the key that corresponds to the highlighted character of the

desired selection; 3) Moving the mouse cursor over the item you wish to select and then ✎ clicking the left mouse button.

Tool Bar

The Tool Bar is the top portion of the screen, which is below the <u>Menu Bar</u> .

The Piano keyboard which is directly below Tool Bar isn't considered to be part of the Tool Bar.   You can hide the piano using the <u>Hide Piano</u> command, and change some settings regarding the piano with the <u>Piano Settings</u>   command.

PowerTracks Pro has a set of buttons that resemble the controls on a tape machine that you can use for activating or stopping the sequencer.

There are two scroll bars below the transport buttons.   The one on the left reflects the current location within the song. The one on the right reflects the current tempo, which is shown in a box to its left. The scroll bars may be used to change the current location or tempo of the song.

The tempo and song location can be changed during playback using the scroll bars. For example, if you move the song location scroll bar during playback, the song will jump to the chosen location within the song.

The *From* and *Thru* fields show the beginning and end of the marked area within the song.

The *Time* field shows the current time within the song in SMPTE format.

The *Now* field shows the current time within the song in Measures:Beats:Ticks.

The current *Key* signature and M*eter* of the song are shown below the Now field.

You can press the [Punch] button to toggle PowerTracks Pro into or out of Punch In mode.

You can press the [Solo] button to toggle PowerTracks Pro into or out of Solo mode. See the section on <u>Solo Mode</u>.

You can press the Notation button [♪] to create a new notation window.   See also the <u>Window - New</u> command.

If you press the [!] panic button, PowerTracks Pro will send an an All Notes Off , as well as a Sustain Pedal Off command over all 16 MIDI channels. It will also shut off any MIDI Thru notes which are currently sustained. This is the button to press if should you ever experience a stuck note that refuses to stop sounding.

Any of the edit fields on the tool bar (e.g, From, Thru, Meter, etc.) may be edited by double clicking the left mouse button while the mouse cursor is over the field.

Command Shortcuts

New	
Open...	F3
Save	F4
Save As...	
Load Scrap...	
Save Scrap...	
Load Mixer Settings...	Shift+F3
Save Mixer Settings...	Shift+F4
Exit	Alt+F4

You can access some of the commands in PowerTracks Pro's menu system by using a shortcut (sometimes called accelerator) key command. For example, you can open a file by pressing *F3,* as shown in the above menu. If there is shortcut for a menu command, it will be shown to the right of the command's name in the menu.

Note: Command shortcuts won't work while inside the Comments window, since many of them would conflict with editing the text.

Function Keys

The function keys provide quick access to some of PowerTracks Pro's commands. The following is a list of each of the commands that you can access via the function keys:

F1	On-line Help	**F6**	Go to Time
F2	Open a new Event List Window	**F7**	From = Now
F3	Open file	**F8**	Thru = Now
F4	Save file	**F9**	Panic
F5	Tempo		

Note String Fields

Some dialog boxes have fields in which you are required to enter note information. A note string consists of the note, a sharp (#) or flat (b) symbol, and the number of the octave of the note. Note strings range in value from "C 0" which is the lowest note, to "G 10" which is the highest note. Middle C is "C 5". You can specify either *Sharps* or *flats* when <u>entering</u> note strings, (For example, "F#7" is the same as "Gb7"), but the pitch will be <u>displayed</u> as either a sharp or a flat depending on the key signature of the song.

Time Display Formats

Time: `00:00:00:00`

Now: `1:01:000`

PowerTracks Pro normally displays event times in the form of Measures:Beats:Ticks. For example, the start of the song is displayed as "1:01:00".

If you have set the time display mode to "SMPTE", and <u>Event List</u> window will display event times in Hours:Minutes:Seconds:Frames. Also, if you've set the time display mode is to "SMPTE", the From and Thru markers will be displayed as SMPTE times.

File Formats

PowerTracks Pro will load and save PowerTracks Files (which have a *.SEQ* extension), as well as Standard MIDI Files (*.MID extension*).

PowerTracks Files are PowerTracks' native file format. Features such as track looping, comments, and banks of system exclusive are all saved to PowerTracks Files.

Standard MIDI Files are a standardized format agreed on by the International MIDI Association. Many sequencers support this format, thus making it possible to transport song files between sequencers. If you save a song to a Standard MIDI File   PowerTracks Pro can't save information such as track looping, comments, initial program change, and system exclusive. PowerTracks Pro can't save pitch and velocity transposition settings into a .MID file. However, if any tracks make use of pitch or velocity transposition, PowerTracks Pro will automatically transpose the track data as it is being saved.

The settings for the Mixer are saved with extension of '.MS' .

The Icon Row

You will see a row of icons at the bottom of PowerTracks Pro as shown below:

Bars   Meter Map   Tempo Map   Comments   SysEx   Mixer

You can open a window by double-clicking on the icon.

Loading a Song

You can load a song by pressing *Alt-F* to activate the <u>File Menu</u>, and then choosing the <u>Open</u> menu selection. A dialog box will pop up, which will display   all *.SEQ* and *.MID* files within the current subdirectory. Simply choose the file you wish to load, and PowerTracks Pro will load the file into memory.

Playing a Song

You can activate playback by pressing the button in the tool bar.

Recording

You can activate Recording by pressing the [Record] button.

You can stop playback or recording by pressing the [Stop] button or the *SPACE* bar.

Recording will occur over the track which was the current track when you activated Record.

Any Volume, Pan, Chorus, and Reverb mixer adjustments made during recording will be recorded in real-time as controller messages just like incoming MIDI data. Adjustments made in the All column of the mixer will not be recorded, however.

When recording mixer moves, it might be helpful to record the data on separate tracks from the musical data. If Punch In mode is activated, recording will erase previously recorded data in the Punch in range without the need for you to erase the old data.

Keep in mind that each column in the mixer represents a MIDI channel, and any adjustments made in that column will result in MIDI controller message being generated on that particular channel.

If you've made any mixer adjustments during recording, PowerTracks Pro will ask you whether or not you wish to keep the recorded moves. PowerTracks Pro asks you whether or not to keep the recorded mixer moves, since you may have merely been making temporary level adjustments while recording music.

Selected Tracks

The editing routines only affect the selected tracks. Selected tracks are indicated by the   track's number being highlighted. The Current Track is automatically selected by PowerTracks Pro.

See also: Selecting Multiple Tracks

Current Track

The current track is the one that is highlighted in the same color as the window's title bar. For example, if the window's title bar is blue, the current track's number will be highlighted with the color blue. The current track also happens to be the one that contains the input focus rectangle in the Tracks window as shown below:

In the example above, track 2 is the current track. You don't have to select the current track because PowerTracks Pro will select it automatically.

Selecting Multiple Tracks

If you hold down the *shift* key while pressing the up or down arrow key to move to a different track, the current track will remain selected. The *ctrl* key has the opposite effect. If you move away from the current track while holding *ctrl,* the current track will be de-selected.

You may also use the mouse to select multiple tracks by clicking the left mouse button and holding it down while the cursor is over a track and then dragging the mouse cursor either upward or downward. You can use the *slash* key (*/*) to force the current track to be the only selected track.

Solo Mode

You can toggle PowerTracks Pro in and out of Solo Mode by pressing the button. When in Solo Mode, you will only hear the current track (assuming you haven't muted it). You won't hear any of the other tracks. The Solo button will remain pressed   to indicate PowerTracks Pro is in Solo Mode.

Using the Editing Routines

Before executing an editing routine (in the lower portion of the <u>Edit Menu</u>), first mark the area of the song you wish the routine to edit.

Marking a section of a Song: Use the *F7* and *F8* keys to set the *From* and *Thru* values to the current time. This method of marking is most useful from within the Bars window or the Event Editor. Simply move the cursor to beginning of the area you wish to mark and press F7. Then, move the cursor to the end of the area you wish to mark and press F8.

You may also mark an area of the song by directly specifying the values for *From* and *Thru*. *Ctrl-F7* and *Ctrl-F8* are two command shortcuts for directly specifying From and Thru. After entering either of these two key combinations, a small dialog box will pop up and you may enter a time value.

You can mark a section of a song in the Bars window by 🖱 clicking and holding the left mouse button and then dragging the mouse cursor.   For example, if you click the mouse when the cursor is in the column with measure 5 and then drag the mouse cursor to the column with measure 10,   PowerTracks Pro will mark measures 5 through 10.

When in the Bars window, the marked area will be highlighted. When in an Event List, events that are within the marked area will have a black rectangular box to the left of them as shown below:

```
▮ 1        1:01:000 10  Note       F#3    64    29
▮ 1        1:01:030 10  Note       F#3    64    29
▮ 1        1:01:060 10  Note       G#3    64    29
▮ 1        1:02:000 10  Note       F#3    64    29
```

Once you have marked a section, you may use one of the editing commands such as copy or cut, and the chosen command will only affect marked area of selected tracks.

 See also: <u>Edit Menu</u> and <u>Block Menu</u>

Menu Commands

File Menu
Edit Menu
Track Menu
Action Menu
Block Menu
Options Menu
Window Menu

File Menu

The File Menu contains commands that are related to files.

<u>File - New</u>	Wipes the current song from memory.
<u>File - Open</u>	Loads a file.
<u>File - Save</u>	Saves a file.
<u>File - Save As</u>	Saves a file under a chosen name.
<u>File - Open From Clipboard</u>	Loads a MIDI file from the Clipboard.
<u>File - Load Scrap</u>	Loads a file into the <u>Scrap Buffer</u>.
<u>File - Save Scrap</u>	Saves cut or copied events to a file.
<u>File - Exit</u>	Exits the program.

File - New

This command wipes the current song from memory so that you may start a now song. If you've changed the song since you last saved it, PowerTracks Pro will ask you whether or not you wish to save the file before wiping it from memory.

File - Open

This command will load either a .SEQ or .MID file. A dialog box will pop up which has two list boxes; one that displays all the .MID and .SEQ files in the current directory, and another with the directories.

If you move the highlight bar over the desired choice and either press ENTER, or ⊗ click   on the

[OK] PowerTracks Pro will load the file. A file can also by typing its name directly in the *file name* field instead of using the list box. You may use the mouse to select a file by

⊗ double-clicking the left mouse button.

You can also restrict the type of file you're looking for to PowerTracks files (.SEQ) or MIDI files (.MID) via the drop-down combo box in the lower right corner of the dialog as shown below:

File - Save

This command will save your work under its current name. If the current song has no name, a dialog box will pop up so that you may choose a file name and file format (.MID or .SEQ). See the File - Save As command for more information on choosing a file name and file format.

File - Save As

The Save As command is similar to the File - Save command, but it lets you choose the name of the file before saving it.

PowerTracks Pro can save files either in .MID or .SEQ format. A dialog box, which looks similar to the File Open dialog, allows you to choose the name of the file and the directory, drive, and file type. If you choose to save over a file that already exists, the program will prompt you to make sure you want to overwrite the existing file.

File - Open From Clipboard

If data is in the Clipboard in the form of a Standard MIDI File, this command will load the entire file from the Clipboard into PowerTracks. This is similar to loading a file from disk except that the file is loaded from the Clipboard.   This command provides a quick way of transferring an entire file from another program into PowerTracks.

File - Load Scrap

This command works the same way as the File - Open command, except that the .MID or .SEQ file is loaded into the Scrap Buffer. You may then Paste the contents of the scrap buffer anywhere within the song. This is useful for importing a file into the current song.

File - Save Scrap

This command works just like the File - Save As command, but saves the contents of the Scrap Buffer to a .MID or .SEQ file. This is useful for exporting part of your work.

File - Exit

Exits PowerTracks Pro. If you've changed your work since you last saved it, PowerTracks Pro will ask you whether or not you wish to save the file before exiting.

Edit Menu

The Edit Menu contains commands that are related to editing the song.   This menu has standard editing routines such as cutting, pasting, quantizing, etc. The editing commands affect the marked area of all selected tracks. You can undo any of the commands.

Edit - Undo   Undoes the last editing command.
Edit - Cut   Cuts a section of the song.
Edit - Copy   Copies a section of the song.
Edit - Paste   Pastes contents of the Scrap Buffer.
Edit - 1-Track Paste   Pastes to one track.
Edit - Quantize   Rounds the timings of the notes.
Edit - Replace   Replaces specified events with different ones.
Edit - Pitch Transpose   Transposes notes up or down.
Edit - Fill   Inserts Controller, Pitch Bend, or Aftertouch.
Edit - Length   Expands or shrinks a section of the song.
Edit - Slide   Slides events forward or backward in time.
Edit - Rechannel   Changes the MIDI channel(s) of events.
Edit - Eliminate Note Overlap   Shortens Overlapping Notes.
Edit - Extract Channels to Tracks   Moves events to tracks with the same number as the channel.
Edit - Change Velocities   Increase or decrease note velocities.
Edit - Velocity Dynamics   Compress or expand note velocities.
Edit - Chords   Submenu for editing chord symbols of Notation Window.

Edit - Undo

This command will undo the last edit command executed. It will restore the tracks that were affected by the last edit command to their previous state.

The Undo command itself can be undone. If you've just executed the Undo command, it will appear in the menu as 'Redo'. The Redo command simply re-executes the command that was just undone.

If you execute a command and there won't be enough memory to be able to Undo the command, PowerTracks Pro will warn you beforehand. If you receive such a warning, it might be a good idea to save your work to disk before executing the command if you aren't certain what affect the command will have on your work.

Edit - Cut

This command works differently depending upon which window is active. If you are working in the Comments window this command will cut the selected text to the clipboard.

Otherwise, this command deletes MIDI events from the marked area, and moves them to the Scrap Buffer. As with copied events, deleted events can later be pasted to any location, or saved to a file with the Save Scrap command.

Options: When PowerTracks Pro cuts the events, it will create a gap in the selected tracks of the song. You have a choice of keeping or closing the gap that PowerTracks Pro created after the cut.

Another option is to use the Data Filter to determine which events to cut. If you use the Data Filter PowerTracks Pro will cut some events and will leave some events untouched depending on whether or not they "pass through" the filter.

This command also will automatically place the cut events into the Windows clipboard in .MID format so that you may paste the events into another Windows application that supports pasting Standard MIDI Files from the clipboard.

Edit - Copy

This command works differently depending upon which window is active. If you are working in the Comments window, this command will copy the selected text to the clipboard.

Otherwise, this command copies the marked area of selected tracks and places the copied events in the Scrap Buffer. You may then use the Paste   command to paste the contents of the scrap buffer anywhere within the song, or you may use the Save Scrap command to save the contents of the buffer to a file. You can use the Data Filter   to determine which events to copy.

This command also automatically copies the events into the Windows clipboard so that you may paste the events into another Windows application that supports pasting Standard MIDI Files from the clipboard.

Edit - Paste

```
┌─────────────────────────────────────────┐
│ ▄           Paste                        │
├─────────────────────────────────────────┤
│                                          │
│   Repetitions:    ┌─────┐                │
│                   │  1  │                │
│                   └─────┘                │
│  ┌─Options────────────────────────────┐  │
│  │ ◉ Merge with existing data         │  │
│  │                                    │  │
│  │ ○ Create gap on selected tracks    │  │
│  │                                    │  │
│  │ ○ Create gap on all tracks         │  │
│  └────────────────────────────────────┘  │
│                                          │
│   From:    ┌───┐   ┌───┐   ┌───┐         │
│            │ 1 │ : │ 1 │ : │ 0 │         │
│            └───┘   └───┘   └───┘         │
│       ┌────────┐      ┌────────┐         │
│       │   OK   │      │ Cancel │         │
│       └────────┘      └────────┘         │
└─────────────────────────────────────────┘
```

This command works differently depending upon which window is active. If you are working in the Comments window, this command will paste text from the clipboard into Comments.

Otherwise, this command pastes the contents of the Scrap Buffer to the current location in the song. The *repetitions* option will cause the paste to repeat for as many times as you specify. The *Options* field gives you 3 choices:

 1) Merge the Paste with existing data.

 2) Create a Gap on the currently Selected Tracks.

 3) Create a Gap on all tracks.

This command can also paste a Standard MIDI File from the Windows clipboard. If you're using another MIDI application capable of copying a Standard MIDI File to the clipboard, such as Band-in-a-Box, this is very   convenient.   Keep in mind that this command currently does not paste tempo and meter changes.

Edit - 1-Track Paste

Same as the Paste command, but PowerTracks Pro pastes all the data onto one track. You must select only one track and no more or this command won't be executed by PowerTracks Pro.

Edit - Quantize

The Quantize command rounds the times of notes to the nearest specified time interval. This is very useful for correcting timing errors in your music. Both the *start times* and *durations* of the notes can be quantized.

The *resolution* will determine the degree to which PowerTracks Pro rounds the timing. For example, if you choose a resolution of a sixteenth note, PowerTracks Pro will round the notes in the marked area to the nearest sixteenth note. You may choose a resolution from a whole note down to a 32nd note.

The *percentage* option will allow you make the timing of your music more accurate without sounding too mechanical. For example, if you chose an interval of a sixteenth note, a percentage of 50% will move the notes 50% <u>closer</u> to the nearest sixteenth note instead of moving the notes <u>exactly</u> to the nearest sixteenth note.

You can use the <u>Data Filter</u> to determine which notes will be affected by the Quantize command.

Edit - Replace

This command will search for any type of event you specify and replace the events that PowerTracks Pro finds with new ones. As with other commands, the replace command affects only the marked area of all selected tracks.

PowerTracks Pro will prompt you for the type of event to search for followed by the search ranges. Next, you will be prompted for: **1)** the type of event with which to replace the found events, and **2)** the replacement ranges. Pressing *ESC* at any time will take you back to the previous step. PowerTracks Pro will change the events that match the search criteria to the kind of event you specified as the replacement event type (assuming you didn't select the same replacement type as the search type). In addition, PowerTracks Pro will re-map the values of these events from the search ranges to fall within the replacement ranges.

Edit - Pitch Transpose

This command transposes notes in the marked area of all selected tracks by the specified v*alue*. For example, if you specify a value of "-12" PowerTracks Pro will transpose the notes down one octave. You may use the Data Filter to determine which notes to transpose.

Edit - Fill

This command will insert a stream of either controller, pitch bend or channel aftertouch events. You can use Fill to do things such as fade-ins, fade-outs, pitch bends, etc. PowerTracks Pro will prompt you for the type of event to fill and a *start* and *end* value. Then PowerTracks Pro will automatically insert the events throughout the marked area of the song. The values of the inserted events will gradually increase from the start value to the end value.

Edit - Length

This command alters the length of the marked area of all selected tracks by the specified *percentage*. For example, 50% will shorten the length by half. You can use the Data Filter to determine which events are affected by this command.

Edit - Slide

This shifts the time values of the events within the marked area of all selected tracks by the specified *value*. The value can be positive or negative. A positive value will slide the events forward in time and a negative value will slide them backward in time. You may use the Data Filter to determine which events are slid by PowerTracks Pro.

Edit - Rechannel

This command lets you change the MIDI channel(s) of the events in the marked area of all selected tracks. The *Old Low Channel* and *Old High Channel* fields let you specify a range of channels that will be affected by this command.   The *New Low Channel* and *New High Channel* fields let you select the range within which to re-map the events.

For example, let's say you wanted to change all events in the marked area so they are on MIDI channel 2. You would choose an Old Low Channel of 1 and an Old High Channel of 16 (a range of 1 thru 16).   Next, you would select both a New Low and New High channel of 2 (a range of 2 thru 2).   This would cause all events to be remapped to MIDI channel 2.

As another example, suppose you have a multi-channel MIDI guitar part ranging from channels 3 thru 8, and you wanted to have the guitar part be changed so it is on MIDI channels 11 thru 16.   You would select an old channel range of 3 thru 8 and a new channel range of 11 thru 16.   This would cause all the events in the guitar part to be remapped to channels 11 thru 16.

You can use the Data Filter to determine which events are affected by this command.

Edit - Eliminate Note Overlap

This command is a convenient way of getting rid of overlapping notes without having to spend a lot of time manually editing notes.   An overlapping note is a note that ends before the next note starts. For example, if a note begins at 1:01:00 and ends at 1:01:130, but the next note starts at 1:01:120, then the first note overlaps the second note.   If this command were executed, the first note would be shortened to end at 1:01:119 so the notes don't overlap each other.

The default settings for this command are to eliminate overlapping notes that are identical in note number and MIDI Channel.   If you want to eliminate all overlapping notes, you would uncheck the *Same Note Numbe*r and *Same MIDI Channel* checkboxes, so the command would affect all notes that overlap. Notes are only considered to be overlapping if they are on the same track.

Be careful not to execute this command on notes that you *want* to overlap such as chords and arpeggios. Since this command can be Undone, you should listen to the results to make sure everything sounds okay before executing any other edit commands.

 Notes that begin at exactly the same time are not considered to be overlapping by this command.

You can use the Data Filter to determine which events are affected by this command.

Edit - Extract Channels to Tracks

This command will move events to different tracks based on the channel number of the events.   For example, if the channel number of an event is 1, the event will be moved to track number 1.   This is useful if you have multiple channels of data recorded on a track and want to split the data into multiple tracks.

If the **Use Channel Table** checkbox is checked, a dialog box will pop up before the command is executed which lets you choose the tracks to which events of the various MIDI Channels are extracted. For example, as you'll notice when the Channel Table dialog box pops up, the default is for Channel 3 to be extracted to Track 3.   Using the table, you could, for example, have the command extract events on Channel 3 to, say, Track 19 or any of PowerTracks Pro's 48 tracks.

You can use the <u>Data Filter</u> to determine which events are affected by this command.

Edit - Change Velocities

This command lists you increase or decrease the velocity values of notes within the marked area of all selected tracks by a specified percentage.

The **Percentage** setting determines how the velocity values are changed.   For example, percentage of 100% results in no change.   A percentage of 50 would reduce the velocity values by half.   A percentage of 125 would increase the velocity values in the track by 25%.

You can use the Data Filter to determine which events are affected by this command.

Edit - Velocity Dynamics

This command will 'compress' or 'expand' the velocity values of notes within the marked area of all selected tracks. PowerTracks will determine the average velocity of all notes with the marked area.

The **Percentage** setting will cause the velocity values to be moved either closer or farther away from the average velocity.   A percentage of 100% results in no change.   A percentage of 50% would compress the velocity values so that they are 50% closer to the average velocity.   For example, if the average velocity is 64, and a note has a velocity of 84, the note's velocity will be moved midway between 64 and 84 to become 74.   A percentage of 150% would expand the velocity values so that they are 50% farther from the average velocity.   For example if the average velocity is 64 and a note has a velocity of 84, the note would be moved 50% farther away from 64 than 84 to become 94.

In the examples above, the velocity value used was above average. Keep in mind that velocity values that are below the average will be increased toward the average velocity when compression occurs and decreased when expansion occurs.

You can use the Data Filter to determine which events are affected by this command.

Edit - Chords

This menu item is a special sub menu that lets you <u>Delete</u> or <u>Copy</u> chord symbols that are shown in the Notation Window.   The commands in this sub menu do not affect the MIDI Events of a song.

Copy Chords

This command lets you copy or move chord symbols that are shown in the Notation Window to a different location in one operation. This command does not affect the MIDI Events of a song.

The **Copy From Bar** and **Copy Thru Bar** settings let you select the range of bars (measures) in which the chord symbols are copied.

The **Paste From Bar** setting lets you choose the bar number in which to paste the copied chord symbols.

If the **Move Instead of Copy** checkbox is checked, the chord symbols are moved instead of being copied.

The **Repetitions** setting causes the program to paste the chord symbols by the amount of this setting. The repetitions setting is ignored if the Move Instead of Copy checkbox is checked.

Delete Chords

This command lets you delete chord symbols that are shown in the Notation Window.   This command does not affect the MIDI Events of a song.

The **Delete From Bar** and **Delete Thru Bar** settings let you select the range of bars (measures) in which the chord symbols are deleted.

Note: you can also delete chord symbols individually for a specific beat of a song by pressing the Enter key while in the Notation Window if the **Ch** checkbox in the Notation Window is checked.

Data Filter

The Data Filter is a filter that, when in use, determines which events will be affected by the current edit command. PowerTracks Pro will only allow the events that match the chosen characteristics to "pass through" the filter so that the current edit command can act upon them. The filter has a separate row for all six types of MIDI events. Within each row are settings that determine whether a type of event will pass through the filter, and the ranges and values of the events that PowerTracks Pro will allowed to pass through. There is also a row within the filter that lets you specify which MIDI channels will pass through the filter.

The *Use* column determines whether or not an event type will pass through the filter. If the Use column is checked, the event type will be used, but if it isn't checked the event won't pass through the filter. For example, if the use column in the Note row is not checked then note events will not pass through the filter.

The *Range* column determines what range of events will pass through the filter. For example, if the minimum for the note range is 'C1' and the maximum is 'C2' only notes that fall within the range of C1 through C2 will pass through the filter. The current edit command will not affect any notes lower than C1 or higher than C2.

The *Value* column works in the same way as the range column, but will act upon note velocities, controller values, or aftertouch values. Only events with values that fall within the specified values will pass through the filter. For example, if the minimum note value is 50 and the maximum is 100, then only notes with a velocity of 50 up to a velocity of 100 will be pass through the filter.

A *Secondary Filter* is a second Data Filter that you can use in addition to the regular filter. If you check the "Use Secondary Filter" option at the bottom of the filter, then a second filter will pop up after you're done editing the regular filter. Events that pass through either the regular or Secondary Filter will be affected by the current edit command.

The purpose of the Secondary Filter is to let you choose two separate sets of ranges. For example, you could specify a note range of C1 to C2 in the regular filter, and a note range of C7 to C8 in the secondary filter. Notes that fall within either range will be affected by the current edit command but notes that don't fall within either of these two separate ranges won't be affected at all.

Track Menu

Duplicate...
Erase...
Erase Data Only...

This menu contains the following commands, which are related to tracks:

Track - Duplicate   Makes an exact copy of a track.
Track - Erase   Kills a track.
Track - Erase Data Only   Kills a track without erasing its settings.

Track - Duplicate

This makes an exact copy of a track. You must select only one track or this command won't execute since this command is for duplicating one track at a time. PowerTracks Pro will prompt you to select a destination track. The destination track must be empty.

Track - Erase

This command <u>permanently</u> kills <u>all</u> <u>selected tracks</u>, and resets their track setup values to 0. PowerTracks Pro will ask you whether or not you wish to erase all selected tracks. If you erase them, you can't get them back.

Track - Erase Data Only

This command works the same as the Erase command except that it will not erase the settings in the Tracks Window such as the Track Name, Channel, Velocity, etc.

Action Menu

```
Play
Play From Start
Record
Record From Start
Step Record
Stop
Go to Time...        F6
Juke Box...

Panic !              F9
Cache Patches Now
```

This menu contains commands that mainly deal with recording or playback.

Action - Play   Plays the song.
Action - Play From Start Plays song from start.
Action - Record   Record MIDI Data.
Action - Record From Start Record from start of song.
Action - Step Record   Record by step.
Action - Stop   Stop playback or recording.
Action - Go to Time   Go to a new location in song.
Action - Jukebox   Lets you play a list of songs.
Action - Panic   Shuts off notes and resets sustain pedal.
Action - Cache Patches Now   Updates the patch cache.

Action - Play

You can start playback by using this command or pressing or by pressing the *SPACE* bar, or by pressing the ▶ Play button. You can stop playback by using the stop command, or by pressing the SPACE bar, or by pressing the ■ Stop button.

Action - Play From Start

This command will play back the song from the beginning.

Action - Record

You can start recording either by using this command or pressing the [Record] button. Recording can be stopped by hitting the *SPACE* bar, or by pressing the

[Stop] button. If PowerTracks Pro recorded any MIDI events you will be asked whether or not you wish to keep the take.

Recording will occur over the track which was the current track when you activated Record.

Any Volume, Pan, Chorus, and Reverb mixer adjustments made during recording will be recorded in real-time as controller messages just like incoming MIDI data. Adjustments made in the All column of the mixer will not be recorded, however.

When recording mixer moves, it might be helpful to record the data on separate tracks from the musical data.   If Punch In mode is activated, recording will erase previously recorded data in the Punch in range without the need for you to erase the old data.

Keep in mind that each column in the mixer represents a Track, and any adjustments made in that column will result in MIDI controller message being generated based on the forced MIDI channel of that particular track, or the channel of the first MIDI event if there's no forced channel for the track, or based on the track number if there's no events or forced channel.   See the Mixer Window for further information.

If you've made any mixer adjustments during recording, PowerTracks Pro will ask you whether or not you wish to keep the recorded moves.   PowerTracks Pro asks you whether or not to keep the recorded mixer moves, since you may have merely been making temporary level adjustments while recording music.

Action - Record From Start

This command will start recording from the beginning of the song.

Action - Step Record

This command allows you to record a song one step at a time, as opposed to a normal real-time record. Each time you play something on your keyboard the sequencer will record the event with a time value representing the current location in the song (Now).

Choosing a Step Size: To choose a step size, click the mouse over the desired step.

Durations: Durations are chosen exactly the same way as step sizes. The "Step Size - 1" option will automatically make the durations 1 tick less than the Step Size. This is a convenient way of making the durations automatically match whatever step size you choose.

Auto Advance: When Auto Advance setting is checked, the time will automatically advance to the next step after you play a note or a chord. You will see the Now: and Time: fields on the tool bar change when the time advances.

Dotted Step: When Dotted Step is enabled, the step size will be 1.5 times the regular step size. (Example: a dotted eighth note is equal to 3 sixteenth notes)

Go to: You may use the Go to... button to move to a new location.

Backup and Advance: The < Back up and Advance > buttons allow you to move forward and backward in time by one step.

When you are finished with step record, press the OK button, and the take will be kept. Pressing the Cancel button will cancel the step record without keeping the take.

Action - Stop

This command simply stops the sequence from playing or recording.

Action - Go to Time

This command lets you go directly to any time within the song. You can also use the F6 function key to activate this command. If the Display Mode (in the Options - SMPTE command dialog) is set to "Normal" then the time is expressed in Measures:Beats:Ticks. If the Display Mode is set to "SMPTE" then the time is expressed in Hours:Minutes:Seconds:Frames.

Action - Jukebox

The command lets PowerTracks play a list of songs. A dialog box will pop up that lets you choose which songs to be played.

The **Play List String** field contains a list of songs to be played by PowerTracks.   Wild cards are allowed. For example if the Play List String is '*.*' then all .MID and .SEQ files in the current directory will be played. Only files with a .MID or .SEQ extension will be loaded if the extension of filename is a wild card. The current directory is shown at the right of the dialog's title. You can specify several files to search for by separating them with a semicolon character.

For example, suppose the Play List String is :

'C:\WINDOWS\CANYON.MID;C:\PTW*.SEQ;C:\MIDIFILE*.MID'

PowerTracks will first play CANYON.MID followed by all the .SEQ files in the PTW directory, followed by all the .MID files in the MIDIFILE directory. The Play List String can be up to 1024 characters long.

When the **Random** checkbox is checked, PowerTracks will play all the files in random order.

The **Open** button lets you load a .JUK file.   A .JUK file simply contains a Play List String.   If you save a .JUK file with the **Save** button, the current Play List String can be saved to a .JUK file. If you later load the .JUK file with the Open button, the Play List String stored in the file will appear in the Jukebox dialog.

The **Add to Play List** button lets you add a file to the play list from a File Open dialog without having to type the file name into the Play List String field.

The **OK - Start Jukebox button** will close the Jukebox dialog and start playing the songs in the play list. If you typed any invalid file names in the Play List String field, the program will inform you of the error so you can correct it. When the Jukebox is playing, the window title of PowerTracks will have the words '(Jukebox)' shown to the right of the file name.   If you stop playback while in Jukebox mode, the Jukebox will be stopped and PowerTracks will then be back to normal.

Action - Panic

This command will send an All Notes Off and a Sustain Pedal Off command over all 16 MIDI channels. It will also shut off any MIDI Thru notes that are currently sustained. This command is the same as pressing the panic button.

Action - Cache Patches Now

If you are using an output driver that requires patch caching, this command will cause PowerTracks to update the patch cache.   You only need to use this command if you have made changes to the patches that a song uses after the file was loaded. In order to update the patch cache, PowerTracks must scan the currently loaded song for patch changes.   To save time, PowerTracks does not scan the entire file for patch changes.   Instead PowerTracks scans the beginning of each track. The first 5 events of each track are scanned, or all events that have a time of 1:01:000, whichever is greater. If a track has a forced MIDI channel of 10, or any of the scanned events at the beginning of the track have a channel number of 10, then PowerTracks does scan the entire track for drum notes.   PowerTracks will also scan the Tracks Window for patch changes in the 'Prg' field.

When PowerTracks updates the patch cache for a track, the cache is updated based on the MIDI Output Port for the track.   If any of the tracks are using an output port that does not require patch caching, such as the MPU-401, then the track will not be scanned for patches.

See also the Options - MIDI Out command.

Block Menu

```
From = Now      F7
Thru = Now      F8
From = Value... Ctrl-F7
Thru = Value... Ctrl-F8
```

The Block Menu contains some commands that deal with marking an area (or block) of the song. The editing commands of the Edit Menu will affect the marked area.

Block - From = Now	Sets From to the current time.
Block - Thru = Now	Sets Thru to the current time.
Block - From = Value	Sets From to a chosen value.
Block - Thru = Value	Sets Thru to a chosen value.

Block - From = Now

This command sets the beginning of the marked area to the current time.

Block - Thru = Now

This command sets the end of the marked area to the current time.

Block - From = Value

This command lets you directly specify the From time value. A dialog box will appear, and you may enter the new time.

Block - Thru = Value

This command lets you directly specify the Thru time value. A dialog box will appear, and you may enter the new time.

Options Menu

```
Tempo...       F5
Meter...
Key Signature...
Metronome...
SMPTE...
MIDI Out...
MIDI Thru...
MIDI Devices...
Patch Names...
Punch In...
Resolution        ▶
Sync Source       ▶
√ Auto Sync Chase
Endless Loop
────────────────
Show Piano
Piano Settings...
```

The Options Menu has various settings that affect PowerTracks Pro. Most of these options are stored within a song when it is saved to a .SEQ file, but only some of these options are saved into a .MID file. Some of the options are saved to PTW.INI.
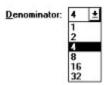
Options - Tempo	Changes the current Tempo.
Options - Meter	Changes the current Meter.
Options - Key Signature	Changes the Key Signature.
Options - Metronome	MIDI Metronome settings.
Options SMPTE	SMPTE Settings.
Options - MIDI Out	MIDI Out Settings.
Options - MIDI Thru	MIDI Thru Settings.
Options - MIDI Devices	MIDI Driver setup.
Options - Patch Names	Lets you choose which patch names to use.
Options - Punch In	Punch In settings.
Options - Resolution	Changes the resolution in PPQ.
Options - Sync Source	Changes the sync source.
Options - Auto Sync Chase	Allows for hands-free sync chasing.
Options - Endless Loop	Song will loop endlessly.
Options - Hide Piano	Hides or shows the piano keyboard.
Options - Piano Settings	Piano display preferences.

Options - Tempo

This command allows you change the current tempo of the song. You may choose a tempo value of 8 to 500. PowerTracks Pro will automatically change the current tempo entry in the Tempo Map to the tempo that you select.

Options - Meter

This command lets you change the current meter. The <u>Meter Map</u> event for the current time will be automatically be changed. The *numerator* may be from one to 99. You can change the *denominator* via the drop down combo box illustrated below:

<u>D</u>enominator: | 4 | ±

```
1
2
4
8
16
32
```

Options - Key Signature

This allows you to choose the key signature of the song. This setting will affect whether accidentals are displayed as sharps or flats. Simply pick a key signature from the drop down combo box illustrated below:

Key:

```
D      ±
C      ±
G
D
A
E      ±
B
```

Options - Metronome

This command lets you configure the MIDI metronome. The metronome can be active during recording, playback or both.

Recording: If this option is enabled then the metronome will be on during recording.

Playback: If this option is enabled then the metronome will be on during playback.

PowerTracks Pro will send a specific note out via MIDI on each beat. The *note*, *velocity*, *duration* and *port* options will determine the pitch and characteristics of the note that is sent out via MIDI on each beat of the song.

Count In: This option lets you choose how many measures will be counted down before recording begins. The countdown may range from 1 to 4 measures.

Options - SMPTE

This option lets you choose the time display format, as well as whether or not PowerTracks Pro displays MIDI events as SMPTE times.

Time Display Mode: If the time display mode is set to *Normal*, PowerTracks Pro will display the time in Measures:Beats:Ticks. When set to *SMPTE*, the time will be displayed as Hours:Minutes:Seconds:Frames.

SMPTE Format: You may choose one of four SMPTE formats: 30 Frame Non-Drop, 30 Frame Drop, 25 Frame, or 24 Frame.

SMPTE Offset: determines the SMPTE time that PowerTracks Pro associates with the beginning of the song. For example, if you use an offset of 00:00:02:00, the start of the song will be 00:00:02:00. This gives the program two seconds to sync up to the tape when starting the tape from the beginning.

Options - MIDI Out

This command deals with various settings that affect MIDI output.

Send SPP: determines whether or not MIDI Song Position Pointer is sent.

SPP Locate Delay: the delay time (in milliseconds) before play is started after sending Song Position Pointer. This gives MIDI devices some time to find the proper location when syncing to PowerTracks Pro.

Send Realtime Messages: when this option is enabled the sequencer will send MIDI clocks as well as Start, Stop, and Continue.

Send Most Recent Patch/Wheel/Controller: When this option is enabled the sequencer will search back through the tracks for the most recent patch, wheel (pitch bend), and controller events, and will send them before starting playback. This insures that you will hear the proper sounds when playing from a new location within the song.

Sync Output Port: this setting is the output port to which MIDI Clocks are sent.   If you wish to sync, say, a drum machine to PowerTracks Pro, make sure this setting is set to the same output port to which the drum machine is connected.

Cache Patches when playback is started: If you are using an output driver that requires patch caching, PowerTracks Pro will update the patch cache when a .MID or .SEQ file is loaded.   If this setting is checked, and you are using an output driver that requires patch caching, PowerTracks Pro will update the patch cache every time playback is started.   Enabling this setting will cause the sequencer to take longer to start playback, so enable this setting only if you have a special need for it. This setting is saved to PTW.INI. See the Action - Cache Patches Now command for more information about patch caching.

Sysex Delay: when multiple packets of system exclusive data are sent, some synthesizers require a delay between packets.   A sysex packet is a message that begins with F0 and ends with F7. If your synth requires a delay between packets when receiving sysex, then this setting lets you specify a delay between 1 and 100 milliseconds. The default setting is 0 for no delay.

Bank Changes Use MSB: Not all synth manufacturers agree as to the method of sending/responding to bank changes. Changing this setting might help if your synth does support bank changes but doesn't respond to them when this setting is checked.

Options - MIDI Thru

This command lets you enable or disable MIDI Thru, and allows you to choose how the data is echoed. There are two types of MIDI Thru: *Track-Specific* and *Global*.

Enable Thru: If this option is checked then MIDI Thru will be enabled. If this option is not checked then MIDI Thru will be disabled.

Thru Method: There are two types of thru methods, as discussed below:

Track-Specific: When Track-Specific MIDI Thru is enabled, PowerTracks Pro will echo the incoming MIDI data using the forced *Channel*, *Velocity*, *Key*, and *Port* settings of the current track. If these settings are set to 0, the MIDI data will be echoed out unchanged. For example, if the current track has a forced MIDI channel of 2, all incoming MIDI events will be echoed out via MIDI on channel 2.

Global: When Global MIDI Thru is enabled, PowerTracks Pro will echo incoming MIDI data using the forced *Channel*, *Velocity*, *Key*, and *Port* settings that you specified in the MIDI Thru entry box. If these settings are set to 0, the MIDI data will be echoed out unchanged.

Options - MIDI Devices

This command lets you choose the MIDI input and output drivers to use with PowerTracks Pro. A dialog box will pop up which contains two list boxes; one for the input drivers and one for the output drivers. Choose the ones you wish to use with PowerTracks Pro. You can select more than one input or output driver, since PowerTracks Pro supports multiple ports.

The **Timer Period in Milliseconds** setting determines how fast a timer interrupt PowerTracks uses.   The smaller the setting, the faster the interrupt rate.   The range allowed is between 1 and 20. This setting is not something you normally need to change.   However, if your computer is a slower 286 and you experience timing problems, you could try selecting a setting greater than 10.   If your computer is a fast 486 or higher you could try a setting less than 10, but keep in mind that faster interrupt rates will cause the computer to do more work, and therefore screen updates, etc. might become slower.

Options - Patch Names

PowerTracks Pro lets you associate a list of names to patch numbers. The default setting is 'Numeric', in which case you will select patches as numbers rather than from a patch list.   We have included a General MIDI patch list, which is a standard set of names used in many newer synthesizers.

The *Numeric Range* setting in the dialog lets you choose whether the numbers range from 0-127 or 1-128 when the patch names are set to 'Numeric'.

If you're using a patch list, the number range is based on whether the first name in the list was assigned a value of 0 or 1 in the file PATCHES.INI.

PATCHES.INI is a text file which defines the lists of patches.   You could add a new patch list by typing the names in PATCHES.INI. See the PATCHES.INI file for information about the file format.

Options - Punch In

This allows you to enable or disable Punch In. When Punch In is enabled, recording will take place during the period between *From* and *Thru* and will overwrite any existing events during that time. When Punch In is disabled, recording may occur at any time within the song and the data will be merged with any existing events.

Note: The From and Thru settings for Punch In are NOT the same as the From and Thru settings used for editing.

Options - Sync Source

This option determines which clock source will handle the timing of the music.

Internal: When set to internal, PowerTracks Pro will handle the timing. The following two settings are used when syncing to external devices:

MIDI: When the Sync Source is set to MIDI, the program will use song position pointer and MIDI clocks as the clock source.

MTC/SMPTE: When the Sync Source is set to MTC /SMPTE, the program will use MIDI Time code as the clock source.

This option is saved automatically to PTW.INI so that it will remain in effect the next time you use PowerTracks Pro.

Options - Auto Sync Chase

This option is useful when syncing the sequencer to an external device, such as a drum machine or tape deck, during playback. When Auto Sync Chase is enabled, it allows for hands-free sync chasing to the external device. For example, if the sequencer is playing while synced to a tape deck, and you stop the tape deck, PowerTracks Pro will await the MIDI Sync or MTC without you having to press PowerTracks Pro's Play button. When you start the tape deck again, PowerTracks Pro will automatically sync to the tape deck. When this option is selected a check mark will appear next to the menu item.

This option is saved automatically to PTW.INI so that it will remain in effect the next time you use PowerTracks Pro.

Options - Endless Loop

When this option is enabled, PowerTracks Pro will automatically loop back to the beginning of the song when the song reaches the end. This setting is not saved to PTW.INI or to .SEQ files.

Options - Resolution

This option allows you to change the timing resolution in pulses per quarter note (PPQ). Simply pick a resolution from the menu, and the program will automatically convert the song to the new resolution.

Options - Hide Piano

This option lets you hide the piano keyboard from the screen.   When the piano is hidden there will be a little more space available for the placement of the windows below the tool bar.   This menu option will read 'Show Piano' when the piano is hidden.

This option is saved automatically to PTW.INI so that your preference will remain in effect the next time you use PowerTracks Pro.

Options Piano Settings

This command lets you change the piano display mode.   There are two display modes for the piano. When the display mode is set to 'Current Track', the piano will display notes as they are being played from the <u>current track</u> .

If the display mode is set to 'All notes except for drum channel', the piano will display notes that are played from all the tracks except for notes that are on the drum channel.   The default drum channel is channel 10, but it can be changed to any MIDI channel between 1 and 16.   If you select a drum channel of zero, then the piano will display all notes that are being played regardless of the MIDI channel.

These settings are automatically saved to PTW.INI so that they will remain in effect the next time you use PowerTracks Pro.

Window Menu

The Window Menu contains commands that deal with creating, selecting, and arranging windows.

Window - New   Creates a new window.
Window Tile   Arranges the windows in a tiled manner.
Window - Cascade   Cascades the windows like a waterfall.
Window - Arrange Icons   Neatly lines up the icons.
Window - Close All   Minimizes all the open windows.

Window - New

Some types of windows allow you to open more than one instance at a given time.   The New command deals with the creation of a Window that allows multiple instances.   The <u>Event List</u> and <u>Notation Window</u> are currently the only two of PowerTracks Pro's windows that fall in this category.   When you choose the New command a submenu will appear with 'Event List', and 'Notation' being the only two choices. Choose the New command to create an Event List or Notation window.

The New command will not create a duplicate Notation Window or duplicate single-track Event List window since there is no reason for doing so in PowerTracks. For example, if you already have a Notation Window open for Track 1, and you try to open another Notation Window when track 1 is the current track, a second Notation Window won't be created.   Instead, the first Notation Window will be brought to into view and become the currently activated window.   The same goes for Event List windows except that PowerTracks only checks for duplicates if the Event List is for just one track; not for multiple tracks such as tracks 1,2, and 3.

Window - Tile

The Tile command will arrange the PowerTracks Pro's windows so that an equal portion of each window is on the screen. Each window will look like an individual tile on the screen.

Window - Cascade

The Cascade command will arrange the windows so they are cascaded like a waterfall.

Window - Arrange Icons

This command will arrange the icons so that they are neatly lined up at the bottom of the screen.

Window - Close All

This command minimizes all windows so that they will be seen as icons.

Tracks Window

This window shows the tracks with their names and various settings.

Selected Indicator: The first column in the track view indicates whether or not a track is selected. If a track is selected, its number will be highlighted. The current track will be highlighted in the same color as the window caption, and an input rectangle will appear over the current edit field.   (See also Selected Tracks)

Play Status: The Play Status field shows the current status of the track. A track can be in one of three states: Play (P), Muted (m), or Frozen (f). By pressing the *plus (+)* or *minus (-)* keys while the cursor is over the status field, you will be able to toggle the status of a track. Tracks with a Play (P) status will be heard. Muted tracks will not be heard, but the data will still be processed so that you may switch the track back into (P) status at any time during play/rec. Frozen tracks are not heard and not processed. Since frozen tracks aren't processed, there is less work for the sequencer to do during playback. If you have some tracks that you wish to keep for backup purposes but don't need them to be heard, you can save the sequencer some work during playback by freezing the tracks. You may only toggle a track into or out of frozen status while PowerTracks Pro is stopped.

Editing Fields within the Tracks window: The following fields may be edited by moving the cursor over the particular field you wish to edit and then pressing ENTER, or by   double clicking the mouse while over the field. Numeric fields may be incremented or decremented by pressing the +/- keys.
Track Name: The name of a track.
Events: The number of events in a track.
Ch: Forced MIDI channel. When not set to zero, all events in a track will be sent out over the selected channel.
Key: Forced Key Transposition. This setting transposes the events in a track up or down by whatever amount you specify. (example: -12 will transpose down by 1 octave)
Vel: Forced Velocity transposition. This setting increases or decreases the velocity of the notes in a track by whatever amount you specify.

Port: Determines which MIDI port the data in a track is sent out. If the port selected is greater than the number of available output ports, the events in the track will be sent out the highest available port. For example, if only one port is available, and you select port number 2, the events will be sent out of port number 1.

Prg: Program change. When this setting isn't disabled, a MIDI patch change will be sent at the start of the song. When you change this setting, a program change will be sent out via MIDI. This is convenient for 'auditioning' sounds during playback.

Bank: Bank change. This setting is the current bank for the track. A   bank change is sent along with the program change for the track. A bank change is controller number 0, which is defined in the MIDI specification for switching to a bank of patches.   This allows for much more than 128 possible patches to be accessed via MIDI.   If you change this setting, the bank change will be sent followed by the program change for the track.   If no program patch is selected, then just the bank change message will be sent, in which case the synth might not respond.   Not all synths respond to bank change messages.

Loop: When this setting is enabled, the track will automatically repeat for the number of times specified. The track will loop back to the start of the measure that contains the first event in the track. If this setting is set to zero, the track will not be looped.

> **Note: Loop information is not saved to .MID files. If you are working with .MID files, you should use the paste command to repeat a passage instead of looping.**

Bars Window

This window shows the bars (or measures) of the song. Bars that have MIDI data will be shaded, while bars without any data are not shaded.

The horizontal   scroll bar allows you scroll away from the current location in the song.   Keep in mind that scrolling the Bar Window won't change the current location in the song.   Instead, you should use the scroll bar in the bottom left corner of the tool bar to scroll to a new location.

See also Using the Editing Routines.

Meter Map

The Meter Map is a list of all the meter changes that occur during the course of the song. The Ins ,
Del , and
Change buttons may be used to insert, delete, and change entries in the meter map. You may also insert meter entries by pressing *INS.* Pressing *ENTER* or
double clicking over the desired entry will allow you to change the meter of the currently selected entry. The *DEL* key is used to delete entries from the map. If there is only one entry in the map, you won't be allowed to delete it since a minimum of one entry is required in the map.

Tempo Map

The Tempo Map is a list of all the tempo changes that occur during the course of the song. The

[Ins] ,

[Del] , and

[Change] buttons may be used to insert, delete, and change entries in the tempo map. You may also insert tempo changes by pressing the *INS*, and you may change the tempo of the currently selected entry by pressing *ENTER* or by

double clicking over the desired entry. The *DEL* key is used to delete entries from the map. If there is only one entry in the map, you won't be able to delete it since at least one entry in the map is required.

Comments

The Comments window is a simple text editor, which allows you to edit or view comments. The comments will be saved to a .SEQ file but not to a .MID file. You can cut or copy from the Comments window to the clipboard, or you can paste from the clipboard into Comments using the commands in the Edit Menu.

The following is a list of the editing commands:
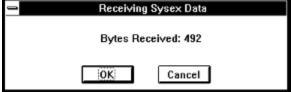
HOME	Go to beginning of line
END	Go to end of line
^HOME	Go to beginning of text
^END	Go to end of text
UP	Cursor Up
DOWN	Cursor Down
PAGEUP	Up one page
PAGEDN	Down one page
RIGHT	Cursor Right
LEFT	Cursor Left
^RIGHT	Cursor Right one word
^LEFT	Cursor Left one word
INS	Toggle Insert Mode
DEL	Delete text.
CTRL-X	Cut text to clipboard.
CTRL-INS	Copy text to clipboard.
SHIFT-INS	Paste text from clipboard.

Note: Command shortcuts like pressing the SPACE bar to play a song won't work within the comments window.

SysEx

The SysEx Window is actually a built-in system exclusive (sysex) librarian, which allows you to transmit or receive sysex data. You may also load and save MIDIEX compatible sysex files. The sysex librarian can hold up to 24 banks of system exclusive data. Since the librarian stores all data on disk as opposed to memory, the size of the sysex data is limited only by the amount of free disk space.

Receive: This command lets you receive a data dump from your synthesizer to the currently selected bank. When you execute this command, a message box will pop up to indicate that the sequencer is ready to receive the dump. You may then dump the data from your synth and all the data received will be stored in the current bank.   A dialog box will show the progress of the dump.

When your synth is finished dumping the data, you may then press the OK button   to let the program know that the dump is finished.

Transmit: Sends the data in the current bank out via MIDI.   A dialog box will inform you that a send is in progress.

If you wish to cancel the transmission after it has started, you may press the cancel button, and the transmission will be stopped.

Request: This option allows you to initiate a dump request by sending a dump request to your synthesizer. Simply choose an instrument from the available choices and press ENTER. You may be prompted for the channel or patch numbers if the instrument requires them. After sending the dump request out the MIDI OUT port, the program will then receive any data that is sent from your synth as if the receive command had been executed.

Load: This command will load a MIDIEX compatible sysex file into the currently selected bank.

Save: This command will save the currently selected bank on disk in MIDIEX compatible format.

Name: Lets you choose the name for the current bank of sysex data.

Auto: When this option is enabled, the bank will automatically be transmitted via MIDI when loaded from a .SEQ file. The letter 'A' will appear to the right of the bank name if the bank is to be Auto-Transmitted.

Port: This setting determines the output port through which the sysex data will be sent out via MIDI.   If the selected port is greater than the number of ports available, the data will be sent out the highest available port.   For example, if the port setting for a bank is set to '2' and there is only one MIDI output driver installed, the sysex data in the bank will be sent out through port 1.

Delete: This simply deletes the data from the currently selected bank.

Edit::   This command is for experienced MIDI users who wish to edit the bytes of the currently selected bank. You can also type in sysex data if the current bank has no data in it.   A dialog box will pop up in which you can edit the bytes.   The bytes are edited as hexadecimal numbers.   The bytes are shown separated by spaces.   The sysex data will look something like this example: 'F0 41 10 42 12 40 11 02 10 1D F7' . Each sysex message should start with 'F0' and end with 'F7'.

The following is a list of the editing commands you can use when editing sysex data:

HOME   Go to beginning of line

END	Go to end of line
^HOME	Go to beginning of text
^END	Go to end of text
UP	Cursor Up
DOWN	Cursor Down
PAGEUP	Up one page
PAGEDN	Down one page
RIGHT	Cursor Right
LEFT	Cursor Left
^RIGHT	Cursor Right one word
^LEFT	Cursor Left one word
INS	Toggle Insert Mode
DEL	Delete text.
CTRL-X	Cut text to clipboard.
CTRL-INS	Copy text to clipboard.
SHIFT-INS	Paste text from clipboard.

Note: If you save a song to a .SEQ file, the sysex data will be saved within the file. However, if you save the file to a .MID, sysex information will not be saved.

Mixer Window

The Mixer Window is a graphical mixer that lets you control various settings for each of the 48 tracks in PowerTracks.   The mixer window is designed to work with General MIDI and Roland GS synths.   The mixer can also be used with regular non-GM synths, assuming your synth will respond to some or all of the controller messages for Volume, Panning, Chorus, and Reverb.

The Mixer uses two kinds of controls that aren't built into Windows:

Knobs 🔘 and Spin Controls
0 ⬍ .

To use the knobs, simply 🖱 click and hold down the left mouse button while the mouse cursor is inside of the knob and move the mouse cursor. The knob's pointer will follow the mouse cursor. Keep in mind that once you've held down the mouse button, you can even move the mouse cursor outside of the knob so that the mouse cursor isn't covering the knob's pointer.   When the knob is at the desired position, simply let go of the mouse button and the knob will stay at that setting.

If you need to see or edit the exact setting of a knob, simply 🖱 click on the right mouse button. A dialog box will pop up which will display the setting as a number, and will let you type in a new setting.

To use the Spin Controls simply 🖱 click the mouse on either the up or down arrow until the desired setting is shown.
The mixer's knobs and sliders will respond to Volume, Pan, Chorus, and Reverb controller messages that are played in the sequence.
Mixer moves can be recorded in real-time onto a track just like MIDI data. See the Record help topic for information about recording mixer moves.
The **Reverb**, **Chorus** and **Pan** knobs let you control the Reverb, Chorus, and Pan settings for each part. The Reverb, Chorus, and Pan settings in the **All** column are master settings that control the overall level of each effect for a GS sound module. When in General MIDI mode, adjustments made to the settings in this column will change the settings for all 48 tracks at the same time.

The **Volume** controls let you adjust the volume of each part.

The Volume control in the **All** column is the master volume for a GS module.   When in General MIDI mode, this control will simply move all the faders at the same time.

The **Track Numbers** at the bottom of the mixer show which track is associated with each column of the mixer. At program start-up the track numbers range from 1 to 10.   When you adjust the settings in a particular mixer channel, PowerTracks sends them over the Forced MIDI channel of the track that is associated with that column.   If there is no forced channel for a track, PowerTracks will send the adjustments over the channel of the first MIDI event in the track.   If there are no events in the track and no forced channel, then PowerTracks will base the MIDI channel with which to send the adjustments on the track number (e.g., tracks 1 - 16 are associated with MIDI channels 1 - 16. Tracks ranging from 17 through 32 and tracks ranging from 33 through 48 are associated with MIDI channels 1 - 16. e.g., track 17 being associated with MIDI channel 1, track 18 with MIDI channel 2, etc.).

The **Current Mixer Track** is the one in which the track number is highlighted in black. At program start-up, Track 1 is the mixer track. The current mixer track can be changed by clicking on the track number, or if you edit any of the mixer settings of a track, the current mixer track will automatically change to the one that you're editing.

The **Range Combo** 1-10 ⬍ lets you choose the range of tracks, such as 1 through 10 or 11 through 20. When the range is 40 through 48, tracks 1 through 2 will be associated with the last two mixer columns.
The **Module Select** combo lets you choose between Roland GS and General MIDI. When in Roland GS mode, the Mixer communicates with your synth via System Exclusive messages for a few of the settings such as All Volume, All Pan, All Chorus, and Tuning. When in General MIDI mode, the Mixer uses MIDI controller messages.   The GS Settings dialog will work with Roland GS synths (except for the Pitch Bend

Range setting which will work for GS and GM synths).

The **Tune** knob lets you tune your synth. When you ⌖ click on the tune knob, you'll hear an A note sent out to the current part. Adjust the knob until the module is in tune and then release the left mouse button. If you wish the A note to be sustained for as long as you're holding down the mouse button, make sure the current part has a patch with infinite sustain such as an organ sound.

The **Reset** button initializes the settings of your synthesizer.

The **GS Button** launches the GS Settings dialog.

GS Settings Dialog

The GS Settings Dialog lets you change some settings of Roland GS sound modules.   This dialog lets you edit the GS part that corresponds to the channel of the Current Mixer Track.

The **ID** number is the unit ID number of your GS synthesizer. This is normally 17. This number is sent with sysex messages, and your synth will only respond to sysex messages with the correct ID number.

The **Effects** combo boxes let you select the type of **Reverb** and **Chorus**.

The **Port** number is the output port for the mixer. All GS editing adjustments will be sent out over the mixer's current output port.

The GS settings dialog also has knobs for adjusting the **Modulation**, **Filter**, and **Envelope** parameters of your Roland GS synthesizer. When you make adjustments to the knobs, the Roland GS part on the channel of the current mixer track will be affected by any changes you have made.

Other settings in the GS settings dialog are **Modulation Pitch Depth** and **Bend Range**.   The Modulation Pitch Depth is only sent as GS sysex, but the Bend Range setting is sent as controller messages if the currently selected module is General MIDI and as GS sysex if the currently selected module is Roland GS.

Guitar Window

The guitar window displays notes (as green squares) that are played in the current track or MIDI Thru on a guitar fretboard.   It works in a similar manner to the piano below the toolbar.   However, since there are six separate strings on the guitar fretboard, and many notes can be played several ways on a guitar, it is little more complicated than the piano.

Below the guitar fretboard are **position markers**. The current position is highlighted in reverse video.   The positions range from 0 (open) to 24 (the 24th fret).   There is an additional position called 'All'.   When All is the current position, notes will be displayed in all possible ways that they can be played on the guitar. When the position ranges from 0 -24, the notes will be displayed in the current position, unless they are outside the range of the position, in which case they will not be shown.   You can change the current position simply by clicking on any position marker.

The **Insert Position button** will insert the current position into the current track at the current location (Now:).   When you play back the track, the current position of the guitar will change when the track plays the position event.   A position event is stored in a track as a MIDI controller (number 84) with a value ranging from 0-24 indicating positions 0-24, and a value of 127 indicates the 'All' position.   The ability to insert position information into a track is useful for properly displaying a track that was recorded by a MIDI guitar controller with all six strings set to transmit over one channel.   By inserting position information, you can have the guitar fretboard display the notes in the position the you played them instead of having them shown in all possible positions.

You could, if you are determined, record guitar music on a MIDI keyboard and then insert position information to have the track be displayed as if it was played on a guitar. However, the best way to record guitar music is with a guitar controller that is capable of transmitting over 6 separate MIDI channels.   See the information on Multi-Channel mode below.

The **Note Indicator** is the white square to the right of the Insert Position button.   If you move the mouse cursor over the guitar fretboard, the name of the note that the mouse cursor (if any) will be shown in the white box. This is useful for getting to know the notes of the guitar.

The **Backup and Advance buttons** (the ones with the '**<**' and '**>**' characters) let you advance forward or go backward by one note.   PowerTracks Pro will play the note that you have advanced or backed up to. You can stop the note from sounding by advancing or backing up to another note, or you can press the Stop Button.   This is useful for hearing and seeing a sequence of notes one step at a time. Keyboard shortcuts for backup and advance are Shift-Left Arrow and Shift-Right Arrow.

The **Backup Group and Advance Group buttons** (The ones with the '<-' and '->' characters) work in a similar manner to the Backup and Advance buttons except they work on a group of notes.   Notes that are within a certain distance from each other (determined by PowerTracks Pro) are considered to be a group of notes.   This is useful for hearing and seeing notes and chords be played one step at a time. Keyboard shortcuts for backup and advance are Ctrl-Left Arrow and Ctrl-Right Arrow.

The **Settings button** will access a dialog which will let you change the following settings of the guitar window:

The **Note Display Options** checkboxes determine if the guitar window displays notes on the current track or notes that are echoed out via MIDI Thru.

When **Multi-Channel** mode is enabled (the default), and the MIDI channel of a note is within the guitar channel range (11-16 is the default), PowerTracks Pro will assume that notes within the channel range fall on a particular string.   For example, in this case, a note on MIDI channel 11 will be considered to be on string number 1.   The note won't be displayed if it is too high or too low for the string.   The purpose if multi-channel mode is so that when you play back a track that was recorded by a MIDI guitar controller in Mono mode, the notes will display in the guitar window the same as they were played on the MIDI controller. If a note's MIDI channel falls outside the channel range, PowerTracks Pro will use the position information to display the note.

The Guitar Window will still display a multi-channel track properly even if the track has a forced MIDI channel in the Track Window.   By using a forced MIDI channel, the guitar will display the notes properly

without actually transmitting the data over 6 separate MIDI channels. However, if you recorded a multi-channel guitar track with pitch bend enabled then using a forced MIDI channel for the track is not recommended.

The **Base Channel** determines the guitar channel range when in Multi-Channel Mode. For example, with a Base Channel of 1, the channel range will be 1-6.   The highest possible base channel is 11 (the default) in which the channel range is 11-16.

The **Fretboard** Color radio buttons let you choose between Brown or Black for the color of the guitar fretboard.

The **Octave** determines the range of notes that are displayed on the guitar fretboard.   When set to 0, the fretboard will display notes normally.   When set to, for example, -1, the guitar window can be used to display bass lines.

The **String Tuning** determines the range of notes that are displayed on each of the six strings.   The default is standard E tuning.   You can change the note value corresponding to the open note for each of the six strings, and the guitar will then display notes as if they are played on a guitar with an alternate tuning.   The strings must be tuned from highest to lowest.   For example, string number 1 must be tuned higher than string number 2.

The **Send Notes To Notation Window** setting, when enabled, lets you insert a note into a Notation Window by clicking on a note of the fretboard. The note will be inserted at the current time of any opened Notation windows. If this setting is enabled, be careful not to accidentally insert a note when you're using the mouse to switch to the guitar window. If this setting isn't enabled, you can still insert a note into a Notation window by holding down the Ctrl key and then clicking on the guitar fretboard.

All the guitar settings are saved to PTW.INI so that they will remain in effect the next time you use PowerTracks Pro.

Event List

An Event List window is an event editor that lets you insert or delete MIDI events, and lets you make changes to existing events. A list of events is displfayed vertically in a window, with each line in the list representing an individual event. Each event is shown with its *track number*, *time*, *MIDI channel number*, the *kind* of the event, and the *parameters* of the event. The [Ins] , [Del] , and [Change] buttons may be used to insert, delete, and change events.

When an Event List is created, it is based on the tracks which are currently selected. For example, if only track 1 is selected, and you use the New command to create an Event List window, it will only deal with events that occur in track 1.

You can also open an Event List while multiple tracks are selected. In this case, the Event List will deal with events in all the tracks which where selected at the time of the creation of the Event List window. For example, if tracks 1 through 3 were selected when you created an Event List window, the Event List will deal with events occurring in those 3 tracks regardless of what tracks you've selected after it was created.

Events may be inserted by pressing the *INS* key. After pressing insert, a menu will pop up, and you may choose which type of event to insert. After picking the kind of event to insert, an entry box will pop up which will let you choose the MIDI channel, time, and any other parameters of the event.

Events may be deleted simply by pressing the *DEL* key.

Existing events may be edited by pressing the *ENTER* key. After pressing ENTER, an entry box will pop up, and you may make changes to the event.

You can play events one at a time by pressing the Transmit button. If the event you're playing isn't a note, the cursor will be advanced to the next event, but if the event is a note, it will be sustained until any other key is pressed.

You can stop a sustained note from sounding by pressing the Silence button. The sustained note will also stop in other situations, such as when you switch to a different window or choose a different event list command.

Notation Window

The notation window displays the notes of a song on a staff and lets you print music on your printer. The notation window has two modes of operation: Standard Notation mode and Staff Roll mode. When in Standard Notation mode, the Notation Window shows the track as regular music in standard notation. When in Staff Roll mode, the Notation Window is a hybrid between a piano roll and staff.

The Notation Window can also display chord symbols. See the Entering Chord Symbols topic for more information on entering chords.

By default, the Notation Window is in Standard Notation mode. Pressing the N button will toggle the window between Standard Notation Mode and Staff Roll mode. It will be obvious which mode is in effect, since Standard Notation mode displays the notes as regular music, while the Staff Roll mode displays the notes as noteheads (no stems) with optional duration lines.   Also, the Staff Roll mode will contain gray vertical lines across the staff.

Standard Notation Mode

The purpose of Standard Notation mode is to provide a convenient way of displaying a track as regular music on a staff within PowerTracks. The Notation Window is not a substitute for full-blown scoring or notation software. PowerTracks is first and foremost a sequencer (not a scoring program).

Editing of music cannot be done in Standard Notation mode. To edit the music, the window must be in Staff Roll mode.

Currently, the time signatures supported by Standard Notation mode are 1/4, 2/4, 3/4, and 4/4.   If the song contains any measures with an unsupported time signature, the measure will be drawn as blank when in Standard Notation Mode. Staff Roll mode supports all time signatures supported by PowerTracks Pro.

The Print button lets you print out music on your dot matrix, laser, or any graphical printer supported by Windows. This is not a substitute for a full blown music publishing program, but is a convenient way of getting your music on paper as standard notation.   When you press the print button, the Print Options dialog will pop up.   This dialog lets you change some settings that affect the printout.

Like the Notation Window itself, any measures with time signatures other than 1/4, 2/4, 3/4, and 4/4 will be printed as blank. The printout will contain one time signature at the beginning of the printout, but any time signature changes throughout the song will not be printed.

If the Notation Window is in Staff Roll mode, the printout will printout will appear in Staff Roll mode instead of standard notation.

There are some options in a dialog box which can be accessed by pressing the Opt. button. When in Standard Notation mode, the **Resolution** setting determines how the program rounds the note times and durations when translating a track into standard notation. For example, a resolution of 4 will cause the program to round each note and duration to the nearest 16th note when displaying the music (in 4/4). A resolution of 3 will cause PowerTracks to round each note to the nearest 8th note triplet (in 4/4). A resolution of 2 will cause PowerTracks to round each note to the nearest 8th note (in 4/4).

Hint: If you're displaying   jazz swing or shuffle music that has a triplet feel to the eighth notes, make sure to set the resolution to =3 (triplets). This will display the 8th notes and other aspects of jazz swing music correctly.

The following 3 settings are for Standard Notation mode only, and don't have any effect in Staff Roll mode:

The **Minimize Rests** checkbox, when checked, will cause PowerTracks to display the music with minimal rests. Use this setting if notes are displayed as shorter than you intended. For example, if eighth notes are displayed as sixteenth notes because you recorded them staccato.

The **Clefs Split At** setting determines the split point for placing notes on the Bass or Treble clef.   The default setting is 'C 5' which is middle C. For example, you can use a higher split point, such as 'C 6' if

you want some notes up to a G above middle C to be displayed on the bass clef with ledger lines instead of on the treble clef. If the split point is above middle C, and a note in the music is high enough that any of the ledger lines above the bass clef would overwrite the treble clef, the note will be placed on the treble clef.

The **Tick Offset** lets you display the music ahead or behind the beat. If you have a tendency to play the music ahead of the beat, you can specify a setting from 1 to 120 to have the music displayed forward in time. A setting from -1 to -120 will cause the music to be displayed ahead of the beat   (but not before the beginning of the song). 120 ticks equals one quarter note for this setting regardless of the current PPQ setting. Generally you won't need to use this setting since the notes are rounded when being displayed in standard notation.

Hint: The notation of Jazz swing music will often be improved by a Tick Offset setting of about -5. (minus 5) This is because jazz music is typically played a little after the beat.

See the information on the Staff Roll mode below for more settings in the Notation Window Options dialog.

Staff Roll Mode

Staff Roll mode is a similar to a piano roll, except the notes are shown on a grand staff.   Its purpose is to allow for easy graphical editing of notes, and not to display the music in regular notation.   With the Staff Roll, you will be able to graphically edit sequences much easier than if you were using a regular piano roll or an ordinary notation window.

Notes are shown as black dots (note heads) on the staff.   Notes are not shown with stems.   If the Show Note Durations setting (discussed later) is enabled, the durations of the notes are shown as horizontal lines. The horizontal duration lines are drawn a little higher or lower if the note is a sharp or a flat, which helps you be aware of rare situations where notes a half step apart overlap each other. Notes are shown with sharp, flat, or natural symbols depending on the key signature of the song.   Notes are shown exactly where they occur. They are not quantized.

Notes can be *inserted* simply by clicking on the staff in an appropriate location. You will see the name and octave of the current note location in a box at the top of the window.   This helps if you are inserting a note above or below the grand staff.   You can also insert notes via the Piano or Guitar Window as discussed later in this section. Notes can be *deleted* by holding down the Delete key and then

clicking over the note you wish to delete.   Notes can be *edited* by clicking on the note with the right mouse button.   If you

click on notes that are overlapping each other while attempting to edit or delete a note, a dialog box will pop up that will let you choose which note to edit or delete.
Notes can be *moved* via drag and drop. To move a note, move the mouse cursor over an existing note

and then click and hold the left mouse button. The mouse cursor will change to a different shape. While keeping the mouse button pressed, move the mouse cursor over to the location you wish to drop the note and then let go of the mouse button.   The note will be moved to the place you dropped it. Certain areas of the screen are not valid locations to drop a note.   The mouse cursor will change to a circle with line through it to indicate an invalid location.   If you try to drop a note in an invalid location, nothing will happen.

There are some options related to how notes are displayed.   These options are in a dialog box which can be accessed by pressing the Opt. button.   In this dialog, if the **Show Note Durations** checkbox is checked, then the durations of notes will be shown as either green or blue horizontal lines depending on whether the **Duration Color** is set to green or blue.
The **Quarter Notes Per Screen** setting determines the horizontal resolution of the screen.   For example, with 4 Quarter Notes Per Screen, the width of the screen is equal to 4 Quarter Notes or one measure in 4/4.   At 8 Quarter Notes Per Screen, the width of the screen is equal to 8 Quarter Notes or two measures in 4/4.   You can have a setting as low as 1 Quarter Note Per Screen or as high as 64, although the

screen may look unusual at the extremes since the size of the note heads remains the same regardless of this setting.

The **Resolution** setting determines how many vertical grid lines will be drawn for each beat. For example, with a resolution of 1, just one line will be drawn per beat.   With a Resolution of 4, 4 lines will be drawn, with 1 line being the beat line drawn in a solid color and the other lines being dashed lines representing sixteenth notes in 4/4.

The **Transpose** setting lets you adjust the Notation window to display notes either higher or lower than their actual pitches.   For example, if you're working with guitar music, you could set this to +12 and the guitar music will be displayed an octave higher, which is the way guitar music is normally notated.

Hint: This setting is also useful for displaying music for non-concert instruments such as trumpet or saxophone. Trumpet players (and other Bb instruments) should set transpose to +2, Alto Saxophone (and other Eb instruments) should set the transpose to -3. The music is then displayed in the correct key for the instrument, but plays in the concert key to the MIDI card.

If the **Snap To grid lines** checkbox is checked, the inserted note will be lined up with the closest grid line (quantized).   The duration of inserted notes is determined by which check box at the top of the screen is checked.   The **Duration %** Setting causes the durations to be set to a percentage of the currently selected duration.   For example, if the current duration is Whole, and you set the percentage to 50, the duration will be half the length of a Whole note. If the **Auto** checkbox is checked, the duration will be automatically set by the program so the note lasts up to the next note in the measure or to the end of the measure, which ever is closer, and multiplied by the percentage. If Auto is checked and you insert a note in a spot in a measure before a previous note or chord in the measure ends, the previous note or chord will be shortened so it doesn't overlap the currently inserted note.

The **Channel** and **Velocity** settings determine the MIDI Channel and velocity of inserted notes.

If the **Play Inserted Notes** checkbox is checked, notes that you insert will sound briefly as they are inserted. This lets you hear that the note you inserted sounds correct.

If the **Highlight Played Notes** checkbox is checked, notes will be highlighted in red as the notes are played when a song is playing.   If you have a slower computer or a track is very dense, you can save PowerTracks some extra work by unchecking this setting.

You can change the **Key Signature** of the song by clicking on the key area of either the treble or bass staff to the right of the clef symbol.   Or, you can simply double click on the Key setting in the Tool Bar at the top of PowerTracks Pro's main screen.

During playback, notes are highlighted in red as they are being played.   In addition, a vertical black line at the top of the screen will indicate the current location of the song during playback.   When playback is stopped you can click on the top of the screen below the duration checkboxes to change the time of the song.

You can also insert notes by clicking on the Piano or the Guitar Window.   If you click on the Piano or Guitar Window, notes will be inserted into any open Notation window at the current location in the Notation window. For example, if you click on middle C of the Piano keyboard, a middle C will be inserted into the Notation window.

Note: By default, you must hold the Ctrl key before clicking on the Guitar fretboard to insert a note into a Notation window.   If the *Send Notes To Notation Windows* **options in the** *Guitar Settings dialog* **is enabled, holding the Ctrl key won't be required, but be careful not to accidentally insert a note when using the mouse to switch to the Guitar window.**

Entering Chord Symbols

Chords symbols can be entered in the Notation Window for each beat of a song.   A 'beat', in this case, is the current PPQ resolution regardless of the time signature.   A sequence only contains one set of chord symbols regardless of how many Notation Windows are opened. Chord symbols are stored in .SEQ files. They are also stored in .MID files using a special manufacturer-specific META event.   This META event is used by the Windows version of PowerTracks, The Pianist, The Guitarist, and Band-In-A-Box.   This META event will be ignored by other programs including the DOS version of PowerTracks.

If you load a .MID that contained this META event into a program that ignores it, and then re-save the file, the META event will not be saved into the file.   The same is true if you load a .MID or .SEQ containing chord symbols into the DOS version of PowerTracks and then re-save the file.   The chord symbols will not be stored in the file by the DOS version.

Chord entry is done from the computer keyboard **while in the Notation Window**.
Chords are typed in using standard chord symbols (Like C or Fm7 or Bb7 or Bb13#9/E)
Chord entry is enabled when the 'Ch' checkbox is checked in the Notation Window.
To start typing in chords in a Notation Window:

- Rewind to the beginning of the song

- Enable Chord entering by clicking   on the 'Ch' Checkbox.

   - You may move this around by Cursor (arrow) Keys, Enter Key, Or Mouse Pointer Click
   on   the time indicator at the top of the Notation Window. The time line moves **2 beats at a time** in response to the left and right cursor keys.

When you have the time indicator at or close to the beat that you want to enter a chord, you then type the name of the chord you would like.

For example type c6 to get the C6 chord. Note that you should never have to use the SHIFT key, as PowerTracks will sort this out for you.

   - Use b for   'flat '   e.g. Bb7

   - Use # or 3   for Sharp   e.g. F#7 .   (# is the uppercase symbol of   3, so you can actually   type F37 to get F#7 - PowerTracks will sort out the case, saving you the effort of using   <SHIFT>3 to type the # symbol.

   - Use / for Slash Chords with alternate Roots such as C7/E   (C7 with E bass)

   - Use a comma to enter 2 chords in a row. In the example below, we would type **Ab9,G9**   to enter 2 chords at a time (on beat 3 and 4 of bar 2)

The chords are shown in the Notation Window above the treble clef.   Ex:

C6   AM7 | DM7   Ab9 G9 | C6/E | A7#9 |

In the above example, the '|' symbol shows roughly where the bar lines would be if these chords were entered in a Notation Window. The sequence of keystrokes to enter all the chords in the above line would be:

w c6>am7>dm7>ab9,g9>c6/e>>a739 ENTER

(w indicates rewind) (the > indicates cursor key to the right)   (ENTER indicates pressing the Enter key)

(we're able to type A7#9 as a739 because PTW knows to use the uppercase of the 3 which is #)

Hint: The fastest way to type in chords is to use your left hand to type in the chords. Your right hand

to the next bar/beat after you've typed in the chords

Chord List

(Commonly used chords are displayed here in **bold** type)

(major chords)
  C,CMAJ,C6, **CMAJ7**, **CMAJ9**,CMAJ13,**C69**,CMAJ7#5,
  C5b, Caug,C+,
  CMAJ9#11, CMAJ13#11,
(minor chords)
  Cm,Cm6,**Cm7**,Cm9,Cm11,Cm13,
  Cmaug,Cm#5,
  CmMAJ7,
(half diminished)
  Cm7b5,
(diminished)
  Cdim,
(dominant 7th chords)
  C7,7+, C9+, C13+, **C13**, C7b13, C7#11, C13#11, C7#11b13, **C9**,
  C9b13, C9#11, C13#11, C9#11b13, C7b9, C13b9, C7b9b13, C7b9#11,
  C13b9#11, C7b9#11b13, C7#9, C13#9, C7#9b13, C9#11, C13#9#11, C7#9#11b13,
  C7b5, C13b5, C7b5b13, C9b5, C9b5b13, C7b5b9, C13b5b9, C7b5b9b13,
  C7b5#9, C13b5#9, C7b5#9b13, C7#5, C13#5, C7#5#11, C13#5#11, C9#5,
  C9#5#11, C7#5b9, C13#5b9, C7#5b9#11, C13#5b9#11, C7#5#9, C13#5#9#11,
  C7#5#9#11, C13#5#9#11

(sustained 4 chords)
  Csus ,**C7sus**,C9sus,
  C13sus, C7susb13, C7sus#11, C13sus#11, C7sus#11b13,
  C9susb13, C9sus#11, C13sus#11, C9sus#11b13, C7susb9, C13susb9,
  C7susb9b13, C7susb9#11,
  C13susb9#11, C7susb9#11b13, C7sus#9, C13sus#9, C7sus#9b13, C9sus#11,
  C13sus#9#11, C7sus#9#11b13,
  C7susb5, C13susb5, C7susb5b13, C9susb5, C9susb5b13, C7susb5b9,
  C13susb5b9, C7susb5b9b13,   C7susb5#9, C13susb5#9, C7susb5#9b13,
  C7sus#5, C13sus#5,
  C7sus#5#11, C13sus#5#11, C9sus#5,
  C9sus#5#11, C7sus#5b9, C13sus#5b9,
  C7sus#5b9#11, C13sus#5b9#11, C7sus#5#9, C13sus#5#9#11, C7sus#5#9#11,
  C13sus#5#9#11.

Note 1: it is not necessary to type upper or lower case.
    the program will sort this out for you.
Note 2: Any chord may be entered with an alternate root ("Slash Chord")
    e.g.: C7/E   = C7 with E bass
Note 3: Separate chords with commas to enter 2 chords at a time
    e.g.: Dm7,G7

---

new chords added
    C5b   : This is C flat 5. It is spelled this way to avoid confusion
    C2 C5 C4 C69 C7alt Cm7#5

You can now type C-7 for Cm7   (i.e. use the minus sign)
        or C7-9 for C7b9

Print Options

This dialog lets you change various settings that affect the printout. These settings will remain in effect until you exit the program.

The **Include Bass Clef** and **Include Treble Clef** checkboxes let you decide whether the printout should contain the Bass Clef, Treble Clef or both. Note that both the bass and treble clefs are always printed in Staff Roll mode regardless of these settings.

The **Clef Sign Every Line** and **Key Signature Every Line** checkboxes let you decide if the printout should print the clef sign and key signature on every line.

The **From** and **Thru** settings determine the range of measures that are printed. By default From is set to 1 and Thru is set to 1000. This will cause the entire song to be printed (unless the song really goes beyond 1000 measures). The program won't print beyond the end of the song. If there are sustained notes that go beyond the measure in the Thru setting, the program may print extra measures. For example, if the Thru setting is set to measure 5, and there is a note that is sustained until measure 6, the program will print measure 6.

The **Bars Per Line** setting determines how many measures are drawn on each line of the print out in 4/4. If the Bars Per Line is set to 4, you will get 8 measures per line if the time signature is 2/4.

The **First Bar is Lead In** setting causes the program to print an extra bar of music on the first line of the first page printed. Use this setting in combination with the *Bar # Offset* setting if the song has a lead in.

When the **Bar Numbers** setting is checked, the program will print measure numbers at each measure.

The **Staves Per Page** setting lets you determine how many staves will be printed per page. Normally, you'll want to leave this at 10, but you can decrease this setting if the song has a lot of very high or very low notes so that there is room between staves for them. If you increase this setting beyond 10, there may not be enough room for all the staves on the paper depending on the size of the paper in your printer. If the printout has a song title, the first page printed out will be limited to 8 staves so that there's room for the title.

The **Margins** setting lets you change the left and right margins of the printout in inches. When the margins are set to 0, the program will print as wide as your printer will support. Therefore, there may still be margins if your printer can't print on the edges of the paper.

The **Bar # Offset** setting is an advanced setting that you can use to decrease all the measure numbers of the printout. It decreases the numbers that are printed at each measure. For example, if you specify a Bar # Offset of -2, all the measures numbers will be printed as 2 less than their actual numbers. So, measure 3 would be printed with a number of 1, and the number for measure number 4 would be printed as 2. Any number that is reduced to 0 or less isn't printed, so in this case measures 1 and 2 would have no number. This setting is useful if the song has a lead in, because, for example, a setting of -1 would cause the first measure to be printed with no number and the rest of the measures will be printed with their numbers starting with 1. Note that the *From* and *Thru* settings correspond to the actual measure numbers regardless of this setting.

The **Clefs Split At** setting determines the split point for placing notes on the Bass or Treble clef. The default setting is 'C 5' which is middle C. For example, you can use a higher split point, such as 'C 6' if you want some notes up to a G above middle C to be displayed on the bass clef with ledger lines instead of on the treble clef. If the split point is above middle C, and a note in the music is high enough that any of the ledger lines above the bass clef would overwrite the treble clef, the note will be placed on the treble clef. Note: This is identical to the Clefs Split At setting in the Notation Options dialog, and does not affect printing in Staff Roll mode.

The **Title**, **Composer**, **Style** and **Copyright** settings let you insert text onto the first page of the printout. The *Title* field is for a song title. The *Composer* field is for the author's name, and will appear to the right of the title. The *Style* field is for the style of the music such as Slow Blues, and will appear to the left of the title. The *Copyright* field is for a copyright notice and will appear at the bottom of the first page of the printout.

The **Setup Printer** button let's you configure your printer.   The changes to the printer configuration will be in effect for printing music until you exit the program.

Unlike most other dialogs, this one has a **Close button** in addition to Okay and Cancel. The close button works the same as Cancel, except that any changes you've made to the settings will be saved instead of discarded.

Quick Start Tutorial

Overview
PowerTracks for Windows is a full featured MIDI sequencer for Windows 3.1. You can record, edit and display music to be played back through your sound card or MIDI synthesizer. Music can be displayed in standard music notation on the screen. The music can also be displayed using the on-screen piano keyboard or guitar fretboard. Includes full support for reading and saving Standard MIDI files, professional recording ,editing and playback features . Create and Edit music using piano roll, music notation, event list, bars view, track view and more.

Getting Started

Choosing Your Input And Output Drivers
The first time you run the program, you will be asked to select a MIDI driver to use (from a list). For example, if you use a MPU401 MIDI interface, then you would select "MPU 401" as your driver. If you use a specific sound card, then you would instead choose that driver to use. Make sure that you have already installed the driver for your MIDI interface or sound card . If it doesn't appear on the list that PowerTracks shows you, you will need to install your driver (using the Windows "Control Panel | Drivers" program) . There is more information in the PowerTracks manual about installing your driver.

Loading and Playing Songs
PowerTracks comes with files ready to play. These include professional quality recordings of Piano , guitar and combo music. To load in a new song, Choose **File | Open** . You will then see a list of files available. There are 2 types of files that PowerTracks can read in - PowerTracks files (.SEQ.) or Standard MIDI File format (.MID).

Loading and Playing the Song "Melancholy Baby"
From the list of songs that you see, choose "Melancholy Baby". This is called **MELABABY.SEQ** on your disk. When you select it, press OK to load it in. This will then load in the song and your PowerTracks screen will look like this:
Each of the rows (entitled Bass, Drums, Piano, Guitar etc.) represent a different track of the song. This song (Melancholy Baby) is a slow jazz swing song. The instrumentation consists of bass, drums and guitar. The guitar was recorded using a MIDI guitar so you will hear a true guitar performance.

Selecting a track .Click your mouse anywhere on the row to select that track . You will see that the track is selected by noticing that the track number (at the far left) is highlighted in blue   There are several settings for each track P (play/mute/freeze) Ch (Channel), Key(transpose), Vel (velocity adjust), Pt (port), Prg (program-patch change), Bank, and Loop. Look at the last column in the row (called "Events"). This tells you how many MIDI Events are in a track, if there are 0 events the track is empty.

Setting up the patch changes. There is an important column on the list of tracks called Prg (program / patch). This tells your synthesizer which patch (or instrument) to use. For example the Bass is set to patch =32. Some synths (like Korg or Yamaha) number patches from 0-127 , but most others number patches from 1-128 (Roland, General MIDI). Fortunately, PowerTracks allows either kind of numbering. Since PowerTracks defaults to numbering from 0-127, you will need to change the Patch numbering to 1-128 if you are using a Roland or other sound card. Let's do this now. Using the pull down menu , Choose **Options | Patch names** . You can then select the Numeric Range of **1-128.** If you use a General MIDI compatible synthesizer   , you can also choose the Patch names "General MIDI" and you will then be able to select patches by name instead of number. (Users without General MIDI synths can press Help inside this dialog for information about creating your own patch name list). When you have successfully changed the patch numbering to 1-128, you will notice that the Patch for the Bass has

changed from 32 to 33. This is normal. If you would like to change the bass patch to a different patch, either double mouse click on the PRG setting for the track, or highlight the PRG setting and use the + and - keys to change the value.

Now lets have some fun !

Let's Display The Guitar Track In Standard Music Notation.
First, select the Guitar Track (track 4) - you select the track by mouse clicking anywhere on the Guitar Track row. You will know that the correct track has been selected when you see it highlighted in blue.

To view the notation , using the pull down menu, choose Window | New | Notation Window. (A keystroke shortcut is ALT F2). This will now display the music for you in standard music notation.

Setting OPTIONS for the notation. The notation defaults to 1 bar per screen, and a resolution of 16th notes. Let's change these. Press the OPTIONS button at the top left of the Notation Window. **Change the Beats Per Screen setting to 8** (i.e. 2 bars per screen). Since Melancholy Baby is a Jazz Swing tune, the eighth notes are in a triplet feel. To display this properly, **change the RESOLUTION to 3 (triplets).** Since jazz music is often played "a little behind the beat," set the **Tick offset to -10.** This will adjust   the notation (but not the performance).Since guitar music is notated up an octave (12 semitones) from concert, **Set the Transpose to =12 semitones**. This will transpose the notation (but not the performance). Non-concert instruments players of   Trumpet or Saxophone can view music in their key by using a transpose value of 2 and -3 respectively. For more information on these settings, press HELP inside the OPTIONS dialog. Exit the OPTIONS dialog by pressing OK.

Now PLAY the Song !
Press the SPACEBAR to play the song or stop the song. You can also use the PLAY button on the main screen.

Moving around the song. You can move around the notation window by using the PAGE UP/DOWN keys, or the horizontal scroll bar at the bottom of the notation window.

Double click on the NOW field at the top right of the screen to jump to a certain bar of the song.

 The small black vertical bar that runs near the top of the Notation Window always indicates your exact position in the song. You can click anywhere on the line to move your position.
Advance ahead a chord at a time by CTRL <RIGHT ARROW> (or back by CTRL <LEFT ARROW>)

See the music played on a Guitar fretboard. Using the pull down menu Choose Window | Guitar. You will then see the Guitar track of Melancholy Baby displayed properly on Guitar (it was recorded on a MIDI guitar so displays exactly as played on Guitar).Press Help when in the Guitar Window for more info on the Guitar   .Close the Guitar Window by pressing CTRL F4.

Now let's edit the Guitar Track. From the Notation Window for the Guitar Track. Go to bar
1 of the song (by using the PAGE UP key). Press the N button at the top of the Notation Window. This will change the notation display to the Staff Roll (piano roll) . This shows the notes exactly as they were played in time, so is more precise than the Notation mode. You can return to notation mode by again pressing the N (Notation) button. The **Staff Roll** allows you to insert, delete, or change notes in the track easily. From the Staff Roll mode, **insert notes** by a left mouse click at the point you would like the note. You will see vertical lines on each beat, and dashed vertical lines on the subdivision of the beat (you can change the number of subdivisions by the RESOLUTION setting in the OPTIONS (Opt.) dialog). A note at beat 1 would be placed by clicking the mouse arrow in the center of the bar line (that is the beginning of beat 1). The duration of each note can be set at the top of the Notation Window. If you would like to place

notes in between the divisions, make sure that "Snap to Grid Lines" is off in the OPTIONS dialog. You can also insert notes by clicking on the piano (or CTRL click on the Guitar) . **Moving notes** is done by dragging and dropping the notes using the mouse (Holding down the Shift key before you drop the note will insure that the note moves only in time or pitch (but not both). Deleting or **Editing Notes** (**and deleting notes)** is done by RIGHT MOUSE CLICKING over any note. This display a dialog with options to change or delete the note. Press F1 for more info about the Staff Roll. When you view another song in Notation mode remember that you may need to modify the Notation settings (like restoring the transpose to =0, or the backup ticks value to =0 etc.)

Tutorial #2 - Recording Your Own Music

Let's start a blank song. Choose **File | New**. You now have a blank sequence. Select the track you want, and press the RECORD button. After a 1 bar count in, you can record your music from any MIDI keyboard. Rewind the song by pressing the REWIND button, and then record another track**. Merge** 2 tracks by Choosing Edit | Cut and then Edit | 1-track paste to merge the info from the cut track to the new track. View your music in notation by choosing Window | New | Notation Window (or ALT F2). Edit your music from the Notation Window by pressing the N button to get to the staff roll (piano roll view). See the information above regarding Editing a Track.

Scrap Buffer

When you Copy or Cut a section of the song, the data is placed in a temporary storage area. This temporary storage area is known as the scrap buffer.