Wave Shaper™ User Guide Contents

Wave Shaper Overview

Wave Shaper lets you record, play, and edit digital audio (wave) files, and <u>embed</u> them into documents created by Windows applications.

What is Wave Audio?

Wave audio is recorded audio stored in digital form.   When you speak into a microphone, e.g., your voice is converted into voltage and "sampled" (expressed as numbers representing the signal level) thousands of times per second.   These samples are stored in a file with the .WAV file extension.

Wave Shaper Controls

Click on the picture below for more information.
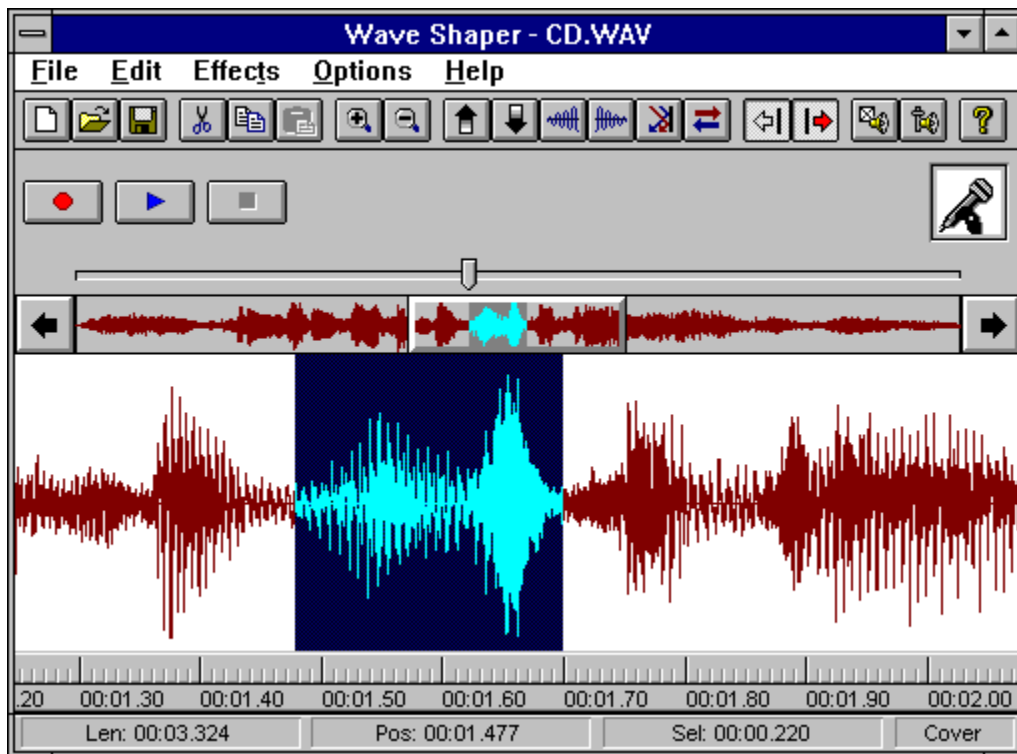
Title Bar: Displays the title of the currently loaded wave file, if any.

Menu Bar: Provides Wave Shaper functions through standard Windows pull-down menus.

File   Edit   Effects   Options   Help

Toolbar: Offers convenient push-button access to many functions also available through the File, Edit, Effects, and Options menus.

New File: Clears the currently loaded file.

 Open File: Loads an existing wave file from disk.

 Save File: Saves the current recording in a wave file.

 Undo: Cancels the previous editing operation.

Cut: Deletes the selected waveform section.

 Copy: Copies the selected section to the clipboard.

Paste: Copies wave audio from the clipboard.

Zoom In: Shrinks the <u>Zoom Lens</u> to cover a smaller area.

⌕ *Zoom Out*:   Expands the <u>Zoom Lens</u> to cover a larger area.

Louder: Evenly raises the amplitude of the selection.

Quieter: Evenly lowers the amplitude of the selection.

 Fade In: Gradually raises the amplitude of the selection.

 Fade Out: Gradually lowers the amplitude of the selection.

Echo: Adds an echo to the selected section.

 Reverse: Reverses the selected section.

 View Left: Displays the left channel (of stereo audio).

 View Right: Displays the right channel (of stereo audio).

 Settings: Lets you change application settings.

 Mixer: Launches the mixer application, if available..

Help: Displays the On-line User Guide.

Button Bar: Offers <u>Record</u>, <u>Play</u>, and <u>Stop</u> buttons as well as a drag-and-drop <u>OLE icon</u> for audio annotation purposes.

Record: Starts recording from current input source.

Play: Starts playing at the <u>current position</u>.

Stop: Stops playing the current wave file.

 OLE: OLE drag-and-drop icon (icon bitmap varies).

Position Slider: Indicates the current position in the loaded wave file.   The current position is where Wave Shaper starts playing when the <u>Play button</u> is pressed.

Overview: The upper waveform view window displays a graphical view of the entire currently loaded wave file.

Zoom Lens: Indicates the portion of the currently loaded wave file that is shown in more detail in the <u>Zoom View</u>.

Zoom View: The lower waveform window displays a detailed view of the portion of the wave file under the <u>Zoom Lens</u>.
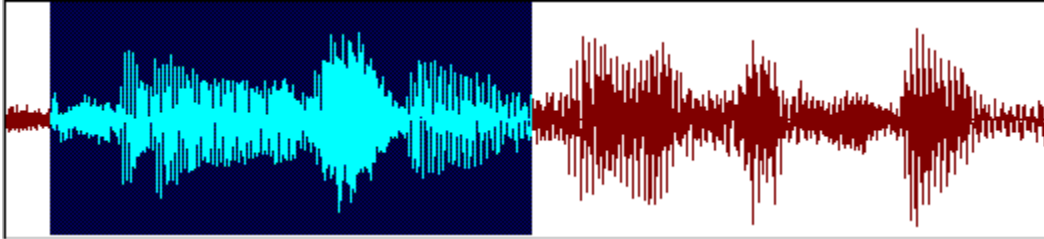
Position Scale: Provides a series of reference markers such as time indicators for use in editing the wave file in the Zoom View.

Status Bar: Reports information about the current wave file including its length, the current position, and the length of selected portion.   The Status Bar also indicates the current <u>Paste Mode</u>.

| Len: 00:03.324 | Pos: 00:01.477 | Sel: 00:00.220 | Cover |

Loading and Playing a Wave File

To load and play an existing wave file:

1.	Click on the <u>Open File</u> button or select Open from the File menu.

2.	Navigate among the subdirectories to locate the .WAV file you wish to load. Click on OK to select the file. The name of the file will appear on the <u>Title Bar</u>.

3.	To play the file, click on the <u>Play button</u>. To stop playing, click on the <u>Stop button</u>. The <u>Position Slider</u> moves to the right during file playing, and indicates the current file position.

Note:	You can also load a .WAV file by dragging it from File Manager (in Windows 3.1) or Explorer (in Windows 95) and dropping it on Wave Shaper.

Recording a Wave File

1.   Make sure your audio hardware mixer application has the desired audio input (microphone, CD, Line In, e.g.) enabled.

2.   If you already have a file loaded and wish to record a new file, click on the <u>New File</u> button or select New from the File menu.

      If you wish to record into an existing wave file, do not select New.   Instead, click in the <u>Zoom View</u> window to select the point at which you wish to record, and use the <u>Paste Mode</u> item under the Options menu to select how you wish to insert your audio.

3.   Click on the <u>Record button</u>.   Then speak into the microphone (or press the Play button on your CD or Line In player device, e.g.).

4.   When finished, click on the <u>Stop button</u>.

Recording or Pasting Into an Existing Wave File

When you record or paste into an existing file, what happens depends on the Option Menu Paste Mode setting:

Insert: Wave Shaper inserts the audio into the current wave file at the <u>current position</u>, and moves all audio data after the current position to the right, following the newly inserted data.

Cover: Wave Shaper inserts the audio into the current wave file at the current position, overwriting the existing audio data from the current position forward for the length of the inserted audio.

Mix: Wave Shaper inserts the audio into the current file at the current position, combining it with the data that is already there.   Doing this, you can overlay one type of audio (speech, e.g.) on top of another (recorded music, e.g.).

Saving Recorded Audio in Disk Files

1.   Select Save As from the Wave Shaper File menu.

2.   Navigate to the directory in which you want to store the file, and specify a file name. Digital audio (wave) files are stored with a .WAV file extension. Click on OK to save the file.

Choosing Record Settings

Wave Shaper allows you to record audio in different data formats, for different uses.   Some data formats offer excellent sound quality, while others sacrifice sound quality but allow file saving in less disk space.

To pick a recording data format:

1.	Select the Set File Format menu item under the Options menu.

2.	Choose from among the available audio data formats. The Format pick list offers a list of available audio compression formats, while the Attributes pick list lets you select the sample rate, sample size, and number of channels (mono versus stereo).

3.	You can add your own audio style by clicking on Save As.

Note:	To *convert* audio from one format into another, load the file to be converted and select a new format as described above.

Viewing and Selecting Wave Files

When you have a wave file loaded, Wave Shaper displays the entire file in the <u>Overview</u> window, and either all or a portion of it in the <u>Zoom View</u> window.

To select a portion of the wave file for editing:

1.   Move or stretch the <u>Zoom Lens</u> to cover a portion of the wave file that includes the section you want to edit.   To move the Zoom Lens, just drag it in the Overview (upper) window.   To stretch it, move the mouse cursor over the left or right edge of the Zoom Lens until it becomes a double-headed arrow cursor, and then hold down the left mouse button while dragging the lens edge.

2.   In the Zoom View (lower) window, hold down the left mouse button and drag the cursor to select a portion of the wave file.

Applying Audio Effects

Once you have <u>selected</u> a portion or all of the wave file, you can apply a variety of effects by selecting them from the Effects menu or clicking on their buttons on the <u>Toolbar</u>.

Echo: Selecting Echo displays a sub-menu of echo effects choices.

Fade: Gradually adjusts the amplitude of the selected portion.

Normalize: Scales the waveform selection so that its loudest point reaches full scale (makes it as loud as it possible without clipping).

Reverse: Reverses the selected portion, so that it "plays backwards".

Speed: Speeds up or slows down the selection.   Increasing the speed of a wave file raises its pitch and reduces its length, while decreasing its speed has the opposite effects.

Trim: Deletes silent sections at the beginning and end of the waveform (but not in the middle of the waveform).

Amplitude: Evenly increases or decreases the loudness of the selection.

Cut and Paste Editing

To delete a portion of a wave file, either permanently or temporarily (so you can move it elsewhere using the Paste command):

1.   Select the desired portion of the wave file.

2.   Select Cut from the Edit menu, or click on the scissors button.

To duplicate portions of files:

1.   Select the desired portion of the wave file.

2.   Select Copy from the Edit menu or click on the Copy button.

3.   Click in the Zoom View window at the desired insertion point.

4.   Select the appropriate Paste Mode from the Options menu.

5.   Select Paste from the Edit menu or click on the Paste button.

About Embedding and OLE

Wave Shaper lets you "audio annotate" documents.   That is, you can record audio using Wave Shaper, and insert it as a comment into documents you create using most major Windows applications.   Windows does this embedding using its Object Linking and Embedding (OLE) technique.   Each message you embed in a document is an "object".

Embedded audio objects appear as icons in the document:
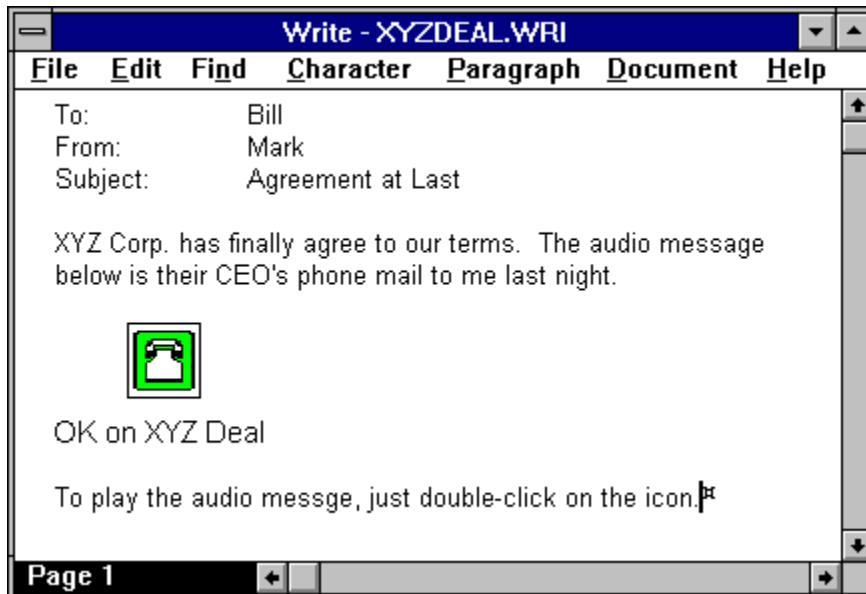
Embedding Techniques

You can embed all or part of a recording into a document created by an OLE client application.   To embed audio, you can often use any of three techniques, depending on the client application:

> Drag and drop the <u>OLE icon</u> from the <u>Button Bar</u> into your document.   The icon will appear at the current cursor position.

> Use Copy or Copy Object from the Wave Shaper Edit menu to place some or all of the current wave file onto the Windows clipboard, and then paste the object into the document using menu items (Edit/Paste, e.g.) of the OLE client application.

> From within the OLE client application, use its menu items (Insert, e.g.) to bring up Wave Shaper and record or paste in your audio message.   When finished, exit Wave Shaper to <u>leave the audio object in the document</u>.

Embedding Options

Wave Shaper lets you choose how your embedded audio will appear.   Using the Properties menu item under the File menu, you can control the following:

Label: the text caption that will appear under your <u>embedded object icon</u> (e.g., Listen to this!).

Set Picture: the <u>bitmap icon</u> that represents your embedded audio in the document (choose a lightbulb, envelope, or whatever best represents the type of message you are leaving).

Playing Embedded Audio

Once you have <u>embedded an audio object into a document</u>, it stays there until deleted.   To play the object, just double-click on its icon.   This will launch Wave Shaper with the audio object playing.   If you send the document to other people who have Wave Shaper installed, they will be able to play back embedded audio.