

Lesson 3. Editing Audio

Lesson Files Time Goals

Logic Pro X Files > Lessons > 03 Get Dancing
Logic Pro X Files > Media > Additional Media > wave.aif
This lesson takes approximately 90 minutes to complete.
Assign Left-click and Command-click tools
Edit audio regions nondestructively in the workspace
Add fades and crossfades
Create a composite take from multiple takes
Import audio files
Edit audio regions nondestructively in the Audio Track Editor
Align audio using the Flex tool

Audio engineers have always looked for new ways to edit recordings. In the days of magnetic recording, they used razor blades to cut pieces of a recording tape and then connected those pieces with special adhesive tape. They could create a smooth transition (or crossfade) between two pieces of magnetic tape by cutting at an angle.

Digital audio workstations revolutionized audio editing. The waveform displayed on the screen is a visual representation of the digital audio recordings stored on the hard disk. The ability to read that waveform and manipulate it using the Logic editing tools is the key to precise and flexible audio editing.

In this lesson, you will edit audio regions nondestructively in the workspace and the Audio Track Editor, and add fades and crossfades. You will open a take folder and use Quick Swipe Comping to create a single composite take. Finally, you'll reverse a guitar recording to create a swelling sound effect, and use the Flex tool to correct the timing of a guitar recording.

Even as your ability to read waveforms and use the Logic editing tools develops, never forget to use your ears and trust them as the final judge of your work.

Assigning Mouse Tools

Until now, you have exclusively worked with the default tools. You have also used keyboard modifiers such as Control-Option to choose the Zoom tool and

used keyboard modifiers such as Command-Option to choose the Zoom tool, and changed the pointer to tools such as the Resize or Loop tools. When editing audio in the workspace, you will need to access even more tools.

In the Tracks area (and in various editors), two menus are available to assign the Left-click tool and the Command-click tool.

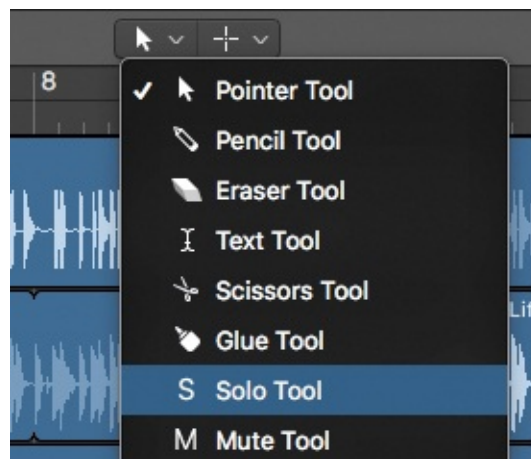


Previewing and Naming Regions

During recording sessions, helping the talent produce the best possible performance often takes priority over secondary tasks such as naming regions. In the aftermath of such sessions, when you don't know what musical material is contained in the regions on a track, taking the time to preview those tracks and give them descriptive names will help prepare for an efficient editing session.

In this exercise, you will assign tools to the mouse pointer. You will use the Solo tool to preview the audio regions on the new Guitar track, and apply the Text tool to rename them.

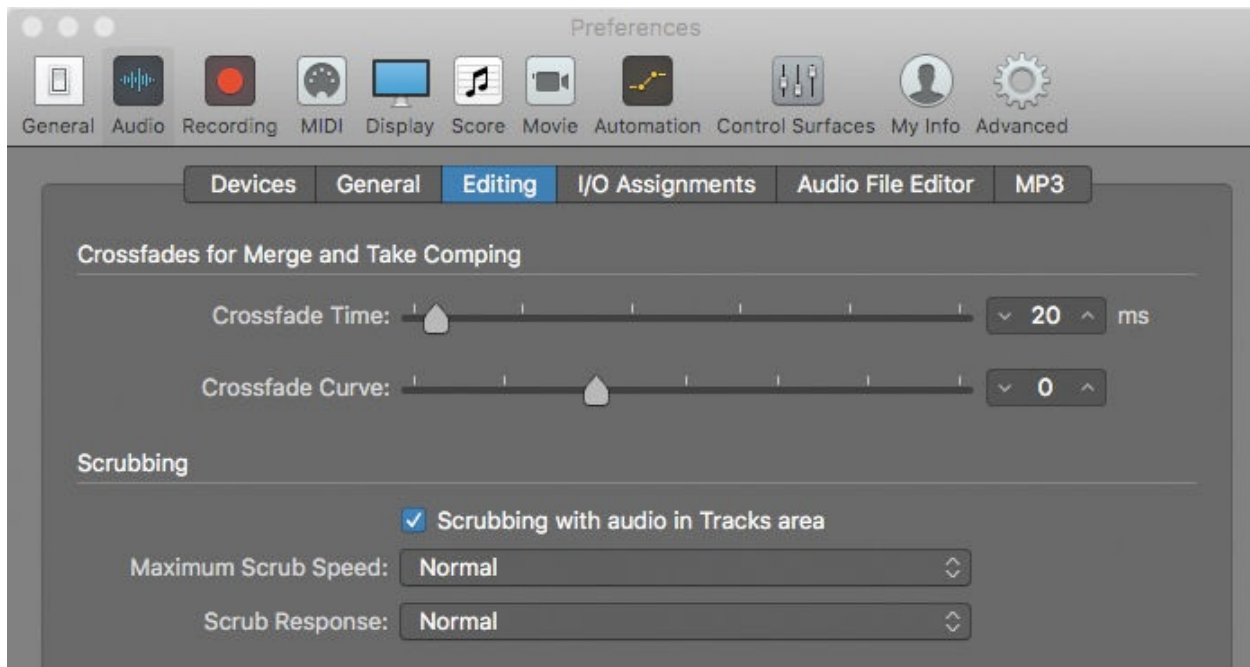
- 1 Open Logic Pro X Files > Lessons > **03 Get Dancing**.
- 2 In the Tracks area menu bar, click the Left-click Tool menu, and choose the Solo tool.



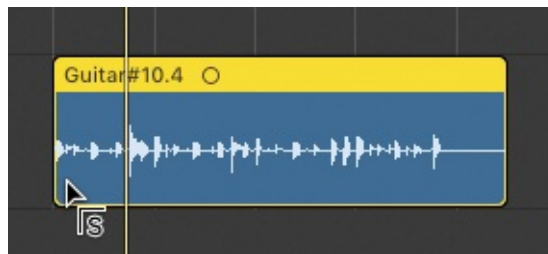
When placed over a region, the mouse pointer has a little S next to it, indicating that it's a Solo tool. You can hear a region play back in solo mode by placing the Solo tool over the region and holding down the mouse button.

Let's first make sure the scrubbing preference is turned on.

- 3 Choose Logic Pro X > Preferences > Audio. Click the Editing tab and make sure "Scrubbing with audio in Tracks area" is selected.



- 4 With the Solo tool over the Guitar track (track 7), hold down the mouse button at the beginning of the *Guitar #10.4* region.



In the control bar, the Solo button turns on, and the LCD display and the playhead both turn yellow. The region is soloed, and you can play back starting from the location where you placed the Solo tool.

You can also drag the Solo tool to scrub the region. You can change the playback speed or direction by dragging the Solo tool to the right or to the left. This technique can be useful when you're trying to locate a specific piece of audio material within a region.

You can hear that the guitar is playing single, muted notes, so you will give it a descriptive name based on those notes.

- 5 Click the Command-click Tool menu, and choose the Text tool.



Your Left-click Tool menu now displays the Solo tool, and the Command-click Tool menu displays the Text tool. If you hold down Command when your pointer is over a region, it changes to the Text tool.

6 Command-click the *Guitar#10.4* region.



A text field appears, in which you can enter a new name for the region.

7 Type *Muted Single Notes*, and press Return to rename that region.

8 Farther to the right on the same Guitar track, using the Solo tool, hold down the mouse button in the Guitar take folder at bar 13.

You can hear some dead notes at the beginning of this take folder, and about a bar of funk rhythm guitar (in bar 14). You will edit this take folder later in this lesson.

9 Command-click the take folder, and rename it *Funk Rhythm*.

10 Using the Solo tool, listen to each one of the three small regions at the end of the Guitar track.

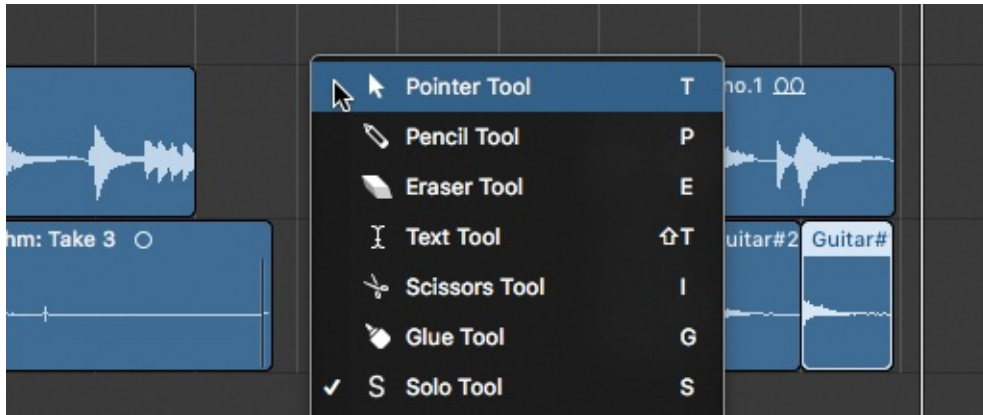
Tip

To make sure you start playback from the beginning of each region, Option-click the region with the Solo tool.

In those regions, the guitar sustains chords, so you will name the regions after the chord names. When naming multiple regions, you may find it cumbersome to repeatedly hold down Command, so let's assign the Text tool to the Left-click tool.

Instead of moving back and forth from the workspace to the tool menus in the Tracks area menu bar, you can press T to open the Tool menu at the current pointer position.

11 Press T (Show Tool Menu).



A Tool menu appears at the pointer position. This key command will save you a lot of trips to the title bar.

Note

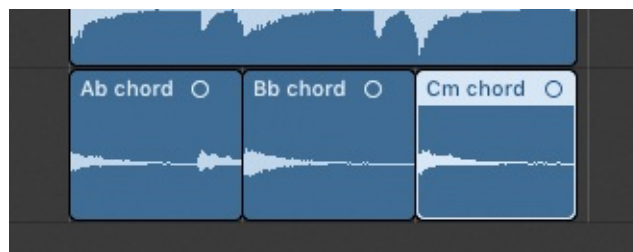
Different areas of the main window (such as the Tracks area or the editors) have their own sets of tools. You can change an area's tools in the Tool menus in its menu bar, or by positioning the pointer over that area and pressing T.

12 In the Tool menu, choose the Text tool.

Tip

When the Tool menu is open, you can press the key command listed to the right of a tool to assign that tool to the Left-click tool.

13 Rename the last three regions on the Guitar track: *Ab chord*, *Bb chord*, and *Cm chord*.



You can also Command-click a tool in the pop-up Tool menu to assign it to the Command-click tool.

14 Press T to reopen the Tool menu, and Command-click the Marquee tool. Now, let's return the Left-click tool to the Pointer tool.

15 Press T twice.

The Tool menu opens and closes, and the Left-click tool reverts to the Pointer tool.

Both tools are back to their default assignments: the Pointer tool for the Left-click tool and the Marquee tool for the Command-click tool.

Tip

If you have a two-button mouse, you can assign a third tool to the right mouse button by choosing **Logic Pro X > Preferences > General** and clicking the **Editing** tab. From the **Right Mouse Button** pop-up menu, choose “**Is Assignable to a Tool.**” The **Right-click Tool** menu will appear to the right of the two existing **Tool** menus.

Now that you know how to choose the best tool for the job, you’re ready to start editing the audio regions on the Guitar track.

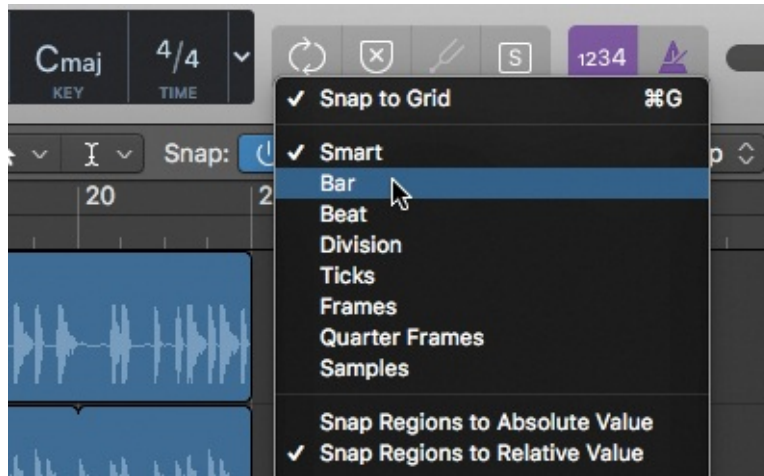
Editing Regions in the Workspace

Editing audio regions in the workspace is nondestructive. Regions are merely pointers that identify parts of an audio file. When you cut and resize regions in the workspace, only those pointers are altered. No processing is applied to the original audio files, which remain untouched on your hard disk. As a result, editing in the workspace provides a lot of flexibility and room for experimentation because you can always adjust your edits at a later date.

In this next exercise, you will edit the *Muted Single Notes* region on the Guitar track. You will first resize the region to make it exactly four measures long, and then you’ll use the Marquee tool to select some of the audio material in the region and copy it later in the track.

Since you’ll be working with whole bars, you’ll first choose snap modes to make the mouse pointer snap to bar lines on the grid, making the editing session easier and faster.

- 1 At the top of the Tracks area, from the Snap menu, choose Bar.

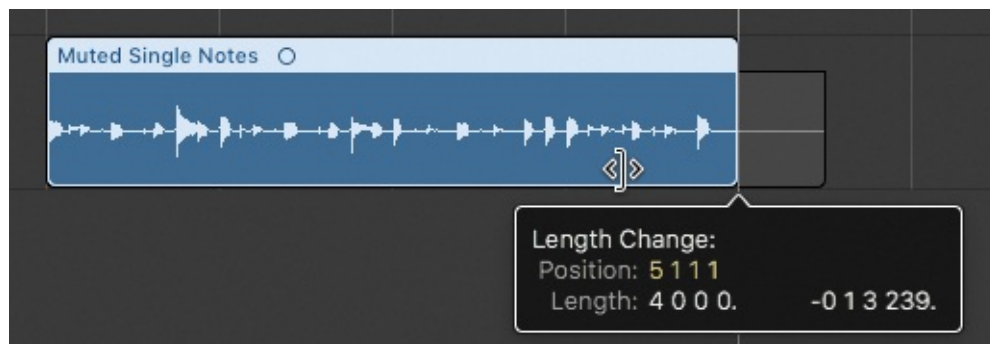


Note

If the Tracks area is not wide enough to display the Snap menu in its menu bar, click the action pop-up menu that appears and choose Snap > Bar.

In the Snap menu, a checkmark appears in front of the modes you choose.

- 2 From the Snap menu, choose Snap Regions to Absolute Value.
- 3 On the Guitar track (track 7), resize the *Muted Single Notes* region to exactly 4 0 0 0.



Drag the Resize tool toward the left until it snaps to bar 4.

Tip

To disable snapping when using various tools in the workspace, hold down the mouse button to start using the tool, and then hold down Control or (for even greater precision) Control-Shift.

- 4 Listen from the beginning of the song to the end of the *Muted Single Notes*

region.

You will now repeat the simple motif in the last two bars of the *Muted Single Notes* region a couple more times, from bars 9 to 13, where the synthesizers play.

The Command-click tool is now the Marquee tool, and the Left-click tool is the Pointer tool. This is a very powerful tool combination when editing audio in the workspace. You can select a section of an audio region with the Marquee tool, and move or copy that selection using the Pointer tool.

- 5 Command-drag the waveform in the *Muted Single Notes* region from bar 7 to bar 9.



The section you selected with the Marquee tool is highlighted.

- 6 Press the Spacebar to play the selection.

Tip

When a marquee selection is present, playback starts at the beginning and stops at the end of that marquee selection, even when Cycle mode is turned on.

The playhead jumps to bar 7 and plays the selection. It corresponds exactly to the two-bar pattern of the guitar you are going to copy.

- 7 Option-drag the marquee selection to bar 9, first releasing the mouse button and then releasing the Option key.



Option-dragging a marquee selection automatically divides, copies, and

Option-dragging a marquee selection automatically copies, and pastes the selection to a new location regardless of region boundaries. In this example, the two-bar guitar pattern is copied and pasted at bar 9.

Remember to release the mouse button first and the Option key second. When the mouse button is released, the original region is automatically restored.

8 Option-drag the new two-bar *Muted Single Notes.3* region to bar 11.



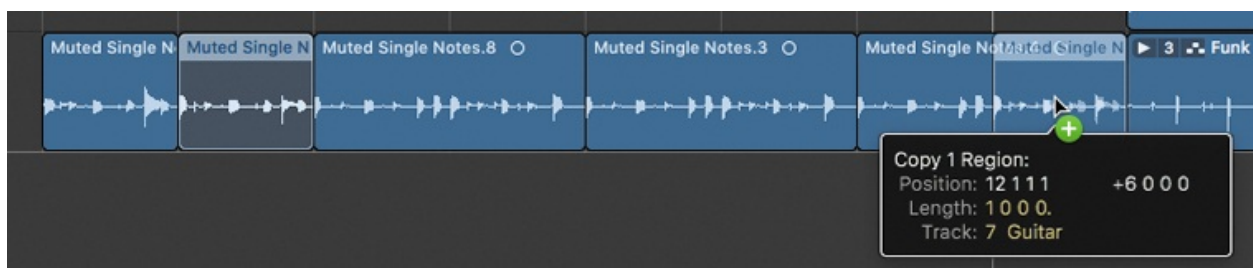
9 Listen from the beginning of the song to the Funk Rhythm take folder at bar 13.

The guitar plays a melodic riff with high notes when it first comes in, and then it plays more discretely throughout the following sections, leaving room for the two synths to shine.

Still, you can bring back a little bit of the excitement just before the breakdown at bar 13.

10 In the first *Muted Single Notes* region, Command-drag from bar 6 to bar 7.

11 Option-drag the marquee selection to bar 12.



In the Tracks area menu bar, the Drag pop-up menu shows the default drag mode, “No Overlap.” As you copy the new region to bar 12, the two-bar region that existed at bar 11 is trimmed down to a one-bar region to make space for the new region.

12 Click the background to clear the Marquee selection.

13 Listen to this new edit.

This last region brings back a welcome variation to the monotonous pattern that the guitar has been playing for the past five bars, returning in time to lead to the break in the next section.

Now you know how to select the desired material within a region and move or copy that material anywhere on the track. You could, for example, move or copy a single drum hit, or a single word in a vocal performance, to replace another one that doesn't sound as good.

Comping Takes

In the previous lesson, you recorded several takes of a guitar performance and packed them into a take folder. Now you will learn how to preview those individual takes and assemble a composite take by choosing sections from multiple takes, a process called *comping*.

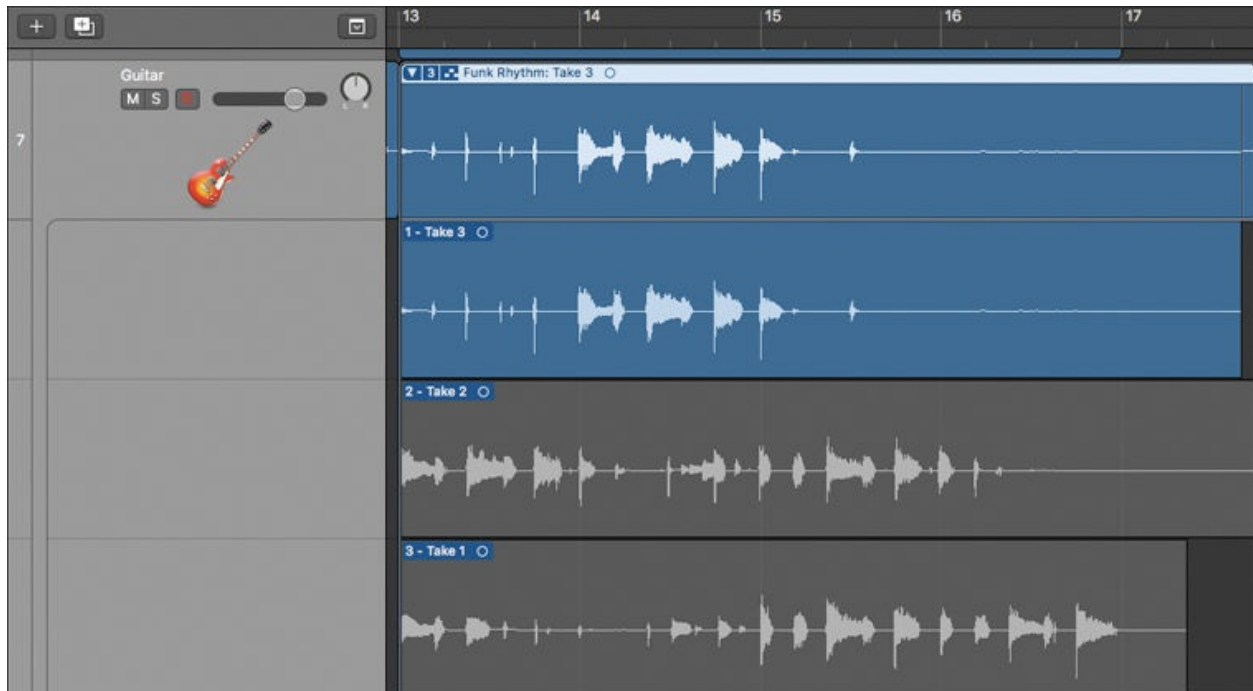
Comping techniques are useful when you have recorded several takes of the same musical phrase, each with its good and bad qualities. In the first take, the musician may have messed up the beginning but played the ending perfectly. And in the following take, he nailed the beginning and made a mistake at the end. You can create a perfectly played comp using the beginning of the second take and the ending of the first take.

You can use the same comping techniques to create a single musical passage from multiple musical ideas. As they improvise in the studio, musicians will often record a few takes and later comp the best ideas of each performance into a new, virtual performance.

Previewing the Takes

Before you start comping, you need to become familiar with the takes you are going to comp. While doing so, you will assign the takes different colors to help distinguish between them, and then decide which part of which take you will use.

- 1 At bar 13 on the Guitar track, double-click the take folder to open it.
- 2 Press Z to zoom in on the selection.



The selected take folder and its takes fill the workspace. The take folder is on the Guitar track, and the three takes it contains are on lanes below the Guitar track. Take 3 at the top is selected and is the take currently playing. The other takes are dimmed to indicate that they are muted.



You'll see three buttons at the upper left of a take folder:

- ▶ The disclosure button allows you to open or close the take folder.
- ▶ The Take Folder pop-up menu displays the current take number (or the current comp letter) and contains options to manage your takes and comps.
- ▶ The Quick Swipe Comping button allows you to toggle Quick Swipe Comping on and off to edit the individual takes in the same way you would edit regions on a track.

After those three buttons, you'll see the name you previously gave your take folder (Funk Rhythm) followed by the comp name (Take 3).

Let's assign each take a unique color.

3 Press Option-C to open the Color palette.

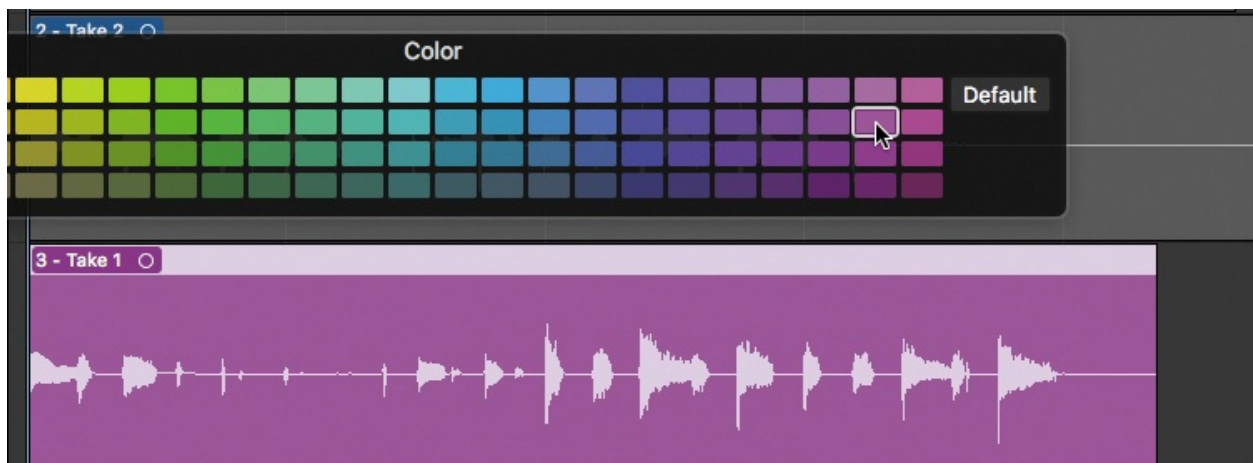


Tip

The Color palette displays a white frame around the color(s) of the selected region(s). This is useful when you need to assign other regions the same color.

4 Click Take 1 to select it.

5 In the Color palette, click a purple color square.



Take 1 is purple.

You will keep the blue color for Take 2, and choose a new color for Take 3.

6 Click Take 3, and in the Color palette, click a green square.

7 Close the Color palette.

8 Press Command-U to turn on Cycle mode and make the locators match the selected take.

9 In the Guitar track header, click the S (Solo) button, or make sure the Guitar track is selected and press S.

10 Press the Spacebar.

The selected take, Take 3, plays. There's really only one usable bar in this whole take—the second bar (between bars 14 and 15).

11 Stop playback, select Take 2 and listen to it.

This time the first bar sounds good, but the second bar is rather messy; the third bar sounds good, and then the guitar player plays the wrong chord and stops. So far, between Take 2 and Take 3, you have just enough material to cover the first three bars of the breakdown, and you're missing the fourth bar.

Note

Logic can also continue playing in Cycle mode as you select different takes.

12 Listen to Take 1.

This time the guitarist misses the entire beginning but gives a good performance in the fourth bar of the breakdown.

Although each take is a very poor performance, you have all the material you need to create a comp take that will sound good. You will use the following sections of each take: ► Take 1: The fourth bar

► Take 2: The first and third bars

► Take 3: The second bar

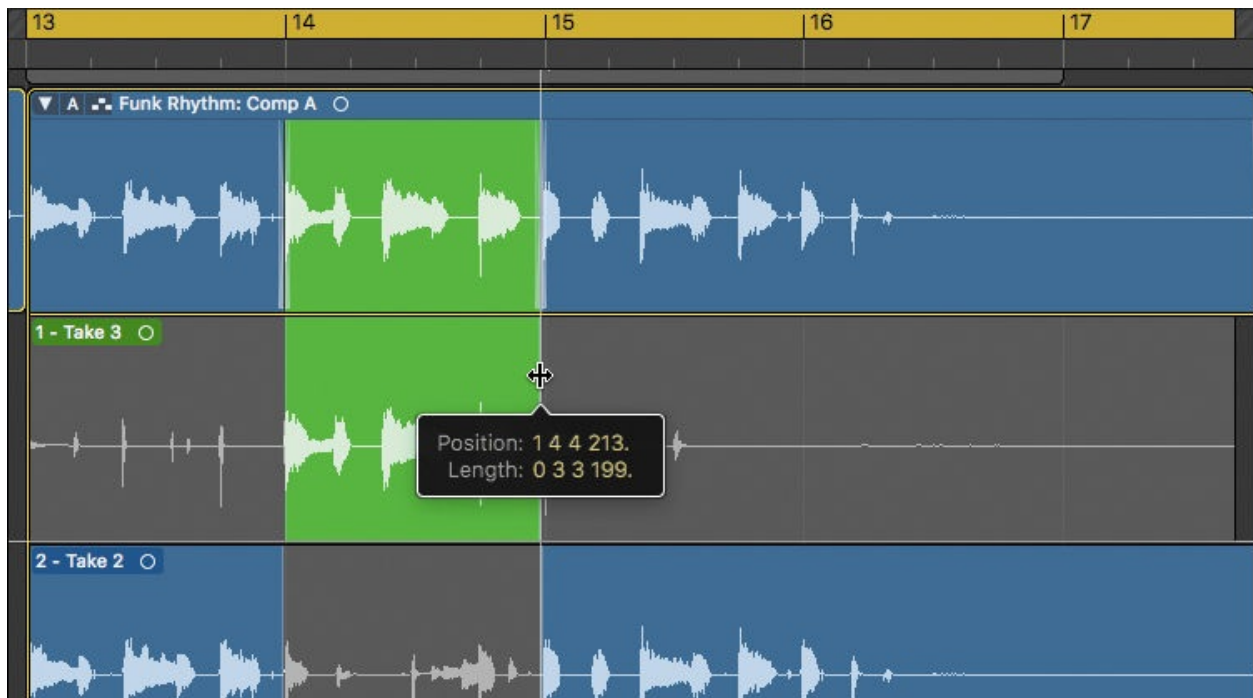
Comping the Takes

Now you'll assemble the best sections of each take to create a single, flawless composite take using the Quick Swipe Comping feature. You will swipe your mouse across the parts of the takes you want to hear in your comp.

1 Click Take 2 to select it.

The entire take is selected, and its color and name are displayed in the take folder.

2 Click Take 3 at bar 14, and drag to the right to select one measure.



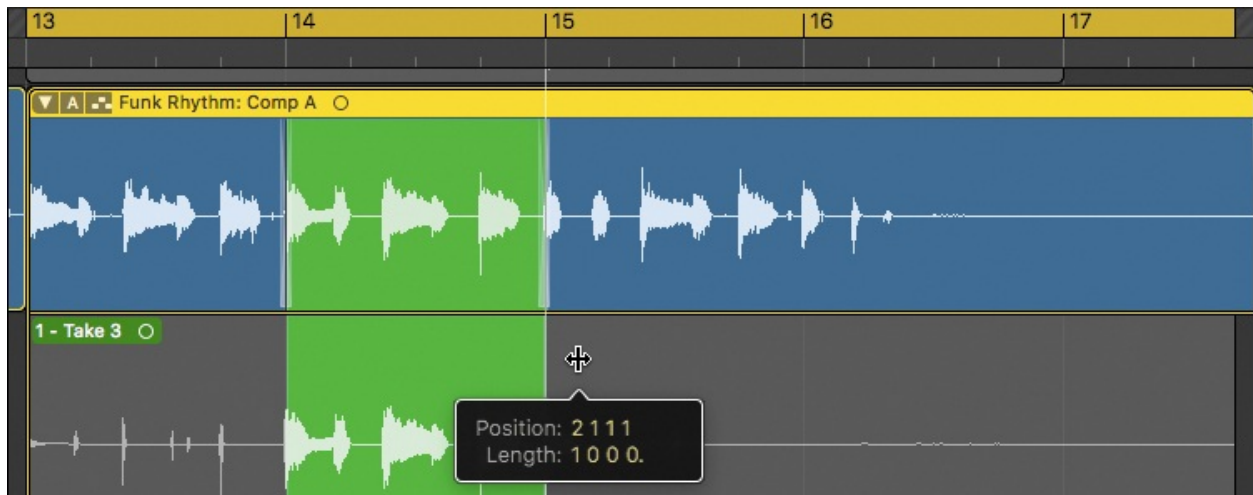
The mouse pointer does not automatically snap to the grid when Quick Swipe Comping, but snapping would help you edit this kind of rhythmic material.

- 3 At the top of the Tracks area, from the Snap menu, choose Snap Quick Swipe Comping.



Let's undo the previous selection and try repeating that operation with snapping turned on.

- 4 Choose Edit > Undo Edit Comp (or press Command-Z).
- 5 At bar 14, click Take 3 and drag right to select one measure.



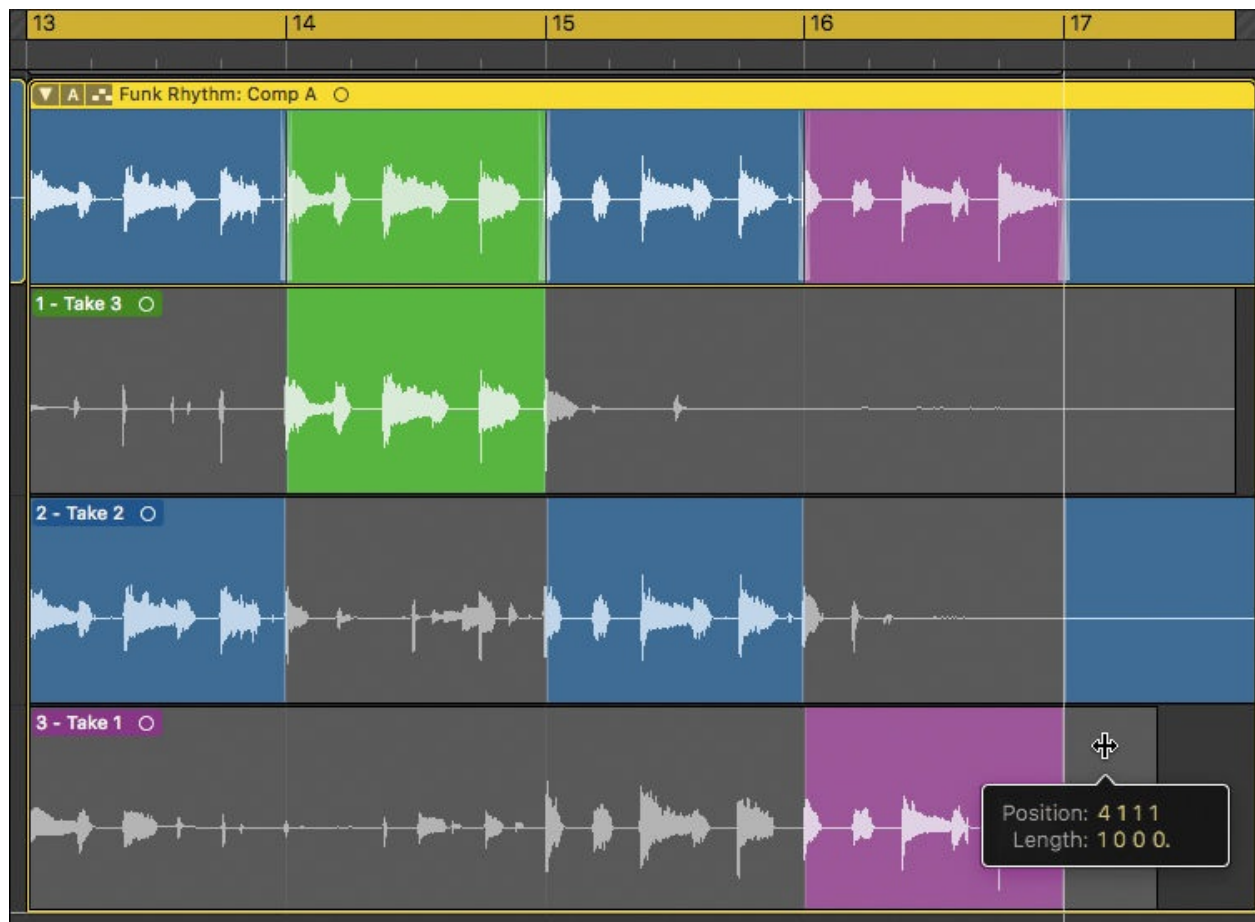
This time the mouse pointer snaps, making it easier to select exactly one measure.

6 Click Take 1 at bar 16 and drag to select one measure.

Notice that in the take folder on the Guitar track, the waveform and its background color match the sections of the selected takes. Your comp name, Comp A, now appears next to the take folder name, and the letter A is displayed in the Take Folder pop-up menu (to the right of the disclosure triangle).

Note

A take folder can contain multiple comps that you can choose from the Take Folder pop-up menu. An easy way to start a new comp is to Option-click a take to select it, and start comping again.



7 Listen to your comp.

Although each individual guitar take was pretty poor, you've edited them together into a good-sounding guitar part. There is, however, a lingering noise present at the end of Take 2 you can delete.

8 At the end of Take 2, click the last section highlighted in blue.



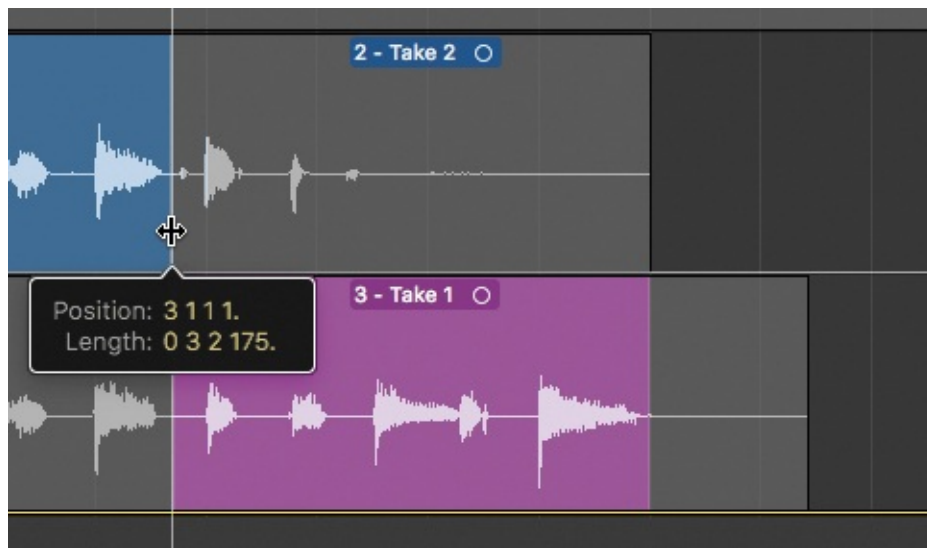
The upper part of the clicked section is white, indicating that the section is selected.

9 Press Delete to remove the selected section.

10 Listen closely to the edit at bar 16.

You can hear a double-attack on the downbeat of bar 16. You will now clean up that edit.

11 At bar 16, click-hold the right edge of the last highlighted section in take 2; then hold down Control-Shift while you drag to the left into the silent section.



Holding Control-Shift while you drag temporarily disables the snapping, giving you the precision you need to clean up this edit.

12 From the Take Folder pop-up menu, choose Flatten.



The take folder is replaced by the current comp. The selected sections of the takes in the folder are now replaced by audio regions, and crossfades are displayed at the junctions between regions.

13 Click the Guitar track's Solo button (or press S) to unsolo the track and