

## Chapter 5

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# Sound with Mac OS

As any Macintosh owner will tell you, sometimes loudly and proudly, a Mac comes with sound. It plays music, alerts, and sound effects using the built-in hardware and software. It can even talk to you, and in some models you can talk back to it. This chapter shows you how to control sound on your Mac with Sound Manager (the Mac OS basic sound software) and PlainTalk, the speech extension. And since Mac OS doesn't quite do everything people want, you'll also learn how to use Agent Audio and SoundApp to manage snd resources and sound suitcases.

What you'll learn:

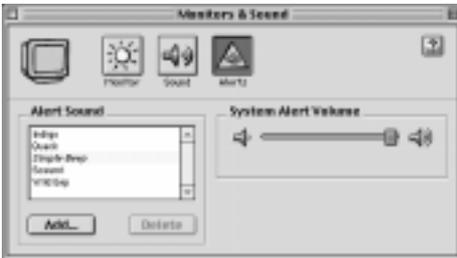
- How to manage your system alert sound: selecting one, adding new ones to the list, removing old ones from the list, recording your own, and setting the volume
- How to manage your sound input and output devices: setting the volume, configuring them, and selecting them
- How to use Text-to-Speech: selecting a voice, reading documents out loud in SimpleText, adding voice annotations to SimpleText documents, and using talking alerts
- How to use Agent Audio to manage a program's snd resources: viewing and playing sounds, extracting sounds, and replacing sounds
- How to use SoundApp to create and manage sound suitcases

## System Alert Sounds

Mac OS uses one sound as the *system alert* or system beep. It plays the alert sound to call your attention to error messages and other events. It gives you several sounds to choose from, and you can add more sounds to the list if you wish.

### Selecting an alert sound

You use the Monitors & Sound control panel to change your alert sound. Figure 5-1 shows an example of the control panel, with the Alerts section selected. The figure shows the five basic sounds provided by Mac OS. You'll see how to add more sounds in the next section.



**Figure 5-1** You change your system alert sound in the Monitors & Sound control panel.

How to change the alert sound:

1. Choose Apple menu  ⇨ Control Panels ⇨ Monitors & Sound to open the control panel.
2. Choose the Alerts button to display the Alerts panel. This panel lists all the sounds that can be alert sounds. The current one is highlighted.
3. Click each sound to hear what it sounds like.

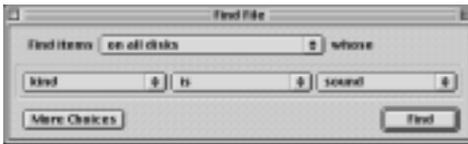
4. When you find the sound you want to use, drag the System Alert Volume slider to adjust its volume. Keep playing it and adjusting the volume until you're satisfied with the way it sounds.
5. Close the panel when you're done.

## Locating more sound files

You aren't limited to the few alert sounds that Mac OS gives you. You can add as many sounds to the list as you'd like. Before I show you how to do that, let's look at how you can find some sounds to use. The following procedure uses Find File to build a list of sound files. It doesn't find all possible sounds on your system because it doesn't locate snd resources. You'll see how to access snd resources in the "Managing snd Resources with Agent Audio" section later in this chapter.

How to find all your sound files:

1. Choose Apple menu  ⇨ Find File to open the Find File window, shown in Figure 5-2.
2. Set the five pop-up menus so that the window reads, "Find items *on all disks* whose *kind is sound*," as shown in the figure.
3. Choose Find to begin the search.



**Figure 5-2** File Find helps you locate all the sound files on your computer.

Find File opens a new Items Found window to list the files it finds, as you can see in Figure 5-3. The top panel lists the files. When you select a file in the top panel, the bottom panel shows the location of the file. In the example, the Droplet sound is selected in

the top panel, and the bottom panel shows that it is in the SoundApp68K folder. You can resize the bottom panel by dragging the bar between the two panels. You can access a file directly from the top panel. Double-click a sound to listen to it, or drag it from the window to move it to the desktop or some other folder.



**Figure 5-3** The *Items Found* window displays the results of a *File Find* search.

## Adding more system alert sounds

The Alerts panel lists all the snd resources in the System file (also called the System suitcase). You can add any sound to the list by moving or copying it into the System file. The following procedure shows you how.



### Tip

Tip #51 to avoid premature aging: Keep your system alert sound short and pleasant. You have to listen to it a lot.

How to add more system alert sounds:

1. Quit all programs (except Finder). You can't change the System file if any program is running.
2. Open your startup disk by double-clicking its icon on your desktop.

3. Open the System Folder and locate the System file. (Don't open it, just find it.)
4. Locate the sound file that you want to add.
5. Drag the sound file to the closed System file. The next time you open the Alerts panel, you'll see the new sound in the list.

**Tip**

If you're having trouble dragging the sound from its current folder to the System file, try dropping it to the desktop. Then drag it from the desktop to the System file.

To remove an unwanted sound from the alert sounds list, drag it out of the System file. If you want to keep it, drop it on the desktop or in another folder. Or drop it in the Trash to delete it. Another way to delete it is to choose the Delete button in the Alerts panel (refer back to Figure 5-1). The Delete button completely eliminates the snd resource; it does not put it in the Trash.

## Working with Your Sound Devices

Your Macintosh comes with a variety of sound devices. It probably includes a built-in microphone and speaker. Your monitor might include better speakers. Perhaps you also have added some external sound devices. The Monitors & Sound control panel gives you a way to select the devices you want to work with and adjust their volumes.

### Adjusting volume

You use the Sound panel, shown in Figure 5-4, to adjust the volume of all your sound devices. It displays the sound devices attached to your system, so yours might show different devices than those in the figure. Each device can be adjusted independently, and each can be muted without affecting the others.



**Figure 5-4** *The Sound panel lets you adjust the volume of your sound devices.*

How to adjust the volume of a sound device:

1. Choose Apple menu  ⇨ Control Panels ⇨ Monitors & Sound to open the control panel.
2. Choose the Sound button to display the Sound panel.
3. Drag the volume slider to adjust the volume of all your devices. The system plays your alert sound so you can hear the new volume.
4. To mute the device, click the Mute box to place an *X* in it. To unmute it, click it again to remove the *X*.



#### Note

A device cannot be muted if its Mute check box is dimmed (light gray).

## Selecting sound devices

Even if you have several sound devices, you can use only one input (or source) device and one output (or playback) device at a time. You select and configure the devices you want to use in the Sounds control panel.

## The sound source

The sound source determines which of your input devices you are currently listening to or recording. If you have not added any input devices to your system, your built-in device is your only sound source. By the way, your built-in CD-ROM drive counts as part of the built-in device. If you have added external sound sources — perhaps a CD player or a tape player — you can select and configure them in the Sound control panel.

When you select an external sound source, you have the option of playing it through the current output device. Suppose, for example, that you have added an external tape player to the sound input port. To listen to a tape on your built-in speakers, you would select the tape player as your sound source and enable the Playthrough option. If you don't enable Playthrough, the tape will play but you won't hear it.



### Note

Playthrough should be disabled when recording from an external source.

How to select a sound source:

1. Choose Apple menu  ⇨ Control Panels ⇨ Monitors & Sound to open the Sound control panel.
2. Choose the Sound button to display the Sound panel.
3. Select the device you want from the Sound Monitoring Source pop-up menu. If you select the microphone and start getting feedback (a loud howl), click Mute immediately. Shield the microphone from the speakers to prevent feedback.
4. If the Playthrough option is available, enable it to play the sound through your output device.

## The playback device

When you play a sound, where do you hear it? If you have added devices to your system, you probably want to use them instead of the built-in devices. The Sound Out panel lets you choose your playback device.

How to select a playback device:

1. Choose Apple menu  ⇨ Control Panels ⇨ Monitors & Sound to open the Sound control panel.
2. Choose the Sound button to open the Sound panel.
3. In the Sound Output section, select the device you want to use.
4. Depending on your hardware, you may see some device options in the panel. Set the Rate, Size, and Use options for the device, if necessary.

## Recording your own alert sounds

The Mac OS alert sounds are a little on the dull side, don't you think? Of course, you can download more interesting sounds from many places on the Internet. (Chapter 9 shows you how.) But it's also fun to record yourself saying "Oops" or "huh?" or your favorite companion barking, meowing, or chirping.

How to record your own alert sound:

1. Following the above procedures, choose and configure the microphone that you want to use as your sound source. Make sure that Playthrough is disabled if you have that option.
2. In the Monitors & Sound control panel, choose the Alerts button to open the Alerts page.
3. Choose Add to open the recorder controls, shown in Figure 5-5.

4. Choose Record to start recording. As you record, the speaker icon displays the volume and the fill bar displays the elapsed time. (Reminder: Keep it short.)
5. Choose Stop to complete the recording.
6. Choose Play to listen to your new recording.
7. Repeat steps 4 through 6 until you have a recording that you want to use.
8. Choose Save and give your new recording a name. The recorder controls disappear and the new sound appears in your Alert Sounds list.



**Figure 5-5** *The recorder controls let you make your own voice recordings.*



### Note

Chapter 11 explains a lot more about how to record sounds.

## Text-to-Speech

Apple PlainTalk gives your Macintosh the ability to talk with you. It can speak to you and recognize what you say, to a limited extent. The technologies of computer speech and voice recognition are still in development, so don't expect too much from your Mac. It can do a lot more than most PCs, but it's still not like talking with your next-door neighbor, unless you live next to Robbie the Robot.

The quality of your text-to-speech depends in large part on which version of the speech software you install. The text-to-speech portion of PlainTalk, called MacinTalk, comes in several levels.

MacinTalk Pro, which sounds fairly natural but strangely Swedish, requires at least a 68040 processor and System 7.0. MacinTalk 3, which sounds more mechanical, can run on the 68030 and higher processors with at least 300K of RAM. MacinTalk 2, which uses wavetable synthesis techniques, runs on any Macintosh with System 6.0.7 or higher and at least 150K of RAM.

All Macintosh processors support English text-to-speech. The 68020 and higher processors also support Mexican Spanish text-to-speech. If your system does not have PlainTalk installed, you can download the English and Mexican Spanish versions at no charge from the following site. You'll also find the latest PlainTalk news, additional voices, applications, and browser plug-ins here:

<http://www.speech.apple.com/>

## Selecting a voice

MacinTalk provides a variety of voices, and you can download more from Apple's PlainTalk site. A few voices, such as Junior and Fred, are fairly clear. Others are just for fun — Cellos sings everything to the tune of "In the Hall of the Mountain King," and Bahh bleats like a goat.

How to select a voice:

1. Choose Apple menu  ⇨ Control Panels ⇨ Speech to open the Speech control panel (see Figure 5-6).
2. Select Voice in the Options pop-up menu.
3. Select a voice in the Voice pop-up menu.
4. Click the speaker icon to hear what the voice sounds like. (Hint: You can change the speed of the voice with the Rate slider.)
5. Repeat steps 3 and 4 until you find the voice you want to use.



**Figure 5-6** *The Speech control panel lets you select a voice for text-to-speech.*

Most likely, both MacinTalk 3 and MacinTalk Pro are installed on your system. MacinTalk 3 provides nearly 20 voices, including Junior, Fred, Cellos, and Bahh. MacinTalk Pro provides three higher quality voices: Agnes, Bruce, and Victoria. All three need a lot more RAM, so if they sound choppy to you, or if they produce error messages, you might need to choose one of the MacinTalk 3 voices until you can install more RAM.

## SimpleText speech

SimpleText is the Mac OS document editor with text-to-speech capabilities. It can read aloud all of a document or any selected part. You can also add a recorded message, called a voice annotation, to any document. This section shows you how to use SimpleText's speech features.

### Reading documents aloud

SimpleText's Sound menu controls the text-to-speech features. The commands on this menu let you start and stop speech as well as change voices.

How to listen to a document:

1. Open the document in SimpleText.
2. Select the text that you want to hear. (If you don't make a selection, SimpleText reads the entire document.)

3. Choose Sound ⇨ Speak Selection (or Speak All if nothing is selected).

Now you can work in other applications while your computer reads the document to you, if you wish. To stop the reading, choose Sound ⇨ Stop Speaking. You can change voices via Sound ⇨ Voices.

### Voice annotations

SimpleText also includes a voice annotation feature. This feature actually has nothing to do with PlainTalk or text-to-speech. It simply records a snd resource. You can then play it back whenever you'd like. Each document can have only one voice annotation.

How to record a voice annotation:

1. Open the document to be annotated in SimpleText.
2. Choose Sound ⇨ Record to open the recorder controls. (Refer back to Figure 5-5 to see the recorder controls.)
3. Choose Record to begin the recording.
4. Record your annotation as desired.
5. Choose Stop to end the recording. The recorder controls disappear, and the recording becomes a snd resource in the current document.
6. Choose Sound ⇨ Play to listen to the recording. If you decide you don't like it, choose Sound ⇨ Erase to get rid of it. Then you try it again, if you wish.



#### Tip

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You can also hear a recorded annotation by dropping the document on the SoundApp icon.

You can't see any indication of the voice annotation in the text itself, but if you pull down the Sound menu, you'll see that the Play and Erase options are available, while Record is not. You might want to add a written note in the document to tell people (including yourself) that a voice annotation is attached and how to play it.

## Talking alerts

With PlainTalk 1.5, you can also use talking alerts, where your Mac reads alert messages out loud as well as displaying them. To set up talking alerts, open the Speech control panel and choose Talking Alerts from the pop up menu. Figure 5-7 shows the Talking Alerts control panel.



**Figure 5-7** You set up talking alerts in the Speech control panel.

The first option, labeled “Speak the phrase,” determines what you hear when an alert message first appears. When this option is disabled, each alert is signaled by your standard alert sound. But if you enable this option by clicking it so that an *X* appears in the check box, the alert sound is replaced by your current PlainTalk voice speaking the selected phrase. The second Talking Alert option, labeled “Speak the alert text,” determines whether PlainTalk reads aloud the text of the alert message. PlainTalk pauses the number of seconds indicated by “Wait before speaking” to give you a chance to clear the message before it starts talking.

You can designate a specific alert phrase or choose “Random from the list” to let PlainTalk select a different phrase (or the system beep) each time. “Alert,” “Excuse me,” “Whoa,” and “Rats” are some of the dozen phrases that PlainTalk provides. You can add your own phrases to the list by choosing “Edit phrase list” from the pop-up menu. Then choose Add to add your own, Remove to remove the highlighted phrase, or Edit to change the highlighted phrase.



**Tip**

You can try out your current talking alerts setup by clicking the speaker icon to the right of the slider.

## Managing snd Resources with Agent Audio

It's a little frustrating not to be able to access the snd resources in a file. Sometimes you want to borrow a cool game sound to use as an online chat sound. Or maybe you want to replace an annoying sound with one you like better. Or perhaps you just like to change sounds with the seasons. This book's CD-ROM includes an excellent shareware program called Agent Audio that lets you manage snd resources. With Agent Audio, you can

- View and play sound resources from programs and other files
- Convert sound resources to stand-alone sound files
- Replace snd resources
- Archive snd resources

### The fine print

Agent Audio is located in the Macintosh folder on this book's CD-ROM. The registration fee is \$12, but you can try it out for one week free of charge. The package includes an electronic manual, where you'll find registration information and a form to print and send.

## Viewing and playing sound resources

Figure 5-8 shows the CompuServe sound list displayed in the Agent Audio window. To display any program or file's list of sound resources, simply drop it in either of Agent Audio's two panels. Agent Audio's left-hand panel is known as the Destination and the right-hand panel is known as the Source. To display the CompuServe sound resources, for example, I dropped the CompuServe program icon into Agent Audio's Destination panel. If drag and drop doesn't work for you, use the options on the File menu to open a program or file. Choose File ⇨ Open Destination File to open a program or document into the Destination panel. Choose File ⇨ Add Source Sounds to open a program or document into the Source panel.

Once the list is displayed, you can listen to any sound by double-clicking it. When you're done with the file, choose Close to remove it from the window again.



### Note

Balloon help does not work with Agent Audio. Instead, help appears in the small window near the bottom center as you move your mouse around the Agent Audio window.



**Figure 5-8** Agent Audio displays the sound resources embedded in any file's resource fork.

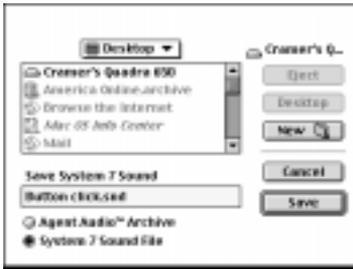
In Figure 5-8, the numbers after the names are not sizes but resource IDs—Button click is resource 15088, Host message is resource 14151 and so on. Programs use the IDs, not names, to access their sound resources. CompuServe activates resource 15088 when you click a button, for example. Every snd resource must have a resource ID, but names are optional.

## Extracting sound resources

Suppose one of your game programs has some really cool sounds and you want to “liberate” them to use elsewhere. You use Agent Audio’s Create Sound Archive feature to copy snd resources as independent SND files. The original snd resource remains where it is; it is not damaged or deleted when you copy it.

How to copy a snd resource as a separate SND file:

1. Open the program or file containing the snd resource in the Destination panel of Agent Audio.
2. Select the sound that you want to extract from the program.
3. Choose the Create Sound Archive button (see Figure 5-8) to open the window shown in Figure 5-9.
4. Choose System 7 Sound File.
5. Select a location for it. (You can also change its name if you wish.)
6. Choose Save to complete the task.



**Figure 5-9** When you extract an *snd* resource, Agent Audio displays this window so you can assign a name and location to the file.

## Replacing sound resources

Suppose you want to replace one or more of a program's resources. For example, lots of AOL members like to change their standard sound files — *Welcome*, *You've Got Mail*, and so on — for holidays or just for fun. Agent Audio gives you the ability to change the sounds in any program or file.



Before you change anything, you should archive the current sounds so you can restore them later, if you wish. Just follow the above procedure, except in step 4 keep the default option of Agent Audio Archive. When you choose Save, Agent Audio copies all the Destination *snd* resources into an archive file, using the file icon shown in the margin. You can reopen this archive in Agent Audio at any time by dragging it into either panel.

After you have archived the program's current resources, you're ready to replace them. For the next step, you drop some replacement sounds into the Source panel. You can build the Source list from many different places. You could drop a couple of program icons into the Source panel, add a few independent *SND* files, and throw in an Agent Audio archive or two. The Destination list can contain

resources from only one file or program at a time, but the Source list can receive sounds from a variety of sources. Once you have set up your Source list, the Agent Audio window looks something like Figure 5-10.



**Figure 5-10** *Agent Audio lets you copy sounds from the Source list to replace Destination sounds.*

Now all you have to do is select a Destination sound to be replaced, select a Source sound, and choose the Replace/Copy Sound button, shown here. A black dot appears next to the Destination sound to show that it has been replaced. The Destination sound's name and ID do not change. You can check the new sound by double-clicking it to make sure the change took place. When you're satisfied with all your changes, choose the Save button to save the file with its new sound resources.



### Tip

Choose Edit ⇄ Undo to undo your most recent replacement. Choose Revert to undo all your changes since the last time you saved the file.

## Using SoundApp to Create Sound Suitcases

A *suitcase* is a special type of Macintosh file that holds system resources such as sounds. It's similar to a folder except that it contains resources instead of files and all the resources are of the same type. It's an efficient and easy way to store and access your sounds.

Chapter 2 introduces SoundApp as a way to play back and convert many types of sound files on your Mac. You also use SoundApp to create a new sound suitcase. First, you need to configure a few options. Start SoundApp and choose Convert ⇨ File Format ⇨ Sound Suitcase. This tells SoundApp to convert sounds into the sound suitcase format. It also configures the other submenus of the Convert menu so that only options appropriate for sound suitcases are shown. Next, choose Convert ⇨ Encoding and select the desired encoding method. Choose Convert ⇨ Sampling Rate and select the desired sampling rate. Or if you want each converted sound to retain its current sampling rate, choose No Change. Likewise, choose Convert ⇨ Channels and choose Mono, Stereo, or No Change. You don't need to choose anything on the Convert ⇨ Bit Depth submenu because the only available option for sound suitcase is 16-bit.

Now you're ready to create a suitcase. Select one or more sounds to start with. Hold down Shift (SoundApp's conversion key) while you drag and drop them on the SoundApp icon. SoundApp displays a window where you can select the location for the new suitcase and give it a name.

Once the suitcase is created, you can add more sounds to it simply by dropping them on the suitcase. You open a sound suitcase just like any folder or file, by double-clicking it. Remove sounds by dragging them out of the suitcase. Double-click a sound to play it.

## What's Next?

AOL, CompuServe, and The Microsoft Network all have extensive sound features. Not only do they use sound themselves, but they also provide a treasure trove of sound files for downloading. Chapter 6 shows you how to work with sound on all three of these popular online services.