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CHAPTER 5

Edit Your Podcast

You've successfully recorded your podcast—congratulations! That is an accomplishment right there, but don't make the mistake of thinking that you're finished and your podcast is ready to release onto the Net. No, you still have some work ahead of you. You need to clean up your recording and edit it to make sure that it's as close to matching your vision as possible. In this chapter, we walk through some of the most common editing tasks that you will want to perform with Audacity.

Opening the File with Audacity

If you just finished recording your podcast with Audacity, it's obvious which file you're going to edit, so it's unnecessary to open it. If you took a break after recording your podcast, however, and you now want to open the recording to edit it, or if you plan to open and integrate more than one recording, you need to know how to open Audacity files. Fortunately, it's pretty dang easy.

The easy way: Choose File, Open, navigate to the file you need, select it, and voila! It's open in Audacity. Repeat as necessary.

Drag and drop also works. In either Windows or Mac OS, just drag the audio file into an open Audacity window (as in Figure 5.1), and the program opens the file.

CHAPTER 5

Edit Your Podcast

FIGURE 5.1

Drag the audio file icon into the open Audacity window.



If you want to kill two birds with one stone, just drag an audio file onto the Audacity icon, and the program will open and then quickly open the file. If you use Windows, make sure you have the Audacity icon on your Desktop; if you use a Mac, drag the audio file onto the Audacity icon on your Dock, as you can see in Figure 5.2.

FIGURE 5.2

Drag an audio file to the Audacity icon in the Dock.



Linux users can use File, Open, of course, but they can also start Audacity from the command line, with the name of the audio file as an argument.

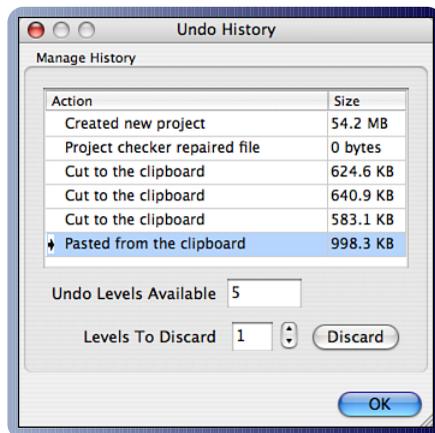
```
$ audacity my_wicked_cool_podcast.aup
```

Orient Yourself in Audacity

When you first open your podcast in Audacity, you'll see something that looks like Figure 5.3:

FIGURE 5.3

The main Audacity window, features your podcast's waveform.



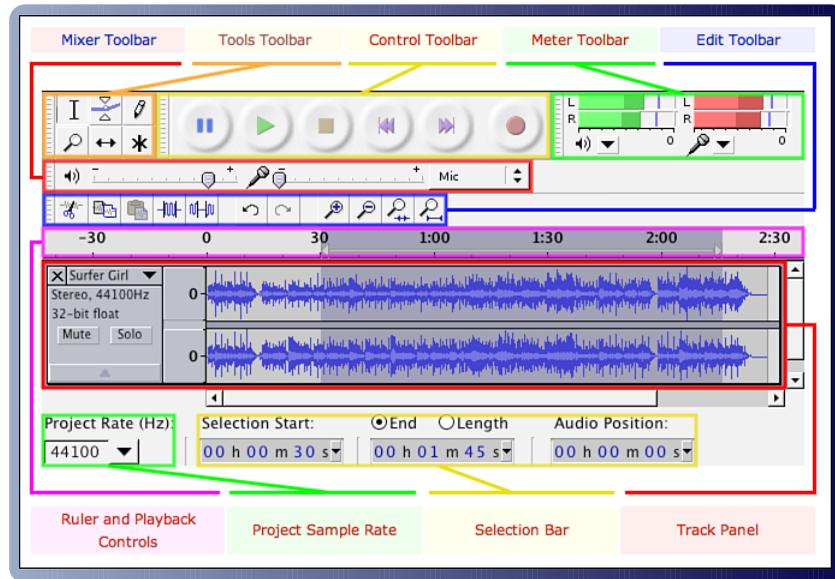
The blue squiggly lines you see are called a *waveform*, and they represent your recorded audio. Basically, the larger a particular squiggle, the louder the audio at that point, with the reverse true as well.

The ruler along the top of the waveform shows the length of the recording; in this case, around 21 minutes. You also use the ruler to select areas of your audio that you want to hear or edit.

Let's quickly go over the other components of your Audacity window. We've already looked at a few of the interface elements in other chapters, which I will refer to, but there are some new components as well. In Figure 5.4 you can see all the various aspects of Audacity's window, along with labels describing them.

You may see a big difference in the layout of the Audacity you have running on your computer and that shown in Figure 5.4. If so, don't panic. You can move Audacity's toolbars around within the window to best suit your preferred working style; in addition, Audacity automatically moves the toolbars around as you adjust the size of the program's window. It's best if you learn the names of the various components so that you can refer to them by name instead of by position.

FIGURE 5.4
The labeled parts of an Audacity window.



The six colorful buttons in the top left of the Audacity window, as shown in Figure 5.5, are the Control toolbar. They should be familiar to you from virtually any digital audio program.

FIGURE 5.5
Audacity's Control toolbar.



If you need a quick refresher on the purposes of the Control toolbar, take a look back in Chapter 4, “Record Your Podcast,” in the section “Recording with Audacity.”

The Meter toolbar, displayed in Figure 5.6, was covered earlier in Chapter 3, “Microphone and Speaker Setup,” in the “Test Volume Levels” section.

FIGURE 5.6

The Input and Output level meters show you the volume Audacity hears.



Those meters show you the volume levels of input and output that Audacity hears. The input level is critically important when you’re recording, and the output level becomes important as you edit your podcast.

The Mixer toolbar, which you can see in Figure 5.7, was also covered previously, in the “Test Volume Levels” section of Chapter 3.

FIGURE 5.7

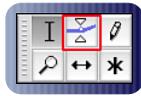
The Mixer toolbar in Audacity allows you to control the volume level of your microphone.



The two sliders control the volume levels Audacity uses for input and output on your sound card. The left slider, with the speaker in front of it, is for output, whereas the right, with the microphone icon, is for input. To the right of the input slider is a drop-down menu that allows you to select the source of input: microphone, line in, CD/Video in, and so on.

Next to the Control toolbar is a group of six small buttons with various icons on them, shown in Figure 5.8.

FIGURE 5.8
Audacity's Tools
toolbar.



This is the Tools toolbar, and it allows you to perform editing functions on your audio file that require selecting areas of your audio.

The Edit toolbar, viewable in Figure 5.9, is useful as you work on fixing up your podcast.

FIGURE 5.9
Audacity's Edit
toolbar.

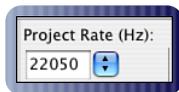


More information
about the Edit toolbar
can be seen at
http://audacityteam.org/manual/index.php?title=Edit_Toolbar.

Many functions on the Edit toolbar should be familiar to anyone who's used a word processing program. Cut, Copy, Paste, Undo, and Redo should hold no surprises. We'll cover the other buttons and what they do later throughout this book.

Figure 5.10 shows the Project Rate area of Audacity.

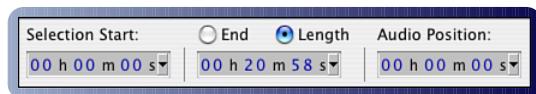
FIGURE 5.10
Audacity allows you
to see and change
the sample rate of
your audio.



Finally, the Selection toolbar, shown in Figure 5.11, is used to view and change the exact start and stop time of a range of selected audio, allowing you to make precise selections.

FIGURE 5.11

Make selections within your audio file with the Selection toolbar.



You'll use the Selection toolbar a lot as you edit your podcasts; in fact, you'll learn more about it in the next section.

Listening to Your Audio File

As you edit your Audacity file, you're going to listen to it as well. In fact, you can't edit an audio file without also listening to it.

The Play and Stop buttons will be your friends. Click on the waveform to select a place from which to start listening, and then click the Play button, or use the Spacebar as a handy shortcut. When you hear something problematic and need to cease play, click the Stop button or use the Spacebar again, which toggles between Play and Stop.

Selecting a Portion of Audio

If you want to listen to a particular chunk of audio—from 1:30 to 2:15, for instance—select that part of the waveform and then click Play. Audacity plays only the selected area of audio.

Of course, that brings up the question: How do you select part of a waveform? There are actually several ways to do this.

If you want to select everything, press Ctrl+A (or ⌘-A on a Mac); to deselect everything—in other words, to select nothing—press Ctrl+Shift+A (or ⌘-Shift-A on a Mac).

If you're going to use the mouse, you first need to click the button on the Tools toolbar for the Selection tool, displayed in Figure 5.12.

FIGURE 5.12

You will use the Selection tool on the Tools toolbar a lot.



Now that you're in Selection mode, click on the spot in the waveform where you want to start, and then drag to the right *or* left until you reach the end or beginning of the area you want to define. If you want to extend your selection range after you've already defined an area, hold down Shift as you left-click and drag.

If you're a keyboard person, or if you just want tighter control over the selection process, move the waveform's cursor to where you want to start your selection by using the left arrow to move left and the right arrow to move right. When the cursor is in its starting place, use Shift+left arrow to move the selection area to the left, and Shift+right arrow to move the selection area to the right.

Keep in mind that you can use both to expand the same selection area; in other words, you could use Shift+right arrow to expand a selection forward in time, and then use Shift+left arrow to expand the same selection backward in time, creating a larger overall selection area. If it's confusing, try it with one of your audio files, and it will become clear.

If you go too far to the left and want to back up to the right, use Ctrl+Shift+right arrow; if you go too far to the right and want to back up to the left, use Ctrl+Shift+left arrow (Mac users, substitute ⌘ for Ctrl).

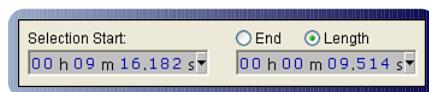
Where did I find out all these cool time-saving keyboard commands? They're all right there in front of you—just go to Preferences, Keyboard, and you can see, and even modify, the entire list. If you want to use Audacity to its maximum productivity, you need to learn as many keyboard shortcuts as possible.

Using the mouse can be the right thing to do at times, and using the keyboard can help you be more accurate, but if you want the absolute highest precision, you'll want to use the Selection Bar.

When you first view the Selection Bar, pay special attention to the Selection Start and the End/Length drop-down menus, shown in their default states in Figure 5.13.

FIGURE 5.13

By default, the Selection Bar doesn't display milliseconds.



By default, the Selection Bar displays—and lets you change—hours, minutes, and seconds. This might sound like it's fine, but when you need precision to choose a specific area of an audio file, you'll quickly find that it's just not good enough. You need more specificity. Fortunately, the developers of Audacity realized this need. When you click on either drop-down menu, you'll see the menu displayed in Figure 5.14.

FIGURE 5.14

The Selection Bar allows you to choose from several display notations.

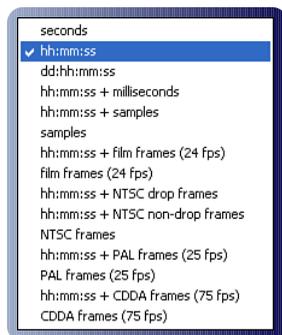


FIGURE 5.15

Aha! Milliseconds!



FIGURE 5.16

You've selected just over 9.5 seconds.

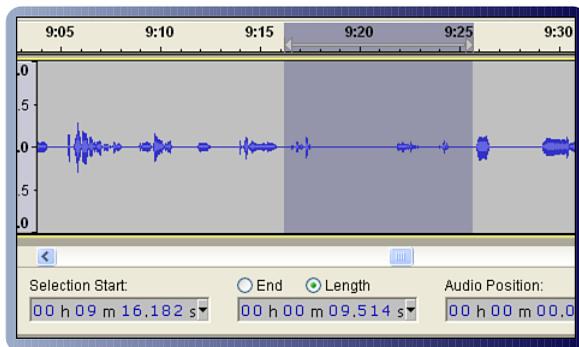
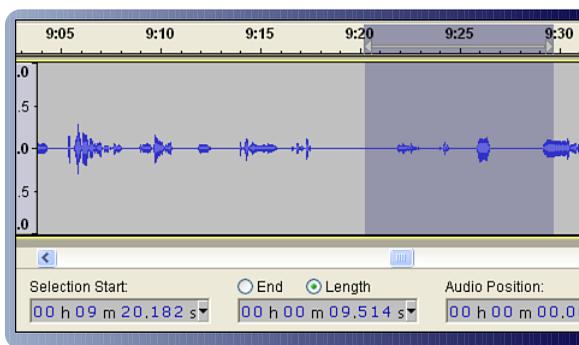


FIGURE 5.17

You changed the Selection Start, but the Length is the same.



For our purposes, select hh:mm:ss milliseconds, which causes Selection Start and End/Length to look like what you see in Figure 5.15.

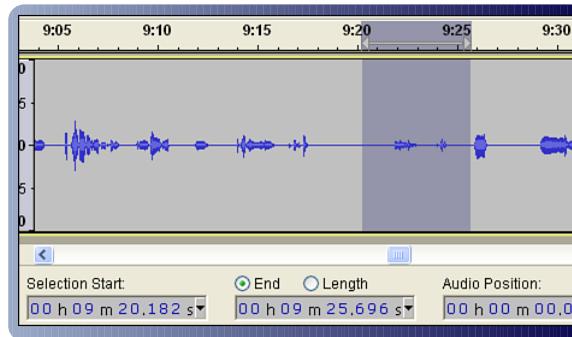
Now you can make precise selections. To change any of the numbers displayed in the Selection Start or End/Length, click on the number you want to change and use your up or down arrow keys to increase or decrease the number. As you change the number, others around it may change as well; in other words, if 09.514 seconds is displayed, and you move the 5 up five places, the number will change to 10.014 seconds. You can also change adjacent numbers by moving between them with the right and left arrow keys, and then use the up and down arrows to change the actual values.

The difference between altering the End and altering the Length is best seen with examples. Let's begin with a selected area of about 9.5 seconds, illustrated in Figure 5.16.

The default is Length, so let's use that first. The length is set to 9.514 seconds, so you are telling Audacity that you want the length of your selection to remain 9.514 seconds, *no matter how the Selection Start changes*. In Selection Start, click on the 6 in 16 and then press your up arrow key four times, advancing the Selection Start to 20.182, which you can see in Figure 5.17.

You've advanced the *start* of the selection forward by four seconds, but the *length* of the selection hasn't changed, and is still 9.514 seconds.

FIGURE 5.18
You changed the Selection Start, resulting in a shorter selection.



Instead of choosing Length, what if you had instead used End? In that case, End would change to show the time that the selected area stopped: 9 m 25.696 s. If you then clicked on the 6 in the 16 in Selection Start and pressed the up arrow four times, advancing the Selection Start to 20.182, you'd see a different result, as shown in Figure 5.18.

This time you changed the Start but left the End the same, resulting not in a selection that is the same length and shifted, but instead in a shorter selection. Both have their place, and you'll know when you need one or the other. The important thing is that you now know how to tell Audacity to provide you with the exact selection you need.

Viewing Aspects of Your Audio with Zoom

What if you want to select three minutes of audio, but Audacity only displays 30 seconds? There are several ways around that issue as well.

To see your entire audio waveform inside your Audacity window, choose View, Fit in Window, or press Ctrl+F (⌘-F on a Mac). Alternately, you can click on the Fit Project button on the Edit toolbar, which you can see in Figure 5.19.

FIGURE 5.19
Fit Project on the Edit toolbar shows your entire audio file.



Of course, if your audio file is 20 minutes long, you will definitely be able to see the three you want, but it may be tough to select exactly those three minutes.

FIGURE 5.20

Zoom In and Zoom Out are found on the Edit toolbar.



In cases like that, you want to use Zoom. You can use the Zoom In and Zoom Out buttons on the Edit toolbar, shown in Figure 5.20.

Zoom In shows you a progressively smaller and smaller section of the waveform, whereas Zoom Out shows you more and more.

Or you can use the Zoom button on the Tools toolbar, which you can see in Figure 5.21.

FIGURE 5.21

The Zoom button on the Tools toolbar.



To use the Zoom button, just click on the waveform to move in, and Shift+click to move out. If you're zooming in and then zooming out quickly as you try to find the optimal area to select, this method can be a lot quicker than clicking back and forth on the Zoom In and Zoom Out buttons.

You can also use the menus—View, Zoom In and View, Zoom Out—but that's way too slow! Instead, use the keyboard commands: Ctrl+1 to Zoom In and Ctrl+3 to Zoom Out (Mac users, that's ⌘ for you). As for View, Zoom Normal (Ctrl+2 or ⌘-2, depending on your OS), that shows your audio file in increments of one second, with about one inch onscreen for every one second.

Finally, if you've made a selection, and you want to zoom in so just that selection area is showing in Audacity, use View, Zoom to Selection or Ctrl+E (⌘-E for Macs). You can also click the Fit Selection button on the Edit toolbar, shown in Figure 5.22.

FIGURE 5.22

The Fit Selection button on the Edit toolbar.



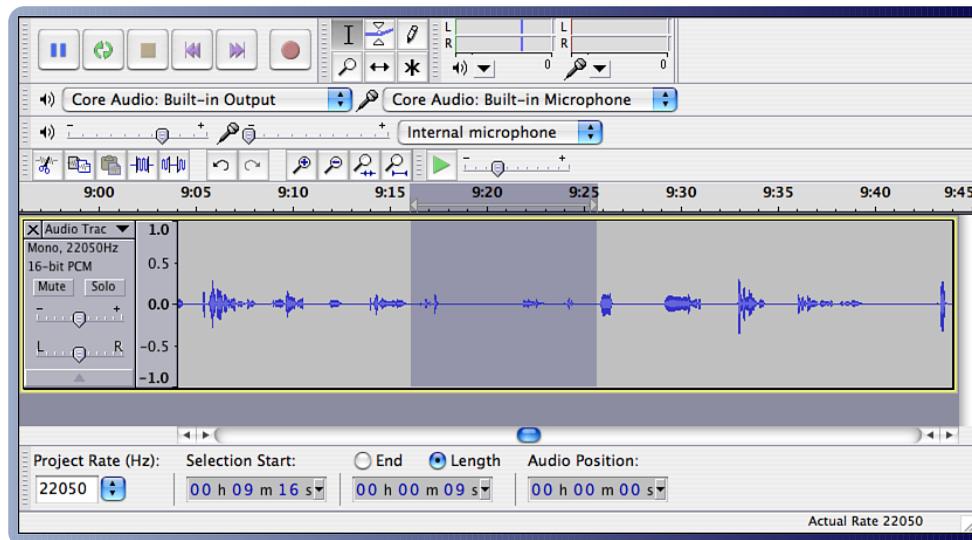
You can't edit your podcast if you don't listen to it first. The quicker you are at making selections, the faster your editing process will be, and you will get your podcast in front of the world sooner rather than later.

Deleting Audio

You're listening to your rough audio recording, and you hear a place in which you cough, pause for several seconds, and then cough again. That needs to be removed! Zoom in so that the area in question is comfortably visible, and then select the part you want to remove using the techniques discussed in the preceding section. Eventually you might have something that looks like Figure 5.23.

FIGURE 5.23

Select the area you want to remove.



To remove the offending sounds, go to Edit, Delete (or Ctrl+K/⌘-K), and they will go bye-bye. When you do so, the audio in front of the area you deleted collapses backward to fill in the time gap that was created. To put it another way, if your audio file was 20:43 and you deleted 13 seconds, the file is now 20:30.

This is not the case if you use Edit, Split Delete (or Ctrl+Alt+K/⌘-Option-K), however. In that case, when you delete a section of your podcast, you leave free space behind, acting as a DMZ between what are now two large hunks of your file. If your audio file was 20:43 and you use Split Delete to remove 13 seconds, the file is still 20:43, with a 13 second gap wherever you surgically sliced out a piece. In addition, you now have two separate audio clips that can be manipulated independently.

You can also replace the coughing with silence by choosing Edit, Silence (or Ctrl+L/⌘-L). This is more like Delete, in that you still have only one complete clip, unlike Split Delete, which results in two separate clips.

If you want to delete everything *except* the area you have selected, use Edit, Trim (or Ctrl+T/⌘-T). After using that command, the only audio left will be what you had previously selected, so this is a great way to get rid of 10 minutes of meaningless rambling to focus on the 45 seconds of great banter that you want to use.

Of course, you can use Undo if you suddenly realize that your coughing is sonic genius and must be preserved; to find out how, look ahead in this chapter to “Undo Your Mistakes.”

Cutting, Copying, and Pasting Audio

Anyone who’s typed a document on a typewriter and then graduated to word processing software has given thanks for Cut, Copy, and Paste. Those three simple commands have made life infinitely easier for writers, but they can also be used in Audacity to edit podcasts and other audio files as well.

To remove a selected chunk of audio and place it temporarily on your computer's clipboard, go to Edit, Cut, or press Ctrl+X (⌘-X for Macs) on your keyboard. When you do so, the audio in front of the area you cut collapses backward to fill in the time gap that was created. To put it another way, if your audio file was 20:43 and you cut 13 seconds, the file is now 20:30.

This is not the case if you use Edit, Split Cut (or Ctrl+Alt+X/⌘-Option-X), however. In that case, when you cut out a section of your podcast, you leave free space behind, acting as a DMZ between what are now two large hunks of your file. If your audio file was 20:43 and you use Split Cut to remove 13 seconds, the file is still 20:43, with a 13 second gap wherever you surgically sliced out a piece. In addition, you now have two separate audio clips that can be manipulated independently.

What if you like the way you introduced your podcast—"This is the Audacity podcast, dedicated to all things audacious in open-source audio editing."—and you want to use that exact same bit of audio at the end of your podcast? No problem. Select those few seconds at the beginning of your file, choose Edit, Copy (or Ctrl+C/⌘-C), place the cursor on the waveform at the end of your file where you want the same audio to appear, and use Edit, Paste (or Ctrl+V/⌘-V).

Of course, you can use Paste after you have cut part of your podcast too.

Undo Your Mistakes

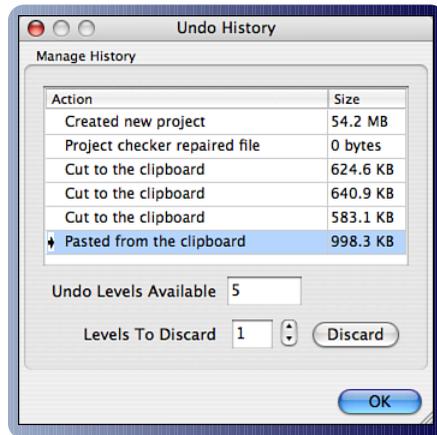
If you decide that you've made an error, it's easy to undo your action: Select Edit, Undo, or press Ctrl+Z/⌘-Z.

To jump back several steps, or to see everything that you've done to a file, use View, History, which shows you something like you see in Figure 5.24.

CHAPTER 5

Edit Your Podcast

FIGURE 5.24
Undo as many levels as you want with Undo History.



For more about incorporating music into your podcast, see Chapter 11, “Add a Musical Intro and Outro.”

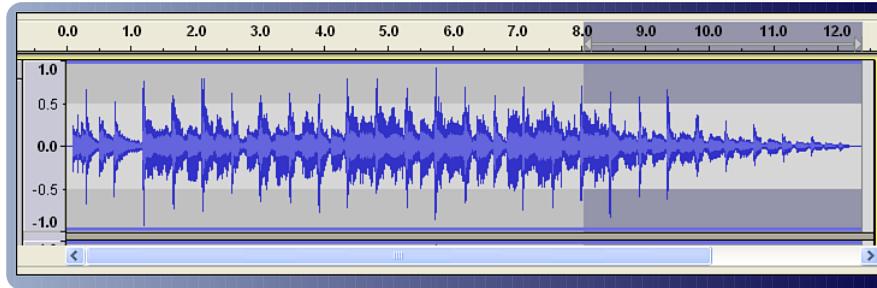
Fading In and Out

Most popular music nowadays finishes not with a sudden, abrupt ending but with a gradual fade out. This is usually a nice way to end—and begin!—your podcast as well, especially if you utilize some sort of music to bring listeners in and then lead them out at the end.

The easiest way to reduce the volume gradually on a part of your podcast is to select the area you want to change and then go to Effect, Fade Out. You can see the results in Figure 5.25.

FIGURE 5.25

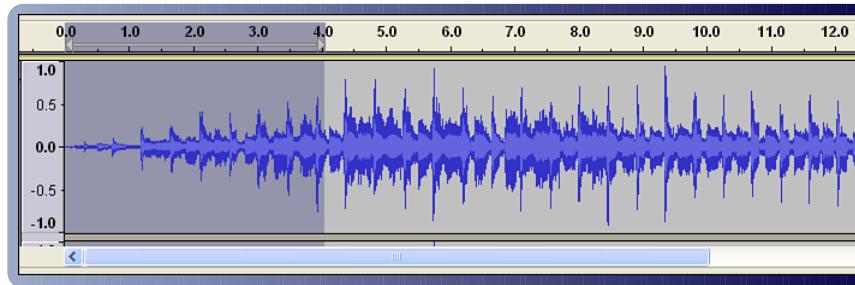
Reduce your audio's volume gradually with the Fade Out effect.



Likewise, to gradually increase the volume on part of an audio file, select the area and then choose Effect, Fade In. Audacity produces what you see in Figure 5.26.

FIGURE 5.26

Increase your audio's volume gradually with the Fade In effect.



For most people, the changes made with the Fade Out and Fade In effects are just fine. The only real control you have is based on the length of your selection—the longer the time span chosen, the more gradual the fade in or out—but that will produce acceptable results most of the time.

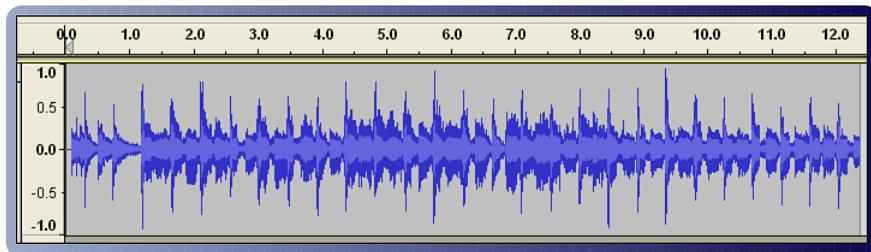
However, if you want complete control over the changes in volume over time, you need to familiarize yourself with the Envelope tool, shown in Figure 5.27.

FIGURE 5.27

The Envelope tool gives you complete control over audio fading.



Let's illustrate the use of the Envelope tool by working on the brief audio file shown in the following figure.



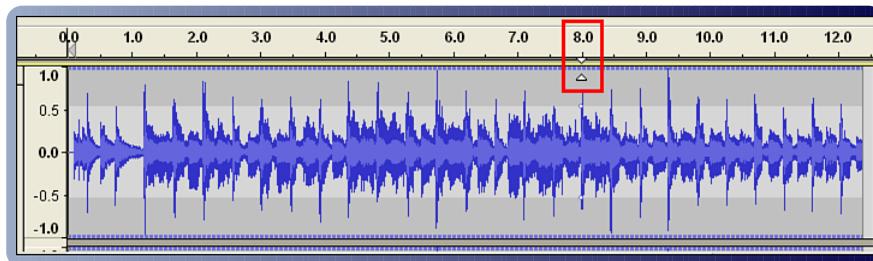
Remember, the Fade Out effect would create a very linear, gradual decrease in volume. In the case of this audio file, I want the last five seconds to contain the fade out. Specifically, I want a fairly sudden drop in the first two seconds, and then a more gradual lowering over the last three seconds. No problem for the Envelope tool.

I start by selecting the Envelope tool, and then click once on the waveform around the 8.0 second mark (about five seconds before the audio clip ends). Where you click is important. If you click within the waveform, you then can adjust the overall volume of your clip by moving your mouse up or down. Up makes the audio louder overall; down reduces the entirety of your audio. If you want to set your initial mark for

the Envelope tool without adjusting your clip's volume, carefully click on the blue line at the top of the band containing the waveform, as shown in Figure 5.28.

FIGURE 5.28

Carefully click on the selected area called out in this figure.



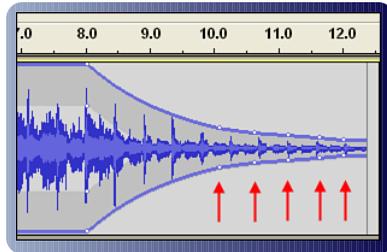
Since I want a pretty abrupt drop about two seconds after the fade out starts, I now click with the Envelope tool at 10.0. This time, however, I click within the waveform itself. I just click; I don't drag my mouse, as that will adjust the volume, and I don't want to do that yet.

I add other control points at 10.5, 11.0, 11.5, and 12.0, just by clicking on the waveform. Now that they're in place, I go back and carefully click on each individual point I inserted. As I click on a point, I move my mouse up to increase the volume and down to lower the volume. I walk through each control point until I get the results you can see in Figure 5.29 (the arrows have been added so that you can more easily see the control points; Audacity won't put those in there).

If I insert a control point and want to move it to a new location, clicking and dragging it to a new location on the waveform works perfectly. If I insert a control point and decide I don't want it any longer, I can just click on it and then drag it outside the track. When I release the mouse, the control point is gone.

FIGURE 5.29

The Envelope tool allows you to precisely control the fade out.



The Envelope tool performs the same function as the Fade In and Fade Out effects—it changes volume over time—but it gives you a heck of a lot more control over just how that fading occurs. You may never use it, but when you need it, you’ll be glad that Audacity’s developers had the foresight to include such a powerful feature.

Conclusion

If you’re going to take podcasting seriously, you’re going to have to edit the initial audio that you record. Sure, a few successful podcasts are considerably more raw, with little to no editing, but that’s the exception, not the rule. Just because a popular podcast gets away with it, does not mean that you can. Take the time to edit your podcast and make it sound great. You’ll be proud of your work, and your audience will appreciate the extra polish that you put into place!