

You will need the Product ID number from the Registration Card when you install the software. You also will need this number if you phone for technical support. Please copy this number to the line below so you will have it for future reference!

Product ID Number: _____

AudioStation® 2

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You can register your software by mail, fax, phone, BBS, Internet or WWW.

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Using This Manual

AudioStation 2 controls your multimedia PC just like a home stereo system! Its intuitive, hardware-style interface unites your computer's MIDI, WAV, and CD functions so they're easy to control — and fun to use. You'll find that AudioStation is a welcome alternative to the utilities supplied with Microsoft Windows.

AudioStation 2 is a suite of six separate applications which work together seamlessly. These include the Audio Mixer — to control volume settings; the three players — CD Player, MIDI Player and WAV Player, and two sound/music editors — MIDI Orchestrator for MIDI files and AudioView for WAV (digital audio) files.

The early chapters in this User's Guide help you install the software and introduce you to some of the basic controls and techniques necessary to run the applications. The later chapters focus on each application individually.

If you encounter any problems during installation or while using the software, run MediaCheck,™ Voyetra's multimedia diagnostic utility. It's included with AudioStation 2 and installs automatically.

The Appendices at the back of the book contain useful information on MIDI, digital audio, troubleshooting and diagnostics. A list of Keyboard Shortcut Keys, the General MIDI Patch Set, General MIDI Drum Note Map and General MIDI Controller Types also can be found here.

To find information about a specific control, menu item or dialog box, refer to the Table of Contents at the front of the book or the comprehensive Index at the back.

Now let's get started...

Acknowledgments

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Chapter 1

Getting Started...

Welcome!

And thank you for purchasing AudioStation® 2. This program is one in a series of Voyetra Technologies' CD-ROM titles designed to bring professional-quality music recording and editing to multimedia computer users.

Voyetra Technologies has been in the business of music hardware and software for more than 20 years. We are the world's leading provider of interactive sound, audio, and music multimedia software. Our software is included with many of the sound cards and PCs sold today, so there is a good chance you already own some of our other products.

Whether you are a new acquaintance or a Voyetra veteran, you will benefit from our long-standing upgrade policy and our excellent technical support.

As a registered user, you are entitled to special discounts on our other products — but we can't offer you these benefits if we don't know who you are. So before you install AudioStation 2, take a minute to register your software...and welcome to the Voyetra family!

On the World Wide Web

When you're "surfing the net," be sure to visit Voyetra's Website for the latest information on products and upgrades — www.voyetra.com



You can register your software by mail, fax, phone, BBS, Internet or World Wide Web — whichever is easiest for you. See the front of this manual for these addresses.

Benefits of Registering Your Software

There are many benefits to registering your software. In addition to our limited warranty, you'll also receive:

- Update Notifications — we'll keep you informed of software updates and new Voyetra products.
- VoyeTracks™ Newsletter — we'll let you know about developments at Voyetra Technologies, with information on how others are using our software and tips to help you get the most from our products.
- Upgrade Plan — we'll offer you discounts on Voyetra's full-featured PC sound products.
- Technical Support — we'll be happy to help you get your software installed before you register; however, you must be a registered user to receive full technical support.



Your Product ID Number appears on the Registration Card. Be sure to write this number in the front of this manual so you will have it available should you need to phone for Technical Support.

What's Included

AudioStation 2 has components for all of your audio needs:

Software

Audio Mixer

Lets you easily access the volume controls of your PC while you are running other multimedia applications.

CD Player

Plays commercial audio CDs on your PC's CD-ROM drive. It has the same features as a home CD player including looping and shuffle play. You can also make playlists of your favorite songs and save the lists for future listening sessions.

WAV Player

Plays and records WAV files. Playlists let you create lists of your favorite WAV files and play them back in any order. Edit the files with AudioView.

AudioView™

Edit and record WAV files. Includes a full range of sound effects including echo, reverse, normalize, scale, and more. Embed sound files into OLE documents using drag-and-drop techniques. This component can be launched directly from within the WAV Player.

MIDI Player

Plays and records standard MIDI files (.MID). Playlists lets you create lists of your favorite MIDI songs and play them back in any order.

MIDI Orchestrator™

Lets you mix and edit MIDI files by changing instruments, transposing keys, adjusting tempo, muting or soloing specific tracks, and more. This component can be launched directly from within the MIDI Player.

MediaCheck™

In addition to all of these applications, AudioStation also comes with MediaCheck,™ Voyetra's powerful, multimedia diagnostic utility.

Use MediaCheck to test and troubleshoot the multimedia features of your computer. A series of displays takes you step-by-step through the testing process. If your system's multimedia devices are not working properly, MediaCheck provides troubleshooting tips.

If you have a MIDI keyboard which needs to be connected to your PC, MediaCheck has an online video tutorial which shows you, step-by-step, how these connections are made.

Online Video Tutorials

There are six online video tutorials to help you become familiar with AudioStation 2's applications:

AudioStation® Overview Tutorial

Provides an overview of AudioStation's components.

AudioStation® Mixer Tutorial

Illustrates how to use the Audio Mixer component.

CD Player Tutorial

Shows how to play audio CDs and create playlists.

MIDI & WAV Player Tutorial

Describes how to audition and play MIDI and WAV (digital audio) files.

MIDI Orchestrator™ Tutorial

Shows how to record and edit MIDI files in Orchestrator.

AudioView™ Tutorial

Shows how to record and edit WAV (digital audio) files.

Sample Files

To help you get started creating music quickly, we've included dozens of sample files from Voyetra's MIDI Music Gallery™ and Digital Sound Gallery.™ These can be accessed directly from the CD-ROM.

Drum Tracks (located in the demos\drumtrax directory)

A variety of styles including pop, rock, jazz, funk and others.

MIDI Files (located in the demos\midfiles directory)

A selection of classical, action, rock, pop, religious and other styles.

Hardware Requirements

These are the *minimum* hardware requirements to run AudioStation 2:

- IBM PC or compatible running Windows 3.1 or 95
- 486DX2/66 or higher processor
- 8 megabytes of RAM (Random Access Memory)
- SVGA monitor and adapter capable of displaying 640x480, at least 256 colors
- Hard disk drive with at least 6 Megabytes of free storage space
- Double-speed (or faster) CD-ROM drive
- Windows Sound System (WSS) compatible sound card
- Headphones or speakers connected to your sound card



- *An external MIDI keyboard is required for recording MIDI files.*
- *An external sound source — such as a microphone — is required for recording WAV (digital audio) files.*

Hardware Notes

All of the multimedia hardware and software on your system must be working correctly *before* you install the software. If your system isn't working properly, neither will AudioStation 2!

- Microsoft Windows (3.1x or 95) must be installed and working on your computer.
- An external MIDI keyboard must be attached to your computer to record MIDI files. (For information on connecting your MIDI keyboard, refer to "Setting Up Your MIDI Keyboard" in the following chapter.)
- A microphone and/or external sound source must be attached to your computer to record digital audio (WAV) files.
- Headphones and/or speakers must be connected to the jack labeled "output" or "speakers" on the back of your sound card.
- If you are using speakers, they need to have their own amplification since the output from the sound card may be too low to power them. Speakers with built-in amps are powered either by battery or AC.

Working with Windows

AudioStation 2 works with Microsoft Windows. To use AudioStation 2, you need to have a basic knowledge of Windows techniques. This includes how to:

- Use the mouse to move the cursor, select items, click, double-click, drag-and-drop.
- Work buttons, drop-down lists and other controls that appear on Windows screens.
- Find, open, name, save and close files.

If any of these techniques are unfamiliar to you, refer to your Windows manual or work through the tutorial included with Windows before proceeding.

Chapter 2

Up and Running



If you have a previous version of AudioStation installed on your system, there's no need to uninstall or delete it before installing AudioStation 2.

Installing AudioStation 2

AudioStation 2 is extremely easy to install. It has an automatic installation process. The only important piece of information you will need to provide is the Product ID Number. This number can be found on the Registration Card for the software.

Since you will also require the Product ID Number if you need to phone Voyetra Technologies for Technical Support, we recommend you write this number in the space provided on the Title Page of this manual. That way, you will always have the number handy.

To Install the Software:

1. Make certain you have the Product ID number. (This number can be found on the Registration Card.)
2. Place the CD in your computer's CD-ROM drive.
 - For Windows 3.1, choose Run from the Program Manager's File menu.
 - For Windows 95, choose Run from the Taskbar's Start menu. (When you insert the AudioStation 2 disc for the first time in Windows 95, you are automatically prompted to run it.)
3. In the Run dialog box, type the letter of the drive followed by \setup. If your CD-ROM drive is d:, type d:\setup and press Enter.
4. Follow the on-screen instructions.



In Windows 3.1, you are prompted to install Video for Windows. You need Video for Windows to run AudioStation's online video tutorials and MediaCheck's "Setup" video.

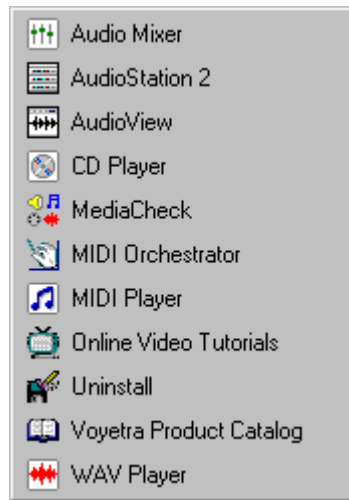
README File

During installation, a README file with important information, may be installed. If a README exists, we suggest you read it before you proceed.

To View the README File:

1. Double-click the README icon.
2. In Windows 3.1, Windows Write will open and display the file. In Windows 95, WordPad will open and display the file.
3. To print the README file, choose Print from the File menu of either Windows Write or WordPad.

Running the Software



*Voyetra AudioStation 2
Program Group*

Each module in AudioStation 2 has its own icon.

- Clicking an individual icon calls up an individual application.
- Clicking the AudioStation 2 icon displays the entire AudioStation rack — with the Power Bar, Audio Mixer, and CD, WAV, and MIDI Players displayed.

AudioStation's applications are installed to your hard drive. However, to run MediaCheck, the Online Video Tutorials, or the Voyetra catalog, the AudioStation 2 disc must be in the CD-ROM drive.

Uninstalling AudioStation 2

Should you decide to remove AudioStation 2 from your hard drive, the included Uninstall utility allows you to do so easily. But be careful! Uninstall removes everything — even files you have created — from the Voyetra\AS2 directory.



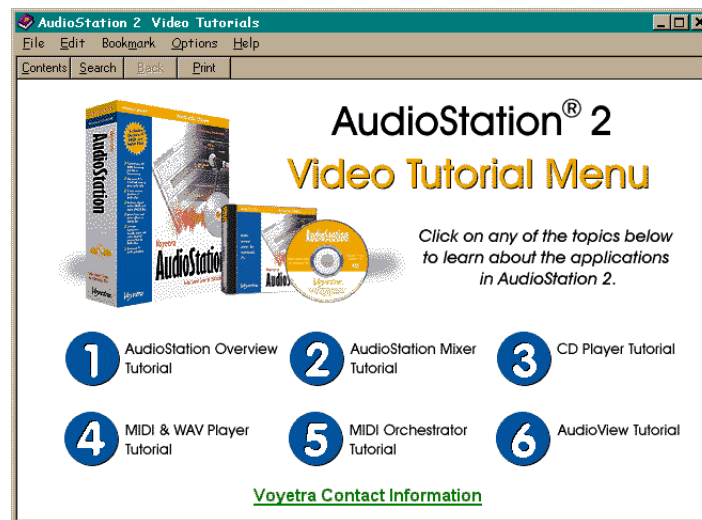
Uninstall will remove everything in your AudioStation 2 directory — even files you have created which were not part of the original program. Be certain to carefully read the on-screen instructions before running Uninstall!

If you need to reinstall AudioStation 2, there is no need to uninstall it first!

Online Video Tutorials

AudioStation 2 comes with a series of six online video tutorials. These tutorials help you learn about the software by watching videos right on your computer's monitor.

This is a good time to view the first video, the AudioStation Overview Tutorial, which helps you become acquainted with all of the modules in AudioStation.



AudioStation 2 Video Tutorial Menu

To View the Overview Tutorial Video:

1. Make certain the AudioStation 2 disc is in the CD-ROM drive.
2. Click Online Video Tutorials in the Voyetra program group.
3. When the Video Tutorial Menu displays, click **1** to view the AudioStation Overview Tutorial.
4. Sit back, relax, and enjoy the video!

Chapter 3

Let's Do Launch

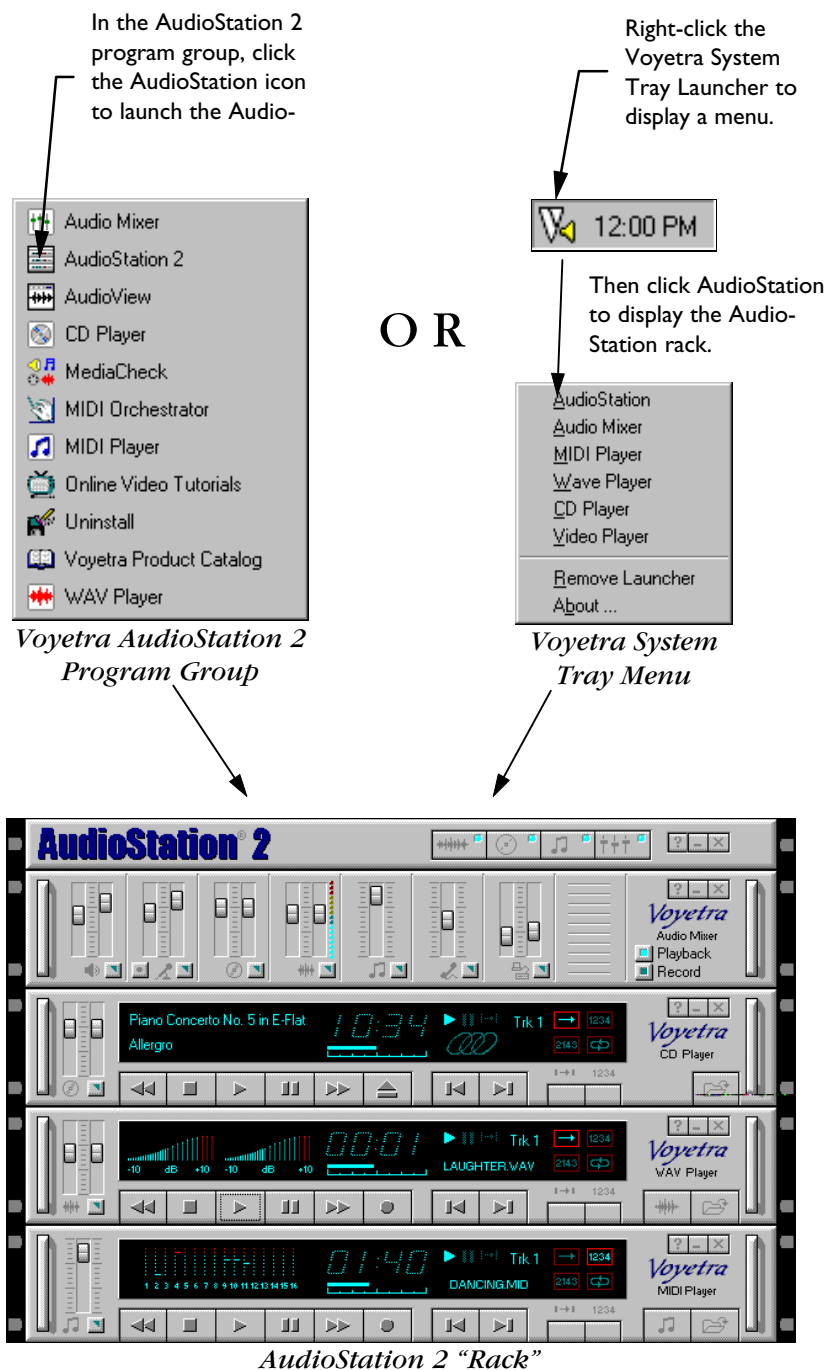
Launching the Rack

AudioStation 2 contains the Audio Mixer and the three Players — CD Player, MIDI Player, and WAV Player — all in one convenient “rack.”

When the AudioStation rack is displayed, you can close one or all of the components from the Power Bar located at the top of the AudioStation rack display. For more information on using the Power Bar, refer to the “Power Bar” chapter.

There are several ways to launch AudioStation:

- Click Start. Point to Programs. Point to Voyetra AudioStation. Click AudioStation 2.
- Double-click the AudioStation icon in the Voyetra\AS2 directory.
- Right-click the Voyetra System Tray Icon and click AudioStation.



If Some of the Modules Appear to be “Missing”

You can use the Power Bar to customize AudioStation 2 by closing various Players or rearranging the order in which the Players are displayed. Refer to the “Power Bar” chapter for additional information.

AudioStation’s rack maintains the “look and feel” of how the software appeared the last time you used it. Therefore, if you exit AudioStation with one or more Players closed, these Players will not appear on the rack the next time you open AudioStation. But don’t despair! The four buttons along the top of the Power Bar correspond to the three Players and the Audio Mixer. Clicking the appropriate button(s) will once again display whichever components previously were closed down.

The Power Bar



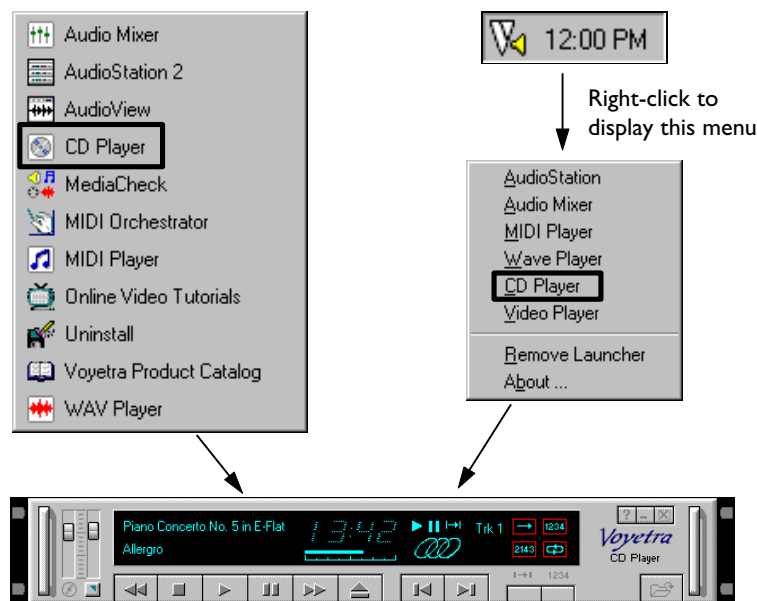
You may not see all the components when you run AudioStation. This is because the component is not activated. When a Player or the Audio Mixer is activated, its icon lights. To activate the Player or Audio Mixer, click the appropriate button on the Power Bar and the component once again displays in the rack.

Launching the Individual Players

Sometimes you will only want to open one or two of the components — not the entire AudioStation rack. For example, you may only want to use the CD Player to listen to an audio CD while you work at your PC. There are several way to do this:

- Right-click the Voyetra System Tray Icon and click the Audio Mixer or the Player's name.
- Click Start. Point to Programs. Point to Voyetra AudioStation. Click the Audio Mixer or the Player's name.
- Double-click the Audio Mixer or the Player's icon in the VOYETRA\AS2 directory.

This will call up the specific Player or the Audio Mixer.



Clicking the CD Player icon calls up the CD Player without the entire AudioStation rack.

Chapter 4

AudioStation Controls

Many of the modules in AudioStation 2 use similar controls. This chapter covers the basic controls which you will encounter — Transport Controls, Volume Controls (Sliders), Play Position Slider, and additional buttons.

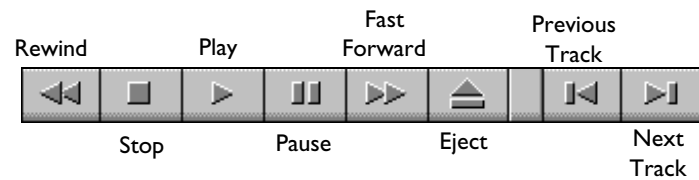
Transport Controls

The Transport controls are similar to the control buttons found on a VCR or tape deck. They control functions such as Play, Rewind, Pause, Fast Forward, and so on.

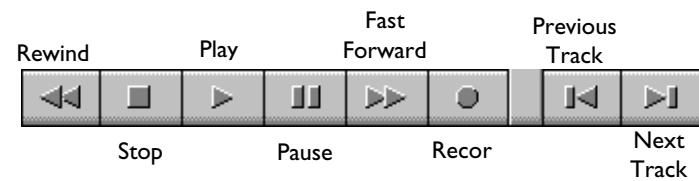
Transport controls on AudioStation's three media players — the CD Player, MIDI Player, and WAV Player— are similar in almost every respect. The only differences are:

- The CD Player has an Eject button to eject the CD.
- The MIDI and WAV Players have a Record button to record their respective file types.

Transport Controls — CD Player



Transport Controls — MIDI and WAV Players



Operating the Transport Controls

Using the Transport Controls is as easy as pointing-and-clicking.

To Use the Transport Controls:

1. Place the mouse pointer on the desired button.
2. Click the left button on the mouse to “press” the button on the screen.

Here's What the Transport Controls Do

This table describes the functions of the Transport Controls.



Rewind Rewinds the track (CD) or file (MIDI or WAV) to the beginning, quickly, by increments.



Stop Stops playback of the track (CD) or file (MIDI or WAV).



Play Plays the track (CD) or file (MIDI or WAV) from the current position.



Pause Pauses playback of the track (CD) or file (MIDI or WAV) at the current cursor position. To resume playing, press Pause again.



Fast Forward Moves the audio track (CD) or file (MIDI or WAV) forward, quickly.



Eject Opens/Closes the CD drive.
CD Player only!



Record Activates Record Standby. Recording begins when the Play button is pressed.
MIDI and WAV Players only!



Previous Track Jumps back to the previous track (CD) or file (MIDI or WAV) in the playlist.



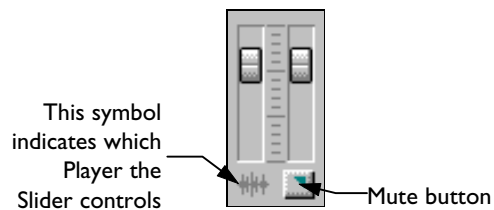
Next Track Jumps forward to the next track (CD) or file (MIDI or WAV) in the playlist.



Holding down the Shift Key and clicking the Previous Track or Next Track button goes to the first or last track in the Playlist.

Volume Controls (Sliders)

In the various AudioStation modules, volume is controlled with sliders. The volume can be adjusted either by using the mouse or with the keyboard. The sound from a selected source can be turned off by clicking the Mute button at the bottom of the slider.



To Operate the Sliders with the Mouse:

1. Place your mouse pointer on the desired slider.
2. Hold the left mouse button and drag the slider up or down.

To Operate the Sliders with the Keyboard:

1. Use the Tab key to move to each slider — from left to right.
2. To activate the slider, press the Spacebar.
3. Use the arrows keys on the keyboard to move the sliders up or down.

To Operate the Mute Button:

- Click the Mute button at the bottom of the slider. The slider is muted when the button is lit.
- To turn the sound back on, click the Mute button again.

Using the Volume Control Sliders

- If you want to move the left and right sliders simultaneously, place the mouse pointer between the two sliders. The pointer changes to an up/down arrow. By clicking-and-dragging, both sliders can be moved in unison.
- If you click or click-and-hold the mouse pointer above or below the slider, the slider moves toward the pointer.

Play Position Slider



The Play Position Slider — on the CD, WAV, and MIDI Players — combines a digital clock display with a horizontal slider. This shows at what point in time the currently-playing file or track is positioned. Dragging this slider to the left or right moves to any point in the currently-playing selection.

To Use the Play Position Slider:

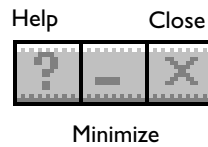
1. Place the mouse cursor over the slider.
2. Hold the left mouse button and drag the slider left (to move to an earlier position) or right (to move to a later position).
3. When the mouse button is released, the selection begins to play at the selected time.



The Play Position Slider can be moved even while the selection is playing!

Additional Buttons

Three standard Windows buttons appear at the top of each Player.



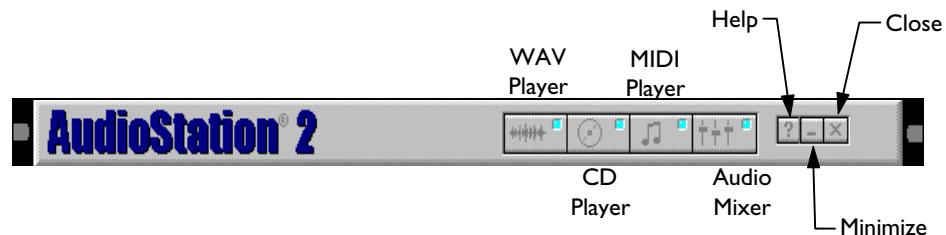
From left to right these buttons are:

- | | |
|----------|---|
| Help | Clicking the ? displays online help for AudioStation. |
| Minimize | Clicking the — minimizes the application. |
| Close | Clicking the X closes the application. |

Chapter 5

Power Bar

The Power Bar launches AudioStation 2's modules — the three media Players and the Audio Mixer. These components are stacked from the top down, in the order in which they are launched.



Power Bar Buttons

- To launch an individual module, click the appropriate button.
- To close all of the modules, click the Close button (X).
- To minimize AudioStation, click the Minimize button (-).
- To obtain online Help, click the question mark (?).

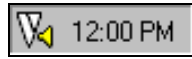
Power Bar Right-Click Menu



Right-clicking on the Power Bar displays a menu with the following commands:

Restore	Restores AudioStation after Minimizing.
Move	This function is not available in the Power Bar.
Size	Is not used with AudioStation, so this function remains unavailable.
Minimize	Minimizes AudioStation.
Maximize	Is not used with AudioStation, so this function remains unavailable.
Close	Exits AudioStation.
Save Settings on Exit	Preserves the order in which the modules are stacked on the rack — as well as which ones are open — when this option is On (checked).
Show Voyetra System Tray	Displays/Hides the Voyetra System Tray Launcher.
About Power Bar	Displays information about the version and date, as well as the Product ID number.

Voyetra System Tray Launcher



*Right-click the
“V” to display a
menu*

When you install AudioStation 2, you are asked if you would like to replace the Windows Volume icon with the Voyetra System Tray Launcher.

If you choose this option, the Voyetra System Tray Launcher icon — the “V” — will display in the Windows System Tray.



If you double-click the Voyetra System Tray Launcher icon — the “V” — the Audio Mixer will launch.

Voyetra System Tray Launcher Menu



Right-clicking the Voyetra System Tray Launcher icon displays a menu which provides easy access to all of AudioStation’s components.

This menu also launches the Audio Mixer, from which you can control the overall volume on your sound card.

To Display the Voyetra System Tray Launcher Menu:

- Right-click the “V” icon in the System Tray.

The following items appear in the Voyetra System Tray Launcher menu:

AudioStation	Launches AudioStation — with all its components.
Audio Mixer	Launches the Audio Mixer.
MIDI Player	Launches the MIDI Player.
WAV Player	Launches the WAV Player.
CD Player	Launches the CD Player.
Remove Launcher	Removes the Voyetra System Tray Launcher.
About...	Displays version and copyright information.

To Launch an AudioStation Component:

1. Right-click the Voyetra System Tray Launcher. A menu displays.
2. Click the name of the component you wish to launch.

To Remove the Voyetra System Tray Launcher:

1. Right-click the Voyetra System Tray Launcher. A menu displays.
2. Click Remove Launcher. The next time you start Windows, the Windows Mixer icon will display in the System Tray.

Running the Voyetra System Tray Launcher

If you did not replace the Windows Volume Control with the Voyetra System Tray Launcher and you wish to do so now, follow these steps:

1. Through Explorer in Windows 95, locate the AudioStation directory. This is most likely C:\VOYETRA\AS2.
2. Double-click the file AS2TRAY.EXE. This runs the Voyetra System Tray Launcher application. You will notice that the Voyetra System Tray Launcher is now in the System Tray.

Chapter 6

Audio Mixer



The Audio Mixer, shown here with slider volume controls and Mute buttons for each of the Mixer's functions. Because AudioStation's Mixer automatically detects the functions of your audio hardware and configures the display accordingly, your Mixer may appear slightly different than the one pictured above.

The Audio Mixer controls the volume levels on your sound card. Because each sound card supports different mixer functions, not all AudioStation Audio Mixers look the same. Depending on which sound card you have, there may or may not be a Mute button beneath each of the slider controls on the Mixer component.



Now's a good time to view the AudioStation Mixer Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ②.

For more information on how the mixer functions work on your sound card, see the sound card manufacturer's reference manual.

Sound Sources

Your computer generates sound in a number of ways:

CD Audio	Your computer can play a music (audio) CD similar to the way you would play a CD in your home stereo system.
----------	--

MIDI Music Synthesis	Your computer's internal synthesizer generates music for games and multimedia applications.
-------------------------	---

Digital Audio (WAV)	Your computer can play and record digital audio files.
------------------------	--

The Mixer has individual controls to adjust CD, MIDI, and WAV, as well as microphone input and line-level output.

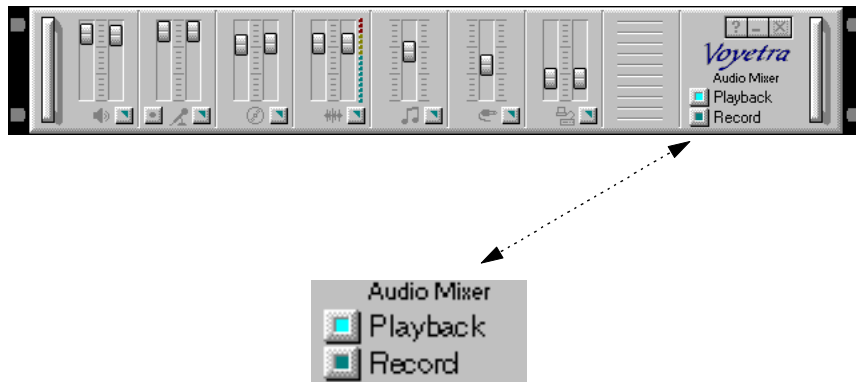
Use the Audio Mixer with all of your Windows multimedia and sound applications.

C A U T I O N !



Do not use headphones the first time you use the Audio Mixer! Some sound cards generate audio signals strong enough to cause hearing problems and/or discomfort.

Record vs. Playback Mixer Modes



Most Audio Mixers have two modes — Record and Playback. If your Mixer has this capability, the buttons to change between these modes appear at bottom right of the Mixer's faceplate.

- When Record is selected, the Mixer's sliders control recording levels.
- When Playback is selected, the Mixer's sliders control playback levels.

To Change Between Playback and Record Modes:

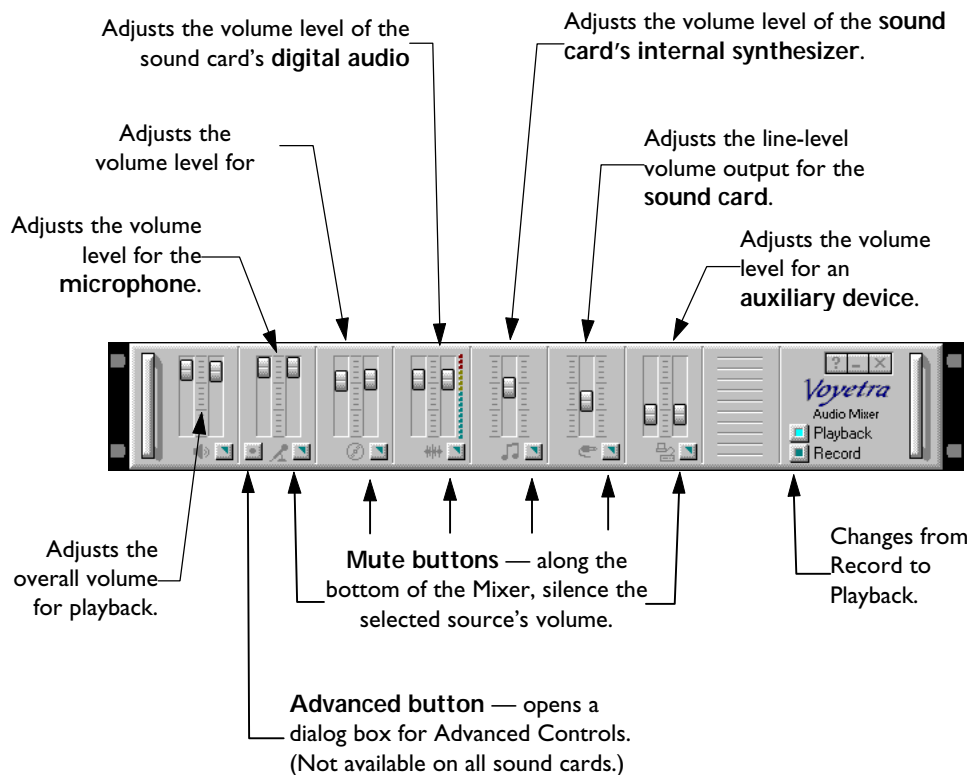
- Click the appropriate button. The button lights to indicate which mode is active.



When the light on a Mute button is lit, the component's volume is muted and will not be heard.

Playback Controls

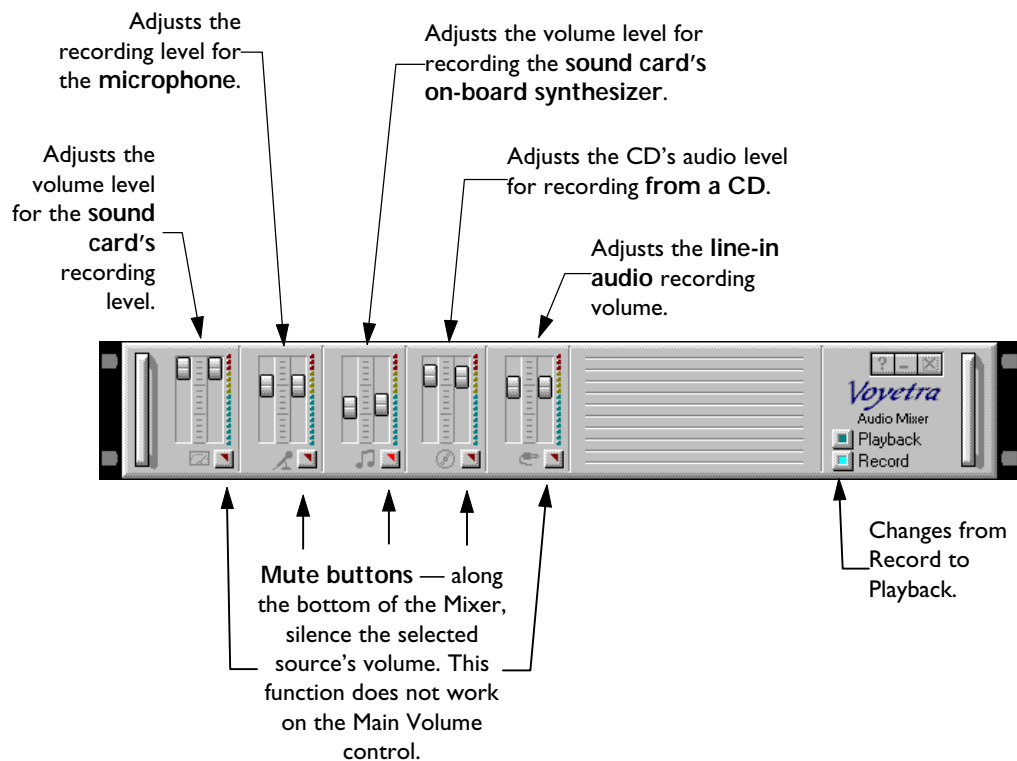
The controls for Playback differ slightly than the controls for Recording.



Your Mixer may look slightly different than the one pictured above. If you are uncertain as to the function of any of the icons, rest your mouse pointer atop the icon and Tool Tips will identify the sound source for you.

Record Controls

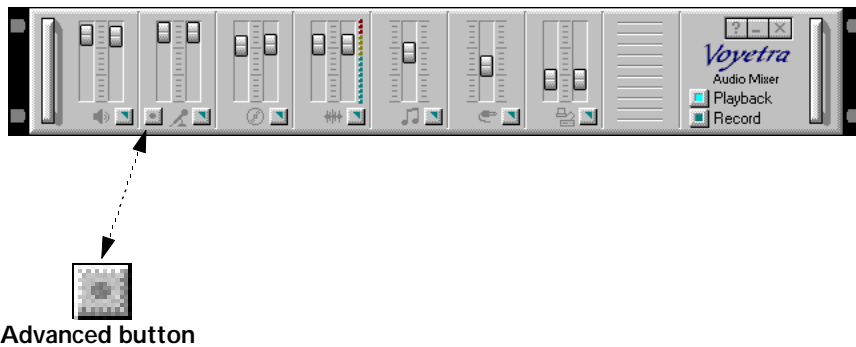
The controls for Recording differ slightly than the controls for Playback.



Your Mixer may look slightly different than the one pictured above. If you are uncertain as to the function of any of the icons, rest your mouse pointer atop the icon and Tool Tips will identify the sound source for you.

Advanced Controls

Some sound card drivers contain additional functions. In the Windows Sound System, these functions are available through the Advanced button, located at the bottom of the device's volume controls.



To Use the Advanced Button:

1. Click the Advanced button for the device you wish to control. A dialog box opens.
2. Turn the Advanced item On or Off by clicking its button. When the option is On, the button lights.



If you are unsure of any control's function, move the mouse pointer over the control in question, wait just a moment, and Tool Tip help will display the control's name.

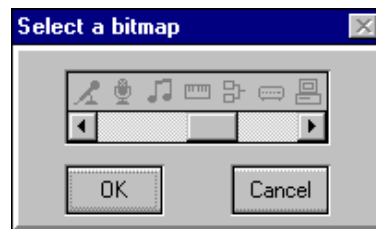
Customizing Your Mixer

AudioStation's Audio Mixer uses an auto-detection feature to duplicate the functions of the Windows Mixer which came with your sound card. AudioStation 2's powerful ability to auto-detect the drivers on your sound card means that different sound card mixers will vary slightly in appearance.

However, if you would like, you can change the icons on the Audio Mixer to suit your personal tastes — and to help you better identify which device is being accessed by each volume slider.

To Change an Icon under a Slider:

1. Move the mouse pointer over the icon you wish to change and click the right mouse button. A dialog box containing several icons displays.



2. Use the scroll bar or the arrows to find an icon that best represents the volume slider control.
3. Click the icon you want, then click OK. The old icon is replaced.



Note that you are only changing the icon — not the device the volume slider is controlling!

Right-Click Menu



Right-clicking anywhere on the Audio Mixer displays a menu which contains information about the Audio Mixer and gives you control over its appearance.

The right-click menu contains the following controls:

Restore	Restores the Audio Mixer after minimizing.
Move	Moves the Audio Mixer to any location on the screen. <i>(Only available when the Audio Mixer is launched as a separate component.)</i>
Size	Is not used with the Audio Mixer.
Minimize	Minimizes the Audio Mixer. <i>(Only available when the Audio Mixer is launched as a separate component.)</i>
Maximize	Is not used with the Audio Mixer.
Close	Exits the Audio Mixer.
About Audio Mixer...	Displays information about the version number, date, and Product ID number.
WSS Compatible Mixer	Switches between the Windows Sound System compatible mixer and the sound card's mixer.
Configure	Opens the Configure dialog box to change the appearance of the Audio Mixer. <i>(You can only Configure your Mixer if it is set to WSS Compatible.)</i>

Moving the Audio Mixer

If you don't like where the Audio Mixer is situated on the screen, it's easy to move it to another location.

To Move the Audio Mixer around the Screen:

1. Place the mouse cursor on the Audio Mixer and wait until the mouse pointer changes to a hand.
2. Click and hold the left mouse button; the fingers of the hand icon curl slightly.
3. Move the mouse — the Mixer moves along with it.
4. When you find a convenient location for the Mixer, release the mouse button. The Mixer is not positioned at that location.



Use the hand icon to move the Audio Mixer to a new location on the screen.

Windows Sound System Compatible Mixer

When you start the Audio Mixer, its controls are compatible with the Windows Sound System (WSS) — its default setting. With these controls, you can use all the features that your sound card is capable of.

- In some cases, you can switch between the WSS compatible mixer and an older sound card mixer.
- If you have an older mixer made specifically for your sound card by Voyetra, you can access it from a pop-up menu.
- Use the old mixer only if you have an old driver for your sound card that does not work with the Windows Sound System. Otherwise, you should always use the WSS Compatible Mixer.

To Switch between the Two Mixers:

1. Right-click the Mixer.
2. On the pop-up menu which appears, click WSS Compatible Mixer to deselect it (remove the check mark).
3. Restart the Mixer as you are prompted to do.



After you close and restart the mixer, you will notice changes to its faceplate.



If your card is not supported, the WSS compatible mixer option will be unavailable.

Configuring the Audio Mixer



Audio Mixer Pop-Up Menu

Through the Configure dialog box, you can change the appearance of the Audio Mixer. You can reorganize the order in which the controls appear and add or remove controls — as long as these controls are available on your system.

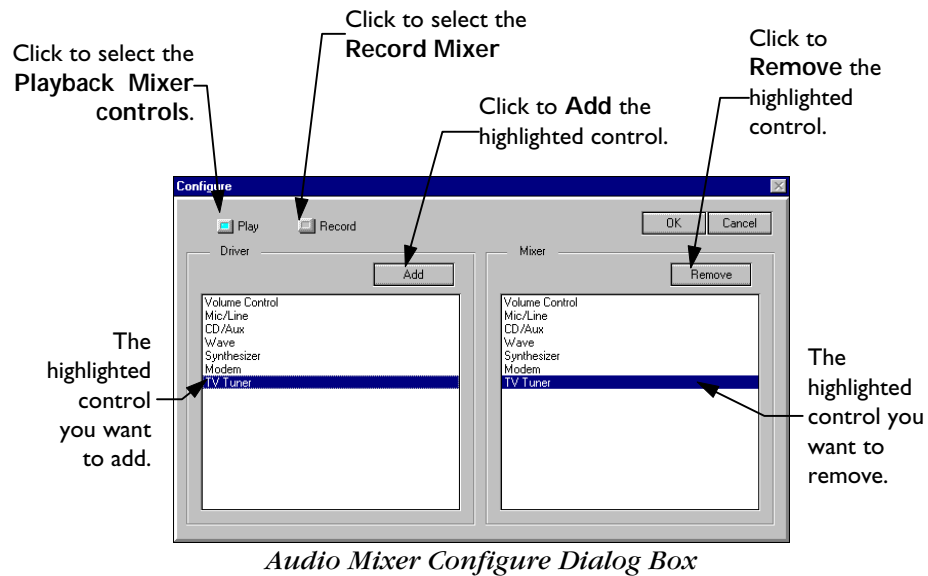
You access the Configure dialog box through the right-click pop-up menu.

To Open the Configure Dialog Box:

1. Right-click on the Audio Mixer to display the pop-up menu.
2. Click Configure on the menu to open the Configure dialog box.
3. When the box opens, notice that the list in the Mixer box, on the right, contains the list of controls currently on the Audio Mixer.



The button of the Mixer you are currently working with — Play or Record — will be lit.



Since each system has its own hardware specification, what you see in this manual may vary from what you see on your screen.

To Add a Mixer Control:

1. In the Driver box on the left, click to highlight the name of the control you want to add.
2. Click the Add button. The control is added to the list in the Mixer box.
3. Click OK. You will now see the control added to the Audio Mixer.



- *You can only add one instance of each control to the Audio Mixer.*
- *Controls are always added to the end of the list.*

To Remove a Mixer Control:

1. In the Mixer box on the right, click to highlight the name of the control you want to remove.
2. Click the Remove button. This removes the control from the Mixer box.
3. Click OK. You will notice that the control is no longer on the Audio Mixer.



Removing controls from the Audio Mixer does not remove them from your system — it only removes them from the Audio Mixer. You can always add the controls back to the Audio Mixer at a later date.

Changing the Order of the Mixer Controls

The order of the list, from top to bottom, corresponds to the Mixer controls from left to right.

It is easy to change the order in which the controls appear on your Mixer. When adding controls, their names are only added to the end of the list — you cannot add a control to the middle of the list. Therefore, the topmost control listed in the Mixer box will be the first control on the left of the Audio Mixer.

If, for example, you had three controls — MIDI, WAV and CD — and you wanted them to appear in reverse order, you would need to take the following steps.

To Change the Order of the Mixer Controls:

1. Click each control to highlight it, then click the Remove button. You should now have no controls in the Mixer box.
2. In the Drivers box, click CD, then click Add.
3. Click WAV, then Add.
4. Click MIDI, then Add.
5. The order should now appears as CD,WAV and MIDI — reverse of the original order. This can be helpful when locating the controllers on the Audio Mixer.

Chapter 7

Playlists

What Is a Playlist?

A playlist provides an easy and convenient way to personalize the way you hear music and sound on your computer. A playlist lets you select files and play them back in any order you wish. Each of AudioStation's media players — MIDI, WAV, and CD — provides a dialog box from which you can create your own playlists and save your favorite ones!

The playlist is a powerful feature. When playing back the songs on a playlist, you can shuffle the lists of files and hear them in random order. The CD Player even lets you name and save each CD and the tracks on it!

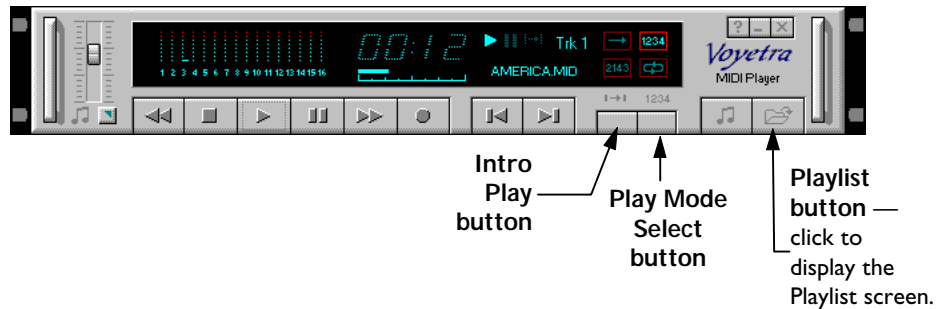
The three media players work in much the same way, although there are a few minor differences in the way playlists works in the CD Player as compared to the MIDI or WAV Players. These differences are explained throughout this chapter.



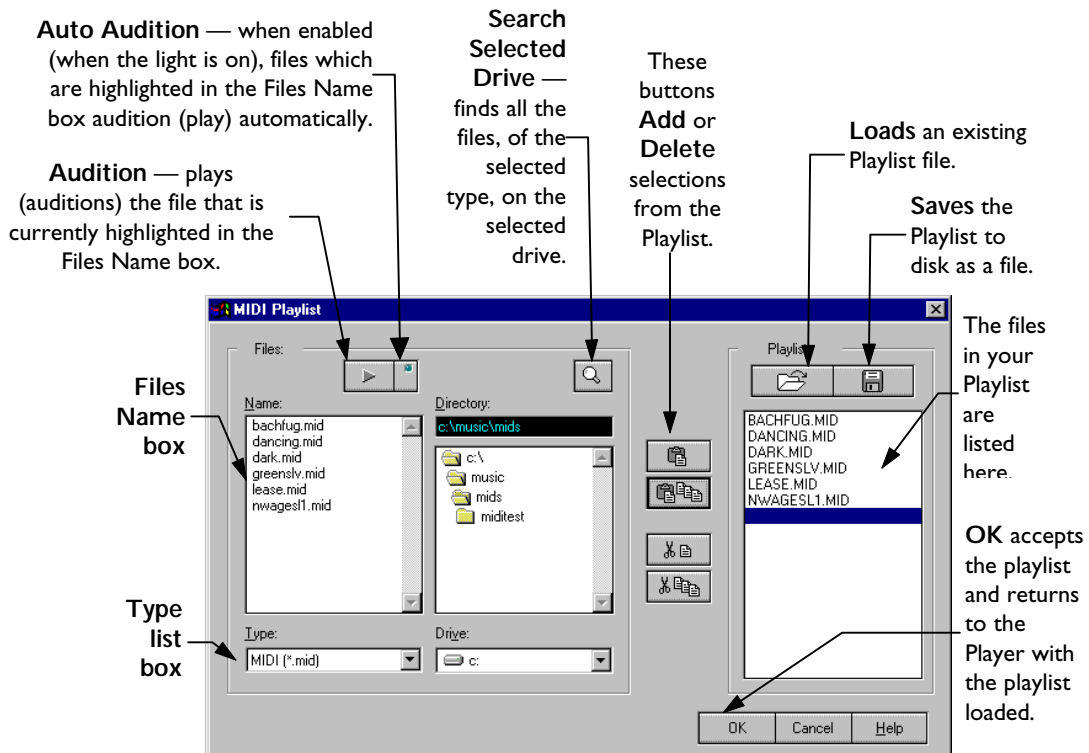
Although there are some differences in how the Playlist feature works on the various Players, the Playlist screen is accessed in the same way for each of the Players.

Playlists — MIDI and WAV Players

A playlist is created on the Playlist screen. This screen is slightly different for the MIDI and WAV Players than for the CD Player.

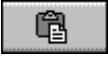

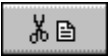


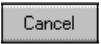
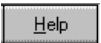


Playlist Screen — MIDI and WAV Players



Other Playlist Controls

Other buttons on the Playlist screen include:

Add		Adds the highlighted file(s)/ track(s) from the File Name box / CD tracks box to the Playlist.
Add All		Adds all the files/tracks currently listed in the File Name box / CD tracks box to the Playlist.
Delete		Removes the highlighted file(s)/ track(s) from the Playlist.
Delete All		Removes all files/ tracks from the Playlist.
OK		Closes the Playlist screen and returns to the MIDI, WAV, or CD Player screen with the updated playlist loaded.
Cancel		Closes the Playlist screen and returns to the MIDI, WAV, or CD Player screen without updating the playlist.
Help		Displays online Help for the MIDI, WAV, or CD Player.

Creating a Playlist — MIDI and WAV Players

It's easy to create a playlist of the files you would like to hear.

To Create a Playlist:

1. Click the Playlist button at the lower right-hand corner of the MIDI or WAV Player. This displays the Playlist screen.
2. Navigate to the drive and directory where the desired files are located.
3. In the Type list box at the lower left of the Playlist dialog box, choose the desired file extension. The Files Name box displays all files with that extension.
 - To hear a file before adding it to the Playlist, click to highlight the file's name in the Files Name box and then click the Audition button ► at the top left of the screen.
 - To automatically play a file when its name is highlighted in the Files Name box, click the Auto Audition button. When enabled, the button on the display is lit.
 - To load all the files on a selected drive into the Files Names box, click the Search Selected Drive button.
4. To add a file to the Playlist, double-click the file's name in the Files Name box. The file name will be added to the Playlist box on the right.
5. Repeat these steps to complete the playlist.
6. Click OK to close the Playlist screen and return to the Player with the newly-created Playlist loaded or click Cancel to return to the Player without updating the Playlist.



To play a file without actually loading it, click the Audition button.

Playlists — CD Player



To create a CD Playlist, you must have an audio CD in your computer's CD-ROM drive!

Clicking the Playlist button on the CD Player displays a screen where you can view the contents of the currently loaded CD, the number of tracks on the disc, and the total length of the tracks in minutes:seconds. This is the screen from which you create a customized playlist.

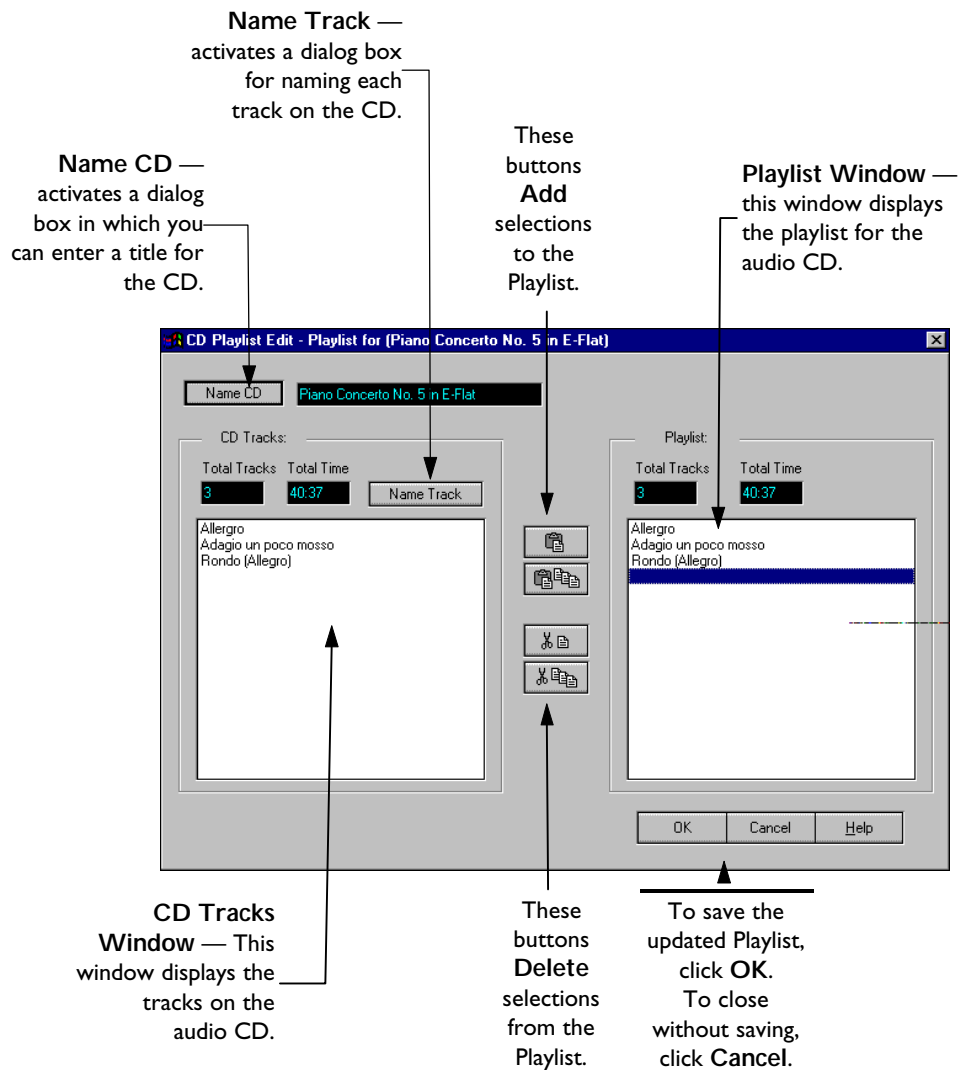
Initially, there are no titles for the tracks — you need to enter the names of the tracks yourself. However, you only need to do this once. Then, each time you load that CD, the CD Player automatically recognizes the disc and displays the track names previously entered.

- When you first load a new CD, the CD Tracks list box on the left side of the playlist window displays Untitled 1, Untitled 2, and so on for each track on the disc. You can enter the titles of the tracks (or any text you wish) and assign a name to the CD itself using the Name Track and Name CD buttons located on the CD Playlist screen.
- Above each list box (CD Tracks and Playlist) is a display showing the Total Tracks and the Total Time for each list.
- The Add All and Delete All buttons add or delete all the tracks from the playlist.



Although playlists are a convenient way to hear your favorite selections, you can play CD tracks without creating a playlist!

Playlist Screen — CD Player



Creating a Playlist — CD Player

Here's how to create a playlist of your favorite tracks on an audio CD.

To Create a Playlist — CD Player

1. Click the Playlist button at the lower right-hand corner of the CD Player screen. The CD Playlist screen displays.
2. To name the CD and the CD's tracks, see the instructions which follow.
3. Double-click the track's name in the CD Tracks window (on the left) to add it to the Playlist window (on the right).
4. Repeat the steps above to complete the playlist.
5. Click OK to return to the CD Player.



You don't have to save the playlist. The CD Player does this for you automatically!

Naming CD Tracks

The tracks on the audio CD appear as "Untitled" followed by a number until you name them.

To Name the Tracks on a CD:

1. Click to highlight the desired track in the CD Tracks window.
2. Click the Name Track button.
3. In the dialog box which displays, enter a name for the track.
4. Press the Enter key, click the CD Next button or click the Up or Down arrows.
5. Continue entering track names until you have completed the list, then click OK.

Naming a CD

The name of the CD appears as “Untitled” until you enter a name.

To Name an Audio CD:

1. In the CD Playlist screen, click the Name CD button.
2. In the dialog box which displays, enter a title for the disc.
3. Click OK.

Playing CD Tracks Without a Playlist

Although playlists are a convenient way to listen to the songs you would like to hear, you can play audio CDs without creating playlists.

To Play an Audio CD without a Playlist:

1. Insert an audio CD in your CD drive.
2. Click the CD Player’s Playback Mode Select button to select a mode — Single, Playlist, Shuffle, or Loop.
3. Use the Previous Track or Next Track buttons to select the desired track.
4. Click the Play button.



If you need to increase or decrease the volume, use the Audio Mixer and/or the volume control sliders on the Player.

Playlist Modes

There are four different playback modes. These can be accessed by clicking the Playback Mode Select button.

Playback
Mode Select
button



Click this button to select one of the four playback modes:

Single Mode



In the MIDI and WAV Players, plays the current selection in the playlist, then stops when the file is complete.

Play All Mode



In the CD Player, plays the entire CD once through.

Playlist Mode



Plays files or tracks in the order that they appear in the playlist, starting with the currently selected file, and stops after the last file.

Shuffle Mode



Plays the files or tracks in the playlist in random order, continuing until you click the Stop button or close the Player.

Loop Playlist Mode



Plays all the files or tracks in the order in which they appear in the playlist, starting with the currently selected file, then repeats the list from the beginning. This process continues until you click the Stop button or close the Player.

Listening to a Playlist — MIDI, WAV, CD

The steps for listening to a playlist are the same for all of the Players.

1. Select a playlist mode by clicking the Playback Mode Select button on the front of the Player.
2. Click the Play button. The files or tracks in your playlist begin to play.
3. To hear a different selection without waiting, use the Previous Track selection and Next Track selection buttons to jump to the desired selection.



To halt playback before the playlist is finished, click the Stop button.

Inserting Items in a Playlist

Once you have created a playlist, you may want to add more tracks or files to it.

To Insert a Single Item to a Playlist:

1. In the Playlist box on the right side of the Playlist screen, highlight the line just below where you want to insert an item. If you want to add an item to the bottom of the playlist, highlight the blank line below the last item in the list.
2. In the Files Name box in the MIDI or WAV Player or the CD Tracks box on the CD Player, double-click the desired file name or track or highlight the file/track name and click the Add button.

To Insert Several Items in a Playlist:

1. Select an insertion point in the playlist by highlighting the line just below where you want to insert an item. To add an item to the end of the playlist, highlight the blank line below the last item in the list.
2. In the Files Name box in the MIDI or WAV Player or the CD Tracks box in the CD Player, select the items you wish to add.
 - To select a group of consecutive items, click-and-drag the mouse up or down over the desired items.
 - To select a group of non-consecutive items, hold down the CTRL key as you click on individual file names or tracks.
3. Click the Add button.



To add all of the file names in the Files Name box or all of the CD tracks in the CD Tracks box, click the Add All button.

Deleting Item(s) from a Playlist

After you have created a playlist, you may decide that you no longer want certain files or tracks to be part of the playlist.

To Delete Item(s) from a Playlist:

1. In the playlist box on the right, select the item(s) you wish to remove.
2. Click the Delete button.
 - To remove all of the items from the playlist, click the Delete All button.



Delete operations only remove files from a playlist. They do not erase from the files or tracks from your hard disk — or CD!

Saving a Playlist — MIDI and WAV Players

To Save a Playlist:

1. Click the Save button on the Playlist screen.
2. Navigate to the directory where you would like to keep your playlists.
3. Type a file name in the Files box.
4. Click OK to save the playlist.

Loading a Playlist — MIDI and WAV

To Load a Playlist:

1. Click the Playlist button to display the Playlist screen.
2. Click the Load button.
3. Navigate to the drive and directory, then double-click the desired file name.



Loading and saving playlists apply only to the MIDI and WAV Players. You do not need to save the playlist for the CD Player — it is saved automatically. Also, once you have created a playlist for an audio CD, whenever that CD is inserted in the CD-ROM drive, the playlist previously created loads automatically.

Audition — MIDI and WAV Players

Audition lets you play a file without actually loading it.



The Audition button plays the highlighted file in the Files Name box .



The Auto Audition button, when enabled (when the light is on), automatically plays the files which are highlighted in the Files Name box.

- To audition a file, highlight the file name and click the Audition button.
- To audition files automatically, activate the Auto Audition button. The file begins playing the moment you highlight it.
- To stop audition playback, de-activate the Auto Audition button if necessary, then click on any file name.



Audition only works with the MIDI and WAV Players!

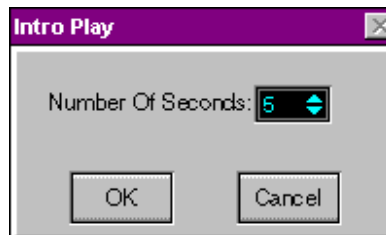
Intro Play



Intro Play lets you to hear a file or CD track for a preset amount of time.

To Set an Amount of Time for Intro Play:

1. Right-click on the Player to display the system menu.
2. Click Intro Play.
3. Use the on-screen buttons use the spin buttons to select a length of time, in seconds.
4. Click OK.



To Use Intro Play:

1. Create or load a playlist.
2. Click the Intro Play button. The files or CD tracks play for the selected amount of time.



If using the CD Player, make certain an audio CD is in the CD-ROM drive!

Chapter 8

CD Player



Many CD players allow you to customize the way you listen to music. If there is a selection you don't want to hear, just press a button and skip right over it. AudioStation's CD player includes this feature —and more.

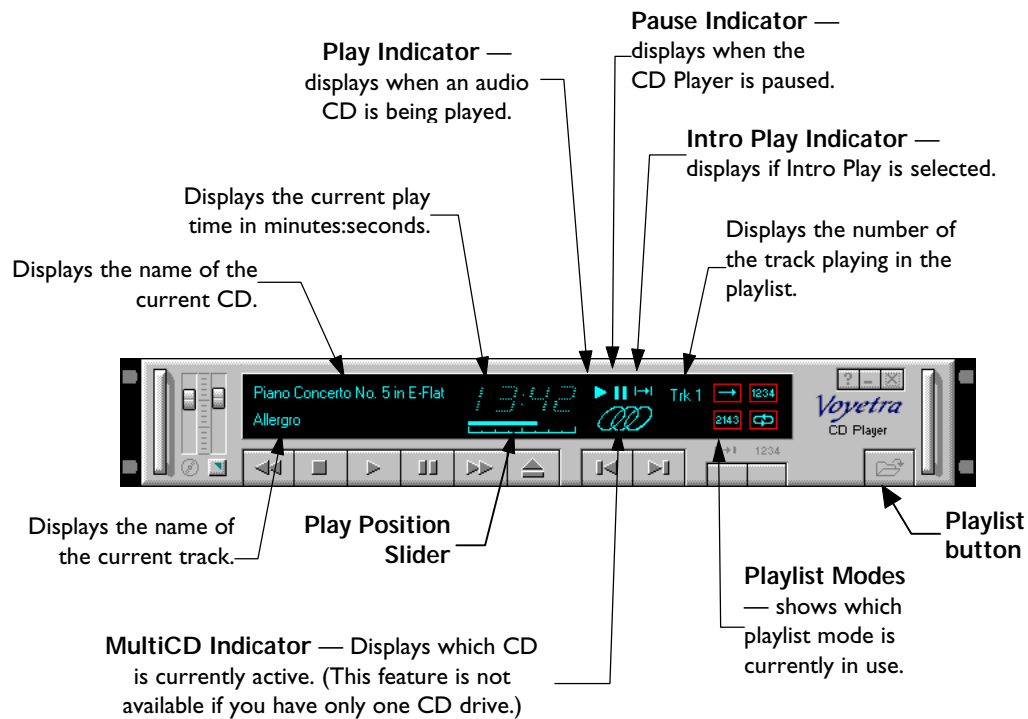
- You can easily create your own playlist — and play the tracks you wish to hear in any order.
- The CD player lets you name the CD— and each track.
- When you place an audio CD in your computer, the CD player automatically displays the name you previously entered.

Listen while you work! With the CD Player, you can catch up on that work you need to do while your pre-programmed list of songs plays quietly — or not so quietly — right on your computer!



Now's a good time to view the CD Player Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ③.

CD Player Screen Areas



For information about the Transport Control buttons along the bottom of the Player, refer to the “AudioStation Controls” chapter.

Playing an Audio CD

Refer to the chapter on “Playlists” for instructions on how to play audio CDs with AudioStation’s CD Player.

Chapter 9

MIDI Player



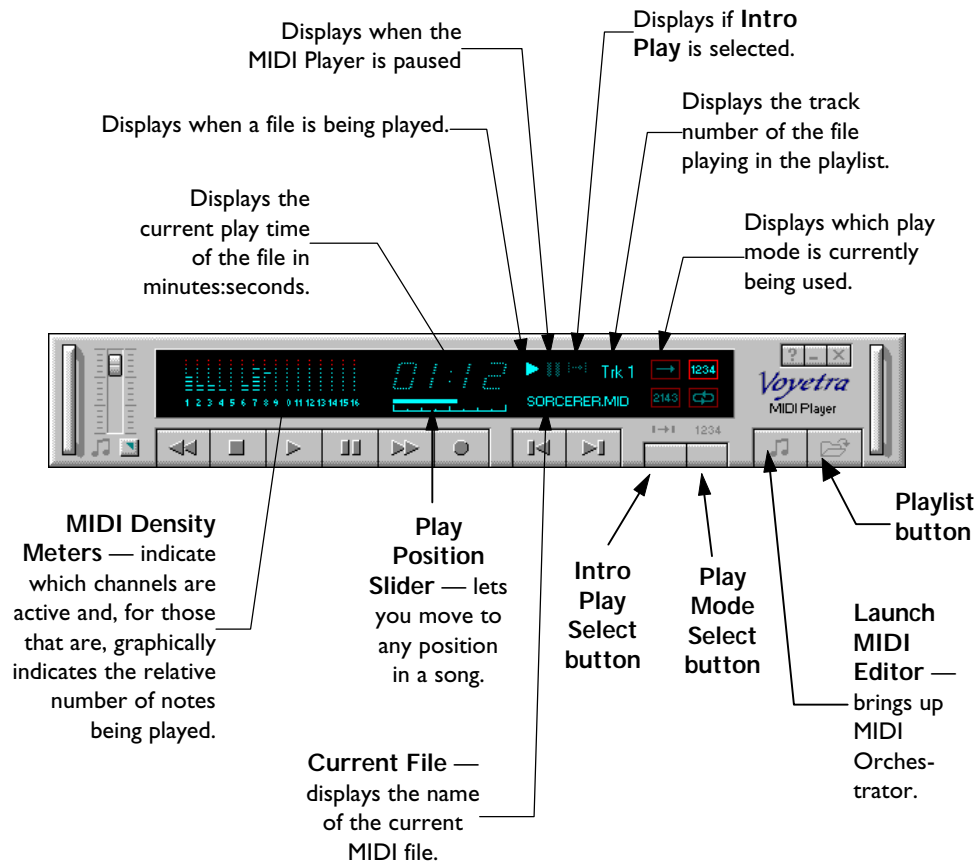
The MIDI Player lets you record and play MIDI files on your sound card's built-in synthesizer and/or on external instruments. With the MIDI Player, you can create custom playlists to hear your favorites time and time again. A MIDI interface or connector is required to connect external MIDI devices.

Should you wish to modify a MIDI file, the Launch MIDI Editor button calls up MIDI Orchestrator, with the current MIDI file loaded and ready for editing.



Now's a good time to view the MIDI & WAV Player Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ④.

MIDI Player Screen Areas



Recording MIDI Files

You can record a MIDI file using the MIDI Player. However, to save the file, you need to use MIDI Orchestrator. Therefore, when recording a MIDI file, it is preferable to click the Launch MIDI Editor button on the MIDI Player to bring up MIDI Orchestrator where you have more control over which track and instrument (patch) you are using in your recording and you can save the file directly.

Recording & Saving Files with MIDI Player

To Record a MIDI File:

1. Click the Record button. The red LED blinks, indicating that the module is in Record Standby mode.
2. Click the Play button to begin recording.
3. Play your MIDI device.
4. To pause temporarily during recording, click the Pause button. Click the Pause button again to resume recording at the point where you left off. (If you'd like, you can use the Spacebar instead of the Pause button.)
5. Click the Stop button when you have finished recording.
6. Click the Play button to hear what you have just recorded.
7. You can follow the above steps to re-record if you wish. The new material replaces the currently recorded material!

C A U T I O N !!



To resume recording after pausing, use the Pause button or the Spacebar. If you click the Record button, you will erase the existing recording and start a new one.

To Save the MIDI file:

1. Click the Launch MIDI Editor button to open MIDI Orchestrator.
2. From the File menu, select Save.
3. Select a file format — .ORC, .RMI or .MID.
4. Type a new file name in the dialog box.
5. Click OK.

Editing Files from the MIDI Player

To Edit a MIDI File:

1. Load a Playlist containing the desired file into MIDI Player — or create a new playlist.
 - You can also use the currently-loaded file. If you are using the current file, skip to step 3.
2. Return to the MIDI Player and use the Next or Previous buttons to access the desired file.
3. Click the Launch MIDI Editor button to open MIDI Orchestrator.
4. Edit and save the file as desired.



For information on creating a Playlist, refer to the “Playlist” chapter.

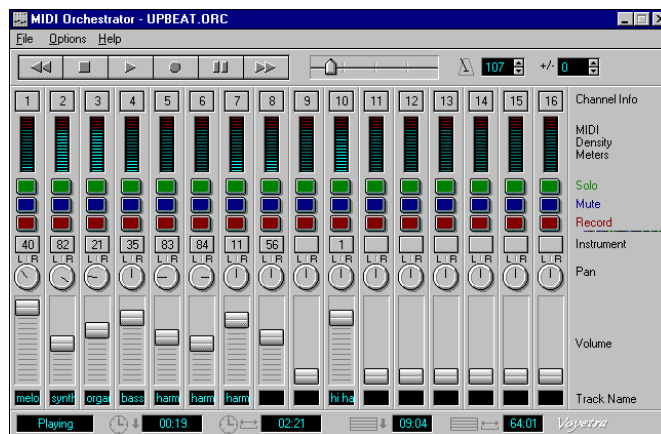
Launch MIDI Editor Button



The Launch MIDI Editor button on the MIDI Player opens MIDI Orchestrator with the current file loaded. MIDI Orchestrator lets you tailor MIDI files to your own needs. Its channel-based mixing console makes it easy to play, record, and optimize MIDI files. With MIDI Orchestrator, you can easily select instrument sounds, balance channel volumes, control tempo, transpose tracks, add new tracks to existing MIDI files or create multitrack MIDI compositions from scratch.

Chapter 10

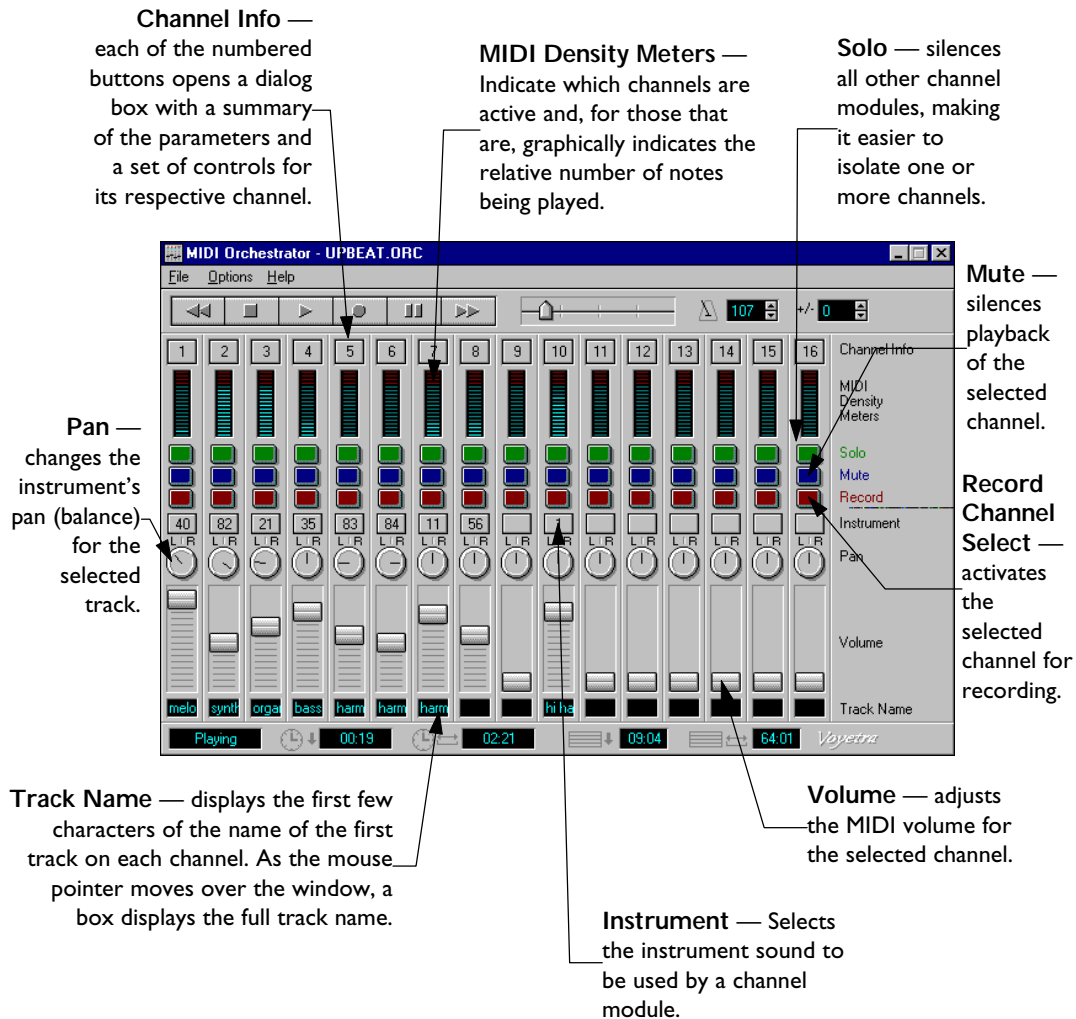
MIDI Orchestrator



MIDI Orchestrator™ lets you mix and modify MIDI files by changing instruments, transposing keys, adjusting tempo, muting or soloing specific tracks, and more. This component can be launched directly from within the MIDI Player.

MIDI Orchestrator has 16 separate modules. Each module is a collection of displays and controls which operate on a single MIDI channel. In this way, you can Solo or Mute the channel, adjust its volume and instrument sound, and control other parameters.

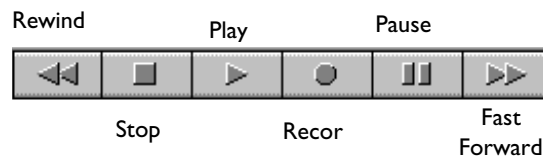
MIDI Orchestrator Screen Areas



Now's a good time to view the MIDI Orchestrator Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ⑤.

Transport Controls

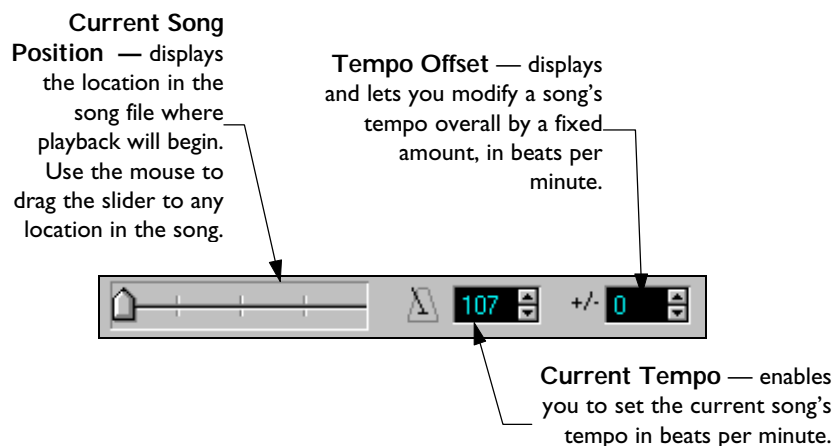
The Transport Controls are located at the top of the screen, directly beneath the menu bar. These controls are similar to the buttons on a tape deck or VCR. For more information on using the Transport Controls, refer to the “AudioStation Controls” chapter.



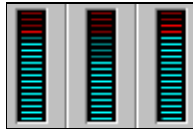
You can advance to either the beginning or the end of a file by double-clicking the Rewind or Fast Forward buttons.

Global Controls

The Global Controls affect the play location in the song and the tempo for playback. These controls are located to the right of the Transport Controls.



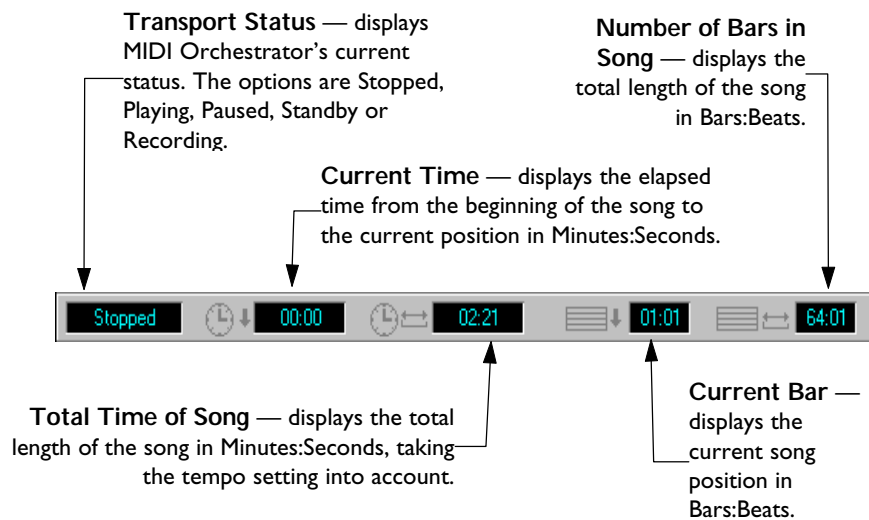
MIDI Density Meters



MIDI Density Meters display how much MIDI information is being sent through a channel. As the number of MIDI signals increase, the higher the meters will rise.

Status Area

The Status Area, at the bottom of the screen, displays information about the Record/Playback status and length of the song being played.



Numericals



Numericals are small boxes that display parameters or values. These provide a quick way to adjust numerical values. Some numerical boxes have spin buttons — a small pair of triangular up/down arrows.

- To increase the numerical value, click the top (up) arrow.
- To decrease the numerical value, click the bottom (down) arrow.

To change the values in boxes with spin buttons, you can use the spin buttons alone or in conjunction with the Shift and Ctrl keys.

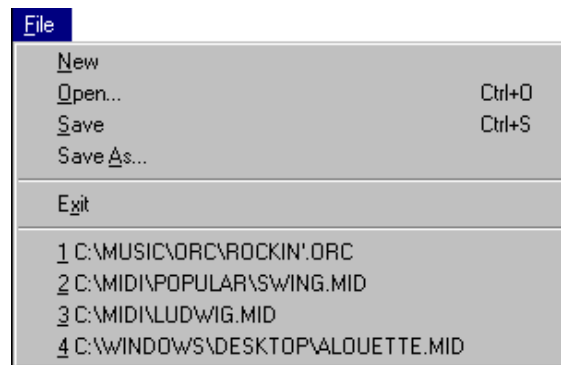
To Increase a Value...

Action	Where	Effect
Click the mouse button	on an up Spin Button	to increase the value by the smallest amount.
Press the + key	when a numerical box is selected	to increase the value by the smallest amount.
Hold the Ctrl key and press the + key	when a numerical box is selected	to increase the value to the maximum amount.
Hold the Shift key and click the mouse button	on an up Spin button	to increase the value by a large amount.
Press the multiply * key	when a numerical box is selected	to increase the value by a large amount.
Hold the Ctrl key and click the mouse button	on an up Spin button	to increase the value to the maximum amount.

To Decrease a Value...

Action	Where	Effect
Click the mouse button	on a down Spin Button	to decrease the value by the smallest amount.
Press the - key	when a numerical box is selected	to decrease the value by the smallest amount.
Hold the Ctrl key and press the - key	when a numerical box is selected	to decrease the value to the minimum amount.
Hold the Shift key and click the mouse button	on a down Spin button	to decrease the value by a large amount.
Press the divide / key	when a numerical box is selected	to decrease the value by a large amount.
Hold the Ctrl key and click the mouse button	on a down Spin button	to decrease the value to the minimum amount.

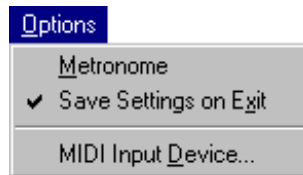
File Menu



The commands in the File menu are:

- | | |
|------------------------|--|
| New | Creates a new, empty file. |
| Open | Presents a dialog box from which you can select the file you wish to load. |
| Save | Saves the currently-loaded file to disk. If the file already has a name, it will be saved under that name. Otherwise, the Save As... dialog box appears. |
| Save As... | Presents a dialog box for naming and saving the current file to disk. |
| Exit | Closes MIDI Orchestrator. |
| 1/2/3/4
(File List) | Lists the paths of the four most recently opened files. To open a listed file, click once on its entry or enter its number. |

Options Menu



The Options menu has three settings:

Metronome When enabled, the PC speaker clicks as a time reference for recording.

To activate this feature:

- Click Metronome.

When the Metronome is activated, a check mark appears next to its name.

Save Settings on Exit When enabled, the current Metronome setting is saved when MIDI Orchestrator is closed.

To activate this feature:

- Click Save Settings on Exit.

When Save Settings on Exit is activated, a check mark appears next to it.

MIDI Input Device Lets you select a MIDI input device for recording.

Selecting a MIDI Input Device

To Select a MIDI Input Device:

1. Select MIDI Input Device... from the Options Menu. A dialog box appears.
2. Click the drop-down box to see a list of the MIDI input devices available on your system.
3. Click the input device you wish to use.
4. Click OK to accept your choice.



Opens MIDI
Options dialog box

MIDI Options Dialog Box

The Options button in the MIDI Input Device dialog box opens the MIDI Options dialog box.

Keep MIDI Drivers Open While Inactive

The Keep MIDI Drivers Open While Inactive setting determines how your MIDI configuration changes when you switch from MIDI Orchestrator to another Windows program.



If **Keep MIDI Drivers Open While Inactive** is deselected — which is its default setting — your MIDI drivers will be available to another MIDI program when MIDI Orchestrator is inactive. However, this closes the drivers for MIDI IN, MIDI OUT and MIDI THRU, and your MIDI keyboard will not be available when using other applications.

If **Keep MIDI Drivers Open While Inactive** is selected, your MIDI drivers will remain open even when MIDI Orchestrator is inactive. This lets you play your MIDI keyboard when you switch to another Windows application, but it may cause conflicts and system instability if two MIDI applications are open simultaneously.

Send Reset Controllers on Stop

If your MIDI scores involve many controller change events, you will probably want to select this option. If, for example, you have the Volume and Pan controllers changing to simulate the motion of a musician moving around a stage and you stop the song, auto-rewind, then play it back, Volume and Pan remain at the values they had when playback was stopped.

By enabling **Send Reset Controllers on Stop**, you can prevent this subtle error. MIDI Orchestrator resets all the controllers to eliminate unwanted controller settings from a previous song or playback session.

Close MIDI IN While Using Wave

Some sound card drivers will report “Wave Device Already in Use” if you try to record WAV files while simultaneously playing a MIDI file. If you encounter this problem, select the **Close MIDI IN While Using Wave** option when you are recording Digital Audio. This closes the MIDI IN port, enabling you to simultaneously play MIDI tracks and record digital audio.

Clock Rate

Clock Rate sets the timing resolution with which MIDI Orchestrator records. The higher the setting, the higher the resolution and the greater the accuracy of your recording. The default Clock Rate setting is Medium.

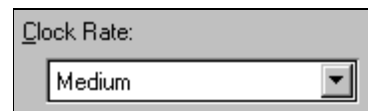
Set the Clock Rate to High if you are sending a large amount of MIDI data and MIDI Orchestrator is “dropping” some of the data. The High setting increases the timing resolution of MIDI Orchestrator and allows for a greater degree of accuracy when recording MIDI. Be aware, however, that this setting can slow down your system.

You would only need to set the Clock Rate to Low if you have a slow system and MIDI Orchestrator is having a problem recording your MIDI data. In most cases, Medium is the most appropriate setting for the Clock Rate.

Setting the Clock Rate

To Change the Clock Rate Setting:

1. From the Options menu, select MIDI Input Device.
2. In the MIDI Input device dialog box, click the Options button.
3. From the Clock Rate list, select Low or High.
4. Click OK.

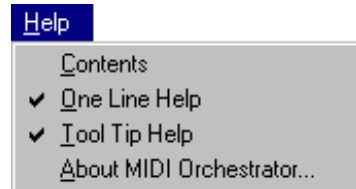


In most cases, you will not have to change the Clock Rate setting from its default of Medium..

Help Menu

In MIDI Orchestrator, Help is just a mouse-click away.

There are several different types of help to choose from. These can be enabled or disabled from the Help menu.



A check mark to the left of the menu option indicates the feature is turned on.

Contents Displays the entire Help file.

- Click Contents to open the Help file or press the F1 key.

One Line Help Activates MIDI Orchestrator's One Line Help system. As you pause the mouse pointer on top of screen areas and controls, single-line definitions are displayed in the Title bar at the top of the application.

- Click One Line Help to activate this feature.

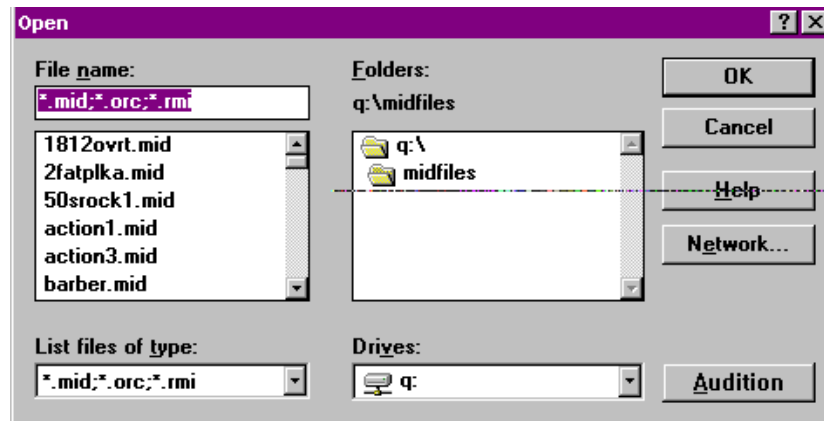
Tool Tip Help Displays the names of screen areas and controls as the mouse pointer stops on top of them. The text is displayed in a small yellow window that pops up near the mouse pointer.

- Click Tool Tip Help to activate this feature.

About... Displays MIDI Orchestrator's "About..." box. This contains the program's revision number and creation date, along with the Product ID Number.

Loading and Playing a MIDI File

It's easy to load and play files in MIDI Orchestrator!



File Open Dialog Box

To Open and Play a File:

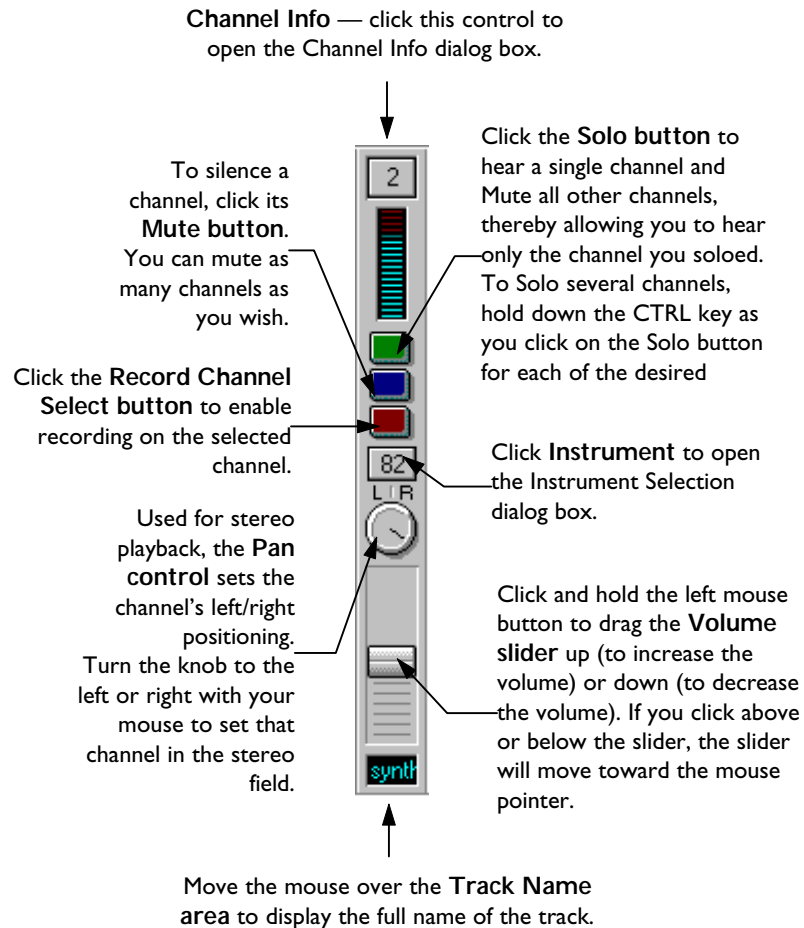
1. Choose Open from the File menu and locate the drive and directory where your MIDI files are located.
2. Double-click the file name of the desired song. As the song file loads into MIDI Orchestrator, the sliders adjust to the correct volume for each channel and the status indicators display the length of the song.
3. Click the Play button to play the song. As the song plays, the Status indicator displays "Playing," the MIDI Density Meters indicate the activity on each channel, and the Song Position slider advances from left to right.



The MIDI Density Meters for some of the channels may be grayed out. This is normal. It indicates that there is no port assignment for those channels in the Windows MIDI Mapper, so those channels are unavailable.

Channel Module Controls

MIDI Orchestrator has 16 channels — each with the following controls.



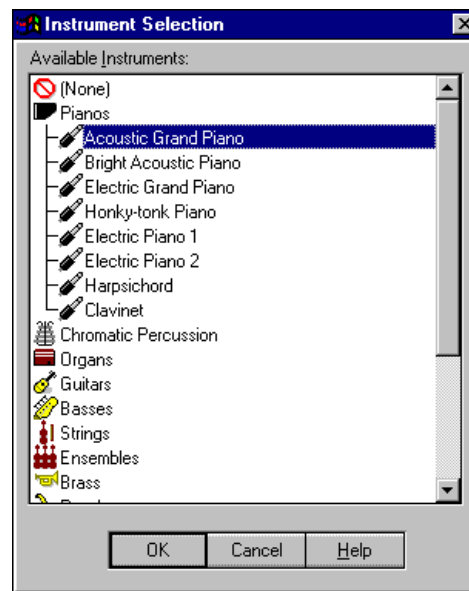
- To Solo multiple channel modules, press *Ctrl+click* on the desired Solo buttons.
- To adjust the Pan, click the control dial and drag it to the setting you want.

Assigning Instrument Sounds with the Instrument Selector

You can assign any of the 128 instruments to each channel and these can be changed at any time — even as a song is playing.

To Select an Instrument:

1. Click the Instrument Selector button for the appropriate channel. The Instrument Selection dialog box appears.
2. Double-click on an instrument group, a list of the instruments in that group appears.
3. Click on an instrument to assign a new sound.
4. Click OK.



If you'd prefer, you can use the up and down arrow keys to move around the Instrument Selection dialog box. Then press Enter to select the instrument you have chosen.

Setting or Changing a Song's Tempo



To Change the Tempo for a Song:

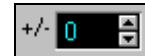
1. Click the Tempo numerical.
2. Click the up or down spin button to set the initial tempo for the song — or key in the desired value.



Some MIDI files contain a Tempo Map — a series of additional messages to change the tempo at various points throughout the song. Each tempo setting remains in effect until a new one is encountered or until the end of the song.

Adjusting All of the Tempos in a Song

The Tempo Offset control changes all the values in the Tempo Map, including the initial one, by the amount you select. This is useful when you want to change the overall speed of a song that contains many tempo changes.



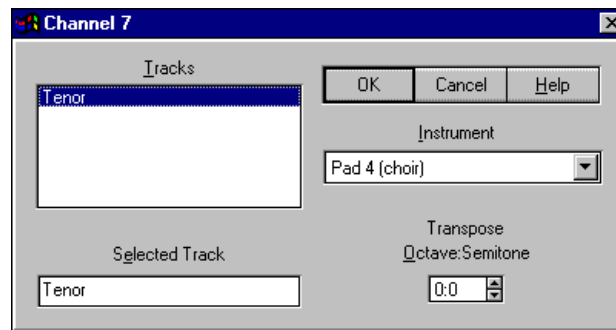
To Adjust All of the Tempos in a Song:

1. Click the Tempo Offset numerical.
2. Use the spin buttons to change the value up or down — or key in the desired value.



For more information on using numericals, refer to the “Changing Numericals” section elsewhere in this chapter.

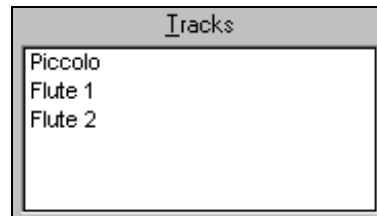
Channel Info Dialog Box



Each channel module has its own Channel Info dialog box. This box provides a summary of all of the settings for that channel and enables you to adjust them.

Tracks

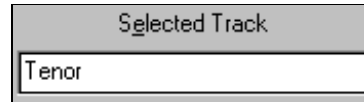
The Tracks box lists the names assigned to all of the tracks on the channel and allows you to select a track to name, re-name, or transpose.



When you use MIDI Orchestrator to record new data in an existing MIDI file, the new material creates a single track on the selected channel and replaces all pre-existing data on all tracks assigned to that channel.

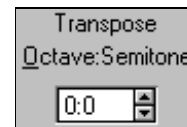
Selected Track

Selected Track does exactly as its name indicates — it displays the currently-selected track.

A rectangular control box with a light gray background. At the top, the text "Selected Track" is centered. Below it is a white text entry field containing the word "Tenor".

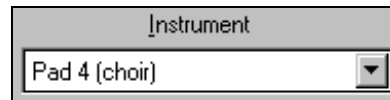
Transpose

Transpose lets you transpose the selected track by octaves and/or semi-tones.

A rectangular control box with a light gray background. At the top, the text "Transpose" is centered. Below it, the text "Octave:Semitone" is displayed. At the bottom is a numeric entry field showing "0:0" with up and down arrow buttons on its right side.

Instrument

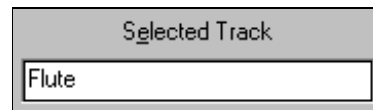
Instrument lets you select an instrument for that channel.

A rectangular control box with a light gray background. At the top, the text "Instrument" is centered. Below it is a white text entry field containing the text "Pad 4 (choir)". To the right of the field is a small downward-pointing arrow button.

Naming or Renaming a Track

To Name or Rename a Track:

1. Click the Channel Info button.
2. Type the desired name in the Selected Track box.
3. Click OK.

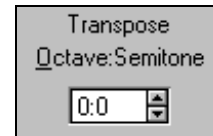
A rectangular control box with a light gray background. At the top, the text "Selected Track" is centered. Below it is a white text entry field containing the word "Flute".

To make it easier to identify each channel, use this procedure to edit the name of the first track. The first few characters will appear in the channel module's Track Name area near the bottom of the main screen. Whenever the mouse cursor rests in the Track Name area, the full track name will be displayed.

Transposing a Track

To Transpose a Track:

1. Click the Channel Info button of the channel module containing the track you want to transpose. That track name will be displayed in the Selected Track box
2. Use the spin buttons in the Octave:Semitone numerical to transpose the pitch up or down.



Recording



To record with MIDI Orchestrator, a MIDI interface or connector and a MIDI keyboard are required. Make sure the MIDI OUT of your keyboard is connected to the MIDI interface or sound card's MIDI IN.

To Prepare for Recording:

1. From the Options menu, enable the Metronome if you would like the PC to produce a timing reference tone from the speaker for each beat as you record.
2. Use the Tempo control to set the desired tempo.
3. Select the Channel module into which you wish to record by clicking its Record Channel Select button. This red button illuminates, indicating the Channel is enabled.
4. Use the Instrument Selector button to choose an instrument for recording. For now, set the instrument to 1, which usually creates the sound of a piano.

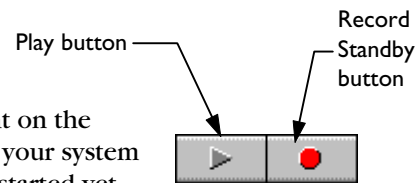
-
5. Turn down the volume on your MIDI keyboard and play a few notes. You should hear the selected instrument on the sound card's synthesizer. If you do, you're ready to record.



During recording, all the incoming MIDI data, regardless of its MIDI channel assignment, is merged and placed into the one channel you have selected.

Record Standby Mode

In Record Standby mode, the red light on the Record button blinks to indicate that your system is ready to record but hasn't actually started yet.



From this point, you can click the Record Standby button again to cancel Record Standby or you can click the Play button to begin recording.

To Record a Melodic Track:

1. Click the Record Channel Select button on a Channel module to activate that channel.
2. Click the Record button in the Transport Control area. The blinking red light indicates that MIDI Orchestrator is in Record Standby mode.
3. Click the Play button to start recording. The red light will stop blinking and remain lit, indicating that MIDI Orchestrator is recording. Also, the Status Indicator, at the bottom of the screen, now reads, "Recording." If you enabled the Metronome, you should hear the PC speaker counting the tempo.
4. Play your part on the MIDI keyboard.
5. Click the Stop button to stop recording.
6. Click the Play button to hear what you have just recorded.



If you wish to re-record the track, repeat the steps above. Note that the new recording will replace the entire previously recorded track.

You've Got the Beat

What's a song without drums? Now's the time to add the beat!

Depending on how your MIDI system is set up, the drum channel may be either 10 or 16. If you're not certain which it is, use MediaCheck™ to help you determine which channel is your setup for drums. (For information on using MediaCheck, refer to the "MediaCheck" chapter in this User's Guide.)



For a listing of which key triggers which drum sound, refer to the Appendix, "General MIDI Drum Note Map." (Not all devices use the drums in this listing. Check the documentation for your MIDI device if necessary.)

To Record a Drum Beat:

1. Click the correct Record Channel Select for the drum channel on your synthesizer. Each key on your MIDI keyboard will now act as a different drum instrument.
2. Click the Record button in the Transport Control area. The blinking red light indicates that MIDI Orchestrator is in Record Standby mode.
3. Click the Play button to start recording. The red light will stop blinking and remain lit, indicating that MIDI Orchestrator is recording. Also, the Status Indicator now reads, "Recording." If you enabled the Metronome, you should hear the PC speaker counting the tempo.
4. Play the drum part on the MIDI keyboard.
5. Click the Stop button to stop recording.
6. Click the Play button to hear what you have just recorded.



If you don't feel like creating a drum track, use one of the sample tracks which came with AudioStation. These are in the demos\drumtrax directory on the AudioStation CD-ROM.

Overdubbing Additional Parts

For a richer, fuller sound, you'll want to add additional parts.



You can use the Mute and/or Solo buttons to silence other tracks when recording a new track.

To Add Additional Parts:

1. Choose another channel to record on.
2. Click on this channel's Record Channel Select button.
3. Use this Channel module's Instrument Selector button to choose an instrument sound for the new part.
4. Click the Record button in the Transport Control area. The blinking red light indicates that MIDI Orchestrator is in Record Standby mode.
5. Click the Play button to start recording. The red light will stop blinking and remain lit, indicating that MIDI Orchestrator is recording. Also, the Status Indicator now reads, "Recording." If you enabled the Metronome, you should hear the PC speaker counting the tempo.
6. Play your part on the MIDI keyboard.
7. Click the Stop button to stop recording.
8. Click the Play button to hear what you have just recorded.



If you wish to re-record the track, repeat the steps above. Remember, the new recording will replace the entire previously recorded track.

Saving

Choosing a File Format



MIDI Orchestrator lets you open and save song files in three formats — .MID, .ORC and .RMI

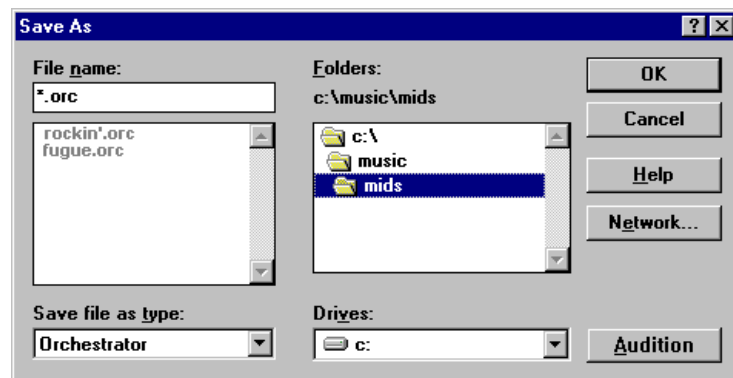
- .MID This format is compatible with most other PC MIDI applications. When you save a file in this format, settings for Tempo, Tempo Offset and Transpose are combined and the resulting new values are saved. Muted and unsoloed tracks are deleted.
- .ORC If the file is just for your own use, or if you plan to share the file with another application that supports .ORC files such as Voyetra's MIDI Player or Digital Orchestrator Plus,TM save your file in this format. .ORC also preserves all of the file's settings independently, just as you see them on screen.
- .RMI Files in this format include a header with identifying information which certain MIDI devices may require. In other respects, RMI files are identical to standard MIDI files.



When in doubt, use the .ORC format. You can always re-open a file and save it in .MID format later, if necessary.

Saving a File

It's always a good idea to save often — that way you won't lose what you have been working on.



The Save As... Dialog Box

To Save a File:

1. Choose Save from the File menu.
2. Select a file format, either .ORC, .RMI or .MID. (See “Choosing a File Format” for more information about file types.)
3. Type a new file name in the dialog box.
4. Click OK.



Be sure to check all of your Mute and Solo settings before you save a file in .MID format. Any tracks that you have de-activated with the Solo or Mute buttons will be deleted during the save operation.

Chapter 11

WAV Player



In the past, playing WAV (digital audio) files was a clumsy proposition at best. The sounds that enhance an application could not easily be accessed. You could listen to a single file, but to hear a string of them and analyze each one — or change them to suit your tastes — was not easy.

WAV Player lets you load any number of WAV files and then play them back in any order you see fit. Editing them is just a click away.

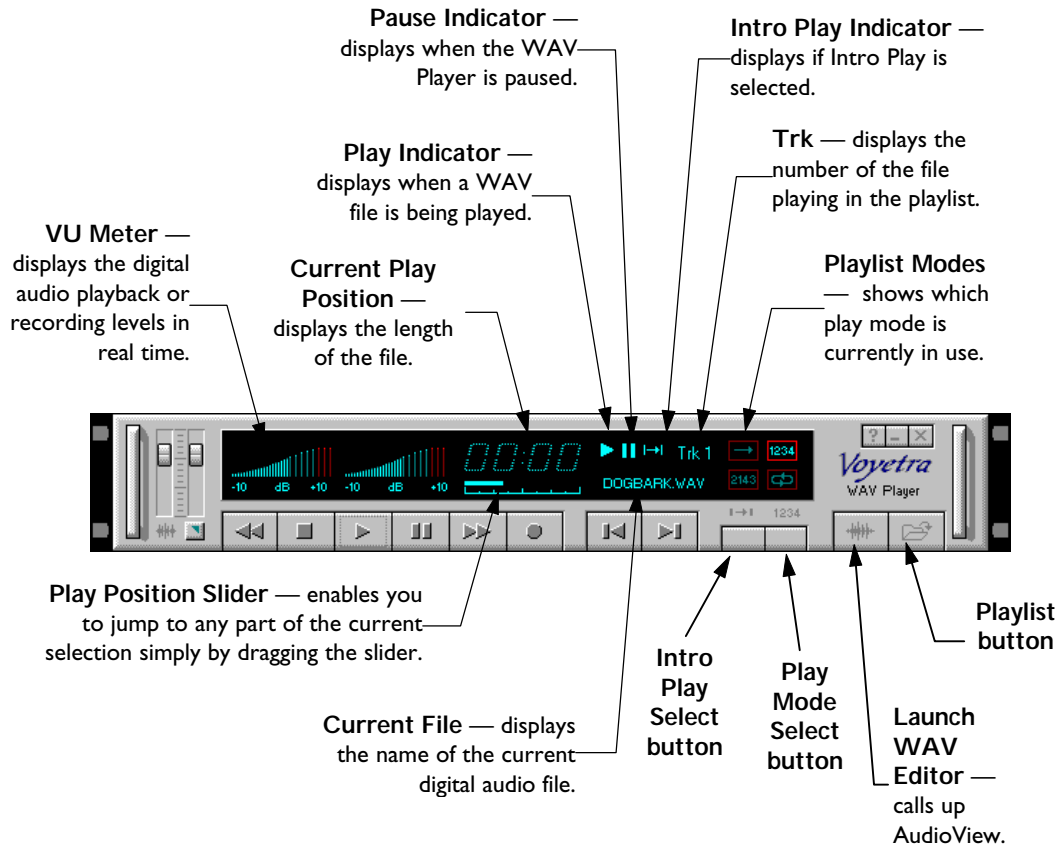
The WAV Player has a direct link to AudioView. With AudioView you can cut, paste, reverse, add echo or do any number of edits to customize your own sounds. You can even create sounds from scratch.

You will find the WAV Player, with its recording, playback and editing capabilities a powerful, easy-to-use sound utility.

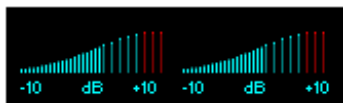


Now's a good time to view the MIDI & WAV Player Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ④.

WAV Player Screen



VU Meter Display



The VU Meter is a horizontal display of “lights” that indicate playback or record levels.



On the VU Meters:

- *For stereo files, separate left and right levels are displayed.*
- *For mono files, both meters display identical levels.*

Playing Digital Audio Files

Before you can play digital audio files, you must first create a playlist of the files you want to hear.



For information on creating a playlist, refer to the “Playlist” chapter, earlier in this User’s Guide.

To Play Digital Audio Files:

1. Once you have created a playlist, press OK to close the Playlist screen.
2. Press Play to hear the files in the playlist.

Recording Digital Audio Files

Record Standby Mode



When the Record button is clicked, it puts the WAV Player into Record Standby mode. The red light on the Record button blinks to indicate that the system is ready to record — but hasn't actually started recording yet. Now you can:

- Click the Play button to begin recording.
- Click the Record button again to cancel Record Standby.

To Find the Best Volume for Recording:

1. Click the Record button for Record Standby mode.
2. Click the Play button to start recording.
3. Watch the VU meters as you speak into the microphone or play your sound source.
4. Adjust your mixer's record level slider and/or your speaking volume so the red lights blink occasionally at peak volumes.

To Record a Digital Audio File:

1. Use the Audio Mixer to select an input source such as Mic or CD and set its record level.
2. If you want to record from your CD drive or from an external source such as a tape deck, cue up the material as needed.
3. Click the WAV Player's Record button. The red LED will blink, indicating that the module is in Record Standby mode.
4. Click the Play button to begin recording. Speak into the microphone or start playing the material you have prepared.
5. Click the Stop button when you are done.
6. Click the Play button to hear what you've just recorded. You can follow the above steps to re-record if you wish.

To Pause During Recording:

- To temporarily stop recording, click the Pause button.
- To resume recording at the point where you left off, click the Pause button again — or press the Spacebar.



Use only the Pause button or the Spacebar to resume recording. If you click the Record button, you will erase the existing recording and start a new one.

After you have recorded a WAV file with the WAV Player, you should save it. To save the file, you will need to open AudioView.

Launching AudioView and Editing Digital Audio Files



The Launch WAV Editor button on the WAV Player launches AudioView with the current file loaded.

AudioView is AudioStation's digital audio editor/recorder from which you can save WAV files and perform common editing functions such as copy, cut, and paste.

AudioView also offers more sophisticated editing features such as Mix Paste for making composite files from two or more files and wave level adjustments for fine tuning playback volumes.



Now's a good time to view the AudioView Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click ⑥.

To Save a WAV file:

1. Click the Launch WAV Editor button to open AudioView.
2. From the File menu, select Save.
3. Select a file format — .WAV or .VOC.
4. Type a new file name in the dialog box.
5. Click OK.



- *The VOC format was originally developed by Creative Labs for their Sound Blaster™ products and is widely supported by other manufacturers.*
- *The WAV format was developed by Microsoft and is used with Windows® applications.*

To Edit Files from the WAV Player:

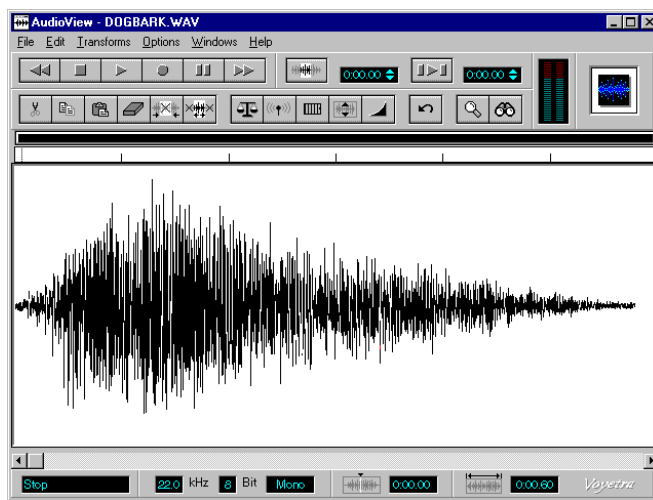
1. Load a Playlist containing the desired file into WAV Player or create a new playlist. You can also use a file that you have just recorded.
2. Return to the WAV Player screen and use the Next or Previous buttons to access the desired file.
3. Click the Launch WAV Editor button to open AudioView with the current file loaded.
4. Edit and save the file as desired.



For detailed instructions on using AudioView's powerful editing features, refer to the "AudioView" chapter.

Chapter 12

AudioView



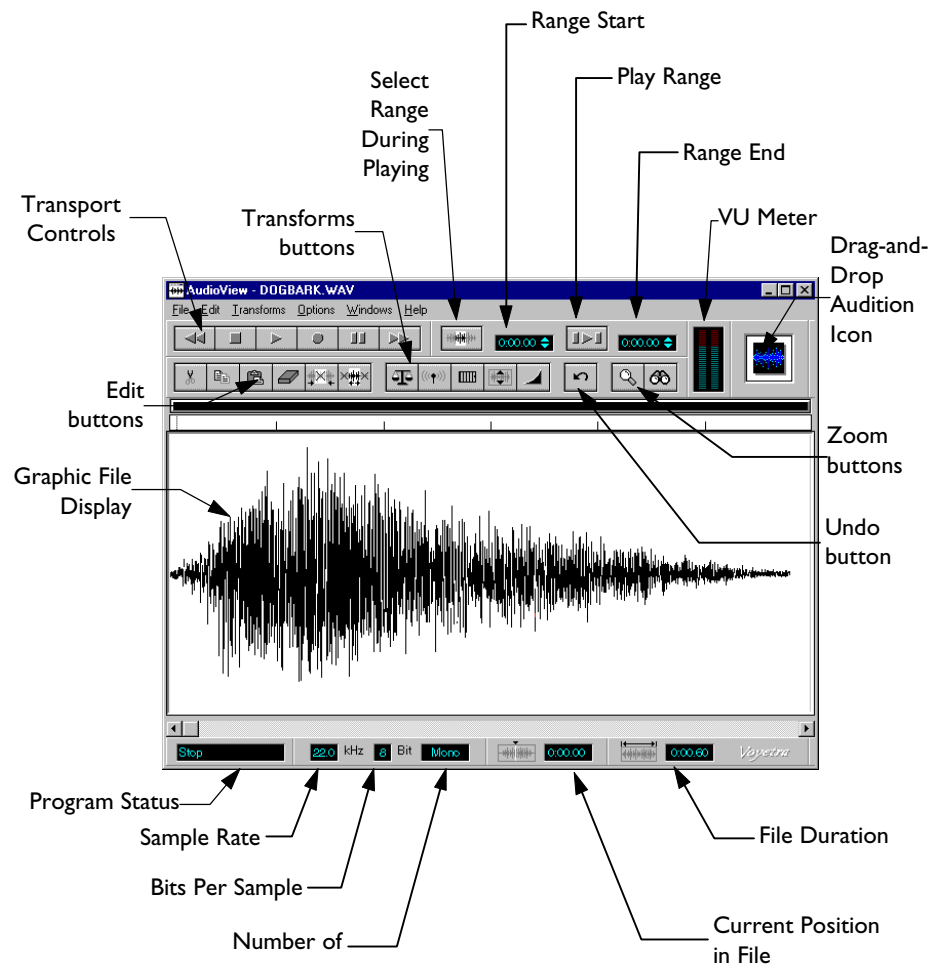
AudioView lets you record and edit WAV files using standard Windows cut-and-paste techniques. AudioView supports the most popular digital audio formats for the PC.

With AudioView, you record directly to the hard drive, then use simple, powerful editing tools to cut, copy, paste, mix paste, and more. AudioView's Drag-and-Drop Audio icon simplifies opening files and embedding WAV files in OLE documents.

Launching AudioView

AudioView can be launched from its own icon in the Voyetra Audio-Station program group, from the WAV Player, or from the Voyetra System Tray Launcher.

Audio View Screen





Now's a good time to view the AudioView Video Tutorial. Make certain the CD-ROM is in the drive, click Online Video Tutorials, and then click 6.







Transport Control Buttons

AudioView uses the same Transport Control buttons as AudioStation's Players. For additional information on the Transport Controls, refer to the "AudioStation Controls" chapter, earlier in this User's Guide.



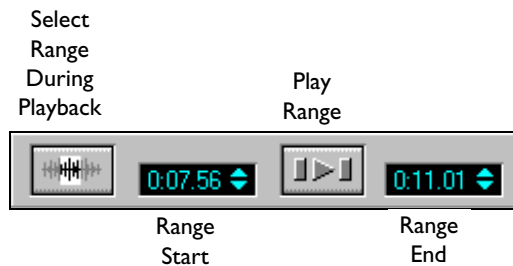
You can advance to either the beginning or end of a file by double-clicking the Rewind or Fast Forward buttons.

Keyboard Shortcut Keys for AudioView

Transport Control	Keyboard Shortcut	Action It Performs
	Spacebar	Play
	Enter	Stop
	<	Rewind
	>	Fast Forward
	P	Pause
	R	Record

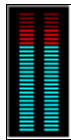
Range Controls

The Range Controls are located along the top of the AudioView screen.



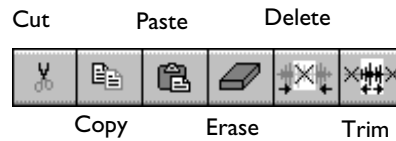
Many of AudioView's functions require that you select a range of data. The Selected Range is defined by its Start Time and End Time. The Range Start and Range End numerals in the Range Controls area show the exact beginning and end point of the selected range. You can adjust these boundaries within 1/100th of a second.

VU Meter



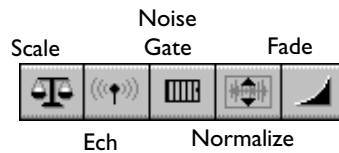
The VU Meter indicates signal (volume) levels during recording and playback to help you determine the best signal level.

Edit Buttons



The Edit buttons, located just beneath the Transport Controls, provide quick access to the more frequently used Edit functions: Cut, Copy, Paste, Erase, Delete, and Trim.

Transforms Buttons



The Transforms Buttons provide quick access to the more frequently used Transform functions: Scale, Echo, Noise Gate, Normalize, and Fade.

Undo

Undo restores the file to the state it was in before the most recent Edit or Transform operation.



You can use Undo to restore a file if you've accidentally chosen New or recorded over it — as long as you haven't saved the new material.

Zoom Buttons

With the zoom buttons you can see how samples form wave shapes and even see individual samples.

Zoom In



This button provides a magnified view of a selected range.

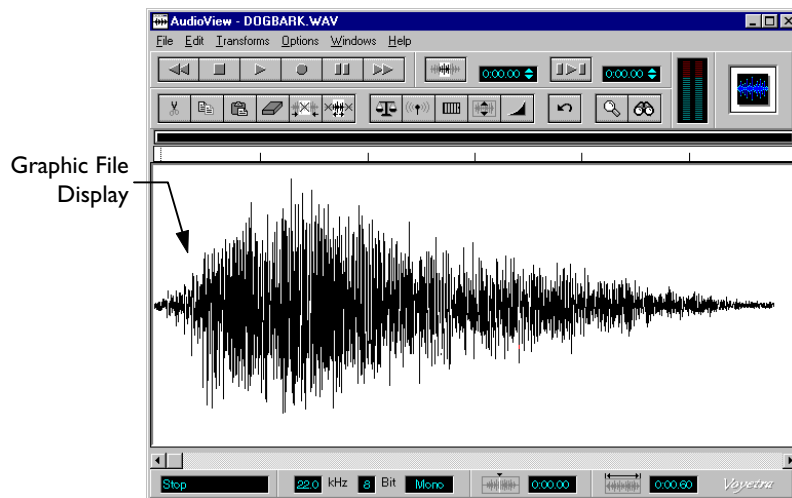
Zoom Out



This button returns to the previous zoom level.

Understanding the Graphic File Display

The main section of the AudioView screen is the Graphic File Display.

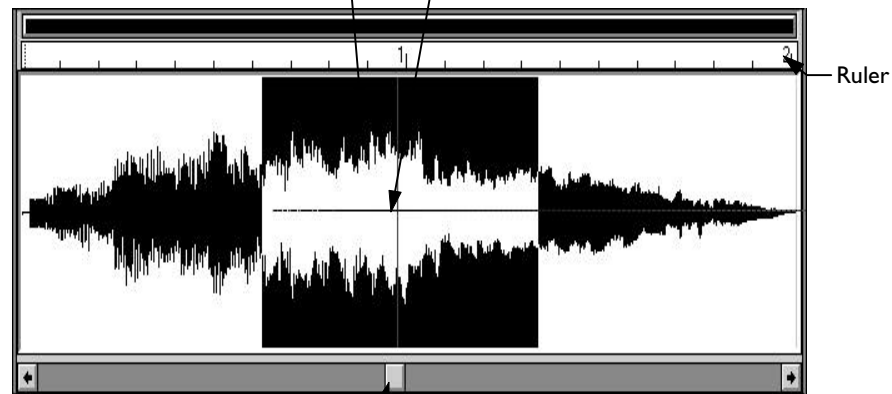


One of the great advantages of editing with AudioView is the ability to see sound displayed graphically on the screen. You can see the entire file or you can zoom in on any part of it — so closely, in fact, that you can actually see each of the thousands of individual samples that make up a file.

The Graphic File Display shows you two characteristics of the sound in the file: *time* and *amplitude*.

All of AudioView's edit functions and most of the transforms require that you specify a section or *range* of the file that you wish to edit. When a range is selected, it appears in reverse video on the Graphic File Display.

The **Play Position Marker** is a vertical line that displays the point in the file where playback will begin. During playback, it moves from left to right across the Graphic File Display.



The **scroll bar** along the bottom of the Graphic File Display moves the Play Position marker forward or backward.

Time

The horizontal dimension of the display represents time, moving from left to right. A ruler just above the display, marked in seconds, displays time. For longer files, this ruler is marked in minutes.

Amplitude

The vertical dimension of the Graphic File Display shows the amplitude of each sample in the file. Amplitude is a measure of the strength of the signal — how much it departs from zero. The amplitude of a single sample can be any of 256 possible values: It can be positive (from 1 to 127), zero or negative (from -1 to -128). Many samples are strung together to represent sound waves. Positive amplitudes form the peaks of the waves; negative amplitudes represent the troughs.

The horizontal axis along the center of the Graphic File Display represents an amplitude of zero. Each sample extends upward or downward from this line. Usually, the samples are drawn so closely together that they form a solid mass with jagged edges. The wider this mass is from top to bottom, the greater the overall amplitude of the samples.

Refer to “Using the Zoom Buttons” later in this chapter for information on viewing different levels of magnification in the Graphic File Display.

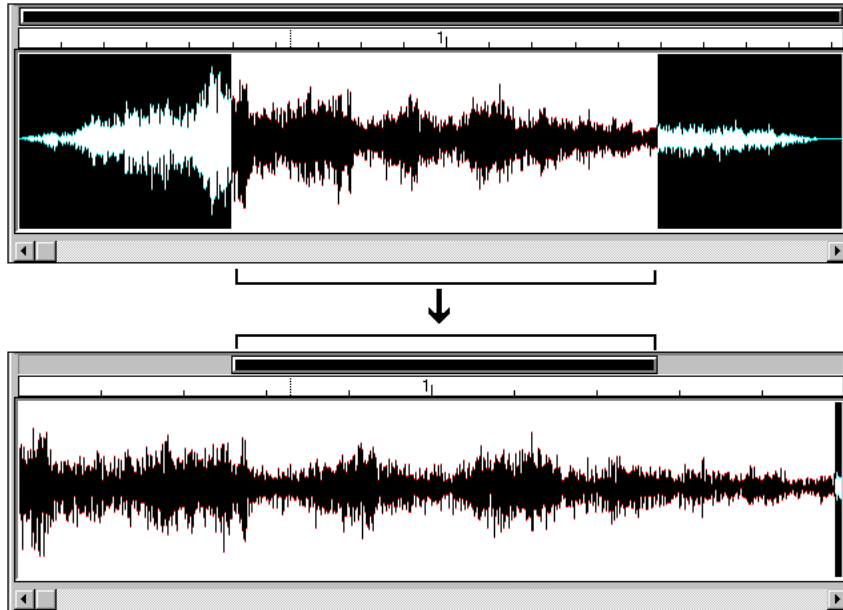
Amplitude vs. Volume

Amplitude — corresponds to, but is not exactly the same as “volume” or “loudness.” Amplitude is a measurement, expressed as a number.

Volume or loudness — is a result — it’s what the amplifier, speakers and other electronic equipment do with the amplitude.

Amplitude can be expressed as a negative number; audible volume cannot. No sound can be “less loud” than zero. Amplitude, on the other hand, can be considerably less than zero (minus 126 for example), and still be quite strong; (126 of a possible 128 steps away from zero). With its absolute value of 126, this negative amplitude, when amplified, will result in a relatively loud sound.

Overview Bar



The Overview Bar is a black bar which helps you keep track of your location within a large audio file. When you Zoom In on a section of an audio file, the Overview changes size to reflect the size and position of the zoomed range within the entire audio file.

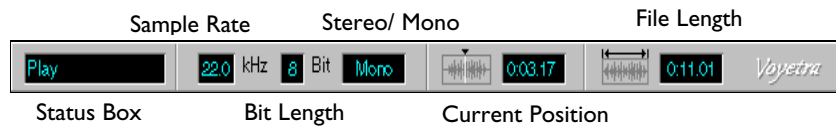


Refer to the section on “Using the Zoom Buttons” for more information about zooming in on a file.

To Toggle the Overview Off:

- Choose Overview from the Options menu.

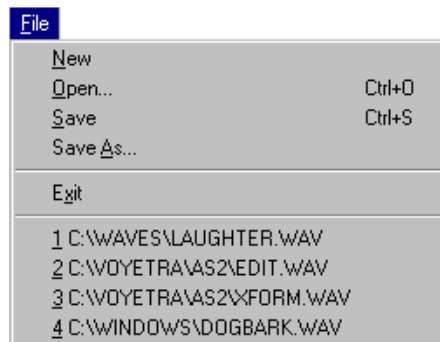
Status Area



The Status Area located at the bottom of the screen displays information about the status of AudioView and the current file.

Status Box	Displays the current status of the program (for example, Stop, Play, Record, Drawing) or the current Transform or Edit control (such as Normalize, Find Peak, Echo, Cut, etc.).
Sample Rate (kHz)	Is the sample rate. The higher the sample rate, the better the resolution.
Bit Length	Indicates if the audio file is 8- or 16-bit. Note that 12-bit audio files will be displayed as 16 bit.
# of Channels	Indicates whether the current file is stereo or mono.
Current position	Displays the current play position during recording and playback, in minutes:seconds.hundredths of a second.
File length	Displays the total length of the current file in minutes:seconds.hundredths of a second.

File Menu



New Creates a new, empty file based on the settings in the Setup window.

- It is not necessary to choose New before recording.

When you record, AudioView always replaces the currently loaded file with newly recorded material.

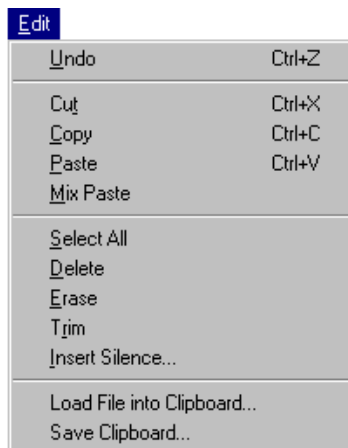
- Choosing New does not erase the contents of the Clipboard.

Open Presents a dialog box from which you can select the file you want to load.

- To locate a file with a specific file extension, choose VOC or WAV from the drop-down list at the lower left. The default is WAV format which is used by most Windows applications.
- To hear a sample of a file, click on the filename to highlight it then click on the Audition button. To stop Audition playback, click on any other file.
- To hear sample playback automatically—without clicking the Audition button—activate Auto Audition from the Options menu.

-
- To load the highlighted file, click OK.
- | | |
|------------------------|---|
| Save | Saves the current file to disk. If the file already has a name, it will be saved with that name. Otherwise, the Save As... dialog box displays. |
| Save As... | Presents the Save As... dialog box, which lets you enter a new name for the file you want to save. After entering the desired name for the file, click OK to save it. |
| Exit | Closes AudioView and returns to Windows. |
| 1/2/3/4
(File List) | The bottom portion of AudioView's File menu lists the four audio files that you have opened or saved most recently. To open a file in this list, click on its entry or type its number. |

Edit Menu



For quick access to many of the functions on the Edit Menu, use AudioView's on-screen Edit buttons.

Undo	Reverses the effect of the last command.
Cut	Removes the selected portion and places it on the Clipboard.
Copy	Copies the selected portion to the Clipboard, without removing the selected data.
Paste	Pastes the data from the Clipboard into the currently loaded file, starting at the beginning of the selected range.
Mix Paste	Combines the data from the Clipboard with the data in the currently loaded file.
Select All	Selects the entire file.
Delete	Deletes the selected portion of the WAV file, but does not place any data on the Clipboard.
Erase	Cuts the selected area, leaving silence in its place, and places the data on the Clipboard.
Trim	Deletes all the data that is not currently selected.
Insert Silence	Inserts the selected amount of silence into the file.
Load File into Clipboard	Opens a dialog box from which you can load a file directly to the Clipboard.
Save Clipboard	Opens a dialog box from which you can save the data to the Clipboard as a file.



If you want to cut-and-paste between different files, you can run several instances of AudioView simultaneously.

Transforms Menu

With AudioView, you can add digital effects (transforms) to your entire file or a selected range of the file.



- | | |
|-----------|---|
| Normalize | Modifies the file's amplitude and improves its signal-to-noise ratio. This can be helpful if a file has been recorded at too low a level. |
| Find Peak | Locates unwanted spikes so that they can be Scaled or Deleted. |
| Scale | Adjusts the amplitude of a selected range by a Scale Factor that you select. Scale is very useful for balancing volumes when cutting and pasting between different files. |

Fade	Creates a smooth “fade in” or “fade out” on the selected range.
Echo	Lets you add custom effects such as reverb, repeats, resonance, and so on. The Echo dialog box has two sliders to control Time and Depth, and four Preset buttons.
Noise Gate	Finds every sample in the selected range with an amplitude below a specified amount and replaces it with silence. The procedure removes background noise from the quieter parts of the selected range.
Invert Samples	Changes positive amplitude values to negative and vice-versa.
DC Offset	Centers the display for an audio file that was recorded with a DC offset. Matches offsets of audio files after cutting-and-pasting material from different files.
Reverse	Reverse makes the selected range play backwards. Use the Reverse transform as a special effect or to create an unusual transition between music and narration.
Crossfade	A single command that combines three tasks: <ul style="list-style-type: none">• A Fade Out on the current file.• A Fade In on the data on the Clipboard.• A Mix Paste of the two.
Halve Sample Rate	Reduces the sample rate of an audio file by half. This can make the file compatible with sound cards that cannot support higher sample rates.

16 - 8 bits	Converts a 16-bit audio file to the 8-bit format, allowing a sound card that supports only the 8-bit file format to play the file.
Stereo - Mono	Combines the right and left channels of an 8-bit or 16-bit stereo file into one channel, creating a mono file. This transform reduces the file size by half and permits it to play on sound cards that do not support stereo.
WAV -> VOC or VOC -> WAV	Converts 8-bit PCM WAV files to the Sound Blaster VOC format, or VOC files to 8-bit PCM WAV format.
Change Speed	Changes the sample rate of a file to a new rate which you select. This transform audibly changes the speed and pitch of the sound, much like playing a record or tape player at the wrong speed. You can choose one of the most commonly used speeds from the New Sample Rate list or enter any speed your sound card supports.

Options Menu



The Options Menu lets you customize AudioView.

A check mark appears next to an Option when it is enabled.

Auto Audition	Lets you quickly audition a file from the Open or Save As... dialog box. When Auto Audition is active, clicking on a filename in the list box starts playback of that file. The file plays until you click on another file name or control or until the end of the file is reached.
Auto Rewind	When Auto Rewind is enabled, AudioView automatically rewinds to the beginning of the file any time it stops playing. When Auto Rewind is unchecked, the play position marker remains at the point where it has been stopped.
No Wave	When enabled, the Graphic File Display disappears and AudioView's window shrinks vertically. Use No Wave to eliminate waiting for screen re-draws, to reduce system overhead when playing back files at high data rates, or to make room on your desktop for other applications.
Ruler	Toggles the ruler above the Graphic File Display on or off. The Ruler measures time in units of seconds, tenths of a second or hundredths of a second, depending on how much of the file is displayed.

Overview	Toggles the Overview display on or off. The Overview provides a visual indication of that section's location within the entire file.
Playback VU, Record VU	Toggles the VU meter on or off. The playback VU meter monitors signal levels during playback of an audio file. The record VU meter monitors incoming signal levels during recording. These meters are disabled during recording or playback of compressed files.
Zoom In	Provides a magnified view of a selected range. You can also use the Zoom In button for easier access to this function.
Zoom Out	Returns to the previous zoom level. You can also use the Zoom Out button for easier access to this function.
View Entire	Returns immediately to a full view of the audio file after having zoomed in multiple levels.



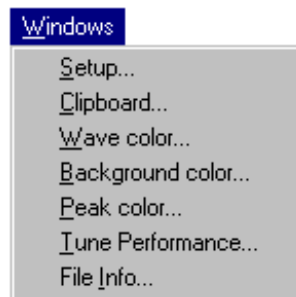
If you experience problems playing or recording files at high data rates, try disabling the VU meters to reduce system overhead — or you can also enable “No Wave.”

Enabling and Disabling Options

To Turn On/Off Any of the Items in the Options Menu:

- From the Options Menu, select the item to toggle it on/off. When the check mark no longer appears next to the entry, it means that the feature has been disabled.

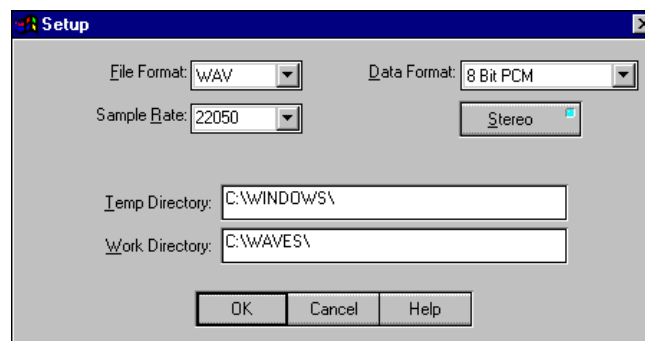
Windows Menu



The Windows Menu lets you set different parameters for recording and playing back your digital audio files.

Setup

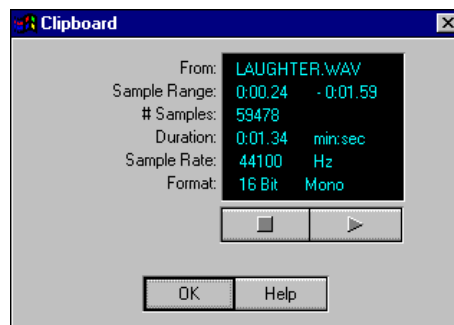
Displays the Setup dialog box where you can choose settings for a file prior to recording.



Setup Dialog Box

File Format	Lets you select WAV or VOC file format. The VOC format was originally developed by Creative Labs for their Sound Blaster™ products, and it is widely supported by other manufacturers. WAV format was developed by Microsoft and is used with Windows® applications.
Data Format	AudioView automatically detects and lists all of the data format/compression schemes supported by your sound card.
Sample Rate	Allows you to select a sample rate in Hz.
Stereo	Toggles Stereo on and off. (This option appears only if the sound card supports stereo.)
Temp Directory	The directory that AudioView uses for temporary storage when you record, edit or transform digital audio data.
Work Directory	This is the default directory that AudioView will use when opening or saving files.

Clipboard



The Clipboard displays information about the contents of AudioView's Clipboard.

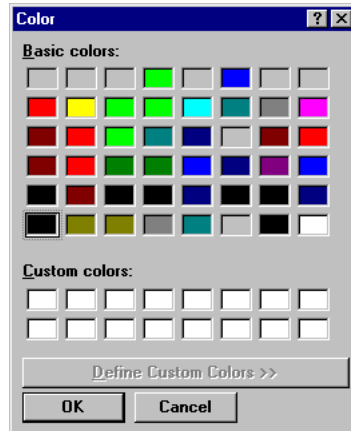
It also lets you audition the contents of AudioView's Clipboard.

From	The source file from which the data was Cut or Copied or the name of the file loaded into the Clipboard.
Sample Range	The starting and ending sample numbers, referenced to the source file from which the data was Cut or Copied.
# Samples	The total number of samples in the Clipboard data.
Duration	The duration of the data in the Clipboard in minutes:seconds.hundredths of a second.
Sample Rate	The sample rate of the data in the Clipboard.
Format	The bit length and mono/stereo setting of the data in the Clipboard.
Transport buttons	Plays only the material currently in the AudioView Clipboard. Use these buttons to check the contents of the Clipboard before you paste them into a file.
OK	Closes the Clipboard window and returns you to the main screen.



Data pasted from the Clipboard will play back at the Sample Rate of the file it is pasted into.

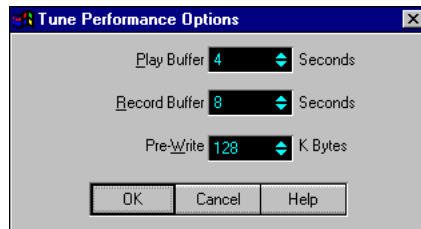
Wave Color, Background Color, Peak Color



These commands — Wave Color, Background Color, and Peak Color — allow you to customize the Graphic File Display.

Use the Color dialog box to select colors for the waves, the background and the peaks of the waves.

Tune Performance



Tune Performance lets you optimize AudioView's performance or fix problems you might encounter during recording or playback, especially with high data rates.

Play Buffer When you play digital audio, AudioView sets aside a buffer, a portion of your system's RAM, to momentarily hold data and prevent bottlenecks.

The capacity of the Play Buffer is expressed in seconds; the default is 4 seconds. If you want to change the size of the buffer, try increasing its size in steps of about 2 seconds.

Record Buffer Sets the amount of time that AudioView sets aside in your system's RAM, when recording a digital audio file, to momentarily hold data and prevent bottlenecks.

Record Buffer works in the same manner as the Play buffer. The record buffer's default is 8 seconds. If you have trouble recording, try increasing the size.

The message "Unable to allocate enough memory" that you've requested more memory than your computer can provide. If this occurs, decrease the size of the Record Buffer.

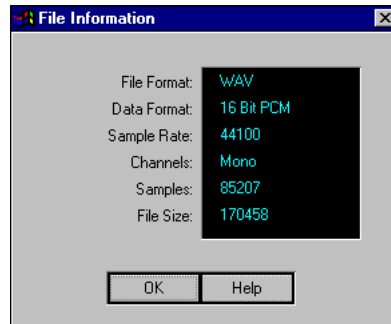
Pre-Write Sets the amount of memory that the system uses to prepare for recording.

AudioView creates or pre-writes an unfragmented file on the hard drive prior to recording. The Pre-Write setting establishes the size of this file. The default is 128K. If increasing the Record Buffer hasn't solved your data rate problem, set a Pre-Write value slightly larger than size of the file you'll be recording (in Kilobytes).



Normally, you should change settings in the Tune Performance dialog box only if you are experiencing problems. Try other troubleshooting options before changing any of the default settings.

File Info



File Info displays a summary of information about the current file including:

- File Format
- Data Format
- Sample Rate
- Channels (mono/stereo)
- Number of Samples in the file
- Total File Size

File Format	Displays the format of the loaded file.
Data Format	Displays the Data Format of the loaded file.
Sample Rate	Displays the Sample Rate of the loaded file.
Channels	Displays whether the loaded file is in stereo or mono.
Samples	Displays the total amount of sample in the loaded file.
File Size	Displays the size of the loaded file.

Digital Audio Data Compression

Digital audio compression reduces the size and storage requirements of digital audio files. PC sound systems can support digital audio data compression in hardware, through software products like Microsoft's Audio Compression Manager (ACM), or both. AudioView searches your system for many of the most widely supported compression schemes and supports any that it finds.

If you are recording a file to be played back on another system or with a different software application, you may not want to use compression. Keep these considerations in mind as you decide whether or not to use data compression:

- Data compression reduces file size partly by eliminating some data, which inevitably reduces audio quality. In general, compression is most appropriate for speech or other situations where high fidelity is not essential.
- Compressed files can be played back only on systems that support the same compression scheme.
- Not all software applications support playback of compressed files (even if the sound hardware does).
- AudioView cannot perform any edit or transform functions on compressed files—that is, anything other than 8- or 16-bit PCM (Pulse Code Modulation).
- AudioView cannot display the waveform or VU Meters when recording or playing compressed files. If you have trouble getting a usable level when trying to record a compressed file, switch to 8- or 16-bit PCM in the Setup window, use the VU meters to adjust your record level as needed, then switch back to the compressed format and record your file.
- Don't confuse digital audio data compression with other common methods of compressing computer files:
 - Archiving utilities are used for storing inactive files or sending files with a modem. Files cannot be used while they are in the compressed state.

-
- Hard disk compression utilities create a single, large file on your hard disk which the operating system treats as a new disk drive. Compression and de-compression occur automatically in a process invisible to the user.

To Use a Different Type of Compression:

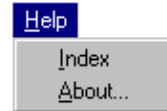
1. Select Setup from the Windows menu.
2. Click the arrow on the drop-down box for Data Format and select the format you want.
3. Click OK to return to AudioView's main screen.
4. Record a file and then save it. The file will be saved in the data format you selected.



You cannot change the compression of a file that has already been recorded!

Help Menu

The Help Menu activates the Online Help system and provides information about the revision number and creation date of AudioView.



- Click Index to activate the Online Help system.
- Click About to receive information about the revision number and creation date.

Playing a File

Auditioning a Digital Audio File

If you would like to hear a file before opening it, you can Audition it.

To Audition a File:

1. Select Open from the File Menu.
2. Navigate to the directory where your digital audio files are located.
3. Click a filename to highlight it.
4. Click the Audition button.
5. To stop Audition playback, click a different file name.



If Auto Audition is enabled in the Options menu, you will automatically hear each file as you select it.

Opening and Playing a Digital Audio File

To Open and Play a File in AudioView:

1. Choose Open from AudioView's File menu.
2. Navigate to the directory where your digital audio files are located.
3. To open a file, double-click on its filename or highlight the desired filename and choose OK. After the file loads, a graphic representation of the audio file fills the Graphic File Display and the Status indicators along the bottom of the window display information about the file.
4. To play a file, click the Play button in the Transport Controls area. The Play Position Marker moves from left to right as the file plays.



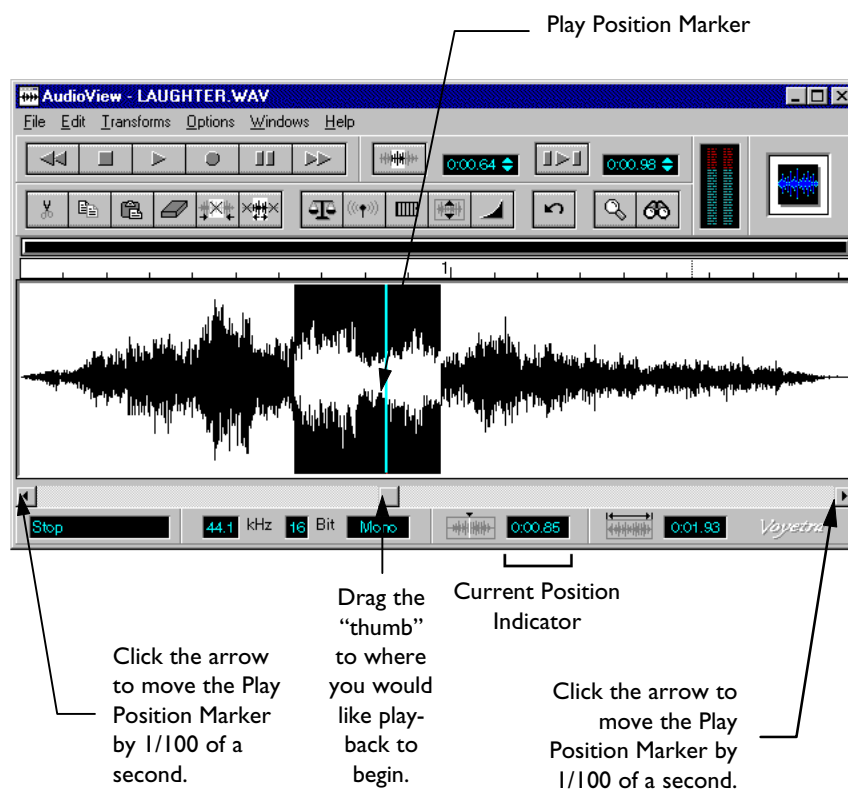
- *To halt playback momentarily, click on the Pause button. Click on the Pause button again to resume playing.*
- *In Windows 95, you can load a file by dragging it directly into AudioView's Graphic File Display.*

Choosing a Starting Point for Playback

Playback can begin at any point in the file. To choose a different starting point, move the Play Position Marker to the desired position before clicking the Play button. The Current Position Indicator at the bottom of the screen always shows the exact location of the Play Position Marker in minutes, seconds and hundredths of a second. Playback always begins from that point.

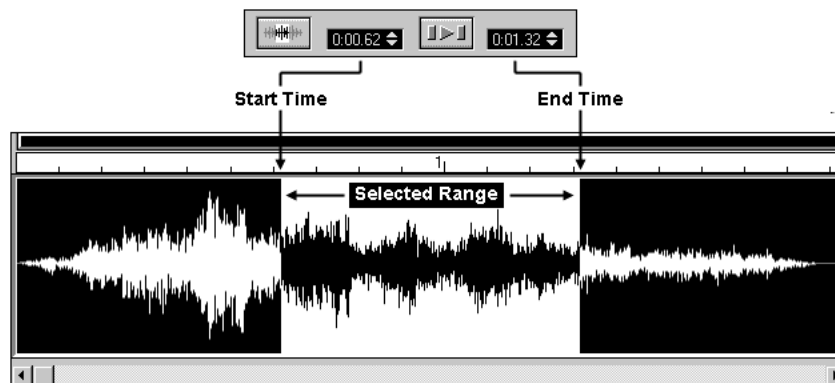
To Set the Play Position Marker:

- With your mouse, drag the thumb, the movable square box on the scroll bar, to approximately the point where you would like playback to begin.



Selecting a Range

All of AudioView's Edit functions require that you select the section or *range* of the file that you wish to edit. If you've ever used a word processor, this concept will be familiar to you. The Range controls always display the start time and the end time of the selected range. The selected range appears in reverse video on the Graphic File Display.



There are several ways to select a range. You can drag your mouse across part of the Graphic File Display, or select a passage on-the-fly as you listen. The on-the-fly method is useful when you need to select an area whose boundaries are not apparent in the Graphic File Display.



A good way to select a precise range is first to make a rough selection, then fine-tune it. The Range Start and Range End numericals in the Range Controls area show the exact beginning and end point of the selected range, and allow you to adjust its boundaries within 1/100th of a second.

The Play Range button allows you to listen to the selected range so that you can verify your selection.

Moving the Play Position Marker with the Scroll Bar

- To scroll through the audio file, drag the “thumb” (the movable square on the scroll bar) marker to the left or right.
- To adjust the Current Play Position by one hundredth of a second, click the right or left arrows at the ends of the Scroll Bar.
- To adjust the Current Play Position by a tenth of a second, click on the Scroll Bar anywhere between the thumb and the arrows at either end.

Selecting a Range

To Select a Range with the Mouse:

1. Click on the desired start point (Range Start) in the Graphic File Display and, while holding the mouse button, drag it to the right..
2. At the desired end point (Range End), release the mouse button.

To Select the Entire Range

- From the Edit menu, choose Select All.

~or~

- Double-click anywhere in the Graphic File Display. The entire WAV file displays in reverse video.

To Select a Range as You Listen:

1. Play the file, listening for the position you have chosen as the start point.
2. When you hear the section you want, click and hold down the Select Range During Playback button with your mouse.
3. Release the mouse button at the end of the desired section.
4. Click the Stop button.
5. Click the Play Range button to play the selected range.

To Make a Rough Adjustment to the Selected Range:

1. Place the mouse cursor at the desired location in the Graphic File Display.
2. Press the Shift key and click. The Range Start or Range End point, whichever is nearer, will jump to the mouse cursor. The other boundary will not be affected.

To Make a Precise Adjustment to the Selected Range:

- Click anywhere on the appropriate Range Start or Range End numerical (the displays to the left and right of the Play Range button) and drag up or down to reach the desired Start or End time.

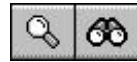
~or~

- Click on the upper or lower half of the numerical to adjust the time by 1/100th of a second.



When you have selected the range you want, take note of the numbers in the Range Start and End marker boxes. If you want to select that range again, these numbers will help you do so quickly and precisely.

Zoom Buttons



The Zoom buttons provide quick access to the following menu commands.

Zoom In



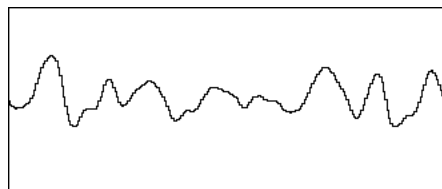
Provides a magnified view of a selected range.

Zoom Out

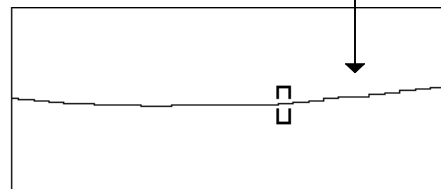


Returns to the previous zoom level. To zoom all the way out and see the entire file, double-click the Zoom Out button.

With the zoom buttons you can see how samples form wave shapes, and even see individual samples. Select a very small range, half a second or less, and zoom in. You should see a rough pattern of wave shapes. If you don't, make another small selection and zoom in again. After a few zooms, you'll see a long staircase meandering up and down. Each step represents a single sample.



Zoom In to see waves.



Zoom In further to see individual samples.

Using the Zoom Buttons

Zoom buttons allow you to easily zoom in on a selected range and zoom out again.

To See a Magnified View of the Waveform:

1. Select a range with the mouse.
2. Click the Zoom In button or choose Zoom In from the Options menu. The range you selected will be enlarged to fill the entire area of the Graphic File Display.
3. Repeat this process for increasingly higher degrees of magnification.

To Reduce the View of the Waveform:

- Click the Zoom Out button or select Zoom Out from the Options menu. Successive Zoom Out commands restore each of the views you zoomed in on, in reverse order.

To Quickly Zoom Out to See the Entire File:

- Double-click the Zoom Out button or select View Entire from the Options menu.

The following section presents a tutorial on how to use the editing features in AudioView.

Editing a File

With AudioView's editing tools you can cut, copy, paste, insert, or delete data within a file or among several files. If you want to cut and paste between different files, you can run several instances of AudioView simultaneously.

For this tutorial, use the file EDIT.WAV, which can be found in the VOYETRA\AS2 directory. This file consists of a short selection of music followed by some speech. The boundary between the music and speech portions of the file will be apparent in the Graphic File Display.

Using the Edit Functions

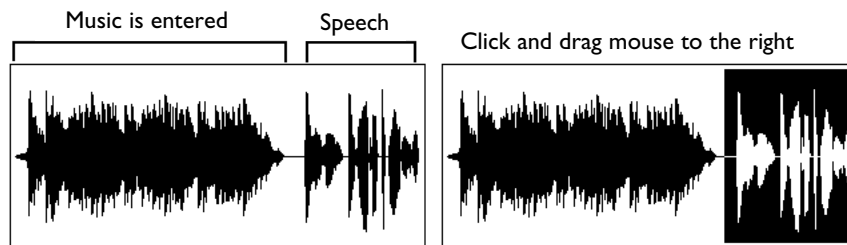
AudioView's editing functions work just like those in a word processor. You can cut, copy, paste or delete digital audio data as you would text. Think of the Start point of the selected range as the "cursor position". Data that you cut or copy remains in AudioView's Clipboard until you replace it with different audio data or close Windows altogether.



For the following tutorials, be sure to save the edited file under a new name. Otherwise you will overwrite the EDIT.WAV file.

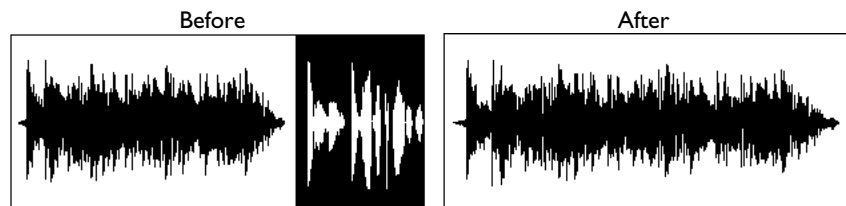
To Cut a Section of a File:

1. Select the range of the file that you wish to remove. Use the techniques described in the earlier section, “Selecting a Range” to select just the speech portion of the EDIT.WAV file.



Use your mouse to select just the speech portion of EDIT.WAV.

2. Click the Play Range button to check the accuracy of your selection.
3. Choose Cut from the Edit menu or click the Cut button from the Edit Controls. The selected range is removed from the file and copied to AudioView's Clipboard. The part of the file that remains widens to fill the display.



After you cut the speech, the music expands to fill the display.

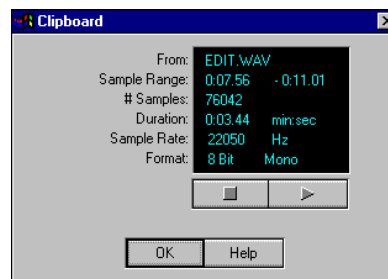
4. Play the file to check the results. You should hear the music but not the spoken words.

Checking the Contents of AudioView's Clipboard

The data that you just cut is now stored in AudioView's Clipboard so you can paste it into a digital audio file. The Clipboard window displays a summary of information about the data and has its own Play and Stop buttons.

To Check the Contents of AudioView's Clipboard:

1. Choose Clipboard from the Windows menu. A window displays information about the current contents of the Clipboard.



Clipboard Contents Dialog Box

2. Click the Clipboard's Play button. You should hear the part of the file that you just cut.
3. When you're satisfied that the Clipboard contains the correct material, click OK to close the Clipboard window.
4. Now we're going to paste the speech portion back into the file but in a different location so that it will play before the music.



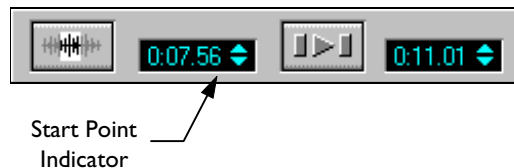
When cutting or copying data, the information is saved to AudioView's own Clipboard — not to the Windows Clipboard.

Selecting a Place to Paste

Before using the Paste command, you must designate the point at which you want the material to be inserted. The Paste command always inserts the Clipboard data at the *Start* point of the currently selected Range.



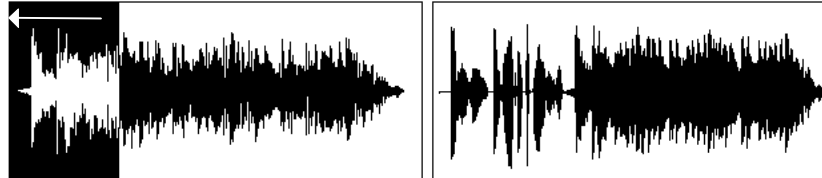
If the selected range has no width (that is, its start and end points are identical), it will not appear in the Graphic File Display. To see where the Clipboard data will be pasted, look at the Start Point Indicator to the left of the Play Range button.



To Paste the Contents of the Clipboard into a File:

1. If you haven't already done so, use the procedure, "Cutting a Section of a File" to place some data in the Clipboard.
2. Select a range and adjust its Start point to the location where you want to paste the data.
3. We want to paste the material at the very beginning of the file. Place your mouse pointer anywhere in the file and drag all the way to the *left* to place the start point at the beginning of the file. The end point of the selected range has no effect on Paste, Mix Paste or Insert Silence operations.

Click and drag the mouse to the left to select a range beginning at 0:00.00, then



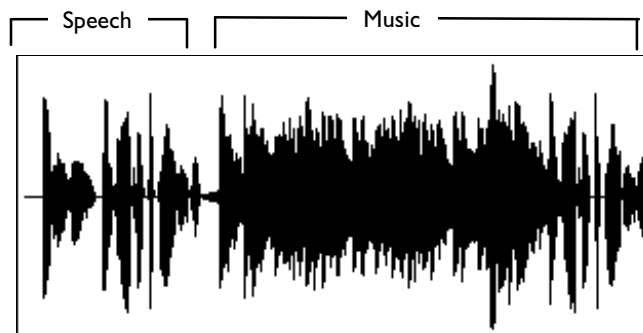
Material is pasted from the beginning of the selected range.

4. Choose Paste from the Edit menu or click the Paste button. The contents of the Clipboard will now be inserted at the chosen start point. Any data after that point will be shifted to the right.
5. Play the file to hear the result.

Using Mix Paste

Many times, in multimedia presentations, you may want to combine different elements to produce a new sound. This is easy to do with the Mix Paste command. The Mix Paste command differs from the Paste command in that it does not push existing data out of the way — instead it combines the sounds.

If you followed along with the previous section, on pasting the contents of the Clipboard into a file, your file should now have the speech before the music.



Next we'll combine the speech and music with the Mix Paste command.

To Use Mix Paste:

1. Select the range that includes only the speech.
2. Using either Cut from the Edit menu or the Edit Buttons, cut this section. This copies it into the Clipboard. Notice that the remaining portion of the file expands to fill in the display.
3. Select a place to paste the data you just cut. For this example, paste the data about two seconds into the file; that way we can hear a short musical introduction before the speech begins. This can be achieved by setting the start time with the Range Start Marker, to two seconds. For more information on selecting a range, see the section earlier in this chapter, "Selecting a Range."



4. Select Mix Paste from the Edit menu. The speech is now combined with the music.
5. Play it to hear the effect. You should hear the music begin immediately and the speech begin two seconds into the file.



*You can see the difference in the waveform when the speech is added.
Mix Paste will lengthen the file if necessary.*



If you want to create a new file from the Clipboard's contents, choose New from the Files menu before pasting the data.

This ends the Editing Tutorial section.
When asked if you want to save the changes to
EDIT.WAV, click "No."



If you accidentally save the EDIT.WAV or the XFORM.WAV files with changes, you can open the original (unedited) files directly from the CD-ROM.

Deleting a Section of a File



There are two ways to delete a section of a file. One way is by using the Delete command on the Edit menu. The other is by clicking the Delete button in the Edit button bar.

Delete differs from Cut in that no information is placed on the Clipboard.

To Delete a Section of a File:

1. Select the range to be deleted.
2. Choose Delete from the Edit menu or click the Delete button.



If you need to Undo the delete, click the Undo button.

Erasing a Section of a File

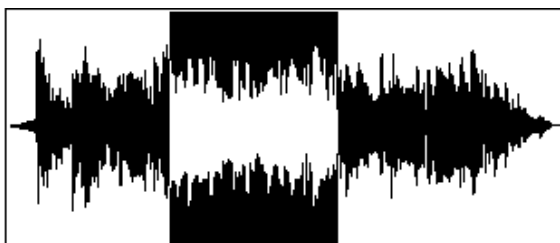


Erase cuts the selected range, places it into the Clipboard and replaces it in the file with silence. You can either use the Erase command from the Edit menu or the Erase button.

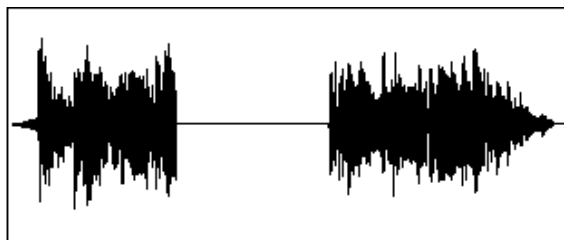
To Erase a Section of a File:

1. Select a range to be erased.
2. Choose Erase from the Edit menu or click the Erase button.

Before erasing



After erasing

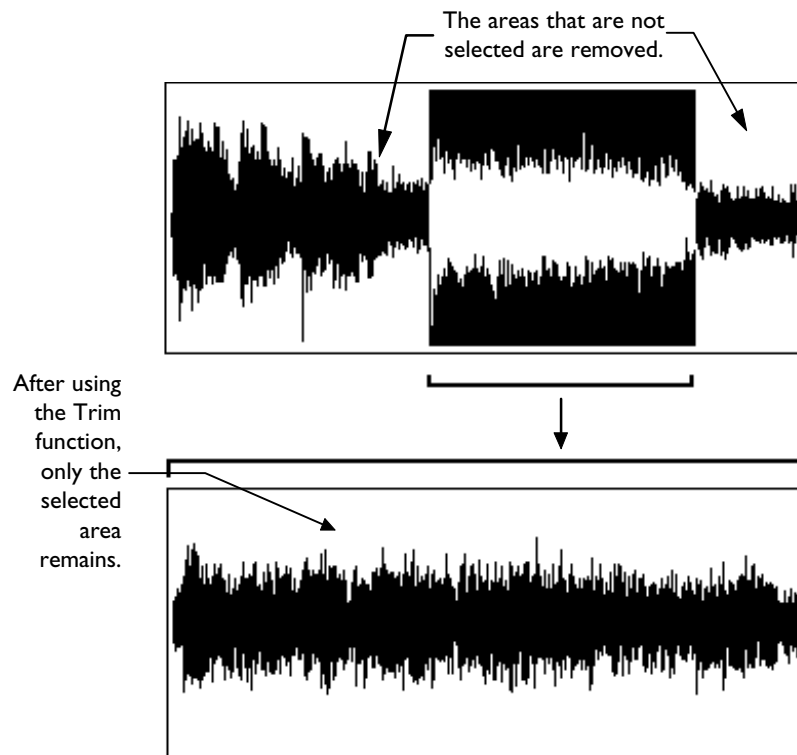


Trimming a File

The Trim function provides an easy way to consolidate part of a file. This can be useful if there is silence before and after the speech or music portion of a file, or if you want to extract only a small part of a file.



The Trim function can be accessed either by clicking the Trim command on the Edit menu or the Trim button on the Edit button bar.



To Trim a Portion of a File:

1. Select the area you want to keep. The areas outside the selected portion will be eliminated.
2. Select Trim from the Edit menu or click the Trim button.



When using the Trim function, no data is placed into the Clipboard. If you wish to undo Trim, click the Undo button.

Undo



The Undo command allows you to experiment freely with edits, transforms and special effects knowing that—as long as you have not saved your file in the interim—you can restore the file to its previous state. Using the Undo command is easy!

To Undo the Most Recent Change:

1. Click the Undo button or select Undo from the Edit menu.
2. Play the file or the selected range to verify the results.



You can only Undo the most recent edit or transform — so whenever you edit your file, play it back to check the results before you do any further editing.

Inserting an Interval of Silence in a File

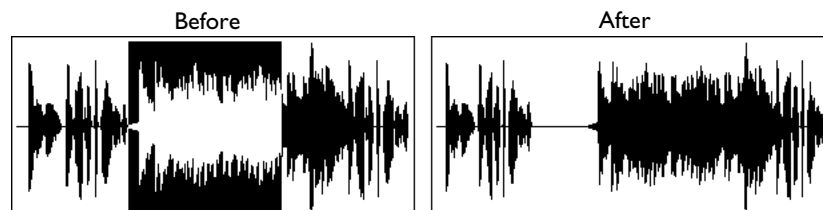
If You Want to Add an Interval of Silence into a File:

1. Select a range and adjust its Start point to the desired location.
2. From the Edit menu, choose Insert Silence. A dialog box appears with a slider at the left.



The numerical, above the slider, displays the length of the interval you are about to insert. You can use either the numerical or the slider to adjust the value in the box.

3. Enter a time interval in the dialog box.
4. Click OK. A silent interval of the length you specified will be inserted at the designated Start point. Any data after that point will be shifted to the right.



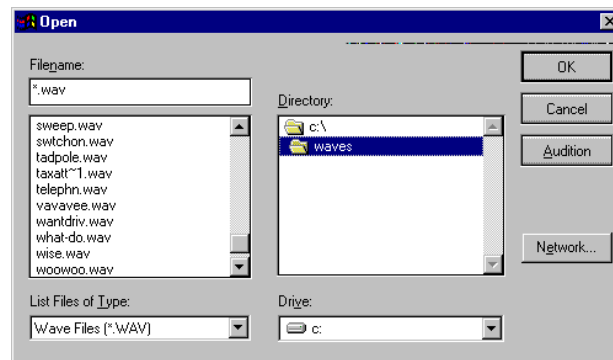
Silence is inserted at the beginning of the selected range.

Loading a File into the Clipboard

With this menu item you can load a file directly into the Clipboard. This is useful when you want to Mix Paste or append a file.

To Load a File into the Clipboard:

1. Select Load File into Clipboard from the Edit Menu. A dialog box displays.



2. Navigate to the directory where the file you want to load is located.
3. Click a file to highlight it.
4. Click OK. The file is now loaded into the Clipboard.



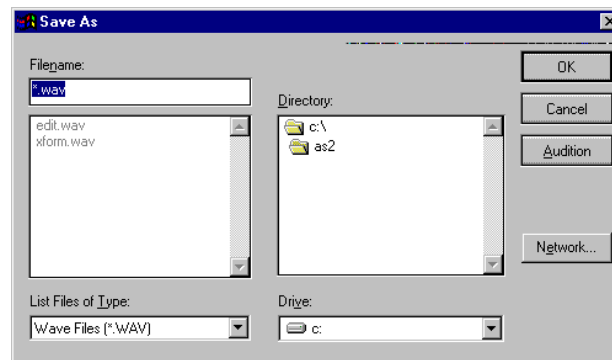
Remember, when cutting or copying data, the information is saved to AudioView's own Clipboard — not to the Windows Clipboard!

Saving a File from the Clipboard

If you have information that you have placed in the Clipboard, and you now wish to save it as a file, the Save Clipboard command makes it easy to do!

To Save Data from the Clipboard as a File:

1. Select Save Clipboard from the Edit menu. A dialog box appears.

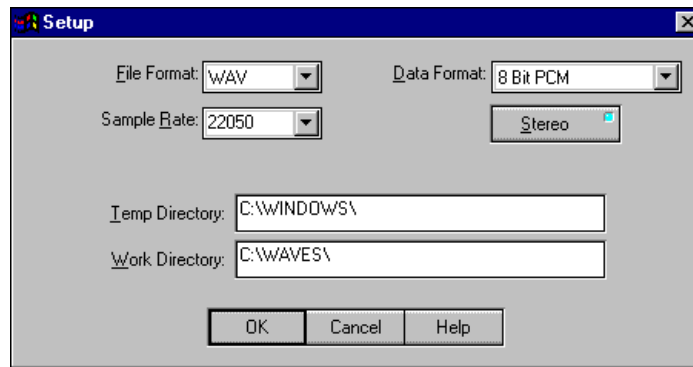


2. Navigate to the directory where you want to save the file.
3. In the Filename box, type a name for the file.
4. Click OK.

Recording

Preparing Your System for Recording

Your system must be set up correctly before you can record. You might want to take the following steps to familiarize yourself with AudioView's setup procedures or to confirm the settings. Once setup is completed, you only need to repeat this procedure to change settings.



Use the Setup dialog box to configure settings before recording.

To Prepare for Recording:

1. Make certain the audio source (microphone, CD drive, tape deck, etc.) is ready for recording.
2. Use the Audio Mixer to select an input source and set the recording volume level. Refer to the "Audio Mixer" chapter for more information about selecting a source and setting the volume.
3. From the AudioView Windows menu, choose Setup.
4. Select the desired File Format (WAV or VOC).
5. If you have selected WAV as the File Format, select the desired data format from the Data Format combo box. Some systems support one or more types of data compression; if so, they'll be listed here.

-
6. Choose a Sample Rate from the Sample Rate combo box. You can choose a sample rate from the list. Higher sample rates give you better audio quality but also create larger files.
 7. Click the Stereo button to select Mono or Stereo. The blue indicator on the Stereo button lights when stereo is enabled.
 8. Check the entries in the Temp Directory and Work Directory. Make sure that they are valid directories and that there is enough free disk space to accommodate the file you plan to record.
 9. Choose OK to return to AudioView's main window.

Adjusting the Signal Level

There are several ways to adjust the level of the incoming signal during recording.

- Use the Audio Mixer to adjust the level of the incoming signal.
- You might be able to adjust the output volume of the device, such as a tape player, that is generating the sound.
- If you are using a microphone, you can speak more softly or loudly or move closer or further away.
- Be sure to check the VU meters from time to time and to re-adjust volume settings as needed.

You'll notice that as you record, the VU Meters blink in response. This is a good time to adjust the level of the incoming signal to get the best audio quality. The objective is to record at the highest level possible without distorting the sound:

- If the red indicators light most of the time, the incoming signal is too loud and the recording will probably sound distorted. Reduce the volume of the incoming signal.
- If the blue indicators blink consistently and the red ones blink just occasionally, the record level is about right.

VU Meters

The VU Meters indicate signal levels during recording and playback to help you determine the best signal level. Although their appearance doesn't change, the VU meter perform slightly different functions depending on what AudioView is doing at the time:



- If you're recording, they display the levels of the incoming signals.
- During playback, they display the levels of the recorded material.
- If you are recording or playing stereo, AudioView will display separate readings for the left and right channels.
- If you are recording or playing mono, both meters show identical readings.

To Toggle the VU Meter On or Off:

- Choose Record VU or Playback VU from the Options menu.



If you receive the message, "Disk could not keep up with digital audio file," try turning the VU Meters off.

To Ensure You Are Recording at the Best Volume:

1. Click the Record button to place your application in Record Standby mode.
2. Click the Play button to start recording.
3. Watch the VU meters as you speak into the microphone or start your sound source.
4. Adjust the Mixer's record level slider and/or your speaking volume so that the red lights just blink occasionally at peak volumes.

To Record a File:

1. If you are recording from a CD drive, CD player, or tape deck, cue up the material as needed.
2. Click the Record button in the Transport Controls area. The blinking red light indicates that AudioView is in Record Standby mode and the word "Standby" appears in the Status Box at the lower left.
3. Click the Play button to start recording. The red light remains lit and the word "Recording" appears in the Status Box at the lower left.
4. Speak into the microphone or play the material you prepared.
5. Click the Stop button to stop recording.
6. Click the Play button to hear your recording.



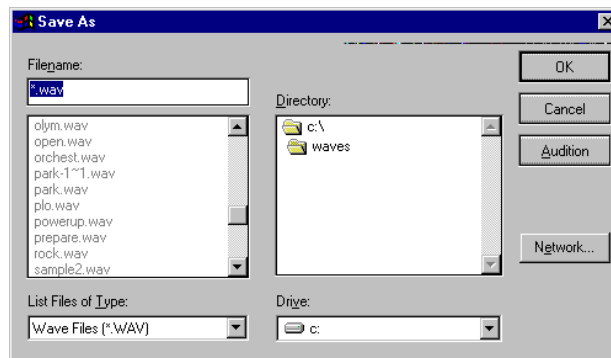
To temporarily halt recording without losing material already recorded, click the Pause button. Click the Pause button again to resume recording..

Saving Files

So that you don't lose the work you've been doing, it's always advisable to save frequently.

To Save a File:

1. Choose Save from the File menu. If the file is new and has never been saved before, the Save As... dialog box opens.



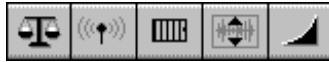
Save As Dialog Box

2. Select a file type from the List Files of Type box.
3. Type a file name in the dialog box.
4. Click OK.

Modifying Files with Transforms

AudioView includes many transforms which enable you to modify your digital audio recordings. These transforms can be accessed from the Transforms menu, although a button bar containing five of the most commonly-used transforms appears on the AudioView screen.

You can use transforms to fix certain kinds of problems and to add interesting effects.



Use the Transforms buttons for quick access to some of the more commonly-used Transforms.

Usually, you begin by selecting a range. However, you don't always need to do this, some transforms affect the entire file.

Next, you select the transform. Some transforms execute automatically, others present a dialog box in which you make choices or enter values.

**The next AudioView
tutorial begins here.**

Using Transforms to Fix Problems

For this part of the tutorial, you will need to open the XFORM.WAV file which was copied to your hard drive by the installation program. We are going to use some of AudioView's Transforms to fix the file. First, we'll use Reverse to modify the file so that it plays forward.



If you still have the EDIT.WAV file opened from the Editing Tutorial section, choose "No" in the prompt box that asks if you want to save the changes to the EDIT.WAV file.

XFORM.WAV

When you load and play XFORM.WAV, you'll notice that it has several problems:

- The recorded sound is backward.
- The volume of the file is uneven.
- The overall volume of the file is too low.

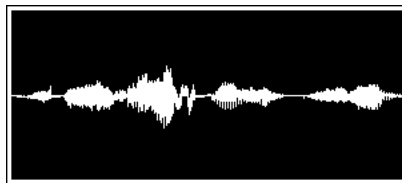
Reverse Transform

First, we'll reverse the file.

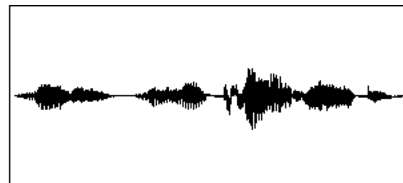
To Reverse XFORM.WAV:

1. If you haven't already done so, load XFORM.WAV and click the Play button to hear it.
2. Select the range that you want to reverse. Since we want to reverse the entire file, double-click anywhere in the Graphic File Display to select the entire file as the range, or you can choose Select All from the Edit Menu.
3. From the Transforms menu, choose Reverse. Notice the Status box at the lower left reads, "Reverse."
4. Click the Play button to hear the file. The speech will now be understandable.

Before Reverse



After Reverse



Normalize Transform



CAUTION!

The Normalize transform can make the file quite loud. If you're wearing headphones, remove them when listening to a file which has been Normalized until you're sure that the volume is at a comfortable level.

Now that XFORM.WAV no longer plays backwards, you'll notice that it has an unacceptably low amplitude. You could turn up the volume on your sound card, amplifier, or speakers to compensate, but that would also amplify the electrical noise inherent in any electrical circuitry. A better solution is to leave your volume settings as they are and increase the amplitude of the samples in the file.

The Normalize Transform does this for you, increasing the file's amplitude without elevating electrical noise. The resulting material has a better signal-to-noise ratio.

Normalize finds the highest level present in the selected range, converts that level to equal the highest level allowable by the sound card and scales the rest of the levels proportionately.



The Normalize transform can be accessed either from the Transforms menu or from the Normalize button which appears in the button bar on the AudioView screen.

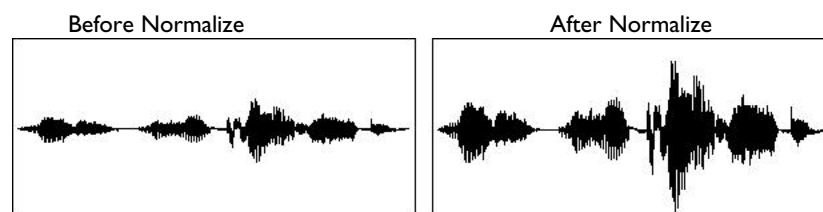


While Normalize can improve the signal-to-noise ratio during playback, it cannot remove noise that has been recorded into a file. Use the Noise Gate transform to learn reduce recorded noise.

To Normalize Sound:

1. Select the range you want to Normalize. We want to normalize the entire file so double-click anywhere in the Graphic File Display or choose Select All from the Edit Menu.
2. Select Normalize from the Transforms menu or click the Normalize button.

This transform finds the greatest amplitude in the selected range — in this case, the entire file — increases its value to the highest value allowed by the sound card, then increases the amplitude of all the other samples in the same proportion. The amplitude of the file increases overall, but its original dynamic proportions are retained.



Normalize increase amplitudes without introducing distortion.

3. Turn down the volume on your sound system and play back the file. XFORM.WAV should now sound better when played at a moderate volume.



When using the following tutorials, be sure that you save the edited file under a new name. Otherwise you will overwrite the XFORM.WAV file.

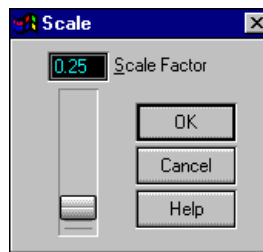
Scale Transform

One problem remains with the XFORM.WAV file — the mismatched levels between one part of the file and the other. We'll use the Scale Transform to match the levels.



The Scale transform can be accessed either from the Transforms menu or from the Scale button which appears in the button bar on the AudioView screen.

Scale adjusts the amplitude of a selected range by the factor that you select. Scale is very useful for balancing volumes when cutting and pasting between different files.



Scale Transform Dialog Box

The Scale transform allows you to change the amplitude of a selected range by a *scale factor* that you specify. For example, a scale factor of 2.0 will double the amplitude; a scale factor of 0.25 will reduce it to one quarter of its original value. The first part of XFORM.WAV has roughly half the amplitude of the second so we'll increase it by a scale factor of 2.

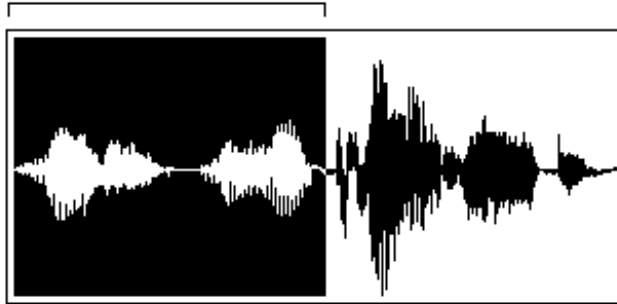


Any resulting amplitudes that exceed the maximum level supported by the sound card are set to the maximum level. If this happens to more than just a few samples, the sound will probably be distorted. To avoid this, consider using the Normalize transform.

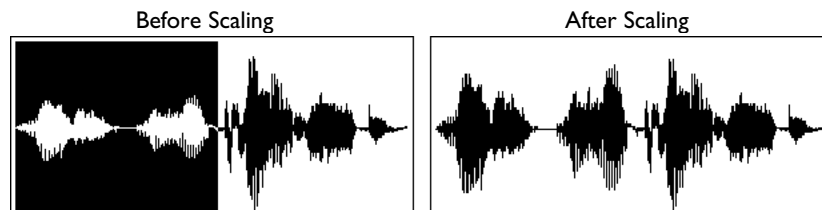
To Scale the Loudness of XFORM.WAV:

1. Select the range that you want to scale. The first half of the file has a visibly narrower amplitude range than the second half. Use the mouse to select this area and adjust the Range Start and Range End times if necessary.

Select this area to be Scaled.



2. Select Scale from the Transforms menu or click the Scale button. The Scale dialog box displays.
3. You can use the slider or the numerical controller to set the desired Scale Factor. Drag the slider with the mouse to set the scale factor to 2.00.
4. Click OK.
5. Play back the file to hear the results.
When the Transform is complete, the two parts of the file should show roughly equal levels. When you play back XFORM.WAV, its level should sound consistent.



The Scale transform can balance amplitudes that don't match.

Name that File

At this point in the tutorial you have altered the XFORM.WAV file so it plays correctly and clearly. Save this file, in its altered state, with the file name NEWFORM.WAV, to be used in the tutorial sections which follow.



It's time to save XFORM.WAV — but do NOT save it with the same file name.

- 1. Open the File menu and click Save As...*
- 2. In the Filename section of the Save As... dialog box, enter the name NEWFORM.WAV.*
- 3. Click OK to save the file and close the dialog box.*

Creating Special Effects with Transforms

Echo Transform



Echo allows you to add custom effects such as reverb, repeats, resonance, and so on. The Echo transform can be accessed either from the Transforms menu or from the Echo button which appears in the button bar on the AudioView screen.



This transform presents you with the Echo dialog box which contains two sliders, *Time* and *Depth*, and four Preset buttons. You can adjust the Time and Depth sliders to add a variety of echo-related effects to a file or you can click on one of the Preset buttons to quickly configure the sliders for some of the more commonly-used echo effects.

From the Echo dialog box, you can access:

- | | |
|-----------|---|
| Ambience | adds a slight amount of reverberation to make a file sound fuller. |
| Stadium | adds a spacious reverb effect, similar to a stadium or a large concert hall. |
| Resonance | adds a distinct resonant frequency (overtone). This preset creates a robot-like effect when used on speech. |
| Long Echo | adds a series of repeating echoes with decreasing volumes. |

You can also adjust the Time and Depth sliders to create your own custom effects.

- | | |
|-------|--|
| Depth | determines the reduction in amplitude. |
| Time | determines the delay. |

To Add Effects to NEWFORM.WAV:

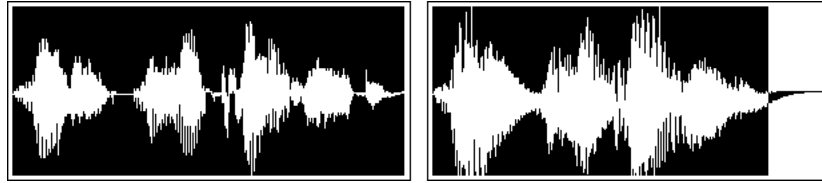
1. Double-click anywhere on the Graphic File Display to select the entire file as the range.
2. Select Echo from the Transforms menu or click the Echo button.
3. In the Echo dialog box, click the Ambience button. Notice that the sliders and Numericals adjust to the Ambience settings.
4. Click OK.



5. After the Transform is completed, play the file. You'll notice that a small amount of reverberation has been added and the file sounds fuller.

Use the Undo command to remove the Ambience effect, in order to try a different Preset. Repeat the procedure above, this time choosing the Stadium preset. When you play the file, you should hear a reverberation similar to that heard in a stadium or a large concert hall.

Undo the Stadium transform, and try out the other two presets. Notice the robot-like quality created by the Resonance setting and the more natural, outdoor quality of the Long Echo preset. Undo each transform after you have listened to it.

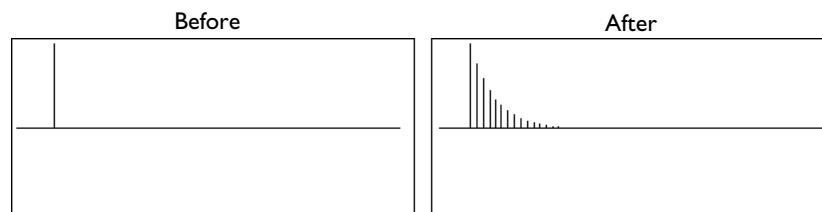


Before After
*The Echo transform, using the Resonance preset.
Notice how the file is extended to the right
to accommodate the echo.*

Each time you select a preset button, the Time and Depth sliders on the left move to different settings. You can adjust these sliders (or the numericals above them) to create any type of echo you want.

How the Echo Transform Works

To illustrate how the Echo Transform works, we've artificially created a file that has just one sample, isolated in an interval of silence. We used the Resonance preset to add an echo to this file, generating the new samples shown at the right.

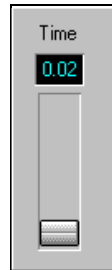


*An echo applied to a single sample, using the Resonance preset.
Each sample's amplitude is 77% as high as the previous one.
The time interval between repetitions is 2/100ths of a second.
This happens to every sample in the selected range.*



Notice the way the original sample is repeated: each repetition has a smaller amplitude and each is placed slightly to the right of the one before.

The Depth slider determines the reduction in amplitude. In this example, the amplitude of each new sample is 77% of the amplitude of its predecessor



The Time slider determines the delay. Here, each new sample occurs .02 seconds after its predecessor.

In a real file with many samples, this procedure is applied to every sample in the file and a Mix Paste operation merges all the new samples into the existing file.

Creating Your Own Echoes

By imagining the environment that creates the echo — the reflecting surface and its distance from the sound source — you can create realistic echoes easily. An echo, after all, is simply a sound reflected by a surface of some kind.

The efficiency with which the surface reflects the sound corresponds to the depth. An efficient sound reflector, like a smooth, hard wall, would have a relatively high depth setting. A less efficient reflector, like a grandstand in a stadium filled with people, calls for a lower depth setting.

The distance between the sound source and the reflecting surface corresponds to the time. At room temperature, sound travels at about 1,130 feet per second. Some quick arithmetic tells us that it would take about 2.33 seconds for a sound to make a round trip to a canyon wall a quarter mile away and back.

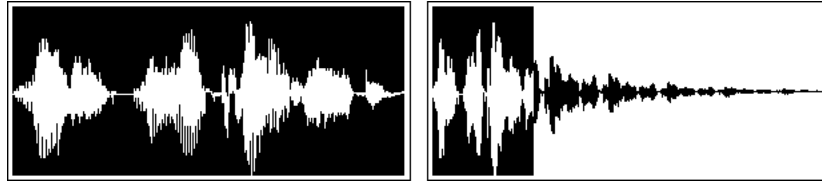
Even using these guidelines, you will probably need to make and undo several test echoes to get the effect you want. Be sure to play your results often as you experiment.

Not all echo effects need to be realistic. Generally, for a sound to be heard as a discrete echo, the delay must be 1/60th of a second or more. If the repetitions are similar in amplitude and have a short time delay, as they do in the Resonance echo, they tend to interfere with each other. The audible result is a pronounced harmonic overtone which produces the artificial, robot-like quality you hear.

To Create Custom Echo Effects:

1. Load the file you previously saved as NEWFORM.WAV. If you still have the XFORM.WAV file opened, choose “No” in the dialog box that asks if you want to save the changes to the file.
2. Select a range. (For this exercise, select the entire file by double-clicking in the Graphic File Display.)
3. Click the Echo button or choose Echo from the Transforms menu.
4. In the Echo dialog box, click one of the presets if you wish. The presets are a quick way to make an initial rough setting. For this exercise, click the Long Echo button.
5. Adjust the Time and Depth sliders as desired. For this exercise, try a Time setting of .75, and a Depth setting of 50.
6. Click OK. After the Transform executes, play the file to check your results.

The time setting of .75 creates a delay of three-quarters of a second between each repetition. The depth setting of 50 means that the amplitude of each repetition is 50% as high as the previous one. Notice that the file has lengthened to accommodate the added echoes. The effect should be similar to a natural, outdoor echo.



Before *b* After
AudioView creates a long extension to accommodate this echo.



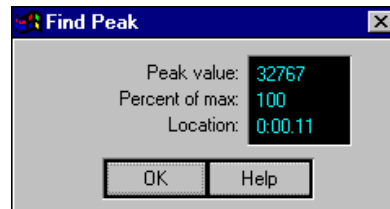
You do not need to use the XFORM.WAV file for the following transforms. Try using a new file to see what effects the different Transforms can produce. Remember to save your files under a different name to preserve the original material.

Find Peak Transform

This transform is useful for locating an unwanted spike so that it can be Scaled or Deleted. This transform scans the selected range and:

- Locates the largest amplitude — positive or negative — within the selected range.
- Displays a dialog box with information about the peak.
- Selects a two-second range “straddling” the peak.

The Find Peak dialog box contains the following information:



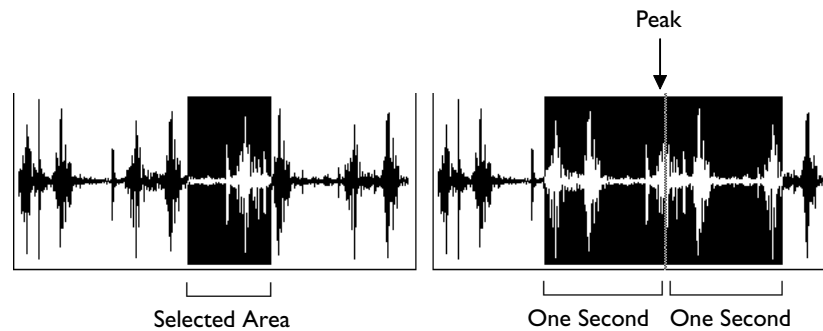
Find Peak Dialog Box

Peak value The absolute value of the peak amplitude, that is, a negative or a positive amplitude is expressed as a positive number. For 8-bit files, the value can range from 0 to 128; for 16-bit files it can range from 0 to 32768.

Percentage The amplitude value of the peak expressed as a

of max percentage of the maximum amplitude possible with
the sound card.

Location The location of the peak within the file, in
minutes:seconds.hundredths of a second.



Find Peak selects a new range, with a duration of exactly 2 seconds, centered on the Peak, and moves the Play Position Marker to the Peak.

To Find the Peak in a File:

1. Select the range in which you want to locate the peak. If you want to select the entire file, double-click in the Graphic File Display or choose Select All from the Edit menu.
2. Select Find Peak from the Transforms menu. A dialog box appears, containing information about the Peak in the file.
3. Click OK. When you click the OK button in the dialog box, the transform goes on to :
 - Select a new range beginning exactly one second before and ending exactly one second after the peak.
 - Resets the Current Play Position to the point where the peak occurs.

Fade Transform

Fade creates a smooth “fade in” or “fade out” on the selected range. There is no simple rule for determining the best type of fade and curvature. Use the Undo command to experiment with different Fade settings until you achieve the effect you want.

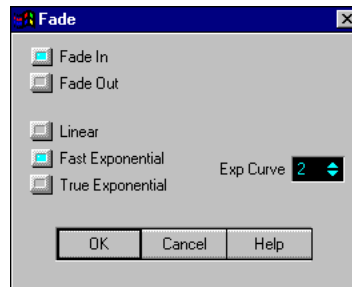


The Fade transform can be accessed either from the Transforms menu or from the Fade button which appears in the button bar on the AudioView screen.

To Create a Fade:

1. Select the range you wish to apply a fade to.
2. Select Fade from the Transforms menu or click the Fade button. The Fade dialog box opens.
3. Select Fade In, or Fade Out.
4. Select how the fade will be produced — Linear, Fast Exponential or True Exponential.
5. Select the amount of the curve by adjusting the numerical in the Exp. Curve box.
6. Click OK.

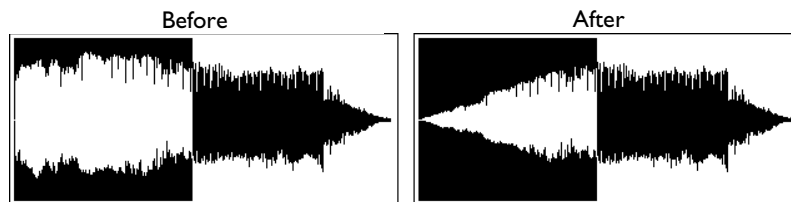
Fade Dialog Box



Fade Dialog Box

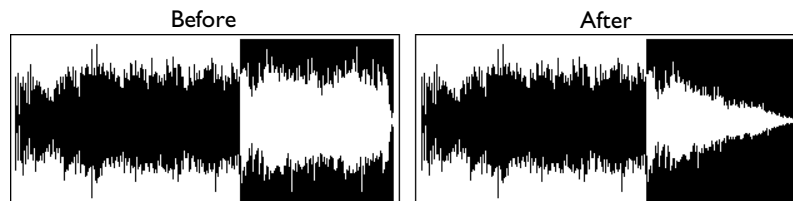
The dialog box for the Fade transforms contains the following elements:

Fade In — Creates a smooth transition from 0 upward, to the original ending level of the selected range.



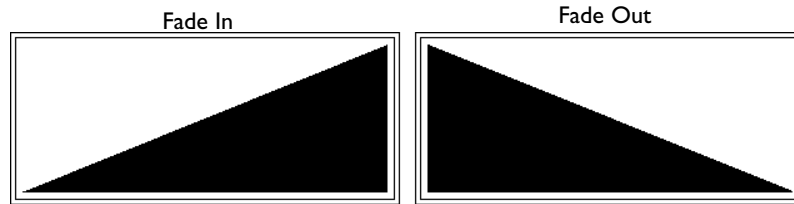
Fade In creates a gradual increase in amplitude (volume).

Fade Out — Creates a smooth downward transition, from the original starting level of the selected range to 0.



Fade Out gradually reduces the amplitude to zero.

Linear — A Linear fade creates a “straight-line” transition, as follows:



The simplest types of fades are Linear.

Fast Exponential — A Fast Exponential fade creates a roughly curved transition.

True Exponential — A True Exponential fade is smoother than Fast Exponential but takes longer for your PC to calculate.

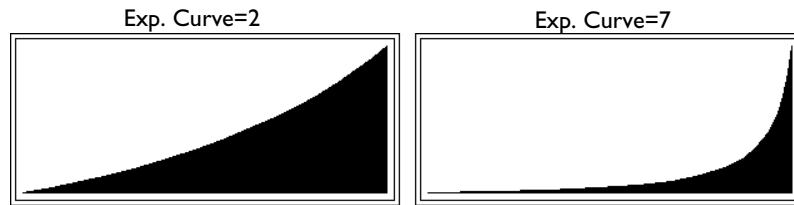


Exponential fades are curved to create a more natural effect.

Notice that the Fast Exponential curve isn't as smooth as the True Exponential curve. The Fast Exponential is considerably easier for your PC to calculate and the difference between the two is usually not audible.

Theoretically, the True Exponential fade reflects more accurately the way in which the human ear responds to sound pressure levels, and should sound more natural. In practice, however, this depends on such factors as the nature of the recorded material, the sound card you are using and the type of effect you want.

Exp Curve Lets you set the degree of curvature for Fast Exponential or True Exponential fades. The greater the curvature value the more abrupt the fade will be, as illustrated below:



By changing the value for the Exp Curve, you can control how abruptly a fade takes place.



There is no simple rule for determining the best type of fade and curvature. Use the Undo command and experiment with different Fade settings until you achieve the effect you want.

Noise Gate Transform

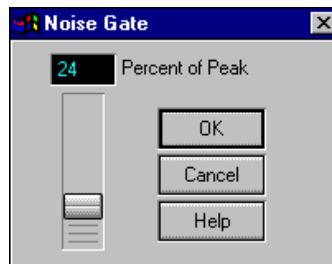
Noise Gate finds every sample in the selected range with an amplitude below a specified amount, and replaces it with silence. The procedure removes background noise from the quieter parts of the selected range.



The Noise Gate transform can be accessed either from the Transforms menu or from the Noise Gate button which appears in the button bar on the AudioView screen.

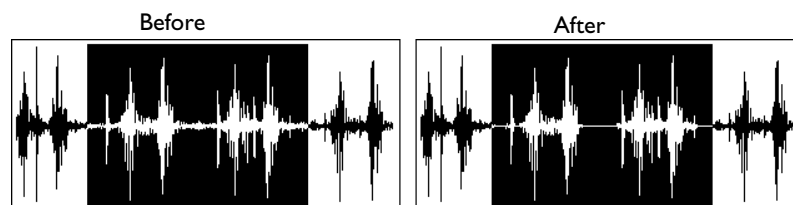
To Reduce the Background Noise From a File:

1. Select the range from which you want to remove the noise.
2. Select Noise Gate from the Transforms menu or click the Noise Gate button. A dialog box opens.



Noise Gate Dialog Box

3. Use the slider or the numerical to select a percentage of the peak amplitude. The transform acts on any sample whose amplitude is below that level. Any noise below the level selected is removed. For example, if you select 10, any sample with an amplitude of 12 or less (10% of the maximum possible amplitude of 128) is replaced by a sample with an amplitude of 0.
4. Click OK to begin the transform. As the transform is working, Noise Gate displays in the status box at the lower left.



The Noise Gate transform removes low-level background noise. Notice how there is no longer any noise on the selected area.



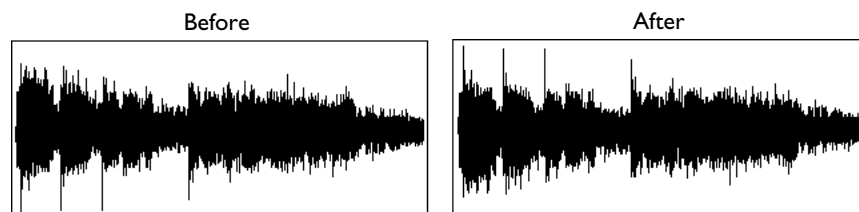
The Noise Gate transform is intended to remove unwanted background noise but, if you set the percentage too high you may also remove sounds you wish to keep. Use the Undo command to help test this transform until you are satisfied with the results.

Invert Samples Transform

Invert Samples changes positive amplitude values to negative and vice-versa. In the Graphic File Display, the selected range will appear upside down, but the effect of the change is usually not audible.

To Invert Samples:

1. Select the range you wish to invert.
2. Select Invert Samples from the Transforms menu. The sample is inverted. Notice, in the following diagram, how this affects the file.



Invert Samples can be used to align the visual appearance of two different audio files after using cut-and-paste.

DC Offset



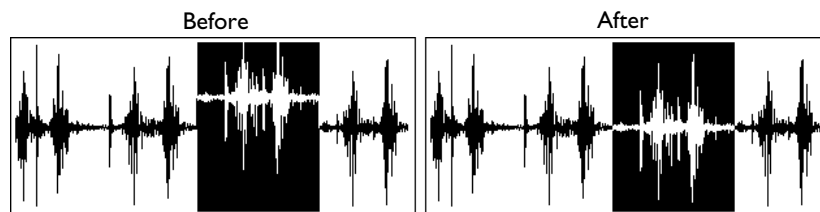
Occasionally, when recording, the WAV file may not align correctly on the digital zero point. This can create an annoying popping sound which is usually audible at the beginning or ending of a recording. This sound occurs because there is a discrepancy between the last value of the WAV file and its zero point.

Use DC Offset to:

- Center the display for an audio file that was recorded with a DC offset.
- Match offsets of audio files after cutting and pasting material from different files.

To Use DC Offset:

1. Select the range you wish to offset.
2. Select DC Offset from the Transforms menu. A dialog box appears.
3. Using either the slider or the numerical box, select the amount of offset. You can select numbers from -127 to 127. A positive number shifts the range up, a negative number moves it down.
4. Click OK.



DC Offset moves the selected range up or down.

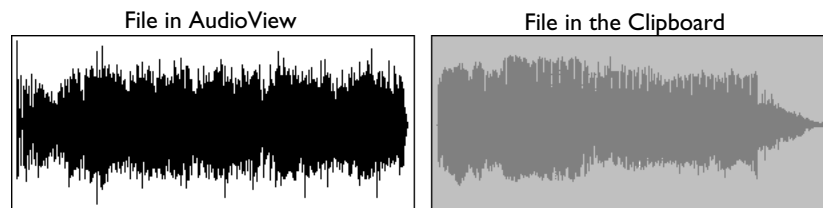
Crossfade

Crossfade is a single command that combines three tasks:

- Fade Out on the current file.
- Fade In on the data in the Clipboard.
- Mix Paste of the two.

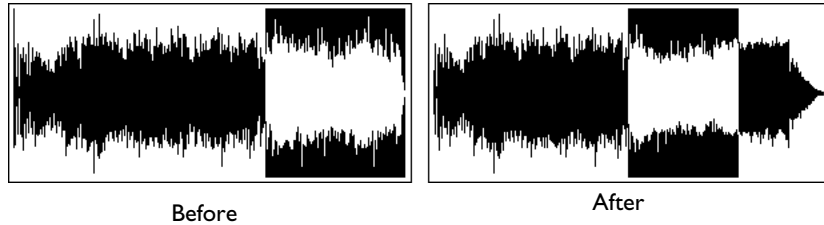
To Crossfade Two Audio Files:

1. Load the file you want to Fade Out with into AudioView.
2. Load the material you want to Fade In with into the Clipboard.
Use the Load File Into Clipboard command in the Edit menu to do this.



*Start with one file in AudioView and one in the Clipboard
(The Clipboard data, on the right, will not be displayed
on your screen).*

3. Select the range where you want the Crossfade to occur (normally at the end of a file). The crossfade will occur over this interval .
4. From the Transforms menu, choose Crossfade. The two audio files will be mixed and pasted together to create a smooth transition.

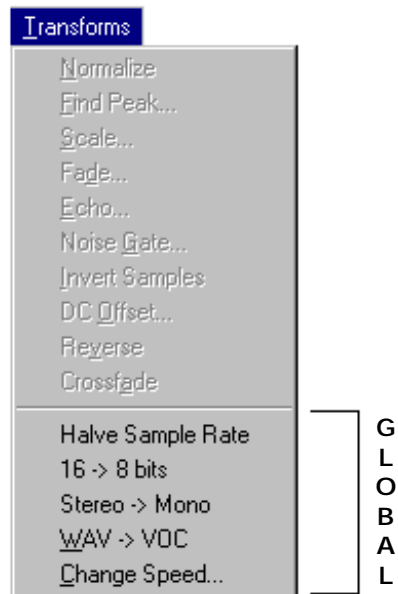


Select the area where you want the fade to occur, then Crossfade.



To use the Crossfade transform, the data from the two files, the one in AudioView and the one in the Clipboard, must be compatible. That means, they must have the same sample rate, number of bits, and both have the same number of channels (stereo or mono).

Global Transforms



AudioView contains five global transforms. These act on the entire file; you do not need to specify a range.

To Use Any of the Global Transforms:

- Select the transform you would like from the Transforms menu. As the transform is working, you will see its name in the Status box in the lower left corner.



As a precaution, make a backup copy of your audio file before using any of the Global transforms.

Halve Sample Rate — This transform reduces the sample rate of an audio file by half. This can make the file compatible with sound cards that cannot support higher sample rates.

The process deletes data to create a smaller file and results in some loss of fidelity. If the new sample rate is lower than the sound card can support, the transform converts it to the lowest default sample rate allowed by the card.

16 - 8 bits — This sample converts a 16-bit audio file to the 8-bit format, allowing a sound card that supports only the 8-bit file format to play the file. This process reduces the file size.
There may be some loss of fidelity when using this transform.

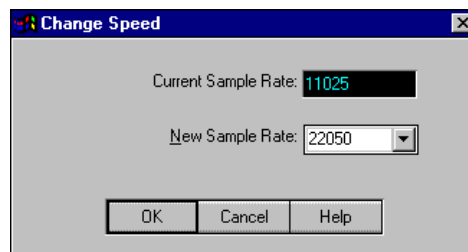
Stereo - Mono — This transform combines the right and left channels of an 8-bit or 16-bit stereo file into one channel, creating a mono file. It also reduces the file size by half which permits it to play on sound cards that do not support stereo.

This transform can only work on a stereo file. If the file is not stereo, this transform is unavailable.

WAV -> VOC or VOC -> WAV — This transform converts 8-bit PCM WAV files to the Sound Blaster VOC format, or VOC files to 8-bit PCM WAV format.

This transform displays WAV -> VOC or VOC -> WAV depending on what the current file type is.

Change Speed — This transform changes the sample rate of a file to a new rate which you select. This transform audibly changes the speed and pitch of the sound, much like playing a record or tape player at the wrong speed. You can choose one of the most commonly used speeds from the New Sample Rate list, or enter any speed your sound card supports.



Change Speed Dialog Box

To Change the Speed of a File:

1. Select Change Speed from the Transforms menu. A dialog box appears containing the Current Sample Rate and the New Sample Rate.
2. Click the arrow on the drop-down box to display the available sample rates and then select a new sample rate.
3. Click OK.



- *By choosing a sample rate lower than the Current Sample Rate, the speed of the file is lowered.*
- *By choosing a sample rate higher than the Current Sample Rate, the speed of the file is raised.*

Understanding Object Linking and Embedding (OLE)

AudioView can take advantage of Object Linking and Embedding (OLE). OLE enables you to place information from one application into a document created by another application, even if the two applications use very different types of data. You might not normally think of placing sound in a spreadsheet, but if the spreadsheet supports OLE, you can!

Servers and Clients

An OLE application can be a server, a client, or both.

Applications which create objects that can be embedded or linked into other applications are called OLE servers. AudioView is an OLE server.

Applications that can contain embedded or linked objects are called OLE clients. Major Windows applications such as Word and Excel function as clients in an OLE transaction.

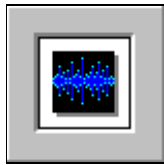
Linking vs. Embedding

Linking and embedding are different ways of placing data objects into clients. In either case, an icon appears in the client to represent the object. You click the icon to activate the object, for example, to hear a linked digital audio file. Linked and embedded objects are deceptively similar in function and appearance. You should understand the important differences between the two.

- When you embed an object in a client, you create a unique copy of that object which is saved as a part of the client document. Any changes you make apply only to that single instance of the object; copies embedded elsewhere remain unaffected. Because every embedded object is an independent copy, embedding can consume a lot of disk space.

-
- When you link an object to a document, all you really do is place a reference, or link, to the original object in the client document. Thus you only need one copy of the object, no matter how many times it appears. This saves disk space, but any changes you make to the object are automatically reflected in every client document that contains a link to the original — something you may not always want.

Using the Drag-and-Drop OLE Icon



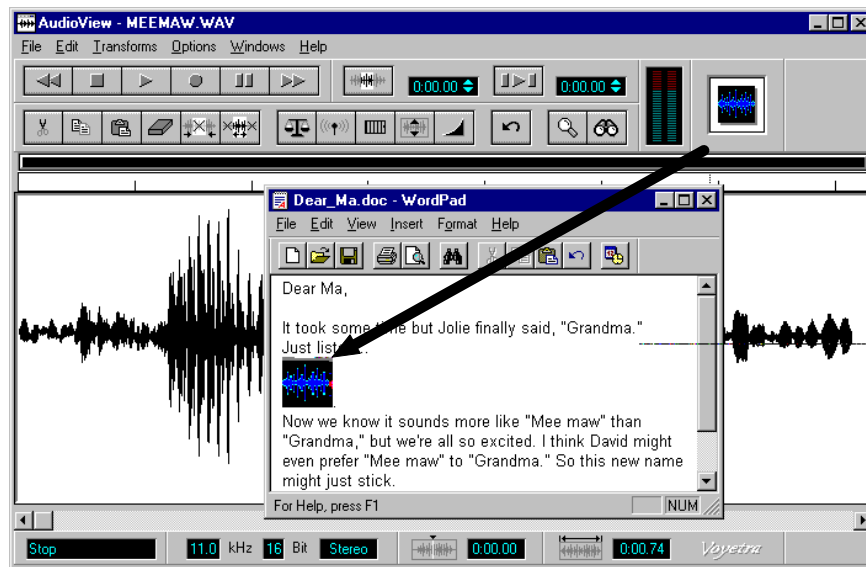
AudioView's unique drag-and-drop OLE (Object Linking and Embedding) icon offers a quick, intuitive way to embed sound objects into documents created by other applications — even applications which don't normally support sound.

The documents into which you place sound must be an OLE client. If you are not familiar with this, consult your Windows documentation before you continue.

- AudioView is an OLE server. This means you can embed or link AudioView sound objects into documents created with any OLE client.
- You can use AudioView to edit sound objects from within the client document.
- When you have linked or embedded a sound object, a copy of the AudioView icon serves as a place holder in the appropriate point in the OLE client.

To Embed a Sound File in a Document:

1. Load or record the desired sound file into AudioView.
2. Drag AudioView's drag-and-drop OLE icon to the desired point in the destination document and release the mouse button.



Drag-and-drop the AudioView OLE icon into the word processing document.

To Embed a Selected Part of a Sound File:

1. Load or record a sound file in AudioView.
2. Highlight the desired range in the Graphic File Display.
3. From AudioView's Edit menu, choose Copy or click the Copy button.
4. Click on the desired insertion point in the destination document.
5. From the client document's Edit menu, choose Paste.

To Link a Sound Object:

1. Load or record the desired sound file into AudioView.
2. Make sure the file is saved.
3. Select any part of the file. (This procedure creates a link to the entire file, so it doesn't matter what you select, but you must select something.)
4. From AudioView's Edit menu, choose Copy.
5. Click on the desired insertion point in the destination document.
6. From the client document's Edit menu, Choose Paste Link.



Be aware that if you give someone a file that contains a link, you must remember to provide the linked object(s) as well!

To Play an AudioView Sound Object:

- In the client document, double-click the AudioView icon representing the sound object you wish to play.
- ~or~
- Another method is to select the AudioView icon and choose Sound [VOY] >> Object, Play from the document's Edit menu.



Some OLE clients implement OLE functions differently. Check the client application's documentation for details.

To Edit an AudioView Sound Object:

1. In the client document, select the AudioView icon representing the sound object you wish to edit.
2. From the client's document Edit menu, choose Sound [VOY] Object >> Edit. AudioView starts, with the sound object already loaded.
3. Edit the sound object in AudioView as desired.
4. Update the sound object in the client document:
If you're editing an embedded sound object, choose Update [application name] from AudioView's File menu.



If you're editing a linked sound object, choose Save from AudioView's File menu. This will overwrite the original sound file.

Chapter 13

MediaCheck

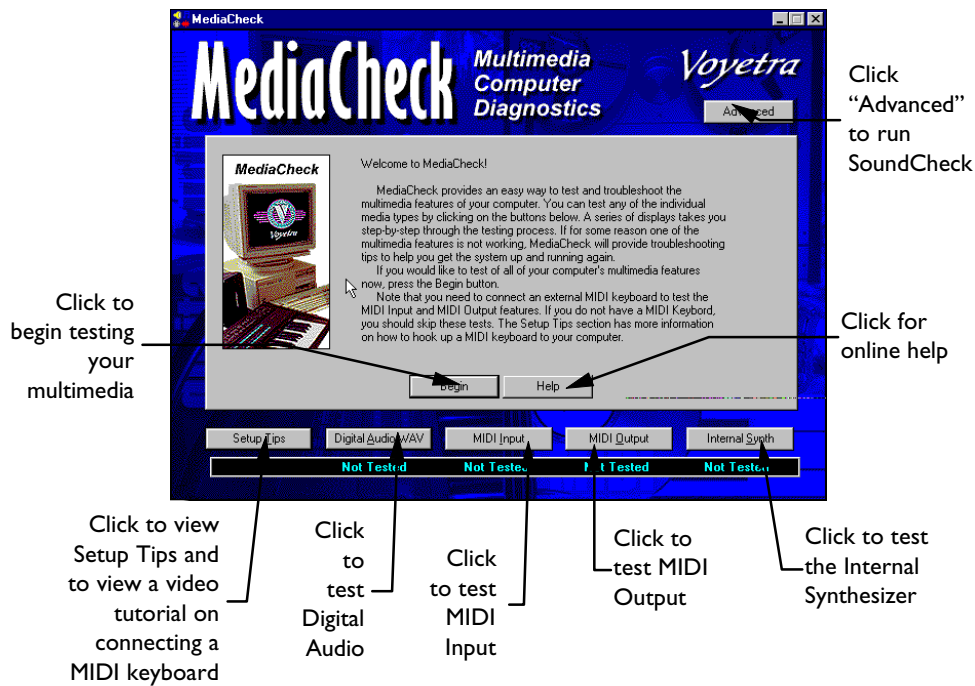
MediaCheck™ provides an easy way to test and troubleshoot the digital audio and MIDI features of your computer. A series of displays takes you through the testing process step-by-step. If, for some reason, one of the multimedia devices on your computer is not working properly, MediaCheck provides troubleshooting tips to help you get your system up-and-running again.

MediaCheck also provides setup tips for attaching an external MIDI keyboard to your computer — and a video to show you how to make these connections. Once the MIDI cable is installed, you can use MediaCheck's MIDI Input and MIDI Output tests to confirm that your system is operating properly.

When troubleshooting a multimedia computer, it is often necessary to view the installed sound card drivers if changes need to be made to the drivers' configuration. Locating these drivers can be quite difficult. The Advanced button in MediaCheck calls up SoundCheck,™ an advanced multimedia troubleshooting utility, which displays a detailed listing of all of your computer's sound card drivers. From here you can access the drivers' configuration dialog box and view status information. This tells you whether or not the driver is working properly. SoundCheck also provides access to the Windows MIDI and Sound Mapper applications.

MediaCheck Main Screen

Here's an overview of the main screen in MediaCheck. Note that clicking the Advanced button calls up SoundCheck, which takes a more detailed look at your system.



Using MediaCheck

With MediaCheck, you can run a complete test of your multimedia devices or individually test the specific multimedia functions you are having trouble with. For example, you may want to perform a complete test before you run a multimedia application or you may only want to run the MIDI Input Test if you just hooked up an external MIDI keyboard to your PC and want to make certain it is working properly.

Setup Tips

The Setup Tips section includes a video which demonstrates how to connect the MIDI cable to your PC and MIDI keyboard.

To View Setup Tips:

- Click the Setup Tips button located at the bottom of the screen.



For additional information on connecting your MIDI keyboard to your PC, refer to “Making the Connections” in the “Up and Running” chapter.

Running the Complete Test

The complete test checks Digital Audio, MIDI Input, MIDI Output, and Internal Synth.

To Run the Complete Test:

1. Click the Begin button on the main screen. MediaCheck automatically takes you step-by-step through the various tests.
2. In each test, you are prompted with questions to help determine that your system is working correctly. Click the appropriate answer for each question.

Running a Specific Test

If you only need to test one function — for example, Digital Audio or MIDI Input or Output — there’s no need to run a complete test. In

Digital Audio WAV Test

The Digital Audio WAV Test provides a quick check of the digital audio playback capabilities of your multimedia system.

To Run the Digital Audio WAV Test:

1. Click the Digital Audio WAV Test button at the bottom of the screen. This will play a digital audio file.
2. When asked if you can hear it, click either Yes or No.
3. Your answer determines the next course of action.
 - If you choose Yes, MediaCheck assumes that your system is functioning properly.
 - If you choose No, MediaCheck suggests several troubleshooting tips. Try these tips. If one of these works, you should hear the WAV file. If none works, click the Advanced button for more information about your system's WAV drivers.

MIDI Input Test

The MIDI Input Test provides an easy way to check that MIDI data is being received from an external source — such as a MIDI keyboard.

To Run the MIDI Input Test:

1. Be sure your MIDI keyboard is connected to your computer.
2. Click the MIDI Input Test button at the bottom of the screen.
3. Click the correct answer for the questions asked.
 - When the keyboard is played, one of the 16 lights should illuminate. For example, if the keyboard is transmitting on MIDI Channel 1, the Channel 1 light illuminates.
 - Each of the 16 lights represents a MIDI input channel. This helps you determine which channel your MIDI keyboard is transmitting on.

-
- If none of the MIDI input lights turn on when you play your synth, click the No button and follow the troubleshooting tips.

MIDI Output Test

The MIDI Output Test provides an easy way to check that MIDI data is being transmitted successfully from your computer to an external source — such as a MIDI synth.

To Run the MIDI Output Test:

1. Be sure your MIDI keyboard is connected to your computer.
2. Click the MIDI Output Test button at the bottom of the screen.
3. When asked if you can hear the MIDI file, click Yes or No.
 - If the synth is turned on and connected properly you should hear music coming from the synth.
 - If you cannot hear music playing from the synth, click the No button and follow the troubleshooting tips.

MIDI Drum Sounds

MIDI files transmit their information on different channels, and each channel is usually assigned a different musical instrument sound. Typically drum sounds are fixed to either channel 10 or channel 16. This can sometimes cause a problem.

For example, a game may play a MIDI file with its drum information programmed on channel 16, but the internal synthesizer is set to play its drum sounds on channel 10. This would cause the music to sound strange. Usually the multimedia application provides a way to fix this.

MediaCheck can help by confirming which channel your computer's internal synthesizer has drums mapped to.

Internal MIDI Synthesizer Test

Most multimedia computers have a MIDI synthesizer built in. This enables games and other multimedia applications to play music.

To Run the Internal MIDI Synthesizer Test:

1. Click the Internal MIDI Synthesizer Test button. A MIDI file plays a drum part on channel 10.
 - If you hear drums, click Yes and move on to the next test.
 - If you hear a sound like a “piano playing a strange melody,” click No.
2. When you click No, MediaCheck plays a MIDI drum part on channel 16. If you don’t hear anything at this point, there may be a problem with the internal synthesizer in your system or its drivers.
3. Follow the on-screen instructions for information on how to resolve this type of problem.

Test Results

As the test advances, MediaCheck provides feedback. This information appears beneath the test button.

Test Passed Indicates your system is working correctly.

Test Failed Indicates your system is not working correctly.

Not Tested Indicates that test has not been run yet.

Advanced Button

The Advanced button in MediaCheck launches SoundCheck, which takes a more detailed look at your multimedia hardware and software. SoundCheck displays all of the sound card drivers currently installed on your system along with the status of each. This information helps determine if there is a problem — such as an address or interrupt conflict — with the hardware or software.

To Launch SoundCheck:

- Click the Advanced button at the upper right of the screen.



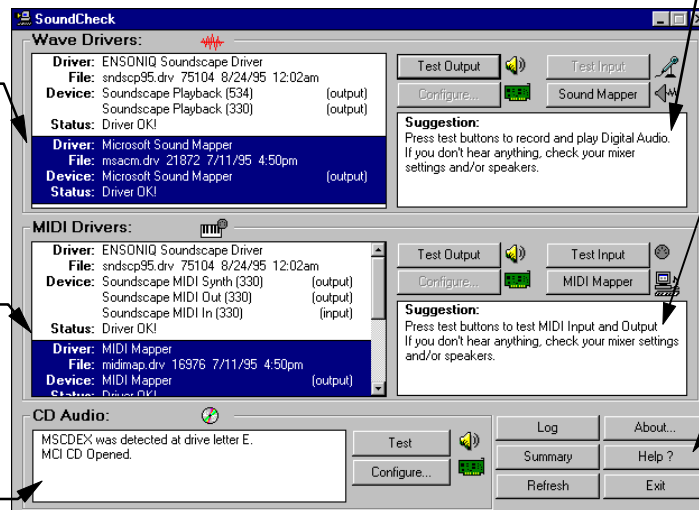
Do NOT wear headphones when using SoundCheck! Running the tests in SoundCheck can cause sudden volume increases.

SoundCheck Screen

Displays information about the Wave Drivers

Displays information about the MIDI Drivers

Displays information about the CD-ROM Drivers



Provides troubleshooting suggestions for your system's digital audio devices

Provides troubleshooting suggestions for your system's MIDI

Click on any of these buttons to display additional information about your system

Testing Digital Audio

To Test Digital Audio Output:

1. Click the Test Output button, in the Wave Drivers section, to play a pre-recorded test file.
2. A dialog box asks whether the file is playing. If there is no sound, check the most likely sources of problems:
 - Speakers are connected incorrectly.
 - Low sound card volume setting.
 - Speakers or other amplified source is not turned on or the volume setting is too low.

To Test Digital Audio Input:

If you are not able to record sound, the problem could simply be bad connections or your drivers may be set up incorrectly. Follow these steps to isolate the problem:

1. Connect a microphone or other device — such as a tape deck — to the appropriate input on your sound card.
2. Use the Mixer utility that came with your Sound Card to select the input device and set the volume level.
3. Click the Test Input button in the Wave Drivers section. The Wave Input Test dialog box opens.
4. Click the Record button.
5. Speak into the microphone for a few seconds — or play a few seconds of the tape.
6. Click the Stop button in the dialog box to stop recording.
7. Click the Play button to hear the results. If you don't hear anything, continue on to Configuring Digital Audio.

Configuring Digital Audio



Before you make any changes to your Wave Driver's configuration, consult your sound card manual.

To Configure Digital Audio:

- Click the Configure button in the Wave Drivers section. SoundCheck displays a dialog box enabling you to change the configuration of the currently-selected driver.



You should change the driver configuration ONLY if you have a problem. Most often, you need to restart Windows for any changes to take effect. If you do not restart Windows, click the Refresh button so that SoundCheck can recognize the new configuration.

Testing MIDI Output

To Test MIDI Output:

- Click the Test Output button in the MIDI Drivers section. The MIDI Output Test dialog box opens. From here you can play a Base Level, Extended Level or Dual Arrangement MIDI test file. This helps determine which MIDI setup is best for your system.



Unless you have selected it for testing, SoundCheck bypasses the MIDI Mapper and sends MIDI data directly to the device driver. This helps you distinguish between incorrect MIDI Mapper settings and problems with the driver software.

Testing MIDI Input



The MIDI Input Dialog Box

To Test MIDI Input:

- Click the Test Input button in the MIDI Drivers section. This opens the MIDI Test Input dialog box.

MIDI input testing allows you to quickly determine:

- If MIDI data sent from a MIDI device is reaching your computer.
- On which channel MIDI data is being received.



A row of 17 LEDs appears in the MIDI Input dialog box. The first 16 correspond to the 16 MIDI channels; the 17th LED, the one at the far right labeled “Misc,” is for non-note MIDI messages that are not channel-specific. As you play a synthesizer or other MIDI device, one or more of the LEDs flash to indicate when MIDI data is being received and on which channel.

MIDI

To Configure MIDI:

- Click the MIDI Mapper button to open the Windows MIDI configuration utility.

In Windows 3.1:

- It opens the MIDI Mapper.

In Windows 95:

- It opens the MIDI Properties dialog box.

Use either utility to choose an appropriate setup for your MIDI output device, edit an existing setup or create new ones. As a general guide:

- Base Level synths, typically the earlier FM synthesis sound cards, only use channels 11 through 16, with drums on channel 16.
- Extended Level synths, typically better FM synthesis sound cards, use channels 1 through 10, with drums on channel 10.
- General MIDI synths, typically wavetable synthesis sound cards or external high-end keyboard systems, use all 16 MIDI channels, with drums on channel 10.

Testing CD Audio

A message in the status box in the CD Audio section tells you whether or not MSCDEX was detected. If it is detected, a second message informs you of the status of the Windows MCI CD audio driver. If SoundCheck tells you that MSCDEX was not detected, refer your CD-ROM drive's manual for the proper installation of MSCDEX.

To Test CD Audio:

1. Place a disc with audio tracks in the CD-ROM drive. Use a commercial CD recording — the kind you buy in a record store.
2. Check your mixer settings. Be sure that the CD-ROM drive is selected and that the volume is turned up enough.
3. Click the Test button to play a CD Audio track.

Summary Button

The Summary screen displays an overview of your system's audio capabilities. You can also run a speed diagnostic of your system from this screen.

Not all sound cards actually play at precisely the same sample rate. SoundCheck can measure how accurate the playback of your sound card is.

At the bottom of this screen is the Wave Sync button. This runs a diagnostic to test the actual sample rates of your sound card.

To Run a Speed Diagnostic of Your System:

1. Click the Summary button to open the Audio Capabilities & Related Data screen.
2. Click the Run button to test your system's speed.

Log Button

The Log button opens Notepad and creates a log file containing extensive configuration information.

This file contains data generated during testing that can be useful to you and to tech support people.

Wave Sync

Wave Sync tests your hardware's ability to accurately synchronize digital audio and MIDI.



It is only necessary to use Wave Sync if you are working with applications that have this option — such as Voyetra's Digital Orchestrator Plus.TM

To Test Wave Sync:

1. In SoundCheck, click Summary to display the Audio Capabilities & Related Data dialog box. Then click WaveSync.
2. Choose the Wave Out Device. (This is how sound will be played out of your sound card. Usually you will see the name of the sound card displayed in this box.)
3. Select the Sample Rate to test.
4. Click the Start button.
5. When you are done, also check the Wave In Device by selecting "None" for Wave Out and selecting the sound card for Wave In.

You will notice numbers calculating. Note that this may take a LONG time.

Here's an explanation of the terms used in the Wave Sync test:

Elapsed Time	Is a measure of how much time has passed, in milliseconds, since you clicked the Start button.
Actual Sample Rate	Is the true sample rate of the sound card. As time passes, the accuracy of this number increases. You will be able to see the Actual Sample Rate number begin to stabilize as time goes on.
Deviation	Is the running margin of error that your sound card's drivers may produce.

What the Deviation numbers mean:

Between 0 and 10	Excellent for syncing digital audio and MIDI.
Between 11 and 50	Good for syncing digital audio and MIDI.
Between 50 and 500	Fair (it may be a bit unstable) for syncing digital audio and MIDI.
Over 500	Syncing digital audio and MIDI will not work.

Be aware that many sound cards have a very low Wave Out deviation and a high Wave In deviation.

The timing of digital audio playback is handled solely by your sound card driver. If you have a multimedia program that synchronizes digital audio with another function — such as MIDI to WAV — it must ask the sound card exactly where into the playback of the WAV file it is at any moment. This information is gathered by the application communicating with your sound card's WAV driver. This information is then used to calculate at what point the WAV file should sound. If there is a large discrepancy in this number — where the sound is and where the sound card driver thinks it is — the application will not play the sound at the correct moment. This can result in an out-of-sync playback.

Appendix A

Overview of MIDI and Digital Audio

MIDI, an acronym for Musical Instrument Digital Interface, is a system for encoding, sending and receiving the electronic messages which control MIDI devices. Anything that generates or responds to MIDI messages is a MIDI device. Common MIDI devices are electronic musical synthesizers (synths), keyboards, and drum machines. MIDI commands can also control more specialized devices, such as theatrical lighting systems. A sound card installed in a computer can also be programmed to respond to MIDI commands.

MIDI is not a product or a tangible object; it is a specification — a widely accepted system of rules — introduced in the early 1980s by the MIDI Manufacturers Association. These rules specify how MIDI data should be encoded and sent among MIDI devices. They also govern hardware issues such as the design of the cables and connectors used by MIDI devices.

A series of MIDI commands can be organized in a deliberate way to instruct a MIDI synthesizer to play a musical passage. This series of commands is called a *sequence* and a hardware device or computer software program that creates and edits sequences is called a *sequencer*. With sequencer software, your computer can record, edit, or play MIDI sequences and save them as files on a disk. The collection

of commands in a file — the sequence — then instructs a synthesizer to play the music.

A single MIDI sequence can control a number of MIDI devices — virtually an entire synthesized orchestra. This requires certain procedures to keep things organized. For example, to ensure that each command reaches the correct device, each MIDI command includes an instruction that assigns it to a MIDI port. If a command is assigned to port 1, only the MIDI device attached to port 1 receives the command.

Each command routed to a given port is also assigned one of 16 MIDI channels. Like a television, a MIDI device receives incoming signals on all channels, and can be set to respond only to selected channels. A synthesizer differs from a TV, however, in that it can “tune in” more than one channel at a time.

Each channel is assigned a patch — an instruction that tells the synthesizer to generate a particular type of instrumental sound for that channel. So, for example, if you have assigned an oboe sound to port 2, channel 4, any note directed to port 2, channel 4 will sound like an oboe — until you change the patch assignment.

MIDI commands can trigger two kinds of events: *note events* and *non-note events*. A note event is the equivalent of pressing a piano key. It instructs the synthesizer to play a particular pitch at a precisely defined time. The command can convey musical nuances as well, such as how hard a piano key is struck, held down, or released. However, not all MIDI devices are designed to respond to this type of information.

Non-note events — sometimes called *controller events* or simply *controllers* — manage other functions of the MIDI device. They may, for example, adjust the volume or assign a new patch to one of the channels.

A MIDI file does not actually contain sound. Rather, it is a set of instructions that tell a synthesizer which sounds to make and when to make them. In this sense, a MIDI device is like a player piano and a MIDI sequence is like the perforated paper roll that controls it. If one of the holes instructs the piano to play the middle C key, the piano will do so.

The ultimate result, however, depends upon the quality and condition of the piano. If the middle C string is tuned to E-flat, you will hear E-flat.

This sort of problem can occur with synthesizers, too, but the potential for error is even greater, since they can simulate so many different instruments.

Early Problems with MIDI

When it was first released, the MIDI specification attempted to strike a balance between standardization and versatility. MIDI manufacturers, software programmers, and composers agreed on certain basic commands, but other parts of the specification were less rigidly defined. With everyone free to play by their own rules, fundamental problems soon emerged:

- | | |
|---------------------------------|---|
| File Format | Though MIDI software programs could send and receive MIDI commands, each developed its own way of storing sequences on computer disks, so a MIDI file could be played only by the program that created it. |
| Patches | The commands that tell the synthesizer which patches (instrument sounds) to use are really just numbers. Standardizing a numbering scheme was simple enough — patch numbers run from 0 to 127. But no rules governed which sound went with which number. Consequently, the part composed for violin on one synthesizer might sound like a trumpet when played on another. |
| Capabilities of the Synthesizer | All hardware has inherent limits; a synthesizer can only make a certain number of sounds, and more importantly, it can only play a limited number of notes at once. These capabilities vary widely. A sequence created on a relatively powerful synthesizer — one that can simultaneously generate many notes and instruments — can overwhelm a lesser synthesizer. |

These problems multiplied as the market grew. Patch and drum maps varied from one synthesizer manufacturer to another, or even among different models from the same manufacturer. The initial goal of MIDI

— device-independent MIDI files that would play on any MIDI synthesizer — began to fade from view.

Working Toward Compatibility

To help composers create device-independent MIDI files, a number of organizations are at work to establish more fully-defined conventions. The MIDI Manufacturing Association has offered a specification called General MIDI (GM) which standardizes, among other things, instrument and drum sounds. The Multimedia PC Marketing Council, or MPC, divides synthesizers into two types — *Base Level* and *Extended Level* — so composers can tailor their arrangements to the differing capabilities of synthesizers.

Even if composers and manufacturers were to adopt a new standard today, incompatibility problems would remain for most of the MIDI devices and files already in use. As an interim solution, Microsoft created the MIDI Mapper — a software utility for Windows 3.1 that translates MIDI data as it is played, allowing newer files to work with older synthesizers.

With the release of Windows 95, Microsoft has replaced the MIDI Mapper with the MIDI Configuration utility. For more information on the MIDI Mapper and the Windows 95 Configuration utility, refer to their respective sections later in this chapter.

MIDI Terminology

What happens when a key on a MIDI keyboard is pressed? How is a MIDI command translated into the correct sound and routed to the correct destination? How is the sound created? The following section is designed to help you understand the fundamentals of synthesized sounds and how they are built into an entire composition.

We hope that these definitions are helpful to you as you begin to work with MIDI software.

Voices and Polyphony

Let's start with the most basic resource in a synthesizer, a *voice*. A voice is the electronic circuitry that can make a relatively simple sound. A synth that has more than one voice is said to be polyphonic. A synthesizer's *polyphony* — the number of voices — is a fundamental characteristic that establishes its capabilities. Virtually all synths made today are polyphonic.

Instruments and Timbre

A synth combines one or more voices to create an instrument — a sound that you hear and recognize, such as a piano, violin, tuba, or possibly a unique, newly invented sound. *Timbre* is the subjective, audible quality that distinguishes one instrument from another. Most synths are multitimbral, that is, they can produce several different instrument sounds at once. This way you can have an entire band playing your composition.

Voices can usually be allocated dynamically. This means that when a voice is no longer needed, it immediately becomes available for another instrument. Occasionally, a MIDI arrangement calls for more voices than the synth can provide. Voices are then “stolen” from older notes to make the newer ones. For this reason, it's always a good idea to assign the more critical parts of an arrangement to lower-numbered MIDI channels. Voices are stolen from the higher numbered channels first.

Wavetable Synthesizers

Recently the technology of *wavetable synthesizers* has come into common use. These synthesizers use memory to store brief sound samples made from recordings of actual instruments. To play a note, the synthesizer looks up and retrieves the appropriate sample, manipulates it as needed and plays the sound. This system is considered to create more realistic instrument sounds, as opposed to the older FM (Frequency Modulation) synthesis technique of creating synthesized sound.

Patches

Each instrument sound is commonly called a *patch* or *program*. The terms are taken from the patch boards used to program early synthesizers. The operator used wires, like those on an old telephone switchboard, to “patch” or connect one electronic module to another. The words “patch,” “instrument,” “program” or sometimes simply “sound” are often used interchangeably.

Patches are usually identified by both a number and a recognizable name like “Marimba” or “Harpsichord.” The numbers are always 0 to 127, though some systems label patches with numbers from 1 to 128 for clarity. A set of 128 patches is called a *patch bank* — or sometimes a *palette* — and many synths allow you to change patch banks as needed.

Notes

In MIDI, as in traditional music, a note is one of the most fundamental units. It defines a *pitch* (for example, F#) and a *duration* (for example, a half note). In MIDI, pitches are identified by numbers from 0 to 127. On many keyboards, for example, Middle C is note number 72. The duration is expressed in units of bars, beats and clicks. A click is the smallest division of a note according to the current MIDI configuration in a sequencer. As in traditional music, the duration of a note is ultimately determined by the time signature and the tempo of the song.

MIDI note commands define other characteristics, too. These include *start time* (which establishes where in the composition the note occurs) and *velocity* (which corresponds to how hard a key is struck).

Non-Note Messages

Not all MIDI commands play notes; some control the overall characteristics of the song or the behavior of the synthesizer. These *non-note events* include commands that set the key signature and tempo, change patches, and a host of other parameters.

Each synthesizer will vary in its response to these messages, depending on its design and features. If a synth fails to respond to certain message types, it isn't necessarily a malfunction. It may simply be that the synth wasn't designed to support that feature.

Channels

Each MIDI note must be assigned to one of 16 channels. The note will then be played with the patch assigned to that channel. For example, if a violin patch has been assigned channel 4, all notes played on that channel will sound like violins. If you change the patch assignment for channel 4 to oboe, the sound changes to oboe.

Tracks

Imagine an arrangement that includes three clarinets playing in harmony. Since they all share the clarinet patch, they can share a channel. To assign the same patch to three different channels would waste the synth's resources. As you edit the arrangement, you need some way to keep the parts separate. In traditional music notation, you might put each part on its own staff.

The MIDI equivalent is to place each part on its own track. Each track must be assigned to a channel, and therefore a patch. The composer has considerable freedom in the use of tracks. Several tracks can be assigned to the same channel, and each track's channel assignment can be changed independently.

For example, suppose you decided to change one of the clarinet parts to an oboe, without changing the other two. You could assign its track to another channel — and assign an oboe patch to that channel.

Melodic and Percussion Instruments

There are two broad categories of instruments: *melodic instruments* and *percussion (drum) instruments*. Each melodic instrument requires a full range of notes, such as all the keys on the MIDI keyboard, and must have its own channel and patch assignment.

Percussion instruments, however, don't rely on pitch. You cannot play F-sharp on a cymbal or a snare drum the way you can on a piano or clarinet. So, while you need the entire range of the MIDI keyboard to play a melodic instrument like a piano, you only need a single key to play a cymbal.

Drum Channel

Because each drum instrument requires only one key, all the drums are gathered onto a single channel, and one key is assigned to trigger each. Every synthesizer has a *drum channel* for this purpose. This channel usually cannot be changed and is almost always channel 10 or 16.

If data created for a melodic instrument is inadvertently directed to the drum channel — or vice-versa — the synth attempts to play it anyway. The result is typically a strange collection of noises.

Ports

If there are only 16 channels — and each instrument claims one of them — how would you manage an arrangement that requires more than 16 instruments? This question leads us to the final parameter that MIDI data needs to reach its destination — a MIDI *port*.

Each set of 16 channels is assigned to a port, and a MIDI system can have several ports. Unlike channels and tracks, which are characteristics associated with MIDI data, ports are more closely associated with MIDI hardware. Ordinarily, each port is connected to a different MIDI device.

MIDI Hardware

To provide the ports necessary to control external MIDI devices, a computer requires hardware called a MIDI *interface*. An interface is typically a card installed in one of the bus slots on the computer's motherboard. It has one or more 5-pin DIN plugs to communicate with external MIDI devices. A cable connects the interface to a plug on the MIDI device. Each of these connections represents one MIDI port.

Each port is identified by a number and functions as an input or an output. Two-way communication requires both types. The computer receives data from a synthesizer (during recording) via an input port, and sends data to the synthesizer (during playback), via an output port. MIDI data travels only in one direction, so the MIDI Out plug from one device is always connected to the MIDI In of another. Multiport interfaces permit a single computer to control several 16-channel MIDI devices.

Many synths also have a specialized variant of the MIDI Out port, called *MIDI Thru*. A MIDI Thru simply takes the data that arrives at the MIDI In connector, echoes (repeats) it, and sends it out again, unchanged, via the MIDI Thru connector. This provides a way to connect several synthesizers together.

Sound Cards

Sound cards don't require a MIDI interface or a cable; the connection to the computer is established when the card is plugged into its slot. Since you cannot "play" a sound card as you would a keyboard, sound cards don't have a MIDI output port. Instead, they have connectors that send audio signals to devices such as headphones, speakers, or an amplifier.

However, many sound card designs allow for a simple kind of MIDI interface, so your computer can communicate with external MIDI devices in addition to the sound card. Usually it's an optional adapter cable that you plug into the sound card's joystick connector.

Every synth, whether it's internal (built into a sound card) or external (connected by means of an interface) must be identified by a port

number. Since a sound card doesn't need an actual physical port, it's given a kind of artificial — or virtual — port assignment. The most common arrangement is to call the sound card's external MIDI connector Port 1 and the synthesizer built into the sound card Port 2. If your system had two external (real) ports, the virtual port for the sound card would be port 3, and so on.

Windows 3.1 MIDI Mapper

When you install MIDI hardware such as a sound card or a MIDI interface, an applet called the MIDI Mapper is added to your Windows 3.1 Control Panel.

Ordinarily, when you use a sequencer to play a MIDI file, you direct the output — the MIDI data — to the driver for your synthesizer. The driver manages the communication between the software application (the sequencer) and the hardware (the synthesizer).

The MIDI Mapper offers another option: instead of directing MIDI data to your synthesizer's driver, you can send it to the MIDI Mapper. To the Windows application, the MIDI Mapper appears to be a software driver.

The MIDI Mapper intercepts data from the software application and passes it on to your synthesizer's driver. What is the purpose of this extra step?

Before sending data along to the synth's driver, the MIDI Mapper can translate or re-map it. Depending on how you configure the MIDI Mapper, it can re-direct data (change its destination), it can halt data (prevent it from reaching your synthesizer) or it can just pass the data along unchanged. You can re-map channels, patch assignments and even individual keys — all independently of each other. This re-mapping function lets you reconcile differences between a MIDI file and your MIDI hardware.

For example, suppose all your MIDI files have drums on channel 10, but the drum channel on your synth is channel 16. You could use your sequencing software to open, edit and save every one of your files

individually — changing channel 10 to channel 16, dozens or possibly hundreds of times.

A far less tedious solution would be to create a MIDI Mapper Setup that always re-maps data from channel 10 to channel 16. This approach offers two advantages:

- In one step you've made it possible for all the MIDI files to play on your synthesizer.
- Because you didn't alter the MIDI files, they will still play correctly on other synths.

The same file, in fact, can play correctly on any synth that has its own correctly configured setup. Because you can create and save as many setups as you wish and switch among them as needed, you can play the same file on a variety of synthesizers.

The Windows User's Guide and the MIDI Mapper's help file explain how to operate the MIDI Mapper. Consult these sources to set your MIDI Mapper correctly for your configuration.



*All your setups are saved in a single file called **MIDIMAP.CFG** in your **WINDOWS\SYSTEM** directory.*

*Always make a backup copy of **MIDIMAP.CFG** before you change any MIDI hardware or software.*

Windows 95 MIDI Configuration Screen

Beginning with Windows 95, the MIDI Configuration dialog box replaces the MIDI Mapper utility, but it has different capabilities.

You can open the MIDI Configuration screen by selecting Multimedia from the Control Panel, then selecting the MIDI tab. In the MIDI Tab window you select the Custom Configuration option button and then click the Configure button. The MIDI Configuration dialog box opens.

Selecting a channel and clicking the Change button opens the Change MIDI Instrument Dialog box where you can set the driver assignments for the selected channel.

Digital Audio

Digital Audio differs from MIDI in that it records sound, not a sequence of commands.

The hard drive is the storage medium; it serves the same function as tape does in a conventional tape recorder, but with one major difference: Sound, which occurs in nature as a series of waves, must be converted to a series of numbers that your computer can read.

To do this, most PC-based digital audio hardware uses a technique called Pulse Code Modulation, or PCM. (That's why digital audio is sometimes referred to as "PCM audio.") Incoming electrical signals in the form of waves (analog signals), such as those from a microphone, are turned into numbers by a circuit called an Analog to Digital Converter (ADC) and saved in computer memory. These numbers can be saved in a file, and you can manipulate this data as easily as you would text in a word processor.

When you play the file, a Digital to Analog Converter (DAC) converts the numbers back into analog electrical signals. Audio equipment then amplifies these signals and sends them to speakers or headphones, where you hear them as sound.

Data Formats

The digital audio files most commonly used by Windows are called Wave files, identified by the .WAV file extension. Another type is the .VOC file, originally developed by Creative Labs for their Sound Blaster™ products, and widely supported by other manufacturers. Among digital audio files there are various data formats available. Each data format has four defining characteristics:

Sample Rate — To record sound, the ADC must select and measure a *sample* (a discrete instant in the sound wave), and store its *amplitude* (a measure of its loudness) as a number in your computer. To capture a sustained interval of sound, this process must be repeated very rapidly. The *sample rate* is the frequency with which the sampling process occurs.

Sample rates are generally expressed in *Kilobertz*, or thousands of cycles per second. A typical digital audio recording might be sampled at 11,025 Hz (samples per second), or 11.025 kHz. Generally, higher sample rates produce better sound fidelity, but a high sample rate can generate so much data that it can outpace the processor of your computer or overrun the capacity of your hard disk.

Bit Length — The amplitude of each sample is expressed as a number and, like all values stored in a computer, these are binary numbers. The electronic “digits” that represent numbers are called *bits*. Bit resolution (also called “bit length” or “sample size”) is the number of binary digits that make up each sample. Eight bits can represent a range of values from 0 to 255, while sixteen bits can represent values from 0 to 65,535. Most digital audio programs, including Voyetra’s Digital Orchestrator Plus,™ now use 16 bits as a standard.

With the larger bit lengths, digital audio data can be measured more precisely. As an illustration, imagine two tape measures. Both are 10 feet long, but one is marked with 255 divisions, the other with 65,535. Although both may be perfectly *accurate*, the latter is more *precise*. The larger bit lengths provide better sound fidelity, but again, there’s a price—your system must process more data.

Compression — To speed processing of large amounts of data, many sound cards use *data compression* to reduce the size of the data files. Before the data is stored, some of it is removed and, on playback, this data is artificially restored.

Because you cannot edit compressed data, AudioView does not support this feature. However, if you export recorded data as a WAV file you can use compression software on the resulting data. Your system—and any others on which the file will be played—must have the necessary hardware and software to work with the compression format you select.

Mono or Stereo — Stereo digital audio consists of two sets of data working together, one assigned to the left channel, the other to the right. Thus, at a given sample rate and bit length, a stereo file requires twice as much data as its mono equivalent. Again, you face the issues of computer system speed and hard disk storage capacity whenever you work with stereo files.

Appendix B

General MIDI Instrument Sets

General MIDI Patch Set

The General MIDI Patch Set was designed to ensure compatibility between files by defining a common set of instrument names and MIDI numbers. This means, for example, that if you set a track to Patch #4, “Honky-tonk Piano,” it should sound pretty much the same when played on any other General MIDI synthesizer or sound card.

These instrument sounds correspond to the numbers in the Instrument row in MIDI Orchestrator.

For more information on setting patches, refer to the section on “Assigning Instrument Sounds with the Instrument Selector” in the chapter on MIDI Orchestrator.

PIANO	BASS	REED
1 Acoustic Grand Piano	33 Acoustic Bass	65 Soprano Sax
2 Bright Acoustic Piano	34 Electric Bass (finger)	66 Alto Sax
3 Electric Grand Piano	35 Electric Bass (pick)	67 Tenor Sax
4 Honky-tonk Piano	36 Fretless Bass	68 Baritone Sax
5 Rhodes Piano	37 Slap Bass 1	69 Oboe
6 Chorused Piano	38 Slap Bass 2	70 English Horn
7 Harpsichord	39 Synth Bass 1	71 Bassoon
8 Clavinet Chromatic	40 Synth Bass 2	72 Clarinet
 PERCUSSION	 STRINGS	 PIPE
9 Celesta	41 Violin	73 Piccolo
10 Glockenspiel	42 Viola	74 Flute
11 Music box	43 Cello	75 Recorder
12 Vibraphone	44 Contrabass	76 Pan Flute
13 Marimba	45 Tremolo Strings	77 Bottle Blow
14 Xylophone	46 Pizzicato Strings	78 Shakuhachi
15 Tubular Bells	47 Orchestral Harp	79 Whistle
16 Dulcimer	48 Timpani	80 Ocarina
 ORGAN	 ENSEMBLE	 SYNTH LEAD
17 Hammond Organ	49 String Ensemble 1	81 Lead 1 (square)
18 Percussive Organ	50 String Ensemble 2	82 Lead 2 (sawtooth)
19 Rock Organ	51 SynthStrings 1	83 Lead 3 (calliope lead)
20 Church Organ	52 SynthStrings 2	84 Lead 4 (chiff lead)
21 Reed Organ	53 Choir Aahs	85 Lead 5 (charang)
22 Accordion	54 Voice Oohs	86 Lead 6 (voice)
23 Harmonica	55 Synth voice	87 Lead 7 (fifths)
24 Tango Accordion	56 Orchestra Hit	88 Lead 8 (bass + lead)
 GUITAR	 BRASS	 SYNTH PAD
25 Acoustic Guitar (nylon)	57 Trumpet	89 Pad 1 (new age)
26 Acoustic Guitar (steel)	58 Trombone	90 Pad 2 (warm)
27 Electric Guitar (jazz)	59 Tuba	91 Pad 3 (polysynth)
28 Electric Guitar (clean)	60 Muted Trumpet	92 Pad 4 (choir)
29 Electric Guitar (muted)	61 French Horn	93 Pad 5 (bowed)
30 Overdriven Guitar	62 Brass Section	94 Pad 6 (metallic)
31 Distortion Guitar	63 Synth Brass 1	95 Pad 7 (halo)
32 Guitar Harmonics	64 Synth Brass 2	96 Pad 8 (sweep)

SYNTH EFFECTS

97 FX 1 (rain)
98 FX 2 (soundtrack)
99 FX 3 (crystal)
100 FX 4 (atmosphere)
101 FX 5 (brightness)
102 FX 6 (goblins)
103 FX 7 (echoes)
104 FX 8 (sci-fi)

ETHNIC

105 Sitar
106 Banjo
107 Shamisen
108 Koto
109 Kalimba
110 Bagpipe
111 Fiddle
112 Shanai

PERCUSSIVE

113 Tinkle Bell
114 Agogo
115 Steel Drums
116 Woodblock
117 Taiko Drum
118 Melodic Tom
119 Synth Drum
120 Reverse Cymbal

SOUND EFFECTS

121 Guitar Fret Noise
122 Breath Noise
123 Seashore
124 Bird Tweet
125 Telephone
126 Helicopter
127 Applause
128 Gunshot

General MIDI Drum Note Map

Like the General MIDI Patch Set, the General MIDI Drum Note Map ensures that the drums you designate in your MIDI file will sound the same when played back on other General MIDI sound cards or synthesizers.

The drum sounds correspond to the piano keys on the vertical keyboard in the Piano Roll screen. If you have a General MIDI (GM) instrument and set the track to Channel 10, these drum sounds will play when you insert notes in the Piano Roll screen.

MIDI #	KEY/ Octave	Drum Sound
35	B2	Acoustic Bass Drum
36	C3	Bass Drum 1
37	C#3	Side Stick
38	D3	Acoustic Snare
39	D#3	Hand Clap
40	E3	Electric Snare
41	F3	Low Floor Tom
42	F#3	Closed Hi-Hat
43	G3	Hi Floor Tom
44	G#3	Pedal Hi-Hat
45	A3	Low Tom
46	A#3	Open Hi Hat
47	B3	Low-Mid Tom
48	C4	High-Mid Tom
49	C#4	Crash Cymbal 1
50	D4	High Tom
51	D#4	Ride Cymbal 1
52	E4	Chinese Cymbal
53	F4	Ride Bell
54	F#4	Tambourine
55	G4	Splash Cymbal
56	G#4	Cowbell
57	A4	Crash Cymbal 2
58	A#4	Vibraslap

MIDI #	KEY/ Octave	Drum Sound
59	B4	Ride Cymbal 2
60	C5	High Bongo
61	C#5	Low Bongo
62	D5	Mute High Conga
63	D#5	Open High Conga
64	E5	Low Conga
65	F5	High Timbale
66	F#5	Low Timbale
67	G5	High Agogo
68	G#5	Low Agogo
69	A5	Cabasa
70	A#5	Maracas
71	B5	Short Whistle
72	C6	Long Whistle
73	C#6	Short Guiro
74	D6	Long Guiro
75	D#6	Claves
76	E6	High Wood Block
77	F6	Low Wood Block
78	F#6	Mute Cuica
79	G6	Open Cuica
80	G#6	Mute Triangle
81	A6	Open Triangle

General MIDI Controller Types

General MIDI Controller Types are specified with numbers from 0-127 and control various instrument parameters such as pitch bend, effects depth, and volume.






The chart below lists the controller types, their numbers, name and possible values.




#	NAME	POSSIBLE VALUES
1	MOD WHEEL	0 - 127
2	BREATH	0 - 127
4	FOOT PEDAL	0 - 127
5	PORTAMENTO TIME	0 - 127
6	DATA SLIDER	0 - 127
7	MAIN VOLUME	0 - 127
8	CONTINUOUS RELEASE	0 - 127
10	PAN	0 - 127
11	EXPRESSION CONTROL	0 - 127
64	SUSTAIN	0 = off/127 = on
65	PORTAMENTO SWITCH	0 = off /127 = on
66	SUSTENUTO SWITCH	0 = off /127 = on
67	SOFT SWITCH	0 = off /127 = on
68	2ND RELEASE SWITCH	0 = off /127 = on
84	PORTAMENTO	0 - 127
91	EFFECTS 1 DEPTH	0 - 127 (Normally Reverb)
92	EFFECTS 2 DEPTH	0 - 127
93	EFFECTS 3 DEPTH	0 - 127 (Normally Chorus)
94	EFFECTS 4 DEPTH	0 - 127
95	EFFECTS 5 DEPTH	0 - 127
96	DATA PLUS	0 = off/127 = on
97	DATA MINUS	0 = off/127 = on
121	RESET ALL CONTROLLERS	normally 0
123	ALL NOTES OFF	normally 0
124	OMNI MODE OFF	normally 0
125	OMNI MODE ON	normally 0
126	MONO MODE ON	0/all voices to mono
127	POLY MODE ON	normally 0

Appendix C

Shortcut Keys

The following keyboard shortcut keys correspond to the Transport Control buttons on the Players.

Transport Control	Keyboard Shortcut	Action It Performs
	W	Rewinds the file/track to the beginning by increments, quickly.
	S	Stops playback of the file/track.
	P	Plays the file/track from the current position.
	A	Pauses playback of the file/track at the current cursor position. To resume playing, press Pause again.
	F	Moves the cursor position forward, quickly.

	R	Activates Record Standby; prepares to record MIDI files with MIDI Player. Recording begins when the Play button is pressed.
	T	Jumps back to the previous event in the playlist.
	N	Jumps forward to the new event in the playlist.



You can use the TAB key to highlight each button from left to right. To activate the highlighted button, press the Spacebar. When the volume control is highlighted, use the arrows keys to move the sliders up or down.

Appendix D

Setting Up Your MIDI Keyboard

To fully utilize the features of MIDI Orchestrator and the MIDI Player, you'll need to have a MIDI keyboard properly connected to your PC.

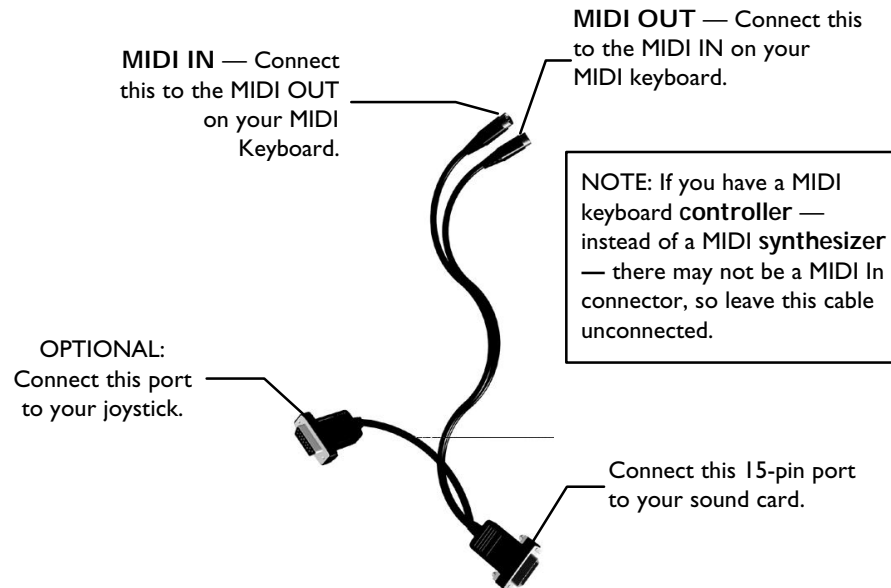
A MIDI adapter cable attaches the keyboard to your PC. This cable uses the joystick port on your sound card as a MIDI interface. One end of the cable has a multipin connector which attaches to the sound card. The other end of the cable has two connectors — MIDI In and MIDI Out — which are connected to the MIDI keyboard.



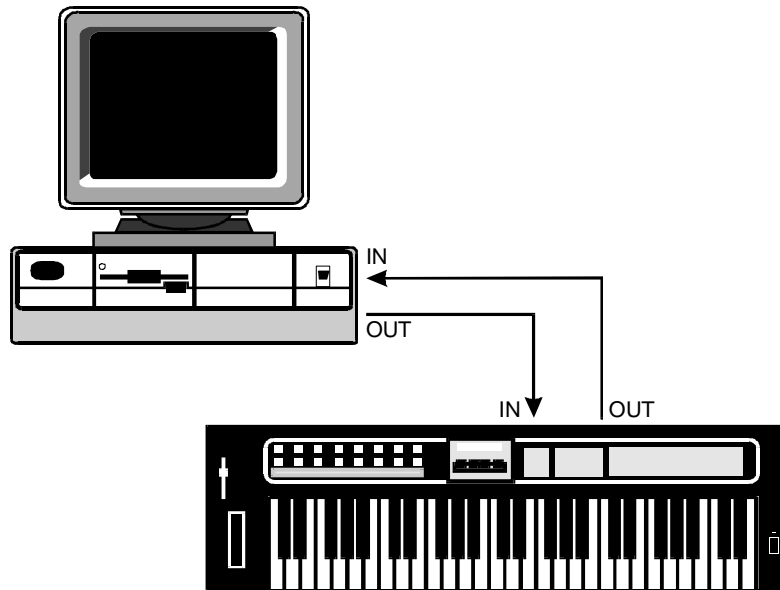
If you need a MIDI adapter cable — or a MIDI keyboard — you can purchase one at your local computer store or you can order one directly from Voyetra. See page ii at the front of this manual for information on how to contact Voyetra Technologies.

Making the Connections

The following illustration describes how to connect a MIDI cable.



To view a video which demonstrates how to connect the MIDI adapter cable, see “MIDI Cable Installation Video” which follows.



Typical MIDI setup with a musical keyboard.

MIDI Cable Installation Video

MediaCheck, Voyetra's multimedia diagnostic utility program which automatically installs on your system when you install AudioStation 2, includes a video which demonstrates how to connect a MIDI keyboard to your PC.



In order to watch the video, the AudioStation CD must be in your CD-ROM drive!

To View the Video:

1. Put the AudioStation disc in the CD-ROM drive.
2. In the Voyetra program group, click the icon for MediaCheck.
3. In MediaCheck, click Setup Tips at the bottom left of the screen.
4. When asked if you want to view instructions on setting up your external keyboard, click Yes.
5. Sit back and watch the video!



Unlike the other AudioStation video tutorials which can be accessed from the Online Video Tutorials icon in the Voyetra AudioStation program group, this video can only be accessed directly from within MediaCheck!

Appendix E

Troubleshooting

Fortunately, the situations that cause the most multimedia problems are among the easiest to fix. Start your troubleshooting journey with the general suggestions below. If you still have problems, look up the specific symptoms you're experiencing.

Throughout the troubleshooting process, don't forget another valuable resource — the hardware manuals that came with your sound card or other peripherals.

First Things First...

First, confirm that your sound card is connected to a working output device such as headphones, speakers or an amplifier with speakers. If you are using speakers, make certain that they:

- Are plugged into the correct port on your sound card.
- Are turned on and have the volume set to an adequate level.
- Have their own source of power. Most sound cards can supply enough power for headphones, but not for external speakers. Depending on the type, your speakers will need to be plugged into a wall outlet or an amplifier, or will be powered by batteries.



If you must use headphones when testing your multimedia devices, we advise you not to place them directly on your ears. The volumes produced can cause hearing damage.

If the speakers are not the problem, then you will have to check your multimedia devices. To do so, you can use:

- Windows® Media Player
- Voyetra's MediaCheck™

Media Player

There are three devices you can test using the Windows Media Player: the MIDI Sequencer, digital audio (Sound), and Video.

To Open the Media Player in Windows 3.1:

1. Double-click the Accessories program group.
2. Double-click the Media Player icon.

To Open the Media Player in Windows 95:

1. Click Start.
2. Point to Programs. Point to Accessories. Point to Multimedia.
3. Click Media Player. Media Player opens.

To Test Multimedia Devices with Media Player:

1. Click Device to display the multimedia devices on your system. If you do not see Sound, Video for Windows or MIDI Sequencer listed in the menu, they are not properly installed on your system. Refer to your user's manual or contact your hardware manufacturer for assistance.
2. Click the name of the device — Sound, Video for Windows, or MIDI Sequencer — you want to test.

-
3. Locate a file of the type of media you want to test and click Open.
 4. Click the Play button. If you hear the sound or MIDI or see the video, the drivers are installed and working properly. If any of these multimedia devices fail to operate correctly, contact your hardware manufacturer.

Setting the Mixer

Some of the basic problems that occur with multimedia applications can easily be remedied by checking the Windows 95 mixer. With the mixer, you can control the volume of the different components on your computer's sound system.

Windows 3.1 does not include a mixer, although many sound cards include mixer applications for Windows 3.1. If you are running Windows 3.1, check your sound card's documentation to determine if you have a mixer and how to access it.

In Windows 95, the Audio Mixer included with AudioStation does emulate the Windows Sound System, and it can be use to set volumes on the different multimedia components. However, we suggest that you use the Windows Sound System volume controls when testing each device's volumes. This ensures that everything is working properly. If the Windows Sound System does not work correctly, neither will the Audio Mixer.

To Open the Windows 95 Mixer:

1. Click Start.
2. Point to Programs. Point to Accessories. Point to Multimedia.
3. Click Volume Control. Make any necessary changes from the Volume Control Panel.

Troubleshooting the Mixer

“ The sound is too low or I don’t hear any sounds at all. ”

“ Some of my components work, but others do not. For example, I can hear MIDI but I cannot hear WAV (digital audio). ”

Possible Problem

The mixer settings are too low or some of the components are muted.

Possible Solution

Check the mixer to make sure all of the components’ volumes are at least half way to the top. Also, check that none of the components are muted. In particular, check the Master volume setting if there is one.

“ MIDI and WAV (digital audio) files do not play simultaneously. ”

Possible Problem

The sound card cannot support the simultaneous playing of MIDI and WAV.

Possible Solution

Open two instances of Media Player. In one play a MIDI file, in the other play a WAV file. If they do not play simultaneously, contact your sound card manufacturer.

“ I don’t see all the components when I run AudioStation. ”

Possible Problem

The component is not activated.

Possible Solution

On AudioStation’s Power Bar, click the icon for the component to activate it. When a component is active, the light on its icon is lit.

Troubleshooting MIDI

“ I can’t find the connectors to hook my sound card and my MIDI keyboard together. ”

Possible Problem

Your keyboard is not a MIDI device. Not all synthesizers or electronic keyboards support MIDI.

Possible Solution

Look for round MIDI plugs labeled MIDI IN, MIDI OUT or MIDI THRU. They are usually found on the back panel of the MIDI keyboard. If your keyboard is not equipped with these plugs, you will not be able to hook your keyboard to your computer.

Possible Problem

Your sound card did not come with a MIDI connector cable.

Possible Solution

Most sound cards don’t have MIDI connectors. A special adapter cable that connects to the joystick port is used instead. The manufacturer of your sound card can probably provide you with one, or you can purchase one from Voyetra.

“ I’m getting sound, but there’s interference with it. ”

Possible Problem

A hum, hissing or other constant undertone of noise usually indicates electrical interference or a hardware malfunction.

Possible Solution

Increase the sound card’s output level and lower the amplifier’s volume. If that doesn’t help, try it the other way around.

If you are not able to resolve this problem, contact the hardware manufacturer.

“ Music files that work with other Windows programs or tracks from my CD player won’t load into MIDI Orchestrator.”

Possible Problem

You tried to open a file that isn’t supported by MIDI Orchestrator.

Possible Solution

Be sure the file is a valid MIDI file with a .MID, or .ORC extension. Digitally recorded sound files — those with WAV, VOC extensions, or CD Audio Tracks — can’t be used by a MIDI sequencer.

“ I cannot record from my MIDI keyboard. ”

“ I do not hear anything when I play my MIDI keyboard. ”

Possible Problem

Your sound card isn’t connected to an output.

Possible Solution

Be sure your sound card is connected to a working output device such as headphones, speakers or an amplifier with speakers — and that you are using self-powered speakers. The sound card’s amp isn’t designed to power external speakers.

Possible Problem

Your MIDI cables are not plugged in correctly.

Possible Solution

Make sure that the MIDI cable runs from the MIDI keyboard’s MIDI Out to the computer’s MIDI In and vice versa.

Possible Problem

Your synthesizer is not set up to transmit MIDI.

Possible Solution

Some MIDI instruments send and/or receive MIDI data automatically, or can be configured to do so. Others require that you take specific steps to transmit MIDI each time you turn on the synthesizer. Check your MIDI instrument's instructions to find out how to set it up to transmit MIDI. The salesperson who sold you the MIDI instrument may also be helpful.

Possible Problem

Your synthesizer and computer are set to different MIDI ports and/or channels.

Possible Solution

Make sure that MIDI Orchestrator's MIDI Input, which can be set in the Options menu, is set to the same input that your MIDI instrument is connected to.

Possible Problem

The MIDI drivers are not properly configured.

Possible Solution

Run MediaCheck to diagnose and fix the problem.

Possible Problem

There is no power to the MIDI keyboard.

Possible Solution

Check to make sure the MIDI keyboard is plugged in and turned on.

“ I can hear music when I play my MIDI keyboard, but I can't record. ”

Possible Problem

You have not selected a track for recording.

Possible Solution

Be sure that the Record button for a channel module is selected.

Possible Problem

Your synthesizer is sending on one channel and/or port and the software is set to receive on another.

Possible Solution

Be sure you know which port and channel your synth is using to send MIDI data and that the track you've selected for recording has the same settings. MIDI Orchestrator sends MIDI data through the device configured in the MIDI Mapper (in Windows 3.x) or the MIDI Configuration Screen (Windows 95). Check these settings to make sure the MIDI data is being properly routed.

“Some of the tracks on my MIDI Orchestrator are grayed out. Why?”

Possible Problem

Your MIDI Mapper is not setup properly.

Possible Solution

MIDI Orchestrator is designed to play on 16 tracks. If a few are grayed out, it is due to the set up of your MIDI Mapper. Most sound cards are optimized for the MIDI Mapper configuration of Extended MIDI; that is, they will play on tracks 1 through 10 only. This is to ensure you get the best sound quality.

Run MediaCheck to determine the best setting for your sound card.

“When playing a MIDI file I don't hear anything.”

Possible Problem

The MIDI file is an Extended Level file and your sound card is set up for Base Level, or vice-versa.

Possible Solution

Run MediaCheck to help diagnose and resolve the problem.

“ When I change the patch on one track, some of the other tracks change too. ”

Possible problem

You have assigned several tracks to the same channel. (This isn't really a problem—the program is designed to work this way.)

Possible solution

Assign the track to a different channel. Patches are assigned to *channels*, not to tracks, so when you change a patch, you change it for every track assigned to that channel.

“ When I play the MIDI keyboard, I hear a strange echo or the notes sound doubled-up — thicker. Sometimes I run out of voices and not all the notes sound. ”

Possible problem

Your MIDI file contains a Base-Level and an Extended Level arrangement, and you're trying to play both of them at the same time.

Possible solution

Set the MIDI Mapper in Windows 3.1, or the MIDI Configuration in Windows 95, to play only channels 1 through 10, or only channels 13 through 16. MediaCheck can help you determine which option is correct for your situation.

Possible problem

The MIDI data arriving at the MIDI In is echoed to the MIDI Out.

Possible solution

If you are using a keyboard controller, try turning the local control off. See the documentation for the keyboard to do this.

“It sounds as if tracks are missing from my MIDI file. Also, other parts sound very strange and there are no drum sounds.”

Possible Problem

Your MIDI Mapper in Windows 3.1 or the MIDI Configuration in Windows 95 is not set up properly; you're trying to play an Extended-Level arrangement on a Base-Level synth.

Possible Solution

In Windows 3.1, check that the MIDI Mapper is set up correctly for your sound card.

In Windows 95, check that the MIDI configuration is set up correctly for your sound card.

Possible Problem

The file could just be too complex for your synth.

Possible Solution

Edit the file so it doesn't demand as many simultaneous notes and/or instruments from your synth.

Troubleshooting Video

“ Videos do not play. ”

Possible Problem

Video for Windows is not installed.

Possible Solution

Run SETUPFW.EXE from the VFW directory on the CD.

“ I can see the video, but I do not hear any sound. ”

Possible Problem

Your mixer is set too low.

Possible Solution

Check the mixer and increase the output volume setting for WAV.

“ My video playback skips. ”

“ The sound and the video are not in sync. ”

Possible Problem

Your system is too slow.

Possible Solution

Close any other applications which are open. Also, close any TSRs (Terminate and Stay Resident programs) such as screen savers.

Use a 2x (double-speed) or faster CD-ROM.

Troubleshooting Digital Audio



The following items can help resolve the digital audio problems you may be having with WAV Player. If any of these problems occur and you need to change the format or tune the performance of a WAV file, launch AudioView. AudioView lets you make changes to the performance and formatting of a WAV file.

“ I cannot hear any digital audio. ”

Possible Problem

You do not have the correct drivers installed.

Possible Solution

Check to make sure you have the latest drivers for your sound card. Use MediaCheck to determine the dates of the drivers installed.

Run Media Player and test the device labeled Sound. If Sound does not work, contact your sound card manufacturer.

“ The sound sometimes stutters and/or stops. ”

Possible Problem

Your system may be too slow. The demands of recording and editing digital audio can tax many computer components, particularly older, slower ones.

Possible Solution

Close any open applications.

Check to make sure you have the latest drivers for your sound card.

“ The sound is garbled. ”

Possible Problem

If sound suddenly stops or “stutters,” and/or locks up your computer, you probably have a hardware conflict—more than one device trying to use the same IRQ, I/O address or DMA channel.

Possible Solution

Check your user’s manual or contact your hardware manufacturer for help on how to resolve these type of problems.

“ I have received one of the following error messages —
“Unsupported Audio File Format,” “ Invalid Bit Length,”
“Invalid Sample Rate.” ”

Possible Problem

If you try to play a file whose format (sample rate, bit length, mono/stereo setting, etc.) is not supported by your sound card, AudioView will display one of the above error messages. This is more likely to occur with files created on a different system.

Possible Solutions

You may need to re-create or convert the file. Check the hardware documentation to determine the digital audio capabilities of your sound card and use a format that it supports.

“ My file starts to play and then quits. ”

“ Sound seems to cut in-and-out or sounds broken up. ”

“ I received the message “Disk could not keep up with digital audio.” ”

Possible Problem

These symptoms usually stem from the speed requirements of digital audio. A 16 bit, 44 kHz file, for example, moves almost 100K of data per second through the computer system, pushing computers, hard drives and CD drives to their limits.

Possible Solutions

Close any Windows applications that you are not using.

Reduce the screen display's demands.

Disable the Record VU or Playback VU, and select No Wave from the Options menu in AudioView.

Decrease the sample rate.

If you are attempting to record 16-bit audio, try switching to 8-bit.

If you're recording in stereo, try switching to mono.

Troubleshooting CD Audio

“ My CD won't play.”

Possible Problem

The material loaded may not be compatible with an audio CD.

Possible Solution

Because CDs can store different kinds of material, the phrases “Playing an audio track” and “Playing a game” describe different kinds of activity:

To play Redbook Audio tracks , that is, recordings on CDs that you would buy in a record store—use CD Player.

To play games—in other words, to run software programs designed for recreation or education, don't use the CD Player application. Consult the instructions that came with the game CD to find out how to install and/or run the game or program.

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