Complete Production Toolkit

Version 1.0

Documentation Feedback

At Digidesign, we're always looking for ways to improve our documentation. If you have comments, corrections, or suggestions regarding our documentation, email us at *techpubs@digidesign.com*.

contents

chapter 1

Introduction

Complete Production Toolkit for Pro Tools LE®
provides additional features, plug-ins, and soft-
ware options for music creation and post pro-
duction. Complete Production Toolkit provides
increased voice and track counts, and surround
mixing capabilities that are equal to
Pro Tools HD. Additionally, it includes the full
contents of DV Toolkit™ 2 and Music Produc-
tion Toolkit 2.

📖 *For information on standard Pro Tools LE*
features, refer to the Pro Tools Reference
Guide (Help > Pro Tools Reference Guide).

Complete Production Toolkit Overview

Complete Production Toolkit enables the fol-
lowing features in Pro Tools LE:

- Session and track features:
  - Up to 128 mono or 64 stereo audio tracks of
    simultaneous playback or recording
  - Ability to use QuickPunch™ on up to 64
    tracks
  - Up to 64 Instrument tracks
  - 128 internal busses
  - Import Session Data options (Destination
    Track Names, Time Code Mapping, Find
    Matching Tracks, Session Data to Import,
    Track Playlist)

- Enabling of all DigiTranslator™ 2.0 features
  for importing and exporting AAF and
  OMF® format
- MP3 export option (for bounce recording
  or exporting a region as an MP3 file)
- Improved session interchange between
  Pro Tools HD and Pro Tools LE

- DigiBase™ Pro, including support for:
  - Catalog browsers
  - The ability to search on multiple criteria si-
    multaneously in DigiBase browsers

- Editing features:
  - Continuous Scroll
  - Scrub Trim tool
  - Replace Region command
  - TCE Edit to Timeline Selection command
  - Selection of alternate field recorder audio
    channels in the Pro Tools Timeline
  - Expanding alternate field recorder chan-
    nels to new tracks
  - 1/2 frame grid and nudge

- Beat Detective™ features:
  - Ability to apply Beat Detective across mul-
    tiple tracks
  - Collection Mode

- Mixing and Automation features:
  - Snapshot automation for writing or trim-
    ming automation data
  - Glide Automation commands

- Surround mixing up to 7.1 with 003®, 003 Rack, 003 Rack+, Digi 002®, and Digi 002 Rack, and up to 5.1 with Mbox® 2 Pro

☼ *With Complete Production Toolkit, you can open surround sessions on any Pro Tools LE system. Use the Neyrinck SoundCode™ Stereo down mixer plug-in for monitoring surround sessions in stereo with Pro Tools LE interfaces that have fewer than six outputs.*

- Time code and synchronization features:
  - Timebase rulers (Time Code, Time Code 2, and Feet+Frames)
  - Time Code Rate selector
  - Feet+Frame Rate selector
  - Current Time Code Position command
  - Current Feet+Frames Position command
  - Use Subframes option
  - Audio Rate Pull Up and Pull Down
  - Video Rate Pull Up and Pull Down
- Video features:
  - Support for multiple video tracks on the Timeline, multiple QuickTime movies per track, and multiple playlists per track
  - Support for adding and editing multiple video regions
  - General video editing
  - Video region groups
  - Support for Video Import Options
  - Video Universe window

Additional Software

Complete Production Toolkit includes additional software for working with Pro Tools:

DINR (Digidesign Intelligent Noise Reduction™) LE Plug-in For reducing noise in audio.

DigiTranslator 2.0 Software Option For exchanging audio and video files, and sequences with other AAF and OMF-compatible applications.

Eleven LE Plug-in For use as a guitar amp and speaker emulation.

Hybrid Synthesizer Plug-in For use as a virtual instrument in your Pro Tools sessions.

Neyrinck SoundCode Stereo For monitoring up to 7.1 surround sessions (down mixed to stereo) with all LE interfaces including 2 channel interfaces (such as the Mbox 2 Micro). This plug-in also lets you quickly and easily create stereo mixes from up to 7.1 surround sessions.

Smack! LE Compressor Plug-in For applying compression to your audio.

Structure LE Plug-in For use as a virtual instrument in your Pro Tools sessions.

TL Space Native Convolution Reverb Plug-in For applying convolution reverb to your audio.

X-Form Plug-in For high-quality time compression and expansion, and formant corrected pitch-shifting (based on the Radius® algorithm from iZotope).

System Requirements and Compatibility

To use Complete Production Toolkit, you need:

◆ An iLok USB Smart Key (an iLok.com account is also required for managing iLok licenses)

– and –

◆ A Digidesign-qualified Pro Tools LE system

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

For complete system requirements and a list of Digidesign-qualified computers, operating systems, hard drives, and third-party devices, refer to the latest information on the Digidesign website:

www.digidesign.com/compatibility

Contents of the Boxed Version of Complete Production Toolkit

The Complete Production Toolkit package contains the following components:

• Complete Production Toolkit Installer disc

• Activation Card, with Activation Code and instructions for authorizing Complete Production Toolkit software components using an iLok USB Smart Key (not supplied)

Register Complete Production Toolkit for Pro Tools LE

If you purchased the Complete Production Toolkit software option from the DigiStore (www.digidesign.com) using Internet Activation, you are automatically registered.

If you purchased a boxed version of the Complete Production Toolkit option, you will be automatically registered when you authorize your software (see "Authorizing Complete Production Toolkit Option" on page 6).

Registered users receive periodic software update and upgrade notices.

For information on technical support, visit the Digidesign website (www.digidesign.com).

Conventions Used in This Guide

All Digidesign guides use the following conventions to indicate menu choices and key commands:

Convention	Action
File > Save	Choose Save from the File menu
Control+N	Hold down the Control key and press the N key
Control-click	Hold down the Control key and click the mouse button
Right-click	Click with the right mouse button

The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

☼ *User Tips are helpful hints for getting the most from your Pro Tools system.*

⚠ *Important Notices include information that could affect your Pro Tools session data or the performance of your Pro Tools system.*

⌨ *Shortcuts show you useful keyboard or mouse shortcuts.*

▤ *Cross References point to related sections in this guide or other Digidesign Guides.*

About www.digidesign.com

The Digidesign website (www.digidesign.com) is your best online source for information to help you get the most out of your Pro Tools system. The following are just a few of the services and features available.

Product Registration Register your purchase online.

Support and Downloads Contact Digidesign Technical Support or Customer Service; download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Answerbase; or join the worldwide Pro Tools community on the Digidesign User Conference.

Training and Education Study on your own using courses available online or find out how you can learn in a classroom setting at a certified Pro Tools training center.

Products and Developers Learn about Digidesign products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

News and Events Get the latest news from Digidesign or sign up for a Pro Tools demo.

Pro Tools Accelerated Videos Watch the series of free tutorial videos. Accelerated Videos are designed to help you get up and running with Pro Tools and its plug-ins quickly.

chapter 2

Installation

Installing Complete Production Toolkit

⚠ *A Digidesign-qualified version of Pro Tools LE must be installed before you install your toolkit and authorize its software components.*

To install Complete Production Toolkit:

1 Do one of the following:
- Download the installer for your computer platform from the Digidesign website (www.digidesign.com). After downloading, make sure the installer is uncompressed (.ZIP on Windows or .SIT on Mac).

– or –

- Insert the Installer disc for your version of Pro Tools into your computer.

2 Locate and double-click the Complete Production Toolkit installer icon:
- Install Complete Production Toolkit (Mac)

– or –

- Complete Production Toolkit.exe (Windows)

3 Follow the on-screen instructions to complete the installation.

4 When installation is complete, click Quit (Mac) or Finish (Windows).

The installer process installs Complete Production Toolkit features, as well as any of the following optional components that you choose to install:

- DINR™ LE
- DigiTranslator 2.0
- Eleven™ LE
- Hybrid™
- MP3 Export option
- Neyrinck SoundCode Stereo
- Smack!™ LE
- Structure® LE
- TL Space™ Native
- X-Form™

5 Each software component (including Complete Production Toolkit) must be authorized before it can be used. See "Authorizing Complete Production Toolkit Option" on page 6.

⚠ *If you launch Pro Tools without authorizing a Complete Production Toolkit software component, you will be prompted to authorize it.*

Authorizing Complete Production Toolkit Option

Complete Production Toolkit and its additional software components must be authorized before they can be used in Pro Tools.

Complete Production Toolkit and Additional Software Components

Each Complete Production Toolkit component must be authorized before it can be used in Pro Tools. Authorization includes activating your software licenses online, then transferring your licenses to an iLok USB Smart Key (iLok).
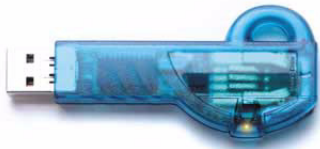
iLok USB Smart Key

The iLok is similar to a dongle, but unlike a dongle, it is designed to securely authorize multiple software applications from a variety of software developers.

This key can hold over 100 licenses (or authorizations) for all of your iLok-enabled software. Once an iLok is authorized for a given piece of software, you can use the iLok to authorize that software on any computer.

⚠ *The iLok USB Smart Key is not supplied with the Complete Production Toolkit package, and must be purchased separately.*

📄 *For additional information about iLok technology and licenses, see the electronic PDF of the iLok Usage Guide.*

The following Complete Production Toolkit software components must be authorized before they can be used in Pro Tools LE:

- Complete Production Toolkit (includes Pro Tools features)
- DINR LE
- DigiTranslator
- Eleven LE
- Hybrid
- MP3 Export option
- Neyrinck SoundCode Stereo
- Smack! LE
- Structure LE
- TL Space Native
- X-Form

Authorizing Download Versions of Complete Production Toolkit

If you purchased a download version of Complete Production Toolkit from the DigiStore (www.digidesign.com), authorize the plug-in by downloading licenses from iLok.com to an iLok.

Authorizing Boxed Versions of Complete Toolkit

If you purchased a boxed version of Complete Production Toolkit, it comes with an Activation Code (on the included Activation Card). You will need this code to authorize Complete Production Toolkit and the included plug-ins.

To authorize Complete Production Toolkit using an Activation Code:

1 If you do not have an existing iLok.com account, visit www.iLok.com and sign up for an iLok.com account.

2 Transfer the license for your toolkit option and plug-ins to your iLok.com account by doing the following:

- Visit http://secure.digidesign.com/activation.

– and –

- Input your Activation Code (listed on your Activation Card) and then your iLok.com User ID. Your iLok.com User ID is the name you create for your iLok.com account.

3 Transfer the licenses from your iLok.com account to your iLok USB Smart Key by doing the following:

- Insert the iLok into an available USB port on your computer.
- Go to www.iLok.com and log in.
- Follow the on-screen instructions for transferring your licences to your iLok.

4 Launch Pro Tools.

5 If you have any installed unauthorized plug-ins or software options, you are prompted to authorize them. Follow the on-screen instructions to complete the authorization process.

Removing Toolkit Options and Plug-ins

Complete Production Toolkit and all of its optional software components can be removed from your system.

Uninstalling Complete Production Toolkit Components

Mac

To remove Complete Production Toolkit on Mac:

1 Locate and open the Pro Tools folder (Applications/Digidesign/Pro Tools).

2 Drag the following components to the Trash:
- Complete Production Toolkit.bundle
- OMF.bundle

3 Locate and open the Codecs folder (Applications/Digidesign/Pro Tools/Codecs).

4 Drag the MP3 folder (containing MP3.bundle) to the Trash.

5 Locate and open the Plug-ins folder on your Startup drive (Library/Application Support /Digidesign/Plug-ins).

6 Drag the following plug-ins to the Trash:
- DINR LE.dpm
- Eleven LE
- Hybrid Synthesizer
- Neyrinck SoundCode Stereo
- Smack LE Compressor
- Structure LE
- TL Space
- X-Form

7 Empty the Trash.

To remove the TL Space Native impulse response library:

1 Locate the TL Space Impulse Responses folder (Library/Application Support/Trillium Lane/TL Space).

2 Drag it to the Trash and empty the Trash.

Windows Vista

To remove Complete Production Toolkit on Windows Vista:

1 Choose Start > Control Panel.

2 Double-click Programs and Features.

3 From the list of currently installed applications, select Digidesign Complete Production Toolkit.

4 Click Uninstall.

5 Follow the on-screen instructions to remove the Complete Production Toolkit option.

Windows XP

To remove Complete Production Toolkit on Windows XP:

1 Choose Start > Control Panel.

2 Double-click Add or Remove Programs.

3 From the Currently installed programs list, select Digidesign Complete Production Toolkit.

4 Follow the on-screen instructions.

5 When removal is complete, close the Add or Remove Programs window.

chapter 3

Session and Track Features

Complete Production Toolkit enables additional session and track features in Pro Tools LE. It also includes support for the MP3 export option.

📄 *For more information on working with Pro Tools sessions and tracks, see the Pro Tools Reference Guide.*

Increased Voice and Track Counts

Support for Up to 128 Voices

Complete Production Toolkit lets you play or record up to 128 voices simultaneously at 44.1 or 48 kHz and up to 96 voices at 88.1 or 96 kHz. Each channel of an audio track uses a single voice.

For example, at 44.1 or 48 kHz, you can have up to:

- 128 mono tracks

– or –

- 64 stereo tracks

– or –

- 21 5.1 tracks

– or –

- Any combination of mono, stereo, and surround tracks that do not require more that 128 voices for all audio channels

Higher track counts are only supported with multiple hard drives and faster Digidesign-qualified systems. Visit the Digidesign website for more information (www.digidesign.com).

Track Priority and Dynamic Voicing

⚠️ *Tracks do not play back when they are inactive or their voice assignment is set to Off.*

When working with more than 128 voices (at 44.1 or 48 kHz), you can play back audio on a track that would use voice number 129 and higher by changing the higher track's priority, as follows:

- Make a lower numbered track inactive (click the Track Name and select Track > Make Inactive) to free up its voice.
- Set the voice assignment in a lower numbered track to Off (click the Voice selector and select Off).
- Drag the Track Name button of the higher numbered track to the left (Mix window) or upwards (in the Edit window or Track List) until it is in the range of the maximum number of voiced audio tracks allowed by your system. The previous last voiced audio track will now be out of range and its voice assignment will change to Off.

Setting a track voice assignment to Off

For the track that was originally higher numbered than the total allowed number of voiced audio tracks, its voice assignment was set to Off. When bringing it into the range of total allowed voiced tracks, it automatically resets to DYN.

📖 *For more information on track priority and voice assignments, see the Pro Tools Reference Guide.*

Support for Up to 64 QuickPunch Tracks

With Complete Production Toolkit, up to 64 mono or stereo audio tracks at 44.1 or 48 kHz, and up to 48 tracks at 88.1 or 96 kHz can be simultaneously recorded with QuickPunch.

Additional Enhanced Session and Track Features

In addition to the increased audio track count (using up to 128 voices), Pro Tools LE with the Complete Production Toolkit option includes the following:

- Support for up to 64 Instrument tracks
- Support for up to 128 internal buses
- Display of up to 256 tracks (128 voiceable)—tracks in excess the 128 voice limit are set to inactive
- Support for up to 21, 5.1 tracks (for more information about surround mixing and monitoring in Pro Tools LE with the Complete Production Toolkit option, see Chapter 8, "Surround Features").

Import Session Data Enhancements

This section provides information on Import Session Data features that Complete Production Toolkit adds to Pro Tools LE systems.

With Complete Production Toolkit, the Import Session Data dialog lets you view the properties of a session, select which tracks to import, and choose which attributes of those tracks you want to import into the current session.

Time Code Mapping Options

With Complete Production Toolkit, you can specify where the imported tracks are placed in the current session. Times are indicated in time code.

From the Import Session Data dialog, the following Time Code Mapping Options are available:

Maintain Absolute Time Code Values This option places tracks at the locations where they were located in the source session. For example, if the current session starts at 00:01:00:00, and the session from which you are importing starts at 10:00:00:00, the earliest imported tracks can appear in your session is 9 hours and 59 minutes after the start of the session.

Maintain Relative Time Code Values This option places tracks at the same offset from session start as they had in the source session. For example, if the source session starts at 01:00:00:00 and contains a track that starts at 01:01:00:00, and the current session start is 02:00:00:00, the track will be placed at 02:01:00:00 in the current session.

Map Start Time Code To This option places tracks relative to their original session start time (with Complete Production Toolkit, times are expressed in hh:mm:ss:ff). For example, if the current session starts at 00:01:00:00, and the ses-

sion from which you are importing starts at 10:00:00:00, you can reset the start time code to 00:01:00:00, to avoid placing files 9 hours and 59 minutes from the start of your session.

Destination Track Names (Operation/Destination Track Pop-Up Menus)

For each source track, there is a corresponding Operation/Destination Track pop-up menu that lists options for importing the track and available destination tracks in the current session.

The names of available destination tracks in the current session are listed at the bottom of the pop-up menu. Imported playlists and all attributes selected in the Session Data to Import will be placed in the destination track you choose.

Only destination tracks that match the track type (audio, Instrument, MIDI, Auxiliary Input, or Master Fader) and the channel format (mono or stereo) of the source track appear in the pop-up menu.

Find Matching Tracks

If you are importing playlists from source tracks with the same name as destination tracks in the current session, click Find Matching Tracks to automatically match the track names. Tracks must have the same name, track type, and channel format to be automatically matched.

Session Data to Import

The Session Data to Import menu is where you select which attributes of the selected tracks you want to import into the current session.

The selected attributes are applied to all tracks that you choose to import into the current session.

Replacing Track Attributes

When you import an attribute of the source track into an existing track in the current session, it replaces the corresponding attribute in the destination track. If you choose not to import an attribute of the source track, the corresponding attribute in the destination track is retained.

Replacing Track Path Names

When you import a track's input, output, send output or hardware insert assignments, any custom path names and I/O configurations from the source session are imported into the track, but they are not imported into the I/O Setup. Use the Import Session button in the I/O Setup dialog to import I/O configurations into the I/O Setup.

For information on importing I/O configurations into I/O Setup, see the Pro Tools Reference Guide.

Selecting Track Attributes to Import

You can select All, None, or any combination of the listed attributes to import.

The following attributes are available to import:

All Imports all of the source track's playlists, according to the Track Playlist Option setting, and all of the attributes in the Session Data to Import list.

None Imports only the source track's main playlist, according to the Track Playlist Option setting, and no other attributes of the source track.

Alternate Playlists Imports all of the source track's alternate playlists. The alternate playlists appear in the destination track's playlist pop-up menu.

Regions and Media Imports all of the audio files or regions in the source track, and places them in the Region List.

Volume Automation and Setting Imports the source track's Volume fader setting and any automation data on the track's Volume Automation playlist. The Volume fader setting and any Volume automation data in the destination track are replaced.

Pan Automation and Setting Imports the source track's Pan Slider settings and any automation data on the track's Pan Automation playlist. The Pan Slider setting and any Pan automation data in the destination track are replaced.

Mute Automation and Setting Imports the source track's Mute setting and any automation data on the track's Mute Automation playlist. The Mute setting and any Mute automation data in the destination track are replaced.

Main Output Assignments Imports the source track's channel output assignments, including any multiple output assignments. The channel output assignments in the destination track are replaced.

Send Output Assignments Imports the source track's send output assignments. Any Send output assignments in the destination track are replaced.

Plug-in Assignments Imports the source track's plug-in assignments. Any plug-ins in the destination track are removed, and their associated settings and automation are lost.

If the source track uses a plug-in that is not available on the destination system, it appears in the destination track and is made inactive.

Plug-in Settings and Automation When the source track's plug-in assignments are imported, this option imports the track's plug-in settings and any automation data associated with the plug-ins. If no plug-in assignments are imported, this option has no effect.

Hardware Insert Assignments Imports the source track's hardware Insert assignments. Any Insert assignments in the destination track are replaced.

Input Assignments Imports the source track's channel input assignment. The Input assignment in the destination track is replaced.

Side-Chain Assignments When the source track's plug-in assignments are imported, this option imports any side-chain assignments associated with the plug-ins. If no plug-in assignments are imported, this option has no effect.

I/O Labels (Path Names) Imports the source track's path names.

Track Active State Imports the active/inactive state of the source track from the source session.

Track Comments Imports the track comments associated with the source track. Any comments in the destination track are replaced.

Record Safe/Solo Safe Settings Imports the record safe and solo safe settings of the source track from the source session. Any record safe or solo safe settings in the destination track are replaced.

Track View Settings Imports the track height and playlist view of the source track from the source session.

Mix/Edit Groups: Imports track group assignments from the source session.

Track Playlist Options

You can select from the following options to control how the main playlist from each source track is imported to the destination track in the current session.

Import Main Playlists — Replacing Destination Main Playlists Imports the main playlist from the source track. When you overlay the playlist into an existing track, the main playlist in the destination track is deleted and replaced with the imported playlist.

◆ If you select the above option and import all of the source track's attributes, this is equivalent to importing the entire track.

◆ If you select the above option and do not import any of the source track's attributes, you replace the audio playlists while keeping your current mixer settings.

Import Main Playlists—Overlaying New with Existing, Trimming Existing Regions Imports the main playlist from the source track. When you import the playlist into an existing track, any existing playlist data that overlaps data imported from the source track is trimmed and replaced with the imported data. Any playlist data in the destination track that does not overlap remains in the destination track.

Do Not Import Main Playlists—Leaving Destination Playlists Intact Does not import the main playlist from the source track. No audio is imported; only the attributes selected in the Session Data to Import list are imported to the selected tracks.

◆ If you select the above option and import all of the source track's input, output, send, insert and plug-in attributes, this is equivalent to importing a "channel strip."

Import Tempo/Meter Map Imports the meter and tempo maps, as they appear in the Tempo and Meter Conductor rulers, from the source session. Any Tempo or Meter events in the destination session are replaced.

Import Marker/Memory Locations

Imports markers and Memory Locations as they appear in the Marker ruler, from the source session. Any markers and Memory Locations in the destination session are retained. Imported marker and Memory Locations are assigned the next available Marker/Memory Location numbers.

DigiTranslator 2.0 Features

Importing AAF and OMF Sequences

With the DigiTranslator 2.0 option (included with Complete Production Toolkit), Pro Tools lets you open AAF and OMF sequences as new Pro Tools sessions or you can import AAF and OMF sequences into existing Pro Tools sessions.

⚠ *Pro Tools cannot play MXF audio or video files embedded within an AAF sequence.*

📄 *For more information on opening and importing AAF and OMF sequences using the DigiTranslator 2.0 option, see the DigiTranslator 2.0 Guide.*

Exporting Pro Tools Tracks as AAF or OMF Sequences

With the DigiTranslator 2.0 option (included with Complete Production Toolkit), Pro Tools lets you export individual tracks in AAF or OMF format. Use the Export Selected Tracks as AAF/OMF command.

⚠ *Pro Tools with DigiTranslator 2.0 does not support AAF files with embedded media.*

📄 *For more information on exporting selected tracks from Pro Tools sessions as AAF and OMF sequences using the DigiTranslator 2.0 option, see the DigiTranslator 2.0 Guide.*

MP3 Export Option

With Complete Production Toolkit, the MP3 file type is available when using Bounce to Disk or exporting a region as a new audio file.

MPEG-1 Layer 3 (MP3)

The MPEG-1 Layer 3 compression format (MP3) is used for streaming and downloading audio over the Internet, and for playback on portable devices. The MP3 Export Option is required to use this file type.
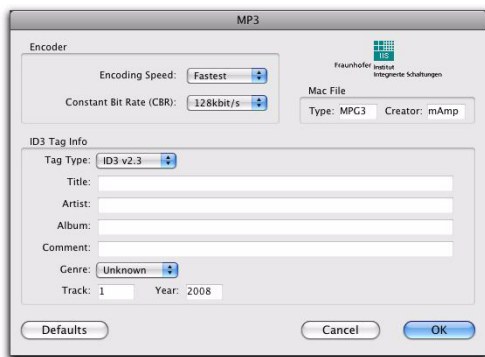
MP3 Export Options

When you select this format, the Resolution pop-up menu in the Pro Tools Output Options dialog is unavailable. The resolution is set by the encoder.

The sample rate chosen is given to the codec as a base sample rate for operations. The actual sample rate of the resulting file is determined in the MP3 Encoder Options dialog. For example, if a base sample rate of 48000 Hz is chosen, the MP3 Encoder Options dialog will allow output streams in 48, 24, or 12 kHz, depending on encoding quality.

When you export or bounce to MP3 format, you can set the following options:

Encoder Settings

Encoder Speed Determines the audio quality of the bounced file. There are two options: Highest Quality and Fastest Encoding Time.

The Highest Quality option can take up to five times longer to process audio than the Fastest Encoding option, so you should use it only when the highest fidelity is essential and you have the time to devote to the encoding process.

Constant Bit Rate (CBR) Encodes the file at a single bit rate that you choose from the Constant Bit Rate (CBR) pop-up menu. Because the bit rate is fixed, the quality of the encoded audio will vary depending on the nature of the material being compressed. The 128 kbit/s option is generally best for streaming over the Internet, since it has predictable bandwidth requirements.

ID3 Tag Info Settings

ID3 Tag Type The ID3 tag stores data about the encoded audio file that is used by MP3 players to display information about the file. Pro Tools supports three versions of this tag, in order to provide backward compatibility with older MP3 players:

- ID3 v1.0: Appears at the end of a streaming MP3 file, so that tag information is only displayed after software streaming is finished.

- ID3 v1.1: Same as version 1.0, but adds track number information to the tag.

- ID3 v2.3: Appears at the front of a streaming MP3 file, so that tag information is displayed when streaming begins.

⚠ *While ID3 v2.3 is the current standard MP3 format, not all MP3 players support ID3 v2.3. Contact the developer of your player software for compatibility information.*

Title/Artist/Album/Comment Type the title, artist, and other information for the MP3 file. This information is displayed by many MP3 players.

Genre Choose a genre for the file. This information is displayed by many MP3 players, and can appear in searchable catalogs and databases.

Track Number If you select ID3 tag type v1.1 or v2.3, you can enter a CD track number for the file. This information is displayed by many MP3 players.

Year Enter a year for the file. This information is displayed by many MP3 players.

Mac File Settings

Mac File Type and Creator If you expect your file to be used on a Mac, you can enter the Mac file type and creator. This will allow users to double-click the file to open their MP3 player.

Default Button

To restore all settings in this dialog to their default values, click Defaults.

Session Interchange Between Pro Tools HD and Pro Tools LE with Complete Production Toolkit

The Complete Production Toolkit option provides improved session interchange between Pro Tools|HD systems and Pro Tools LE systems.

📖 *For more information on sharing sessions, see the Pro Tools Reference Guide.*

When opening a Pro Tools HD session in Pro Tools LE with Complete Production Toolkit, the following occurs:

Tracks

- Any audio tracks that exceed the 128 voice limit, as well any inactive tracks, are set to *voice off*.

- Any Auxiliary Input tracks beyond 128 are made inactive.

- Any Instrument tracks beyond 64 are made inactive.

- TDM plug-ins with RTAS® equivalents are converted; those without equivalents are made inactive. When subsequently opening the session in Pro Tools HD, any plug-ins that were converted to RTAS will be converted back to TDM if possible.

- Multichannel surround tracks are maintained.

- Unavailable input and output paths are made inactive.

- Any Delay Compensation settings are removed. When subsequently opening the session in Pro Tools HD, the original Delay Compensation settings are restored.

- VCA Master tracks are hidden and any VCA automation is automatically coalesced. When subsequently opening the session in Pro Tools HD, VCA tracks remain hidden and will need to be manually shown.

Groups

- Mix Groups keep only Main Volume information.

- Mix/Edit Groups keep only Main Volume and Automation Mode information.

- Automation overflow information for grouped controls is be preserved.

- Group behavior of Solos, Mutes, Send Levels, Send Mutes is be preserved.

- Solo Mode and Solo Latch settings are dropped.

I/O Setup

If your Pro Tools LE audio interface has a sufficient number of outputs, the I/O Setup is maintained. If not, a warning is posted when opening the session and you will need to manually reconfigure the I/O Setup.

To reconfigure a session that was created with audio output paths that exceed the available audio outputs of your Pro Tools LE audio interface for stereo monitoring:

1 After opening the session, choose Setup > I/O and click the Output tab.

2 Make sure the audio output paths that are unavailable with your Pro Tools LE audio interface are set to Inactive by deselecting the Active/Inactive control for the path. Inactive tracks that were assigned to the path display in italics in the track path selectors.
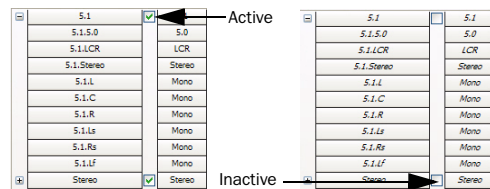
Active/inactive Output path settings in I/O setup

3 Click the Bus tab and, if necessary, create a new surround format bus (such as 5.1).

4 Click OK to save your changes and close the I/O Setup dialog.

5 Route any track outputs or sends that were assigned to the surround audio path to the new surround bus path.

6 Create a new Auxiliary Input track with the desired surround channel format (such as 5.1).

7 Set the Input path for the Auxiliary Input track to the corresponding surround bus.

8 Insert the SoundCode Stereo (surround channel format to stereo) plug-in on the Auxiliary Input track. The channel width of the track changes to stereo.

9 Set the output path of the Auxiliary Input track to the main stereo outputs of your audio interface for monitoring.

chapter 4

DigiBase Pro

Complete Production Toolkit enables DigiBase Pro in Pro Tools LE.

📖 *For information on DigiBase, see the Pro Tools Reference Guide.*

With DigiBase Pro, you can:

- Search on any combination of file metadata simultaneously.
- Create and share custom Catalog browsers (Catalogs) that reference files wherever they are stored.
- View, search, and import files from Catalogs even if they are on offline volumes.

## Searching for Multiple Criteria Simultaneously in DigiBase Browsers

Use DigiBase to find files by name, modification date, and kind. With DigiBase Pro, you can search multiple criteria simultaneously, and search on any criteria.

To start a search:

1 Open any browser.

2 Click the Search icon to display the Search pane.

📑 *You can also start a search by pressing Control+F (Windows) or Command+F (Mac).*

3 If in the Workspace browser, select volumes or folders to search.
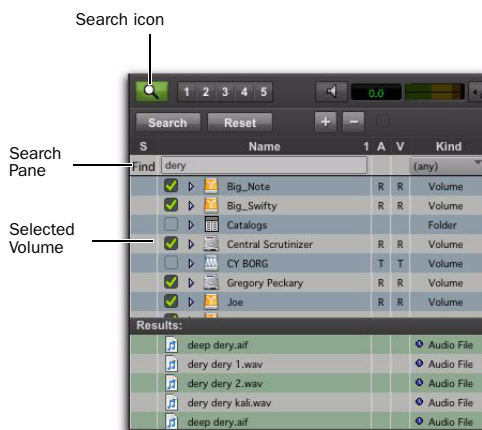
Search icon and Search pane

4 Enter text into the File Name field to search by name, or enter a date, or select a kind from the Kind pop-up menu.

5 Choose additional search criteria as needed. Press Tab to move to the next available search field, or Shift+Tab to move to the previous.

6 Click the Search button, or press Enter (Windows) or Return (Mac).

Searching begins, indicated by the spinning arrows in the toolbar, and by the Search button changing to Stop. The Results List (at the bottom of the browser) fills with items that match the search criteria. Items can be selected and auditioned as they are found.

7 Click the Stop button at any time to stop the search, and keep the list of files already found (if any).

📖 *For detailed information on DigiBase search functions, see the Pro Tools Reference Guide.*

Saving Search Results as a Catalog

To save the results of your search as a Catalog:

1 Choose Edit > Select All, or press Control+A (Windows) or Command+A (Mac), to select all items in the Items List.

2 From the Browser menu, choose Create Catalog.

DigiBase Pro Catalogs

Catalogs are available with DigiBase Pro, which is included with Complete Production Toolkit (see Figure 1).

While Volume browsers are designed to be an accurate representation of the file structure on a given volume, Catalogs are similar to having a Favorites folder, and serve as a way to collect and organize frequently used items regardless of where they are stored.
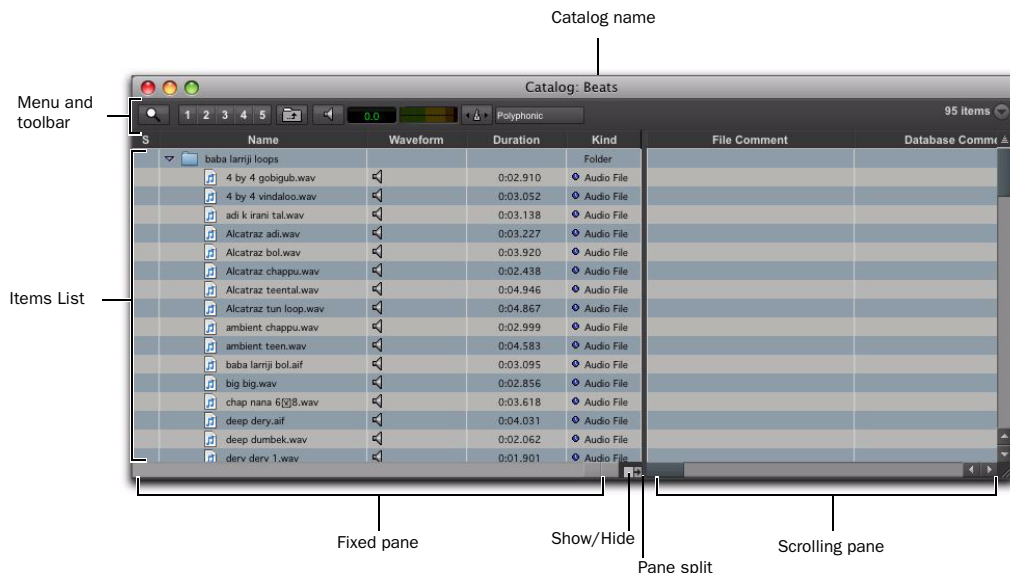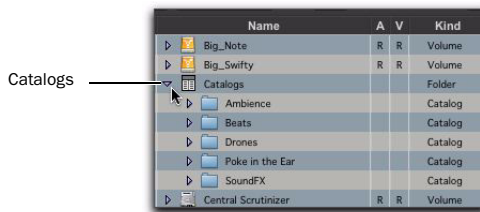

Figure 1. Catalog browser

A Catalog is analogous to a folder full of aliases or shortcuts. Placing a file in a Catalog does not create a copy of the file, and does not change where the file is stored. Rather, it stores a reference (or alias) to the file so that it can be found and manipulated without having to search for its physical location.

Opening a Catalog Browser

Catalogs are displayed in the Workspace browser.

Catalogs item in the Workspace

To open a Catalog browser:

1 Open the Workspace browser.

2 Click the Catalogs Expand/Collapse icon.

3 Do one of the following:

- Click the Expand/Collapse icon for the desired Catalog to view its contents in the Workspace.

– or –

- Double-click the Catalog name to open it in its own browser window.

Clip Names in Catalogs

Clip Names are the names that appear in the Timeline and Region List when a file is imported into a session.

For most files, the Clip name is the same as the file name. For OMF Files, the Clip Name is the name that appears in the Avid® bin.

Clip names can only be edited in a Catalog. Editing the Clip name does not affect the actual file; however, if you add the same file to a new Catalog, it retains its original Clip Name. When you drag a file from a Catalog into a session, the edited Clip Name is what appears in the Timeline and Region List.

If the Clip Name is longer than 32 characters, Pro Tools truncates the name automatically when imported into the session.

Comments and Catalogs

Catalogs provide commands for managing OS 9 Finder comments, Database comments, and Clip Names.

Database Comments in a Catalog are stored in the Catalog database. Database Comments, which can be up to 256 characters in length, are searchable, cross-platform, and editable.

Copy OS 9 Finder Comment to Database Comments (Mac Only) Copies an item's OS 9 Finder comments to its Database comments.

☼ *OS 9 Finder comments (from the OS 9 Get Info window) are not supported in OS X Get Info windows. Use the Copy OS 9 Finder Comment to Database Comments command to utilize any OS 9 Finder comments stored with your media.*

Copy OS X Finder Comment to Database Comments (Mac Only) Copies an item's OS X Finder comments to its Database comments.

Copy Database Comments to Clip Names Copies an item's Database comments to Clip Name.

Copy File Comments to Clip Names Copies an item's File Comments to Clip Name.

Creating Catalogs

Catalogs can be added to the Workspace as new, empty Catalogs, or you can select items first and then save a Catalog of all selected items.

To create a new, empty Catalog:

1 Open the Workspace browser.

2 Choose New Catalog from the browser menu.

3 Enter a unique name and click OK.

To catalog a selection of items:

1 Open any browser (including an existing Catalog).

2 Select the items you want to include in the new Catalog.

3 Choose Create Catalog from Selection from the Browser menu.

A new, fully indexed Catalog database of the selected items is created.

Creating Catalogs of Folders

To create a Catalog of an entire folder and all its contents:

1 Open the Workspace browser, if not already open.

2 Drag and drop a single folder onto the Catalog icon in the Workspace browser.

Pro Tools first indexes the folder, then a fully indexed Catalog is created, with the same name as the dropped folder.

Renaming a Catalog

Catalogs can be renamed at any time.

To rename a Catalog:

1 Click the Catalog item in the Workspace browser until its name highlights.

2 Enter a new name for the Catalog.

Modifying Catalogs

To add items to a Catalog, do one of the following:

■ Open the Catalog and drop new items from another browser.

– or –

■ Click the main Catalogs icon in the Workspace, to expand your view of all existing Catalogs, then drop items onto any Catalog.

To add a folder to a Catalog:

1 Open the Catalog.

2 Choose Create Folder from the Browser menu.

To delete items from a Catalog:

1 Select the items.

2 Press the Delete key, or choose Delete Selected from the Browser menu. A warning dialog appears.

3 In the warning dialog, do one of the following:
- Click Cancel to cancel the delete operation.
- Click Delete Files to delete aliases and associated files from disk.
- Click Delete Aliases to delete only the aliases and not the associated files.

This operation cannot be undone.

Consolidating Files with Catalogs

Catalogs are excellent tools for consolidating files from a variety of sources.

For example, create a Catalog named "Thumps" and fill it with sound effects from three different volumes. You can then drag the Catalog from the Workspace browser to another volume, and a folder named "Thumps" is created on that volume. All of the files referenced by the Catalog are automatically copied to the volume. Folders and sub-folders, if any, and their contents are included in the copy.

Updating Catalogs

Since a Catalog database is not linked to any particular volume, there is a limit to the abilities of the Update Index command. When Update Database for Selected is selected from the Browser menu in a Catalog, Pro Tools searches for the items represented by the aliases in the Catalog and updates the following information:

Metadata Metadata for all files found online, including File comments, are updated.

Database Comments Database Comments are not updated, because they are unique to each Catalog and are not part of the file's metadata.

Relinking Catalog Items

If files are ever missing from a Catalog, use the Relink window to locate, copy, and relink files. For more information, see the *Pro Tools Reference Guide*.

Deleting Catalogs

To delete a Catalog:

1 Select one or more Catalogs in the Workspace browser.

2 Press the Delete key, or choose Delete Selected from the Browser menu. A warning dialog appears.

3 In the warning dialog, do one of the following:

- Click Cancel to cancel the delete operation.
- Click Delete Files to delete aliases and associated files from disk.
- Click Delete Aliases to delete only the aliases and not the associated files.

This operation cannot be undone.

Importing Catalog Items

You can import online and offline items from Catalogs into the current session.

Importing Online Items from a Catalog

Dragging and dropping audio files to the Pro Tools Region List and Timeline is identical to dragging and dropping from Volume browsers.

Importing Offline Items from a Catalog

With Catalogs, it is possible to search and import files that are offline. For example, if you have a music cue that you know you want to use, but it resides on a CD-ROM or other unmounted volume, you can spot the file from a Catalog to the session Timeline, and it is automatically imported into the session when the volume is mounted.

The first step is to add files to a Catalog (files must be online to be added to a Catalog). Once added to a Catalog, if the items are taken offline they are listed in italicized text.

Offline files can be dropped from a Catalog to the Timeline just like online files. When you drop the files, a dialog appears asking if you want to relink the files or skip relinking. Click Skip All to load all the items as offline files (in the Timeline, their regions appear in light blue). In the Project browser, these items are listed in the Render Sources folder, to ensure that Pro Tools remembers that these items need to be relinked.

Whenever the volume containing the offline items is mounted, Pro Tools automatically starts to import the files, in the background. This is true even if you have saved the session, quit, and relaunched Pro Tools.

Once the items are completely imported, they appear as online items in the Timeline, Region List, and in the Project browser.

If the offline items match the session sample rate, bit depth, and file format, no conversion is necessary. As long as the volume is playable, the items become playable in the session as soon as the volume is mounted.

If the volume is unsuitable for playback, you are informed that some items must be copied to suitable volumes first.

chapter 5

Editing Features

Complete Production Toolkit enables additional editing features in Pro Tools LE.

📄 *For information on editing in Pro Tools, see the Pro Tools Reference Guide.*

Continuous Scrolling During Playback

When this scrolling option is selected, the Edit and MIDI Editor window contents scroll continuously past the playback cursor, which remains in the center of the window. With this option, playback is always based on the Timeline selection. Continuous Scrolling During Playback uses host processing power, so use this option with Pro Tools LE with Complete Production Toolkit only when absolutely necessary.

Half-Screen Edit Window

When the Scrolling option is set to Continuous, a half-screen appears at the far left of the Edit window (before the beginning of the session) when the Playhead is at the beginning of the session.
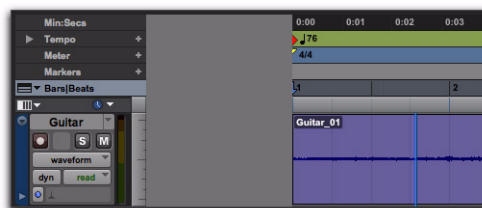
Half-screen for Center Playhead Scrolling option

The Scrub Trimmer Tool

The Scrub Trimmer tool is a convenient tool for auditioning material (on up to two tracks) to find a trim point. You can drag in a track to hear the audio information, then trim at a specific location by releasing the mouse button.

This action creates a new region. Note that the Scrub Trimmer tool changes into a "right trim" or "left trim" shape as it is placed over the right or left side of a region. To reverse the direction of the Scrub Trimmer tool, press Alt (Windows) or Option (Mac) before you click the region.

Scrub Trimmer tool over a region

Scrub playback speed and direction vary with controller movement. Scrubbed audio is routed through the track signal path, so you hear any effects in the signal path.

To scrub trim a track:

1 Do one of the following:

- Click the Trimmer tool pop-up menu and select Scrub.

– or –

- Right-click on any track and select Tools > Trimmer Tools > Scrub.

The tool changes to a speaker with a bracket.

2 Drag within a track to the left or right. Audio from a scrubbed track is routed through the track signal path, including any TDM effects. When you locate the trim point, release the mouse button to trim the region.

To scrub trim two tracks, click with the Scrub Trimmer tool between two adjacent tracks and drag.

To scrub with finer resolution (without having to zoom in), press Control (Windows) or Command (Mac) while scrubbing.

Replacing Audio Regions

Use the Replace Region function to replace multiple instances of an audio region in a playlist with another region. This is useful in post production if you use a sound effect, room noise, or atmosphere region many times in a session, and later decide to replace one or all of the original regions with a different region.

This is also useful in music production if you want to replace a certain loop or sample (for example, a drum beat) with a new one. You can use this compositionally, if you know the tempo of a section or session, to create a scratch piece with "rough" regions of the correct length, and later replace them with "final" regions of the same length.

To replace regions by dragging and dropping:

1 Select a region in a track's playlist that you want to replace. The selection can extend beyond the region's end point, to include material from the replacement region that is longer than the original region.

2 Control-Shift-drag (Windows) or Command-Shift-drag (Mac) the replacement region from the Region List to the selected region. The Replace Region dialog opens.

Control-Shift-drag (Windows) or Command-Shift-drag (Mac) any region from the Region List to any unselected region on a track to open the Replace Region dialog without first making a selection.

3 Configure the Replace Region dialog (see "Replace Region Dialog" on page 27).

4 Click OK.

Replace Region Dialog

Replace Region dialog

The following options are available in the Replace Region dialog:

Replace: Original Region Only Replaces only the selected region with the replacement region dragged from the Region List.

Replace: All Instances of the Original Region Replaces all instances of the selected region that fit the On criteria with the replacement region from the Region List.

- On This Track: replaces regions that fit the Match criteria and are on the same track as the original region.
- On All Tracks: replaces regions that fit the Match criteria for all tracks in the session.
- On Within the Selection: replaces regions that fit the Match criteria within the current selection.

Replace: All Regions That Match Original Region's Replaces all regions that fit the Match criteria and the On criteria with the replacement region from the Region List.

- Start Position: replaces all regions that have the same original *start* time as the selected region. This includes regions that may have been auto-created when trimming end points.
- End Position: replaces all regions that have the same original *end* time as the selected region. This includes regions that may have been auto-created when trimming start points.
- Name: replaces all regions that come from the same audio file and have been renamed to the same name
- On This Track: replaces regions that fit the Match criteria and are on the same track as the original region.
- On All Tracks: replaces regions that fit the Match criteria for all tracks in the session.
- On Within the Selection: replaces regions that fit the Match criteria within the current selection.

Region matching uses all specified Match criteria. For example, if you select Start Position and End Position, all regions from the same original audio file as your selection with the same original start and end times will be replaced.

Fit Region Using The: Original Region Length If the replacement region is smaller than the original region, the region is placed in the playlist and any remaining audio from the original region is removed.

If the replacement region is larger than the selection, it is placed in the playlist and trimmed to fit within the length of the original region.

Fit Region Using The: Original Selection Length When the playlist selection extends beyond the original region, the replacement region (if larger than the original region) is trimmed to fit within the selection.

Fit Region Using The: Replacement Region Length The replacement region is placed in its entirety, regardless of the length of the original region or selection.

Replacing Regions from the Region List

The Replace Regions command is also available in the Region List menu. To use this command, make sure there is a region selected in a track and a different (replacement) region selected in the Region List.

To replace regions using the Region List menu:

1 Select a region in a track to be replaced.

2 Do one of the following:
- Right-click the desired replacement region in the Region List and choose Replace Regions from the pop-up menu.
- Select the desired replacement region in the Region List and choose Replace Regions from the Region List menu. (If the Region List Selection Follows Edit Selection preference is enabled, Control-click (Windows) or Command-click (Mac) the selected region to deselect it, then Control-click (Windows) or Command-click (Mac) the desired replacement region to select it, and then choose Replace Regions from the Region List menu.)

3 Configure the Replace Region dialog (see "Replace Region Dialog" on page 27).

4 Click OK.

Replace Region and Multichannel Tracks

The Replace Region command supports dragging multichannel regions from the Region List to multichannel tracks, provided they are the same channel format. For example, you can replace a selected stereo region in a stereo audio track with another stereo region from the Region List. However, you cannot replace it with two mono audio regions. Additionally, you cannot replace regions in multiple mono tracks with multichannel regions.

TCE (Time Compression and Expansion) Edit To Timeline Selection

When the Edit and Timeline selections are unlinked, you can compress or expand an audio selection to fit the Timeline selection. On audio tracks, TCE Edit to Timeline Selection uses the TCE AudioSuite™ Plug-in selected in the Processing preferences. On Elastic Audio–enabled tracks, TCE Edit To Timeline Selection uses the track's selected Elastic Audio plug-in.

To fit an Edit selection to the Timeline:

1 Deselect Options > Link Timeline and Edit Selection.

2 With the Selector tool, select the audio material to be compressed or expanded.

3 In any Timebase ruler, select the time range where you want to fit the audio material.

4 Choose Edit > TCE Edit to Timeline Selection. The Edit selection is compressed or expanded to the length of the Timeline selection.

TCE Edit to Timeline Selection on Multiple Tracks and Channels

The TCE Edit to Timeline command can be used on multichannel selections, and selections across multiple tracks. All regions are compressed or expanded equally by the same percentage value, based on Edit selection range. This ensures that the rhythmic relationship between the different channels or tracks is maintained.

Fitting an Audio Region to an Edit Selection

Regions can be dragged from the Region List to fit within an Edit selection. The dragged region is compressed or expanded to fit within the selection. On audio tracks, fitting an audio region to the Edit selection uses the TCE AudioSuite Plug-in selected in the Processing preferences. On Elastic Audio–enabled tracks, it uses the track's selected Elastic Audio plug-in.

To fit an audio region to an Edit selection:

1 With the Selector tool, make an Edit selection in an audio track.

2 Control-Alt-drag (Windows) or Command-Option-drag (Mac) the region from the Region List to the track with the selection. The start of the region is positioned at the selection start, and the region is compressed or expanded to match the length of the selection.

Fit to Selection on Multiple Tracks and Channels

The Fit to Selection command supports dragging multiple regions from the Region List to multiple tracks, or multichannel tracks.

However, all dragged regions are compressed or expanded equally by the same percentage value, based on length of the region last clicked before dragging.

Expanding Alternate Channels to New Playlists or Tracks

When working with a mono region that is part of a multichannel recording imported from a field recorder, you can expand that region (or a selected portion of it) to new playlists that reflect its matching alternate channels while preserving any edits or fades.

📄 *For detailed information on working with multichannel recordings made with field recorders, see the Field Recorder Workflow Guide.*

Conditions for Alternate Channel Availability

An alternate channel is available to replace the original channel (represented by the region or portion of a region selected on the Timeline) if all of the following are true:

- Both channels are part of a multichannel part of a recording made simultaneously on one or more field recorders.
- Certain metadata matches between the original channel and the alternate channel.
- The metadata embedded during shooting and recording has been preserved prior to import into Pro Tools.

With multichannel recordings from one or more field recorders, both channels must overlap at least once between their start time code and end time code positions, and must also meet one of the following conditions:

- Matching Scene and Take
- Matching Shoot Date (applies only if Scene and Take contain any information for both channels)
- Matching Tape name
- Matching Sound Roll name
- Alternate channel Sound Roll name matches current channel Tape name
- Alternate channel Tape name matches current channel Sound Roll name

Expanding Channels to New Playlists

To expand alternate channels to new playlists:

1 In the Timeline, do one of the following:

- To expand only a portion of the regions on the track, make a selection that includes or overlaps any number of regions on a track, and Right-click (Windows or Mac) or Control-click (Mac) the selection.

– or –

- To expand all of the regions on the track, Right-click (Windows or Mac) or Control-click (Mac) the track name.

2 Choose the Expand to New Playlists pop-up menu, and select one of the following methods by which to expand alternate channels for the selection to new tracks:

- By Channel Name
- By Channel Number
- By Channel Name and Number
- By Time Code Only

If alternate channels are available, Pro Tools expands them to new playlists (including the channel represented in the original track) according to the selected option.

Expanding Channels to New Tracks

To expand alternate channels to new tracks:

1 In the Timeline, do one of the following:

- To expand only a portion of the regions on the track, make a selection that includes or overlaps any number of regions on a track, and Right-click (Windows or Mac) or Control-click (Mac) the selection.

– or –

- To expand all of the regions on the track, Right-click (Windows or Mac) or Control-click (Mac) the track name.

2 Choose the Expand Channels to New Tracks pop-up menu, and select one of the following methods by which to expand alternate channels for the selection to new tracks:

- By Channel Name
- By Channel Number
- By Channel Name and Number
- By Time Code Only

If alternate channels are available, Pro Tools expands them to new tracks (including the channel represented in the original track) according to the chosen parameters.

⚠ *It is not possible to rename files encoded with XML metadata. The file extension will always be .A1 and .A2 (even for stereo files). Also, it is not possible to rename files with a .L/.R suffix. As a result, Pro Tools does not always recognize these channels as a stereo pair.*

Expanding Channels by Time Code Only

The Expand To New Tracks By Time Code Only command lets you expand an entire track or only selected regions to new playlists on the same track or to new separate tracks, thus revealing all other regions recorded at the same time code location, regardless of channel name or number. This is especially useful when expanding edited guide tracks to original source audio that was recorded while referenced to time code, but where channel names or numbers were not written to the audio files.

Example Workflow: Working with a Guide Track for Live Concert Videos

1 Multitrack audio is recorded in Pro Tools while chasing time code. A mono or stereo mix is recorded simultaneously as a guide track for the video editor.

2 The picture and audio guide tracks are edited in a video editing application.

3 The edited audio guide tracks are exported from the video editor as an AAF (or OMF) sequence, including handles of at least 2 frames.

4 The AAF (or OMF) sequence is imported into Pro Tools as a new session. The original source audio files and unedited guide track are also imported into the session.

5 The original unedited guide track is relinked to the session (see "Relinking the Original Unedited Guide Track" on page 32).

6 The Pro Tools editor Right-clicks the name of the guide track and selects Expand Channels to New Tracks > By Time Code Only. The original source tracks expand to new tracks with edits and fades that match the guide track.

Relinking the Original Unedited Guide Track

After importing the AAF (or OMF) sequence and original source audio files into the session, it is recommended that you relink the edited guide track to the original unedited source audio.

To relink the original unedited guide track:

1 Open the Project Browser for the session and open the Audio Files folder.

2 Right-click the edited guide track audio file in the browser and choose Relink Selected.

3 In the upper pane of the Relink window, navigate to the original unedited guide track audio file that was recorded in Pro Tools.

If the original unedited file is not available, you can relink to any of the source audio files as long as they have the same start and end times as the guide track.

4 In the Select Files To Relink pane, select the edited guide track file.

5 Drag the original unedited guide track audio file into the Candidates pane. If a dialog appears stating that one or more files are shorter than the media file you are trying to relink, click Yes to select it for relinking anyway.

6 Check the box to the left of the file in the Candidates pane so that the Link icon appears.

7 Click Commit Links at the top of the Relink window and then close the Relink window.

8 You can now Right-click the name of the guide track and select Expand To New Tracks > By Time Code Only. All expanded tracks should be synchronous with the guide track.

chapter 6

Beat Detective Features

Complete Production Toolkit enables additional Beat Detective features for working in Pro Tools.

📑 *For more information about other Beat Detective features, see the Pro Tools Reference Guide.*

Separating Multiple Tracks

You can use beat triggers from a single track, or subset of tracks, to separate a group of tracks.

In the following example, the defined selection is a drum loop consisting of two bars of 5/4. The kick, snare, hi-hat, and overhead microphones are recorded to separate tracks.

Analyzing the loop's kick drum track, with Detection Resolution set to Beats, Beat Detective places beat triggers at the transients on beats 1 and 4 (see Figure 2).
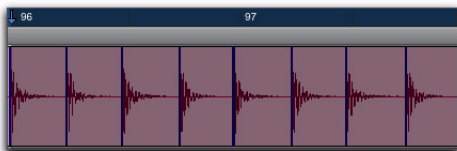
Figure 2. Kick drum track

Extending the selection to the snare, hi-hat, and overhead microphones tracks, and then performing the separation, results in separated regions in each of the drum tracks at the same location, based on the beat triggers from the kick drum track (see Figure 3).
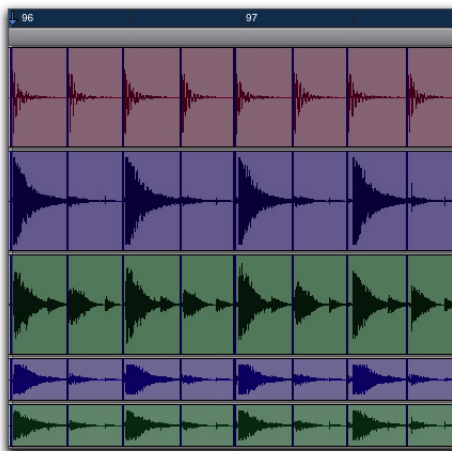
Figure 3. Kick drum, snare, hi-hat, and overhead microphones tracks

The separated regions can then be conformed as a group.

You can also utilize Collection mode when working with multiple tracks. Collection mode lets you analyze and detect triggers on tracks individually, and if you choose, add only the

unique triggers from the current track to the overall collection. For more information, see "Detection (Normal) and Collection Mode" on page 34.

Detection (Normal) and Collection Mode

In some instances, it may be difficult for Beat Detective to successfully analyze multiple tracks with the same Detection settings. With Beat Detective's Collection mode, you can collect a set of beat triggers from different tracks, each with different Detection settings, and use the collection of triggers to generate Bar|Beat Markers or DigiGroove templates, or separate new regions. Collection mode is the only way to analyze and create beat triggers on one track, and apply them to another track.

This method of selectively adding beat triggers from separate analysis passes on different tracks, until you get only the triggers you want, is potentially much more effective than manually deleting, inserting, or adjusting incorrect or false triggers.

Drum Tracks and Collection Mode

Suppose you have drum tracks for kick, snare, hi-hat, and overhead mics. If you analyze a selection across all of the tracks, you may get many false triggers when you raise the Sensitivity slider high enough to capture the hi-hat material (coming mainly from the tracks for the overhead mics).

However, if you analyze only the track for the overhead mics, the resulting beat triggers are slightly later than the material on the other tracks (since it will take more time for the sound to reach the overhead mics). If you then extend

the selection to the other drum tracks and separate them, the regions from the kick, snare, and tom tracks will be cut slightly late (see Figure 4 below).
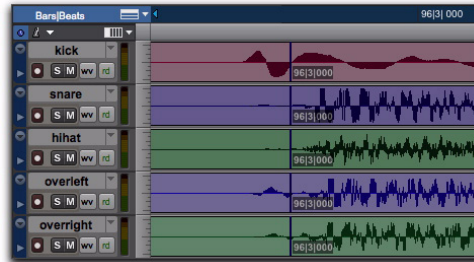
Figure 4. Overhead mics generate late beat triggers

Using Collection mode, you can analyze each drum track separately, one at a time, optimizing the Detection settings for each track until you get the triggers you want. The triggers for each track can be added successively to the collection, or you can choose to collect only the unique triggers from a track. The collection of triggers that results can then be used to generate Bar|Beat Markers or a DigiGroove template, or separate new regions.

Using Collection Mode

Collection mode is available in Bar|Beat Marker Generation, Groove Template Extraction, or Region Separation mode (audio only), and is accessed by clicking the Collection Mode button in the Detection section.
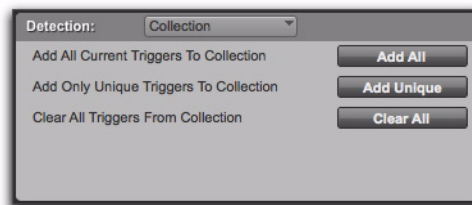
Beat Detective, Collection mode options

To use Collection mode:

1 In the Edit window, make an audio selection on a single track. Make sure the selection's start and end points fall cleanly on the beat.

2 In the Beat Detective window, select one of the following modes:

- Bar|Beat Marker Generation
- Groove Template Extraction
- Region Separation (audio only)

3 Define or capture the selection.

4 Configure the Detection options so the selection's peak transients are accurately detected.

5 Click the Collection Mode button.

6 In the Detection (Collection Mode) section, click Add to add all the current beat triggers to the collection.

7 Click the Normal Mode button and move the selection to the next track you want to analyze. Make sure to keep the selection range constant for each track.

⬛ *Press Start+P (Windows) or Control+P (Mac) to move the selection up, or Start+Semicolon (Windows) or Control+Semicolon (Mac) to move the selection down.*

With Commands Keyboard Focus enabled, press "P" to move the selection up, or Semicolon (;) to move the selection down. Hold down the Shift key to retain and add to the current selection. (See the Pro Tools Reference Guide for information on enabling Commands Keyboard Focus.)

8 Configure the Detection options so the selection's peak transients are accurately detected.

9 Click the Collection Mode button again.

10 Do one of the following:

- In the Detection (Collection Mode) section, click Add Unique Triggers to add only the *unique* triggers from the track to the collection.
- Click Add All to add *all* triggers to the collection.
- Click Clear All to clear *all* triggers from the collection.

Each new set of triggers added to the collection appears in a different color. If successive triggers in the collection are located closely together (for example, because of microphone leakage), Beat Detective keeps only the earlier triggers (see Figure 5 on page 36).

11 Repeat steps 7–10 for each additional track you are analyzing.

The beat triggers stored in the Collection mode are saved with sessions. Therefore, when a session is opened later, the previous collection material is still there (until it is cleared).

12 Once the desired beat triggers have been added to the collection, you can use them to generate Bar|Beat Markers or a groove template, or separate regions. However, this must be done from the Collection Mode section (when the triggers are displayed in multiple colors).

⚬ *To separate regions across multiple tracks, make sure to extend the selection to any additional tracks before separating.*
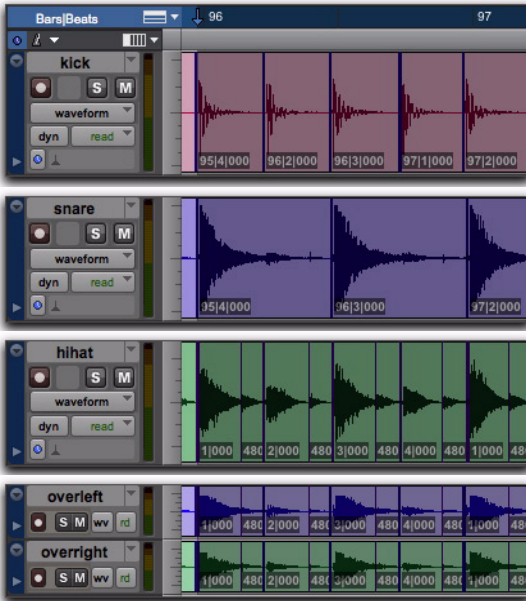
1. Beat triggers detected in Kick track added to collection

2. Unique beat triggers detected in Snare track added to collection

3. Unique beat triggers detected in Hi-hat track added to collection

4. Collected beat triggers applied to Overhead microphones track

Figure 5. Overhead mic track displaying a collection of beat triggers containing unique triggers generated from the kick, snare, and hi-hat tracks

chapter 7

Mixing and Automation Features

Complete Production Toolkit enables additional mixing and automation features in Pro Tools LE.

📖 *For more information on mixing and working with automation in Pro Tools, see the Pro Tools Reference Guide.*

Creating Snapshot Automation

Pro Tools lets you write automation data values for multiple parameters in a single step. You can write snapshot automation in two ways:

To a Selection Automation data is written to the Timeline selection (as well as the Edit selection if linked). Anchor breakpoints are placed just before and after the selection so that data outside the selection is not affected.

To a Cursor Location Automation data is written at the insertion point. After the insertion point, the automation ramps to the next breakpoint value, or if no breakpoints exist, remains at the newly written value for the remainder of the session.

⚠️ *For MIDI automation, the Write To, Trim To, and Glide To commands only apply to MIDI Volume, MIDI Pan, and MIDI Mute. MIDI parameters cannot use the Write To commands.*

To write snapshot automation:

1 In the Automation window, make sure that the parameters you want to edit are write-enabled. Deselect any parameters whose automation you want to preserve.

2 In the Edit window, click the Track View selector to show the automation you want to edit.

3 Write a breakpoint in the playlist if none currently exists, as follows:

- Place the cursor in the playlist (or make an Edit selection), then choose Control+F or ward Slash (/) (Windows) or Command+F or ward Slash (/) (Mac).

– or –

- Select the Grabber tool and click anywhere in the playlist.

4 Do one of the following:

- Select an area in the track's playlist (or within multiple tracks) where you want to apply the automation.

– or –

- Place the cursor at an Edit insertion point.

5 Adjust the controls you want to automate. You can also change a plug-in preset.

6 Choose Edit > Automation and do one of the following:

- To write the current value to only the currently displayed automation parameter, choose Write to Current.

– or –

- To write the current settings for all automation parameters enabled in the Automation window, choose Write to All Enabled.

Adding Snapshot Automation to Empty Automation Playlists

When you use a Write Automation command on an automation playlist with no previously written automation data, the selected value is written to the entire playlist and not just the selected area.

This is because a playlist with no automation data contains only a single automation breakpoint that corresponds to the current position of the control for the parameter. The position of the breakpoint is updated whenever the parameter value is changed.

If you do not want the Write Automation command to write the selected automation value to the entire playlist, you can:

- Anchor the automation data by placing the cursor at the end of the session (or any other end point) and choosing Write to Current.

– or –

- Click with any Grabber tool on each side of the selection.

This lets the Write Automation command write only to the selected area.

Writing Snapshot Automation over Existing Automation Data

When you move the playback cursor, the automated controls in Pro Tools update to reflect the automation data that is already on the track. To keep the settings you have made for a snapshot, you can suspend automation parameters to prevent them from updating.

To write snapshot automation over existing data:

1 In the Automation window, make sure that the automation parameters you want to edit are write-enabled. Deselect any parameters whose automation you want to preserve.

2 Adjust the controls for the parameters you want to automate.

3 Click the Automation Mode selector and select Off mode for the tracks where you want to apply the automation.

4 With the Selector, select the range where you want to apply the automation.

5 Choose Edit > Automation and select one of the following from the submenu:

- To write the current value to only the automation parameter currently displayed in the Edit window, choose Write to Current.

– or –

- To write the current settings for all automation parameters enabled in the Automation window, choose Write to All Enabled.

6 Click the Automation Mode selector and select Read mode for the tracks you want to play back with automation.

Capturing Automation and Applying it Elsewhere

The Write Automation commands can also be used to capture automation states at specific locations in a track and apply them to other locations in the track.

To capture and apply automation:

1 In the Automation window, make sure that the automation parameters you want to edit are write-enabled. Deselect any parameters whose automation you want to preserve.

2 Click the Automation Mode selector and select Read mode for the tracks that have automation you want to capture.

3 Ensure that Options > Link Timeline and Edit Selection is selected.

4 With the Selector tool, select the location where you want to capture automation. All automated controls update to reflect the automation at that location. (If you make a selection, the controls update to reflect the automation at the beginning of the selection.)

5 In each track you want to apply the captured automation, click the track's Automation Mode selector and set the Automation mode to Off.

6 With the Selector tool, select the location where you want to apply the automation.

7 Enable the automation parameters previously suspended.

8 Choose Edit > Automation and select one of the following from the submenu:

- To write the current value to only the automation parameter currently displayed in the Edit window, choose Write To Current.

– or –

- To write the current settings for all automation parameters enabled in the Automation Enable window, choose Write To All Enabled.

9 Click the Automation Mode selector and select Read mode for the tracks you want to play back with automation.

Snapshot Automation and Trimming of Automation Data

Pro Tools lets you use trim values as snapshots and apply the *relative* changes (delta values) to the selected automation by using the Trim Automation command. This works in much the same way as the Write Automation command, except that it writes delta values instead of absolute values to automation data.

You can use trim values in writing snapshot automation to any automatable parameter.

To create a snapshot of relative changes in automation data:

1 In the Automation window, make sure that the automation parameters you want to edit are write-enabled. Deselect any parameters whose automation you want to preserve.

2 Select the area of the track you want to edit. All automated controls update to reflect the automation at the beginning of the selection.

3 Move the controls for the parameter up or down by the amount you want to change the data.

4 Choose Edit > Automation and do one of the following:

- To write the current delta value to only the currently displayed automation parameter, choose Trim to Current.

– or –

- To write the current delta value for all automation parameters enabled in the Automation window, choose Trim to All Enabled.

Glide Automation

The Glide Automation commands let you manually create an automation transition (or glide) from an existing automation value to a new one, over a selected area.

When gliding multiple parameters at the same time, such as with the Surround Panner or plug-ins, use the Edit > Automation > Glide to All Enabled option.

For MIDI automation, Glide To commands only apply to MIDI Volume, MIDI Pan, and MIDI Mute. MIDI parameters cannot use the Write To commands.

To apply a Glide Automation to the current automation parameter type:

1 In the Automation window, make sure the automation type is write-enabled.

2 Click the Track View selector to choose the automation type you want to automate.

3 Drag with the Selector tool in the track to select the area you want to write the glide to.

4 Change the automation parameter to the value you want at the end of the selection. For example, to glide automation volume to –Infinity, move the Volume fader to –Infinity.

5 Choose Edit > Automation > Glide to Current.

[SHIFT] *You can also press Alt+Forward Slash (/) (Windows) or Option+Forward Slash (/) (Mac).*

To do a Glide Automation to all current enabled parameters:

1 In the Automation window, make sure the automation types are write-enabled.

2 In each track you want to automate, click the Track View selector and select from the pop-up menu the automation type you want to automate.

3 With the Selector tool, drag horizontally to include all the tracks you want to automate in a selection (drag vertically to define the time range).

4 In each track you want to automate, change the automation parameter to the value you want at the end of the selection.

5 Choose Edit > Automation > Glide to All Enabled.

[SHIFT] *You can also press Alt+Shift+Forward Slash (/) (Windows) or Option+Shift+Forward Slash (/) (Mac).*

Glide Automation Considerations

When Glide Automation is applied to automation data, it behaves as follows:

• When a selection is made, automation breakpoints are written at the start and end points of the Glide Automation. The automation value at the start of the selection is the start point of the Glide Automation and the end of the selection is the end point of the Glide Automation. The Glide Automation that is created between the two is based on the length of the selection and the end value that is selected.

• If automation breakpoints follow the selection, they are not changed, but the value selected for the end of the selection is written from the end point up until the next breakpoint.

• If no automation breakpoints follow the selection, the value selected for the end of the selection is written to the end of the track.

• If no selection is made, a breakpoint is written to the current location, and the value selected for the Glide Automation is written to the next breakpoint.

Surround Features

Pro Tools LE with Complete Production Toolkit supports surround mixing. Pro Tools supports mixing in the following multichannel (greater than stereo) formats: LCR, Quad, LCRS, 5.0, 5.1, 6.0, 6.1 and 7.1.

Pro Tools LE with the Complete Production Toolkit option and 003, 003 Rack, 003 Rack+, Digi 002, or Digi 002 Rack can monitor mixing in surround up to 7.1.

Pro Tools LE with the Complete Production Toolkit option and Mbox 2 Pro can monitor mixing in surround up to 5.1.

With Complete Production Toolkit, you can open surround sessions on any Pro Tools LE system. Use the Neyrinck SoundCode Stereo down mixer plug-in for monitoring surround sessions in stereo with Pro Tools LE interfaces that have fewer than six outputs. For more information, see the *SoundCode Stereo Guide*.

⚠ *Low Latency Monitoring is unavailable in surround sessions.*

▤ *For information on fundamental surround concepts, see the Pro Tools Sync & Surround Concepts Guide.*

Pro Tools Audio Connections for 5.1 Mixing

While all 5.1 mixing formats provide the same speaker arrangement, there are three primary standards in use for the track layout of the individual channels that comprise the 5.1-format multichannel mix.

In the following table, it is assumed that surround channels are mapped to outputs 1–6 of a Pro Tools audio interface. Use channels 7–8 to monitor a stereo mix for a stereo version, or for cue mixes and monitoring.

Table 1. Track Layouts for 5.1 Formats

Formats	Track Layout					
	1	2	3	4	5	6
Film (Pro Tools default) or C24	L	C	R	Ls	Rs	LFE
SMPTE/ITU for Dolby Digital (AC3) or Control|24	L	R	C	LFE	Ls	Rs
DTS or ProControl	L	R	Ls	Rs	C	LFE

To connect your audio interfaces for 5.1 format mixing and monitoring:

1 Determine the 5.1 format and track layout you want to use.

2 Connect the output channels of your audio interface to the corresponding input channels of your monitoring system according to the assignments listed in Table 1 on page 43.

📄 *If you use a Digidesign control surface, see its guide for more information.*

Configuring Pro Tools for Multichannel Sessions

Configuring Pro Tools and sessions for multichannel mixing can be done in any (or all) of the ways described in this section.

New Sessions

You can create a new session and choose a surround mix I/O Settings file as the *default* I/O Setup. See "New Sessions and I/O Settings" on page 44.

Remixing Sessions in Surround (Importing Multichannel I/O Setups)

By creating or importing a surround mix I/O Settings file in the I/O Setup dialog, multichannel paths can be made available in any stereo (or other format) session. You can then reassign track routing from the original stereo paths to multichannel paths. Inactive and active paths simplify reassignment. See "Importing Multichannel I/O Setups" on page 46.

Custom Multichannel Paths

You can customize and redefine existing paths in the I/O Setup dialog. For more information, see "Custom Multichannel Paths" on page 46.

Importing Session Data

By using the Import Session Data command (File > Import > Session Data), you can import tracks and media from other sessions plus their associated paths and track assignments. After importing session data, you can use the I/O Setup dialog to configure main and subpaths for the requirements of the session.

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

New Sessions and I/O Settings

When you create a new session, you can specify a surround format that you want to use as your I/O Setup. Default path configurations are provided as I/O Settings files, for stereo and surround mixing.

Once you create the new session, you can create and import tracks, import audio, and assign signal routing to set up your mix.

To create a new session for multichannel mixing:

1 Choose File > New Session.

2 Select the Create Blank Session option.

3 Select the Audio File Type, Sample Rate, and Bit Depth as desired.
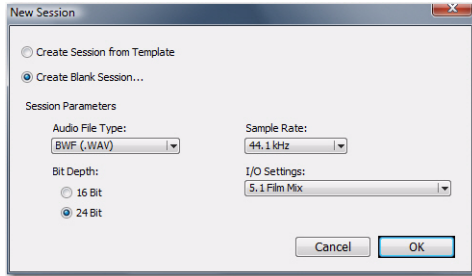
New Session dialog, 5.1 Film Mix I/O setting selected

4 From the I/O Settings menu, select one of the following options:

- 5.1 Film Mix
- SMPTE/ITU
- DTS/ProControl Monitoring

5 Click OK.

6 In the Save dialog, name the session, navigate to the location where you want to save the new session, and click Save.

The surround presets preconfigure the I/O Setup dialog for the new session with default 5.1 format main and sub-paths for outputs and busses.
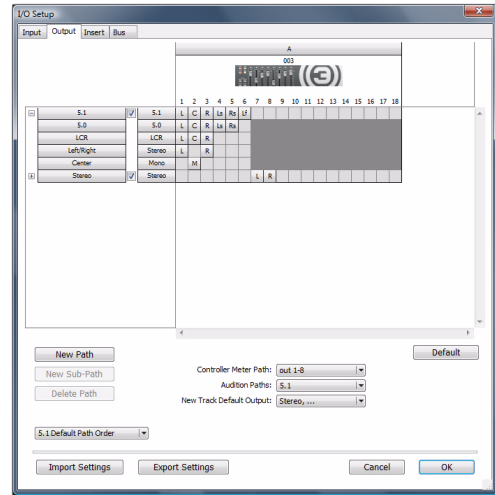
Standard 5.1 format (film) output paths

Surround Mix Settings Files

The surround mix I/O Settings provide output and bus paths for three specific track layout standards in the new session. (For information on inputs and insert paths, see "Default Input and Insert Paths with 5.1 Settings" on page 46.)

Settings Files and Track Layouts

5.1 Settings	Track Layout
Film (Pro Tools Standard, and C24 Monitoring)	L C R Ls Rs LFE
SMPTE/ITU (Control|24 Monitoring)	L R C LFE Ls Rs
DTS (ProControl Monitoring)	L R Ls Rs C LFE

All three 5.1 format I/O Settings (Film, SMPTE/ITU, or DTS) provide the following default output and bus paths for the new session:

Default 5.1 Output Paths

- One 5.1 main output path, with sub-paths for 5.0 (no LFE), LCR, Left/Right (stereo), and Center (mono).

– and –

- One stereo main path with two mono sub-paths.

Default 5.1 Bus Paths

- One 5.1 main bus path, with sub-paths for 5.0 (no LFE), left/right (stereo), LCR, and center (mono).

– and –

- One stereo main path with two mono sub-paths.

Default Input and Insert Paths with 5.1 Settings

The 5.1 Mix settings files provide default stereo main paths and mono sub-paths for inputs and inserts. If you need multichannel input paths or inserts, you can create them in the I/O Setup dialog (see "Custom Multichannel Paths" on page 46).

Importing Multichannel I/O Setups

The I/O Setup dialog can import and export settings files. Importing I/O Setup settings files is useful when you want to remix a stereo session in surround. You can also use this feature to prepare a session for transfer to a different Pro Tools system, or to simply save and exchange I/O Settings.

To import a multichannel I/O Setup settings file:

1 Choose Setup > I/O.

2 Click Import Settings.

3 Select the settings file (.pio) to import and click Open.

4 If the current session has existing path definitions that do not match those in the imported settings file, Pro Tools asks whether you want to delete the existing paths or retain them and add the imported settings to your session.

- Click No to add new paths to your current I/O Setup configuration.
- Click Yes to replace your current I/O Setup configuration with the imported settings.

5 Click OK to close the I/O Setup.

Exporting I/O Settings

Exporting I/O Setup settings files lets you build a library of multichannel setups for different projects.

To export an I/O Setup settings file:

1 Choose Setup > I/O.

2 Click Export Settings.

3 Name and Save your current I/O Settings.

Custom Multichannel Paths

The I/O Setup dialog lets you create and customize signal paths for any supported multichannel mixing format.

Multichannel paths and sub-paths are mapped to inputs, outputs or internal busses in the Channel Grid. When you select a preset 5.1 I/O Settings file, default layout for the corresponding multichannel format paths you create will match the selected format's track layout.

In addition, the I/O Setup dialog, like the Main page of the Hardware Setup dialog, provides controls for routing the physical inputs and outputs on your audio interface to available inputs and outputs in Pro Tools.

When creating 5.1 format paths, you can specify the default track layout. See "Default Path Order for 5.1 Tracks" on page 48.

Remapping Channels

The I/O Setup dialog and its Channel Grid also let you remap channels. This is especially useful to route channels within a multichannel path, without having to repatch your audio interfaces.

You can remap paths to any required configuration, limited only by your systems resources, and the I/O Setup dialog requirements for channel overlapping and naming.

See also "Example Paths and Signal Routing for a Surround Mix" on page 57.

Example LCRS Setup

The following example shows one possible way to configure the I/O Setup dialog to mix in 4-channel LCRS format, with a 003.
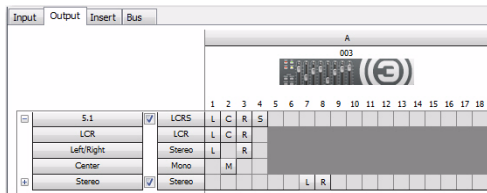
Example LCRS output main and sub-paths

For additional I/O Setup information, see the Pro Tools Reference Guide.

To define an LCRS path:

1 Choose Setup > I/O, and click the Output tab.

2 Click New Path.

3 Select LCRS from the Path Format selector.

4 Name the path LCRS.

5 In the Channel Grid, click in the box below the first (left-most) audio interface channel for the path. Pro Tools automatically fills up the adjacent units to the right. If you click in the LCRS row under channel 1, the LCRS path will be mapped across channels 1–4.

6 Select the new LCRS path and click New Sub-Path.

7 Name the new sub-path LCR and select LCR as the Path format. Click in channel 1 in the LCR row to map the path.

8 Select the LCRS path, click New Sub-Path, and create a stereo sub-path for front Left and front Right.

9 Select the LCRS path, click New Sub-Path, and create a mono sub-path for the Center channel.

10 Select the LCRS path, click New Sub-Path, and create a mono sub-path for the Surround channel.

11 Click OK to close the I/O Setup.

5.1 Tracks, Formats, Mapping, and Metering

Path definitions in I/O Setup determine how audio is routed through, and metered on, your audio interfaces.

Pro Tools internal (on-screen) metering of 5.1 format paths always follows the Film track layout:

L C R Ls Rs LFE

Pro Tools track layout of 5.1 format audio tracks in the Edit window also conforms to the Film layout (arranged top to bottom). See the illustration "5.1 Track Layouts, Routing, and Metering" on page 49.

In the I/O Setup dialog, you can route these signals out of your audio interfaces according to any track layout (such as DTS or SMPTE/ITU).

To re-map channels in a path:

▪ Click and drag a channel to a new valid location in the Grid. Other channel assignments will move (shuffle) to accommodate dragged channels.

Default I/O Selectors in I/O Setup

The Output page of the I/O Setup dialog provides selectors for setting I/O defaults in your multichannel sessions.
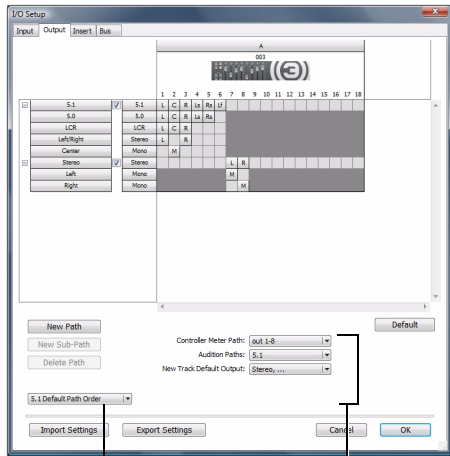
Default Path Order   I/O Setup Options

Default selectors in the I/O Setup dialog

Default Path Order Selects the default track layout (or, path order) for new 5.1 format (six-channel) paths.

Controller Meter Path Selects the path that will be shown in Digidesign control surface output meters. See "5.1 Tracks, Formats, Mapping, and Metering" on page 47 for more information.

Audition Paths Selects the monitoring path for previewing audio in the Region List, Import Audio dialogs, and DigiBase. Only outputs on your primary interface can be used as your Audition path.

New Track Default Output Selects the default output path for all new tracks, for each supported track format.

💡 *The New Track Default Output can be set to bus paths, as well as output paths.*

Default Path Order for 5.1 Tracks

You can specify the default track layout for all new 5.1 format paths you create.

To choose a new default 5.1-format path order (track layout):

1 Choose Setup > I/O.

2 Click the Output tab.

3 Use the 5.1 Default Path Order setting to select the track layout you want (Film, SMPTE/ITU, or DTS/ProControl Monitoring.

5.1 Track Layouts, Routing, and Metering
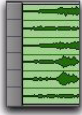
5.1 Format	Tracks	Track Meters	Channel Map in I/O Setup
Film (Pro Tools Standard, and C24) L C R Ls Rs LFE		L C R Ls Rs LFE	L C R Ls Rs LFE
SMPTE/ITU (Control|24 Monitoring) L R C LFE Ls Rs	same L C R Ls Rs LFE (top to bottom)	same L C R Ls Rs LFE (left to right)	L R C LFE Ls Rs
DTS (ProControl Monitoring) L R Ls Rs C LFE	same L C R Ls Rs LFE	same L C R Ls Rs LFE	L R Ls Rs C LFE

Figure 6. Track layout of different 5.1 formats

Routing Audio for Surround Mixing

Surround sessions typically include a combination of mono, stereo, and multichannel audio, Auxiliary Input, Master Fader, and Instrument tracks, and inserts and busses.

Once the appropriate I/O Setup has been imported or configured, audio, Auxiliary Input, Master Fader, and Instrument tracks can be mixed in multichannel for surround using Pro Tools mixing features.

Multichannel I/O and signal routing is determined by the paths defined in the I/O Setup dialog.

If you want independent volume, mute, and solo controls for surround monitoring, you may want to invest in external surround monitoring hardware such as Digidesign C|24™.

Multichannel Audio Tracks

Multichannel audio tracks contain an individual channel for each signal in the track (for example, a 5.1 track would have six channels for left, center, right, left surround, right surround, and LFE).

Multichannel audio tracks can be:

• Recorded directly into Pro Tools, using multiple microphones or microphone arrays, or routed to appropriate multichannel Pro Tools Input paths

• Imported from other Pro Tools sessions

• Edited, processed, and mixed in combination with mono and stereo tracks
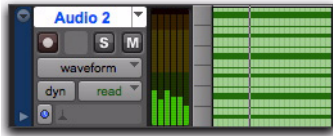
5.1 format multichannel audio track

5.1 format audio files and tracks conform to the Film track layout standard. Regardless of path mapping in the I/O Setup dialog, all 5.1 format audio tracks and meters follow the Film standard track layout:

L C R Ls Rs LFE

Multichannel audio tracks are not required to mix in multichannel formats. Mono, stereo, and all supported track formats can be mixed using Pro Tools track outputs and sends (see "Multichannel Signal Routing" on page 52).

Placing Audio in Multichannel Tracks

You can drag audio files and regions from Digi-Base browsers, the Region List, Windows Explorer, or Mac Finder, or from other tracks, to place them in multichannel audio tracks.

To do so, the number of channels being dragged must match the destination track format. For example, you can only drag a stereo pair or two mono regions onto a stereo audio track. Similarly, you can only place audio into an LCR track when you have selected three regions. With 5.1 tracks, you must select six mono files or regions.

⚠ *When dragged into a multichannel track, audio files are placed from top to bottom in the exact order that they appear in the Region List or playlist from which they came (Top to Bottom must be selected for in the Region List menu > Timeline Drop Order). For this reason, you may want to rename audio files before dragging them, so that they are placed in the preferred order. Rename them so that sorting them By Region Name in the Region List results in the preferred order. (For example, with a 5.1-format track, you can rename the audio tracks so that the arrangement of the tracks corresponds to L, C, R, Ls, Rs, and LFE.)*

Solo, Mute, and Gain in Multichannel Tracks and Paths

Stereo and multichannel tracks consist of multiple audio signals, linked together. By default, multichannel tracks are linked and are controlled by a single channel fader, and solo and mute switches.

For discrete control of signals, multichannel tracks can be converted into individual mono tracks. For discrete level and phase adjustment, you can insert and unlink a multi-mono Trim plug-in. Both of these techniques are explained below.

⚠ *Once converted to mono, multichannel tracks cannot be relinked into their original multichannel format. However, a multichannel track can be reassembled by dragging the corresponding number of mono files (with the appropriate file suffixes) into a multichannel track, although some automation data may be lost. As an alternative, record the submix of the mono tracks to disk on a multichannel track.*

To convert a multichannel track into discrete mono tracks:

1 Select the multichannel track.

2 Choose Track > Split Into Mono.

To have discrete control of gain on individual channels of a multichannel track:

1 Insert a multi-mono Trim plug-in on the multichannel track.

2 Unlink the Trim plug-in by clicking the Link icon so that it is unlit.

3 Use the Channel selector to display the controls for a channel, and adjust the gain.

See "Linking and Unlinking Controls on Multi-Mono Plug-ins" on page 54 for more information.

Track and Output Formats

When you create new tracks, you specify mono, stereo, or a supported multichannel format for the new tracks.

In the Mix and Edit windows, the track format of a track's output is always visible by the number of track meters contained in its fader strip (for example, a single meter for mono tracks, a pair of meters for stereo tracks, and six meters for 5.1 tracks).

Assigning track output determines the format of that output. For example, a mono track always has a single track meter, even when assigned to a stereo output path. If that same mono track is assigned to a 5.1 output path, it's output will be split among those six output channels, depending on the position of its panner.

Changing Format

Changing the output format for a given track has several effects:

• The panner that appears in the track will change to reflect the new output format.

• It may be necessary for one or more pan related automation playlists to be created or deleted.

Because changing the output format has these effects, a warning dialog appears whenever you change the output format of a track to a format of fewer channels. Specifically, this will occur whenever automation playlists will have to be deleted.

Multiple Output Assignments and Track Format

When a track is assigned to more than one path of differing formats, the main output for that track will match the format of the assigned path with the greatest number of channels.

Multiple Outputs and Automation Playlists

When a track has multiple output assignments, Pro Tools sorts panning data appropriately for each assigned path. For example, if you assign a mono track to a stereo path and a 5.1 path simultaneously, that track will have a 5.1 panner in the Mix or Edit window. When you pan the track, Pro Tools interprets the 5.1 panning moves into stereo panning moves.

This provides a type of parallel mixing. You can create a variety of mixes of differing formats all at the same time by routing your elements to multiple paths.

Control-Start-click (Windows) or Command-Control-click (Mac) any control in an Output window to show its automation playlist in the Edit window and view any pan automation.

Multichannel Signal Routing

To mix in a multichannel format, tracks are assigned to multichannel paths.

Tracks can be mixed in surround using the following two methods:

- By setting a track main output to a multichannel path.

- By assigning a multichannel send to route audio to a multichannel path.

This channel's main output path is mono ("Center music"). It has a multichannel send providing a multichannel panner

This channel's output path is multichannel, so the track provides a multichannel panner
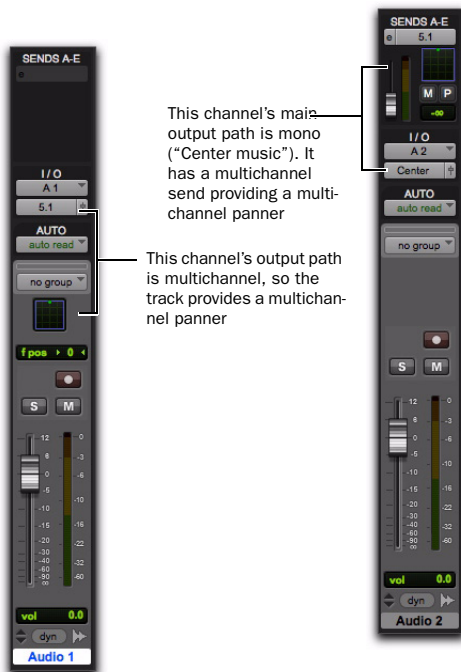
Two different ways to configure tracks for multichannel mixing

Multichannel Track Outputs

Tracks can be routed to multichannel output or bus paths using the track's Output Path selector. This provides a multichannel panner and meter in the Mix and Edit window I/O View.

Additional output assignments can be added by Start-clicking (Windows) or Control-clicking (Mac) the Selector tool and assigning another path.

Multichannel Sends

All track formats, including mono and stereo, let you assign one or more multichannel sends. This provides a multichannel panner in the Sends View. Sends are also useful to bus tracks for multichannel plug-in processing.

Figure 7 shows a mono audio track with a 5.1 (6-channel) send (View > Sends A–E > Send A).

Multichannel send panner

Mono output format

Mono meter
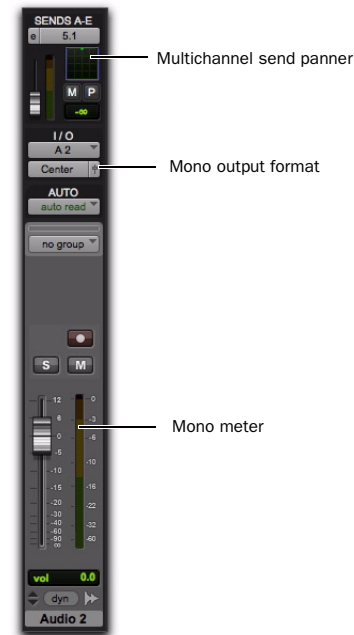
Figure 7. A mono audio track with a mono output format and a multichannel send

Pro Tools bussing and submixing features are available for all channel formats, from mono/stereo through 8-channel. For examples of multichannel monitoring, effects processing, and bussing, see "Mixing with Paths and Sub-Paths" on page 55. For mono and stereo mix examples, see the *Pro Tools Reference Guide*.

Multichannel Auxiliary Inputs and Master Faders

A multichannel Auxiliary Input or Master Fader is used as a return for the multichannel bus. Sends are useful when you need to create an additional, independent mix simultaneously (perhaps of a distinct format), requiring dedicated fader, mute, solo, and automation controls.

You can assign Master Faders to main and sub-paths. Main paths must match the format of the Master Fader, and only one Master Fader can be active and assigned to any single (active) main or sub-path. A Master Fader cannot be assigned to a sub-path if its associated main path is already assigned on another Master Fader.

Multichannel Instrument Tracks

Multichannel tracks can be used to monitor and route multichannel instrument plug-ins or multichannel external MIDI instruments.

Mono, Multi-Mono and Multichannel Plug-ins

Plug-ins can be used in mono, multi-mono, or multichannel formats.

For information about mono, stereo, and mono-in/stereo-out plug-ins, see the *Pro Tools Reference Guide*.

Multi-Mono Plug-ins Are designed for use on stereo or greater-than-stereo multichannel tracks. Multi-mono plug-ins are useful, or required, in the following situations:

• When a plug-in does not involve multichannel correlated processing (for example, when applying EQ to select sides of a multichannel signal)

• When you need to adjust signals within the multichannel track independently

• When a plug-in does not support multichannel formats

When a multi-mono plug-in is first inserted on a multichannel track, the plug-in controls are linked. You can unlink them for independent adjustment. See "Linking and Unlinking Controls on Multi-Mono Plug-ins" on page 54 for more information.

Multi-mono plugs-ins can also be inserted on stereo tracks, to apply unlinked plug-ins on the left and right channels.

Multichannel Plug-ins Are designed for use on stereo and multichannel tracks that require correlated processing, including stereo and multichannel limiting, compression, and similar effects.

Linking and Unlinking Controls on Multi-Mono Plug-ins

When a multi-mono plug-in is used on a multichannel track of more than two channels, the controls are normally linked. Adjusting the Gain control on one channel, for example, will adjust it for all channels.

If necessary, you can unlink plug-in controls on specific channels of a track and edit them independently. You can also selectively link the controls of specific channels.

For example, to apply equal filter cutoffs to the Ls and Rs (surround) channels in a 5.1 mix, you could link enable just those channels in an unlinked, multi-mono EQ plug-in. Adjusting the controls in the plug-in window for either channel (Ls or Rs) adjusts the other, linked channel as well.

Channel selector and Link controls

Channel Selector Accesses a specific channel within a multichannel track for plug-in parameter editing. This menu appears only on multi-mono plug-ins inserted on tracks with more than two channels.

Master Link Button When enabled, links the controls on all channels of a multi-mono plug-in so that they can be adjusted in tandem.

Link Enable Buttons Let you selectively link the controls of specific channels of a multi-mono plug-in. Each square represents a speaker channel. The Master Link button must be disabled to use the Link Enable buttons.

To unlink controls on a multi-mono plug-in:

■ Deselect the Master Link button. It is lit when linked, unlit when unlinked.

To access controls for a specific channel:

■ Select the channel from the Channel selector.

To open a plug-in window for all channels of a multi-mono plug-in:

■ Alt-click (Windows) or Option-click (Mac) the Channel selector.

To link the controls of specific channels:

1 Deselect the Master Link button if it is not already deselected.

2 Click the Link Enable buttons for the channels whose controls you want to link.

For more information on using plug-ins, see the Pro Tools Reference Guide.

Paths in Surround Mixes

Because Pro Tools provides a flexible routing and submixing environment, you can maximize your system's available resources by first identifying the elements that you want to pan dynamically and those that can be placed in certain channels only (see "Mixing with Paths and Sub-Paths" on page 55).

Once you have identified these elements in your session, you can use a combination of main and sub-path assignments, and multichannel panning.

Mixing with Paths and Sub-Paths

It is rare that every track needs to be "flown" (actively panned in between more than a pair of speakers). In most situations, certain elements are placed in certain speakers and remain there, providing the foundation for a mix.

Figure 8 on page 56 illustrates an example of how panning and signal routing can be combined in a multichannel mix. The following sections describe how to organize your session and signal routing to maximize the available resources.

See "Extending Stereo Mixing Conventions to Surround Mixing" on page 58 for related information.

When to Assign Multichannel Outputs

■ Assign 5.1 paths only to those tracks that need to be panned to all six channels.

For example, a sound effects track with a jet fly-over should be assigned a 5.1 path to be able to fly the sound from front-to-back. In a music mix, you can fly a solo instrument or make a synth pad swirl around the room as a special effect.

Elements that need to be heard in all speakers simultaneously can also be assigned to the multichannel output, whether or not they require active panning in the sound field.

When to Use Sub-Paths

■ To help simplify large sessions, use sub-paths to route *static* (or, stationary) elements directly to the output channel or channels.

For example, film dialog is often mixed to the center channel to anchor this essential sound element to the picture. Instead of assigning a six-channel panner to dialog tracks and panning the tracks to the center speaker only, you can route the dialog track's main output to a mono (Center) sub-path.

Tracks routed to subpaths — Tracks routed to main 5.1 surround path — Auxiliary Input routed to main 5.1 surround path

Effect bus routing

Outputs to sub-paths

Outputs to main 5.1 path for surround panning
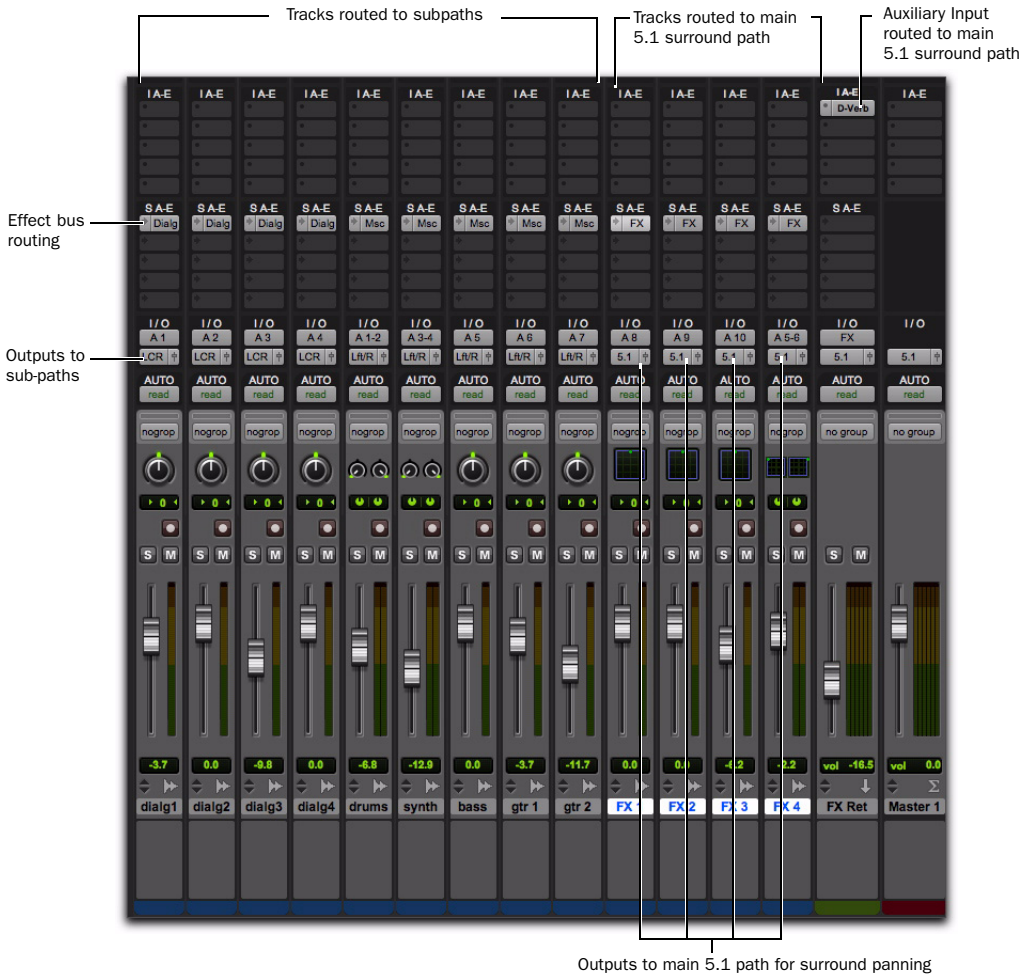
Figure 8. Using signal routing and sub-paths to mix in surround

Example Paths and Signal Routing for a Surround Mix

The examples that follow show how Auxiliary Inputs, Master Faders, and other Pro Tools signal routing features can be used for stem mixes, submixes, and similar project needs.

In these examples, music and effects are being mixed for a trailer, in 5.1 surround. Separate stem mixes (for music and for effects) are to be mastered to 8-track MDM.

Example Multichannel Paths

Signal routing is the key element in any Pro Tools surround session. Signal routing is configured and defined in the I/O Setup dialog.

Example Output Paths

Figure 9 shows output paths defined in the I/O Setup dialog of an example session that was created a 003.
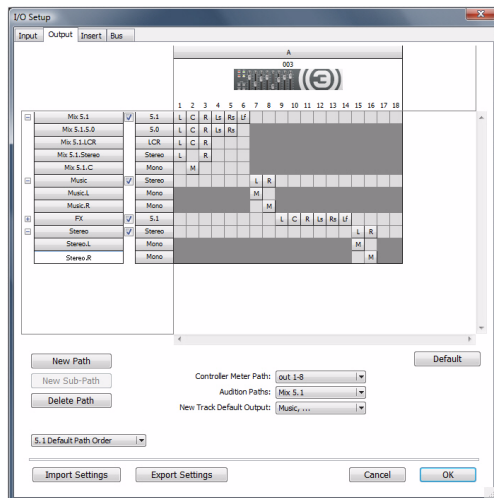
Figure 9. I/O Setup, example output paths

Sub-paths have been defined for Mix, Music, and FX main output paths.

Additional stereo output paths, with mono sub-paths, have also been defined for the remaining channels.

Example Bus Paths

Figure 10 shows example bus paths.
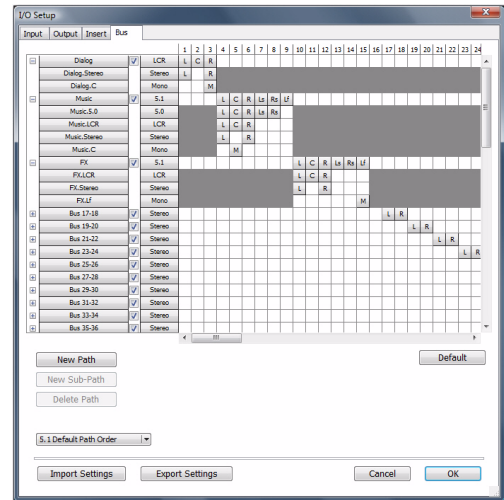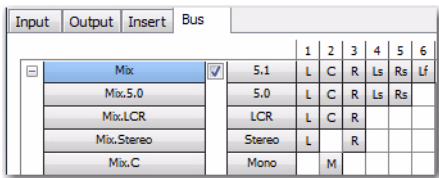
Figure 10. I/O Setup, example bus paths

An LCR format path ("Dialog") and two 5.1 format paths ("Music" and "FX") have been defined, each with several sub-paths.

Example Sub-Paths

Sub-paths let you route to selective channels within the multichannel surround output. In Figure 11, the Mix 5.1 bus has several sub-paths that show this.

Figure 11. I/O Setup, example sub-paths

5.0 Sub-Path The 5.0 path is a 5-channel sub-path. Use this type of sub-path routing to conserve mixing resources with tracks you want to keep out of the LFE channel.

LFE Path A custom LFE sub-path ("Lf") has been added to provide a discrete mono path for the LFE channel.

Signal Routing Examples

The following examples show how main and sub-paths can be used, using an example session consisting of a 5.1 main mix, with music and effects stems (or submixes).

Submix Stem Examples

Figure 12 on page 59 shows a routing configuration for an effects submix. Two tracks are routed to stereo bus sub-paths, while others are assigned to an LCR and a mono bus sub-path. Two tracks (one mono, one stereo) are assigned to multichannel busses for surround panning. A 5.1 Auxiliary Input assigned to the FX main bus path serves as a submixer.

Extending Stereo Mixing Conventions to Surround Mixing

Stereo mixing sets the precedent for active and static panning, and surround mixing can benefit from the same basic principles.

Panning a sound back-and-forth between the left and right speakers is best used as a special effect. In a typical music mix, the basic tracks are placed in the stereo sound field and remain there.

Surround mixes can become incoherent if too many elements are continuously moving, For special effects, some tracks can be panned *dynamically,* bouncing between speakers or sweeping from one side to the other.

Figure 13 on page 59 shows a routing configuration for music tracks.
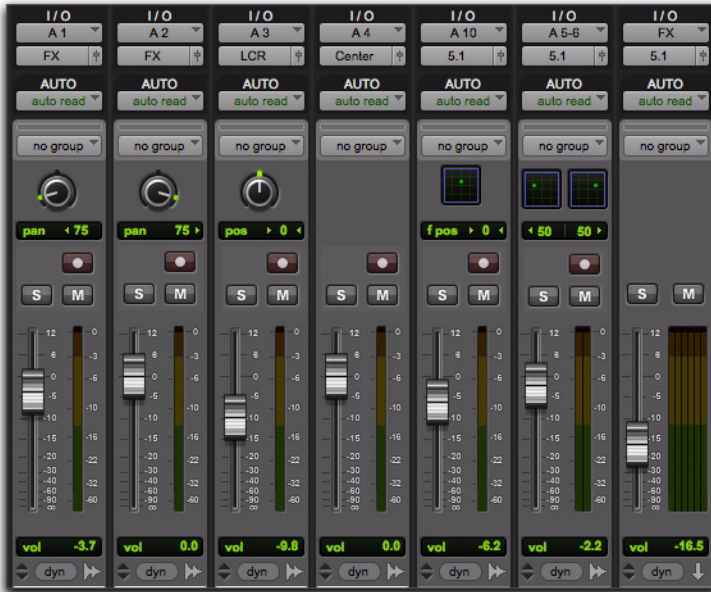
Figure 12. FX stem

Figure 13. Music stem

Most of the music tracks in this example are routed to the front left/right channels, using a stereo sub-path. A 5.1 Auxiliary Input controls the bus and stem output.

Multiple Output Assignments

Multiple output assignments make it possible to configure a number of multi-format mixes. For example, you can assign an additional stereo output to tracks and create a stereo mix at the same time as a 5.1 mix.

LFE Examples

LFE tracks and other audio can contribute to the LFE output in two ways:

• Using the LFE fader in Output windows. This LFE signal is post-fader.

  – or –

• Using a custom sub-path to route channels discretely.

Figure 14 shows a channel Output window, sending and metering to the LFE channel.
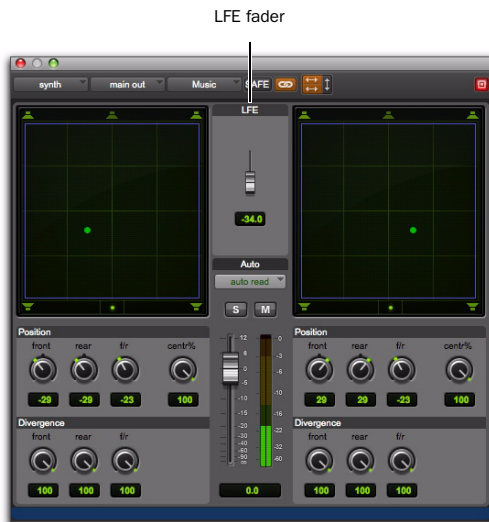
LFE fader

Figure 14. LFE contribution from a stereo output

Using the LFE fader, you can add any amount of any multichannel path to the overall LFE output. In the above example, the track's Center percentage has been turned off, and the LFE fader has been raised to route it to the LFE channel.

Figure 15 shows how a "traditional" LFE track can be routed to only the LFE channel. This example uses a custom-defined LFE sub-path to the FX main bus path.

Main output to mono LFE channel

Figure 15. Discrete LFE routing

💡 *LFE faders can follow Mix and Edit Groups.*

📖 *For instructions on how to create a sub-path, see "Custom Multichannel Paths" on page 46.*

LFE and Filtering

Pro Tools applies no filtering to LFE signals. Some delivery requirements may require filtering for the LFE track. For more information, see the *Pro Tools Sync & Surround Concepts Guide*.

Introduction to Pro Tools Surround Panning

There are four different track panning methods available:

• In the Edit window, using the reduced-height Panner Grid in the I/O View

• In the Mix window, using the reduced-height Panner Grid

• In the Output window, using the full-size Panner Grid

• Through pan automation editing

Control surfaces provide additional panning options. Refer to the documentation for your control surface for more information.

Mix and Edit Window Panner Grids

In the Mix and Edit window, multichannel Panner Grids are displayed on tracks that have multichannel track or send output assignments.

To pan from the Mix or Edit window:

1 To pan in the Edit window, make sure I/O View is being shown (View > Edit Window > I/O). Panner Grids are always displayed in Mix window tracks that support panning.

2 Begin playback.

3 Click and drag on the appropriate multichannel track's Panner Grid in the Mix or Edit windows.

Click and drag to pan

Panning in the Track Grid

The Pan Location cursor follows your movements as long as you hold down the mouse button. Movements are scaled so that, once you click to "grab" the Pan Location cursor, you do not need to limit your movements to the small Track Grid area.

Pan Location Cursor Color while Automating

The Pan Location cursor is green when the track is in Automation Read mode, red in an Automation Touch, Latch, Touch/Latch, or Write modes, and yellow in Automation Off (or Automation Suspend) mode.

In Trim mode, the Volume fader and LFE fader are yellow.

Output windows provide additional features and controls (and a much larger Grid). For details, see "Output Windows" on page 62.

Output Windows

Output windows provide panning controls (called panners), as well as standard Pro Tools controls, for tracks of all mix formats (from 3-channel LCR through 8-channel 7.1).

For information on Output window standard controls, see "Standard Controls" on page 63. For information on Output window panning controls, see "Surround Panner Controls" on page 64.

Some of the features of Output windows include:

- X/Y (joystick-style) panning
- 3-Knob panning
- Full Divergence and Center Percentage control
- AutoGlide
- LFE feed
- Multichannel meters
- Pro Tools target window support

Multiple panners can be opened simultaneously, or a single window can display the current panner.

To open an Output window:

■ Click the Output Window button (it's the small fader at the right edge of the Output selector for a track in the Mix or Edit window (I/O View).

Opening a multichannel Output window

Standard Controls

All Output windows provide standard Pro Tools controls for routing, path assignment and other track features. These controls are located at the top of all Output, Send, Insert, and Plug-in windows. Some controls are specific to the type of window.
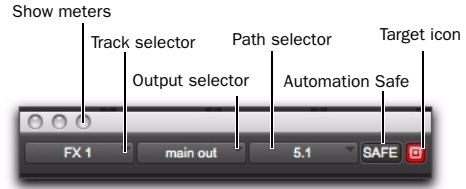
Panner Control section

Track Fader, Solo, Mute, and Auto

All Output windows provide track volume and mute controls. You can adjust and automate track volume, or mute, directly using these controls. The larger fader and Mute button are equivalent to those in the Pro Tools Mix window.

Surround Panner Controls

When assigned to tracks or paths with four or more channels, the Output window provides an X/Y Grid for surround panning. The speakers associated with the panner's multichannel format are displayed in their relative positions outside the Panner Grid. These speakers are also used as Snap Pan to Speaker controls.

This section identifies all the controls and features found in Pro Tools multichannel panners.
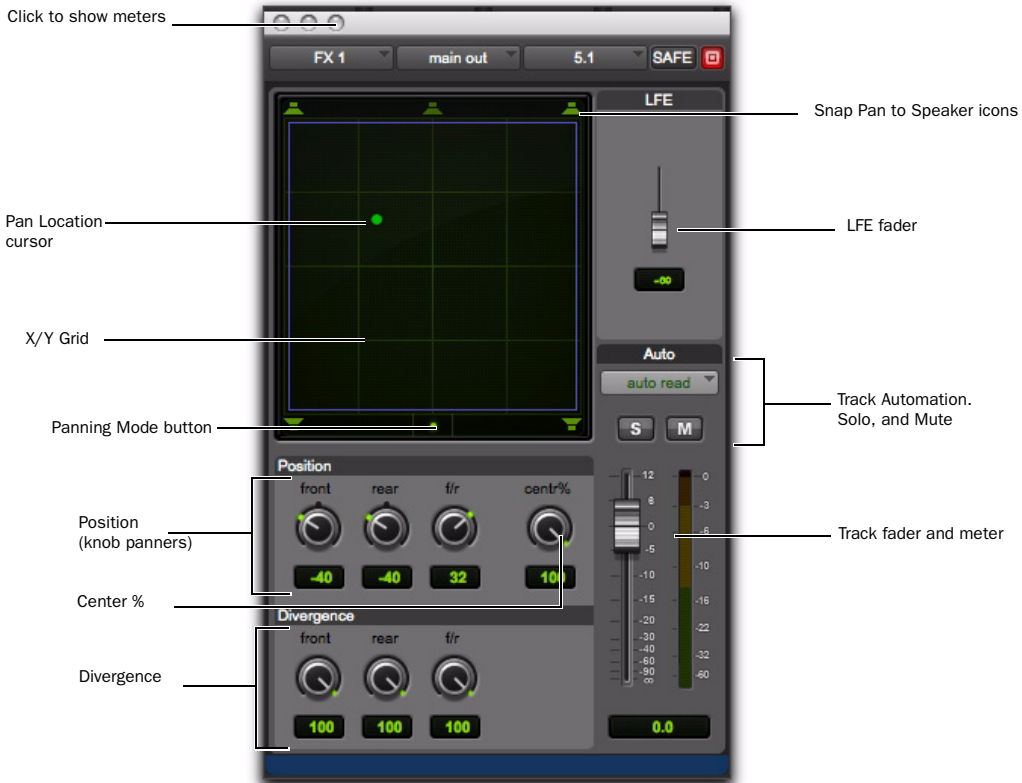
Figure 16. Output window with a 5.1-format multichannel panner

The X/Y Grid and Pan Location Cursor

The X/Y Grid is where multichannel panning information is input and displayed. You can input pan information using X/Y mode, 3-Knob mode, or by entering numeric values in the Position data fields. You can also edit pan automation graphically in the Edit window.
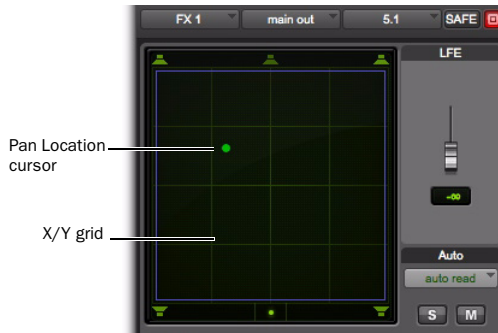
X/Y Grid and Pan Location cursor

Multichannel panners default to X/Y mode. In X/Y mode, the track's current pan position is represented by a green dot. This dot is the Pan Location cursor, and its color indicates track automation status using standard Pro Tools colors:

Green The track is in automation Read mode.

Red The track is in automation Write, Touch, Latch, or Touch/Latch mode.

Yellow The track is in automation Off mode (or Automation Suspend) mode.

Panning Mode Button

This button, located below the X/Y Grid, provides access to Surround panning modes (see "Panning Modes" on page 67).

X/Y mode icon

Panner Mode button set to X/Y mode

Position Controls

The Position controls let you set the positions of the panner.

Position and Center % controls

Front Displays and controls the current front X-axis (left/right) position of the panner.

Rear Displays and controls the current rear X-axis (left/right) position of the panner. In default X/Y Panning mode, Rear is linked to Front position and cannot be controlled independently.

F/R (Front/Rear) Displays and controls the current Y-axis position of the panner.

Center % Control

Center % controls how much of the signal is routed to the center speaker. This lets you mix a track to the front with a phantom center (0% Center value) or to three-channel (LCR) when panning front.

Divergence Controls

Divergence determines the width of the panned signal with respect to neighboring speakers. (For more information, see the *Pro Tools Sync & Surround Concepts Guide*). There are three Divergence controls:

Front, Rear, and F/R Divergence Provide separate, automatable divergence control over front speakers, rear speakers, and between front/rear, respectively.

Divergence controls

📄 *For examples of how divergence settings affect output panning, see "Divergence and Center Percentage" on page 70.*

Snap Pan to Speaker Icons

The Snap Pan to Speaker icons let you force the panner to the speaker's location. For example, clicking on the upper left speaker moves the Pan Location cursor to the upper left corner of the X/Y Grid.

LFE Fader

The LFE fader is only available in ".1" surround formats (5.1, 6.1, and 7.1).

LFE fader

The LFE fader determines how much of the current track's signal will be routed to the LFE channel. LFE faders in Track and Send windows can follow groups. The Pro Tools LFE channel is always full-bandwidth. For more information on how to use the LFE fader, see "LFE Faders in Multichannel Panners" on page 72.

Multichannel Panner Linking

Stereo tracks with multichannel outputs provide left and right multichannel panners. The Output window provides controls to link the left and right channels for precise panning.

When you create a stereo track that is routed to a multichannel output, the following pan linkage controls are active by default:

- Link (links Left and Right pan controls)
- Front Inverse (inverts Left and Right pan control linkage across front)
- Rear Inverse (inverts Left and Right pan control linkage across rear)

The Front/Rear Inverse pan control is unlinked by default.
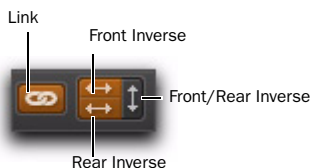
Stereo multichannel panner controls showing default linking

Panning Modes

The Panning Mode button provides access to four panning modes: X/Y mode, Divergence Editing, 3-Knob mode, and AutoGlide mode. Panning controls can be automated in all four modes.

Panning Mode button

Panning Mode button (X/Y mode shown)

Panning Modes

X/Y Mode Joystick-style panning by dragging the Pan Location cursor within the X/Y Speaker Grid. See "X/Y Panning" on page 67 for more information.

3-Knob Mode Point-to-point panning, between pairs of speakers. See "3-Knob Panning" on page 68 for more information.

Divergence Editing The divergence X/Y Grid can be dragged to resize the divergence boundaries. See "Divergence Editing Mode" on page 71.

AutoGlide Mode Point-to-point panning from the Pan Location cursor to a new destination over a specified AutoGlide Time. See "AutoGlide Mode" on page 69 for more information.

To enable a Panning Mode:

■ Click on the Panning Mode button in the Surround Panner until the desired mode icon is displayed.

X/Y Panning

To pan in X/Y mode:

1 Click on the Panning Mode button until the X/Y mode icon is displayed.

X/Y mode icon

Panner Mode button set to X/Y mode

2 Drag the Pan Location cursor, or click anywhere in the Grid and drag to pan the track. The location of the Pan Location cursor determines the pan position of the signal. For example, to pan something to the left rear speaker, move the Pan Location cursor to the lower-left corner of the Grid.

☞ *It is not necessary to click exactly on the Pan Location cursor. Clicking anywhere in the Grid will move the Pan Location cursor relative to where you click or take over with a hardware panner. Panning does not jump to the click position.*

X/Y Panning

To snap the Pan Location cursor to a location in the Grid:

■ Control-Shift-click (Windows) or Command-Shift-click (Mac) at the desired location in the X/Y Grid.

Grid Options and Shortcuts

Fine-Adjust Mode Hold down the Control key (Windows) or Command key (Mac) for fine adjustment of all Panner controls.

Constraining to X or Y Movement Shift-drag the Pan Location cursor to constrain its movement to the X or Y direction.

Reset to Default Alt-click (Windows) or Option-click (Mac) in the Panner Grid to reset all controls to their default position.

Snap Pan to Speaker Click one of the Snap Pan to Speaker icons to force the panner to that speaker location.

Display Automation in Edit Window Control-Start-click (Windows) or Command-Control-click (Mac) a control to display that control's playlist in the Edit window.

☼ *All Pan controls can be automated, including pan position and divergence.*

3-Knob Panning

Pro Tools provides 3-Knob mode as an additional way to input pan moves.

3-Knob mode lets you:

• Pan in straight lines, moving the Pan Location cursor using the Position rotary knobs with full movement of front, rear, and front-rear position.

   – and –

• Pan discretely between pairs of speakers.

For example, when panning front-left to rear-right in 3-Knob mode, audio will be heard from just those two speakers (assuming full divergence is in effect).
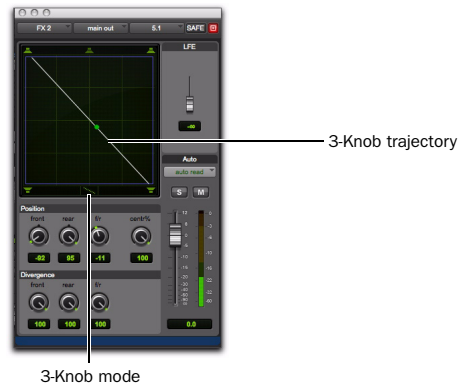
Panning and metering in 3-Knob mode

By comparison, in X/Y mode a diagonal pan may result in audio being heard in some or all channels.

The difference is that 3-Knob mode pans discretely between the front and rear position of the panning *trajectory*, while X/Y mode panning takes place in the full 360° Panning Grid. Divergence and Center Percentage are variable in both Panning modes.

To enable 3-Knob Panning mode:

■ Click on the Panning Mode button until the 3-Knob mode icon is displayed.
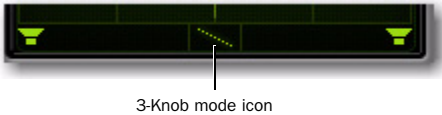
3-Knob mode icon

Panner Mode button set to 3-Knob mode

The panner trajectory line appears across the Grid, extending from the front (X-axis) to the rear (Y-axis).

To pan in 3-Knob mode:

1 Adjust the Front and Rear Position knobs to set the trajectory line.

2 Rotate the Front/Rear Position knob to pan along the trajectory. The Pan Location cursor is constrained to the white trajectory line.

To change the 3-Knob trajectory angles, do one of the following:

■ Drag either end point (Front or Rear) of the trajectory line.

– or –

■ Adjust the Front or Rear Position controls.

To change the current trajectory position (left-to-right) and retain its current angles:

■ Drag the trajectory line (not its end points) to a new position.

AutoGlide Mode

AutoGlide mode lets you quickly write Surround Panner automation by clicking new locations in the Surround Panner window, instead of manually moving the Surround Panner controls.

⚠ *When writing automation in AutoGlide mode, the Pan Location cursor cannot be dragged from its location.*

The time it takes to glide from point to point (from the Pan Location cursor to the new destination) is called the AutoGlide Time. This time is set in the Mixing Preferences page and has a range of 10 msec to 10000 msec (10 seconds).

To set the AutoGlide Time

1 Choose Setup > Preferences and click the Mixing tab.

2 Set the AutoGlide Time in the Automation section.

To do an AutoGlide automation pass:

1 Click the Panning Mode button until the AutoGlide mode icon is displayed.

AutoGlide mode icon
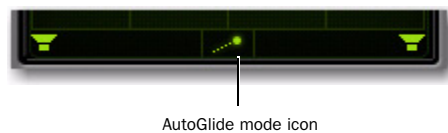
Panner Mode button set to AutoGlide mode

The Panning Mode button displays a slanted dotted line that ends with a filled in dot (representing a cursor) at its top right corner.

2 In the Mix or Edit window, click the Automation Mode selector and select an Automation mode for the track you want to automate.

3 Press Play to begin playback.

4 Set a new destination for the cursor by doing one of the following:

- Click a Snap Pan to Speaker icon to glide to its speaker location.

– or –

- Click in the pan window to glide to a specific location in the X/Y Grid.
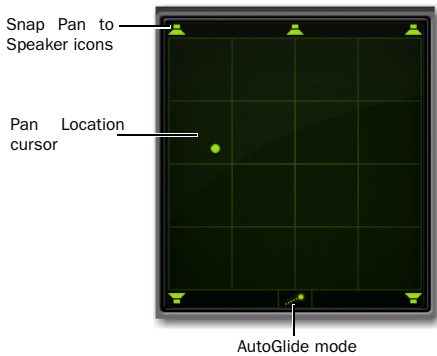
Panning Mode button (AutoGlide mode shown)

The Pan Location cursor will begin to move towards the new destination in the time it takes to travel the AutoGlide Time. When the new destination point is reached, a new breakpoint will be written at the new location.

5 Repeat the previous step if you want to write additional panning moves.

6 Stop the transport when finished.

Divergence and Center Percentage

The Divergence and Center Percentage controls range from 0 to 100, and can be automated. They are especially useful for ensuring audibility and coverage in large venues, and to increase clarity of voices.

Front Divergence Controls divergence between front speakers (X-axis only).

Rear Divergence Controls divergence between the rear speakers (X-axis only).

Front/Rear Divergence Controls divergence between front and rear (the Y-axis).

Center % (Percentage) Determines whether there is a *discrete* center image, a completely *phantom* center image, or a variable amount in between.

Divergence

In the Panner Grid, the current divergence values are displayed using a purple outline.
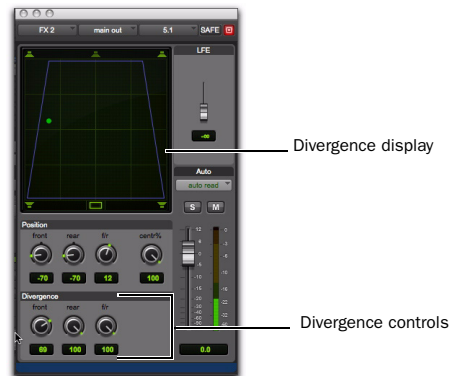
Divergence display and controls

By default, Pro Tools surround panners are 100% or fully divergent, meaning that a signal that is panned completely to one speaker will only be audible in that speaker.

Lower divergence settings result in a progressively wider source signal. When Divergence is less than 100%, tracks will be routed to neighboring speakers to some degree, even when the Pan Location cursor is positioned next to a single speaker.
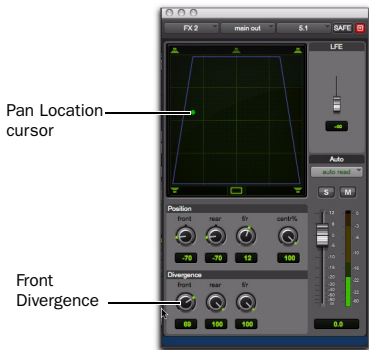
Front Divergence at less than 100% for wider panning

To adjust divergence:

▪ Adjust the Front, Rear, and Front/Rear Divergence controls as necessary.

Divergence Editing Mode

In Divergence Editing mode, you can adjust the divergence boundaries by dragging directly in the Divergence Grid.

To adjust divergence graphically:

1 Click on the Panning Mode button until the Divergence Editing icon is displayed.

Divergence Editing icon
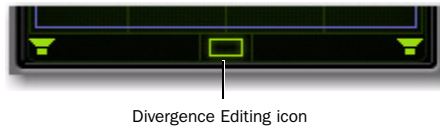
Panner Mode button set to Divergence Editing

2 Drag in the Grid to resize the divergence boundaries.

Center % (Percentage)

Center Percentage controls whether there is a discrete center channel for the track or a phantom center channel.

Center Percentage Example

In film and video production, the center channel often contains dialog. To enhance the clarity of dialog, it is often beneficial to keep elements such as music out of the center speaker. By reducing the Center Percentage on music tracks, music panned to the front of the sound field can be panned to only the left and right speakers, forcing them to have a variable phantom center image.

To adjust Center Percentage:

▪ Adjust the Center Percentage knob as appropriate.

As you reduce the Center Percentage value, the center speaker at the top of the Grid becomes less visible. At 0, the center speaker is completely invisible, reflecting the setting for fully phantom center.
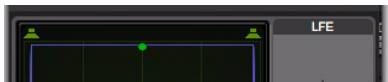
Center % set to 0 (no center speaker shown)

LFE Faders in Multichannel Panners

The LFE fader controls how much of the track is sent to LFE. LFE faders are only available when a track is assigned to a path whose format supports LFE (5.1, 6.1, or 7.1).

To mix to the LFE channel:

▪ Adjust the LFE fader in any ".1" surround format Output window.

📖 *For general information about LFE, sub channels, and related topics, see the Pro Tools Sync & Surround Concepts Guide.*

LFE Faders and Groups

Track and send LFE faders can follow Mix and Edit Groups by being enabled in the Group Attributes page in either the Create Groups or Modify Groups dialog. LFE faders can be assigned to follow groups as a global attribute or on a group by group basis.

LFE Enable

Some multichannel plug-ins, including the multichannel DigiRack Dynamics III Compressor/Limiter, provide LFE Enable. This lets you enable or bypass processing of the LFE channel if present.
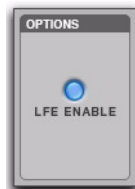
LFE Enable in the multichannel DigiRack Dynamics III Compressor/Limiter

To process the LFE channel in a multichannel plug-in:

▪ Click to enable LFE Enable in supporting multichannel plug-ins. LFE Enable is highlighted when LFE processing is enabled, and unhighlighted when LFE processing is bypassed.

💡 *When LFE Enable is unavailable, try using the multi-mono version of the plug-in.*

Pan Playlists

Multichannel panners have an automation playlist for each position and divergence control.

📖 *Pan automation can be drawn, edited, cut, copied, and pasted from the Edit window. For more information, see the Pro Tools Reference Guide.*

Surround Scope Plug-in

The Surround Scope plug-in provides a 360°
meter for metering multichannel paths during
mixing.

5.1 Format Track Layouts

All 5.1-format meters (including those displayed
in the Surround Scope meter, on tracks, and in
Output windows and their Path Meter Views)
are always arranged in the following order:

L C R Ls Rs LFE

📋 *For more information on Pro Tools meter-
ing, see "5.1 Tracks, Formats, Mapping,
and Metering" on page 47.*

To use the Surround Scope Plug-in:

■ On a multichannel Master Fader, click an In-
sert button and select Multichannel TDM plug-in >
Sound Field > Surround Scope.

Surround Scope displays output levels in both a
360° Grid, and in traditional LED meters.

📋 *For detailed information on Surround
Scope, refer to the Digidesign Plug-ins
Guide.*

chapter 9

Time Code and Synchronization Features

Complete Production Toolkit enables various time code and synchronization features for working with audio, film, video, or digital video in Pro Tools LE.

📖 *For more information on working in Pro Tools with time code and synchronization, see the Pro Tools Reference Guide.*

Timebase Rulers

Complete Production Toolkit adds three additional Timebase rulers to Pro Tools LE sessions: Time Code, Time Code 2, and Feet+Frames. In Pro Tools LE with the Complete Production Toolkit option, you can spot audio to Time Code or Feet+Frames.

📖 *For information on other Timebase rulers, see the Pro Tools Reference Guide.*

To add one of these rulers to the Timebase ruler:

▪ Do one of the following:
  - Select View > Rulers > Time Code.
  - Select View > Rulers > Time Code 2.
  - Select View > Rulers > Feet+Frame.

Time Code Displays the Time Scale in SMPTE frames. The Time Code Rate and Session Start time are set from the Session Setup window. The Time Code Time Scale is absolute based on the frame rate.

Pro Tools supports the following frame rates:
- 23.976 FPS
- 24 FPS
- 25 FPS
- 29.97 FPS
- 29.97 FPS Drop
- 30 FPS
- 30 FPS Drop

Secondary Time Code Ruler A secondary time code ruler, labeled Time Code 2, lets you reference video frame rates in the Timeline that are different from the session Time Code rate. However, you *cannot* Spot to the Time Code 2 ruler and it *cannot* be set as the Main Time Scale. The secondary time code ruler can be set to show any Pro Tools supported frame rate. The Time Code 2 ruler can also display the additional following frame rates:
- 50 FPS
- 59.94 FPS
- 59.94 FPS Drop
- 60 FPS
- 60 FPS Drop

Feet+Frames Displays the Time Scale in feet and frames for referencing audio-for-film projects. The Feet+Frames time display is based on the 35 millimeter film format. The Feet+Frames Time Scale is absolute based on the frame rate.

Secondary Time Code Ruler

Pro Tools LE with the Complete Production Toolkit option provides an additional Timebase ruler, labeled Time Code 2. This secondary time code ruler lets you re-reference video frame rates in the Timeline that are different from the session time code rate.

The Time Code 2 ruler can be set to show any of the following rates:

- 23.976 FPS
- 24 FPS
- 25 FPS
- 29.97 FPS
- 29.97 FPS Drop
- 30 FPS
- 30 FPS Drop
- 50 FPS
- 59.94 FPS
- 59.94 FPS Drop
- 60 FPS
- 60 FPS Drop

The Time Code 2 ruler cannot be set to the Main Ruler in Pro Tools.

Half-Frame Nudge/Grid

Pro Tools provides an additional grid resolution of 1/2 Frame to allow for easy alignment of material when referencing a high-definition (HD) frame rate on the secondary time code (Time Code 2) ruler.

Selecting Time Code and Time Code 2 Rates

The Time Code Rate and Time Code 2 Rate for the session can be set in the Session Setup window with the Time Code Rate and Time Code Rate 2 selectors. The Time Code ruler displays the Time Scale in SMPTE frames (hours:minutes:seconds:frames).

Pro Tools supports the following rates and formats: 23.976 fps, 24 fps, 25 fps, 29.97 fps Non-Drop, 29.97 fps Drop, 30 fps Non-Drop, and 30 fps Drop. In addition, Complete Production Toolkit supports audio pull up and pull down (see "Pull Up and Pull Down Commands" on page 78).

📄 *See the Pro Tools Reference Guide for more information on time code and synchronization.*

Selecting Feet+Frame Rate

The Feet+Frame Rate for the session can be set in the Session Setup window with the Feet+Frame Rate selector. Supported rates are 23.976, 24, and 25 fps.

Set this rate to match the rate of the film projector, or the video if the film projector speed is taken into account.

Redefining Time Code Position

Redefining a Time Code Position

Use the Current Time Code Position command to redefine the current time code position and session start time. By creating an insertion point (or selection), and then entering the new time code position for that location, the session start time will be recalculated based on the new, relative Time Code location.

To redefine a current Time Code code position:

1 With the Selector tool, click in a track (or make a selection) where you want to redefine the position.

⚠ *If your insertion or selection is not on a grid boundary, it will round to the closest boundary.*

2 Choose Setup > Current Time Code Position.

3 Enter a new SMPTE frame number in the dialog to correspond to the time code shown in the dialog.

4 Click OK.

Displaying Time in SMPTE Frames

In Pro Tools, you can set the Main Time Scale to Time Code (SMPTE) and this will be displayed in the Main Counter. Though Pro Tools will still synchronize to incoming SMPTE time code if the Time Scale is displayed in Bars|Beats, Minutes:Seconds, or Feet.Frames, it is usually more useful to use SMPTE time code as your reference.

To set the Main Time Scale to SMPTE Time Code, do one of the following:

■ Choose View > Rulers > Time Code.

– or –

■ Click the Main Counter selector in the Edit window and select Time Code.

Pro Tools displays time code values in the currently selected SMPTE frame rate.

Sub Counter and Sub Time Scale Display

You can display a Sub Time Scale in the Sub Counter. For example, if the Main Time Scale is set to Time Code, and you want to compare SMPTE time to "wall clock," when you are using 29.97 Non-Drop frame rate, click the Sub Counter selector and select Min:Secs as the Sub Time Scale.

Redefining Current Feet+Frames Position

Use the Current Feet+Frames command to redefine the Feet+Frames position at the current insertion point. The session start time is recalculated based on the new, relative Feet+Frames location.

Typically, this command is used for integrating test tones, pre-roll, Academy leader, and similar pre-program material into Pro Tools sessions. Redefining Feet+Frames does not redefine the session start time.

To set a relative frame position for a session (Feet+Frames):

1 With the Selector tool, click in a track (or make a selection) where you want to redefine the position.

⚠ *If your insertion or selection is not on a grid boundary, it will round to the closest boundary.*

2 Choose Setup > Current Feet+Frames Position.

3 Enter a Feet+Frame position to correspond to the time code shown in the dialog.

4 Click OK.

Use Subframes Option

When spotting or shifting material in Pro Tools, or using the Go To dialog, enable the Use Subframes option for greater precision.

Shift dialog with the Use Subframes option enabled

A subframe is 1/100th of a frame. The Use Subframes option enables you to use these smaller units for greater accuracy. When enabled, this command adds a decimal and two decimal places of additional time for subframes in SMPTE and Feet+Frames–based fields in the Spot, Shift, and Go To dialogs.

Pull Up and Pull Down Commands

Use Audio Rate Pull Up/Down and Video Rate Pull Up/Down for audio layback to film or video, or when recording audio for film or video. See the *Pro Tools Reference Guide* for more information.

⚠ *When using Audio Rate Pull Up/Down, Complete Production Toolkit does not automatically adjust the Pro Tools sample rate clock during playback or recording. To synchronize to your external device, or to do a real-time transfer, you must manually adjust your external (S/PDIF or Optical) clock device according to the pull factors that are being used.*

⚠ *When using a video I/O (such as the Avid Mojo®) as the S/PDIF clock source, Audio Rate Pull Up/Pull Down is not supported.*

Audio Rate Pull Up/Down Applies pull up or pull down factors to session audio record and playback. The Audio Rate Pull Up/Down pop-up menu is located in the Session Setup window.

Video Rate Pull Up/Down Lets you change the frame rate of video playback independently from the audio pull-ups (if any). The Video Pull Up/Down pop-up menu is located below the Audio Rate Pull Up/Down pop-up menu in the Session Setup window. Choices are determined by the file format of the video clip, as well as its frame rate.

Audio Pull Down Factors and QuickTime Movies

Audio "pulls" are an industry standard method of adjusting the speed of audio playback to line up with off-speed picture.

In normal industry standard workflows, when audio is pulled down, video and time code maintain their current speed, and only the audio and MIDI are pulled down, in relationship to the video and time code.

For example, when 24 frame film to 29.97 NTSC video transfers are made, it is necessary to slow the film playback speed during the transfer process by 0.1%.

In order to make the same speed change for production audio to match the speed of this new slower picture, Pro Tools audio needs to also be "pulled down" by 0.1%.

To slow audio in Pro Tools, the audio can either be sample rate converted on import or the incoming word clock sample rate source must be "pulled down" by 0.1% (resulting in a 48,000 Hz session speed to be pulled down to play in real time at 47,952 Hz). The pull down setting in Pro Tools adjusts the visual representation of regions on the timeline to equal the word clock pull up/down change.

When the clock is reset to the non-pulled down sample rate, the audio plays at the original film speed.

⚬ *MIDI is always pulled in line with audio pulls.*

Complete Production Toolkit for Pro Tools LE offers limited pull capabilities, primarily for Pro Tools HD users who have a secondary Pro Tools LE system that they use to perform smaller tasks or for remote work.

Although Complete Production Toolkit for Pro Tools LE offers some pull down options, it does not have the ability to adjust the internal sample clock the same way Pro Tools|HD systems do in tandem with the Digidesign SYNC I/O peripheral.

Since Complete Production Toolkit for Pro Tools LE does not have any means to adjust the Pro Tools sample clock, it instead simulates the audio/video pull relationship by pulling up the video instead of pulling down the audio. This maintains the proper video/audio speed relationship when using the fixed Pro Tools internal clock. The audio sample clock is not pulled down, so the digital outputs are not outputting a pulled down sample clock.

If you are using an external clocking source (such as S/PDIF or ADAT Optical), Pro Tools audio and MIDI are resolved to the digital input's clock speed. If you select audio pull down, the audio still doesn't pull down in Pro Tools LE; the video still pulls up to maintain the proper relationship, and the actual Pro Tools sample rate is now dependent on the digital clock source. However, if the incoming digital clock speed is *pulled down*, Pro Tools audio and MIDI will run at a pulled down rate, and the video will play back at its normal speed.

When pull down is selected in Complete Production Toolkit for Pro Tools LE, the following occurs:

- If the external clock is not pulled down, the actual sample rate of Pro Tools LE audio and MIDI is not pulled down, but the video is pulled up.
- If the external clock is pulled down, the actual sample rate of Pro Tools LE audio and MIDI is pulled down, and the video plays at its original non-pulled speed.

chapter 10

Video Features

Complete Production Toolkit enables additional session and track features (including DigiBase Pro) for working with video in Pro Tools LE.

📖 *For more information on working with Pro Tools sessions and tracks, see the Pro Tools Reference Guide.*

Video Track Support

Complete Production Toolkit adds the following video track support to Pro Tools LE:

- Multiple video tracks in the Timeline
- Multiple QuickTime movies on individual video tracks
- Multiple playlists for video tracks

Multiple Video Tracks in the Timeline

You can add multiple video tracks to the Timeline, but only one video track can be played back at a time. This track is known as the main video track.

Multiple Video Track Playlists

Playlists provide an easy way of changing back and forth between alternate versions of a video track.

You can perform all of the same operations with video playlists as you can with audio playlists, including:

- Duplicating a playlist
- Creating a playlist
- Assigning a playlist to another video track
- Renaming a playlist
- Deleting a playlist

Multiple Codecs on an Individual Video Track

A single video track can contain video regions compressed with different video codecs of the same type of video. For example, you can add QuickTime files that were compressed using multiple codecs to the same video track.

However, once the first video file has been added to a session, all additional video files added to the Timeline must have the same video frame rate as the first video file.

Support for Video Import Options

Complete Production Toolkit adds the following options to Pro Tools LE when using the Video Import Options dialog to import video into Pro Tools:

Destination Section

Region List Imports the video file directly into the Region List, where it will be available to drag and drop into Pro Tools.

Additional Video Import Options

Gaps Between Regions When you import more than one video file into a track, they will be shuffled together by default. This option lets you indicate the number of seconds by which each video clip will be separated when imported into the video track.

Bypassing the Video Import Options Dialog

To bypass the Video Import Options dialog when importing video into Pro Tools:

■ Alt-drag (Windows) or Option-drag (Mac) one or more video files from a DigiBase browser into the Region List.

Dragging Video Files from the Region List to the Timeline

You can add video files to the Timeline by dragging and dropping directly from the Region List to a video track.

To add video files to a video track by dragging them from the Region List:

1 Select one or more video files in the Region List.

2 In any Edit mode, drag the selected video files to a blank area in the Timeline (to create a new video track) or an existing video track (to place it within that track).

Video Regions

You can create video regions that function in much the same way as audio regions.

Video region as displayed in Frames View in the Timeline

A video region is a segment of video data, and can be a portion of video or an entire video file. In Pro Tools, video regions are created from QuickTime, Windows Media, or Avid video files, and can be arranged in corresponding video track playlists. Video regions can also be grouped, looped, and color coded.

Just like audio regions, video regions display in Pro Tools in the Region List or the Timeline.

Video Regions in the Region List

A video region displays in the Region List with a small video icon next to its name.
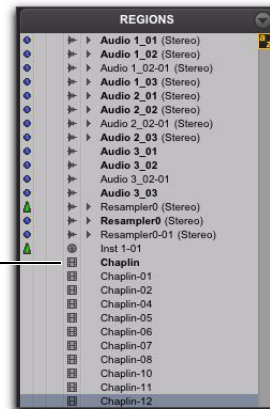
Video region icon —

Video region as displayed in the Region List

Showing or Hiding Video Regions in the Region List

The Region List menu provides commands that let you show or hide video regions in the Region List.

To show or hide video regions in the Region List:

1 In the Edit window, click the Region List menu, and choose Show.

2 Select the Video option to show or hide video regions.

General Video Editing

Most editing operations that are available for audio regions can also be applied to video regions. This section describes all available video editing operations. Unless noted, the procedure for each video editing operation is the same as its audio editing counterpart.

Basic Video Editing Features

- Nondestructive editing
- Display of region names, region times, and other data in playlists
- Multiple video playlists
- Multiple Undo
- Video regions and video region groups in Region List
- All Edit modes
- All Edit Tools (except for Time Compression Expansion and Pencil tools)

Playing and Selecting Video Track Material

- Selecting within video frame boundaries
- Selecting and editing across multiple Video and audio tracks
- Link or unlink track and Edit selections
- Auto-scroll video tracks
- Loop playback
- Video Universe window

Working with Regions and Selections

- Capture regions
- Separate regions and Separate Grabber Tool
- Region overlap and underlap
- All trimming commands except for TCE
- Heal separated regions
- Place, align, slide, shuffle, and spot regions
- Sync points
- Nudging (quantized to frame boundaries)
- Shift command (moving track material back or forward in time by a specified amount)
- Quantize Region to Grid (rounds to nearest video frame)
- Replace Region command
- Cut, Copy, Paste, and Clear commands
- Special Cut, Copy, Paste, and Clear commands
  - Repeat to fill selection
  - Editing across multiple tracks
- Duplicate command
- Repeat command
- Region groups
- Region looping

Managing Regions

- Insert space
- Compact Selected (nothing happens to the video, and at least one audio track must be selected)
- All naming and displaying of region commands

Editing Caveats

The following caveats apply to video editing in Pro Tools:

- MPEG-2 video in the Timeline cannot be edited.
- If you create and enable a track group containing audio and video tracks—and any audio track has region boundaries that do not line up with video frame boundaries— you cannot tab through those region boundaries.

General Editing Operations Not Applicable to Video Regions

The following editing operations are applicable to audio regions, but are not applicable to video regions:

- Fades
- Mute/unmute regions
- AudioSuite plug-ins
- Waveform Repair with the Pencil tool
- Strip silence
- Consolidate regions

Selecting and Editing Across Multiple Audio and Video Tracks

You can create a selection across multiple audio and video tracks, and cut, copy, or paste audio and video simultaneously.

before
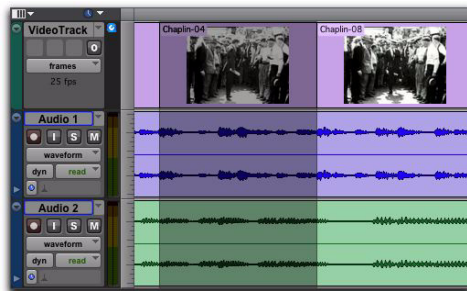
after
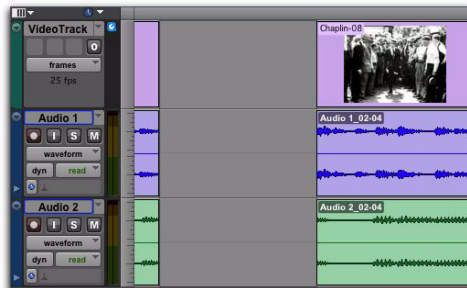
Selecting and editing across multiple tracks (Slip mode shown)

Audio and video that is selected and cut, copied, or pasted follow the current Edit mode.

Selecting within Video Frame Boundaries

Pro Tools does not let you select, play back, or edit a partial video frame. The following rules apply when selecting or editing video:

- When you make a selection in a video track, the selection boundaries follow the current Grid setting but round to the nearest video frame boundary, as follows:
  - If the selection includes more than half of a video frame, the full video frame is included within the selection.
  - If the selection includes less than half of a video frame, that video frame is not included in a video selection.
- When you paste a selection containing video to a video track, the insertion point automatically aligns with the closest video frame boundary.

⚠ *When you paste audio and video simultaneously, this video frame re-alignment may result in the audio not being positioned exactly where you placed it. A warning dialog displays when this occurs.*

Using the Insert Silence Command to Insert Space in Video Tracks

The Insert Silence command lets you make a selection on a track (or tracks) and insert precisely that amount of space. You can also select across video and audio tracks, and use the Insert Silence command to insert audio silence and space simultaneously.

In Shuffle mode, all video data on the track is shuffled later in the track by an amount equal to the selection. In Slip, Grid, or Spot mode, the Insert Silence command works just like the Edit > Clear command.

To insert space into a video track:

1 Make a selection in a track or tracks. The length of the selection determines the duration of the space inserted.

2 Choose Edit > Insert Silence.

Video Region Groups

You can include video regions within region groups for the following operations:

- Creating region groups
- Creating multitrack region groups (including audio tracks)
- Editing region groups
- Creating fades and crossfades for audio files in region groups
- Importing and exporting region group files

Browsing Video in the Video Universe Window

The Video Universe, lets you view, navigate, zoom, and select video regions on the main video track.

The Video Universe window displays the center video frame of each video region in the main video track. Video frames are ordered sequentially according to their order in the Timeline, and the colored strip under each frame represents the color coding for that region.

To display the Video Universe window:

1 Make sure the Video Online button in the main video track is set to online status (blue).

2 Choose Window > Video Universe.
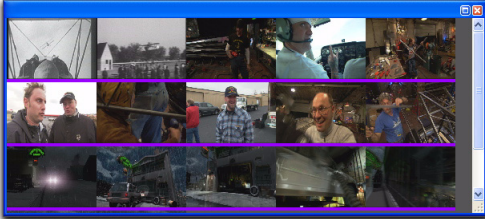
Video Universe with video frames representing video regions on the main video track

Increasing or Decreasing the Size of Video Frames

To increase or decrease the size of video frames in the Video Universe window:

▪ Right-click (Windows or Mac) or Control-click (Mac) anywhere in the Universe, and select Increase or Decrease.

Selecting Zoom Resolutions in the Video Universe

When you move the cursor over the top half of a video frame in the Video Universe, it displays and behaves as a zoom tool. This tool lets you zoom in on one or more video regions to fill the entire Edit window display.
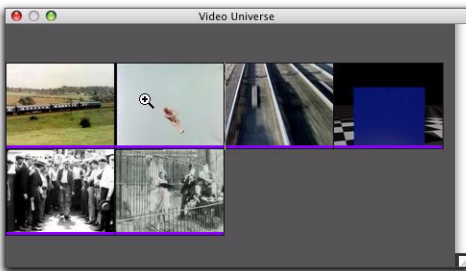
Video frame with zoom tool

To use the Video Universe window to zoom video regions in the Edit window:

1 Move the cursor over the top half of any video frame until it becomes a zoom tool.

2 Do one of the following:

- To move the beginning of a video region to the far left of the Timeline while maintaining the current zoom resolution in the Edit window, click the video frame representing the region once.

- To zoom in on a video region so that it fills the entire Edit window, double-click the video frame representing the region.

- To zoom a range of selected regions so that they fill the Edit window, click and drag on the video frames that represent the regions.

Selecting Ranges in the Video Universe

When you move the cursor over the bottom half of a video frame in the Video Universe, it displays and behaves as a selector tool. This tool lets you select ranges within one or more video regions in the Edit window.

Video frame with selector tool

To use the Video Universe window to select ranges in video regions in the Edit window:

1 Move the cursor over the bottom half of any video frame until it becomes a selector tool.

2 Do one of the following:

- To place the cursor at the beginning of a video region, click the video frame representing the video region.

- To select an entire video region from start to end, double-click the video frame representing that region.

- To select one or more entire regions from start to end, drag the video frames representing the video regions.

If the Edit window does not display the selected video regions, it will automatically scroll to show the beginning of the selection.

Selecting Zoom Resolutions and Ranges Simultaneously in the Video Universe

When you move the cursor over a video frame in the Video Universe while pressing Alt (Windows) or Option (Mac), the cursor appears as a selector tool. This tool lets you zoom and select ranges simultaneously.

To use the Video Universe window to select and zoom simultaneously in the Edit window:

1 Move the cursor over any area of any video frame in the Video Universe window until it becomes a selector or zoom tool.

2 To select a range of video regions while simultaneously zooming to fill the Edit window, Alt-drag (Windows) or Option-drag (Mac) multiple video frames.

chapter 11

Included Plug-ins

Complete Production Toolkit includes the following plug-ins:

- DINR LE
- Eleven LE
- Hybrid
- SoundCode Stereo
- Smack! LE
- Structure LE
- TL Space Native
- X-Form

DINR LE

The LE version of Digidesign Intelligent Noise Reduction (DINR) is included with the Complete Production Toolkit option. DINR LE provides broadband and narrowband noise reduction for suppressing such unwanted elements as tape hiss, air conditioner rumble, and microphone preamp noise.

📄 *For more information, refer to the Digidesign Plug-ins Guide.*

Eleven LE

The Eleven LE guitar amplifier plug-in gives you stunning guitar amplifier, cabinet, and microphone models of the "best of the best" vintage and contemporary gear.

📄 *For more information, refer to the Digidesign Eleven Plug-in Guide.*

Hybrid Synthesizer

The Hybrid synthesizer plug-in, developed by Digidesign's Advanced Instrument Research (A.I.R.) group, combines the warmth of legendary analog synthesizers with the powerful features included in popular digital synthesizers.

Hybrid features a sample-accurate synthesis engine with 23 filter modes with true saturation, plus endless modulation and performance capabilities.

📄 *For more information, refer to the Hybrid Plug-in Guide.*

SoundCode Stereo

The Neyrinck SoundCode Stereo plug-in is an RTAS plug-in that down mixes a surround mix to a stereo mix for Pro Tools HD and Pro Tools LE surround compatible systems. The plug-in supports all Pro Tools surround formats (LCR, LCRS, Quad, 5.0, 5.1, 6.0, 6.1, 7.0, and 7.1).

📄 *For more information, refer to the Sound-Code Stereo Guide.*

Smack! LE Compressor

The Smack! LE compressor plug-in features three compression modes and unique compression ratios to get your desired compression sound.

📄 *For more information, refer to the Digidesign Plug-ins Guide.*

Structure LE

Structure LE, developed by Digidesign's Advanced Instrument Research (A.I.R.) group, is an RTAS virtual instrument plug-in that adds the flexibility and power of an advanced sample player to any Pro Tools system.

📄 *For more information, refer to the Structure LE Guide.*

TL Space Native

TL Space Native is a powerful convolution reverb for post production and music applications. The TL Space package includes a comprehensive library of high-quality sampled reverb spaces and effects, from large concert halls to dense plate reverbs.

📄 *For more information, refer to the TL Labs Plug-ins Guide.*

X-Form

The X-Form AudioSuite plug-in is based on the Radius® algorithm from iZotope and provides the high quality time compression and expansion for music production, sound design, and audio loop applications. Use it to manipulate audio loops for tempo matching or to change vocal tracks for formant correct pitch shifting.

📄 *For more information, refer to the Digidesign Plug-ins Guide.*

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