9 Audio Applications

Using Audio Recorder

The Audio Recorder can record, playback, compress and store voice recordings, and music. It allows you to add and edit voice annotations within Microsoft Windows applications such as Word for Windows, Microsoft Excel, Lotus 1-2-3, and all other application software which support Object Linking and Embedding (OLE).

It provides different settings and compression levels for recording and output level controls. It is compatible with Microsoft Windows Sound Recorder for recording, editing, and playback.

The Audio Recorder can record and playback in .WAV format and .AUD format. The .WAV format is Microsoft Windows 3.1 format for audio files. The .AUD format uses ESPCM/ADPCM compression to produce an audio file.

Different levels of compression are available in the Audio Recorder. Audio Recorder supports linear PCM compression, ADPCM compression, and ESPCM compression at low, medium, and high levels.

To start Audio Recorder:

1. Start Microsoft Windows.

2. From the Orchid Audio Applications window, double-click on the Audio Recorder icon. The following screen appears (Figure 9-1):

Figure 9-1 Audio Recorder Screen

The buttons at the bottom of the Audio Recorder window are from left to right: Record, Play, and Stop. The Audio Recorder can receive input from microphones, a cassette tape player, a compact disk player, or any other line-in source. The large area in the center of the window shows the waveform of the current audio file.

Recording an Audio File

To record a new file:

1. From the File menu, click on New. The following screen appears:

Figure 9-2 Sound Attributes Screen

2. Select your sampling rate, select stereo if desired (default mono), and choose the compression format. For the highest sound quality or to edit or modify the recording with the Effects command before saving, select one of the PCM (uncompressed) formats. Choose one of the ESPCM or ADPCM compression formats if you wish to save disk space and do not mind sacrificing some sound quality.

3. Click on the Record button.

4. Speak into the microphone.

5. When you are done, click on the Stop button.

6. From the File menu, click on Save As. If the file is uncompressed and you wish to save it uncompressed, choose a directory location, enter a name for the audio file, then click on OK button to save it. The uncompressed audio file is saved as a .WAV file.

   If the file is uncompressed and you wish to compress it, click on the Options button and select the compression format you want. Click on the OK button. The compressed audio file is saved as a .AUD file.

You can use the Recording Control window to regulate the mix of audio from several sources. See the Recording Control section for more information.

Playing an Audio File

To play a file:

1. From the File menu, click on Open. The following screen appears:

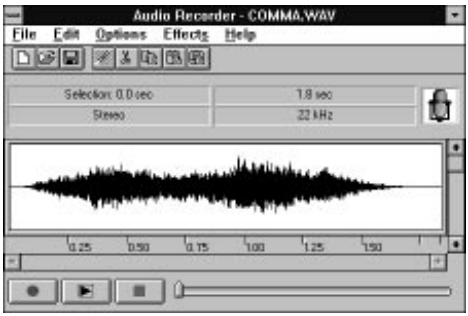

Figure 9-3 Playing a File Display

2. Load an audio file into the Audio Recorder.

3. Click on the Audio Recorder Play button to hear the audio file. The file will play to the end unless interrupted by pressing the Stop button.

   While a file is playing, the wave box graphically displays the waveform of the audio file as if shown on an oscilloscope.

Changing the Waveform

The Audio Recorder's waveform display provides a graphic representation of the audio file currently in memory. You can control the display with the vertical and horizontal scroll bars.

- To zoom in on (or magnify) the waveform, move the vertical scroll button down. To zoom out, move the vertical scroll button up.
- To see more of the waveform ahead or behind the part currently displayed, click the right or left area of the horizontal scroll bar.
- To mark a portion of the audio file for playback, use the mouse to select the section in the waveform display. Then choose Play to hear the selected section.
- To deselect a selected portion of the waveform, click anywhere in the waveform display.
- To select the entire file, double-click anywhere in the waveform display.

Adding the Volume Control and Mixer

You can regulate the playback sound level or stereo balance with the Volume Control. See the Volume Control section for more information.

You can use the Mixer option to play the current audio file together with other sound sources. See the Mixer section for more information.

Adding Sound

The Audio Recorder's drag and drop feature enables you to embed audio files in documents.

1. Load your Windows application and open a document.
2. Load an audio file.
3. Move the cursor to the icon at the top right of the Audio Recorder. The cursor changes into a hand. Press the mouse button down and drag the icon to the document window. Release the button at the place you want the audio icon to appear.

4. To play the audio in your document, double-click on the icon.

You can add audio to a document from the document's application. Place the cursor where you want the audio icon to appear, choose the application's command for inserting an object, then select Audio Recorder in the list box.

Edit Menu Commands

Insert File
Inserts another audio file into the current audio file at the current playing position. Inserting a file increases the length of the current audio file. The maximum length of a file is determined by the amount of memory available. You can also insert audio from the Clipboard.

Mix File
Mixes another audio file with the current audio file at the beginning or at the end. The audio files will blend together and play simultaneously. Mixing a file may increase the length of the current audio file. The maximum length of the new audio file is determined by the amount of memory available. You can also mix with audio from the Clipboard.

Delete File
Deletes the selected portion of the audio file. If you wish to save the deleted section, use the Cut command instead of Delete. To restore a deleted audio section, choose the Undo command before making any other changes to the file.

Changing the Properties

An audio file contains more than sound. You can attach a title, description, and an icon to the audio file.

To change the properties of a file:

1. From the File menu, click on Properties. The following screen appears:

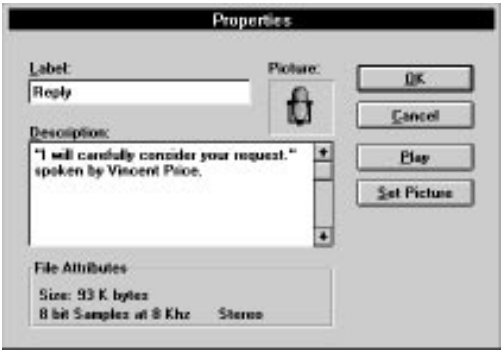

Figure 9-4 Changing the Properties

From this screen, you can place the cursor in the Label or Description area to add or change the label or description for the audio file.

2. Click the Play button to hear the audio file.

3. The Audio Recorder assigns a default picture of a microphone to each audio file. To select another picture more representative of the audio file's contents, click on the Set Picture button.

4. From the Set Picture screen, select the picture to appear with the audio file. Any graphic can be saved in a bitmap (.BMP or .DIB), wave (.WAV), icon (.ICO), executable (.EXE), or library (.DLL) file. The picture selected will appear in the Audio Recorder. It will also appear in any document in which you embed the audio file.

5. When you are finished, click on the OK button.

The Recording Control

An audio file contains more than sound. You can attach a title, description, and an icon to the audio file.

Starting the Recording Control:

From the Orchid Audio Applications program group, double-click on the Recording Control icon. The following screen appears:

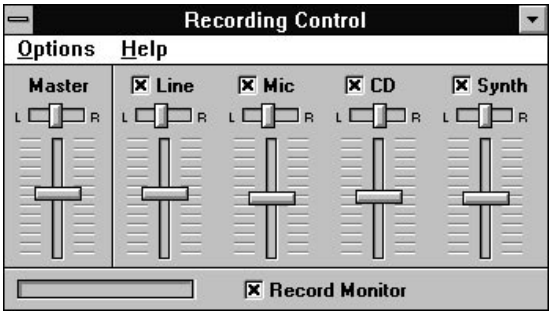

Figure 9-5 Recording Control Screen

The Recording Control can receive input from a microphone, compact disk player, synthesizer, or any other Line-In source. The Recording Control displays the recording level and stereo balance controls for each of your computer's hardware sources.

1. To include a recording source, click on the check box in front of its name.

2. To adjust the stereo balance of any source, drag its top horizontal sliding bar left or right.

3. To adjust the recording level of a source, drag its vertical sliding bar up or down.

4. To monitor a recording in progress, click on the Record Monitor check box.

The Volume Control

Starting the Volume Control:

1. From the Orchid Audio Applications program group, double-click on the Audio Recorder icon or the Mixer icon. From the Options menu, select Volume Control and the following screen appears:

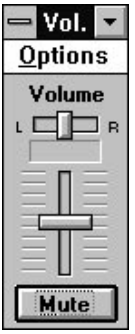

Figure 9-6 Volume Control Screen

   The Volume Control enables you to regulate the volume and stereo balance at which sound is played. You can use the Volume Control with the Audio Recorder during playback. If you are playing multiple sources you can use the Mixer to combine them, and use the Volume Control as the master regulator. The Volume Control receives input from a microphone, cassette tape player, compact disk player, or any other Line-In source.

2. To adjust the stereo balance, drag the horizontal sliding bar left or right.

3. To adjust the volume, drag the vertical sliding bar up or down.

4. To turn the sound off, click on the Mute button. The word MUTE appears.

5. To turn the sound back on, click on the Mute button again.

The Mixer

Starting the Mixer:

From the Orchid Audio Applications program group, double-click on the Mixer icon. From the Audio Recorder or Volume Control Window, open the Options menu and select Mixer. The following screen appears:

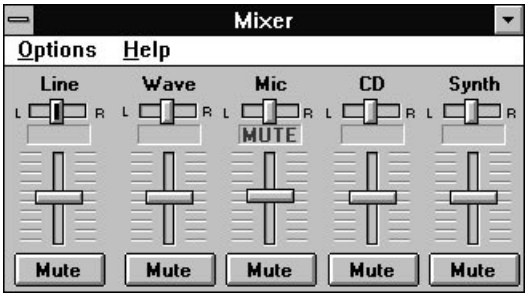

Figure 9-7 Mixer Screen

The Mixer allows you to combine signals from several audio sources during playback, with control over the volume and stereo balance of each source. When you use the Audio Recorder to play an audio file, you can open the Mixer to combine audio from the file with audio from other sources.

The Volume Control acts as a master regulator of the combined signal from the Mixer. The Mixer can receive input from a waveform audio file, a microphone, a compact disk player, a synthesizer or other Line-In source.

1. To adjust the stereo balance of a source, drag its top sliding bar left or right. To adjust the volume of a source, drag its vertical sliding bar up or down.

2. To turn off audio from any source, click on the Mute button. The word MUTE appears. Click the Mute button again to turn the audio back on.

3. To display the Volume Control window with the Mixer window, choose Volume Control from the Options menu.

The Extended Recorder

The Extended Recorder can be used to record meetings and for dictation. Like the Audio Recorder, the Extended Recorder records, compresses, stores, and plays music and other sounds. Unlike the Audio Recorder, the Extended Recorder compresses and stores the audio file directly to your hard disk using ESPCM compression. The recording time is limited only by the amount of hard disk space you have available.

The Extended Recorder can record to and play back from both PCM and .AUD formats. PCM is the Microsoft Windows 3.1 audio file format. The .AUD format uses ESPCM compression to produce an audio file. The Extended Recorder provides a choice of linear PCM (8-bits or 16 bits) and ESPCM low (4-bits) compression.

System Requirements

Use the Extended Recorder with a hard disk compression utility only if you have a high-performance system and are using a low data rate for recording and playback. Otherwise, your computer's CPU may become overloaded.

For Best Results
If you wish to use 16-bit stereo at 44KHz for recording or playback, your system must follow the specifications below:

- 486 system running at 50MHz or faster
- 8 megabytes of RAM or more
- a hard disk access time of 15 milliseconds or faster

Operating a system without these specifications may cause data loss when you attempt 16-bit stereo, 44KHz recording.

Starting the Extended Recorder:

1. From the Orchid Audio Applications program group, double-click on the Extended Recorder icon. The following screen appears:

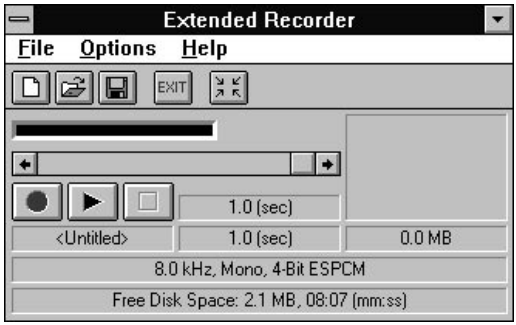

Figure 9-8 Extended Recorder Window

The buttons at the bottom of the Extended Recorder window are from left to right: Record, Play and Stop. This window shows the current file's name, the current location in seconds, and the total length in seconds.

2. You can display more information on the selected file from the Extended Recorder. From the Options menu, select Expanded View. The following screen appears:

Figure 9-9 extended Recorder Expanded View

The expanded view enlarges the Extender Recorder window to show the length of the recording, sample rate, mono or stereo, bits per sample and the free disk space, and recording time available.

The Audio Clip Library

The Audio Clip Library includes music, phrases, and sounds. You can play any audio file in the library by using the Audio Recorder (opened automatically by the Audio Clip Library), the Microsoft Sound Recorder, or other recorders compatible with the Windows .WAV format. You can also add

folders and audio files of your own to the Audio Clip Library.

Starting the Audio Clip Library:

From the Orchid Audio Applications program group, double-click on the Audio Clip Library icon and the following screen appears:

Figure 9-10 Audio Clip Library Window

The Audio Clip Library includes three folders titled Music, Phrases, and Sounds. The Music folder contains short musical interludes. The Phrases folder contains phrases used in business settings. The Sound folder contains a variety of mechanical and animal sound clips.

Talking Calculator

The Talking Calculator is an audio/visual calculator which allows you to perform calculations in Windows 3.1. You can reduce Talking Calculator to an icon so it is readily available whenever you want to perform calculations.

To start Talking Calculator:

From the Orchid Audio Applications window, double-click on the Talking Calculator icon. The following screen appears:

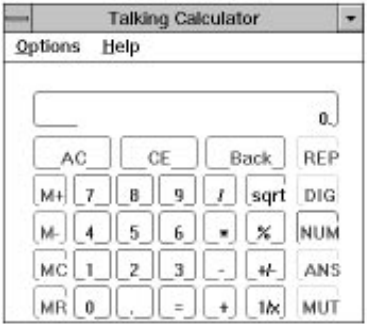

Figure 9-11 Talking Calculator Screen

To perform calculations with your mouse, just point and click. You will hear the number or operation clicked and the resulting answer. You can also use the keyboard by pressing the corresponding keys for each Calculator button. The following table describes each key on the calculator, its keyboard equivalent, and its function.

Button	Key	Function
+	+	Addition
-	-	Subtraction
*	*	Multiplication
/	/	Division
sqrt	@	Square root of the displayed value
%	%	Calculates percentages
=	=	or ENTER performs any operation on the previous numbers
+/	F9	Changes the sign of the displayed number
1/x	r	Calculates the reciprocal of the displayed number
Back	Backspace	Deletes the rightmost digit of the displayed number
AC	ESC	Clears the current calculation
CE	DEL	Clears the displayed number
MC	CTRL+L	Clears any value stored in memory
MR	CTRL+R	Recalls the value stored in memory
M-	CTRL+M	Stores the displayed value in memory
M+	CTRL+P	Adds the displayed value to any value already in memory
NUM		Directs to announce results as whole number
DIG		Directs to announce results as digit
ANS		Directs to announce answer only
MUT		Directs to not make any announcements

To access Help, click on Contents from the Help menu in the Talking Calculator window.

The Chime

The Chime announces the time musically. Chime can announce the time or play audio files at different intervals when enabled.

To start Chime:

From the Orchid Audio Applications window, double-click on the Chime icon. The following screen appears:

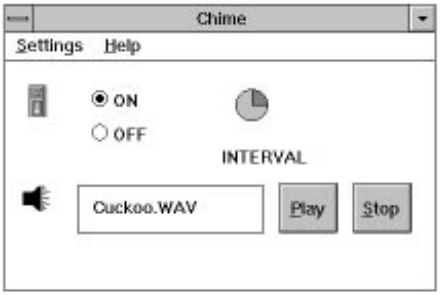

Figure 3-12 Chime Screen

Chime continues to make announcements when you reduce it to an icon. All Chime parameters can be set by selecting the Settings menu. To access Help, click on Contents from the Help menu in the Chime window.

The Timer

The Timer helps you to record time. Whenever you stop the Timer, it announces the amount of time remaining. It continues to display and announce count time remaining when you reduce it to an icon.

To start Timer:

From the Orchid Audio Applications window, double-click on the Timer icon (Figure 9-13).

Figure 9-13 Timer

The Timer window can appear in analog or digital display. Click on the Start button from the Timer window to begin the countdown. If there is zero time on the timer, click on the Reset button. This will reset the timer to the previous countdown. To stop the Timer at any time, click on Stop (the start button switches to stop when the timer is in operation). To access Help, click on Contents from the Help menu in the Timer window.

The Audio Reminder

The Audio Reminder features two alarms with different time, sound and snooze setups. These reminders are set up as alarms which will play the selected audio files at selected times.

To start Auto Reminder:

From the Orchid Audio Applications window, double-click on the Audio Reminder icon. The following screen appears:

9-14 Audio Reminder Screen

When the Audio Reminder is reduced to an icon, it will continue to operate, display, and set off the alarms as required. To access Help, click on Contents from the Help menu in the Audio Reminder window.

The Talking Clock

The Talking Clock helps you keep track of time. It announces the time when you select the Say command. You can display the Talking Clock as an analog or digital clock.

To start Talking Clock:

From the Orchid Audio Applications window, double-click on the Talking Clock icon. The following screen appears:

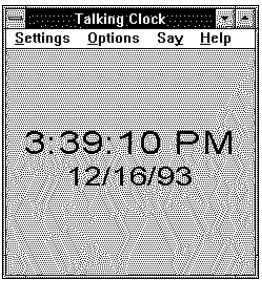

Figure 9-15 Talking Clock Screen

When you start the Talking Clock for the first time, a window with a standard analog clock appears and displays the system time. The next time you start the Talking Clock, the last display mode used will appear.

You can change the size of the Clock window and move it wherever you wish so the current time, including seconds and date, appear on the screen. When the Talking Clock is set to "Always Minimize," it will continue to display and announce the time when you reduce it to an icon. To access Help, click on Contents from the Help menu in the Talking Clock window.

Stopwatch

The Stopwatch allows you to measure duration of time. You can set the Stopwatch to sound a tick each second and announce the amount of time elapsed from the time it was activated. When you start the Stopwatch for the first time, it displays in analog display mode.

To start Stopwatch:

From the Orchid Audio Applications window, double-click on the Stopwatch icon. The following screen (Figure 9-15) appears:

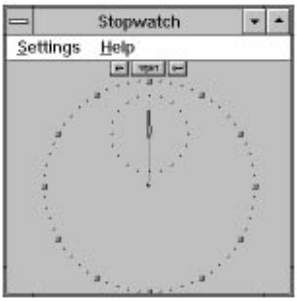

Figure 9-16 Stopwatch Screen

Digital display mode allows you to change the font. From the Settings menu, click on Set Font and select a font. You can change the size of the Stopwatch window and move it wherever you wish so the time lapsed, including minutes and seconds, appears on the screen. Stopwatch continues to display and keep time when you reduce it to an icon. To access Help, click on Contents from the Help menu in the Stopwatch window.

Click here to continue to the next chapter.....