Sound Tools 16
User's Guide

MEDIA VISION

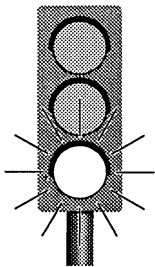## Copyrights

Contents

GETTING STARTED

Included with your Media Vision product are two programs for recording, play back and mixing Sound files (both AIFF and FSSD file formats). The application's small file size and ease of use allow even a low-end Macintosh system and a moderately experienced computer user to enter the exciting world of multimedia.

Sound Tools 16 can be used to record, playback, and edit Sound files. You can use these Sound files in presentations, HyperCard stacks or QuickTime files for exciting audiovisual entertainment.

System Requirements

Your system must meet all of the following requirements in order to use Sound Tools 16 and the Mixer Control Panel.

- You must be running either System 7.0 or later, or System 6.07.

- Your Macintosh must have a minimum of 4 megabytes (MB) of RAM memory.

- Your hard disk must have at least 2 megabytes (MB) of free space.

Using Your Sound Tools 16 User's Guide

The Sound Tools 16 User's Guide describes how to use the applications included with your Media Vision product and how this guide is organized. Refer to the "User's Guide Overview" section below for more information on what this application can do. This guide assumes that you have read and are familiar with the Owner's Guide that came with your Macintosh. You should know how to use the mouse, open applications and documents, and know how to navigate through folders with the use of the Finder. Refer to your Macintosh Owner's Guide for more information.

User's Guide Overview

This guide is divided into various sections. The following is a breakdown of the contents of this guide.

- **Getting Started**: This section describes how to use the Sound Tools 16 User's Guide and what it contains. The minimum system requirements are also described as well as how to begin using the Sound Tools 16 applications.

- **Sound Tools 16:** This program can record, edit and playback Sound files for use in your Macintosh applications.

- **Mixer Control Panel:** Use the Mixer Control Panel to control up to five line-in devices (four Line-in and a microphone input). This Control Panel (CDEV) is ideally suited for work with Sound Tools 16 or any other recording application.

- **Glossary:** Common Sound Tools 16-oriented definitions are covered at the end of this section (refer to page 19).

Assumptions

This User's Guide assumes that the user is familiar with Macintosh class computers and has some exposure to the Macintosh graphical environment.

Graphical User Interface (GUI)

Sound Tools 16 uses a graphical user interface or GUI. A GUI emphasizes visual presentation and is designed to mimic real-life tools or control panels (meters, scales, mixers, recording consoles, etc.). Many people find that these real-life associations make it easier to use software programs. Shown below are the Sound Tools 16 application and the Mixer Control Panel.
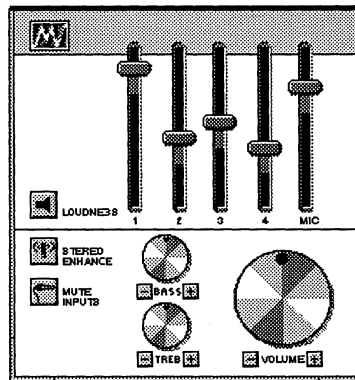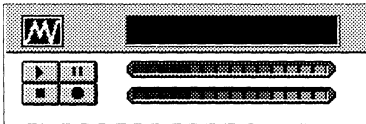
Making Backup Copies

Your software is not copy-protected. Simply put, this means you are allowed to make a backup copy of your Sound Tools 16 software for yourself. A backup copy ensures that you'll be able to recover your original program if anything happens to your hard disk or original software disk.
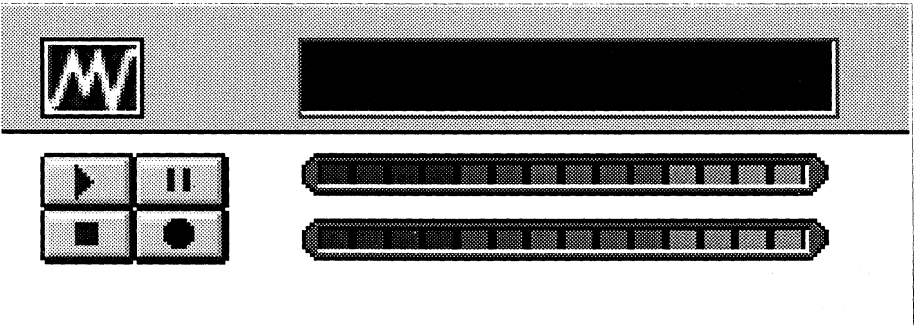
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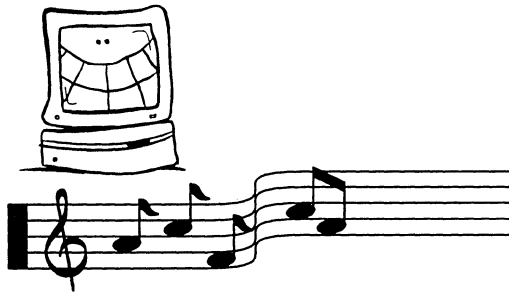
SOUND TOOLS 16

This section provides a brief introduction to the basic features associated with Sound Tools 16. You can use Sound Tools 16 to create Sound files for your multimedia presentations or to annotate or add music and sound effects to Hyper-Card stacks or other Macintosh applications. You can also use the included Mixer Control Panel to mix different audio sources into your applications with Sound Tools 16 or any other application you want to use to record Sound files.

Sound Tools 16 Interface and Legend

Sound Tools 16 Buttons (from left to right):

Play: Click once to begin playing your sound file.

Pause: Click once to pause the playback of a Sound file.

Stop: Click once to stop the playback or recording of a Sound file.

Record: Click once to begin recording a new Sound file.

VU Meters (or Input Level Indicators):

The top meter represents the output of the left channel and the bottom meter represents the output of the right channel. A mono channel appears in both meters. The levels are indicated with color. Blue means the signal is at a low level, red means the signal is at a good recording level (sometimes referred to as "Line-level"). Yellow signifies the signal level is too high and includes distortion.On a monochrome display, green, yellow, and red appear in varying shades of gray.

Status Window:

The status of Sound Tools 16 is displayed in this window. Status modes include Playing, Pause, Stop and Record. Note:

Recording Sound Files

When you want to record audio in a 16-bit format, you must consider the amount of disk storage space needed to store the sound file. A sound file recorded at an 8-bit setting consumes half as much as the same Sound file recorded at the 16-bit setting. Also, keep in mind that your Media Vision product is designed to playback and record at the 8 and 16-bit settings. Your original Macintosh equipment can only record and playback at the 8-bit setting.

The following table shows typical recording rates and the file sizes for one second of audio.

Channel	Sample Size	Frequency (KHz)	File Size (Bytes)
Mono	8-bits	11	11070
Stereo	8-bits	11	22094
Mono	16-bits	22	44144
Stereo	16-bits	44	176444

Starting Sound Tools 16

The instructions for installing your Sound Tools 16 and Mixer Control Panel (CDEV) are described in your Installation Guide. If you haven't already installed your software, do it now (refer to your *Installation Guide*). If you have installed you software, then your applications are ready to use. All of the necessary program files and INITs are already in their correct folders. For more information on your Installation software refer to your *Installation Guide*.

To open the Sound Tools 16 with Mixer Control Panel:

1. Click on your Apple system logo in Menu bar and select Control Panels.
2. Double-click on the Sound Tools 16 icon and the Mixer icon to activate the programs. Once activated, the Sound Tools 16 menu selections appear in the Menu bar. Now both the

Sound Tools 16 with Mixer Control Panel

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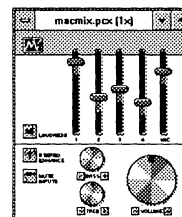
Sound Tools 16 and the Mixer Control Panel are ready to use.

Quitting Sound Tools 16

To quit from Sound Tools 16:

Select Quit from the File menu. If you have not saved your file, you will be prompted to do so now.

To save another version of a Sound file:

1. Make the changes you want in the new version.
2. Choose Save As... from the File menu.
3. Type the name of the new version.
4. Click Save.
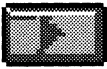
Play
Button

Playing a Sound File

To play a Sound file:

1. Select Open from the File menu.
2. Select a Sound file from among your selections.
3. Click on a Sound file and click on Open. The Sound file title appears in the Sound Tools 16's title bar.
4. Click on the Play button to begin playing the Sound file.

If the Sound file did not play, you may have accidentally selected a portion of the sound file, causing Sound Tools 16 to play only the portion selected, instead of the entire Sound file. A Play point appears across both the Sound file's view windows (if you are playing a stereo file, only one channel appears if the file is
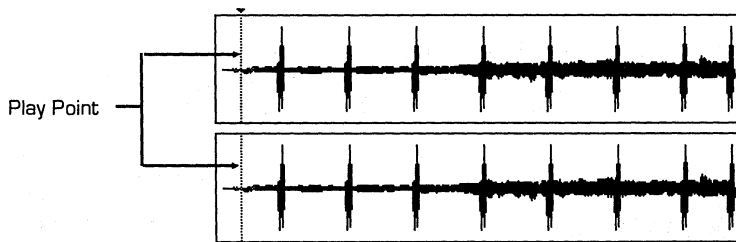
Play Point

mono). The play point moves along the Sound file to show you the part of the sound that is currently playing.

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Zooming In and Out

Use the Zoom slider to Zoom into or enlarge your view of your Sound file. The Zoom slider can zoom up or down in seven gradual steps. You can see the
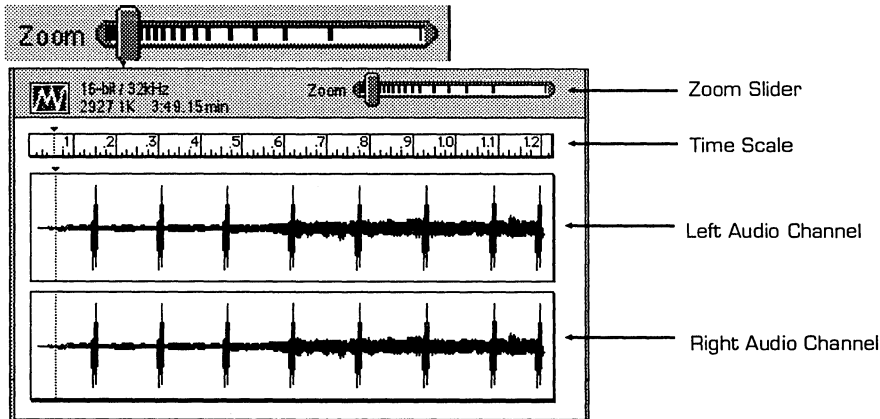
Sound File in more detail (Zoom in) by dragging the Zoom slider to the left. You can see more of the Sound file (Zoom out) by dragging to the right.

Recording a Sound

Sound Tools 16 allows you to record Sound files using two methods:

- Adding a Sound file to an existing Sound file.
- Creating a new Sound File.

To Add a Sound file to an existing Sound file:

1. Open an existing Sound file.
2. Use the Zoom slider to find a place where you want to insert a new sound on the close-up view.
3. Click in the Zoom-in view where you want to insert a sound.
4. Click on the Record button to begin recording. Speak or play the new sound into your line-in source (e.g., microphone, CD audio player, etc.).
5. Click on the Stop button to end the recording.

If you are not happy with the new sound, you can follow the same steps to try again.

Record
Button

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To Create a New Sound file:

> **NOTE**: These steps assume that you have a Line-in source pre-selected.

> 1. Click on the Record button to begin recording. Speak or play the new sound into your line-in source (e.g., microphone, CD audio player, etc.).
> 2. Click on the Stop button to stop recording.
> 3. Click on the Play button to listen to the new sound file.

If you are not happy with the new sound, you can follow the same steps to try again.

Cutting or Clearing a Sound

To remove any part of a Sound file, start by opening the Sound file you want to edit. Perform the following steps:

> 1. To find the part of the waveform you want to remove in the Zoom in view, move or resize the view window as needed.
> 2. Place the insertion point at the beginning of the section you want to remove.
> 3. Click and drag to select the part of the waveform that represents the sound you want to remove.
> 4. Press the backspace key or select Cut from the Edit menu.

Recording with a Microphone

When you position your microphone, place it in an area that won't be too noisy. You probably won't want to install it on your Mac's case, because of the associated vibrations and noise from the fan.

When you use Sound Tools 16 to make a recording, speak in your normal voice and hold the microphone 8 to 12 inches from your mouth. You might want to experiment with different distances.

Selecting a Microphone

You must designate which microphone you are going to use when making a recording using Sound Tools 16. If your Mac has an internal microphone this is the selected default. If your Mac does not have an internal microphone, no default selection is made. In order to override the default setting, perform the following steps:

> 1. Select Control Panels from your Apple menu icon.

2. Double-click on the Sound Control Panel and
   select the icon labeled PAS 16. Return to the desktop.
3. Select Restart from the Special menu.

Sound Tools 16 Commands

This section provides descriptions of Sound Tools 16 commands. The commands are organized from left to right, as they appear in the Sound Tools 16 Menu bar.

File Menu

New

The New command displays a New file box. This file box lets you select the sample rate, 8 or 16-bit mode, mono or stereo. Clicking OK appends this information to the new file. Documents you had open before choosing New remain open but are covered by the new window. The current values you have selected for your Sound files are applied to the untitled window you create.

Open...

The Open command retrieves a Sound file from disk. Choose Open from the File menu to open a Sound file.

Close

The Close command closes your active window.

Save

The Save command saves the Sound file in the active window to disk. Use this command to save Sound files as AIFF files.

Save As...

The Save As... command saves the Sound file in the active window to disk. Use this command to save Sound files as AIFF files.

Use the Save As... command to save a document with a different name, different file type, in different folder, or on a different disk.

Revert to Saved

The Revert to Saved command causes the current Sound file to revert to the last saved version. This feature is helpful when you accidentally edit a Sound file.

Quit

The Quit command allows you to properly exit from your application. If there is an open file, you will be prompted to save any changes.

Edit Menu

Undo

The Undo command removes the effects of your last command.

Cut

The Cut command deletes a selection and puts it on the Clipboard, replacing the previous contents of the Clipboard. The Cut command is not dimmed when nothing is selected.

Copy

The Copy command copies the selection onto the Clipboard, replacing the previous contents of the Clipboard. You can use this command to put a Sound file or a portion of a Sound file onto the Clipboard. The Copy command is dimmed when nothing is selected.

Paste

The Paste command inserts the contents of the Clipboard into the Sound file. You can choose Paste several times to paste several copies of the same information.

Clear

This command removes the currently selected portion of your Sound file or Clipboard.

Select All

This command selects the entire Sound file.

Effects Menu

Louder

Each successive invocation of the Louder command increases the Sound file's loudness (or amplitude) by 20 percent.

Softer

Each successive invocation of the Softer command decreases the Sound file's loudness (or amplitude) by 20 percent.

Fade Out

This command gradually decreases the volume of the Sound file (from 100% to 0%) until the volume reaches the 0% level.

Fade In

This command gradually increases the volume (from 0% to 100%) of the Sound file until the volume reaches the 100% level.
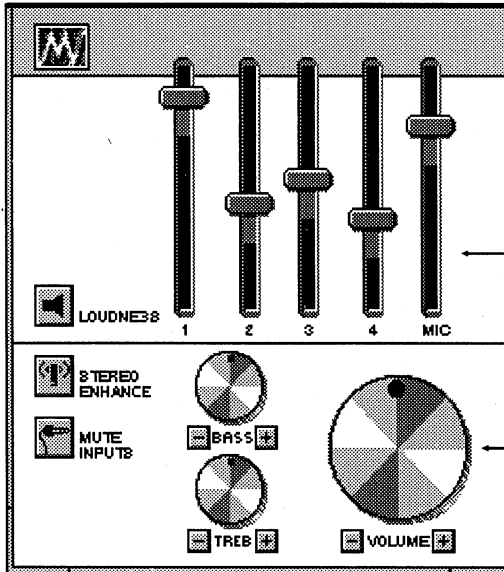
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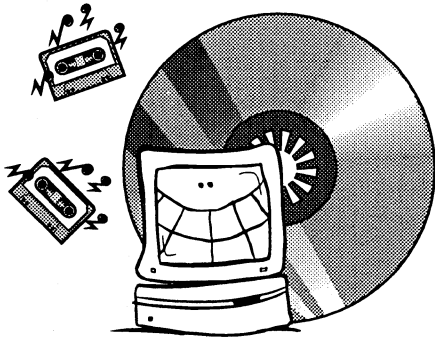
MIXER CONTROL PANEL

This section provides an introduction to the basic features associated with the
Sound Tools 16 Mixer Control Panel (or CDEV). The Sound Tools 16 Mixer Con-
trol Panel can be used with other sound recording applications, such as Passport
Design's TRAX.

Mixer Panel Controls

Line -in Sliders:

The Mixer has five Line-in connections. Adjust the volume of each source with the corresponding slider. Available inputs: Line-in 1, Line-in 2, Line-In 3, Line-in 4 and microphone (MIC).

LOUDNESS

STEREO ENHANCE

MUTE INPUTS

BASS

TREB   VOLUME

VOLUME (Master):
This knob controls the volume of the currently selected audio channel and also controls the audio output while you playback Sound files.

Loudness:
This button boosts the lower bass frequencies of combined audio sources.

BASS:
This knob controls the volume of the lower frequencies of all audio sources.

Stereo Enhance:
This feature makes sounds being played back richer and fuller. This effect is accomplished by phase shifting the left and right channels by a small degree. This results in a "Spatial Separation," which makes mono sounds stereo, and stereo sounds more dynamic.

TREBLE:
This knob controls the volume of the higher frequencies of all audio sources.

Mute:
Mutes all audio output.

Mixer Basics

You can mix up to five sounds at one time with the Sound Tools 16 Mixer. There are basically two stages to mixing sounds:

- Decide which audio source or file to record from.

- Make Adjustments with the Mixer Line-ins and mix the sounds.
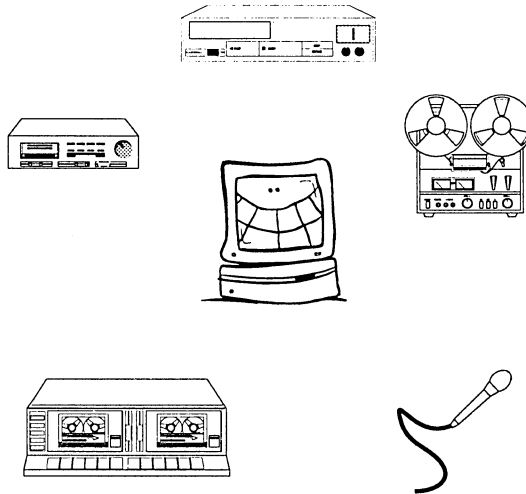
Controlling and Mixing Sound Sources

Use the Mixer's Line-in sliders to control specific sound sources. For example, you can turn down the volume of your CD audio player or tape deck connected via one of your Line-in ports while, at the same time leaving or reducing the volume on your microphone Line-in.

Starting the Mixer

To open the Mixer Control Panel:

1. Click on your Apple logo on the Menu bar and select the Control Panels from the submenu.
2. Double-click on the Mixer icon to activate the program. The Mixer appears on your desktop ready to use.

To adjust or mix the volume for Line-in or MIC (microphone):

- Move the corresponding vertical slider (Line-in or MIC)to the desired audio level.

To save another version of a mixed sound file using Sound Tools 16:

1. Make the changes you want in the new version.
2. Choose Save As... from the File menu.
3. Type the name of the new version.
4. Click Save.

Quitting the Mixer

To quit from the Mixer Control Panel:

When you no longer need to use the Mixer Control Panel, you can close it by clicking the close box.

GLOSSARY

To use this guide effectively, you should be familiar with some basic computer software terminology. If you are a beginner to the Macintosh environment, refer to your *Macintosh User's Guide.*

Audio Interchange File Format (AIFF)

A standard audio file format. AIFF is supported by many applications, including Alchemy and Sound Designer in addition to Sound Tools 16.

Alert Sound

The sound your Macintosh produces when certain software or hardware events occur. This sound is sometimes referred to as the "System Beep".

Amplitude

The height of a Sound file. The amplitude of a Sound is an indication of the strength or apparent loudness of a sound.

Application

A computer program used for a particular task or type of work.

Application Icon

A graphical representation of an application that is minimized. You can find application icons on the desktop.

Bus

A bus is a collection of wires or paths on which data travels from one component (disk drive or printer for example) to another.

Choose

Use the mouse to pick or highlight an item that starts a process or action within windows.

Click

Quickly press and release the mouse button.

Clipping

A Sound file is clipped when the overall amplitude (apparent loudness) exceeds Sound Tools quantization range. See Quantization.

CPU

The Central Processing Unit (CPU) is a microprocessing circuit that is the "brain" of the computer. As the word "Central" contained in its name suggests, the CPU is the center of most of the computer's activity.

Decibel (dB)
A standard unit of measurement for sound level differences.

Desktop
The desktop is actually the background screen in the Finder. This screen is called the desktop because it is used (at least metaphorically) like a physical desktop. Application icons reside inside of folders which sit on the desktop.

Double-click
To click the mouse button twice in quick succession.

Downsampled Sound
A sound which has been recorded at a high sampling rate and then downsampled (or converted) to a lower sampling rate, is said to be "Downsampled". Use the downsampling feature when you want to reduce the amount of memory or hard disk space for a Sound file.

Dragging
To hold down the mouse button while you move the body of the mouse. Use the dragging technique to move objects (e.g., folders) around the Mac's screen.

Finder
The Finder uses graphical icons to represent applications, hard disks, floppy disks, disk folders and the trash can.

Icon
Icons represent running applications, groups, and items present on your desktop or within a folder. For example, a graphic of a pen with paper could represent a word processor application.

Insertion Point
The Insertion Point is like the cursor in a word processor. It is where pasted data will be placed or other data may be inserted depending on the operation. The Insertion Point appears as a vertical line and can be moved by clicking the mouse button any where inside Sound Tools 16 view window.

Menu
The menu items listed in a menu are commands. A command is an action that you want the application to perform.

Quantization

Sound Tools 16 quantization feature restricts the amplitude (apparent loudness) of a Sound file. This feature aids in the reduction of clipping. See Clipping.

Sample Rate

The total number of intervals per second used to capture a sound when it is recorded (or more specifically, digitized).

Sampled Sound

Sampled sounds are sounds which have been recorded in a digital format and saved on your system for playback through a sound card or sub-system.

Scroll Bars

Use scroll bars to scroll horizontally or vertically through a window.

Select

An item is selected when it is highlighted by clicking on it with a mouse.

Title Bar

The title bar is located at the top of a window. The title bar contains the program or document name.

White Noise

A sound that resembles static from your television or radio. White noise is also defined as a noise that has a constant tone. For example, the sound an air conditioner unit makes can be considered white noise.