



Lesson 9: Basic Mixing Techniques



Chapter 9: Basic Mixing Techniques



Objectives:

- Recognize common mixer terminology
- Configure inserts and send-and-return paths to add signal processing to tracks
- Configure the Inserts and Sends views in the Mix window
- Record and edit basic automation
- Add plug-ins to tracks for internal effects processing and sound shaping

Basic Mixer Terminology



- **Inputs**
 - Audio signals coming into an audio hardware device, such as the audio interface used for Pro Tools
- **Outputs**
 - Audio signals coming out of an audio hardware device, such as the audio interface used for Pro Tools
- **Inserts**
 - Audio patch points for inserting a signal processor directly into the signal path
- **Sends and Returns**
 - Send = A signal path carrying a mix output of one or more tracks routed for parallel processing
 - Return = A channel or track used to return the processed signal to the mix; typically an Auxiliary Input track in Pro Tools

The Pro Tools Mix Window (1)



The image shows a screenshot of the Pro Tools Mix Window with ten tracks. Labels on the right side point to specific controls:

- Insert selectors:** Points to the 'INSERTS A-E' dropdown menu at the top of each track.
- Send selectors:** Points to the 'SENDS A-E' dropdown menu below the insert selectors.
- Audio Input Path selector:** Points to the 'I/O' dropdown menu.
- Audio Output Path selector:** Points to the 'Mix' dropdown menu.
- Pan controls:** Points to the pan knob and the 'pan' indicator.
- Volume Fader:** Points to the vertical volume fader.

At the bottom of the tracks, the following names and volume levels are visible:

Track Name	Volume Level
Groove-E	-3.0
SynthBass	-8.3
E-Bass	-2.5
Guitar	-14.5
Pad 1	-3.0
Pad 2	-3.0
SynthLead	-1.5
Vox Print	-2.0
Verb	0.0
Master 1	0.0

The Pro Tools Mix Window (2)

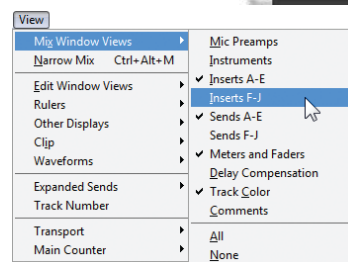
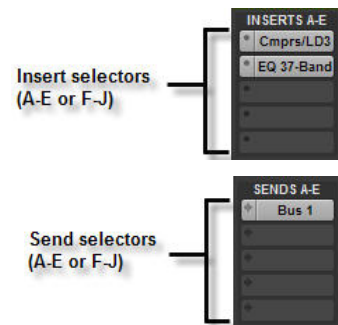


- To Open:
 - Choose Window > Mix
 - Press Command+= (Mac) or Ctrl+= (Windows) to toggle between the Mix and Edit windows
- Configuring the Mix Window
 - Controls include:
 - Volume Faders
 - Pan controls
 - I/O selectors
 - Insert and Send selectors

The Pro Tools Mix Window (3)



- Configuring the Mix Window (continued)
- Input and Output Selectors
 - Input Paths – Set as needed for tracks receiving input from other sources
 - Output Paths – Set as needed to monitor output from your audio interface
- Inserts and Sends Views
 - Inserts View – Pro Tools provides 10 track Insert selectors, in two views: A-E and F-J
 - Sends View – Pro Tools provides 10 track Send selectors, in two views: A-E and F-J
- Choose View > Mix Window Views and select the desired Inserts or Sends view



The Pro Tools Mix Window (4)



- **Configuring the Mix Window (continued)**
- **Configuring Inserts**
- **Plug-In Insert**
 - Adds a software signal processor directly into the signal path
- **Hardware I/O Insert**
 - Routes the signal through an external device connected to parallel inputs and outputs of the audio interface
- **Configuring Sends and Returns**
- **External Send**
 - Click on a Send selector and choose an Interface option
- **Internal Send**
 - Click on a Send selector and choose a Bus option
- **Return to an Auxiliary Input track**

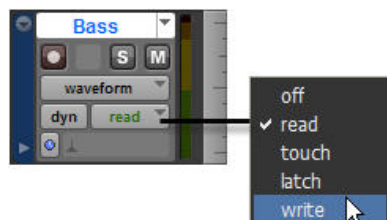
Basic Automation (1)



- Recording Automation (Write Mode)
- Allows you to record changes to controls in real time
- Records enabled parameters whenever session is playing back
- Click the Automation Mode selector (Mix or Edit window)



- Select write mode from the pop-up menu



Basic Automation (2)



- **Playing Back Automation (Read Mode)**
 - Default mode for tracks
 - Plays recorded automation
 - Does not record automation
 - No risk of overwriting existing automation
- **Turning Automation Off**
 - Off mode turns off automation for all parameters
 - No automation is recorded during playback
 - Existing automation is ignored (not played)

Basic Automation (3)

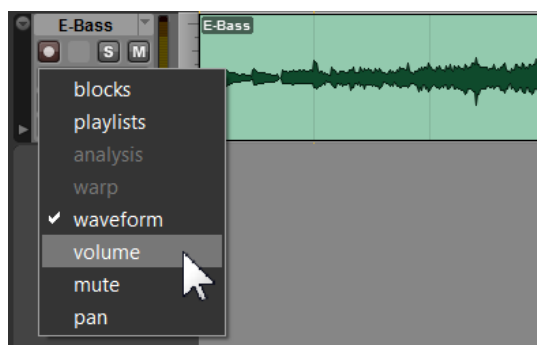


- Viewing Automation Playlists
- Automation playlists can be displayed in the Edit window
- To view an automation playlist:

1. Click the Track View Selector



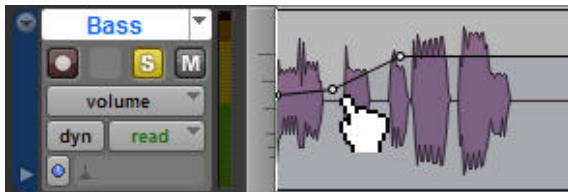
2. Choose desired automation playlist



Basic Automation (4)



- Editing Breakpoint Automation
- Use the Grabber tool to add, move, or delete breakpoints
- Click the automation graph line to add a breakpoint
- Click and drag a breakpoint to adjust its position
- Option-click (Mac) or Alt-click (Windows) on a breakpoint to delete it



Real-Time Plug-Ins (1)



- Two main plug-in categories:
 - Real-time processing (Native and DSP plug-ins)
 - Non-real-time, file-based processing (AudioSuite plug-ins)
- Real-Time Plug-In Features
 - DSP Plug-Ins
 - Pro Tools|HDX hardware only
 - Use the processing power of DSP chips on the cards
 - Native Plug-Ins
 - Available on all Pro Tools systems
 - Use the processing power of the host computer

Real-Time Plug-Ins (2)

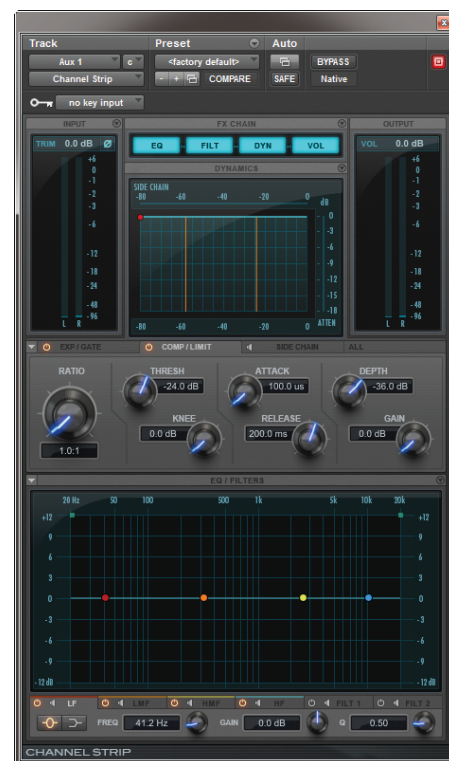


- Plug-Ins Provided with Pro Tools
 - Avid Pro Tools plug-Ins
 - AIR Creative Collection plug-ins
 - Include various dynamics processors, EQs, reverbs, delays, flangers, choruses, etc.
 - Avid EQ III – Parametric equalizer in two configurations:
 - 1-Band
 - 7-Band
 - Avid Dynamics III – Suite of dynamics processors:
 - Compressor/Limiter
 - Expander/Gate
 - De-Esser

Real-Time Plug-Ins (3)



- Plug-Ins Provided with Pro Tools (continued)
- Avid Channel Strip
 - Combines processors in a single interface:
 - EQ
 - Dynamics
 - Filter
 - Gain
 - Uses algorithms based on the System 5 console channel strip



Review/Discussion Questions (1)



1. What term is used to describe an audio patch point that applies a signal processor directly into the signal on a track? How many of these patch points does Pro Tools provide on each track?
2. What term is used to describe a signal path carrying a mix output of one or more tracks routed for parallel processing? How can this signal be returned to the sending device?
3. What menu would you use to display or hide the Mix window? What keyboard shortcut can you use to toggle between the Mix and Edit windows?
4. What menu command can you use to display or hide an Inserts or Sends view area in the Mix window?
5. Which Pro Tools automation mode discussed in this lesson records changes to track controls in real time when playing back the session?
6. Which Pro Tools automation mode can you use to play back automation that has been recorded, without the risk of recording over it?
7. What is the difference between Read mode and Off mode? Will Off mode allow you to play back existing automation on a track?

Review/Discussion Questions (2)



1. What track control can you use to display an automation playlist? What window are automation playlists displayed in?
2. What tool can you use to add, move, or delete automation breakpoints? What modifier can you use to delete a breakpoint by clicking on it?
3. What two types of plug-ins provide real-time processing? What type provides non-real-time processing?
4. What real-time plug-in format requires Pro Tools|HDX hardware? What real-time plug-in format can be used on all Pro Tools systems?
5. What plug-in options are available for EQ and dynamics processing?