

What's New in Pro Tools TDM 6.4

For HD Systems on Windows and Macintosh

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PN 932013283-00 REV A 04/04

chapter 1

Introduction

This document is an overview of new features in Pro Tools TDM 6.4 for Pro Tools|HD systems on Windows XP or Mac OS X.

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

For a list of Digidesign hardware systems, Digidesign-qualified computers, operating systems, and third party devices, refer to the latest compatibility information available on the Digidesign Web site (www.digidesign.com/com-pato).

New Features

Pro Tools 6.4 includes the following new or enhanced features:

- Support for new Digidesign hardware:
 - D-Control
 - Command|8 control surface
 - AVoption|V10 (Windows only)
- New recording and monitoring features:
 - Automatic Delay Compensation
 - Track position numbering
 - +12 dB Fader Gain for increased mixer gain
 - TrackPunch audio recording mode
 - TrackInput for input/disk monitoring per track
 - Enhanced clipping indication
 - Plug-in menus by category
- Post-production and timecode features:
 - 23.976 fps session support
 - Feet+Frames session setup improvements
- Pro Tools interface changes
 - Transport controls can be displayed at the top of the Edit window
 - New consolidated Machine Control and Remote Control preference page
 - Renamed Features

What's New in Pro Tools 6.4

Support for New Hardware

Pro Tools 6.4 provides support for new Digidesign hardware:

- D-Control
- Command|8 control surface
- AVoption|V10 (Windows only)

D-Control

D-Control is a tactile worksurface for Pro Tools|HD systems that employs a familiar, intuitive channel strip—center section console layout.

 *For more information, refer to the D-Control Guide.*

Some of the main features of D-Control include:

- 16 channel strip main unit, expandable to 80 physical faders and channel strips with optional 16-channel Fader Packs.
- High-quality, touch-sensitive motorized Penny and Giles faders.
- Six touch-sensitive, multi-purpose rotary encoders per channel strip.
- Six 15-segment, multi-color LED rings displaying encoder position, and send and plug-in metering.
- Seven six-character alphanumeric, multi-color LCD displays per channel strip.

- 29 illuminated pushbuttons per channel strip for determining operation modes.
- Two 32-segment, bi-color LED bargraphs per channel strip for stereo metering.
- Comprehensive remote monitor control section.
- Eight 32-segment bi-color LED bargraph meters for output metering.
- Dedicated editing panels for EQ and dynamics plug-ins.
- Full transport panel with a jog/shuttle wheel.
- Soft-key panel comprised of assignable buttons and accompanying alphanumeric LCD displays.
- Full-size, 104-key keyboard with a 10-key keypad and a 2-inch trackball, and other Pro Tools-specific controls.

Command|8 Control Surface

Command|8 is a low cost USB-based control surface for Pro Tools, developed in a collaboration between Digidesign and Focusrite. Command|8 is a compact, convenient, and flexible control surface for Pro Tools systems running on Windows XP or Mac OS X.

 *For more information, refer to the Command|8 Guide.*

Some of the main features of Command|8 include:

- Eight fader strips, each featuring a motorized, touch-sensitive fader, rotary knob, LEDs, and solo, mute, and select switches.
- Analog monitoring section with level controls for mains and headphones. Two pairs of analog inputs are provided, one for your main mix from Pro Tools, and one for alternate sources such as CD, Mini-Disc, and DAT players.
- One MIDI In port and two MIDI Out ports providing 16 channels of MIDI input, and 32 channels of MIDI output.
- USB port for direct USB MIDI communication with Pro Tools.
- 1/4-inch Punch In port for footswitch control of recording.
- Transport controls and mode switches.
- Windows switches for Pro Tools display.
- Navigation and Zoom controls.
- Tactile control of track volume, pan, send level, send pan, and record status, as well as PRE gain.
- Fast and convenient access to sends, inserts, plug-in pages, pan settings, and other track functions.
- Big, bright, 110 character LCD for data display.
- Five Function keys to access Utility, Fader Mute, and MIDI mapping functions.
- Stand-alone mode with snapshot save and recall, letting you use Command|8 to control any device that supports MIDI Continuous Controller messages. Custom MIDI mapping can be programmed as needed, and up to eight snapshots can be saved locally in Command|8.

AVoption|V10

Pro Tools with AVoption|V10 hardware and software combines the powerful audio post-production features of Pro Tools|HD with integrated support for import and playback of Avid video media. Avid Media Station|V10 software is included with AVoption|V10, providing video capture and reconvert, AAF/OMF render and export of Avid sequences, and professional audio and video layback.

 *For more information, refer to the Pro Tools AVoption|V10 Guide.*

Pro Tools with AVoption|V10 lets you:

- Import and play back Avid video on the Pro Tools Movie track with near sample-accurate precision against audio tracks.
- Spot individual video clips to new locations in the Movie track.
- View video edits and clip definitions in the Movie track.
- View the Movie track as a series of picture frames.
- Play video on an external NTSC or PAL monitor.
- Import mixed video resolutions to the Movie track.
- Import and play back true 24P and 25P (Progressive Scan) picture media created in Avid video workstations.

Delay Compensation

Pro Tools 6.4 introduces Delay Compensation for managing DSP delays that occur on audio tracks, Auxiliary inputs, or Master Faders because of plug-in use and mixer routing.

Pro Tools maintains time-alignment between tracks that have plug-ins with differing DSP delays, tracks with different mixing paths, tracks that are split off and recombined within the mixer, and tracks with hardware inserts.

To maintain time alignment, Pro Tools adds the exact amount of delay to each track necessary to make that particular track's delay equal to the delay of the track that has the *longest* delay.

Delay Compensation should be enabled during mixing and playback for optimal delay compensated sound. In some case when recording, Delay Compensation should be turned off.

To enable Delay Compensation:

- Choose Operations > Use Delay Compensation.

Delay Compensation Settings

There are three settings in the Playback Engine dialog for dedicating DSP resources for Delay Compensation:

None Allocates no DSP resources for automatic delay compensation.

Short Allocates minimal DSP resources of delay compensation for each channel. This is the most efficient setting for Pro Tools|HD Accel systems.

Long Allocates maximum DSP resources of delay compensation for each mixer channel. Long delay compensation uses the same DSP resources used by high DSP overhead plug-ins.

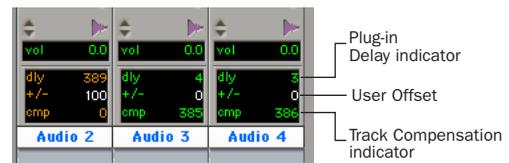
To configure the Delay Compensation Engine:

- 1 Choose Setups > Playback Engine.
- 2 From the Delay Compensation Engine pop-up menu, select a Delay compensation setting.
- 3 Click OK.

The delay compensation option will be saved as a session and system preference.

Delay Compensation View

The Delay Compensation View displays the total amount of plug-in delay on each track, lets you apply a user offset of track delay, and displays the total amount of delay that Pro Tools applies to each track. The Delay Compensation View can be shown in the Mix Window.



Delay Compensation view

To view Delay Compensation information:

- Choose Display > Mix Window Shows > Delay Compensation View.

Delay values can be specified in either samples or milliseconds, as determined in the Display page of the Preferences dialog.

Plug-In Delay (dly) Indicator

This indicator shows the total plug-in and hardware insert delay on the track. This delay total is used by Pro Tools to calculate the delay applied to other tracks to keep them time-aligned. The track with the highest plug-in and insert delay displays delay information in orange.

Bypassing the track's reported delay to Pro Tools can be useful if your total plug-in delay on a track exceeds the amount allowed in the Delay Compensation Engine setting. After bypassing the track's reported delay, you must manually nudge your track earlier by the reported amount to achieve the proper delay compensation for that track, while continuing to use Delay Compensation (see "User Offset (+/-) Field" on page 6.)

To bypass reporting plug-in delay to Pro Tools:

- Start-Control-click (Windows) or Command-Control-click (Macintosh) the Plug-in Delay indicator. The track delay will appear greyed out, and Pro Tools will not use that track's plug-in delay to calculate Delay Compensation for the other tracks.

User Offset (+/-) Field

This field lets you adjust track delays manually. In addition to the automatic delay, positive or negative delay times can be entered in the user offset (+/-) field.

This is useful for changing the feel of a track or for time-aligning a track in case a plug-in is incorrectly reporting its delay.

To change track delay using the User Offset field:

- 1 In the Delay Compensation view, click in the User Offset edit field.

- 2 To set your delay value (in samples or milliseconds depending on your current preferences), do one of the following:

- Enter a positive number (with or without the "+" modifier) or negative number (with the "-" modifier).
- Control-drag (Windows) or Command-drag (Macintosh) in the User Offset field to scroll to a new value.
- Press the Up and Down Arrow keys to increase or decrease the numerical values.

- 3 Press Enter.

To bypass the user delay:

- Start-Control-click (Windows) or Command-Control-click (Macintosh) the User Offset field. The user defined delay will appear greyed out, and it will no longer be applied to the track.

Track Compensation (cmp) Indicator

This indicator shows the amount of compensation Pro Tools applies to each track.

Delay that Exceeds the Compensation Limit

When the total delay on a track exceeds the amount of compensation available, Pro Tools applies the maximum available compensation, and displays the delay information in red (in the Delay Compensation View) for any tracks that cannot be fully compensated. The Delay Compensation indicator in the Edit window also turns red to indicate that the track delay exceeds the delay compensation limit. In this case, you need to bypass the track's reported delay (see "Plug-In Delay (dly) Indicator" on page 6), then manually nudge the track to maintain proper delay compensation (see "User Offset (+/-) Field" on page 6).

Low Latency Monitoring During Recording

For recording, Pro Tools automatically suspends delay compensation to provide a low-latency monitor path through the main outputs of the record-enabled tracks. When an audio track is TrackInput-enabled, armed for recording (in stop), or punched in, the track's delay compensation is automatically suspended (and the Track Compensation indicator displays 0).

Delay compensation can be intentionally applied to audio tracks regardless of input mode.

To apply delay compensation to automatically bypassed tracks:

- Start-Control-click (Windows) or Command-Control-click (Macintosh) the Track Compensation indicator. Track delay will be applied to the track and the Track Compensation Indicator will display in blue.

Track Compensation on Auxiliary Inputs

Delay compensation on Auxiliary Inputs can be bypassed to let you monitor outside sources (such as the audio tracks of a slaved videodeck) with minimal latency, while still reporting the track's delay.

To bypass an Auxiliary Input's delay compensation:

Start-Control-click (Windows) or Command-Control-click (Macintosh) the Track Compensation indicator. The reported track delay will be zero, and will appear greyed out.

I/O Setup and Delay Compensation

The I/O Setup dialog includes options and pages for Delay Compensation.

Compensate for I/O Delays After Record Options

The I/O Setup dialog includes options for compensating for I/O delays after recording.

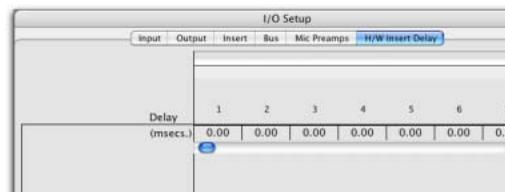
Compensate for Input Delays After Record (Input Page) and Compensate for Output Delays (Output Page) When checked, Pro Tools automatically compensates for the latency of the Pro Tools|HD digital-to-analog and analog-to-digital converters. After a recording pass, the record track is advanced by the total Delay Compensation value (as shown by the Track Compensation indicator in the Mix window).

H/W Insert Delay Compensation

Pro Tools 6.4 introduces H/W Insert Delay Compensation, which lets you specify the latency of outboard hardware (such as effects devices).

H/W Insert Delay Page

From the H/W Insert Delay page of the I/O Setup dialog, you can enter hardware insert latency, in milliseconds, in a field that corresponds to every input/output pair. These times will be used by the delay engine to time align input paths when a hardware insert is used.



H/W Insert Delay dialog

To set an insert delay offset:

- Enter a value, in milliseconds, in the field corresponding with the input where the hardware insert is connected.

⚠ *Insert delay offsets only have an effect when the I/O is used for hardware inserts.*

Track Position Numbering

Track Position Numbering assigns each track a number corresponding to its position in the Mix and Edit Windows. When tracks are reordered, track numbers stay in positional sequence. A new keyboard command lets you scroll directly to any track by number.

To use track position numbering:

- Choose Display > Display Track Position Numbers.

To navigate directly to any track:

- 1 Choose Operations > Scroll To Track Number
– or –

Press Control+Alt+G (Windows) or Command+Option+G (Macintosh).



Scroll To Track dialog

- 2 In the Scroll To Track dialog, enter the track position number for the desired track.

- 3 Press OK.

The track will be selected, and the windows scroll as follows:

- The Edit window tracks will scroll to bring the selected track as close to the top as possible.
- The Mix window tracks will scroll to bring the selected track as close to the left as possible.

Track Numbers and Hidden Tracks

There are two ways to display track position numbers when tracks are hidden, based on the setting of the Track Numbers Stay With Hidden Tracks option (located in the Display page of the Preferences window).

- When Track Numbers Stay With Hidden Tracks is not enabled, numbers are only assigned to tracks that are shown. Active tracks are then numbered sequentially. Hidden tracks are un-numbered.
- When Track Numbers Stay With Hidden Tracks is enabled in, tracks keep their track position numbers even when hidden.

“Scroll to Tracks” Banks Controllers

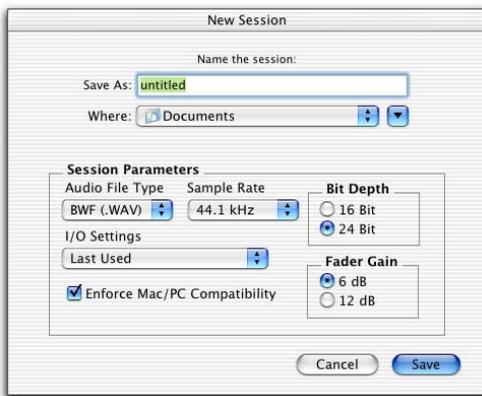
When using a D-Control, Pro Control, or other supported control surface, check this option (located in the Display page of the Preferences dialog) to bank faders to a numbered track when invoking the “Scroll to Track Number” command.

+12 dB Fader Gain

With Pro Tools 6.4, you can select either a 6 dB over 0 dB or a 12 dB over 0 dB Fader Gain for all faders in the session. Fader Gain choices can be made when creating, opening, and importing sessions, and when saving a copy of a session.

To select a Fader Gain level when creating a new session:

- 1 Choose File > New Session.



New Session dialog

- 2 In the New Session dialog, select the Fader Gain.

The Fader Gain setting is saved with the session, and is set as the default for new sessions.

Selecting Fader Gain when Opening a Previously Recorded Session

When opening a session created in a previous version of Pro Tools, you are given the choice of staying at +6 dB or updating the session to +12 dB.

When opening a session created in the current version of Pro Tools, the session is opened with the session Fader Gain settings.

To change Fader Gain settings:

- 1 Choose File > Save Session Copy In.
- 2 Select the Fader Gain level.
- 3 Click Save.

 *The +12 dB Fader Gain setting only affects the position of the fader (both in Pro Tools and on control surfaces) above the 0 dB mark. Fader positions below 0 dB remain unaffected.*

TrackPunch Audio Recording

TrackPunch is a non-destructive recording mode that lets you instantaneously *punch in* (start recording) and *punch out* (stop recording) on individual audio tracks during playback. TrackPunch makes Pro Tools more useful for many recording workflows.

When a track is TrackPunch-enabled, Pro Tools starts recording a new file in the background for that track when playback begins. You can then punch in on that track at any time during playback by record enabling the track.

Pro Tools automatically creates a region in the track playlist at each punch-in point. These regions also appear in the Audio Regions List along with the complete audio file. Up to 200 of these “running punches” can be performed in a single pass.

When using Digidesign MachineControl software in Remote 9-Pin Deck Emulation mode, TrackPunch can be controlled via P2 protocol. D-Control, ProControl, Control|24, and Command|8 support TrackPunch.

TrackPunch and QuickPunch Modes

QuickPunch mode, which uses the master Record button in the Transport to simultaneously punch in on all record-enabled tracks, remains available on TDM systems. TrackPunch and QuickPunch mode cannot be enabled simultaneously.

TrackPunch Usage Guidelines

TrackPunch and Dynamically Allocated Voicing

When using TrackPunch with a Pro Tools TDM system configured for maximum voices, make sure to set the voice assignment for each audio track to *dyn* for Dynamically Allocated Voicing (this mode was previously known as Auto Voice mode). This ensures that Pro Tools can automatically manage voices most efficiently.

Audio Files and TrackPunch

After a TrackPunch recording pass, the punched track's playlist in the Edit window will display the regions created by punching. You can use the Trimmer tool after punch recording to open up the head or tail of TrackPunch (and QuickPunch) recorded regions, or to reveal the parent audio file that was recorded in the background. This lets you compensate for any late or missed punches (from as early as the start of playback, or the point at which the track was TrackPunch or QuickPunch enabled).

Recording with TrackPunch Overview

This section explains how to use TrackPunch in Pro Tools sessions.

Before using TrackPunch, configure Pro Tools and TrackPunch as follows:

To configure Pro Tools and TrackPunch:

- 1 Configure TrackPunch preference settings as suggested in “TrackPunch Preferences” on page 10.
- 2 If necessary, configure Pro Tools synchronization settings for online recording and track arming (see “Configuring Synchronization and Track Arming” on page 11).
- 3 If necessary, program and configure the master synchronizer for remote control of TrackPunch and TrackInput switching (refer to the documentation from the manufacturer).

TrackPunch Preferences

The following preference settings let you customize TrackPunch performance.

QuickPunch/TrackPunch Crossfade Length

This setting determines the length of the crossfade when punch recording in QuickPunch and TrackPunch modes.

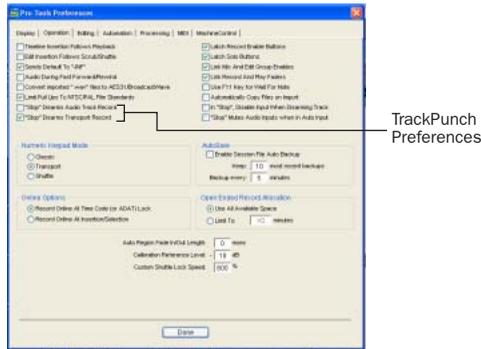
To set a crossfade length for QuickPunch and TrackPunch:

- 1 Choose Setup > Preferences, and click to display the Editing window.
- 2 Enter a new crossfade length (10 ms is recommended).
- 3 Click OK to close the Preferences dialog.

Transport and Track Record Settings

The Operation page of the Pro Tools Preferences dialog has been updated with new preferences for TrackPunch.

These preferences specify how track and Transport record status should respond when the Transport is stopped (during playback and recording), and let you optimize Pro Tools for film, video, and music production workflows as noted in the following sections.



TrackPunch Preferences

Transport RecordLock

This setting lets the Transport Record be configured to either emulate a digital dubber, or to maintain legacy behavior for the Transport master Record.

- ◆ When not enabled, the Transport Record disarms when Pro Tools is manually stopped or stops due to a loss of time code. This replicates legacy Pro Tools recording behavior.
- ◆ When enabled, the Transport Record remains armed when playback or recording stops. This saves having to re-arm the Transport between takes, emulating digital dubber behavior.

 *Punching out of record by pressing Record on the Transport will take the transport out of record enable.*

Destructive Recording and Transport RecordLock

As a precaution against accidentally recording over previous material, the Transport RecordLock preference is automatically disabled and greyed out when Destructive record mode is enabled.

Audio Track RecordLock

This setting lets Pro Tools tracks be configured to either emulate a digital dubber, or to maintain legacy behavior for track record status.

- ◆ When the Audio RecordLock preference is enabled, the record-enabled audio tracks remain armed when playback or recording stops.
- ◆ When the Audio RecordLock preference is not enabled, record-enabled audio tracks are taken out of record enable when Pro Tools is stopped. This prevents tracks from remaining armed from pass to pass, emulating track record behavior of a digital dubber.

Configuring Synchronization and Track Arming

For online recording and punching, configure the following Peripheral and Session Setup settings. For best lockup times when synchronizing, it is recommended that no more than 16 tracks be TrackPunch-enabled at a time.

To record online using TrackPunch and TrackInput switching:

- 1 Choose Setup > Peripherals, and make sure the SYNC I/O is the selected synchronization peripheral, and is communicating with Pro Tools.

2 Choose Windows > Session Setup, and do the following:

- Select a Clock and Positional reference.
- and –
- If you want Pro Tools to be the time code master, enable Using SYNC/USD. This option is located in the Generator controls in the Time Code Settings section of the Session Setup window.

3 If you are controlling Pro Tools via 9-pin protocol, do the following:

- Click the Machine Control tab to display the Machine Control page of the Peripherals dialog.
- Configure Remote 9-pin Deck Emulation mode settings (see the *MachineControl Guide* for details).
- Click OK to close the Peripherals dialog.

4 Configure your master synchronizer as required to control Pro Tools track Record and Input switching through P2 commands. See the documentation for your controller for more information.

 Consult the manufacturer of your controller for the most recent machine profiles and updates available for Pro Tools support.

Enabling TrackPunch Mode

Before you can enable individual audio tracks for TrackPunch recording, TrackPunch mode must be enabled in the Pro Tools transport.

To enable TrackPunch mode:

1 Make sure Pro Tools is not recording or playing back (the Transport is stopped).

2 Do one of the following:

- Select Operations > TrackPunch.
- Start-click (Windows) or Control-click (Macintosh) the Transport Record button to cycle through available Record modes until TrackPunch mode is selected (a “T” indicates TrackPunch mode).
- Press Control+Shift+T (Windows) or Command+Shift+T (Macintosh).



Transport Record with TrackPunch mode enabled

Transport Display of TrackPunch Status



TrackPunch and TrackInput status LEDs in the Transport window

Transport Record Button

The Transport Record button indicates TrackPunch and Record status as follows:

When TrackPunch mode is enabled:

- ◆ A “T” appears in the Transport Record button.
- ◆ If at least one track is TrackPunch-enabled, the Transport Record button lights solid blue.

When TrackPunch mode is enabled and the transport is armed for recording:

- ◆ If no tracks are TrackPunch-enabled, the Transport Record button flashes gray and red.
- ◆ If at least one track is TrackPunch-enabled, the Transport Record button flashes blue and red.
- ◆ If at least one TrackPunch-enabled track is also record enabled, the Transport Record button flashes blue and red, *and* the record LED lights.
- ◆ Whenever at least one audio track is recording, the Transport Record button lights solid red.

Record and Input Status LEDs

Record and Input LEDs next to the Transport Record button indicate track Record and Input status as follows, in all recording modes:

Record Status LED When lit (red), indicates that at least one audio track is currently record-enabled. When off (grey), no tracks are currently record-enabled.

Input Status LED When lit (green), indicates that at least one audio track is currently set to Input Only monitoring (regardless of record enable status). When off (grey), all tracks are in Auto Input monitoring.

 *Track record buttons also appear in blue to indicate that track is TrackPunch-enabled. See “Track Record Status Display” on page 14 for more information.*

TrackPunch Enabling Tracks

You can TrackPunch enable tracks without record enabling them, which lets you punch in individual tracks after you start playback.

To TrackPunch enable or disable an audio track:

- Start-click (Windows) or Control-click (Macintosh) the track’s Record Enable button to toggle the button to solid blue.

To TrackPunch enable or disable all audio tracks:

- Alt-Start-click (Windows) or Option-Control-click (Macintosh) a track’s Record Enable button to toggle the all Record Enable buttons to solid blue.

To TrackPunch enable or disable all selected audio tracks:

- Start-Alt-Shift-click (Windows) or Control-Option-Shift-click (Macintosh) a track’s Record Enable button to toggle the Record Enable buttons for the selected audio tracks solid blue.



Create track groups for each stem or set of tracks on which you plan to punch. Use the Groups List to quickly select all tracks in the group. This makes it easier and faster to take multiple tracks in and out of TrackPunch enable simultaneously.

TrackPunch and Record Enabling Tracks

You can simultaneously TrackPunch enable tracks and record enable them, which starts recording as soon as the transport is record-armed and the playback begins.

To simultaneously TrackPunch enable and record enable an audio track:

- Click the track’s Record Enable button to toggle the track’s Record Enable button to flashing blue and red.

To simultaneously TrackPunch enable and record enable all audio tracks:

- Alt-click (Windows) or Option-click (Macintosh) a track's Record Enable button to toggle all Record Enable buttons to flashing blue and red.

To simultaneously TrackPunch enable and record enable all selected audio tracks:

- Alt-Shift-click (Windows) or Option-Shift-click (Macintosh) a track's Record Enable button to toggle the Record Enable buttons for the selected audio tracks solid blue.

Track Record Status Display

Each track's Record Enable button indicates its TrackPunch and record enable status as follows:

- When a track is both TrackPunch-enabled and record-enabled, its Record enable button flashes blue and red.



Record Enable button

TrackPunch status indication in an audio track in the Mix window

- When a track is TrackPunch-enabled but not record-enabled, its Record Enable button lights solid blue.
- When a track is record-enabled only, its Record Enable button flashes red.
- While a track is recording (in any mode), its Record Enable button lights solid red.



Red (not flashing) indicates recording (all modes)

Track Record status in the Edit window

TrackPunch Recording

After you have put Pro Tools in TrackPunch mode, and enabled tracks for TrackPunch recording, you can record with TrackPunch in several ways.

Punching In On Single Tracks

To punch in on single tracks:

- 1 Put Pro Tools in TrackPunch mode.
- 2 Start-click (Windows) or Control-click (Macintosh) the Record Enable button for each track you want to punch in, so that the track is TrackPunch-enabled only. The track's Record Enable button should light solid blue.
- 3 Click Record in the Transport window to enter the TrackPunch Record Ready mode. The Record button flashes blue and red.
- 4 Click Play in the Transport window to begin playback.
- 5 During playback, punch in and out on individual TrackPunch-enabled tracks by clicking their Record Enable buttons.
- 6 Stop playback. When you are finished with the record pass, track Record Enable status and transport Record Arm status follow the current TrackPunch preference settings.

Punching In on Multiple Tracks

To punch in on multiple tracks simultaneously:

- 1 Put Pro Tools in TrackPunch mode.
- 2 Click the Record Enable button on each track you want to punch in, so that the track is both TrackPunch- and Record-enabled. The track's Record Enable button should flash blue and red.
- 3 Click Play in the Transport window to begin playback.
- 4 During playback, click Record in the Transport window to punch in and out on all TrackPunch-enabled tracks simultaneously.
- 5 Stop playback. When you are finished with the record pass, track Record Enable status and transport Record Arm status follow the current TrackPunch preference settings.

Start Recording on All Tracks

- 1 Put Pro Tools in TrackPunch mode.
- 2 Click the Record Enable button on each track you want to punch in, so that the track is both TrackPunch- and Record-enabled. The track's Record Enable button should flash blue and red.
- 3 Click Record in the Transport window to enter the TrackPunch Record Ready mode. The Record button flashes blue and red.
- 4 Click Play in the Transport window to begin playback.
- 5 During playback, punch out and back in on individual TrackPunch-enabled tracks by clicking their Record Enable buttons.
- 6 Stop playback. When you are finished with the record pass, track Record Enable status and transport Record Arm status follow the current TrackPunch preference settings.

File Management for TrackPunch

It is common to end up with a large amount of unused audio after using TrackPunch or QuickPunch. Unused audio files make sessions larger than may be necessary, which slows session loading, copying, transferring, archiving, and retrieval.

The following describe how to manage files created by TrackPunch and QuickPunch.

Consolidating Tracks in a Region

After using TrackPunch, punched tracks will include any number of individual regions representing each of your final (or “keeper”) punches. Punched regions reference the whole file audio regions recorded in the background as part of TrackPunch and QuickPunch enabling (see “Audio Files and TrackPunch” on page 10).

The Pro Tools Consolidate command lets you retain only the “keeper” punches as visible in the current track playlist. Consolidating regions in a track lets you extract the regions from their parent audio files in order to end up with a single, consolidated audio file containing only the audio displayed in the playlist.



To extract regions from their parent audio files without consolidating them into a single track-based audio file, use the Compact Selected command in the Audio Regions List menu.

To consolidate audio in a track:

- 1 Triple-click in a punched track (or any audio track) to select all regions and files in the currently displayed playlist.

– or –

Make a selection in a track or tracks.

2 Choose Edit > Consolidate Selection.

– or –

Press Alt+Shift+3 (Windows) or Option+Shift+3 (Macintosh).

The new file name will be derived from the parent track name.

 *Be certain to create crossfades for edits before consolidating. The real-time AutoFade option does not create crossfades during consolidation.*

Removing Unused Audio

After consolidating, unused audio can be removed from the session.

To remove unused audio after consolidating:

- Choose Select Unused from the Audio Regions List menu, and clear all unused regions. For more information on Select Unused, see the *Pro Tools Reference Guide*.

TrackInput Monitoring

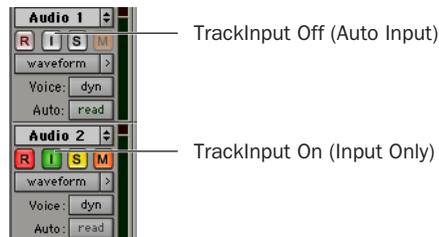
TrackInput monitoring lets you toggle individual audio tracks between Auto Input and Input Only monitoring modes at any time, including during playback or recording. TrackInput provides the monitoring flexibility needed in dubbing and mixing, and is similar to “rehearse” mode on analog multitrack recorders and similar machines.

With the Digidesign MachineControl 2.0 option (available separately), TrackInput can also be remotely controlled from a SoundMaster and compatible devices through P2 protocol commands (with support for pec-direct paddles as supported on the synchronizer or console).

The TrackInput feature also makes it possible to toggle a track between Auto Input and Input Only monitoring mode regardless of whether or not the track is record enabled.

To toggle the monitoring mode of audio tracks do one of the following:

- To toggle individual tracks, click the TrackInput button for each track you want to toggle. The TrackInput button will light green.
- To toggle all tracks in the session, Alt-click (Windows) or Option-click (Macintosh) a TrackInput button. All the TrackInput buttons will light green.
- To toggle all selected tracks in the session, Alt-Shift-click (Windows) or Option-Shift-click (Macintosh) a selected track’s TrackInput button. All the TrackInput buttons for the selected tracks will light green.



TrackInput buttons in the Edit Window

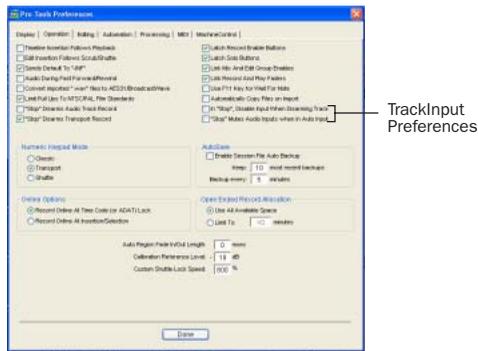
To change the monitoring mode of all record-enabled tracks, do one of the following:

- To change all record-enabled tracks to Auto Input monitoring mode, Choose Operations > Change Record Enabled Tracks to Auto Input.
- To change all record-enabled tracks to Input Only monitoring mode, Choose Operations > Change Record Enabled Tracks to Input Only.
- To toggle the monitoring mode of all record-enabled tracks between Input Only monitoring mode and Auto Input monitoring mode, use Alt-K (Windows) or Option-K (Macintosh).

Monitoring Mode Preferences

The Operation page of the Pro Tools Preferences dialog has been updated with new preferences for TrackInput.

These preferences specify how track and Transport record status should respond when the Transport is stopped (during playback and recording), and let you optimize Pro Tools for film, video, and music production workflows as noted in the following sections.



TrackInput Preferences

Disable “Input” When Disarming Track (In “Stop”)

For flexibility, TrackInput can be customized to remain selected regardless of track record status, or to automatically switch to Auto Input monitoring after a recording pass. This lets you optimize monitoring for a typical dubbing workflow (in which you might want tracks to remain in Input Only mode until explicitly switched to Auto Input monitoring) or a typical music tracking workflow (in which leaving a track in Input Only monitoring mode after recording can result in accidental double-monitoring).

To customize TrackInput for recording:

- 1 Choose Setup > Preferences, and open the Operation page.
- 2 Configure the setting for Disable “Input” When Disarming Track (In “Stop”) setting as appropriate.
 - When enabled, taking an audio track out of record enable (any mode) takes it out of Input Only mode, regardless of the global monitor mode, and switches it to monitor audio from disk only.
 - When not enabled, audio tracks will remain in Input Only monitoring mode until explicitly switched to Auto Input monitoring.

“Stop” Mutes Audio Inputs (When In Auto Input)

- ♦ When enabled, Pro Tools mutes tracks that are record-enabled when the Transport is stopped. Input can still be monitored while stopped using the TrackInput button.
- ♦ When not enabled, Pro Tools monitors audio input on tracks that are record-enabled.

Clip Indication Enhancements

Pro Tools 6.4 provides clip indication enhancements, new clipping settings, and clip clearing.

Clip Indication Enhancements

Clipping indication has been added to the following three locations in the Pro Tools interface:

- Plug-in window header
- Plug-in and Sends Insert button
- Track names in the Show/Hide Tracks List

Plug-In Header Clip Reporting

In addition to clipping displays in the plug-in's interface, plug-ins that display clipping also report the clipping in the plug-in header.



Plug-In Clipping indicator in the plug-In header

To clear plug-in clips:

- Click the clip LED in the plug-in header

Plug-In and Send Clip Reporting

When a plug-in or send clips, the Input or Send for the track displays in red to indicate clipping.

Show/Hide List Clip Reporting

When a track, plug-in, or send clips, the Show/Hide List displays the track's name in red.

Clip Settings

Pro Tools 6.4 provides three options for displaying clip indication:

- 3 Second
- Infinite
- None

To choose a clip setting:

- 1 Choose Setups > Preferences.
- 2 Click the Display tab.
- 3 Select a Clip Indication option.
- 4 Click Done.

Clearing All Clips

To clear all clipping, do one of the following:

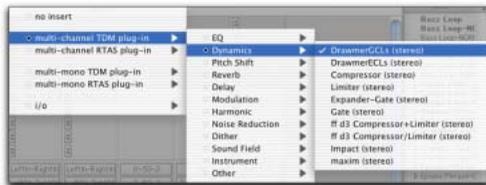
- Press Alt-C (Windows) or Option-C (Macintosh).
- Alt-Click (Windows) or Option-Click (Macintosh) the clip LED in the Plug-in header.
- Alt-Click (Windows) or Option-Click (Macintosh) any track or send clip LED.
- Choose Operations > Clear All Clips.

Plug-In Menus by Category

In Pro Tools 6.4, plug-ins are automatically organized by category (effect type). Plug-ins that do not fit into a standard category (such as the DigiRack Signal Generator), or third-party plug-ins that have not been defined by their developers, appear in the Other category. Plug-ins can appear in more than one category.

Plug in categories include:

- EQ
- Dynamics
- Pitch Shift
- Reverb
- Delay
- Modulation
- Harmonic
- Noise Reduction
- Dither
- Sound Field
- Hardware
- Instrument
- Other
- Wrapped Plug-Ins



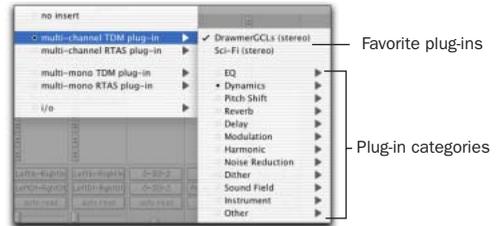
Plug-Ins by Category

To organize plug-ins by category:

- 1 Choose Setups > Preferences.
- 2 Click on the Display tab.
- 3 Select Organize Plug-In Menus By Category.

Plug-in Favorites

For faster navigation to commonly used plug-ins, a plug-in can now be designated a *favorite*. Favorite plug-ins are shown at the top of the plug-in menu.



Menu display of favorite plug-Ins

To designate a plug-in favorite:

- Control-click (Windows) or Command-click (Macintosh) on a plug-in Insert button, and select the plug-in that you want to designate as a favorite.

To remove a plug-in favorite:

- Control-click (Windows) or Command-click (Macintosh) on a plug-in Insert button, and select the favorite plug-in that you want to remove.

23.976 FPS Support

Pro Tools sessions now support 23.976 fps for high-definition digital video and audio production workflows. 23.976 fps, a production variant of 24 fps (sometimes referred to as 23.98 fps), has been added as a time code rate (frame rate) available in Pro Tools sessions.

23.976 fps is supported when using Bounce to Disk, when importing and exporting files, and when importing and exporting OMF/AAF sequences (requires DigiTranslator 2.0). All Pro Tools pull up and pull down factors are available at 23.976 fps. Set Feet+Frames to the appropriate film speed of your session.

Frame edge accuracy at 23.976 fps requires a Digidesign SYNC I/O.

In addition, Pro Tools and the SYNC I/O only provide near sample accurate lock to frame edge when the clock reference is video at 25 fps or 29.97 fps, or when resolved to LTC input.

For this reason, frame edge alignment is unavailable in the following configurations:

- When using serial time code and resolved to video reference and the session is 23.976 fps (or 24 fps, or 30 fps)
- When in Remote 9-Pin Deck Emulation mode and the session is 23.976 fps, 24 fps, or 30 fps)
- When resolved to NTSC or PAL video frame edge and the session is 23.976 fps (or 24 fps, or 30 fps)

To set a session to 23.976 fps:

- 1 Choose Windows > Session Setup.
- 2 Select 23.976 fps from the Time Code Rate selector.

The time code Timeline Ruler displays 23.976 fps, as will all location counters (when viewing time code). The Edit window grid, and all nudging can be configured to 23.976 fps increments and units.

The SYNC I/O indicates 23.976 fps by flashing the 24 fps LED.

In addition, 23.976 becomes an available choice for the Target project time code format in the Export Selected as Files, Bounce to Disk, and Export Selected Tracks as OMF commands.

Projects at 23.976 fps can be imported into Pro Tools through the Import Session Data dialog, with support for offsets.

Feet+Frames Enhancements

Feet+Frame Rate Selector

A new Feet+Frame Rate selector has been added to the Session Setup window. This lets you select from three available feet+frame rates: 25, 24, and 23.976 fps.

Redefine Current Feet+Frames Position

The new Redefine Current Feet+Frames Position command enhances (and replaces) the previously available Feet+Frames command. Redefine Current Feet+Frames Position command adds the ability to specify a Feet+Frames value based on the current Edit cursor time code location. Typically, this feature lets test tones, pre-roll, Academy leader, and similar pre-program material to be more easily integrated into Pro Tools sessions.

Pro Tools Interface Changes

Transport Controls in the Edit Window

The Transport commands can now be displayed and operated in the Edit window (at the top right of the window).



Transport controls displayed in the Edit window.

To show or hide Transport controls in the Edit window:

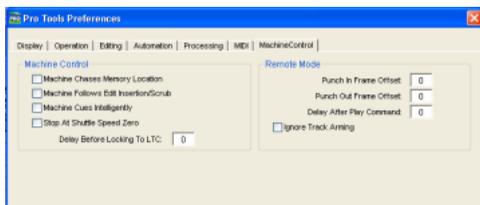
- 1 Choose Display > Edit Window Shows.
- 2 Select Transport View.

New Location for Machine Control and Remote Mode Preferences

A new Machine Control page has been added to the Preferences dialog. This page contains preferences for Machine Control and Remote Mode.

To access Machine Control and Remote Mode Preferences:

- 1 Choose Setups > Preferences.
- 2 Click on the Machine Control tab.

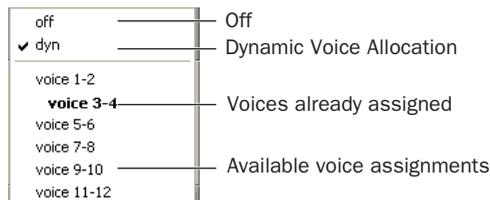


MachineControl Preferences

Renamed Features

Certain Pro Tools features have been renamed or changed.

- ◆ Auto Voice mode has been renamed and is now Dynamic Voice Allocation (dyn) mode.



Voice options

- The names of Pro Tools input monitoring commands have changed, as follows:
 - Auto Input Monitoring is now Change Record Enabled Tracks to Auto Input
 - Input Only Monitoring is now Change Record Enabled Tracks to Input Only.
- The Frame Rate selector in the Session Setup window has been renamed Time Code Rate. This selector lets you set a SMPTE format frame rate for the current Pro Tools session. Choices include 30, 29.97, 29.97 Drop, 25, 24, and 23.976 fps.
- The Limit Pull Ups to NTSC/PAL Film Standards preference in the Operations dialog has been eliminated. All supported frame rates will be displayed in the Time Code window.

