



# What's New

Pro Tools M-Powered™ 7.0



**Copyright**

© 2005 Digidesign, a division of Avid Technology, Inc. All rights reserved. This guide may not be duplicated in whole or in part without the express written consent of Digidesign.

Avid, Digidesign, M-Audio, and Pro Tools are either trademarks or registered trademarks of Avid Technology, Inc. in the US and other countries. All other trademarks contained herein are the property of their respective owners.

Product features, specifications, system requirements, and availability are subject to change without notice.

PN 9329-17736-00 REV A 11/05

# contents

<b>Chapter 1. Introduction</b> .....	1
System Requirements .....	1
New Features in Pro Tools M-Powered 7.0 .....	1
<b>Chapter 2. System Configuration and Session Compatibility Updates</b> .....	5
Additional Supported M-Audio USB Hardware .....	5
Increased Sends and Busses .....	5
Up to 999 Markers/Memory Locations per Session .....	5
Compatibility .....	6
Localization .....	9
General Performance Enhancements .....	9
<b>Chapter 3. Pro Tools Menus and Windows</b> .....	11
Improved and Expanded Menus .....	11
New Consolidated Region List for Audio, MIDI, and Region Groups .....	12
Tool Tips .....	15
New Shortcuts and Tools for Mix and Edit Window Display Options .....	15
Enhancements to I/O Setup and Disk Allocation Dialogs .....	16
DigiBase Changes and Additions .....	16
Improved Window Management .....	16
<b>Chapter 4. New Track Features</b> .....	17
Instrument Tracks .....	17
Increase in Total Number of Sends Per Track to Ten .....	22
Moving and Copying Sends .....	23
New Duplicate Tracks Dialog and Options .....	24
Color Coding Improvements .....	25
Importing and Exporting .....	27

<b>Chapter 5. Audio and MIDI Features for Composition</b> . . . . .	29
Region Groups . . . . .	29
Importing REX Files . . . . .	38
Importing ACID Files . . . . .	39
Region Looping . . . . .	40
Special Cut, Copy, Paste, and Clear Commands . . . . .	44
Drag and Drop Features . . . . .	45
Preview Files from Windows Explorer or Macintosh Finder . . . . .	47
Link Track and Edit Selection . . . . .	48
Zoom Enhancements . . . . .	49
Additions to Strip Silence . . . . .	52
Additions to Separate Regions . . . . .	52
<b>Chapter 6. MIDI Features</b> . . . . .	53
MIDI Real-Time Properties . . . . .	53
Sample-Based MIDI . . . . .	60
Mirrored MIDI Editing . . . . .	61
Previewing MIDI Regions . . . . .	62
Default Thru Follows First Selected MIDI Track Selection Preference . . . . .	62
Selection of Note Ranges from Track Mini-Keyboard . . . . .	63
New Select and Split Notes Window . . . . .	65
New Quantize Features . . . . .	66
Legato, Overlap, and Duplicate Additions . . . . .	67
New Remove Duplicate Notes Command . . . . .	68
Transpose Window Enhancements . . . . .	68
New Import MIDI Options . . . . .	68
Exporting MIDI Files . . . . .	69
MIDI File Support in DigiBase . . . . .	70

<b>Chapter 7. Plug-Ins</b> .....	71
RTAS Performance Features .....	71
New Shortcuts to Enable All Plug-In Parameters .....	73
RMS and Peak Calibration Modes for Signal Generator Plug-In .....	73
RMS and Peak Calibration Modes for Normalize Plug-In .....	74
RMS and Peak Calibration Modes for Gain Plug-In .....	74
TimeAdjuster RTAS Plug-In .....	74
Trim Plug-In +12 dB Updates .....	75
EQ III Band-Pass Mode .....	75
Synchronic Updates .....	76
Bomb Factory Updates .....	79
Pro Tools M-Powered Support for Additional Plug-Ins .....	80
 <b>Chapter 8. Control Surface Features</b> .....	 81
Command 8 New Features and Enhancements .....	81



## chapter 1

# Introduction

This document is an overview of new features in Pro Tools 7.0 for Pro Tools M-Powered systems on Windows XP or Mac OS X.

---

## System Requirements

For complete system requirements, visit the compatibility page of the Digidesign Web site ([www.digidesign.com/compato](http://www.digidesign.com/compato)).

### Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved.

For a list of Digidesign-qualified computers, operating systems, hard drives, and third-party devices, refer to the latest compatibility information on the Digidesign Web site ([www.digidesign.com/compato](http://www.digidesign.com/compato)).

---

## New Features in Pro Tools M-Powered 7.0

Pro Tools M-Powered 7.0 includes the following new or enhanced features:

### System Configuration and Session Compatibility Updates

- New support for M-Audio USB devices
- Increased Sends and Busses
- 999 Markers/Memory Locations per session
- Sessions and compatibility:
  - New session file format (“`.ptf`”)
  - Support for long file names
  - Removal of +6 dB option for new sessions
  - All sessions are Mac/PC compatible
  - Recommended BWAV dialog
- Localization:
  - Cross-platform and language session compatibility
  - Traditional Chinese localization
- General Performance Enhancements:
  - Faster session opening on Windows XP
  - Improved editing speed
  - Improved window redraw on Windows XP

## Pro Tools Menus and Windows

- Improved and expanded menus
- Tool Tips
- Consolidated Region List with improved search tools
- Shortcuts and new tools for Mix and Edit window views
- Resizable I/O Setup and Disk Allocation dialogs
- DigiBase changes and additions:
  - Support for Standard MIDI Files
  - Bar|Beat display of Duration (length) for tick-based audio and MIDI files
  - New Tempo column
- Improved window interaction for Windows XP

## Track Features

- Instrument tracks
  - Software and hardware instruments
  - Unrestricted MIDI and audio routing
- Increased sends per track to 10
- Ability to move and copy sends
- Increased busses on Pro Tools LE and M-Powered to 32
- New Duplicate Tracks dialog and options
- Color Coding improvements
- Importing and exporting:
  - REX and Acid files
  - AAC files
  - Groups and markers from other sessions
  - Importing audio from audio CDs (Windows XP)

## Audio and MIDI Composition Features

- Region groups:
  - Audio and MIDI regions
  - Multi-track region groups
  - Nested groups
  - Fades and crossfades across grouped regions
  - Importing and exporting region groups
  - DigiBase support for grouped files
- Looping audio and MIDI regions or region groups
- Special Cut, Copy, Paste, and Clear commands
- Drag and drop features:
  - Drag and drop audio, REX, ACID, or MIDI files from Windows Explorer or Macintosh Finder to the timeline or Region List
  - New Timeline Drop Order Modes to drop multiple regions (Top to Bottom or Left to Right)
  - Drag and drop audio files to plug-ins from DigiBase
  - DigiBase support for drag and drop of REX, ACID, region groups, and Standard MIDI files
- Ability to preview files from Windows Explorer or Macintosh Finder
- Link Track and Edit Selection command
- Zooming enhancements:
  - Improved Zoom Toggle for streamlined MIDI and audio editing
  - Continuous zoom with Zoom tool
  - Marquee Zoom both vertical and horizontal zoom on MIDI tracks
  - Independent vertical track zoom
  - Automatic “Show All Notes” scaling for vertical zoom of MIDI regions



- Additions to Strip Silence:
  - Extract function (extract silence)
  - Separate function
- Additions to Separate Regions commands:
  - Separate on Grid command
  - Separate at Transients command

### **MIDI Features**

- MIDI Real-Time Properties
- Sample-based (tempo-independent) MIDI
- Mirrored MIDI Editing
- MIDI region previewing in the Region List
- Selection of note ranges from on-screen mini-keyboard
- New Preference for “Default Thru follows Track Selection”
- New Select/Split Notes window
- New Grid/Groove Quantize window
- Groove Quantize support for Input Quantize
- New Remove Duplicate Notes command
- Legato and Overlap additions
- Transpose Window enhancements
- New Import MIDI to Timeline options
- Support for exporting MIDI files

### **New or Enhanced Plug-In Features**

- Multi-processor support for RTAS plug-ins
- RTAS Performance Enhancements
- New shortcuts to enable plug-in parameters
- RMS and Peak calibration modes for Signal Generator, Gain, and Normalize plug-ins
- Support for RTAS version of Time Adjuster plug-in
- Trim plug-in +12 dB update
- EQ III Band-Pass mode
- Synchronic updates:
  - Drag and drop audio files to Synchronic Waveform display
  - Support for AudioSuite version of Synchronic
- Bomb Factory updates:
  - Updated rotary control behavior
  - Restore Bomb Factory plug-in settings
- Support for the AudioSuite versions of Sound-Replacer and NoNOISE plug-ins

### **Control Surface Features**

- Support for 10 sends on Command|8
- Support for Instrument tracks on Command|8



## chapter 2

# System Configuration and Session Compatibility Updates

This chapter describes changes to Pro Tools system capabilities.

---

### Additional Supported M-Audio USB Hardware

With Pro Tools M-Powered 7.0, Pro Tools is now supported on the following M-Audio USB devices:

- Black Box (USB)
- Ozone (USB)
- Transit (USB)
- Fast Track (USB)
- MobilePre (USB)

For the most current list of supported M-Audio hardware, visit the Digidesign Web site: ([www.digidesign.com/compato](http://www.digidesign.com/compato)).

---

### Increased Sends and Busses

On all systems, each audio, Auxiliary Input, and Instrument track now provides 10 sends for routing audio to internal busses or hardware outputs. For instructions on displaying and using the increased number of sends, see “Increase in Total Number of Sends Per Track to Ten” on page 22.

With Pro Tools LE and M-Powered, 32 internal busses are now available. (In previous versions of Pro Tools LE and M-Powered, the maximum was 16). This provides greater bussing resources for sessions, and simplifies session interchange between Pro Tools HD, LE and M-Powered sessions.

---

### Up to 999 Markers/Memory Locations per Session

Each session can include up to 999 Markers/Memory Locations. (In previous versions of Pro Tools, the maximum number of memory locations was 200 per session).

Markers and Memory Locations are useful for identifying sections of songs or scenes, to quickly navigate to specific locations, and to store selections for consistency when auditioning, editing, and bouncing to disk.



*Markers/Memory Locations are also available as choices in the Import Session Data command, to transfer markers or memory locations from one session into another. For more information, see “Importing and Exporting” on page 27.*

---

## Compatibility

### New Session File Format (“.ptf”)

Pro Tools 7.0 uses a new session file format and extension (.ptf) to distinguish its sessions from sessions created with previous versions.

The new .ptf file format supports many new options for session compatibility and transfer as described in the following sections.

Pro Tools 7.0 file icons identify Pro Tools HD, Pro Tools LE, and Pro Tools M-Powered session files. Each Pro Tools system features a unique icon which will be used for all session files on that system (regardless of whether a session file was created on a different Pro Tools system).



Pro Tools HD



Pro Tools LE



Pro Tools M-Powered

#### Session file icons

### WaveCache

Each session folder also contains a WaveCache file. Pro Tools creates this file automatically and uses it to store waveform overview data. By storing waveform data in the WaveCache file, sessions are able to open more quickly. The session WaveCache file can be included whenever a session is transferred to another Pro Tools 7.0 system.

Pro Tools also maintains a distinct WaveCache file inside the local Digidesign Databases folder (C:\Digidesign Databases) which retains waveform data for all files used on the system. Addi-

tional WaveCache files are created on each external hard drive attached to your system, and stored in the Digidesign Databases folder on each drive.

Deleting or trashing any of the WaveCache files will not harm the session or your system. Each session will merely need more time to open due to having to recalculate waveform data for associated audio (and store that data in a new WaveCache file).

### Session Compatibility

A Pro Tools 7.0 format session cannot be played on Pro Tools versions 6.9.x or lower. To save a 7.0 session that is compatible with previous versions of Pro Tools, use the File > Save Copy In command to choose the destination session format (such as 5.1–6.x) and other options. See the *Pro Tools Reference Guide* for details on session and file compatibility.

Pro Tools 7.0 and later session attributes are changed in the following ways when the session is saved to a prior version of Pro Tools:

- Long file names are shortened.
- Region groups are dropped.
- Region loops are dropped.
- Sample based MIDI regions are dropped.
- Sample based MIDI tracks are dropped.
- Sends F–J and automation (if any) are dropped.
- Markers/Memory Locations 201–999 are dropped.
- Instrument tracks are converted to MIDI and Auxiliary Input tracks.

## Support for Long File Names and Unsupported Characters

Pro Tools 7.0 lets you name files with as many as 128 characters.

However, files can be renamed in certain situations when saving a copy of a session to a Pro Tools version that does not support long file names. See “Renamed Audio Files Folder” on page 7.

Pro Tools also automatically renames files while opening sessions when file names contain illegal characters.

### Renamed Audio Files Folder

This folder includes file that have been renamed. Files can be renamed when you open a session that references audio file names with incompatible characters. Files can also be renamed in certain situations when saving a copy of a session to a Pro Tools version that does not support long file names.

### Opening a Session that Contains Audio File Names with Illegal Characters

Pro Tools 7.0 does not support audio file names that contain certain ASCII characters (such as \* and @).

When opening sessions that contain audio file names with illegal characters, Pro Tools automatically creates a renamed copy of each file that contains illegal characters (replacing these characters with an underscore “\_”). Renamed files are copied to the Renamed Audio Files folder. The original files are left intact in the Audio Files folder.

Before the session opens, you are prompted to save a detailed report of the renamed files and their original file names to a Notes text file. Follow the on-screen instructions. By default, the Notes text file is saved to the Session folder.

**⚠** *It is possible to have a Pro Tools 7.0 session that contains audio file names with illegal characters. In this case, if you Save Copy In the session to Pro Tools 6.9.x or lower with Mac/PC Compatibility on, the tracks will be renamed with legal characters. If you Save Copy In the session to Pro Tools 6.9.x or lower with Mac/PC Compatibility off, the characters are not changed.*

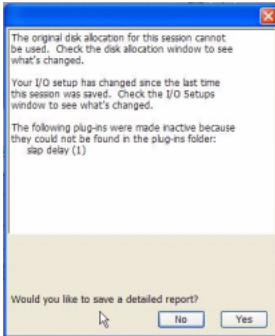
### Saving a Copy of a Session that Contains Long Audio File Names

When saving files to Pro Tools 6.9.x and lower (using Save Copy In), audio files with file names that exceed the limits of the destination format will be truncated and located in the Session folder, as follows:

- If the new session is saved to the same directory as the original, a Renamed Audio Files folder is created in the session’s original folder, and the renamed audio files are placed in it.
- If the new session is saved to a different directory than the original the All Audio Files option *is not checked*, a new Session folder is created, which includes an Audio Files folder and a Renamed Audio Files folder. Renamed audio file will be included in the Audio Files folder.
- If the new session is saved to a different directory than the original and the All Audio Files option *is checked*, a new Session folder is created, which includes an Audio Files folder. Renamed audio files will be included in the Audio Files folder.

## Saving a Notes Report

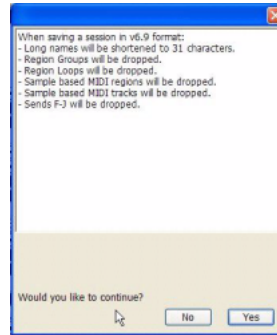
Pro Tools Session notes list the old and new names of converted files. To save a text (.txt) file containing a more detailed Notes report while opening a session, follow the on-screen instructions when prompted. The Notes report will be named with the session name, followed by Notes.txt. You can choose to save this file in your Session folder, or in another location.



### *Opening a session with different settings than the current configuration*

When saving a Pro Tools 7.0 session to a previous version, session notes list all parameters that are not supported and will be dropped when opened on the destination system. To save a text (.txt) file containing a more detailed Notes report while saving a copy of a session to a previous version, follow the on-screen instructions.

The Notes report will be named with the session name, followed by Notes.txt. You can choose to save this file in your Session folder, or in another location.



### *Reminder before saving a Pro Tools 7 session to a previous version*

## Fader Gain Always +12 dB in Pro Tools 7.0 Sessions

All sessions created with Pro Tools 7.0 are "+12 dB" sessions. (The previously available +6 dB fader gain option has been removed from the New Session dialog.)

You can save Pro Tools 7.0 sessions to lower versions of Pro Tools that do support +6 dB using the File > Save Copy In command.

## All Pro Tools 7.0 Sessions Are Mac/PC Compatible

Sessions created and saved as Pro Tools 7.0 sessions are always compatible on both Windows and Macintosh systems.



*The previously available setting for new sessions “Mac/PC Compatibility Mode” is no longer required and has been removed from the New Session dialog.*

The Enforce Mac/PC Compatibility option remains available in the Save Copy In dialog for saving sessions to be compatible with lower versions of Pro Tools. In addition, there are cross-platform limits to consider when completing the Save Copy In. For more information, see the Pro Tools Reference Guide.

### Recommended BWA V Dialog

The recommended file format for cross-platform interoperability is BWF (.WAV). To support optimal session interchange, Pro Tools defaults to BWF format for new sessions.

Pro Tools lets you save, bounce, and export in a variety of file formats. If you attempt to create a session and use the SD II format, however, a warning dialog will appear reminding you of its limitations:

- SD II is not supported on Windows XP.
- The maximum sample rate for SD II files is 48 kHz.

---

## Localization

Pro Tools 7.0 provides improved cross-platform language session compatibility. This lets sessions from localized versions of Pro Tools be transferred between compatible languages while preserving the appropriate settings.

For the most current information on localized versions of Pro Tools, see the compatibility pages of the Digidesign Web site for your language.

---

## General Performance Enhancements

Pro Tools 7.0 includes the following enhancements to general Pro Tools system performance:

- Faster session opening on Windows XP
- Improved window redraw on Windows XP
- Improved editing speed





## chapter 3

# Pro Tools Menus and Windows

Pro Tools menus and windows have been updated, as described in the following sections.

---

## Improved and Expanded Menus

Menus have been restructured to simplify learning and using Pro Tools, as follows.

**File Menu** Provides commands that read and write session data to and from disk.

**Edit Menu** Provides actions that operate on the current selection and affect data in tracks or the clipboard.

**View Menu** Provides choices to customize what is shown in various windows.

**Track Menu** Provides actions that operate at the track level (affecting whole tracks).

**Region Menu** Provides actions that operate at the region level.

**Event Menu** Provides actions that operate at the event level (such as MIDI and other tick-based data).

**AudioSuite Menu** Provides AudioSuite plug-ins.

**Options Menu** Provides items that determine how Pro Tools responds.

**Setup Menu** Provides dialogs and windows to configure application and hardware peripheral settings.

**Window Menu** Provides actions for selecting and opening specific Pro Tools windows.

**Help Menu** Provides links to important Pro Tools documentation, including *Keyboard Shortcuts*, *DigiBase Guide*, *DigiRack Plug-Ins Guide*, *Pro Tools Menus Guide*, *Pro Tools Reference Guide*.

For more information, see the *Pro Tools Menus Guide*.

## Tracks, Regions, and Groups List Pop-Up Menus

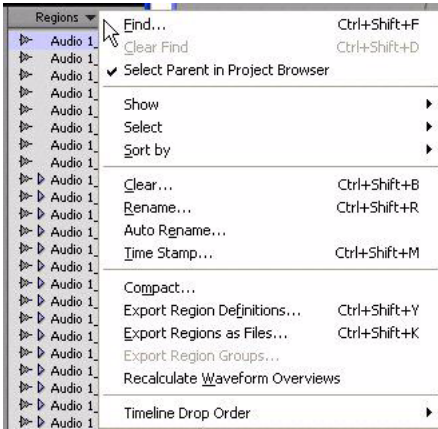
Pop-up menus are provided at the top of the Track, Region, and Group Lists. These pop-up menus provide commands that affect the contents of their corresponding lists, as follows:

**Tracks List Pop-Up Menu** Provides commands to show, hide and sort tracks in the Mix and Edit windows.



*Tracks List pop-up menu*

**Region List Pop-Up Menu** Provides commands to find, select, sort, clear, rename, time stamp, compact, and export items in the Region List. The Region List pop-up menu also provides the Recalculate Waveform Overviews and Timeline Drop Order commands.



*Region List pop-up menu*

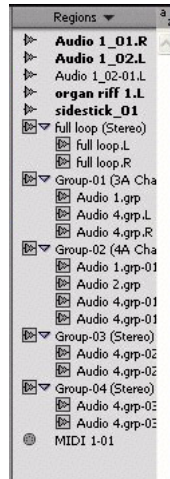
**Mix and Edit Group List Pop-Up Menus** Provide commands to create, display, suspend, and delete Mix and Edit Groups.




*Mix and Edit Group List pop-up menu*

## New Consolidated Region List for Audio, MIDI, and Region Groups

The Edit Window displays all audio regions, MIDI regions and region groups in a single, comprehensive Region List.



*Region list*

 *Previous versions of Pro Tools provided two separate lists (the Audio Region List and the MIDI Region List) and each list had its own menu. The new Region List and Region List menu consolidate the functions of these previously available items.*

All regions can be shown in the Region List. Items can be dragged from the list to tracks and arranged in any order. All types of regions can be auditioned from the Region List by Alt-clicking (Windows) or Option-clicking (Macintosh) them.

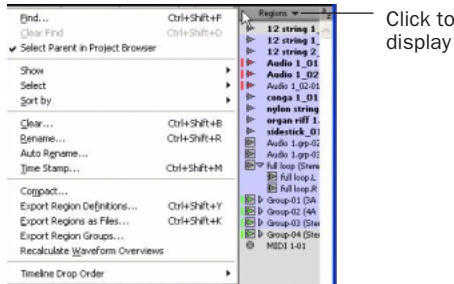
At the top of the Region List is the Region List pop-up menu, which provides commands and tools for managing the contents of the Region List.

## Region List Menu

The Region List pop-up menu provides tools to search, select, sort, export, clear, and manage items in the Region List.

### To access the Region List menu:

- In the Edit window, click the Region List pop-up at the top of the Region List.



Region List pop-up menu

## Enhancements for Sorting and Searching the Region List

The more regions a session contains, the harder it can become to locate a particular region in the Region List. The ability to search and sort regions in the Region List is useful in large sessions.

### Sorting Regions

#### To sort regions in the Region List:

- 1 Click on the Region List pop-up menu (at the top of the Region List) and choose Sort By.

- 2 Select a basis for sorting from the submenu:

- Region Type
- Name
- Length
- Original Time Stamp
- User Time Stamp
- Time Base
- Start in Parent
- End in Parent
- File Name
- File Length
- File Creation Date
- File Modification Date
- Disk Name (audio and region groups only)
- Track Format/Width

- 3 To adjust sort results in an ascending or descending order, choose Region List > Sort By, and select Ascending or Descending.

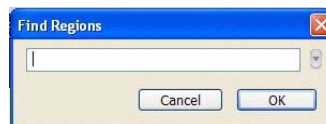
### Finding Regions

The Find command has been enhanced with a new Find History and improved search tools.

Use the Find command to display all regions in a list whose names contain a particular word or phrase.

#### To find and display regions that match a word or phrase:

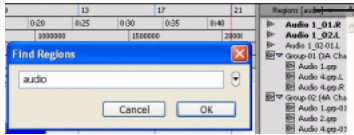
- 1 Click the Region List pop-up menu at the top of the Region List, and choose Find. Or press Control+Shift+F (Windows) or Command+Shift+F (Macintosh).



Find Regions

2 Type the name, or any portion of the name, for the regions you want to find.

As you enter search text, it is displayed at the top of the Region List. Matching results appear in the list as they are found.



Display of search text

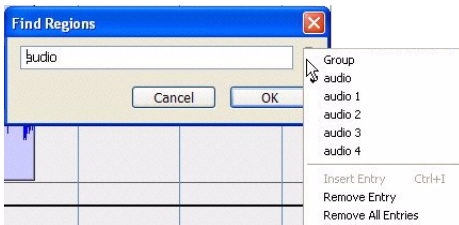
#### Region List while searching

3 Click OK. Regions of any type whose name match the word or phrase you searched are displayed in the Region List. The search string is displayed at the top of the Region List in brackets.

Text entered into the Find dialog is saved in a Find History, letting you quickly repeat previous searches with a minimum of retyping.

#### To repeat a previous search:

- 1 Click the Region List pop-up menu at the top of the Region List, and choose Find.
- 2 Click the small arrow to the right of the text field in the Find dialog and select a text string from the Find History pop-up menu.



#### An example of a Find History

The Find History is saved with the session.

In addition to storing each text string previously entered, you can insert multiple entries into the Find History manually (without having to perform each Find in order to store words or phrases).

#### To compile a Find History without performing each search:

- 1 Choose Region List > Find.
- 2 Type the name, or any portion of the name, for the regions you want to find.
- 3 Click and hold the arrow to the right of the text field in the Find dialog and choose Insert Entry from the pop-up menu.



#### Region List while searching


4 Type another entry and choose Insert Entry again to add additional search strings to the history.

#### To remove an entry from the history:

- 1 Select it from the Find History pop-up menu so it is displayed in the text field.
- 2 Choose Remove Entry from the Find History pop-up menu.

#### To clear the Find History:

- Choose Remove All Entries from the Find History pop-up menu.

 For more information on using the Region List and Regions menu, see the Pro Tools Reference Guide. For an overview of the Regions, see the Pro Tools Menus Guide.

---

## Tool Tips


Pro Tools provides Tool Tips in all main windows. Parking the cursor for a few seconds over an abbreviated name, or unlabeled icon or tool, will display either the function or details of the item (depending on the Tool Tips preferences settings).

### To configure Tool Tips for Pro Tools:

- 1 Choose Setup > Preferences, and click the Display tab.
- 2 In the Tool Tips Display section, click the Tool Tip options you want displayed.

**Function** Shows the functional name of different Pro Tools items (such as specific buttons, indicators, modes, selectors, and Edit tools).

**Details** Shows abbreviated or hidden Pro Tools names or values for different Pro Tools items (such as insert names, gain levels, settings, and routing assignments).

 *Leave both options unchecked to turn off Tool Tips.*

- 3 Click Done.

---

## New Shortcuts and Tools for Mix and Edit Window Display Options

This section describes new ways to manage control views in the Mix and Edit windows.

### Shortcut for Hiding Edit Window Views

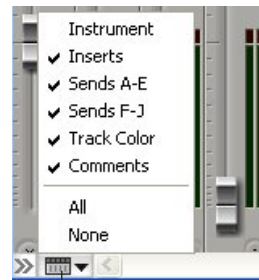
In the Edit window, you can use a keyboard shortcut to hide an Edit window view (such as Comments, Instruments, Inserts, Sends A–E, Sends F–J, I/O, Real-Time Properties and Track Color).

#### To hide an Edit Window view:

- Alt-click (Windows) or Option-click (Macintosh) the name of the Edit window view (located at the top of the view's column). Choices include Mic Pre, Comments, Instrument, Inserts, Sends A–E, Sends F–J, I/O, Real-Time MIDI Properties, and Track Color.

### New Mix Window View Selector

The new Mix Window View selector is located in the lower-left corner of the Mix window.



Click to display

#### Mix Window Shows selector

The Mix Window View selector provides options that are identical to the options as found in the View > Mix Window submenu.

---

## Enhancements to I/O Setup and Disk Allocation Dialogs

### Resizing Enhancements

With Pro Tools 7.0, the I/O Setup and Disk Allocation dialogs can be resized, and provide shortcuts for scrolling.

#### To resize the I/O Setup or Disk Allocation dialogs:

- Drag the lower-right corner of the dialog according to standard convention for your operating system.

### Scrolling Enhancements

With Pro Tools 7.0, scrolling is supported in the I/O Setup and Disk Allocation dialogs.

#### To scroll up or down in the I/O Setup and Disk Allocation dialogs:

- Press Page Up or Page Down.

#### To scroll left or right in the I/O Setup dialog:

- Press Alt+Page Up/Down (Windows) or Option+Page Up/Down (Macintosh).



*The Disk Allocation dialog does not scroll horizontally, but can be resized to display more information.*

---

## DigiBase Changes and Additions

DigiBase browsers have been enhanced with the following additions:

### Support for Standard MIDI Files

DigiBase supports standard MIDI files in browsers, and lets you import (drag and drop) them directly into Pro Tools sessions. See “Drag and Drop Features” on page 45.

### Bar|Beat Display of Duration

DigiBase browsers show the length (duration) of the following items in Bar|Beats: tick-based audio and MIDI files, region groups, REX files, and ACID files. See “DigiBase Support for Region Group Files” on page 37.

### New Tempo Column

When showing tick-based audio and MIDI files, region groups, REX and ACID files, DigiBase browsers now provide a Tempo column. This new column displays the native tempo associated with the item.

---

## Improved Window Management

### (Windows XP Only)

Pro Tools main window displays can be independently resized and maximized, letting you take advantage of standard Windows XP window controls while navigating through sessions.

## chapter 4

# New Track Features

This chapter explains the following new or changed features that relate to sessions, tracks, and compatibility.

- “Instrument Tracks” on page 17
- “Increase in Total Number of Sends Per Track to Ten” on page 22
- “Moving and Copying Sends” on page 23
- “New Duplicate Tracks Dialog and Options” on page 24
- “Color Coding Improvements” on page 25
- “Importing and Exporting” on page 27

---

## Instrument Tracks

Instrument tracks are a special type of track that provide MIDI and audio capabilities in a single channel strip. Instrument tracks make it easy to use software and hardware MIDI instruments, record MIDI, and monitor audio from the instrument.

Instrument tracks let you do all of the following:

- Insert RTAS instrument plug-ins or assign external MIDI devices as inputs.
- Record and edit MIDI data for inserted instrument plug-ins, or trigger external MIDI devices.
- Combine sounds from instrument plug-ins and external MIDI devices, and trigger them from the same Instrument track.
- Route and monitor audio output from instrument plug-ins or external MIDI devices.
- Automate all parameters directly in the Instrument track, and record and play back MIDI controller data on the Instrument track.
- Insert processing plug-ins to process audio from instrument plug-ins and external MIDI devices.

- Insert multiple instrument plug-ins in a row so that instrument plug-ins that support (audio) input mode can be used to further process audio coming from the first instrument on the Instrument track.
- Insert up to 10 sends on each Instrument track to route audio to internal busses or hardware outputs.
- Use fewer total tracks per session, which streamlines use of some system resources and simplifies session navigation.

Instrument tracks are supported on all versions of Pro Tools and all supported control surfaces. Sessions can include up to 128 Instrument tracks with Pro Tools HD, and up to 32 Instrument tracks with Pro Tools LE and M-Powered

## Instrument Tracks Quickstart

**The basic procedure for using Instrument tracks includes the following:**

- 1 Create a new Instrument track in a session.
- 2 Select an Instrument, by doing one of the following:
  - Insert an instrument plug-in, such as a software synthesizer, on the Instrument track. The track's MIDI output is automatically assigned to the inserted instrument plug-in.
  - Assign the Instrument track audio input to the corresponding hardware inputs from an external MIDI device, such as a hardware sampler or synthesizer, then assign the desired MIDI output in the Instrument track to the appropriate MIDI port and channel for the external MIDI device.

- 3 Record-enable the Instrument track and play your MIDI controller. You can now record MIDI data to the Instrument track while playing through the instrument plug-in or external MIDI device.

## Creating Instrument Tracks


**To add Instrument Tracks to a session:**

- 1 Choose Track > New.



*New Tracks dialog.*

- 2 In the New Tracks dialog, do the following:
  - Select Instrument Track from the Track Type pop-up menu.
  - Select the track format (mono or stereo) from the Track Format pop-up menu.
  - Select the timebase (samples or ticks) from the Track Timebase pop-up menu.
  - Enter the number of new tracks.
  - Click create.

 *For more information on the New Track dialog, see the Pro Tools Reference Guide.*

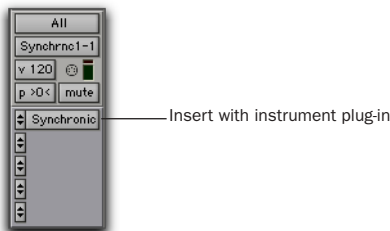


## Inserting Instrument Plug-Ins on Instrument Tracks

**To insert an instrument plug-in on an Instrument track:**

- Click an Insert selector on the Instrument track and select the instrument plug-in that you want to use.

A MIDI node is automatically created and assigned as the track's MIDI output.




*Instrument track with an instrument plug-in (Digidesign Synchronic shown)*

## Instrument Track Display Options

Instrument tracks follow Pro Tools display settings for the Mix and Edit windows. You can show all or some of the control sections for Instrument tracks by choosing the desired options from the View menus, including the new Instruments View. Views can be configured for the Mix and Edit windows separately.

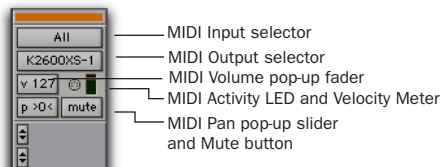
**To show or hide Instruments View in the Mix or Edit windows:**

- 1 Choose View > Mix Window > Instruments, or View > Edit Window > Instruments.

 For more information on View options, see the Pro Tools Reference Guide.

## Instruments View Controls

Instruments View (View > Mix Window > Instruments, or View > Edit Window > Instruments), provides controls for Instrument tracks that affect MIDI data or performance.



*Instruments View (Mix window)*

**MIDI Input Selector** Lets you view and change the MIDI Input assigned to the track.

**MIDI Output Selector** Shows the current MIDI output assignment (usually the instrument plug-in on the track), and lets you choose a different MIDI destination to replace or add to the current MIDI output assignment. If you insert an instrument plug-in, or if you replace one instrument plug-in with another one, the plug-in's MIDI node will be connected automatically.

**MIDI Volume Pop-Up Fader** Lets you change the MIDI volume (MIDI controller number 7) of the track. MIDI volume data is unique from the Instrument track's audio Volume automation.



*MIDI Volume pop-up fader*

**MIDI Activity LED and Velocity Meter** Shows MIDI input activity on the track.

**MIDI Pan Pop-Up Slider** Lets you view and change the MIDI pan (MIDI controller number 10) on the track.



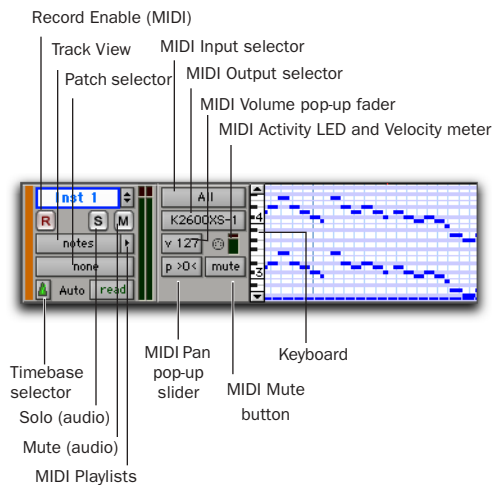
*MIDI Pan pop-up slider*

**MIDI Mute Button** Mutes the MIDI output of the track. MIDI mute is independent of audio mute.

## Instrument Track Controls

Each Instrument track has its own set of controls for audio and MIDI. Instrument tracks can be color coded, grouped, shown or hidden, and support active and inactive track states.

### Instrument Track Controls (Edit Window)



*Instrument track (Edit window)*

**Record Enable** Enables MIDI recording on the track.

**Solo** Mutes post-fader audio output on all other (un-soloed) tracks.

**Mute** Mutes the post-fader audio output of the track.

**Track View** Selects the Instrument track's view: Blocks, Regions, Notes, Volume, Pan, Mute, Velocity, Pitch Bend, After Touch, Program, SysEx, and any continuous controller type for MIDI, as well as Volume, Pan, Mute, or any plug-in controls that have been automated for audio.

**Playlist Selector** Shows the main and alternate MIDI playlists for the track.

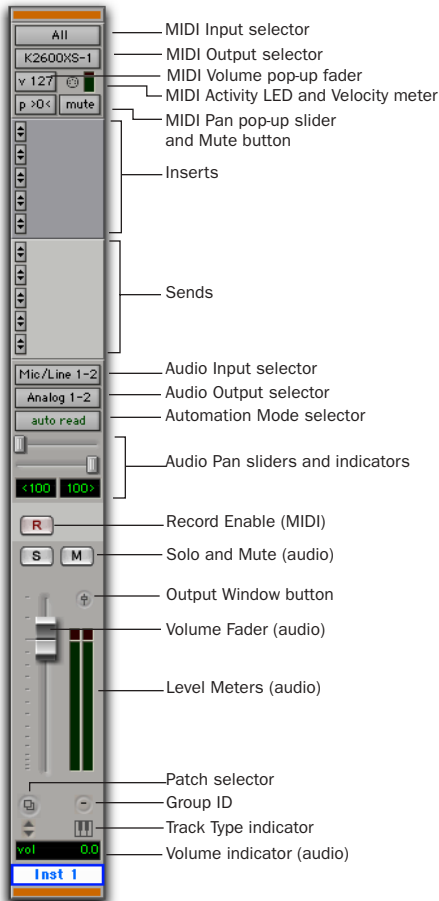
**Patch Selector** Opens the Patch Select dialog where you can specify patch, program, and bank changes for the instrument.

**Timebase Selector** Sets the Instrument track's timebase to ticks or samples.

**Automation Mode Selector** Controls how the track's automation data is written and played back.

**Keyboard** Lets you select, audition, and view MIDI data.

## Instrument Track Controls (Mix Window)



*Instrument track (Mix window)*

**Audio Input Selector** Selects the audio input path for the track. If you are using an external MIDI instrument, select the audio input path to which audio outputs of the MIDI instrument are connected. For instrument plug-ins, the audio input path is effectively bypassed.

**Audio Output Selector** Selects the audio output path for monitoring audio from the Instrument track.

**Automation Mode Selector** Controls how the track's automation data is written and played back.

**Audio Pan Sliders** Controls the balance between assigned stereo audio output paths for the track.

**Record Enable** Enables MIDI recording on the track.

**Solo** Mutes post-fader audio output on all other (un-soloed) tracks.

**Mute** Mutes the post-fader audio output of the track.

**Volume Fader** Controls the audio volume for the track.

**Patch Selector** Opens the Patch Select dialog where you can specify patch, program, and bank changes for the instrument.

## Duplicating Instrument Tracks

When you duplicate an Instrument track, all MIDI and audio routing as well as inserts and sends are copied. Instrument plug-ins (if any) are also copied in the duplicated tracks.

## Active and Inactive Instrument Tracks

Instrument tracks support Pro Tools active and inactive states. Inactive instrument tracks gray out, and do not consume any DSP or other system resources.

**To make an Instrument track inactive or active:**

- 1 Select the desired track.

2 Choose Track > Make Inactive or Make Active.

– or –

In the Mix window, click the Instrument track's Track Type Indicator and select Make Inactive or Make Active.

## Instrument Tracks and Mix/Edit Groups

When Instrument tracks are grouped, MIDI volume and MIDI mute states follow standard Mix and Edit group behavior. MIDI input and output routings do not follow grouping. Other parameters follow grouping when the control being adjusted supports grouping (such as audio mute and solo) and when a matching parameter is available on the Instrument track.



*Instrument tracks support the Pro Tools keyboard shortcut for applying edits to all items: Alt-click (Windows) and Option-click (Macintosh). These tracks also support the keyboard shortcut for applying edits to all selected items: Alt-Shift-click (Windows) and Option-Shift-click (Macintosh).*

## Editing Instrument Tracks

In the Edit window, Instrument tracks can be edited just like MIDI tracks. Instrument tracks also let you edit automation playlists just like Auxiliary Input tracks.



*For information on editing MIDI data and automation on tracks, see the Pro Tools Reference Guide.*

---

## Increase in Total Number of Sends Per Track to Ten

Each audio, Auxiliary Input, and Instrument track provides 10 sends for routing audio to internal busses or hardware outputs.

All 10 sends provide identical controls, routing options and automation capabilities.

### Compatibility Note

In prior versions of Pro Tools, only 5 sends are supported per track. If you save a copy of a Pro Tools 7.0 session as a “5.1 -> 6.9.x” and lower version, sends F–J will be dropped and their automation cleared (if any).



*Pro Tools LE and M-Powered 7.0 also provide an increased number of internal busses (32 maximum instead of the previous maximum of 16). Opening a Pro Tools HD 7.0 session on a Pro Tools LE or M-Powered system will retain the first 32 internal busses, and subsequent busses will be made inactive.*

## Configuring Sends View in the Mix and Edit Windows

Audio tracks, Auxiliary Inputs, and Instrument tracks include two sets of Sends Views: Sends A–E (sends 1–5) and Sends F–J (sends 6–10). The View menu provides separate options for viewing these sends in the Mix and Edit windows.

### To display sends in the Mix or Edit window:


- Choose View > Mix Window (or Edit Window) > Sends A–E (or Sends F–J).

### To show or hide Sends in the Mix window:

- Click the Mix Window View selector (in the lower-left corner of the screen) and choose Sends A–E or Sends F–J.

### To show or hide Sends in the Edit window:

- Click the Edit Window View selector (in the black Edit bar below the Zoom Presets) and choose Sends A–E or Sends F–J.

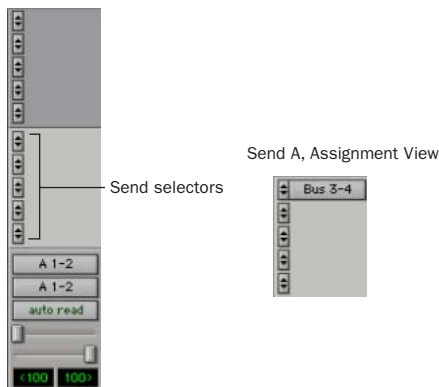
 To hide one of the Sends columns in the Edit window (or any other column) Alt-click (Windows) or Option-click (Macintosh) the name of that column, near the top of the Edit window.

## Sends View Options

Sends are displayed in the Mix and Edit window according to the Sends A–E View and Sends F–J View options. Each Send View has six view choices: Assignments View and five individual Send Views (A–E or F–J).

### Assignments View

This is the default Sends View, showing all five of the Sends A–E or Sends F–J sends on all tracks displayed in the Mix and Edit windows.



Assignments View, no sends (left) and with an assigned send (right)

In Assignment View, send controls are adjusted from Send windows.

### To show all send assignments:

- 1 If sends are not currently visible on your tracks, choose View > Mix Window (or Edit Window) > Sends A–E (or Sends F–J).
- 2 Do one of the following:
  - Choose View > Sends A–E > Assignments or View > Sends F–J > Assignments.
  - or –
  - When displaying sends in an individual send view (such as Send A View), Control-click (Windows) or Command-click (Macintosh) the Send selector and select Assignments.

---

## Moving and Copying Sends

Sends can be moved and copied to other tracks, or to other positions on the same track using conventional drag and drop. Sends can be dropped to create new sends at the destination, or dropped onto existing send assignments to replace them.

Sends can be moved and copied to tracks with compatible send formats (mono or stereo). Pro Tools alerts you when you try to move or copy a send to an incompatible destination. (For more information, see “Send Format and Track Compatibility” on page 24).

### To move a send:

- 1 Make sure the Transport is stopped.
- 2 Click the send name and drag it at a new position in the original track or in a different track.

### To copy a send:

- 1 Make sure the Transport is stopped.
- 2 Alt-drag (Windows) or Option-drag (Macintosh) the send and drop it at a new position.

Moving or copying a send maintains all routing assignments, automation (if any), level/pan/mute settings, and output format.

### Send Format and Track Compatibility

Sends can only be copied to other tracks with a compatible send output format (mono or stereo). In addition, the following conditions apply when moving or copying sends among tracks:

- When copying a stereo send from a mono track to a stereo track, Send pan automation (if any) will be dropped without warning.
- When copying a stereo send from a stereo track to a mono track, the left Send pan automation data is retained and the right side data is dropped. A warning dialog appears for you to confirm or cancel this destructive operation.
- When moving or copying a send and replacing an existing send, all automation on the existing send will be replaced. A warning dialog appears for you to confirm or cancel this destructive operation.

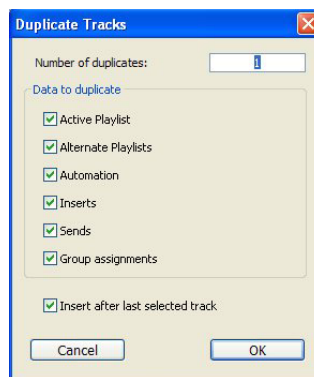
---

## New Duplicate Tracks Dialog and Options

The Duplicate Tracks dialog lets you define how many copies of a track you want to create, and specify which properties will be copied to duplicated tracks.

### To duplicate tracks:

- 1 Select a track in the Mix or Edit window.
- 2 Choose Track > Duplicate. Or press Alt+Shift+D (Windows) or Option+Shift+D (Macintosh).



### Duplicate Tracks

- 3 Configure the following options as needed:
  - Enter how many copies you want to create by typing into the Number of Duplicates field.
  - To copy the currently active (visible) Edit playlist from the source track, enable Active Playlist.
  - To copy all Edit playlists on the source track, enable Alternate Playlists
  - To copy all automation from the source track, enable Automation.
  - To copy all plug-in and insert assignments, enable Inserts.
  - To copy all sends and send assignments, enable Sends.
  - To maintain all Mix and Edit Group assignments, enable Group Assignments.

4 Configure the “Insert after last selected track” option as desired:

- If you want the duplicate tracks to be added next to each of the selected source tracks, deselect the option. This lets you keep originals and their duplicates together (moving and renumbering tracks accordingly).
- To have the new duplicate tracks added after all currently visible tracks (to the far-right in the Mix window, and at the bottom in the Edit window), enable the option. This lets you keep all originals tracks in their current location (and Track number), and keep all duplicates together below or to the right of all previously existing tracks.

5 Click OK to duplicate tracks according to the settings in the Duplicate Tracks dialog. Click Cancel to close the dialog and not create duplicate tracks.

---

## Color Coding Improvements


Pro Tools provides new Preference options for color coding, as well as improved tools and features in the Color Palette that let you more easily assign and manage color coding of session elements.

### Region List Color Coding Option

With Pro Tools 7.0, the default color coding assignment for regions in the track playlist includes a Region List Color option. With this option selected, you can change (default) the color of any region in the track to match its color in the Region List.

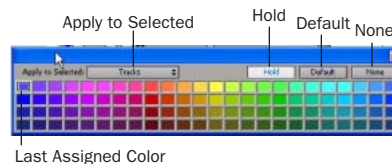
**To configure Region Color Coding default assignment to the color of regions in the Region List:**

- 1 Choose Setup > Preferences > Display.
- 2 In the Default Region Color Coding section, click to enable Region List Color.

 See “Enhancements to the Color Palette” on page 25 to learn how to define default colors for regions in the Region List and how to apply them to regions in tracks.

## Enhancements to the Color Palette

The Color Palette has an updated Apply to Selected pop-up menu and new Hold button.



*Color Palette*

### Enhancements to Apply to Selected Pop-Up Menu


With Pro Tools 7.0, regions in tracks and the Region List can be independently color coded. The Apply to Selected pop-up menu in the Color Palette includes the following new options

**Regions in Tracks** Lets you apply a chosen color to regions in the currently selected track without changing the color of corresponding regions in the Region List.

**Regions in Region List** Lets you apply a chosen color to regions currently selected in the Region List without changing the color of corresponding regions (copies) in tracks.

### To apply a color from the Color Palette:

- 1 Choose Window > Color Palette.
- 2 Do one of the following:
  - In the Apply to Selected pop-up menu, select the destination for color coding: Tracks, Markers, Group, Regions in Tracks, or Regions in Region List.
  - or –
  - Select a track, marker, group, track region or Region List region in the appropriate Pro Tools window. The Apply to Selected menu will display the type of item you have selected.

 *If selecting a marker does not display the Marker option in the Apply to Selected pop-up menu, then the Always Display Marker Colors option in the Display Preferences page is deselected. See the Pro Tools Reference Guide for more information.*

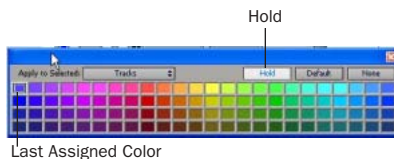
- 3 Select a color from the palette, or select one of the following:

**Default** Removes any custom coloring and restores the color to the default color orientation.

**None** Turns off color assignment. Affected regions are drawn with black waveform or MIDI notes on light gray background. Affected tracks and groups no longer show their color bars.

### New Hold Button

The Color Palette provides a Hold button to simplify the process of assigning colors.



#### Color Palette

By default, the Hold button is off. When off, the Color Palette automatically highlights the assigned color (if any) of items as you select them.

When the Hold button is enabled, the assigned color selected in the Color Palette persists and does not change when a different track or region is selected.

### To use the Hold button to assign the same color to multiple items:

- 1 Click the Hold button to enable it. The Hold button becomes white, and the currently selected color is now highlighted with a wider white outline.

- 2 Select additional tracks or regions to which you want to assign the same color. Because the Hold button is enabled, the Color Palette does not follow item selection; it remains (or “holds”) at the last currently assigned color.

- 3 Click the assigned color again to assign it to the new selection of tracks or regions. Use the Apply to Selected pop-up menu to determine which selected elements are affected.

- 4 To turn off Hold and return the Color Palette to its default mode of color-selection-follows-item-selection, click the Hold button until it turns off.



---

## Importing and Exporting

Pro Tools 7.0 provides the following new file importing and exporting features.

### REX and ACID File Support

Pro Tools lets you import and export REX and ACID files. For information on REX and ACID files, see “Region Groups” on page 29.

### Importing AAC Files

Pro Tools 7.0 adds new support for AAC audio, including audio with AAC, Mp4, and M4a file extensions.

Pro Tools cannot import protected AAC or MP4 files with the M4p file extension. These files are protected under the rules of digital rights management, and cannot be imported.

### Importing Markers Using Import Session Data

Pro Tools 7.0 lets you import Markers/Memory Locations from one session into the current session.

#### To import Markers/Memory Locations:

- 1 Choose File > Import Session Data.
- 2 Enable the Markers/Memory Locations option to import all markers and memory locations from the imported session into the current session. Markers will be added after any existing markers or memory locations.
- 3 Configure other Import Session Data settings as needed (for details, see the *Pro Tools Reference Guide*).
- 4 Click OK to import data to the current session.

## Importing Audio from Audio CDs on Windows XP

Pro Tools 7.0 and DigiBase support importing audio from Red Book audio CDs on Windows XP. This lets you import audio CD tracks from the Workspace directly into Pro Tools sessions and browsers, with look-up of CD metadata through supported Windows XP protocols.

### New Drag and Drop Features

You can import audio and many other types of items using drag and drop. This is the fastest way to import loops and samples while creating, composing, and editing.

New drag and drop features include the following:

- Support for drag and drop of MIDI, region group, REX, and ACID files.
- Drag and drop items directly from Windows Explorer or Macintosh Finder with enhanced capabilities to create new tracks with drag and drop.
- Timeline Drop Order modes for dropping multiple Region List items to a single track or to multiple tracks.
- Drag and drop to plug-ins.

For more information, see “Drag and Drop Features” on page 45, and “New Import MIDI Options” on page 68.



## chapter 5

# Audio and MIDI Features for Composition

This chapter describes the following new and changed audio and MIDI features that enhance composition, arranging, and spotting in Pro Tools 7.0.

- “Region Groups” on page 29
- “Importing REX Files” on page 38
- “Importing ACID Files” on page 39
- “Region Looping” on page 40
- “Special Cut, Copy, Paste, and Clear Commands” on page 44
- “Drag and Drop Features” on page 45
- “Link Track and Edit Selection” on page 48
- “Zoom Enhancements” on page 49
- “Additions to Strip Silence” on page 52
- “Additions to Separate Regions” on page 52

---

## Region Groups

A *region group* is a collection of any combination of audio and MIDI regions that looks and acts like a single region. Region groups can be created on a single or on multiple adjacent audio, MIDI, and Instrument tracks. Region groups let you “nest” multiple regions into “macro” regions for groove and tempo manipulation, editing, and arranging.

Region groups are essentially containers holding one or more regions. Region groups can be placed on tracks alongside standard regions, and edited using many of the same Pro Tools editing techniques. Certain edits to a region group will apply to all regions contained by the region group, such as Cut or Delete. Other edits only apply to the boundaries off the region group and do not affect the underling regions, such as Trim.

Region groups are particularly useful for:

- Grouping tick-based audio regions that have been separated into many small regions, such as with individual hits of a drum pattern. Many such small regions can easily be created with Beat Detective or the Separate Region At Transients command, or imported as REX and ACID files.
- Grouping parts and sections to facilitate composition and arranging. For example, grouping the regions of a brass section during the chorus to copy it to the next chorus.

**⚠** *Region groups have no relation to and are completely independent of Mix and Edit Groups.*

The region group file type is identified with an .rgrp extension and has its own icon.



Region group file icon

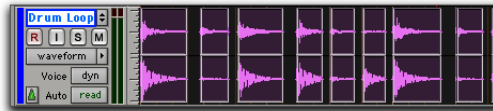
## Creating Region Groups

**To create a region group:**

- 1 Select one or more regions on one or more tracks. (For more information on multitrack region groups, see “Multitrack Region Groups” on page 31).

The size of the selection determines the size of the region group. The selection can start and end on any region boundary, empty space, or even in the middle of a region. Selections starting or ending within a region will separate the region at the selection boundary when you cre-

ate a region group. Region groups created from object-based selections include all regions between the first and last selected region on the track whether they are selected or not.



Selecting regions to be grouped on a single audio track

- 2 Choose Region > Group.

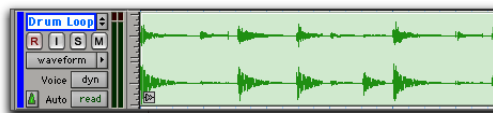
The region group will appear as one region with a region group icon in the lower left corner. Region groups also appear in the Region List.



A region group on an audio track and in the Region List

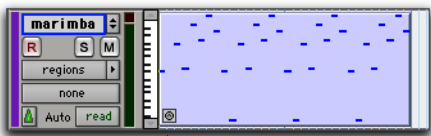
## Region Group Timebase Format

Region groups are created in the same timebase format (samples or ticks) as the tracks they are on. Multitrack region groups can include both sample-based and tick-based tracks.




Audio region group icon


A region group on an audio track



MIDI region group icon

### A region group on a MIDI track

 *Region groups can be created from empty selections. This can be useful when working in Shuffle mode to preserve the gaps between regions.*

 *The Group and Ungroup Regions commands apply to any Time or Edit selection regardless of the current Track View.*

## Ungrouping Regions

### To ungroup a region group:

- 1 Select a region group.
- 2 Choose Region > Ungroup.

The region group disappears, revealing all underlying regions and any nested region groups. When there are multiple nested region groups, the Ungroup command ungroups the front-most top-layer region group only, preserving any underlying region groups.

### To ungroup all a region group, including all of its nested region groups:

- 1 Select a region group.
- 2 Choose Region > Ungroup All.

## Regrouping Regions

The Regroup command undoes the last Ungroup command and regroups the individual regions back to their former region group state. This lets you ungroup a grouped region, edit its underlying regions in any way desired, and regroup it to continue working on higher-level composition and arranging.

### To regroup a region group:

- 1 Select any region from the ungrouped region group.
- 2 Choose Region > Regroup.

If you used the Ungroup All command, the Regroup command recreates all previous nested region groups.

- 3 If you regroup an ungrouped region group that is used more than once in the session, the Change All dialog opens.
- 4 Do one of the following:
  - Choose Modify to apply your changes to all other instances of the same region group.
  - Choose Copy to create a copy and apply your changes only to the copied region group.

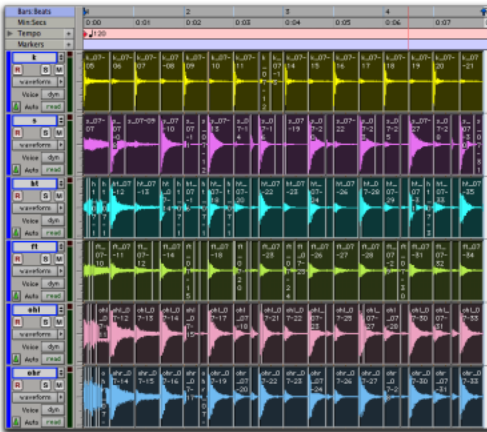
## Multitrack Region Groups

Multitrack region groups (region groups created across multiple tracks) are useful for grouping parts, such as multi-miked drum tracks, and for composing and arranging. Multitrack region groups can be created across any combination of audio, MIDI, and Instrument tracks, and can include either or both tick-based or sample-based tracks.

Multitrack region groups work much like single-track region groups. Multitrack region groups appear as a single object across adjacent tracks.

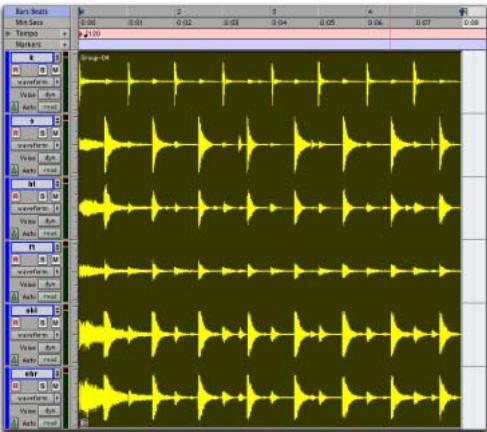
## To create a multitrack region group:

1 Select regions across multiple adjacent tracks.



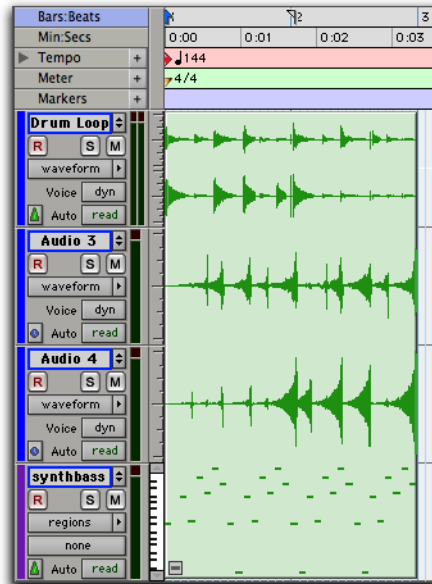
Selecting regions to be grouped across multiple tracks

2 Choose Region > Group.



Region group icon

Multitrack region group (audio regions only)



Mixed region group icon

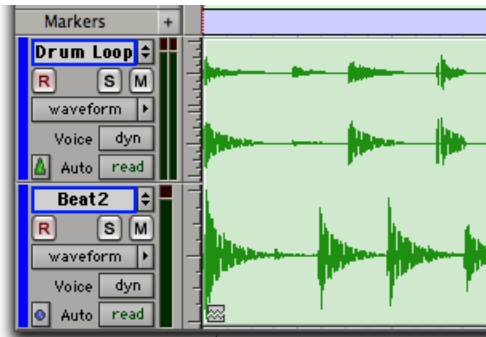
Mixed multitrack region group (sample- and tick-based audio, and tick-based MIDI)

⚠ Multitrack region groups create nested region groups of multiple regions by track before grouping them across tracks.

💡 The Regroup command supports multitrack region groups.

## Separated Multitrack Region Groups

You can insert, move, hide, or delete tracks in multitrack region groups, but it may break the region group. A separated region group displays a break in the region group icon. Separated region groups will continue to function as a single region group, but the separated icon indicates that the region group displayed is somehow incomplete or separated across nonadjacent tracks.




Separated region group icon

### Region group separated by deleting a track

A region group is separated when you do any of the following:

- Insert a track within a multitrack region group.
- Move a track that is part of a multitrack region group so that it is no longer adjacent with the other tracks of the region group.
- Hide a track that is part of a multitrack region group.
- Delete a track that is part of a multitrack region group.
- Change the tempo of a mixed sample-based and tick-based region group.
- Record into a region group.
- Change playlists on a track that is part of a multitrack region group.

There may be situations where you want separated region groups. For example, if you use the same accompaniment on verses one and two of a song, you can group the parts of verse one and copy them as a region group for verse two, but still have a continuous vocal track in the middle of those region groups.

 If you want to delete a track and keep the region group intact, first ungroup the region group, then delete the desired track, and then Regroup the region group. The region group will be recreated intact, but without the deleted track.

## Changing Region Group Timebase

The timebase format of a region group can be changed by:

- ◆ Changing the track's timebase.
- ◆ Dragging the region group to a track with a different timebase.

Changing the timebase creates a copy of the original region group. Both region groups (the original and the copy) appear in the Region List, but they have different timebases.

### Converting Samples to Ticks

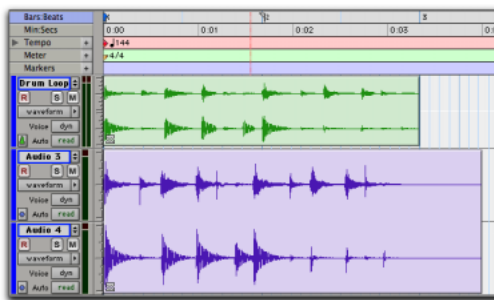
When dragging a region group from a sample-based track to a tick-based track, the length of the region group will not change. This is because region groups are converted from samples to ticks after they are moved into tick-based tracks. The length of the region group will only change with subsequent tempo changes. If possible, change the local tempo on the tick-based track to match the tempo of the sample-based region group before moving a sample-based region group to a tick-based track.

### Converting Ticks to Samples

When dragging a region group from a tick-based track to a sample-based track, the length of the region group will not change unless it is moved to another time location with a different tempo. This is because region groups are converted from ticks to samples after they are moved into the sample-based tracks.

## Multitrack Region Groups with Sample- and Tick-Based Tracks

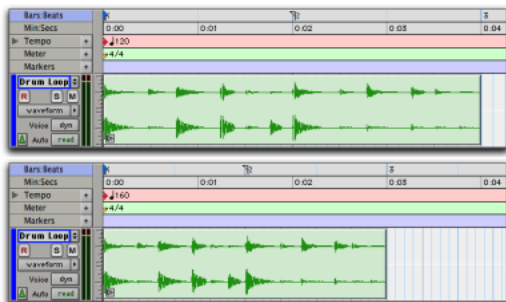
Multitrack region groups can include both sample-based and tick-based tracks. Changing the tempo will break the region group between sample-based tracks and tick-based tracks.



A multitrack region group separated across sample-based and tick-based tracks after changing tempo

## Region Groups on Tick-Based Tracks

When changing tempos, region groups on tick-based tracks adjust their length by adjusting the position of all enclosed regions accordingly. This is useful for arranging rhythmic material and for playing back REX and ACID files.




A region group on a tick-based audio track 120 BPM and at 160 BPM

## Editing Region Groups

Region groups are edited in much the same way as regular regions: They can be named, moved, cut, copied, pasted, trimmed, muted, locked, and so on. However, there are a few significant differences between editing regular regions and region groups.

### Editing MIDI Region Groups

If a MIDI region within a region group is modified in any way, a new region copy is created and placed over of the region group. For example, if you record, draw in a new note, edit MIDI controller data, or Quantize a Timeline selection, a new region is created over the region group.

 To avoid creating new regions over region groups when editing, ungroup the region group, make the desired edits, then regroup the region group.

### Editing Audio Region Groups

Certain audio editing commands create new regions over region groups. To use these commands and maintain the region group, ungroup the region group, perform the edit, and then regroup the region group.

The following edit commands create new regions over region groups:

- AudioSuite processing of a grouped region results in a new region over the region group.
- Consolidating a selection of a grouped region creates a new audio file and region over the region group.
- Recording into a region group creates a new audio file and region over the region group.
- Pencil tool waveform redraw results in a new region over the region group.



## Tabbing to Transients and Region Boundaries

With Tab to Transients enabled, the Tab key moves the Location Cursor to transients and region boundaries within a region group.

With Tab to Transients disabled, the Tab key moves the cursor to region group boundaries only (and the sync point, if present).

## Trimming Region Groups

Trimming region groups works the same way as trimming regular regions, regardless of whether you are trimming a single-track region group or a multitrack region group. The exception is the TCE Trim Tool.

Trimming a region group does not trim the underlying regions. All underlying regions retain their length and location. This is true for all underlying audio and MIDI regions, and nested region groups. Consequently, if you trim the region group shorter, underlying regions may not be heard on playback because they are outside the region boundaries of the trimmed region group.

The TCE Trim Tool applies only to audio regions, and creates a new region over any region group.

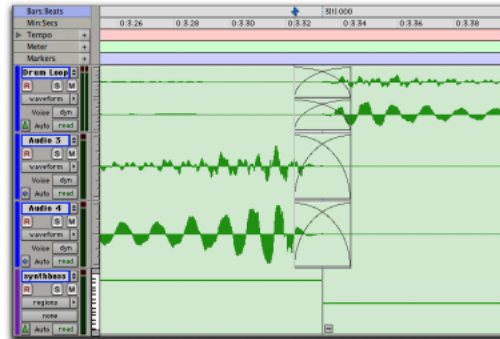
If you Ungroup after trimming a region group in (shorter), audio regions falling outside of the bounds of the current region group are trimmed to fit and removed.

## Recording

When recording audio or MIDI, new regions are created over (in front) of region groups instead of being included in the region group. To record into a region group, first ungroup the region group, then record, and then regroup the region group. The region group will be recreated intact with the newly recorded material.

## Fades and Crossfades on Region Groups

Region groups can have fades and crossfades just like regular regions. Fades only apply to audio regions. In addition to crossfading between region groups, you can also crossfade between region groups and regular audio regions.



Two multitrack region groups with crossfades on the audio tracks, but not on the MIDI track

**A** Ungrouping a region group removes any region group level fades or crossfades. Fades and crossfades are restored by the Regroup command.

## Import and Export of Region Group Files

Pro Tools can export and import the new region group file format (.rgrp). The ability to import and export these files lets you do the following benefits:

- Separate region group metadata from audio files to avoid unnecessary file copy operations when exporting audio region groups composed from multiple source files
- Export MIDI data as part of a region group
- Create multitrack loops

Region group files store the following metadata:

- References to all audio files within the region group
- Region names and relative location in tracks
- Fades and crossfades
- Region group names and format (single or multitrack)
- All MIDI data present in the region group (such as notes, controllers, and Sysex)
- Track names

Region group files do not store the following:

- Automation
- Plug-ins
- Track routing
- Tempo and Meter map
- Region List information

#### To export a region group:

- 1 Select one or more region groups in the Region List.
- 2 From the Region List pop-up menu, choose Export Region Groups. The Export Region Groups dialog opens.



*Export Region Groups dialog*

3 The Destination Directory defaults to the auto-created Region Groups folder in the session folder. You can change the Destination Directory by clicking the Choose button, navigating to the desired location, and clicking Choose. Click Reset to reset the Destination Directory to the default location.

4 Enable one of the following options for resolving duplicate region group file names:

- Prompting for Each Duplicate (default)
- Auto Renaming
- Replacing with New Files

5 Click OK.

#### To import a region group:

- 1 Choose File > Import > Region Groups.
- 2 Navigate to and select the desired region group for import.
- 3 Click Import.

– or –

Drag and drop the region group file from a DigiBase browser or from Windows Explorer or Macintosh Finder to the Timeline, a track, the Track List, or the Region List.

Dropping a region group has the following different results depending on where you drop it:

- When dropping a region group in a track, Pro Tools checks for the matching track format, number of channels, and (in the case of multitrack region groups) if there are enough matching adjacent tracks to import the region group file. If these criteria match, the region group is imported and spotted to the drop location in the track or tracks.
- Dropping a region group on the Timeline or on the Track List creates new tracks for the imported region group.
- Dropping a region group in the Region List adds a new region group in the Region List. All audio and MIDI regions, and even other region groups, contained within the dropped region group also appear in the Region List.

### Exporting Region Groups to Another Hard Drive

Generally, if you are exporting region groups to another hard drive, you should copy any referenced audio files. This way you can move region groups not only from one session to another, but from one system to another.

#### To export a region group to a different hard drive and include its audio files:

- 1 Export one or more region groups to the desired drive.

- 2 Create a new session on the new drive and enable the Automatically Copy Files on Import preference.

- 3 Import all previously exported region groups.

The audio files folder of the new session now contains all files referenced by the region groups.

## DigiBase Support for Region Group Files

In DigiBase browsers, region group files display a unique icon and include the following information (see “Region group files displayed in a DigiBase browser” on page 37):

**Duration** As measured in the last specified (saved) timebase.

**Kind** Region Group File.

**Number of Channels** Can include multitrack region groups, indicated in the number of audio (*n A*) and the number of MIDI and Instrument tracks (*n M*).

**Format** Region Group.

S	Name	1	Waveform	Duration	Kind	Date Modified	Date Created	# Channels	Size	Format	Sample Rate	Bit-Depth
	Group-01.rgrp			11:31:960	Region Group File	Aug 3, 2005 7:36:43 AM	Wed, Aug 3, 2005 7:36:43 AM	2A	31.05 KB	Region Group	44100	24 bits
	Group-02.rgrp			2:01:000	Region Group File	Aug 3, 2005 7:34:34 AM	Wed, Aug 3, 2005 7:34:33 AM	2A	33.12 KB	Region Group	44100	24 bits
	Group-05.rgrp			0:03:333	Region Group File	Aug 5, 2005 5:02:53 AM	Fri, Aug 5, 2005 5:02:53 AM	4A 1M	49.15 KB	Region Group	44100	24 bits

Figure 1. Region group files displayed in a DigiBase browser

## Importing REX Files

The REX file format was invented by Propellerhead Software. REX files are created exclusively with their ReCycle application and consist of both audio data and metadata. REX file metadata includes slice (like a Pro Tools region) and tempo information. REX files are typically edited into small slices (regions) so that when you put them on a tick-based audio track the slices adjust with changes in tempo.

Pro Tools lets you import two different REX file formats: .rex and .rx2. The original REX file format (.rex) stores uncompressed PCM audio data and only supports mono. The REX 2 file format (.rx2) supports mono or stereo and also stores compressed PCM audio data and metadata. Pro Tools lets you import both REX and REX 2 file formats.

### To import a REX file into Pro Tools:

- Drag and drop the REX file from a DigiBase browser or from Windows Explorer or Macintosh Finder to a track, the Track List, the Timeline, or the Region List.

The REX file is converted to a region group on import, and all its slices are converted into individual audio files and regions.

💡 *Larger REX files may contain many audio regions that can quickly fill up the Region List. To hide these individual audio regions, deselect Show > Auto-Created in the Region List pop-up menu.*

💡 *REX files can be previewed in DigiBase browsers just like regular audio files. Playback speed of REX files when previewed in browsers follows the tempo at the current insertion point or selection start.*

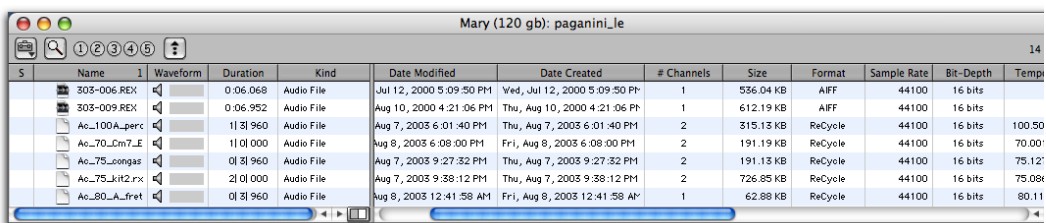
## DigiBase Support for REX Files

In DigiBase browsers, REX files display a unique icon and the following information:

**Duration** As measured in the last specified (saved) timebase.

**Kind** Audio File.

**Format** AIFF (REX 1 files) or ReCycle (REX 2 files).



Name	Waveform	Duration	Kind	Date Modified	Date Created	# Channels	Size	Format	Sample Rate	Bit-Depth	Temp
303-006.REX		0:06.068	Audio File	Jul 12, 2000 5:09:50 PM	Wed, Jul 12, 2000 5:09:50 PM	1	536.04 KB	AIFF	44100	16 bits	
303-009.REX		0:06.952	Audio File	Aug 10, 2000 4:21:06 PM	Thu, Aug 10, 2000 4:21:06 PM	1	612.19 KB	AIFF	44100	16 bits	
Ac_100A_perc		1:31.960	Audio File	Aug 7, 2003 6:01:40 PM	Thu, Aug 7, 2003 6:01:40 PM	2	315.13 KB	ReCycle	44100	16 bits	100.50
Ac_70_Cm7_E		1:01.000	Audio File	Aug 8, 2003 6:08:00 PM	Fri, Aug 8, 2003 6:08:00 PM	2	191.19 KB	ReCycle	44100	16 bits	70.00
Ac_75_congas		0:31.960	Audio File	Aug 7, 2003 9:27:32 PM	Thu, Aug 7, 2003 9:27:32 PM	2	191.13 KB	ReCycle	44100	16 bits	75.12
Ac_75_kit2.rx		2:01.000	Audio File	Aug 7, 2003 9:38:12 PM	Thu, Aug 7, 2003 9:38:12 PM	2	726.85 KB	ReCycle	44100	16 bits	75.08
Ac_80_A_fret		0:31.960	Audio File	Aug 8, 2003 12:41:58 AM	Fri, Aug 8, 2003 12:41:58 AM	1	62.88 KB	ReCycle	44100	16 bits	80.11

Figure 2. REX files displayed in a DigiBase browser

## Importing ACID Files

The ACID file format was created as a “stretchable” and “tunable” format for Sony ACID® software. ACID files are created by Acid and consist of the original audio data (WAVE files) plus metadata about tempo, number of bars, pitch, and slice information. ACID files may not always contain slice metadata. If this information is not available, you may need to manually slice the imported file (using, for example, the Separate Regions At Transients command or Beat Detective).

## DigiBase Support for ACID Files

In DigiBase browsers, ACID files display a unique icon and the following information:

**Duration** As measured in the last specified (saved) timebase.

**Kind** Audio File.

**Format** Wav (Wave ACID) or Wav (WAVE).

Sliced ACID files display WAV (Wave ACID) in the Format column. ACID files with no slice data display Wav (WAVE) in the Format column.

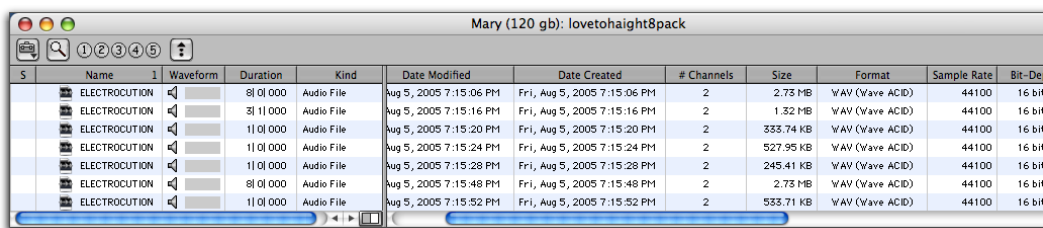
### To import an ACID file into Pro Tools:

- Drag and drop the ACID file from a DigiBase browser or from the Desktop to the Timeline, a track, the Track List, or the Region List.

If slice metadata is present in the ACID file, it is converted and imported as a region group, and all slices are converted into individual audio files and regions. If slice data is not available, it is imported as a regular audio file.

💡 *ACID files can be previewed in DigiBase browsers just like regular audio files. Playback speed when previewing ACID files that contain slice data follows the tempo at the current insertion point or selection start.*

💡 *Use the Separate Region At Transients command or Beat Detective to slice an unsliced ACID file.*



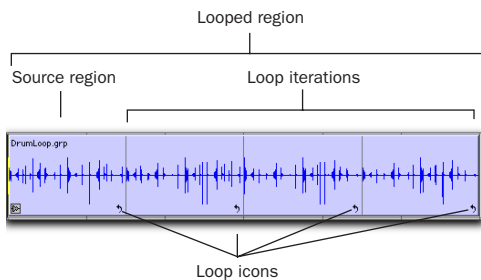
S	Name	Waveform	Duration	Kind	Date Modified	Date Created	# Channels	Size	Format	Sample Rate	Bit-Dep
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:06 PM	Fri, Aug 5, 2005 7:15:06 PM	2	2.73 MB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:16 PM	Fri, Aug 5, 2005 7:15:16 PM	2	1.32 MB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:20 PM	Fri, Aug 5, 2005 7:15:20 PM	2	333.74 KB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:24 PM	Fri, Aug 5, 2005 7:15:24 PM	2	527.95 KB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:28 PM	Fri, Aug 5, 2005 7:15:28 PM	2	245.41 KB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:48 PM	Fri, Aug 5, 2005 7:15:48 PM	2	2.73 MB	WAV (Wave ACID)	44100	16 bit
	ELECTROCUTION	🔊	01:01:000	Audio File	Aug 5, 2005 7:15:52 PM	Fri, Aug 5, 2005 7:15:52 PM	2	533.71 KB	WAV (Wave ACID)	44100	16 bit

Figure 3. ACID files displayed in a DigiBase browser

## Region Looping

Audio regions, MIDI regions, and region groups can all be looped using the Loop and Unloop Region menu commands. Looping regions is an easy and powerful way to repeat a single region on a track or regions across tracks for composing and arranging. Looping regions provides more flexibility than the traditional Pro Tools Repeat and Duplicate Edit menu commands.


When looping regions, you can specify the number of loops, the loop length, or enough to fill the specified Loop Length (such as 30 seconds or until the next region on the track). The *source region* is the original region selected for looping. *Loop iterations* are all looped regions following the source region. In cases where a specific number of repetitions has not been indicated, the last loop iteration will be truncated to fill to the end of the selection or specified Loop Length.




**Looped region**

Once looped, the looped region can be edited much like a region group. For example, selecting and moving a looped region selects and moves the source region and all its loop iterations together.

 You can select regions across multiple tracks for looping.

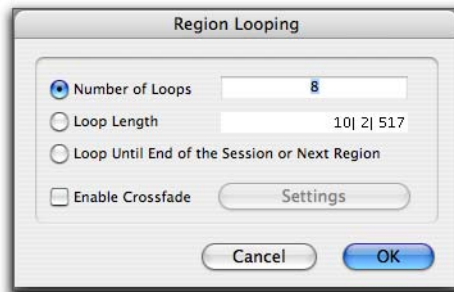
 Selecting and looping more than one region on a track will loop only the first region in the selection.

 Looping a region does not loop any automation associated with the source region. Use the Copy Special and Paste Special Repeat To Fill Selection commands to copy automation for the source loop to all loop iterations (see “Automation and Looped Regions” on page 43).

## Creating Looped Regions

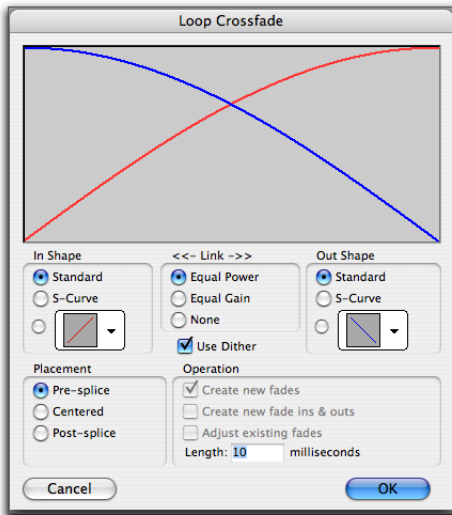
### To loop a region:

- 1 Select an audio or MIDI region, or region group.
- 2 Choose Region > Loop. The Region Looping dialog opens.



**Region Looping dialog**

- 3 Do one of the following:
  - Select the Number of Loops option and enter the number of times to loop the region.
  - Select the Loop Length option and enter the duration according to the main time-base. If the duration is not an exact multiple of the source loop's duration, the last loop iteration will be truncated.
  - Select the Loop Until End of Session or Next Region option. The looped region will be repeated until the end of the session, or until the next region on the track. The last loop iteration will be truncated to fit.
- 4 If desired, select the Enable Crossfade option. This will create a crossfade at the loop point. To edit the loop crossfade:
  - Click the Settings button.
  - Configure the Loop Crossfades dialog as desired.
  - In the Loop Crossfade dialog, click OK.



*Loop Crossfade dialog*

- 5 Click OK.

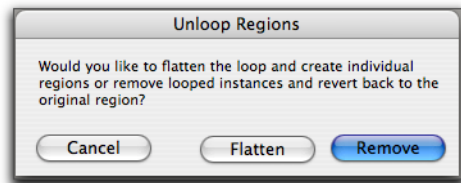
Looped regions (all iterations) display a Loop icon in the lower, right corner.

**To edit the Region Looping dialog settings for a looped region, do one of the following:**

- Select the looped region and choose Region > Loop Region.
  - or –
- Double-click the loop icon with the Grabber.


**To unloop a looped region:**

- 1 Select the looped region.
- 2 Choose Region > Unloop. The Unloop Regions dialog opens.



*Unloop Regions dialog*

- 3 Do one of the following:
  - Click Remove to unloop and remove all loop iterations except the first full loop iteration.
  - or –
  - Click Flatten to unloop and create individual regions from each loop iteration.

 *Region Ungroup functions on loops the same as using the Unloop command and choosing Flatten.*

**To unloop and ungroup a selection down to its individual regions:**

- 1 Select a looped region that contains one or more region groups.
- 2 Choose Region > Ungroup All.

## Editing Looped Regions

Looped regions can be edited as a group or as individual regions. For example, selecting a looped region with the Grabber Tool will select the entire loop (the source region and all its loop iterations), but clicking the Loop icon of one of the loop iterations will select only that one iteration.

Moving a looped region moves the source region and all its looped aliases together as a group. Loop iterations cannot be moved independent of their source region. If you move or paste another shorter region over of a looped region the loop is continued after the new region. The parts of a separated looped region can be adjusted independently.

**To select a looped region as a group, do one of the following:**

- With the Grabber or Smart Tool, single-click the looped region.

– Or –

- With the Selector, double-click the looped region.

The source region and all its loop iteration will be selected.

**To select an individual source region or loop iteration, do one of the following:**

- With the Grabber or Smart Tool, single-click the Loop icon of the source region or loop iteration.

– Or –

- With the Selector Tool, single click the Looped Region icon and drag to the left until the region is selected.

## Tabbing to Transients and Region Boundaries

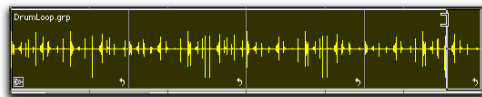
Tab to Transients tabs to transients and region boundaries in a looped region. Normal Tab (Tab to Transients disabled) tabs to the start and end boundaries of the entire looped region.

## Trimming Looped Regions


Trimming looped regions can be done using the Trim tool, the Loop Trimmer, or one of the Trim Region commands. The Trim Tool trims the entire looped region. The Loop Trimmer provides the most unique feature of loop editing and trims the duration of the individual loop iteration while filling the total length of the looped region.


**To trim a looped region as a group:**


- 1 Select the Standard or Scrub Trim Tool.
- 2 Trim the start or end of the looped region as desired.



*Trimming a looped region with the Standard Trim Tool*

 Hold down the Shift key on Windows, or the Control key on Macintosh, while trimming to trim in loop iteration increments.

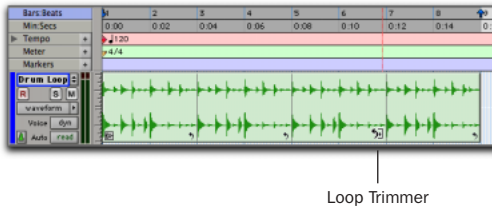
 *Trimming a loop does not trim any underlying Fades.*

 *The TCE Trimmer unloops and consolidates the looped region.*



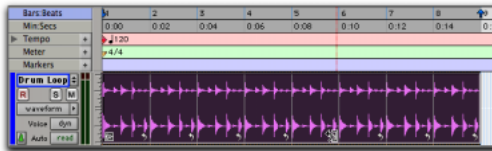
### To trim a looped region using the Loop Trimmer:

- 1 Select the Standard or Scrub Trim Tool.
- 2 Move the cursor over a Loop icon in the looped region. The cursor changes to the Loop Trimmer icon.



### Trimming a loop using the Loop Trimmer

- 3 Trim the start or end of the loop iteration as desired.



### Looped region trimmed using the Loop Trimmer

The number of repetitions of the trimmed loop increases or decreases to fill the length of the entire looped region.

### To trim a looped region to selection:


- 1 Use the Selection Tool to make an Edit selection including some or all of the looped region.
- 2 Choose Edit > Trim Region, and one of the following Trim Region commands:
  - To Selection.
  - To Fill Selection.
  - Start to Fill Selection.
  - End to Fill Selection.

If the source region is extended to the left using the Trimmer tool for the total length of the loop, the source region is moved earlier in the Timeline and loop iterations fill in up to the point where the last original loop iteration ended. If the trim to the left is part of the source region's length, the source region is not moved and a partial loop iteration is created to the left of the source region. This is a powerful feature that lets you make quick changes to your arrangement by using partial loops as upbeats, or by extending looped sound effects or ambience earlier in a film score.

## Automation and Looped Regions

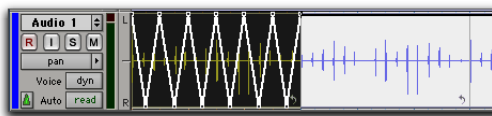
Looping an audio region does not loop any automation associated with the source region. This is useful in that automation can be applied across an entire looped region. For example, you may want to have a long fade across part or all of the looped region.

You can also repeat automation on individual loops. Use the Copy Special and Paste Special Repeat to Fill Selection commands to copy and paste any or all automation data from the source region to some or all of its loop iterations.

 *Looped MIDI regions always loop all MIDI data within the region, including all continuous MIDI controller data (such as pitch bend, modulation, and volume).*

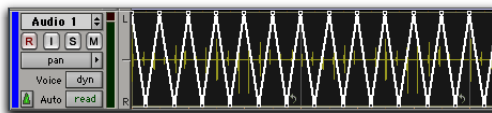
**To copy and paste automation from the source region to loop iterations:**

- 1 Select the source region.
- 2 Choose Edit > Copy Special > All Automation, or Pan Automation, or Plug-In Automation, depending on what automation you want to copy.



*Selected Pan automation for Special Copy*

- 3 Select the looped region.
- 4 Choose Edit > Paste Special > Repeat to Fill Selection.



*Pan automation Special Paste to Fill Selection*

---

## Special Cut, Copy, Paste, and Clear Commands

The Edit menu commands, Cut Special, Copy Special, Paste Special, and Clear Special are provided for editing automation playlists (volume, pan, mute, and plug-in automation) on audio, Auxiliary Input, Master Fader, and Instrument tracks. The commands can also be used for MIDI controller data.

**!** *You cannot paste MIDI controller data to automation data nor automation to MIDI.*

### Cut Special

**All Automation** Cuts all automation or MIDI controller data whether it is shown or not.

**Pan Automation** Cuts only pan automation or MIDI pan data whether it is shown or not.

**Plug-In Automation** Cuts only the plug-in automation that it is shown.

### Copy Special

**All Automation** Copies all automation or MIDI controller data whether it is shown or not.

**Pan Automation** Copies only pan automation or MIDI pan data whether it is shown or not.

**Plug-In Automation** Copies only the plug-in automation that it is shown.

### Paste Special

**Merges** Pastes the MIDI note data from the clipboard to the selection and merges it with any MIDI note data in the current selection.

**Repeat to Fill Selection** Repeatedly pastes the automation data or MIDI controller data from the clipboard to fill the selection. This command makes it easy to fill passages with room tone, ambience, or musical loops in a single command.

**To Current Automation Type** Pastes the automation data or MIDI controller data from the clipboard to the selection as current automation type or MIDI controller. This lets you copy automation from any type to any other type. For example, you can copy Pan automation to Plug-In automation. Or, you can copy MIDI volume data and paste it to MIDI pan.

### Clear Special

**All Automation** Clears all automation or MIDI controller data whether it is shown or not.

**Pan Automation** Clears only pan automation or MIDI pan whether it is shown or not.

**Plug-In Automation** Clears only the plug-in automation that it is shown.

---

## Drag and Drop Features

### Drag and Drop from Windows Explorer or Macintosh Finder

Pro Tools lets you drag and drop audio, MIDI, region group, REX, and ACID files from Windows Explorer or Macintosh Finder to the Timeline or Region List. You can also drag and drop a Pro Tools session file to the Timeline to open the Import Session Data dialog.

### Drag and Drop from the Region List

Multiple regions can be selected in the Region List and dragged to the Timeline in order to place multiple regions in a single track, or place each region in its own new track, in one operation.

### Region List Timeline Drop Order Command

The Timeline Drop Order command sets whether regions dragged from the Region List are dropped sequentially in a single track or spread across multiple tracks. You can drag and drop multiple audio or MIDI regions or region groups. Multiple items can be dropped to create new tracks for the items, or to place items in existing, compatible tracks.

The Region List pop-up menu provides the Timeline Drop Order command and submenu with the following two choices:

**Top to Bottom** When enabled, regions spread across *multiple* destination (drop) tracks or on new tracks (when dragging to the area below the last track or to the Track List).

**Left to Right** When enabled, regions are placed sequentially in a *single* destination (drop) track or on a new track (when dragging to the area below the last track or on to the Track List).

#### To set the Region List Drop Order:

- Choose Region List > Timeline Drop Order, and then Top to Bottom or Left to Right.

#### To drag and drop multiple items from the Region List to multiple new tracks:

- 1 From the Region List pop-up menu, choose Timeline Drop Order > Top to Bottom.
- 2 Search and sort the Region List if desired to configure the order in which items will be placed.
- 3 Select multiple items in the Region List and do one of the following:
  - To create new tracks and place items to a specific location, drop items at the desired location along the area below the last track.
  - To create new tracks and have items placed at the start of the session, drop the items on the Track list.



**New tracks after dropping multiple Region List items, with Timeline Drop Order set to Top to Bottom mode**

### **To spot multiple items across multiple existing tracks:**

- 1 From the Region List pop-up menu, choose Timeline Drop Order > Top to Bottom.
- 2 Select multiple items in the Region List and drop them in the playlist of a compatible track at the desired location. When the cursor is over a compatible destination, the region outlines appear at the location.

### **To drag and drop multiple items from the Region List to a single track:**

- 1 From the Region List pop-up menu, choose Timeline Drop Order > Left to Right.
- 2 Search and sort the Region List if desired to configure the order in which items will be placed.
- 3 Select multiple items in the Region List and do one of the following:
  - To create a new track and spot the first item to a specific location, drop at the desired location in the area below the last track shown in the Edit window.
  - To create a new track and have the first item placed at the start of the session, drop the items on the Track list.
  - To place items in an existing track, drop the items in the Edit playlist for the desired track.



**New tracks created by dropping multiple Region List items with Timeline Drop Order set to Left to Right mode**

If the selected items include mixed types of regions (such as audio and MIDI, or region groups and MIDI) the appropriate track types will be created and each corresponding item will be placed in them. Similarly, if the selected items include multiple formats (mono or stereo) new tracks of each format will be created and those regions placed in them.

## **Drag and Drop to Plug-Ins**

Audio files can be dragged from any DigiBase browser to a plug-in window to quickly load samples into plug-ins, such as Digidesign Synchronic. You can also drag and drop MIDI data from a plug-in to the Timeline, Track List, or to the Region List. Check with the plug-in manufacturer as to whether or not your plug-in supports drag and drop with Pro Tools.

## **DigiBase Support for Standard MIDI File Drag and Drop**

DigiBase supports standard MIDI files as well as audio files and region groups. MIDI files can be dragged from browsers and dropped into Pro Tools sessions.

## **Drag and Drop to Track List to Create New Tracks**

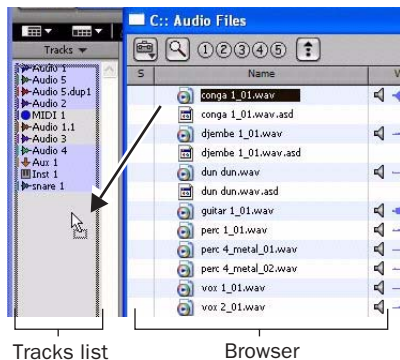
Pro Tools creates new tracks when you drag items (regions, region groups, audio files, or MIDI files) from the Region List, browsers, or the desktop, to the Track List.



*In previous versions of Pro Tools, the Tracks List was known as the Show/Hide List.*

**To import items as new tracks using drag and drop:**

- 1 Select items in the Region List, browsers, or on the desktop.
- 2 Drag the items and drop them onto the Track List.




**Dragging an audio file from a DigiBase browser and dropping it on the Tracks list**

Pro Tools creates new tracks (below the currently selected track in the Edit window or to the right of the currently selected track in the Mix window), and places the items you dropped into the new tracks.

---

## Preview Files from Windows Explorer or Macintosh Finder

Pro Tools lets you preview files from Windows Explorer or Macintosh Finder.

 *To preview an audio file by double-clicking it in Windows Explorer or Macintosh Finder, the audio file must be set to open in Pro Tools. Select Pro Tools as the application to use in Properties dialog (Windows) or the Info dialog (Macintosh).*

**To preview an audio file from Windows Explorer:**

- While Pro Tools is launched, double-click an audio file.

– or –

- Drag an audio file onto the Pro Tools application icon.

A DigiBase browser window opens, with the file selected and its directory displayed, and the file begins playing back.

**To preview an audio file from the Macintosh Finder:**

- While Pro Tools is launched, double-click an audio file.


– or –

- Drag an audio file onto the Pro Tools application icon in the Finder or in the Dock.

A DigiBase browser window opens, with the file selected and its directory displayed, and the file begins playing back.

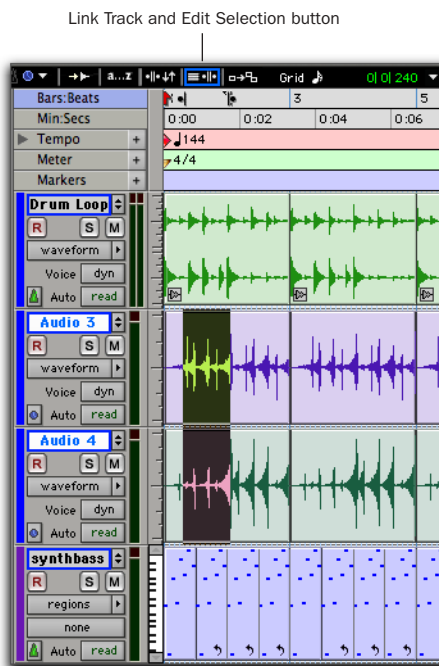
## Link Track and Edit Selection

Link Track and Edit Selection links or unlinks the Track selection with Edit selections. When Link Track and Edit Selection is enabled, you can make an Edit selection within a track or across multiple tracks and each associated track is selected. This lets you quickly apply track-level commands (such as Track View toggle or change track heights) to have the command apply to all selected tracks (using Alt+Shift on Windows or Option+Shift on Macintosh). For example, you can make an Edit selection in a track with Link Track and Edit Selection enabled, and then apply the Duplicate Tracks command to duplicate the track. Conversely, you can select one or more tracks to make an Edit selection of the entire track.

 *Linking the Track and Edit selection can be useful for switching from region-based Real-Time Properties to track-based Real-Time Properties (see “MIDI Real-Time Properties” on page 53).*

### To enable Link Track and Edit Selection:

- Select Options > Link Track and Edit Selection.
- or –
- Click the Link Track and Edit Selection button.



### Link Track and Edit Selection toggle

When Link Track and Edit Selection is disabled, making an Edit selection does not automatically select all associated tracks.

---

## Zoom Enhancements

Pro Tools 7.0 provides enhancements to Zoom Toggle and continuous zooming, to streamline audio and MIDI editing.

### Enhancements to Zoom Toggle

MIDI editing frequently involves repeatedly switching back and forth between different views of data such as zoom states, track heights, and track views. The Zoom Toggle feature has been improved to simplify MIDI display and editing.

The Zoom Toggle lets you define and toggle between zoom states directly from the Edit window, with enough flexibility and control to provide separate track views for audio, Auxiliary Input, and Master Fader tracks, and MIDI and Instrument tracks.

### Zoom Toggle Parameters

The Zoom Toggle stores and recalls the following parameters:

- Track Height
- Display mode (track view)
- MIDI and Audio Zoom In and Out
- Horizontal Zoom
- Grid setting

The Zoom Toggle lets you set separate track heights for audio, Auxiliary Input, and Master Fader tracks, and MIDI and Instrument tracks.

## Using Zoom Toggle

The Zoom Toggle button in the Edit window lets you define a zoom state and toggle between it and the current zoom state. When Zoom Toggle is enabled, the Edit window displays the stored zoom state. When Zoom Toggle is disabled, the Edit window reverts to the last zoom state.

### To store a zoom state using Zoom Toggle:

- 1 Make an Edit selection.
- 2 Click the Zoom Toggle button. It will light to indicate that Zoom Toggle is enabled.



Zoom Toggle button

### Zoom Toggle button in the Tool bar

- 3 Adjust Track Height, Vertical Zoom, Track view, and the Grid as desired.
- 4 Click the lit Zoom Toggle button again to revert to the last zoom state.
- 5 Make another Edit selection and click the Zoom Toggle button to recall the stored zoom state and continue editing.



*In Command Keyboard Focus mode, press the E key to enable or disable Zoom Toggle.*

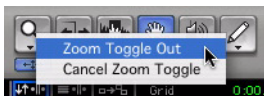
### To modify the stored Zoom Toggle state:

- 1 Make sure the Zoom Toggle button is lit (enabled).
- 2 Adjust Track Height, Vertical Zoom, Track view, and the Grid as desired. As you adjust settings they are stored as the new Zoom Toggle state.

– or –

Click and hold the Zoom Toggle button select one of the following options from the Zoom Toggle pop-up menu:

- Zoom Toggle In
- Zoom Toggle Out
- Cancel Zoom Toggle



*Zoom Toggle pop-up menu*

### To clear the stored Zoom Toggle state:

- 1 Make sure the Zoom Toggle button is lit (enabled).
- 2 Alt-click (Windows) or Option-click (Macintosh) the Zoom Toggle button.

– or –

Select Cancel Zoom Toggle from the Zoom Toggle pop-up menu.

## Continuous Zoom with the Zoomer Tool

You can use the Zoom tool to zoom in or out continuously.

### To use continuous zoom:

- 1 Select the Zoomer tool.
- 2 Hold the Start key (Windows) or Control (Macintosh) and do one of the following:
  - Drag up to zoom in vertically
  - Drag down to zoom out vertically
  - Drag to the right to zoom in horizontally
  - Drag to the left to zoom out horizontally

For horizontal zoom, all tracks zoom together. Tracks will zoom in or out centered horizontally on the location where you click.

### Zooming In or Out of All Audio Tracks Continuously

The continuous zoom feature usually only affects the track or group of tracks in which you click and drag. When using continuous zoom on audio tracks, you can choose to have all shown audio tracks zoom as one.

### To vertically zoom all audio tracks using continuous zoom:

- 1 Select the Zoomer tool.
- 2 Press Start+Shift (Windows) or Control+Shift (Macintosh) and drag up or down. When you release the mouse, all shown audio tracks will zoom to the same zoom level.

## Zoom Presets Enhancements

The Zoom Preset buttons (1–5) now provide pop-up menus to recall and save Zoom presets.



### To store a view as a Zoom preset:

- 1 Use the Zoomer tool to configure the Track view as desired.
- 2 Click and hold one of the Zoom Preset buttons (1–5) and choose Save Zoom Preset from the Zoom Preset pop-up menu. The Zoom Preset button flashes momentarily, and any previously stored zoom preset at that number is replaced.



### Zoom Preset pop-up menu

### To recall a saved Zoom preset:

- Click the appropriate Zoom preset button (1–5).
  - or –
- Click and hold the Zoom preset button and choose Recall Zoom Preset from the Zoom Preset pop-up menu.


## MIDI Zoom and View Improvements

Pro Tools 7.0 introduces several improvements to how MIDI data is displayed and accessed, including the following:

- Marquee Zoom support for Horizontal Zoom In and Out, and MIDI Zoom In and Out on MIDI and Instrument tracks.
- Independent MIDI Zoom In and Out on MIDI and Instrument tracks.
- Automatic scaling of MIDI Zoom In and Out to always show all notes in Region tracks view.

## Marquee Zooming

Pro Tools 7.0 supports Marquee Zooming for MIDI and Instrument tracks. With the Zoomer tool selected, Control-click on Windows and Command-click on Macintosh to make a marquee zoom selection on a single track for Horizontal Zoom In and Out, and MIDI Zoom In and Out at the same time. Marquee Zooming is not available in Regions view.


 With the Zoomer tool, Alt-F-click on Windows or Option-F-click on Macintosh to zoom tracks horizontally to the current Edit selection. MIDI tracks that contain the Edit selection or edit cursor will zoom out vertically so that all notes within the selection are shown.

## Independent MIDI Zoom In and Out

In Notes view, MIDI and Instrument tracks can be independently zoomed vertically. Independent vertical track zoom is not available in Regions view.

### To zoom vertically on a single track:

- Hold the Start key (Windows) or the Control key (Macintosh) and click and drag up to zoom in vertically, or click and drag down to zoom out vertically.

 With the Zoomer tool selected, Alt-A-click a track on Windows or Option-A-click a track on Macintosh to zoom out all the way horizontally and vertically. MIDI and Instrument tracks will zoom vertically to display all notes.

## Regions View Shows all Notes

In MIDI Regions view the MIDI Zoom In and Out level is automatically constrained to encompass and display all notes on the track. Tracks scale their vertical range in regions view to always show all notes at all times, regardless of individual track vertical zoom levels or track height.

---

## Additions to Strip Silence

Pro Tools 7.0 provides two new buttons for extracting and separating regions in the Strip Silence window:

**Extract** Extracts audio and leaves the silent portions of the track (in other words, an “inverse” strip silence feature that is ideal for generating room tone or ambience to use elsewhere).

**Separate** Separates regions based on the boundaries detected by Strip Silence.



*Strip Silence window*

---

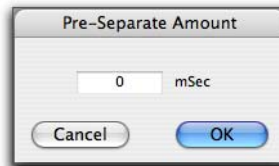
## Additions to Separate Regions

To simplify the task of separating regions into multiple smaller regions, the following two new choices are provided in the Edit menu:

**Separate Regions On Grid** Separates regions based on the currently displayed Grid values and boundaries.

**Separate Regions At Transients** Separates regions at each detected transient using the same algorithm as the Tab to Transients feature.

The Grid and Transient choices let you specify a Pre-Separate amount (handle) to pad the head of the newly separated regions.



*Pre-Separate Amount dialog for Separate Regions on Grid or at Transients commands*

When working with looped regions, the Separate Regions commands (At Selection, On Grid, and At Transients) automatically unloop and flatten the looped regions before separating them.

## chapter 6

# MIDI Features

This chapter describes the following new and changed MIDI features in Pro Tools 7.0:

- “MIDI Real-Time Properties” on page 53
- “Sample-Based MIDI” on page 60
- “Mirrored MIDI Editing” on page 61
- “Previewing MIDI Regions” on page 62
- “Default Thru Follows First Selected MIDI Track Selection Preference” on page 62
- “Selection of Note Ranges from Track Mini-Keyboard” on page 63
- “New Select and Split Notes Window” on page 65
- “New Quantize Features” on page 66
- “Legato, Overlap, and Duplicate Additions” on page 67
- “New Remove Duplicate Notes Command” on page 68
- “Transpose Window Enhancements” on page 68
- “New Import MIDI Options” on page 68
- “MIDI File Support in DigiBase” on page 70

---

## MIDI Real-Time Properties

MIDI Real-Time Properties let you change some MIDI properties in MIDI and Instrument tracks (or MIDI regions) during playback. There are five types of MIDI Real-Time Properties: Quantize, Duration, Delay, Velocity, and Transpose.



*In previous versions of Pro Tools, these edits could only be made while the Transport was stopped.*

MIDI Real-Time Properties can be adjusted during playback, while you listen for the desired result. Once you have found the desired settings, you can write the settings to the selected tracks or regions. This overwrites the corresponding MIDI properties on selected tracks or regions and resets the Real-Time Properties display.

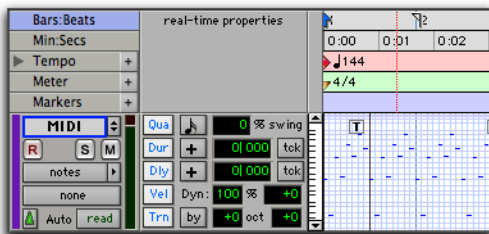
Real-Time Properties can be edited in the Real-Time Properties view in the Edit window, or in the Real-Time Properties window.

### Real-Time Properties View

The Real-Time Properties View in the Edit window only applies to tracks. To apply Real-Time Properties to regions, use the Real-Time Properties window (see “Real-Time Properties Window” on page 54).

## To enable Real-Time Properties View in the Edit window:

- Select View > Edit Window > Real-Time Properties.



### Real-Time Properties View in the Edit window

For Mini and Small track heights, the Real-Time Properties View only displays one or two properties, respectively. By default, the first one or two properties that are enabled are displayed automatically.

## To select a different Real-Time Property in Mini or Small View:

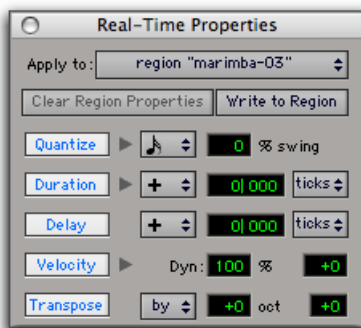
- Control-click (Windows) or Command-click (Macintosh) on a real-time property element to select a different element from the pop-up menu.

## Real-Time Properties Window

Using the Real-Time Properties window, you can apply Real-Time Properties to selected tracks or regions.

## To open the Real-Time Properties window:

- Choose Event > MIDI Real-Time Properties.

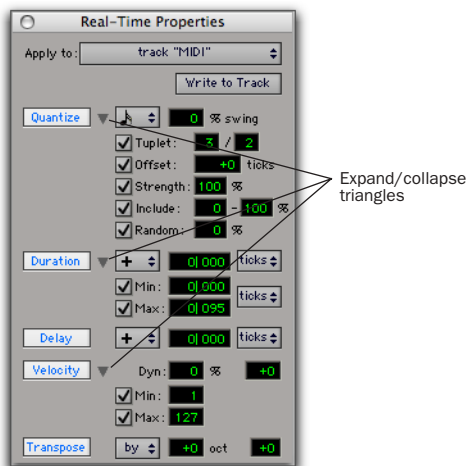


Real-Time Properties window with properties enabled

The Real-Time Properties window can be used to apply either track-based or region-based Real-Time Properties by making an Edit or Time selection and selecting the desired tracks or regions from the Apply To pop-up menu.

## Expanded Real-Time Properties View

In the Real-Time Properties window, Quantize, Duration, and Velocity each provide an expand/collapse triangle to show or hide additional settings.



Real-Time Properties window, expanded view

## Enabling Real-Time Properties

### To enable Real-Time Properties:

- 1 Select a track, or make and Edit or Time selection.



*When using Real-Time Properties, enable Link Track and Edit Selection mode to make a track selection from an Edit selection. See “Link Track and Edit Selection” on page 48.*

2 In Real-Time Properties View in the Edit window, or in the Real-Time Properties window, select the desired Real-Time Properties by clicking the property name (Quantize, Duration, Delay, Velocity, or Transpose). Enabled Real-Time Properties are highlighted and display their settings.

3 If you are using the Real-Time Properties window and Link Track and Edit Selection mode is enabled, select the track or region to affect from the Apply To pop-up menu.

4 Configure the Real-Time Properties settings as desired.

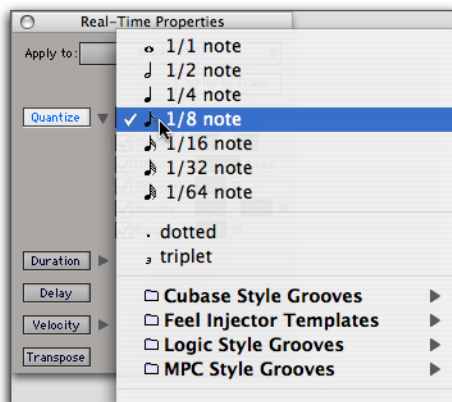
Enabled Real-Time Properties will be heard on playback and play through for the selected tracks and regions.

## Real-Time Properties Settings

### Quantize

Quantize either can be based on a grid or a groove template. For grid quantize, additional tuplet and grid offset settings are available in addition to the standard MIDI quantize properties. For groove quantize, additional controls are provided to set the extent to which the groove’s duration and velocities are applied. Both grid and groove quantize also let you set a strength amount, an “include” range, and a randomize amount.

**Quantize Pop-Up Menu** Select the desired quantize value, including all standard note rhythm values between whole notes and 64th notes, including dotted and triplet options. This pop-up menu also provides access to all standard and custom grooves.



Selecting a Grid Quantize value or a Groove Template

**Swing Value** Enter the desired amount of swing as a percentage between 0 and 300%.

**Tuplet Value** Enable Tuplet and enter the ratio for the tuplet (1–99), such as 3 to 2 or 5 to 4. Tuplet is only available in the expanded Real-Time Properties window.

**Offset Value** Enable Offset and enter the desired offset value in Ticks between –2000 and 2000. Offset is only available in the expanded Real-Time Properties window.

**Strength Value** Enable Strength and enter the amount as a percentage between 0 and 100%. Strength is only available in the expanded Real-Time Properties window.

**Include** Enable Include and enter the range between 0 and 100%. Include is only available in the expanded Real-Time Properties window.

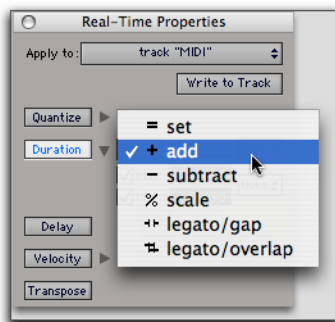
**Random** Enable Random and enter a percentage between 0 and 100%. Random is only available in the expanded Real-Time Properties window.

## Duration

Duration can be used to increase or decrease the duration of MIDI notes by a fixed amount or by a percentage. This is useful for creating legato or staccato passages.

### Duration Mode Pop-Up Menu

Select one of the following options from the Duration Mode pop-up menu: Set, Add, Subtract, Scale, Legato/Gap, or Legato/Overlap.



#### Selecting a Duration mode

**Set** Select to set notes to the specified duration.

**Add** Select to add the specified duration to the current duration of each note.

**Subtract** Select to subtract the specified duration from the current duration of each note.

**Scale** Select to scale the current duration of each note by a percentage from 1 to 400%.

**Legato/Gap** Select to extend each note to the following note. The specified duration is the subtracted to create a consistent gap between notes.

**Legato/Overlap** Select to extend each note to the following note. The specified duration is then added to create a consistent amount of overlap.

### Duration Amount

If the Ticks or Notes pop-up menu is set to ticks, enter a duration as a number of quarter-notes plus a number of ticks, such as 4|000. If the Ticks or Notes pop-up menu is set to a note size, enter a number to by which to multiply that note size, such as 7 16th-notes.

### Ticks or Notes Pop-Up Menus

Selects either Ticks or a note size for Note Durations. There is also a Ticks or Notes pop-up menu for the Minimum and Maximum Durations options.

### Minimum and Maximum Durations

Enable either or both minimum and maximum durations and enter a value in quarter notes plus ticks or as a multiple of a note size. The Minimum and Maximum Durations options are only available in the expanded Real-Time Properties window.

## Delay

Delay lets you delay or advance all MIDI data in the selected region or track. Select "+" from the Delay pop-up menu to delay MIDI data, or select "-" to advance MIDI data. Select Ticks or Milliseconds from the Ticks or Milliseconds pop-up menu. Enter the Delay amount in Tick or Millisecond values. Delay is limited to a maximum of value of 2000 ms or 999 ticks.

## Velocity

Velocity lets you change MIDI velocity by a percentage or by constant value. Enter a percentage value in the Dynamics field to scale velocity around the median velocity of 64. You can also enter an offset by adding (+) or subtracting (-) values between 1 and 127. You can also enter Minimum and Maximum Velocity value limits. The Minimum and Maximum Durations options are only available in the expanded Real-Time Properties window.

Velocity can be applied as a Real-Time Property to MIDI Input and Thru.

## Transpose

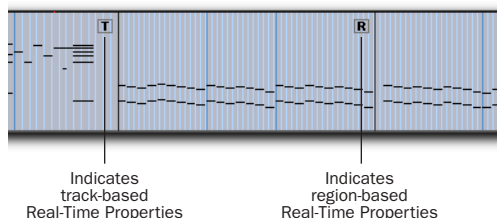
Transpose lets you transpose MIDI notes up or down by a specified number of octaves and semitones. You can also transpose to a specified pitch. Select By or To from the Transpose pop-up menu to transpose by and interval or to a specific pitch. To transpose by an interval, enter the desired number of octaves and semitones as a positive or negative numbers. To transpose to a specific pitch, enter the desired MIDI note.

Transpose can be applied as a Real-Time Property to MIDI Input and Thru.


## Real-Time Properties On Tracks and Regions

Real-Time Properties can be configured to apply to an entire track (all regions on that track), or on a region-by-region basis. Track-level properties also provide real-time MIDI input processing of velocity and transposition.

The presence of track-based Real-Time Properties are indicated by a “T” displayed in the upper right-hand corner of MIDI regions. Region-based Real-Time Properties are indicated by an “R” displayed in the upper right-hand corner of the region. Regions boundaries are indicated in notes view.



**Track-based and region-based Real-Time Property indicators**

 *In previous versions of Pro Tools, MIDI region boundaries were only visible in Regions view.*

## Region-Based Real-Time Properties

Region-Based Real-Time Properties can only be applied using the Real-Time Properties window (Event > MIDI Real-Time Properties). Real-Time Properties can be applied to multiple regions. Once Real-Time Properties have been assigned to a region, the region can be moved or copied and pasted and retain its Real-Time Properties.

## Track-Based Real-Time Properties

All track-based Real-Time Properties consistently apply to MIDI sequences throughout the entire track. However, regions with region-based Real-Time Properties will take precedence over any track-based Real-Time Properties. You can clear region-based Real-Time Properties by selecting the region and clicking the Clear Region Properties button in the Real-Time Properties window (see “Writing Real-Time Properties to Tracks or Regions” on page 58).

To allow greater flexibility when using Real-Time Properties, whenever Real-Time Properties are assigned on a track basis they are actually contained in a track playlist. This lets you create multiple playlists containing different Real-Time Property settings.

## Writing Real-Time Properties to Tracks or Regions

Once you have found the desired settings, you can write Real-Time Properties to the selected tracks or regions using the Real-Time Properties window. Real-Time Properties are applied to the current MIDI data on the track or in a region.

### To write Real-Time Properties to tracks:

- 1 Select one or more tracks to which you want to apply Real-Time Properties.
- 2 Open the Real-Time Properties window (Event > MIDI Real-Time Properties).
- 3 If Link Track and Edit Selection mode is enabled, select Tracks from the Real-Time Properties Apply To pop-up menu.
- 4 Configure the Real-Time Property settings as desired.
- 5 Click the Write to Track button.

### To write Real-Time Properties to regions:

- 1 Select one or more regions to which you want to apply Real-Time Properties.
- 2 Open the Real-Time Properties window (Event > MIDI Real-Time Properties).
- 3 If Link Track and Edit Selection mode is enabled, select Regions from the Real-Time Properties Apply To pop-up menu.
- 4 Configure the Real-Time Property settings as desired.

- 5 Click the Write to Region button.

### To clear Real-Time Properties from a region:

- 1 Select the region for which you want to clear Real-Time Properties.
- 2 Open the Real-Time Properties window (Event > MIDI Real-Time Properties).
- 3 Select Regions from the Real-Time Properties Apply To pop-up menu.
- 4 Click the Clear Region Properties button.

## Real-Time Properties In the MIDI Events List

In the MIDI Events List, the presence of track-based Real-Time Properties are indicated by a “T” displayed to the right of each event. Region-based Real-Time Properties are indicated by an “R.”

Start	Event	length/info	
46  1  000	↓ F#2 36 64	0  0  000	T
46  1  000	↓ D1 36 64	0  0  000	T
46  1  000	↓ D1 36 0	0  4  000	T
46  1  000	↓ D1 36 64	0  0  000	T
47  1  000	↓ Bb3 36 0	1  0  000	T
48  1  000	↓ E4 62 0	0  2  000	R
48  1  000	↓ E4 36 64	0  0  000	R
48  1  000	↓ Bb3 62 0	0  2  000	R
48  1  000	↓ A3 62 0	0  2  000	R
48  1  060	↓ G4 49 0	0  0  060	R
48  2  000	↓ G#4 49 0	0  0  060	R
48  2  060	↓ D5 49 0	0  0  060	R
48  3  000	↓ G#4 49 0	0  0  060	R
48  3  060	↓ G4 49 0	0  0  060	R

*Track-based and region-based Real-Time Properties indicated in the MIDI Event List*



## Display of Real-Time Properties Effects

Typically, the effects of Real-Time Properties are heard but not seen—you see the notes and other MIDI events in their original location, but you hear them as they are effected by the Real-Time Properties settings. Pro Tools provides a preference, Display Events as Modified by Real-Time Properties, to display or not display the effects of Real-Time Properties in both the Edit window and the MIDI Event List. This preference is off by default.

### To enable or disable the Display Events as Modified by Real-Time Properties preference:

- 1 Choose Setup > Preferences.
- 2 Click the MIDI Tab.
- 3 Enable or disable the Display Events as Modified by Real-Time Properties option.



### Display Events as Modified by Real-Time Properties preference

- 4 Click Done.

## Real-Time Properties Effects Displayed in the MIDI Event List

The MIDI Event List takes into account the effect of Real-Time Properties whenever the Display Events as Modified by Real-Time Properties preference is enabled. When editing or inserting an event in a track or region with active Real-Time Properties, Pro Tools takes the properties into account and edits or inserts the event in a different place if necessary to match the effect of the Real-Time Properties.

## Real-Time Properties Effects Displayed in the Edit Window

In the Edit window with the Display Events as Modified by Real-Time Properties preference enabled, MIDI events appear where they sound. However, MIDI events are not actually written to their modified locations until you write the Real-Time Properties to the track or region.

When moving MIDI events, the actual locations (pitch or time) move by the amount the events are dragged, but the effect of Real-Time Properties is displayed.

When inserting an event in a track or region with active properties, Pro Tools takes the properties into account and edits or inserts the event in a different place if necessary to match the effect of the Real-Time Properties.

## Sample-Based MIDI

Pro Tools supports sample-based MIDI on MIDI and Instrument tracks. MIDI events on sample-based tracks are anchored to a sample location rather than the usual tick-based grid. Sample-based MIDI is useful for keeping MIDI data independent of the current tempo. For example, you can create a tempo map from a MIDI performance with rubato, and tempo and meter changes. This frees you from having to record your MIDI performances with a click, and predetermined tempo and meter tracks.

Sample-based MIDI tracks are also useful in post production when triggering samples or other external devices (such as color streamers) while keeping MIDI notes locked to Timecode.

All MIDI editing functions apply to sample-based MIDI just as they do to tick-based MIDI. The only difference is that with sample-based MIDI, MIDI events are anchored to a sample and do not move according to changes in tempo.

### To create a sample-based MIDI or Instrument track:

- 1 Choose Track > New.
- 2 Configure the New Tracks dialog as desired including a MIDI or Instrument track.
- 3 For the MIDI or Instrument track, select Samples from the Timebase pop-up menu.

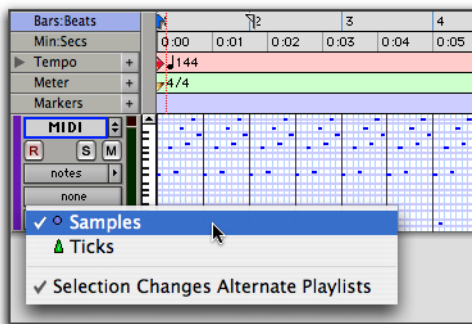


*Creating a sample-based MIDI track*

- 4 Click Create.

### To change a MIDI or Instrument track's timebase:

- Select Samples or Ticks from the MIDI track's Timebase Selector pop-up menu.



*Selecting a sample-based MIDI track*

## Tempo Change and Sample-Based MIDI

Since sample-based MIDI is anchored to the sample and not to the Conductor track (tempo map), it does not respond to changes in tempo.

In Figure 1 on page 61, the top graphic is a MIDI sequence at 49 bpm (the original tempo). In terms of absolute time, it will be the same whether the track is tick-based or sample-based. The middle graphic shows the same MIDI sequence on a sample-based track, but the tempo has been changed to 64 bpm. Notice that the MIDI data stays the same in terms of absolute time, but the location of the bar lines changes relative to the change in tempo (the Conductor track and Bar|Beats ruler are always tick-based). The bottom graphic shows the same MIDI sequence on a tick-based track with a tempo of 64 bpm. The MIDI events maintain their relationship to the Bar|Beat ruler and Conductor track, but change the position in absolute time (minutes and seconds). The dotted line help to show the timebase relationships between the three graphics.



Figure 1. Top: Sample-based MIDI at 49 bpm, Middle: Sample-based MIDI at 64 bpm, Bottom: Tick-based MIDI at 64 bpm

## Tick-Based MIDI Regions and Sample-Based Tracks

If you drag and drop, or cut or copy and paste, tick-based MIDI region to a sample-based MIDI track, the region and all its data are copied and converted to a sample-based time format. The absolute time of the MIDI events at the current tempo in the tick-based track will be preserved when they is copied to the sample-based track. The same is true if you change a track's timebase from tick-based to sample-based.

If you switch a MIDI or Instrument track from ticks to samples, all MIDI regions will be converted and new regions appear in the Region List. You can show which regions are tick or sample-based by selecting Show > Time Base from the Region List pop-up menu.

## Sample-Based MIDI Regions and Tick-Based Tracks

If you drag and drop, or cut or copy and paste, a sample-based MIDI region to a tick-based MIDI track, the region and all its data are copied and converted to a tick-based time format. The same is true if you change a track's timebase from sample-based to tick-based.

## Mirrored MIDI Editing

Mirrored MIDI Editing lets you edit MIDI regions and have your edits apply to every MIDI region of the same name. This can be particularly useful when editing looped MIDI regions.

To enable Mirrored MIDI Editing, do one of the following:

- Select Options > Mirror MIDI Edit.
  - OR –
- Enable the Mirrored MIDI Edit button in the Edit window.



Mirrored MIDI Edit button

### Mirrored MIDI Edit toggle in the Edit window

In Mirrored MIDI Editing mode, the Mirrored MIDI Edit button will blink Red once as an edit is made to alert you that your edit is being applied to more than one region.

**To disable Mirrored MIDI Editing, do one of the following:**

- Deselect Options > Mirror MIDI Editing.
  - or –
- Disable the Mirrored MIDI Edit button in the Edit window.

**⚠** *If Mirrored MIDI Editing mode is disabled, and you edit notes of looped regions in notes view, the edit flattens the loop. Similarly editing region groups separates the region groups.*

---

## Previewing MIDI Regions

MIDI regions in the Region List can be previewed to audition them through an instrument plug-in or external MIDI device. Previewed MIDI regions are played through the default MIDI Thru instrument.

**💡** *You can define a specific MIDI Thru instrument, or configure the MIDI Thru assignment to follow track selection in the Pro Tools MIDI Preferences.*

**To preview a MIDI region in the Region List:**

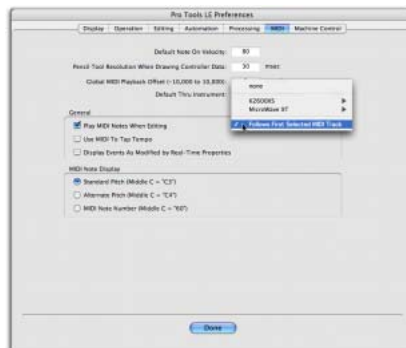
- Alt-click (Windows) or Option-click (Macintosh) the MIDI region in the Region List.

**To set the MIDI device used to preview MIDI:**

- 1 Choose Setup > Preferences.
- 2 Click the MIDI tab.
- 3 Do one of the following:
  - Select a specific device from the Default Thru Instrument pop-up menu to define a consistent preview sound source.

– or –

- Select “Follows First Selected MIDI Track” to have MIDI preview assignment follow the first selected MIDI or Instrument track’s assigned MIDI output (see “Default Thru Follows First Selected MIDI Track Selection Preference” on page 62). When multiple MIDI or Instrument tracks are selected, previewing will use the top track in the Edit window and the left track in the Mix window.



*MIDI Default Thru Instrument Preference*

---

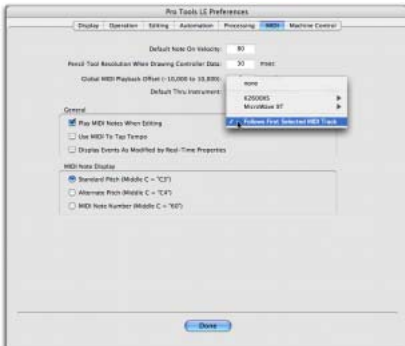
## Default Thru Follows First Selected MIDI Track Selection Preference

In addition to setting the Pro Tools MIDI Thru to a specific device and channel, you can also assign the default MIDI Thru to use the first selected MIDI or Instrument track’s assigned MIDI output. The Default MIDI Thru Instrument setting determines the device used to preview MIDI regions in the Region List.

**💡** *The Default Thru Follows First Selected MIDI Track Selection also lets you play an instrument without having to create and record-enable a MIDI or Instrument track.*

## To configure a default Thru instrument:

- 1 Choose Setup > Preferences.
- 2 Click the MIDI tab.
- 3 Do one of the following:
  - Select a specific device from the Default Thru Instrument pop-up menu to define a consistent preview sound source.
  - or –
  - Select “Follows First Selected MIDI Track” to have MIDI preview assignment follow MIDI track selection. When multiple MIDI tracks are selected, previewing will use the top track/left track in the Edit and Mix windows.



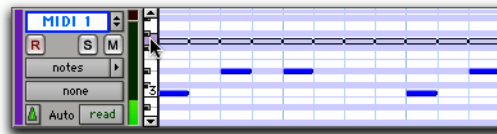
MIDI Default Thru Instrument Preference

## Selection of Note Ranges from Track Mini-Keyboard

The MIDI or Instrument track's mini-keyboard lets you select all instances of a specific note or a range of pitches. See Table 7 on page 64 for a summary of modifier keys for selecting MIDI notes.

### To select all instances of a specific note on a MIDI or Instrument track:

- Control-click (Windows) or Command-click (Macintosh) a key on a MIDI or Instrument track's mini-keyboard. The selected note will playback through the MIDI or Instrument track's assigned output.



Selecting all instances of a note with the mini-keyboard

### To select a range of notes on a MIDI or Instrument track:

- Control-Shift-click (Windows) or Command-Shift-click (Macintosh) a bottom key and a top key on a MIDI or Instrument track's mini-keyboard.
- or –
- Start-click (Windows) or Control-click (Macintosh) and drag across a range of keys on a MIDI or Instrument track's mini-keyboard.



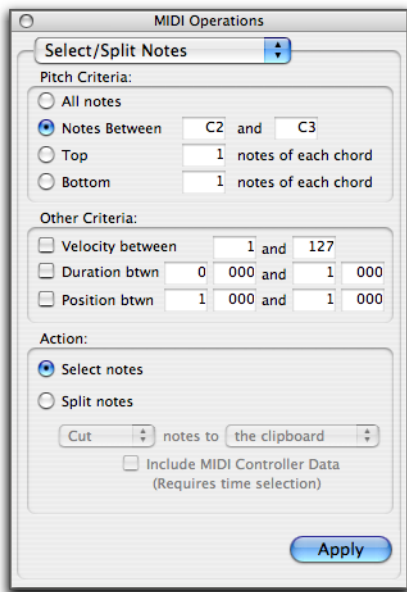
Selecting a range of notes with the mini-keyboard

**Table 7. Summary of key commands for selecting MIDI notes using a MIDI or Instrument track's mini-keyboard**


<b>Task</b>	<b>Windows Shortcuts</b>	<b>Macintosh Shortcuts</b>
Audition and select a single note (deselecting all other notes)	Control-Start-click	Command-Control-click
Audition and add all notes the mouse passes over to the selection	Control-Start-drag	Command-Control-drag
Auditions clicked note and extends the selection to that note	Control-Shift-click	Command-Shift-click
Auditions the note and toggles its selection state	Control-Alt-click	Command-Option-click
Auditions the note mouse is currently over and toggles the selection state of that note	Control-Alt-drag	Command-Option-drag
Select a single note (deselecting all other notes)	Start-click	Control-click
Add all notes the mouse passes over to the selection	Start-drag	Control-drag
Extends the selection to the clicked on note	Start-Shift-click	Control-Shift-click
Toggles the note's selection state	Start-Alt-click	Control-Option-click
Toggles the selection state of the note the mouse is currently over	Start-Alt-drag	Control-Option-drag

## New Select and Split Notes Window

Pro Tools 7.0 combines the Select Notes and Split Notes MIDI Operation in a single new Select/Split Notes window. The Select/Split Notes window provides a complete set of tools to select and split notes based on a wide variety of criteria.



*MIDI Operations window, Select/Split Notes*

 *In previous versions of Pro Tools, two separate windows provided Select Notes and Split Notes functionality.*

New selection options have been added for velocity, duration, and relative position.

In addition, tools are provided to specify whether selected data is copied to the clipboard or to new tracks, whether the data is split to multiple new tracks or a single destination, and more.

### To select and split notes:

- 1 Choose Event > Select/Split Notes.
- 2 Configure the Pitch Criteria as desired.
- 3 Configure the Other Criteria (Velocity, Duration, and Position) as desired.
- 4 Enable the Select or Split option as desired.
- 5 From the Split Notes pop-up menu, select Copy or Cut.
- 6 Select the desired Copy or Cut to destination:

**The Clipboard** Copies the selected data to the clipboard only.

**A New Track** Copies all selected data to a single, new track. If the selection includes multiple tracks, that same number of tracks will be created. The new tracks will duplicate the original track type (Instrument or MIDI).

**A New Track per Pitch** Copies all selected data to multiple new tracks (one new track for each pitch). If the selection includes multiple tracks, each track will have its data split separately.

7 If desired, enable the Include MIDI Controller Data option. Enabling this option will include all controller data associated with the split notes in newly created tracks. Leave this option unchecked to split only note data to new tracks.

- 8 Click Apply.

Any real-time MIDI properties associated with the track or regions are copied to new tracks created by Select/Split Notes.

### New Other Criteria Settings

**Velocity** Enable the Velocity option to specify a range of velocities for selecting or splitting notes. Enter the desired minimum and maximum velocities.

**Duration** Enable the Duration option to specify a range of durations (in beats and ticks) for selecting or splitting notes. Enter the desired minimum and maximum durations.

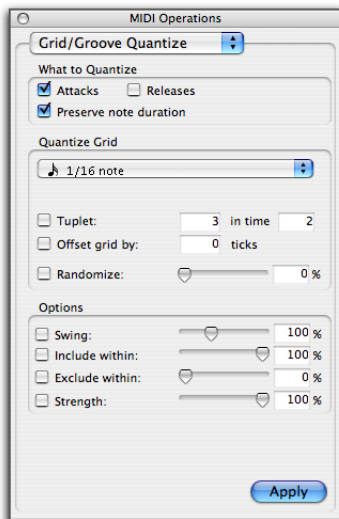
**Position** Enable the Position option to select or split all notes that fall into a range of relative beat and tick locations within each bar. The minimum value determines the start of the range, the maximum value sets the end of the range.

## New Quantize Features


The Quantize, Groove Quantize, and Input Quantize commands have been consolidated, and updated with new capabilities.

## Grid/Groove Quantize Window


The new Grid/Quantize window provides both standard Quantize and Groove Quantize features.



MIDI Operations window, Grid/Groove Quantize

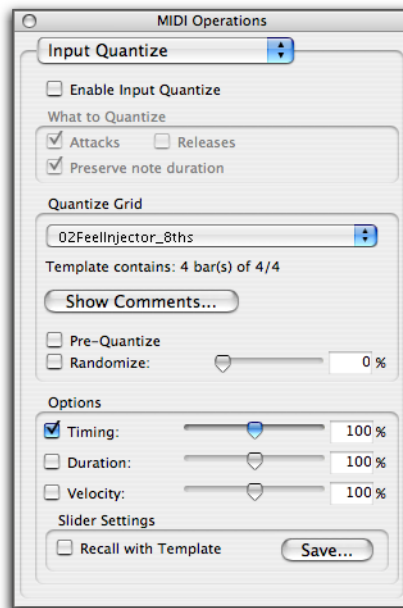
 In previous versions of Pro Tools, two separate windows provided Grid Quantize and Groove Quantize functionality.

Groove Quantize also includes randomization to make grooves applied to multiple tracks sound more lively and realistic.

 Press **Alt+0** (zero) (Windows) or **Option+0** (zero) (Macintosh) to open the Grid/Groove Quantize window.

## Groove Quantize Support for Input Quantize

The updated Input Quantize window provides all the options available in the primary Quantize window, to apply quantization or grooves to MIDI on input.

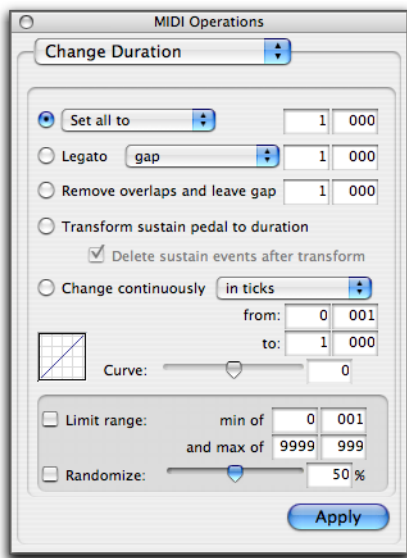


MIDI Operations window, Input Quantize




## Legato, Overlap, and Duplicate Additions

The Change Duration window has been updated to provide more control over legato, and the overlap of or gaps between notes.



*MIDI Operations window, Change Duration*

 Press **Alt+P** on Windows or **Option+P** on Macintosh to open the Change Duration window.

### New Consolidated Set/Add/Subtract/Scale Option

In Pro Tools 7.0, the Set, Add, Subtract, and Scale Duration options have been combined into a single pop-up menu. In previous versions of Pro Tools, there were separate options for Set, Add, Subtract, and Scale Duration.

### Legato

Enable the legato option to add legato to the MIDI selection. Select Gap or Overlap from the Legato pop-up menu and enter the desired gap or overlap in beats and ticks. To avoid the possibility of stuck notes, notes of the same pitch will not overlap, even with Overlap enabled.

### Remove Overlap

The Remove Overlap option removes any note overlap for all notes of the same pitch. This command is different from Legato in that non-overlapping notes of the same or different pitches remain unchanged. To create a gap between previously overlapping notes, enter the desired gap in beats and ticks.

### Transform Sustain Pedal To Duration

The new Transform Sustain Pedal To Duration option extends the length of all notes which are sounding when the sustain pedal (controller 64) is down (0 to 63) to the point when the sustain pedal goes up (64 to 127). Enable the Delete Sustain Pedal Events option to delete the sustain pedal events within the selection.

### Consolidated Change Continuously Option

The new consolidated Change Continuously option (previously called “Change Smoothly”) lets you change the duration of notes continuously in ticks or by percentage. Adjust the Curve slider to modify the shape of the change.

---

## New Remove Duplicate Notes Command

The Remove Duplicate Notes command lets you quickly identify and remove any duplicate MIDI notes. If a note starts within the first 25% of the duration of a note of the same pitch which is already sounding (or within an eighth-note, whichever is shorter), it is considered a duplicate and is combined with the previous note. If it starts later than that, the first note is shortened so that it ends at the same tick at which the new one starts.

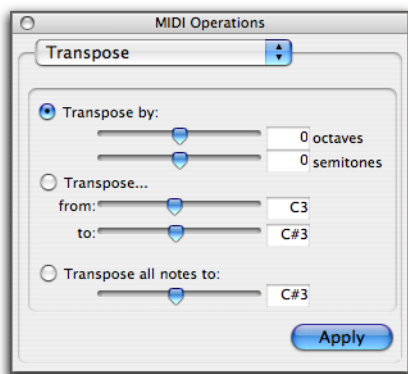
### To remove duplicate notes:

- 1 Make an Edit selection including the duplicate notes that you want to remove.
- 2 Choose Event > Remove Duplicate Notes.


---

## Transpose Window Enhancements

The Transpose window provides a new Transpose by Octaves option and a new Transpose all Notes To option.



*MIDI Operations window, Transpose*

 Press **Alt+T** on Windows or **Option+T** on Macintosh to open the Transpose window.

### Transpose By Octaves

In addition to the Transpose by Semitones option, the Transpose by Octaves option lets you transpose the selected MIDI notes by up to +/- 10 octaves. Previous versions of Pro Tools only provided a Transpose by Semitones option.

### Transpose All Notes To

The new Transpose All Notes To option sets all selected notes to the same pitch. Use the slider or the number entry box to enter the desired pitch to which to transpose all selected notes.

---

## New Import MIDI Options

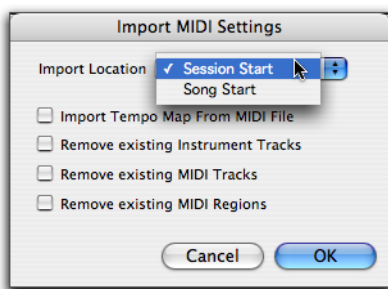
Pro Tools 7.0 provides new import MIDI options. You can import MIDI files to tracks or to the Region List using File > Import > MIDI to Tracks or > MIDI to Region List menu commands. You can also drag and drop MIDI files from a DigiBase browser or from the Desktop to the Region List or existing tracks, or to the Track List or the Timeline to create new tracks. Whenever you import MIDI to tracks, use the Import MIDI Settings dialog to configure MIDI import options.

### To import MIDI files to the Region List, do one of the following:

- Choose File > Import > MIDI to Region List. The MIDI file is imported to the Region List.  
– or –
- Drag and drop a MIDI file from a DigiBase browser or the Desktop to the Region List. The MIDI file is imported to the Region List.

## To import MIDI files to tracks:

- 1 Do one of the following:
  - Choose File > Import > MIDI to Track to import MIDI files to tracks. The Import MIDI Settings dialog opens.
  - Drag and drop a MIDI file from a DigiBase browser or the Desktop to the Track List or the Timeline. The Import MIDI Settings dialog opens.
- 2 Configure the Import MIDI Settings as desired.



*Import MIDI Settings dialog*

The MIDI file will be imported according to the settings in the Import MIDI Settings dialog.

## Import MIDI Settings

**Import Location** Select Session Start or Song Start. This option is available only if the Song Start marker is not located at the session start (sample zero). The imported MIDI sequence will start at either at the Session Start or Song Start Marker accordingly.

**Import Tempo Map From MIDI File** Enable this option to overwrite any existing tempo map with tempo information read from the MIDI file.

**Remove Existing Instrument Tracks** Enable this option to delete any existing Instrument tracks. All existing MIDI regions will be left in the region bin.

**Remove Existing MIDI Tracks** Enable this option to delete any existing MIDI tracks. All existing MIDI regions will be left in the region bin.

**Remove Existing MIDI Regions** Enable this option to delete existing MIDI regions (thus all data on all MIDI and Instrument tracks) but leave existing MIDI and Instrument tracks in place.

---

## Exporting MIDI Files

Pro Tools 7.0 provides new export MIDI options. You can export MIDI files from tracks using File > Export > MIDI.

### To export all MIDI and Instrument tracks in the current session:

- 1 Make sure to unmute any MIDI tracks in the session that you want included in the exported MIDI file. (Or, conversely, mute any MIDI tracks you do not want included in the exported MIDI file.) For Instrument tracks, enable or disable the MIDI mute button (Instruments View) as desired.
- 2 Choose File > Export > MIDI. The Export MIDI Settings dialog opens.



*Export MIDI dialog*

- 3 From the MIDI File Format pop-up menu, select 1 (multi-track) or 0 (single-track).
- 4 If the Song Start time is different from the Session Start time, select Session Start or Song Start from the Location Reference pop-up menu.
- 5 Enable or disable the Apply Real-Time Properties option as desired.
- 6 Click OK. A Save dialog opens.
- 7 Specify a folder destination and name for the MIDI file.
- 8 Click Save.

Pro Tools exports all unmuted MIDI and Instrument tracks in the current session to a Standard MIDI File and writes it to your hard drive. Exported MIDI information includes notes, controller events, program changes, and System Exclusive data, as well as events for tempo, meter, and markers.

The SMPTE start time for the session or the song (depending on the selection from the Location Reference pop-up menu) is also exported. This ensures that the exported tracks, when played from another MIDI application, will align with the correct SMPTE frames, and also synchronize correctly to tape and video devices, or Pro Tools.

## Export MIDI Settings

**MIDI File Format** Determines whether the exported MIDI file is a Type-0 Standard MIDI File (single-track) or Type-1 Standard MIDI File (multi-track).


**Location Reference** Determines the SMPTE start time for the exported MIDI file as being the session start time or the song start time (if different from the session start time).

**Apply Real-Time Properties** Determines whether or not any enabled Real-Time Properties are applied on export. For more information on Real-Time Properties, see “MIDI Real-Time Properties” on page 53.

---

## MIDI File Support in DigiBase

Standard MIDI Files are now supported in DigiBase. This means you can now view, sort, and drag/drop standard MIDI files from the Workspace to the Region List or Timeline. For more information about DigiBase, see the *DigiBase Guide*.

 *MIDI files cannot be previewed in the Workspace, but they can be previewed from the Region List. For more information, see “Previewing MIDI Regions” on page 62.*

## chapter 7

# Plug-Ins

This chapter describes the following new and changed plug-in features in Pro Tools 7.0.

- New options for maximizing RTAS performance
- Numerous additions and changes to individual DigiRack and Digidesign Development Partner plug-ins:
  - Peak and RMS calibration modes for Signal Generator
  - TimeAdjuster RTAS version
  - Trim plug-in +12 dB
  - EQ III Band-Pass Filter
  - Synchronic updates
  - Bomb Factory updates
  - Pro Tools M-Powered support for the AudioSuite versions of SoundReplacer and NoNOISE

---

## RTAS Performance Features

This section describes new features for optimizing Pro Tools RTAS performance on all systems.

### Multiple RTAS Processors

Pro Tools supports multi-processor computers, as well as Hyperthreaded and “multi-core” processors, for RTAS processing.

When using Pro Tools on dual- and multi-processor computers, you can allocate two or more available processors to RTAS processing tasks. In combination with the CPU Usage Limit setting, Pro Tools provides extensive control over the way RTAS processing and other Pro Tools tasks occur on your particular system. For example:

- For sessions with large numbers of RTAS plug-ins you can allocate two or more processors to RTAS and set a high CPU Usage Limit.
- In sessions with few RTAS plug-ins, you can allocate fewer processors to RTAS and set a low CPU Usage Limit to leave more CPU resources available for automation accuracy, screen response, or video.

- Depending on the importance of video and overall screen response, and on the density of automation being employed, different combinations of RTAS Processing and CPU Usage Limit settings may achieve the best results. For example, try reducing the number of RTAS processors but keep the CPU Usage Limit at a high setting.

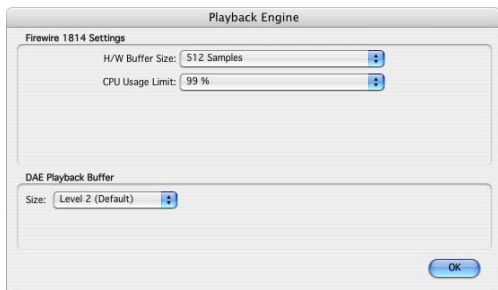
The System Usage window shows the combined amount of RTAS processing occurring on all enabled processors with a single indicator, regardless of how many CPUs are in the system. If the System Usage Window shows that you are at the limit of available resources, increase the number of RTAS processors and/or the CPU Usage Limit setting.

## Adjusting RTAS Processing Resources

Multi-processor support is controlled using the new RTAS Processing selector in the Playback Engine dialog.

### To specify the number of processors for RTAS:

- 1 Choose Setup > Playback Engine.



*Playback Engine dialog*

- 2 From the RTAS Processing pop-up menu, choose the number of available processors you want to allocate:

- Choose 1 Processor to limit RTAS processing to one CPU in the system.

- Choose 2 Processors to enable load balancing across two available processors.
- On systems running four or more processors, choose the desired number of RTAS processors as needed.

- 3 From the CPU Usage Limit pop-up menu, select the percentage of each enabled RTAS processor you want to allocate to RTAS performance.

## CPU Usage Limit

The CPU Usage Limit controls the percentage of CPU resources allocated to Pro Tools host processing tasks.

- ◆ Lower CPU Usage Limit settings limit the effect of Pro Tools processing on other CPU-intensive tasks, such as screen redraws, and are useful when you are experiencing slow system response, or when running other applications at the same time as Pro Tools.

- ◆ Higher CPU Usage Limit settings allocate more processing power to Pro Tools, and are useful for playing back large sessions or using more real-time plug-ins.


The maximum CPU Usage Limit is 85 percent for single-processor computers and 99 percent for multi-process computers. (The 99 percent setting dedicates one entire processor to Pro Tools.)

On multi-processors computers, the maximum CPU Usage Limit is reduced when you use all your processors (as selected in the RTAS Processing pop-up menu). For example, on dual-processors, the limit will be 90%. On four-processor computers, the limit will be 95%.

- ⚠ *Increasing the CPU Usage Limit may slow down screen responses on slower computers.*


### To change the CPU Usage Limit:

- 1 Choose Setups > Playback Engine.
- 2 From the CPU Usage Limit pop-up menu, select the percentage of CPU processing you want to allocate to Pro Tools.
- 3 Click OK.

 *In previous versions of Pro Tools, the maximum CPU Usage Limit setting on single-processor computers was 85%.*

## RTAS Performance Enhancements

In addition to support for multiple RTAS processors, plug-ins that have been updated for Pro Tools 7.0 can take advantage of a larger RTAS buffer for improved RTAS processing and system performance.

 *Contact the manufacturer of your plug-ins for information about updates for Pro Tools 7.0 compatibility.*

## New Shortcuts to Enable All Plug-In Parameters

Pro Tools 7.0 provides a new shortcut to enable all parameters for a single plug-in in one step.

### To enable all plug-in parameters:

- 1 Make sure the plug-in window is open for the plug-in you want to automate.
- 2 Control+Alt+Start-click (Windows) or Command+Option+Control-click (Macintosh) on the Auto button at the top of the plug-in window.

## RMS and Peak Calibration Modes for Signal Generator Plug-In

In Pro Tools 7.0, Signal Generator has been updated to include an RMS/Peak toggle that lets you switch calibration between RMS and Peak modes:

**RMS** Generates signal at levels consistent with the RMS (Root-Mean-Square) value, or the effective average level of the signal.

**Peak** Generates signal at the maximum possible level without clipping.



RMS and Peak toggles

*Signal Generator plug-in*

 *For more information on Signal Generator, see the DigiRack Plug-Ins Guide.*

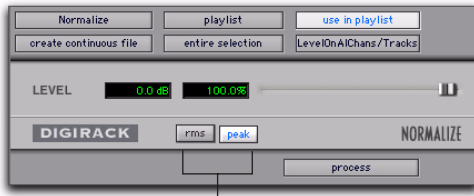
---

## RMS and Peak Calibration Modes for Normalize Plug-In

In Pro Tools 7.0, the AudioSuite Normalize plug-in has been updated to include an RMS/Peak toggle that lets you switch calibration between RMS and Peak modes.


**RMS** Normalizes the input signal at a level consistent with the RMS (Root-Mean-Square) value, or the effective average level of the selected region.

**Peak** Normalizes the input signal at the maximum possible level without clipping.



RMS and Peak toggles

Normalize plug-in

 For more information on Normalize, see the *DigiRack Plug-Ins Guide*.

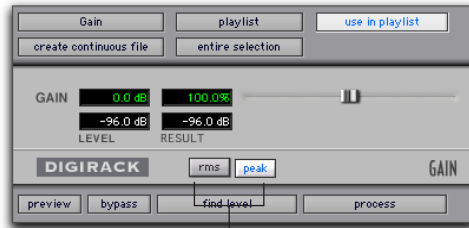
---

## RMS and Peak Calibration Modes for Gain Plug-In

In Pro Tools 7.0, the Gain plug-in has been updated to include an RMS/Peak toggle that lets you switch calibration between RMS and Peak modes.


**RMS** Boosts or lowers the selected input signal to a level consistent with the RMS (Root-Mean-Square) value, or the effective average level of the selected region.

**Peak** Boosts or lowers the gain of the selected input signal to the maximum possible level without clipping.



RMS and Peak toggles

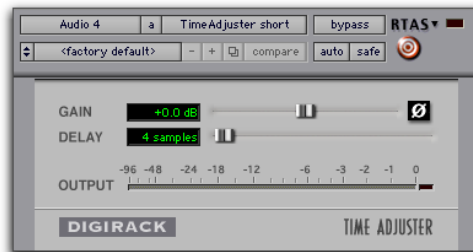
Gain plug-in

 For more information on Gain, see the *DigiRack Plug-Ins Guide*.


---

## TimeAdjuster RTAS Plug-In

In Pro Tools 7.0, TimeAdjuster has been updated to include an RTAS version, which lets you compensate for delays incurred with RTAS plug-ins.



TimeAdjuster RTAS (short version, mono track shown)

 For more information on TimeAdjuster, see the *DigiRack Plug-Ins Guide*.



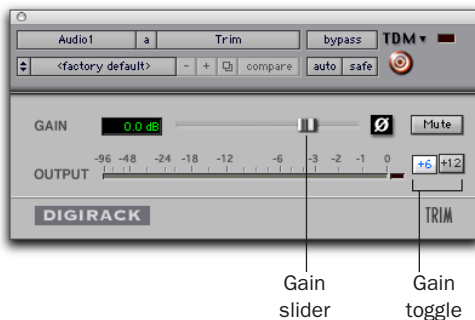
## Trim Plug-In +12 dB Updates

In Pro Tools 7.0, the Trim plug-in includes a Gain toggle, which lets you switch the maximum level of attenuation (controlled by the Gain slider) to +6 dB and +12 dB.

💡 *In previous versions of Pro Tools, the Trim plug-in could be used to attenuate an audio signal from  $-\infty$  (Infinity) dB to +6 dB.*

**+6** Switches the maximum level of attenuation to +6 dB.

**+12** Switches the maximum level of attenuation to +12 dB.



Trim +12 dB update

⚠️ *Automation data adjusts to reflect the current Gain setting. When working with automation data from an older version of the Trim plug-in, ensure the Gain setting is set at +6 dB.*

📖 *For more information on Trim, see the Digi-Rack Plug-Ins Guide.*

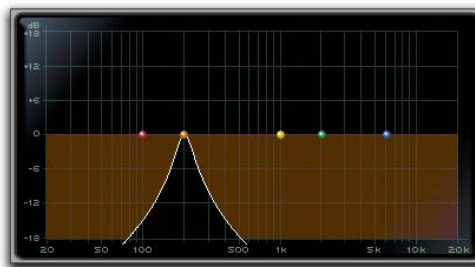
## EQ III Band-Pass Mode

In Pro Tools 7.0, you can temporarily set any EQ III control to Band-Pass mode. Band-Pass mode cuts frequencies above and below the Frequency setting, leaving a narrow band of mid-range frequencies. It is especially useful for adjusting limited bandwidth in order to solo and fine-tune each individual filter before reverting the control to notch filter or peaking filter type operations.

💡 *Band-Pass mode does not affect EQ III Gain controls.*

**To switch an EQ III control to Band-Pass mode:**

- Hold Start+Shift (Windows) or Control+Shift (Macintosh), and drag any rotary control or control point horizontally or vertically.



EQ III interactive graph displaying Band-Pass mode

When in Band-Pass mode, the Frequency and Q controls function differently.

**Frequency** Sets the frequency above and below which other frequencies are cut off, leaving a narrow band of mid-range frequencies.

**Q** Sets the width of the narrow band of mid-range frequencies centered around the Frequency setting.

### To switch an EQ III control out of Band-Pass mode:

- Release Start+Shift (Windows) or Control+Shift (Macintosh), and drag any rotary control or control point horizontally or vertically.

---

## Synchronic Updates

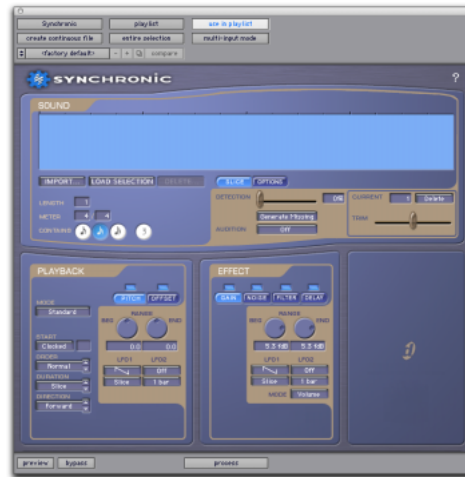
### Dragging and Dropping Audio Files to Synchronic Waveform Display

In Pro Tools 7.0, you can drag and drop audio files from the Workspace directly into the Synchronic Waveform display.

### Synchronic AudioSuite

In Pro Tools 7.0, Synchronic has been updated to support AudioSuite. The AudioSuite version of Synchronic replicates most of the features found in its real-time counterpart, with the following differences:

- New Load Selection button
- One-loop limit
- Changes to modules for AudioSuite



*Synchronic (AudioSuite version shown)*

### New Load Selection Button

The AudioSuite version of Synchronic has a Load Selection button, which lets you automatically load a selected portion of a Pro Tools track into the Waveform display.



*New Load Selection button*


📖 See “Loading a Pro Tools Selection into Synchronic” on page 78 for more information.

## One-Loop Limit

You can work with one audio loop for each instance of Synchronic AudioSuite.

## Changes to Synchronic Modules for AudioSuite

The AudioSuite version of Synchronic includes three of the five modules found in its real-time counterpart: Sound, Playback, and Effect. Each of these modules has been modified slightly for the AudioSuite version.

 *The XFade and MIDI modules are real-time based and are included only in the RTAS version of Synchronic.*

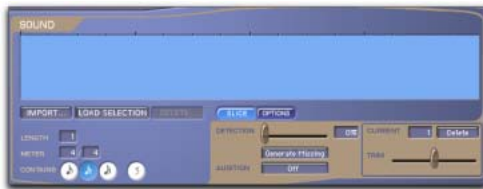
### Edit Mode Only in AudioSuite Modules

In the RTAS version of Synchronic, each module can be independently switched between Edit and Performance modes with the Mode toggle.

In the AudioSuite version of Synchronic, the modules function only in Edit mode. Performance mode is not available since its features are not relevant to non-real time functionality, and the Mode toggle does not exist.

### Changes to the Sound Module in AudioSuite


In Synchronic AudioSuite, the Sound module lets you import, delete, slice-up, and fine-tune audio (loops) for Synchronic playback.




*Synchronic Sound module (AudioSuite version)*

This module replicates the Edit mode functionality of its real-time counterpart, with the following differences:

**Load Selection Button** The Load Selection button lets you automatically load a selected portion of audio from the Pro Tools Edit window into the Waveform display.

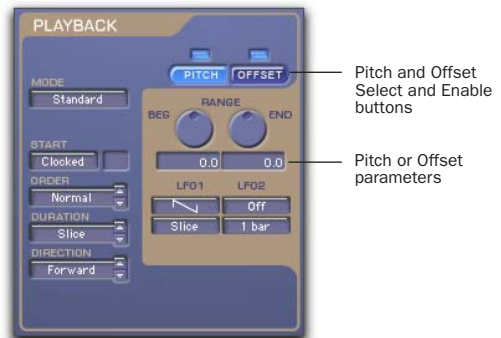
 *The Load Selection button is only available in the AudioSuite version of Synchronic.*

**One Loop Limitation** The AudioSuite version of Synchronic lets you work with one audio loop at a time.

 *See the Synchronic Guide for detailed information on using the Sound module in Edit mode*

### Changes to the Playback Module in AudioSuite

In Synchronic AudioSuite, the Playback module lets you edit the Playback parameters.



*Synchronic Playback module (AudioSuite version)*

This module replicates the Edit mode functionality of its real-time counterpart, with the following differences:

**Playback User Knobs Unavailable** The Playback user knobs are available only in the RTAS version of Synchronic.

☰ *See the Synchronic Guide for detailed information on using the Playback module in Edit mode.*

### Changes to the Effect Module in AudioSuite

The Effect module provides easy access to the Gain, Noise, Filter, and Delay effects and their parameters.



*Synchronic AudioSuite Effect module*

This module replicates the Edit mode functionality of its real-time counterpart, with the following differences:

**Effect User Knobs Unavailable** The Effect user knobs are available only in the RTAS version of Synchronic.

☰ *See the Synchronic Guide for detailed information on using the Effect module in Edit mode.*

## Working with Synchronic AudioSuite

The AudioSuite version of Synchronic adds two new features:

- Loading a Pro Tools selection into the Waveform display
- Printing an audio loop to a track

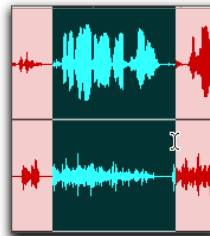
☰ *For more information about using general features in Synchronic, see the Synchronic Guide.*

### Loading a Pro Tools Selection into Synchronic

The AudioSuite version of Synchronic lets you load a selected portion of a Pro Tools audio track directly into the Waveform display.

#### To load a selection from Pro Tools into Synchronic:

- 1 In the Pro Tools Edit window, select the portion of audio you want to loop in Synchronic.



*Making a selection in Pro Tools*

2 In the Sound module of the AudioSuite version of Synchronic (AudioSuite > Instrument > Synchronic), click Load Selection.



### Making a selection in Pro Tools

The selected portion of audio appears in the Synchronic Waveform display.



Pro Tools selection loaded into Waveform display

### Printing a Loop to a Pro Tools Track

Processing the AudioSuite version of Synchronic involves “printing” the audio loop to a selected track or portion of a track.

**!** *Printing an audio loop from Synchronic AudioSuite to a selection in a Pro Tools audio track will overwrite any audio material in that selection.*

#### To print an audio loop to Pro Tools:

- 1 In the Pro Tools Edit window, select the portion of an audio track where you want to print the audio loop.
- 2 Click Process to print the audio loop to the selection.

---

## Bomb Factory Updates

### Updated Rotary Control Behavior

In Pro Tools 7.0, the behavior of rotary controls in all Bomb Factory plug-ins has been updated to be consistent with the behavior of rotary controls in other Digidesign plug-ins. Parameter values increase as you drag upward or to the right, and decrease as you drag downward or to the left.



Bomb Factory rotary control (BF-2A shown)

**💡** *In previous versions of Bomb Factory, it was necessary to drag around a rotary control in a circular motion to adjust the parameters. You can temporarily revert to this behavior by holding down Start+Shift (Windows) or Control+Shift (Macintosh) while adjusting the control.*

### Restoring Bomb Factory Plug-In Settings

In Pro Tools 7.0, you can restore the default settings of any Bomb Factory control by Alt-clicking (Windows) or Option-clicking (Macintosh) the control.

This addition affects the functionality of the Fairchild 670 and the BF76 Bomb Factory plug-ins.

## Changes to Stereo-Linking Controls in Fairchild 670

In previous versions of the Bomb Factory Fairchild 670 plug-in, you could stereo-link its controls by Alt-clicking (Windows) or Option-clicking (Macintosh) either control.

In Pro Tools 7.0, Shift-click a control to link a control to the other control's settings.



*Bomb Factory Fairchild 670 plug-in*

## Changes to Enabling “All Buttons In” Mode in BF76

In previous versions of the Bomb Factory BF76 plug-in, Alt-clicking (Windows) or Option-clicking (Macintosh) one of the Ratio Push switches would enable all of the Ratio Push switches (known as “All Buttons In” mode).

In Pro Tools 7.0, Shift-click or double-click one of the Ratio Push switches to enable “All Buttons In” mode.



*Bomb Factory BF76 plug-in*

## Pro Tools M-Powered Support for Additional Plug-Ins

Pro Tools M-Powered 7.0 adds support for the AudioSuite versions of the following plug-ins:

- SoundReplacer
- NoNOISE

## chapter 8

# Control Surface Features

This chapter provides information about new features and enhancements in Pro Tools M-Powered 7.0 for the Digidesign Command|8 control surface:

## Command|8 New Features and Enhancements

### Support for 10 Sends

The ten available sends in Pro Tools can be viewed from Sends View on Command|8.

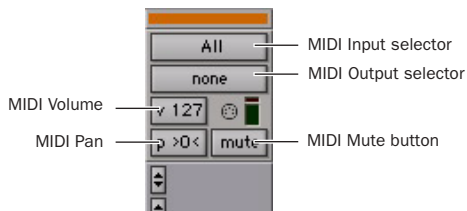
The five Console View switches are dual-function (A/F, B/G, C/H, D/I, E/J). Sends F–J are accessed with the Shift key.

#### To view Sends F–J:

- ◆ To view Sends F–J, put Command|8 in Sends view, then hold Shift/Add and press the corresponding switch (A=F, B=G, C=H, D=I, or E=J). The switches flash to indicate display of Sends F–J.

### Support for Instrument Tracks

The Instruments View in Pro Tools lets you assign MIDI Inputs and Outputs and provides access to MIDI controls for Instrument tracks.



*Instruments view in an Instrument track*

### MIDI Controls on Instrument Tracks

The Instruments View in Pro Tools contains MIDI controls that can be displayed on Command|8 data encoders.

#### To display MIDI controls (“Input Mode”):

- 1 Press the Pan switch to make sure you are in Home view.
- 2 Hold the Command/Control switch and press the F5 switch.

The MIDI controls appear on each channel as follows:

- ◆ Rotary encoder: MIDI Volume
- ◆ Select switch: MIDI Mute



*MIDI Input, MIDI Output, and MIDI Pan controls can be accessed on-screen.*

#### To exit display of MIDI controls:

- Hold the Command switch and press the F5 switch again.



[www.digidesign.com](http://www.digidesign.com)

---

**DIGIDESIGN**

2001 Junipero Serra Boulevard  
Daly City, CA 94014-3886 USA  
Tel: 650.731.6300  
Fax: 650.731.6399

**TECHNICAL SUPPORT (USA)**

Tel: 650.731.6100  
Fax: 650.731.6384

**PRODUCT INFORMATION (USA)**

Tel: 650.731.6102  
Fax: 800.333.2137

**INTERNATIONAL OFFICES**

Visit our Digidesign Web site  
for contact information