

## Chapter 10

---

# Exchanging Sound Files via E-mail

Suppose you want to send your best online buddy a birthday greeting or a new MIDI you just sequenced. You can attach the sound file to an e-mail message and send it on its merry way. With some mailing programs, you can even embed a sound right into the message just like the background sound on a Web page—it plays when your buddy opens the message. This chapter shows you how to send sound files either as attachments or as background sounds. It also shows you what to do when you receive a sound file. We'll cover the most popular mailing programs: America Online, CompuServe, Outlook Express, and Netscape Messenger.

What you'll learn:

- Why sound files must be encoded
- How to attach sound files to an e-mail message using America Online, CompuServe, Outlook Express, and Netscape Messenger
- How to receive, listen to, and save attached sound files with all four mailing programs
- How to insert background sound files with Outlook Express and Netscape Messenger
- How to extract and save a background sound file with Outlook Express and Netscape Messenger

You may be wondering why this chapter doesn't cover voice e-mail. A lot of people are talking about it, but so far it's not a practical alternative to regular e-mail. Basically, *voice e-mail* is a voice-quality recording attached to an e-mail message. And, as Shakespeare said, "... there's the rub." As long as we're stuck with WAV and SND files for recorded messages, you wouldn't want to send anyone a message longer than, "Hi, it's me. Bye." When we reach the point where everyone can play back MP3 files — and I think that will happen in the next couple of years — voice e-mail may then come into its own.

## How the Internet Handles E-mail

Were you surprised to learn in Chapter 10 that newsgroups can handle text data only? The same is true for Internet e-mail. If you try to e-mail any other kind of data, such as a sound file, it doesn't go through properly. So you must convert your sound files — along with any other kinds of nontext files, such as images, videos, and spreadsheets — to text data before sending them. You must encode a file before sending it, and the people who receive it must decode it. *Encoding* converts any file to text data, and *decoding* restores it to its original form.

Your e-mail program probably handles encoding and decoding for you — most of the time. Every once in a while, it can't figure out how to decode a file and gives you the encoded data. If you ever receive an e-mail message full of gobbledygook, it's probably an encoded file that your mail handler couldn't decode. The easiest solution? Ask the sender to send it again. If that doesn't work, you may be able to decode the file yourself. I can't show you how to decode and encode files here — it's too big a topic. I devote several chapters to it in *MIME, UUENCODE & ZIP: Decompressing & Decoding Internet Files* (MIS:Press, 1997). But the MIME and uuencode information in the following sidebar briefly describes the two most popular encoding schemes.

## MIME and uuencode

The two most popular schemes for encoding binary files for the Internet are called *uuencode* and *Multipurpose Internet Mailing Extensions* (MIME). The uuencode method came first, back in the days when the Internet was young and mostly UNIX computers used it. (The *uu* in uuencode stands for “UNIX-to-UNIX” because files were being transferred from one UNIX machine to another.) It encodes using a fairly simple scheme called Base64 encoding. Most programs that do uuencoding produce a file with a .*uue* extension.

MIME is a more modern and sophisticated encoding system, which most of today’s high-end newsreader and mailing programs use. It offers the choice of several encoding schemes, including Base64. Another handy encoding scheme, called *Quoted Printable*, encodes just the binary characters in an otherwise text document. It’s meant for documents that are mostly text but contain an occasional ñ or ©. Quoted Printable encoding should not be used for binary files such as sound files because it would triple the size of the file.

One important feature of MIME is that it permits multipart encoded files. If you send a message with three files attached, for example, your mailer encodes the message and files into one four-part MIME file. It might use Quoted Printable encoding for the message and Base64 encoding for the attached files. The receiving mailer separates and decodes the four parts again, if it’s capable of handling multipart MIME files. One extremely popular mailer that cannot decode a multipart mailer is AOL’s built-in mail handler. It can handle a message and one attachment, but if there are more attachments it makes no attempt to decode any part of the message. Instead, it attaches the entire multipart MIME file to a generic message and leaves it up to the recipient to handle the decoding. This has always surprised me, as AOL was designed mostly for people who are not Internet sophisticated and wouldn’t know what to do with a MIME file if it bit them on the nose.

*continued*

MIME is much more than an encoding scheme. It also identifies each file's type, such as audio/midi or image/gif, and includes that information in the encoded file. Mailers and newsreaders that decode MIME often go on to load a plug-in or helper application to play the file based on its MIME type. MIME types have become so useful that they have grown beyond their original use with encoded files. For example, Web browsers use a file's MIME type, rather than its file extension, to decide how to open it. Windows also keeps track of the MIME types of registered file extensions, although it still uses the extension to determine how to open a file.

---

## **Sending and receiving sound files**

When you want to send a sound file to a friend via e-mail, you must attach it to an e-mail message. Your friend then downloads the attached file to his or her hard drive. In this section, I show you how to send and receive files using some popular mailers: America Online, CompuServe, Outlook Express, and Netscape Messenger. These mailers automatically encode and decode using MIME encoding.

Keep in mind that your recipient may have a slow connection. Most people don't want to spend 20 minutes or more downloading a file just to hear you sing "Happy Birthday" to them. Here's a good rule of thumb: Assume that your recipients can download at about 3 kilobytes per second. That's about nearly full speed when they're connected at 33,600 bits per second. At that rate, an attachment under 180K downloads in less than a minute.

Should you zip or stuff the sound files that you send? You could save 50 percent to 80 percent of a MIDI file's size by compressing it. A WAV compresses by about 25 percent to 50 percent. MP3s don't compress much at all as they are already highly compressed. But the advantages of an uncompressed file might outweigh the advantages of a compressed file. If a sound file is not compressed, most mailers

can recognize its MIME type and make it easy for the recipient to listen to it. AOL, for example, automatically displays a playback control when you download a sound file from an e-mail. But if the file is zipped or stuffed, most mailers simply save it without decompressing or playing it. It's up to you to decide how well your recipients can handle compressed as opposed to uncompressed sound files.

Here's another reason not to bother zipping or stuffing sound files. Modems often compress files automatically. When two modems that use the same protocol are connected, the sending modem compresses the data and the receiving modem decompresses it again. The users aren't even aware of the process, but it can save a lot of transmission time. So when your recipients download files you send, they may get the advantage of compression without any of the disadvantages.

When someone sends you a sound file, you don't need to worry about viruses. An audio file contains data only and cannot contain a virus. But if someone sends you an EXE file as a self-extracting ZIP file containing audio files, take extreme care. Never download and start up an EXE file without checking it first—not even if your best friend sends it to you. Open it in an unzipping program such as WinZip, where you can examine its contents to make sure it really is a self-extracting ZIP file.

## Using America Online

The America Online 4.0 for Windows (WAOL 4.0) built-in mailer lets you attach one or more files, which it automatically encodes before sending. If you attach more than one file, it zips them into a single file. When you receive a single attached sound file, it automatically decodes it. It cannot decode multiple attachments. If it recognizes the sound file's type, it also displays a playback control so you can click the Play button to listen to it. The following sections explain in detail how to send and receive sound files on America Online 4.0 for Windows.

# Sending sound files

WAOL 4.0 gives you an Attachments button to attach one or more files. Figure 10-1 shows the Write Mail form that you use to compose a new letter. In the example, I have attached several files. Two of them are shown next to the Attachments button. When you send an e-mail with multiple attachments, AOL automatically zips them into a single ZIP file, assigning the first attachment's name to the file. In the example in Figure 10-1, AOL will create a file named `medb.zip`, because the first attachment is named `medb.mid`. If you suspect that your recipients might not know how to deal with a zipped file, don't attach multiple files in AOL. Instead, send a separate e-mail for each attachment.



## Tip

There's another advantage to sending unzipped files to AOL members. In addition to saving a downloaded sound file, AOL automatically opens and plays it. But if the file is zipped, AOL doesn't recognize it as a sound file and simply saves it without playing it.



**Figure 10-1** With America Online's mailer, you choose the Attachments button to attach a file to an e-mail message.

How to send sound files with WAOL 4.0:

1. In the main AOL window, choose the Write Mail tool to open a blank Write Mail form.
2. Address and write the message.
3. Choose the Attachments button to open the Attachments dialog box. Figure 10-2 shows an example of the Attachments dialog box after some files have been attached.
4. Choose Attach to open a common Windows browse box.
5. Select a file and choose Open. The browse box closes and the Attachments dialog box shows the attached file in its list box.
6. Repeat steps 4 and 5 until you have attached all the desired files.
7. Choose OK to close the Attachments dialog box and return to the Compose Mail window.
8. Send the letter.

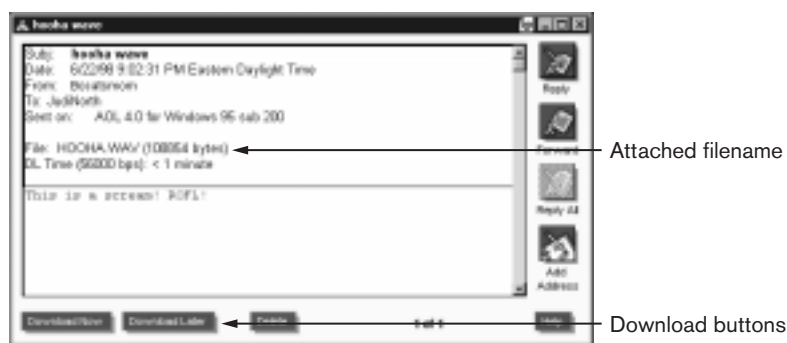
If you change your mind about an attached file before you send the letter, you can detach it by choosing Attachments, selecting the file, and choosing Detach.



**Figure 10-2** WAOL 4.0's Attachments dialog box lists your attachments and lets you attach and detach files.

## Receiving and saving sound files

Now suppose you receive e-mail with an attached file. WAOL 4.0 gives you several clues that a file is attached. First, you'll see an attached file icon next to the message in your mailbox. When you open the letter, it looks something like Figure 10-3, where you can see the name of the attached file as well as buttons to download the file now or later.



**Figure 10-3** AOL gives you several clues that a file is attached.

Clicking the Download Now button opens a common Windows browse box where you can select a name and folder for the file. As long as the file isn't zipped, AOL downloads it, decodes it, saves it in the selected folder, and then starts up your default player to play it. The Download Later button adds the file to your Download Manager list. Unfortunately, Download Manager is another topic that I don't have room to cover in this book. (I'm sorry, but I haven't written a book about it—yet.) Here are a few survival tips for Download Manager:

- When you try to sign off, Download Manager interrupts to ask if you want to download files now. If you say yes, all the files on your Download Manager list are downloaded.



- The files being downloaded receive their default names and go into the default download folder, which is probably the download folder in your AOL folder, unless someone has changed it.
- Download Manager does not play files. You must locate them on your hard drive and play them yourself.
- Choose **My Files** ⇨ **Download Manager** for information about the files that have been downloaded or are waiting to be downloaded.

When you download a zipped attachment, AOL can unzip it for you when you sign off. To enable or disable this feature, go to keyword: **PREFERENCES** and open **Download Preferences**. Two options control AOL automatic unzipping:

- “Automatically decompress files at sign-off”—Enable this option if you want AOL to unzip your files automatically when you sign off.
- “Delete ZIP files after decompression”—Enable this option if you want AOL to delete a file after unzipping it. Otherwise the ZIP file remains in your download folder.

When you enable these features, you’ll see an extra sign-off message listing the files that were unzipped. AOL creates a new folder in your default download folder for each ZIP file it unzips. If it unzips **medb.zip**, for example, the new folder is called simply **medb** and contains all the files that were extracted from **medb.zip**.

## Using CompuServe

CompuServe 3.0.4 for Windows lets you send and receive multiple sound files attached to a single e-mail message. It encodes and decodes automatically, which simplifies playing and saving the files you receive. If you receive a zipped file, CompuServe automatically starts a program to unzip it. The following sections explain in detail how to send and receive sounds on CompuServe.

## Sending sound files

CompuServe's Create Mail form includes an Attach File button that serves two functions. First, it opens a dialog box where you can attach and detach files. Second, it shows how many files are attached. Figure 10-4 shows an example of the Create Mail form with three attached files.



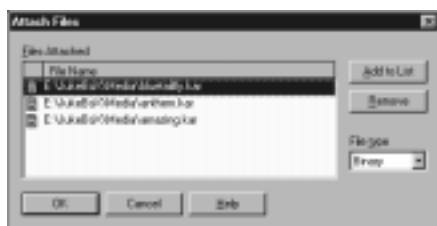
**Figure 10-4** CompuServe's Attach File button shows how many files are currently attached.

How to send sound files with CompuServe 3.0.4:

1. On the Home Desktop, choose Mail Center to open the Mail Center.
2. Choose Create to open the Create page.
3. Choose New to open a blank Create Mail form.
4. Address and write the message.
5. Choose Attach File to open the Attach Files dialog box, shown in Figure 10-5.
6. Choose Add to List to open a common browse box.
7. Select a file and then choose Open. The browse box closes and the Attach Files dialog box shows the attached file in its list box.

8. Repeat steps 6 and 7 until you have attached all the desired files.
9. Choose OK to close the Attach Files dialog box and return to the Compose Mail window.
10. Send the letter.

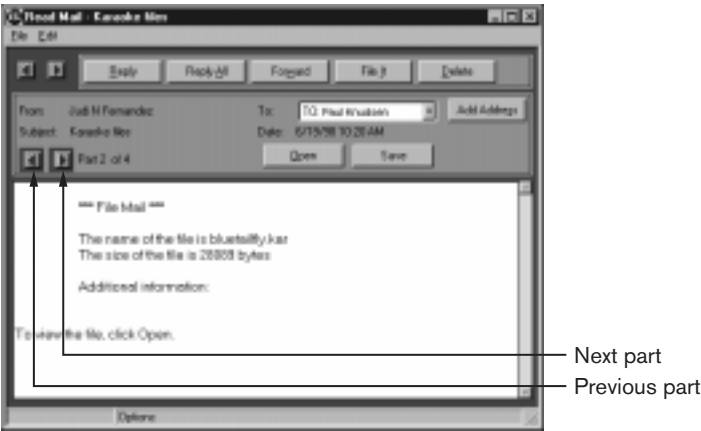
If you change your mind about an attached file before you send the letter, you can detach it by choosing Attach File, selecting the file, and choosing Remove.



**Figure 10-5** *CompuServe's Attach Files dialog box lists your attachments and lets you attach and detach files.*

## Receiving and saving sound files

Now suppose you receive an e-mail with attached files. When you open the letter, you'll see in the header box that you're reading Part 1 of so many parts. Figure 10-6 shows an example where three files are attached, for a total of four parts. The figure shows Part 2, which is an attached file named `bluetailfly.kar`. The arrow icons take you to the previous and next parts. Choose Open to listen to the file using your default player. Choose Save to save the file on one of your drives.



**Figure 10-6** *This message displays information about the first of three attached files.*

If you open a ZIP file, CompuServe unzips it and displays the contents. If you have a default unzipping program set up on your system, CompuServe calls on your program. Otherwise it uses its own unzipping facility.

## Using Outlook Express

In Chapter 9, you saw how Microsoft's Outlook Express 5.0 acts as a newsreader. It also handles e-mail, permitting you to send and receive messages containing HTML code and scripts. As long as you're corresponding with other people whose mail handler also interprets HTML and scripts, your e-mail can be quite colorful. Keep in mind, though, that some people would rather receive plain old text that downloads quickly. To send a message including HTML code, enable Format ⇨ Rich Text (HTML) in the message window.

## Sending sound files

When you want to send a sound file to some friends, you can choose between embedding it as a background sound or attaching it. A background sound plays as soon as someone opens the message, just like the background sound on a Web page. An attached sound file simply appears as an attachment to the message. It's easier for your recipients to listen to a background sound but easier to save an attached one.

If your purpose is to entertain or dazzle the recipient, and you know that they also use Outlook Express, try using a background sound. Outlook Express can receive and play background sounds, as can Netscape Communicator. But people on America Online or CompuServe would receive something strange, such as your HTML source file or a multipart MIME message.

With Outlook Express 5.0, inserting a background sound in a message at last becomes easy. You simply choose **Format** ⇨ **Background** ⇨ **Sound** to select a background sound file. You can insert sounds with earlier versions of Outlook Express, too, but not as easily. You must trick the mail handler into treating the sound file as an image file via a rather complex procedure. If you want more information about how to embed sounds in Outlook Express 4 and earlier versions, you'll find the instructions and the necessary script at this Web site:

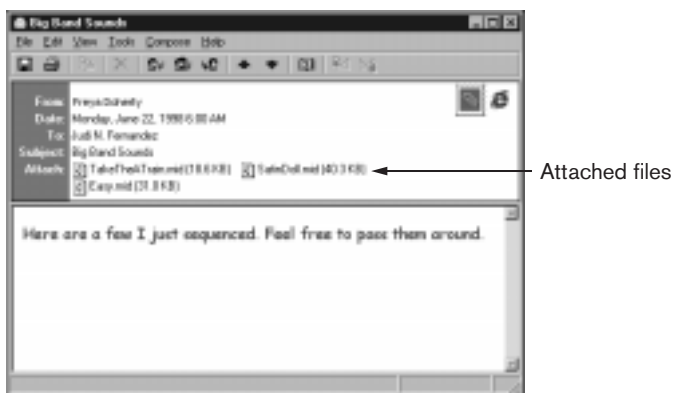
[http://www.okinfoWeb.com/moe/format/format\\_008.htm](http://www.okinfoWeb.com/moe/format/format_008.htm)



If your purpose is to transmit a sound file rather than entertain, it's better to attach the file. Your recipient can easily download an attached file, whereas extracting a background sound takes extra steps as well as extra knowledge. (Hint: Send all your friends copies of this book.) To attach a sound file, choose the **Attach File** tool, shown here, to open a browse box where you can select the file.

## Saving sound files

Now suppose you receive a sound file that you want to save on your hard drive. If it's attached, and if you're using Outlook Express 5.0, and if you're using Outlook Express 5.0, you'll see it listed next to **Attach** in the headers for the message, as shown in Figure 10-7. Double-click a file to preview it. To download it, right-click it and then choose **Save As**.



**Figure 10-7** Outlook Express 5.0 lists attached files in the message headers.

If you want to save a background sound, you can extract it by converting the message to plain text. Changing the message to plain text converts the background sound to an attached file. The following procedure explains exactly what to do.

How to extract a background sound from an Outlook Express message:

1. Choose **Forward Message** to open a forward window.
2. Choose **Format** ⇨ **Plain Text**.
3. When Outlook Express asks if you're sure you want to do this, choose **Yes**. The message changes to plain text in the window and the embedded file becomes an attached file.
4. Right-click the attached file to save it.

## Using Netscape Messenger

Netscape Messenger 4.0x acts as both a newsreader, as you saw in Chapter 9, and an e-mail handler. It offers many of the same functions as the Netscape Navigator browser. It can interpret HTML code and scripts, and it can display graphics and play sound files by using the same plug-ins and helper applications as Navigator. In this section, you'll learn how to both send and receive sound files with Netscape Messenger 4.0x.

### Sending sound files

The easiest way to send sound files to someone is to attach them to a message. The headers area of the Composition window includes three icons that change the contents of the area. From top to bottom, they are:



**Address Message**—Displays the addressing fields (the default display)

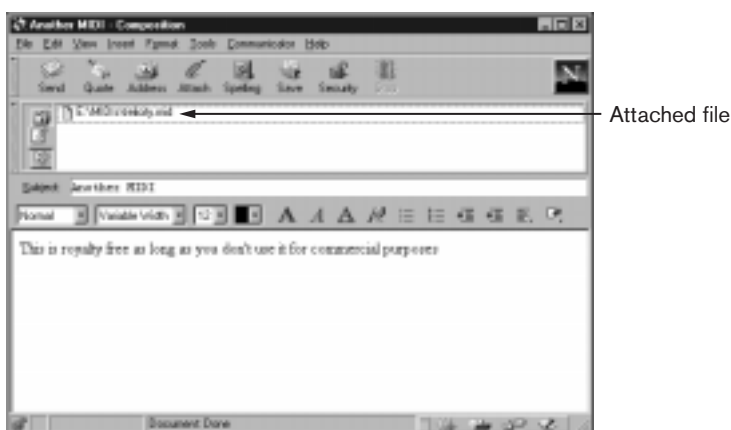


**Attach Files and Documents**—Displays attached files and documents



**Message Sending Options**—Displays options such as format and priority

When you start a new message, the Address Message icon is automatically selected so you can address the message. Complete the address first. Then choose the Attach Files and Documents icon to attach files to the message. The addresses disappear when you choose Attach Files and Documents. (They're still valid, you just can't see them.) Instead, the header area lists the attached files, as in Figure 10-8. The list is blank, of course, until you attach at least one file.



**Figure 10-8** *The Attach Files and Documents icon lets you see what files are attached and add more attachments.*

To attach a file, click anywhere in the file list to pop up a browse box where you can select the file. You can attach as many files as you wish, but keep in mind that your recipient's mail handler may not be able to receive multiple files.

If the recipient's mail handler also interprets HTML and is capable of playing background sounds, it is possible to insert a sound into the background with Netscape Messenger. Messenger by nature ignores background sounds that you insert into the HTML document. It does not encode or transmit them. But there's a way to trick it into encoding the file as an image file and then editing the encoded file to change it into an embedded sound file before you send it. It's a complex process, and it's easy to make a mistake and end up with garbage. But if you're willing to try it, here are the instructions.

How to embed a background sound file in a Messenger message:

1. Choose File ⇨ Compress Folders to remove all the old messages from your Unsent Messages folder. (You'll use this folder to store your new message while you edit it, and you don't want any old messages in there.)



2. In the Compose Mail window, choose Insert ⇨ Image to open the Image properties dialog box.
3. Choose the Choose File button to open a common browse box.
4. Locate and select the sound file. (Hint: You must set the “Files of Type” option to “All files (\*.\*)” in order to see sound files in the browse box.)
5. In the Dimensions group, disable Constrain and set the Height to 100 pixels and the Width to 300 pixels.
6. Choose OK to close the Image Properties dialog box.
7. Choose Format ⇨ Page Colors and Properties and either choose a background color for the page or insert a background picture. (This doesn’t sound like an important step, but it forces Netscape to generate the HTML you need to make the background sound work.)
8. Choose the Message Sending Options icon to display the options.
9. In the Format drop-down list, choose HTML text only.
10. Choose File ⇨ Send Later. Happily, Messenger encodes the sound file before placing it in your Unsent Messages folder.
11. In a plain text editor such as Windows Notepad, open the Netscape Communicator Folder, then the Users folder, then the folder for your user name, then the Mail folder, and finally the document called Unsent Messages. What you’ll see is the encoded version of your message and the attached file. Don’t worry—you don’t really have to read it. You just have to change one line. (If there is more than one unsent message in the document, the one you just added will be the last one in the document.)
12. Find the line that looks something like this, where xxxxxx indicates information supplied by Netscape :

```
<IMG SRC="cid:xxxxxx.xxxxxx.xxxxxx.@xxxxxx.xxxxxx"
HEIGHT=100 WIDTH=300>
```

13. Change “IMG” to “EMBED” and add LOOP=1 before the ending bracket. Don’t change anything else! The result should look like this:

```
<EMBED SRC="cid:
xxxxxx.xxxxxx.xxxxxx.@xxxxxx.xxxxxx" HEIGHT=100
WIDTH=300 LOOP=1>
```

14. Save the changed file as a text file. Important! It’s crucial that you save this file as an ordinary text file. Since you opened the document as a text file, you should be able to use the Save function to save it in the same format. But if you decide to use Save As for some reason, be sure to follow these two rules:
- Select “text” from the “Files of Type” drop-down list.
  - Do not let the editor change the file’s name or add .txt to the end.
15. Return to Messenger and send the file. If all went well, you’ll hear the background sound and see your plug-in’s control panel when you open the message to send it.



### Note

---

HTML’s <EMBED> tag is explained in Appendix D on the CD-ROM.

If something goes wrong and Messenger chokes on the edited Unsent Messages folder, the easiest solution is to delete these two files from the Netscape Communicator\Users\yourname\Mail folder: Unsent Messages and Unsent Messages.snm. Messenger generates a new, empty Unsent Messages folder for you after you delete those two files. (You lose any unsent messages that were in the old folder.)

## Saving sound files

Figure 10-9 shows what a message looks like when you receive an attached sound file. An attachment icon appears next to the Subject, and the file appears below the message. Click the file to listen to it. To save it, right-click it and choose Save Link As.



**Figure 10-9** Netscape Messenger gives you a link to an attached file below the message.

If a sound file is embedded in a message as a background sound, the message window does not show a link. You'll hear the sound as soon as you open the message. To save it, choose **File** ⇨ **Open Attachments**, which displays a list of the attachments to the letter, including the background sound. Select the background sound to open it in a separate window where you can choose **File** ⇨ **Save As**. The file will have a generic name, assigned by Netscape Messenger, so you'll probably want to rename it when you save it.

## What's Next?

How about recording your own sound files to share with your friends in newsgroups and e-mail? Chapter 11 shows you how to record sound files from CDs, from a microphone, or from the Line In port of your sound board.

