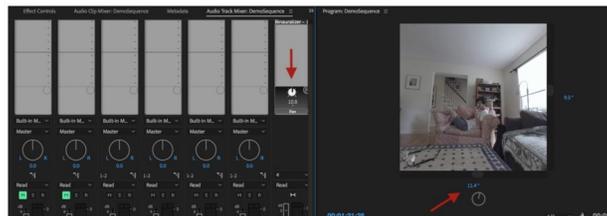


Week 8 - Multitrack audio mixing

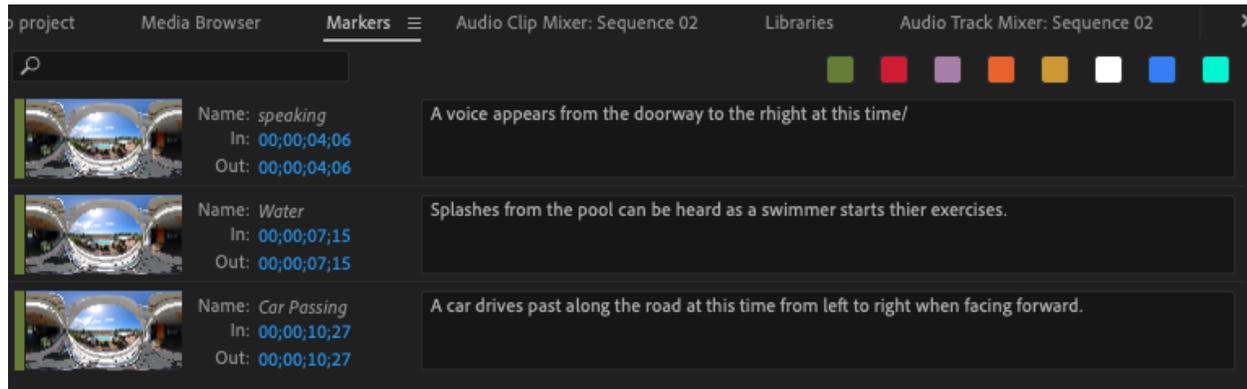
Video audio usually includes a montage of background and foley sounds. The identification, capture and combination of them in a final mix is a critical aspect of the 360 video production process.

- [Example 360 video for download.](#)
- [Here is a video](#) that reminds us about setting up Premiere Pro for Ambisonic audio editing.
- Remember to mute the stereo audio from the original video recording. The audio will be replaced by newly recorded tracks you create in Ambisonic format.
- Remember that whilst mixing and editing, you need to add a Binaural plugin on the Mix (master) track in the Audio Mixer. This is so you can monitor (listen to) the spatial audio on headphones whilst editing. This plugin will be removed before exporting to YouTube.



1 - Audio mixer with video track(s) muted and Binaural plugin on the Mix track.

Audio Effects



Introducing Audio Effects (FX)

Effects help enhance, improve and extend your audio recordings.

When you want to know more about the audio effects available in Premiere Pro, the Help page for Premiere Audio effects is [here](#).

Always check that a plugin is processing all 4 channels of the Ambisonic file - not all effects do. In the visual interface of the effects look for 'in: 1 2 3 4 Out 1 2 3 4' in the bottom left corner.

Adding effects to a clip

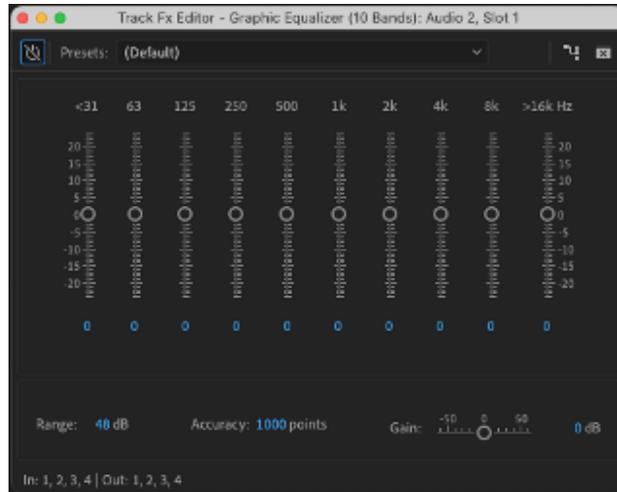
Premiere has an Effects panel (access from the Window menu) which includes a folder of Audio Effects. These can be dragged onto a clip.

Adding effects to a track

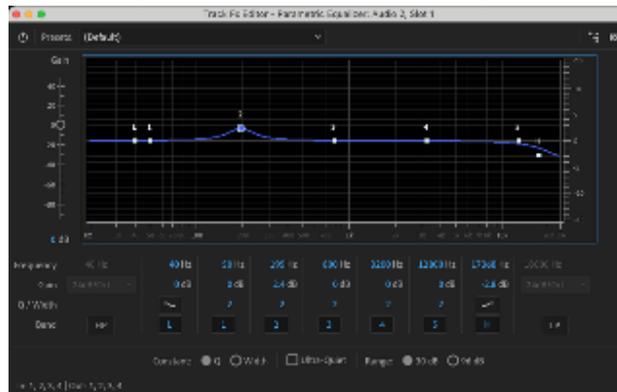
In the Audio Track Mixer window, show the Effects and Sends, and insert an effect into a track. Like we did with the Binauralizer plugin.

Equalisation and Filtering

An EQ, or equalizer, allows you to adjust the tone or timbre of a sound. It can be used on individual tracks to make them sit better in the mix, and used on the master track to adjust the overall sound of the final mix as part of the mastering process.



2 - Graphic EQ



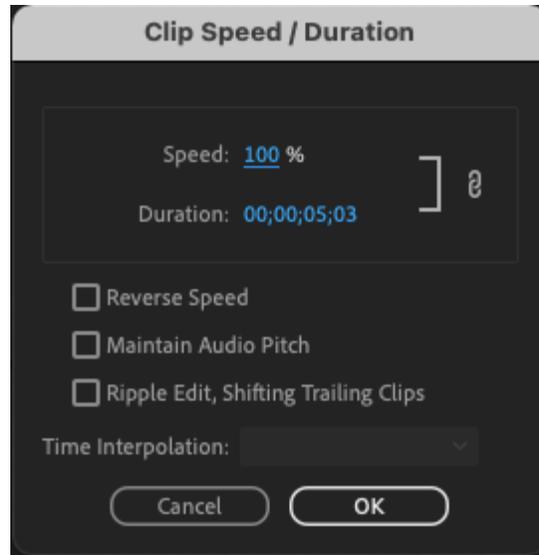
3 - Parametric EQ

Pitch Shifting

Changing the pitch (up or down) alters the character of a sound and can produce some interesting and unexpected effects. In Premiere, the speed and/or duration of an audio clip can be changed. Try out settings on a voice recording to hear the effect, then on other recorded sounds to explore the sonic possibilities.

Add to a clip: Right-click clip -> Speed/Duration...

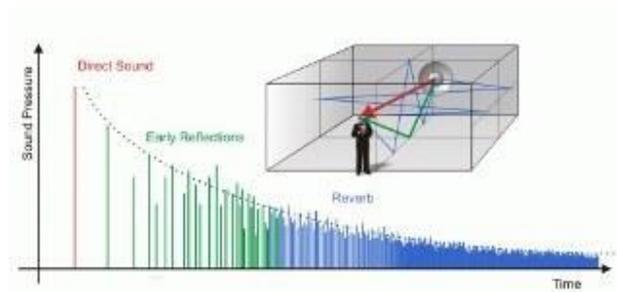
Add to a Track: Insert the Pitch Shifter plugin (Time and Pitch category) on the track in the Audio Track Mixer

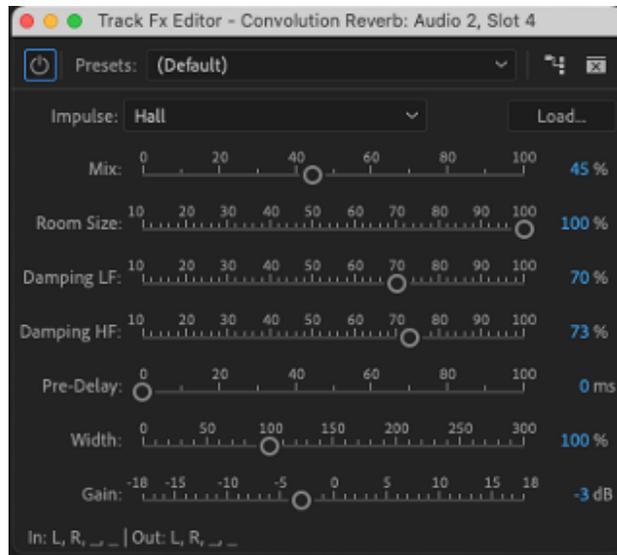


Delay and Reverb

Delay provides an echo of the sound. The time between the original and echo (delay time) and the number of echoes can be varied.

Reverb provides a sense of 'spatialisation' and can be added to a particular track or to the master track to affect the whole mix.



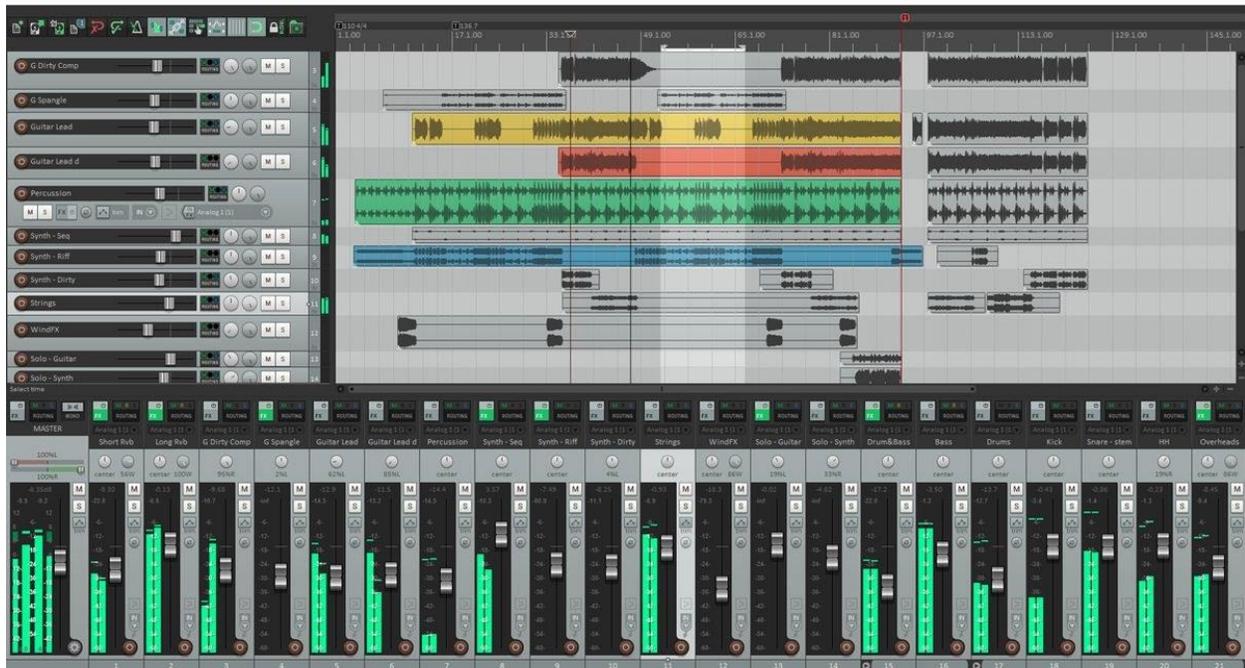


Essential Sound presets in Premiere Pro

There are many audio changes that can be made, and it can become confusing. In Premiere, you can select a clip (or clips) and assign them an Audio Type in the Essential Sound window. This will select a set of effects and adjustments typically used for that type of audio, and allow editing of them in one place.

There is a good video tutorial "[How to Mix Sound for Video in Adobe Premiere Pro](#)" about the Essential Sound settings by Premiere Gal.

Combining Audio Tracks



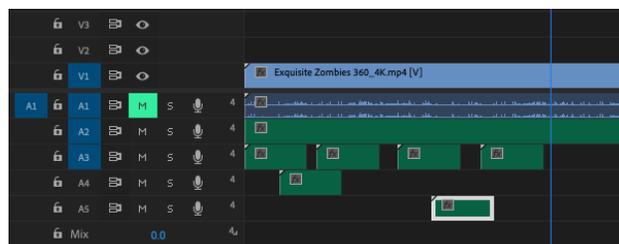
Adding Audio Tracks

Right-click on an existing audio track and choose Add Track from the menu

or

Drag a spatial audio file on to the blank space below the existing tracks on the timeline

Remember to add the Binauralizer plugin to the Mix (Master) track to monitor spatial audio on headphones while you edit.



Locate audio clips on the timeline

Align the start time of audio elements to align with the video cues.

Mixing

Use the track Mixer to adjust the relative volumes of each track to get them in balance.

Parameter Automation

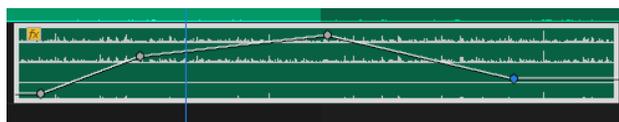
Controls such as panning and volume can change as the video plays. This allows movement in space and variation over time (such as volume fade in and out).

Volume

- Adjust the volume of a clip by right-clicking and selecting 'Audio Gain'
- Expand the audio tracks in the sequence timeline to show waveform for the audio elements. An audio level line should appear in the middle of the element. Click and drag it to change the clip volume.
- Command (Ctrl)-click the line to add break-points that can be dragged to change the volume curve over time.

Breakpoint Envelope changes over time

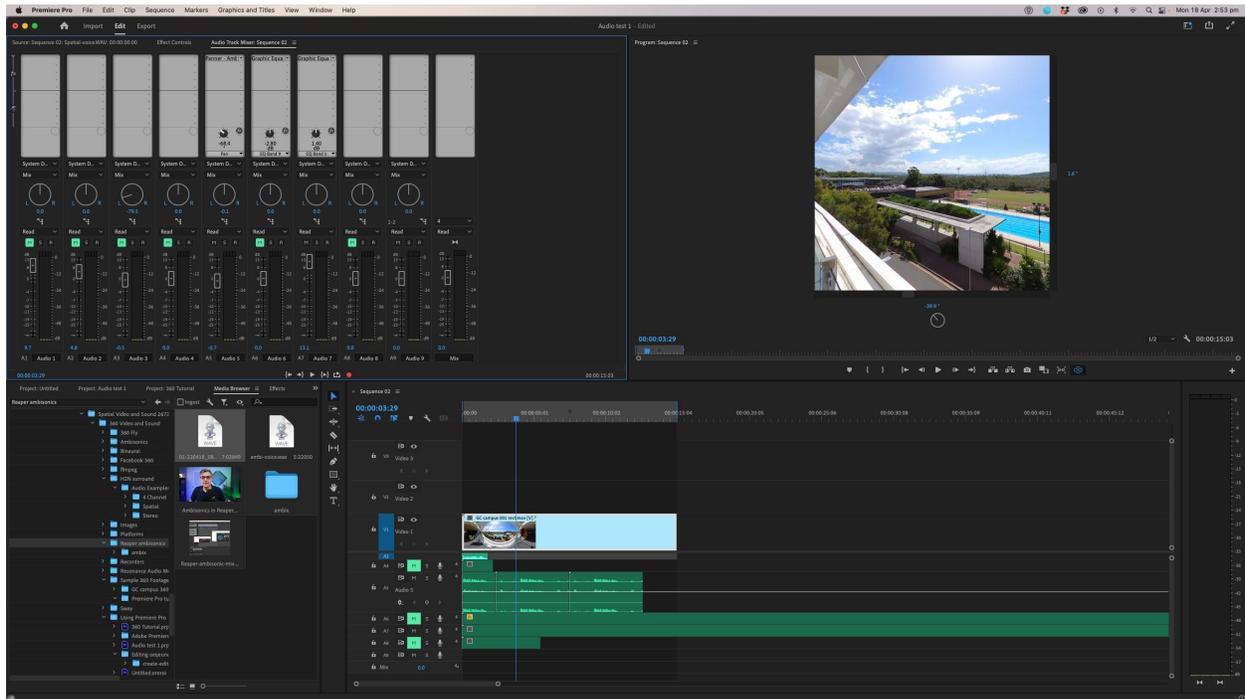
1. Opening the track width far enough will reveal a set of icons below the track name.
2. Click the first icon, Show Keyframes, to reveal a drop down menu. It will include an item for any plugin on the track. Select the plugin parameter you want to edit from the list. The 'line' through the track will now represent that parameter.
3. Add more breakpoints to the line. Drag or add break-points to that parameter envelope (line) just as you did for volume.



Spatial Panner

- To position the sounds in space, left-right & up-down, use Spatial Panner plugin on the track.
- If there are more than one audio clip on the track that need different panning locations or if a sound needs to move in space over time, then use automation to change the Panning parameters over time.

Audio Transition effects



- Just as with video, where there are transitions such as crossfade and fade-to-black, there are corresponding audio transitions.
- View Audio Transition in the Effects window.
- A series of Crossfade options are available; Constant Gain, Constant Power, and Exponential Fade

Sound Effects on Clips, Track or Master



Adding effects to a clip

Premiere has an Effects panel (access from the Window menu) which includes a folder of Audio Effects. These can be dragged onto a clip.

Adding effects to a track

In the Audio Track Mixer window, show the Effects and Sends, and insert an effect into the desired track. Multiple effects can be used in series.

Adding effect to the Mix track

All audio tracks are combined in the Mix track. Effects applied to the Mix track affect all audio. In the Audio Track Mixer window, show the Effects and Sends, and insert an effect into the Mix track. Like we did with the Binauralizer plugin on the Master track.