How to edit audio tracks

Although at times you will use Adobe Audition to record new audio, you will often use it to edit, clean up, or add effects to an existing audio file—such as an audio file recorded with a video. For example, after doing an interview, you might use Audition to reduce background noise, to make the audio louder, or to remove a mobile-phone ring.

This guide covers the following tasks:

- Splitting a sound into clips
- Cutting clip length
- Reducing noise on an audio file
- Increasing or decreasing the volume of a track
- Removing a noise from an audio file
- Adding effects to an audio file
- Combining edited clips in a multitrack session
- Stretching clips in a multitrack session

Splitting sound into clips

After recording or importing an audio clip, you can split the clip into parts so you can edit and manipulate them separately.

To split sound into clips:

1. Start Adobe Audition.
2. Open an audio file in the Waveform Editor.

   Note: To open a file in the Waveform Editor, you can double-click a file in the Files panel or in a multitrack session. You can also choose File > Open to locate and open a file that has not been imported to the Files panel. Another option would be to record a new audio file in the Editor panel. For information on recording audio, see the guide titled “How to record narration.”
3. Select the Time Selection tool in the toolbar (**Figure 1**).
4. Drag to select a segment of the audio file (**Figure 2**).

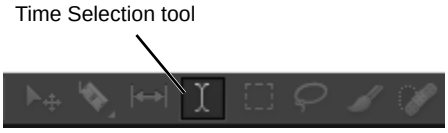

Figure 1 Toolbar

Figure 2 Selecting a segment of an audio file

This document requires Adobe Audition CC, June 2013. Technical instructions may differ depending on your version.

5. Choose File > Save Selection As.

   The Save Selection As dialog box appears (**Figure 3**).

   Audition creates a new file based on your selection. By default, the new file is a Wave PCM file, but you can change that in the Format menu.

6. Enter a name that describes the selected audio and click OK to create the new file.

   Audition creates a new file. You must import the new file to work with it in Audition.

7. Choose File > Open, browse to locate the new file, select it, and click Open.

   The new file opens in the Editor panel and appears in the Files panel (**Figure 4**).

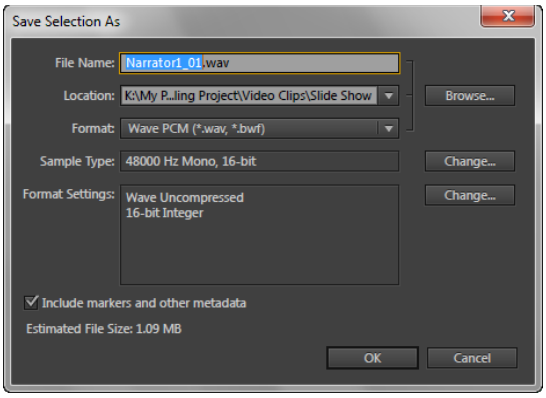

Figure 3 Save Selection As dialog box

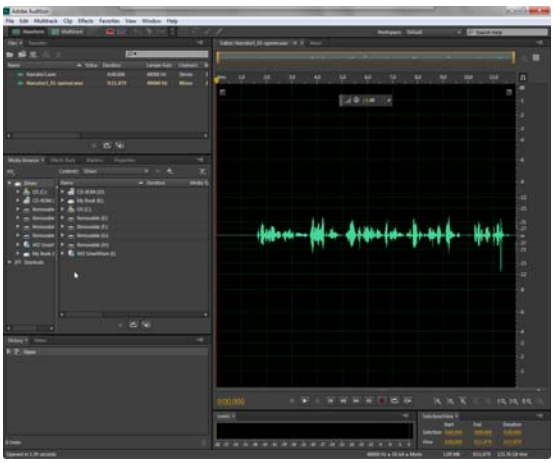

Figure 4 Clip opened as new file

Trimming audio files

To remove part of an audio file, select the part of the clip you want to remove and press Delete. You can remove sections from the beginning, middle, or end of a clip.

To trim audio from a clip:

1. Open the audio file in the Waveform Editor.
2. Select the Time Selection tool in the toolbar (**Figure 1**).

   Note: To select the end of the clip, you may need to zoom out. Click the Zoom Out Full button at the bottom of the Editor panel to see the entire clip (**Figure 5**).

3. Drag to select a portion of the clip and press Delete.

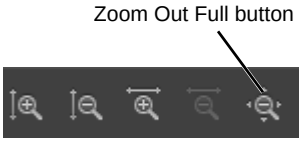

Figure 5 Zoom Out Full button

Increasing or decreasing volume in a sound file

One thing guaranteed to annoy the audience of your finished video is a soundtrack that requires viewers to continually turn their volume up and down as they watch the movie.

When you record audio, you may or may not achieve a consistent level of sound over the entire duration of the recording. Or, you may be using multiple audio files recorded at different times in different locations, each with a different sound level. When editing or mixing audio in Adobe Audition, you can increase or decrease the volume level of a clip or portions of a clip to create a final sound track with a consistent level from start to finish—or a soundtrack that is quiet or loud exactly when it should be.

To increase or decrease sound level of a clip or selection:

1. Open the audio file you want to adjust.
2. Position the pointer over the Heads Up Display (HUD) in the Editor panel (**Figure 6**).

   Note: If the HUD is not open, select View > Show HUD.
3. Drag left to decrease the volume, or drag right to increase the volume.

   As you drag, the decibel level changes in the HUD and the Waveform shows the change graphically.
4. Release the mouse button.

   The change is applied. After applying the change, the HUD resets to +0 dB. The number in the HUD represents the amount of increase or decrease to volume, based on its current level (not the levels in the original file).
5. Using the Time Selection tool, drag in the Editor panel to select a portion of the clip.
6. Use the HUD to adjust the volume up or down.

   The change applies only to the selected portion of the clip.

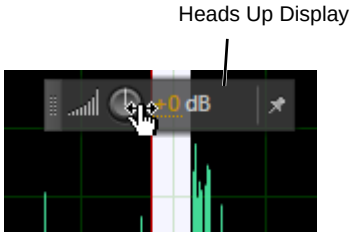

Figure 6 HUD in the Editor panel

Using the Preview Editor

When editing audio, you may want to turn on the Preview Editor. The Preview Editor creates a split screen showing the original waveform (before edits) and a preview of the edited waveform. The original waveform displays in top pane and the preview appears on the bottom pane.

The Preview Editor has three zoom modes.

- Independent zoom: The top and bottom panes zoom independent of one another.
- Mirrored zoom: Both panes zoom in sync with one another.
- Zoom To Selection: When you select a portion of the waveform in the top pane, the selected area zooms in the lower pane.

To use the Preview Editor:

1. Click the Show Preview Editor button in the top-right corner of the Editor panel (**Figure 7**).

   The Editor window splits into top and bottom panes (**Figure 8**). The default zoom mode is Independent, as shown in the Zoom menu (**Figure 9**).

Figure 7 Show Preview Editor button

Figure 8 Preview Editor split panes

Figure 9 Zoom menu

2. Zoom and pan the the waveform in the lower pane.

   The lower pane zooms independent of the upper pane (**Figure 10**).

3. Open the Zoom menu and select Mirrored.

   Audition automatically changes the zoom of both top and bottom panes to match. As you zoom or pan, both panes remain in sync.

4. Open the Zoom menu and select Zoom To Seletion.

5. Select a portion of the waveform in the top pane.

   The lower pane zooms to display a close up of the selected waveform. The top pane remains at it's original zoom level (**Figure 11**).

6. Open the Zoom menu and select Independent to return the Preview Editor to its default zoom mode.

7. Click the Show Preview Editor button to turn the Preview Editor off.

Figure 10 Independent zoom

Figure 11 Zoom To Selection

Removing a noise by using the Sound Remover effect

The Sound Remover effect uses something called *semi-supervised source separation* to remove unwanted sounds. What this means is that you provide a little input and then Audition works to separate the good sound from the bad sound and removes what you don't want. It's great for removing hum from a sound, but can also be used to remove an unexpected cell phone ring or other background noise.

To use the Sound Remover effect:

1. Make sure the Spectral Frequency Display is turned on.
2. Select a sample of the sound you want to remove.

   Note: In this example, we used the Paintbrush Selection tool to select the sound (**Figure 12**). You can hold down the Ctrl key (Windows) or Command key (Mac OS) to make multiple selections using the Paintbrush Selection tool (**Figure 13**).
3. Select Effects > Noise Reduction/Restoration > Learn Sound Model.

   Note: If the Learn Sound Model message appears, click OK to dismiss it.
4. Use the Time Selection tool to select the portion of the clip that contains the sound you want to remove.
5. Select Effects > Noise Reduction/Restoration > Sound Remover (Process).

   Audition opens the Preview Editor automtically. The Effect - Sound Remover dialog box appears (**Figure 14**). You can use the default settings or open the Presets menu and choose a preset, such as Ringing Cell Phone Removal.
6. In the Effects - Sound Remover dialog box, click the Preview Play/Stop button to preview the effect (**Figure 15**).

   You can adjust the settings in the dialog box to modify the effect.
7. When you've effectivley removed the offending sound, click Apply to remove the sound.

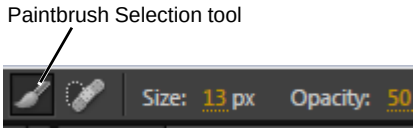

Figure 12 Paintbrush Selection tool

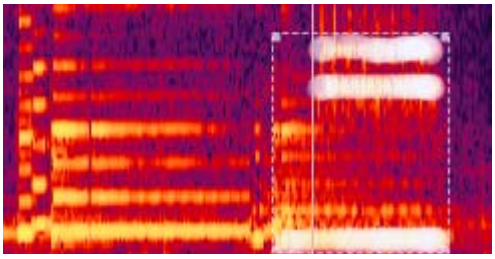

Figure 13 Selecting the offending sound

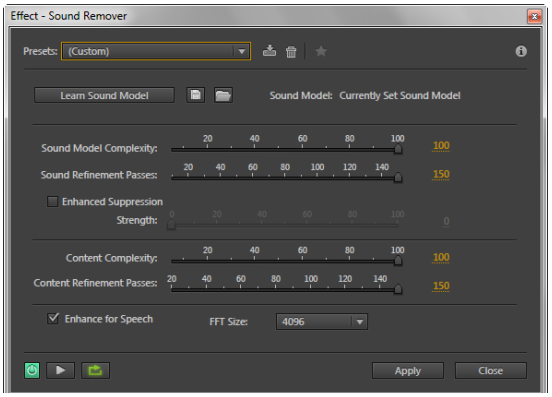

Figure 14 Effect - Sound Remover dialog box

Figure 15 Preview Play/Stop button

Applying effects

An *effect* is a way to distort or modify a sound. Adobe Audition enables you to apply up to sixteen effects at once by using the Effects Rack. Effects you add to the Effects Rack can be powered on and off. The effects you add to the Effects Rack are not permanently applied to the file until you save the file. You can preview the effects and customize, bypass, or remove individual effects. You can also add effects by selecting them in the Effects menu or the Favorites menu. Applying effects to a file in the Waveform Editor is different from applying effects to tracks and clips in the Multitrack Editor.

In this activity, you apply affects to a file in the Waveform Editor. You will learn more about applying effects in the "How to apply Adobe Audition sound effects" guide.

Removing a 60-cycle hum by using the menus

Your audio file might have picked up a low-frequency hum from recording equipment that is connected improperly or has picked up signals from nearby electrical outlets. You can remove this hum by using an effect called Remove 60 Cycle Hum. This is located in the Favorites menu.

To remove a 60-cycle hum:

1. Open the sound from which you want to remove a hum. Make sure no portion of the file is selected in the Editor panel so the effect will not be applied to the entire clip.
2. Select Favorites > Remove 60 Hz Hum.

   Adobe Audition applies the effect to detect and remove any presence of a 60 hz hum.

Adding a reverb effect in the Effects Rack

You can also use effects to add character to your audio files. For example, you can make voices sound as though they are in a large concert hall by using a *reverb effect*.

To add a reverb effect in the Effects Rack:

1. Open the sound to which you want to add a reverb effect.
2. Make sure the Effects Rack panel is open.
3. In the Effects Rack panel, open the Effects menu for the first empty effect (**Figure 16**) and point to Reverb.

   There are five reverb effects to choose from.
4. Select a reverb effect, such as Surround Reverb (**Figure 17**).

   The Rack Effect - Sound Reverb dialog box appears (**Figure 18**).

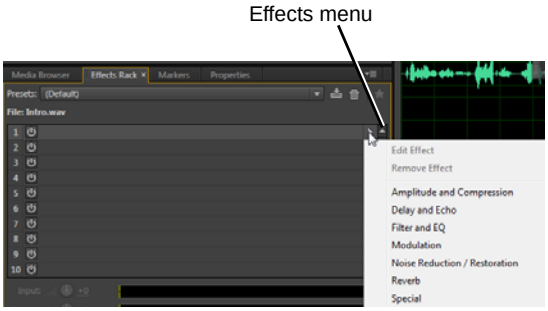

Figure 16 Effects menu in the Effects Rack

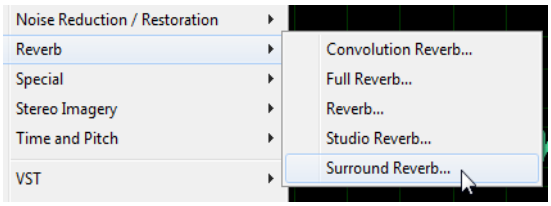

Figure 17 Reverb Effects

5. In the dialog box, open the Presets menu, and select a preset, such as Auditorium.
6. Click the Play button in the transport controls below the Editor panel to preview the effect.

   Note: You may need to drag the dialog box out of the way to see the transport controls.
7. If you are satisfied with the effect, close the dialog box.

   The effect appears as the first effect in the Effects Rack panel (**Figure 19**). The Power State button is toggled to the On state and appears green. You can turn this effect on and off by clicking the Power State toggle button.

   You can add up to 16 effects to a clip.
8. Open the Presets menu in the Effects Rack panel.

   The Effects Rack includes several presets for quickly applying some of the most commonly used effects.

   Note: After adding effects to a clip, you may want to save the entire collection as a new preset. To do that, click the Save Effects Rack As A Preset button (**Figure 19**). Name the new preset and click OK.

Figure 18 Rack Effect–Surround Reverb dialog box

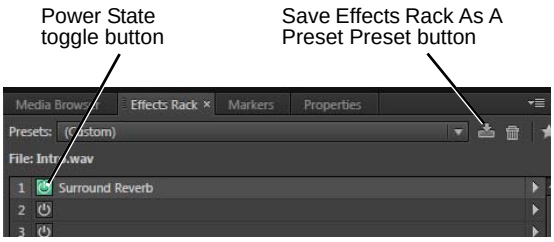

Figure 19 Effects Rack panel

Changing the time and pitch of an audio file

You've heard recordings in which the spoken word is manipulated to sound much slower or faster. One example is in advertisements in which the "fine print" or disclaimer is read at high speed. If you think these narrators are just plain fast talkers, think again. They probably recorded the dialog at normal speed and then added an effect by using a program such as Adobe Audition. Stretching or compressing audio also changes its pitch.

By using the Time and Stretch effects in Adobe Audition, you can manipulate a file's speed and pitch simultaneously to create natural-sounding voices at various speeds. You can also experiment with various speed and pitch settings to create a range of special effects, such as the sound of "chipmunk" voices or the sound of someone who has inhaled helium.

In this activity, you apply Time and Stretch effects to a file in the Waveform Editor. Later in this guide, you will learn to stretch a clip to match the duration of other clips in a multitrack recording.

To change the time and pitch of a sound file in the Waveform Editor:

1. In the Waveform Editor, open an audio file that contains narration or dialog.
2. Play the file to hear how it sounds before adding effects.
3. Select Effects > Time And Pitch > Stretch And Pitch (Process).

   Note: Stretch And Pitch is a process effect, meaning it can only be applied directly to files in the Waveform Editor. It cannot be applied to tracks in a multitrack session, and it cannot be applied as an effect in the Effects Rack panel.

   The Preview Editor opens (splits into two panes) and the Effect–Stretch And Pitch dialog box appears (**Figure 20**). You can enter a specific duration for the file, or you can manually adjust the stretch and pitch shift by percentage of normal. Decreasing the stretch percentage shortens the clip, making voices sound faster. Increasing the stretch lengthens the file, making voices sound slower.
4. Open the Presets menu, and select Fast Talker (**Figure 21**).

   Stretch is reduced to 45% and Pitch Shift is left at 0%, resulting in a shorter file and faster speech.
5. Click the Play button in the dialog box to preview the effect.
6. As the file continues to play, drag the Stretch and Pitch Shift sliders to experiment with various settings and hear how changing the duration and pitch of the file changes the way it sounds.
7. Open the Presets menu, and select Default.

   This returns the audio file to its original settings.
8. Click Close to close the dialog box without applying the effect.

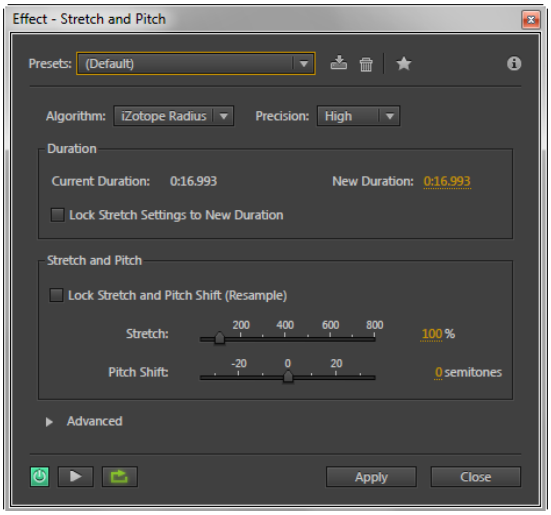

Figure 20 Effect–Stretch And Pitch dialog box

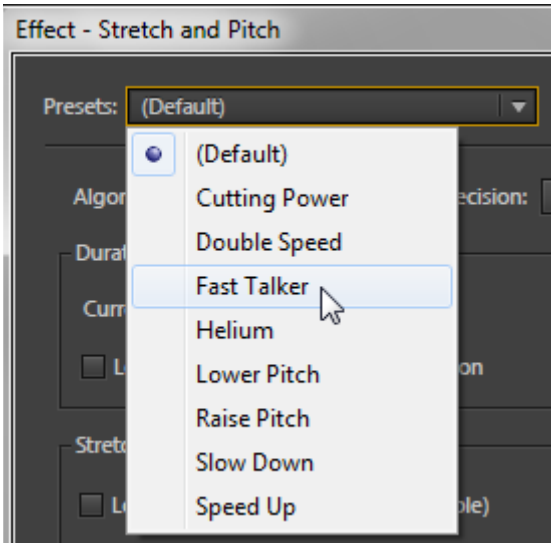

Figure 21 Stretch and Pitch presets

Combining edited clips in a multitrack session

After editing your individual audio clips, you may want to combine several clips in a multitrack project. You already learned how to create a multitrack file in the “How to compose multiple-track recordings” guide. In a multitrack file, you can easily drag clips from one track to another. You can also split and trim the contents of one track and combine it with the contents of another track to blend audio in a multitrack file.

To combine clips in a multitrack file:

1. Select File > New > Multitrack Session to open the New Multitrack Session dialog box.
2. Enter a name for the new multitrack session and click OK.

   The new multitrack session appears in the Files panel and opens in the Editor panel.
3. Add at least three edited audio clips to the empty tracks in the multitrack file (**Figure 22**).
4. To split the contents of the audio in track 2, select the clip in track 2, position the Current Time Indicator (CTI) where you want to split the clip, and choose Clip > Split.

   The clip is divided into two parts (**Figure 23**). You can now edit, trim, or remove the individual parts.
5. Select the first part of the clip you just split.
6. Position the pointer along the right side of the selected clip and drag left to trim the clip (**Figure 24**).
7. Select the second part of the clip you split and trim its left edge to widen the gap between the two clips.

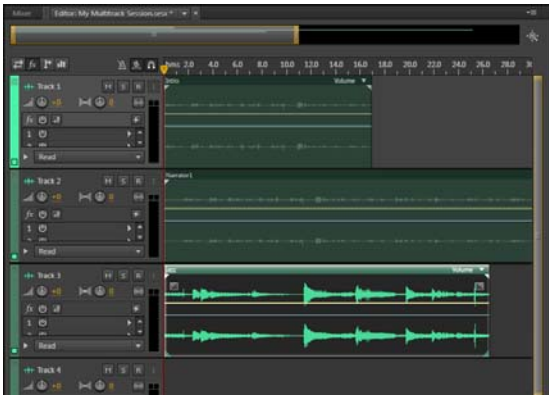

Figure 22 Multitrack file

Figure 23 Split audio track

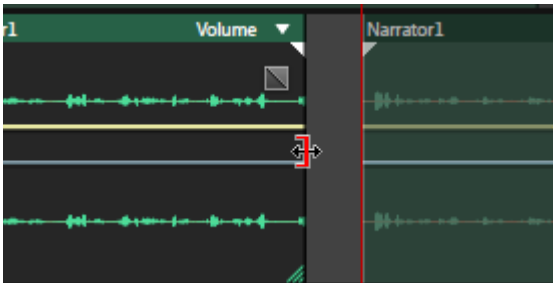

Figure 24 Trimmed section of audio in track 1

8. Trim or split the audio in track 1 to create a clip small enough to fit in the gap you just created in track 2 (**Figure 25**).

9. Drag the small trimmed section of audio from track 1 into the empty space in track 2.

   As you drag the clip into track 2, the clip snaps to the beginning of the existing audio (**Figure 26**).

   You can also use the Fade In and Fade Out handles (**Figure 26**) to gradually introduce the audio of any track. This is useful when you want the music in one track to gradually fade in or fade out under another audio track.

10. To fade audio, select a clip and drag either the Fade In or Face Out handle (**Figure 26**).

    The distance you drag determines the duration of the fade. The resulting curve represents how the fade changes volume slowly at first, then rises rapidly, and finishes slowly (**Figure 27**).

11. Continue trimming and combining clips as needed to blend the audio from each track in your multitrack project.

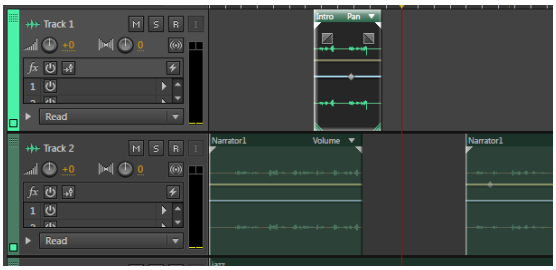

Figure 25 Creating a small clip to fit the gap in track 2

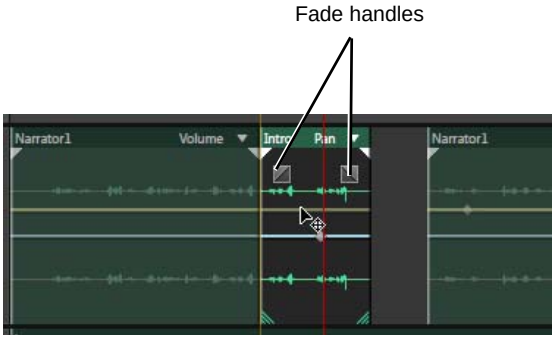

Figure 26 The trimmed clip is now in track 2

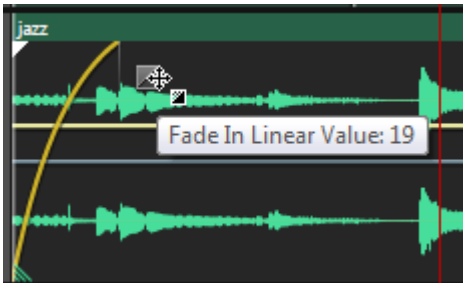

Figure 27 Fade-in curve

Stretching clips in a multitrack session

When composing a multitrack recording, you may want to stretch or compress clips to align perfectly with other clips in the session. For example, maybe you've found the perfect theme music for your movie, but it's about one second too short. You can probably get away with stretching the clip to fit perfectly without your audience ever noticing.

To stretch clips:

1. Open a multitrack session, or create a new multitrack session and add your clips to the empty tracks.
2. Select the clip you want to stretch.
3. Select Clip > Stretch > Stretch Properties.

   Note: If the Stretch panel does not show Stretch properties, close the Properties panel and repeat step 3 above.
4. In the Properties panel, scroll to view the Stretch properties. Expand the Stretch properties if you can't see them all (**Figure 28**).

   By default, stretching is turned off. You can activate stretching in the Mode pop-up menu.
5. Open the Mode menu and select Realtime.

   Realtime stretching is less CPU intensive. The stretching is not rendered at the time of the change.

   Rendered stretching renders the stretched clip at the time of the change, reducing the amount of rendering required later.
6. Open the Type menu and select a type of stretching that best matches the file you want to stretch.

   Monophonic is best for stretching single-source sounds, such as voices.

   Polyphonic is best for complex sounds, such as music, and will automatically shift pitch and speed in relation to each other.

   Varispeed simply speeds up or slows down the recording. The speed and pitch are locked so that when a clip speeds up the pitch increases, as if on a tape machine.

   Notice that in the Properties panel, you can enter new values for the clip duration or percentage of stretch. You can also manually control the pitch in relation to speed by using the Pitch slider. Or, you can drag to stretch a clip in the Multitrack Editor.
7. Take a look at the selected clip in the Multitrack Editor.

   With stretching turned on, the stretching icon appears in the lower-left corner of the clip (**Figure 29**). It indicates the percentage of stretch.

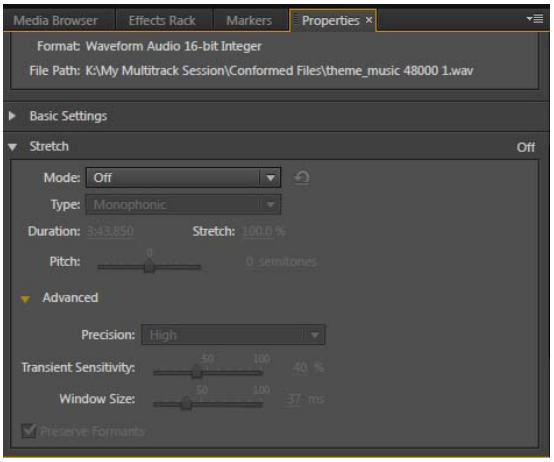

Figure 28 Stretch properties

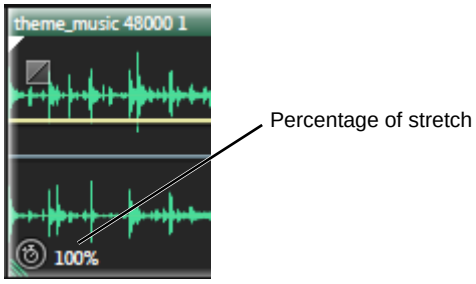

Figure 29 Stretch icon

8. Position the pointer over the stretch handle, a small white triangle in the upper-right corner of the clip (**Figure 30**).

   The pointer changes to a two-headed arrow with a watch.

   Note: A stretch handle also appears at the front edge of the clip in the top-left corner.

9. Drag the stretch handle right or left to adjust the length of the clip as needed (**Figure 31**).

   The entire clip stretches evenly. Stretching is best for small adjustments. If you need a music or sound clip to be of significantly different duration, consider using a sound loop to create your soundtrack. Sound loops are covered in the "How to use sound effects and loops" guide.

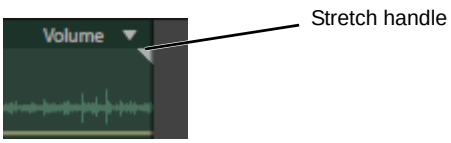

Figure 30 Stretch handle

Figure 31 Stretching a clip