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Click the **Rack** button above to view the Rack in a secondary window

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## The Rack: Components, Commands & Controls

**Sound advice**

## Rack components

## Sound advice...

# Rack components

Click on any component or label to call the main topic for that component.   For definitions click the titles.

# Rack components

**>> Contents**

Click on a component or label to call the main topic for that component.   For definitions click the titles.

**TITLE PANEL**



**MIXING PANEL**



**WAVE RECORDER/PLAYER**



**MIDI PLAYER**



**CD PLAYER**

**Title Panel**
   Offers file and screen management functions through a menu bar and
   button bar.   Either bar can be hidden.

# Title Panel diagram

# Title Panel

 Click for diagram

Sound Impression's topmost component offers a range of basic file and screen management functions.

A menu bar lets you use either your mouse or shortcut keys to activate these functions.   Several of the menu items are also available on the button bar.

All menu commands except File|Exit have button equivalents elsewhere in the program
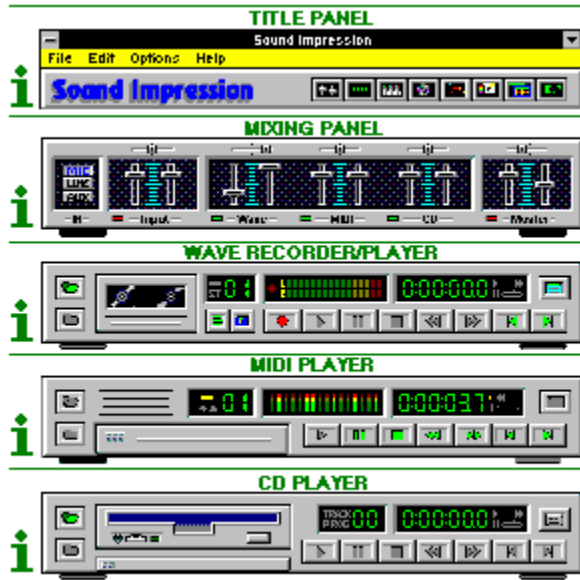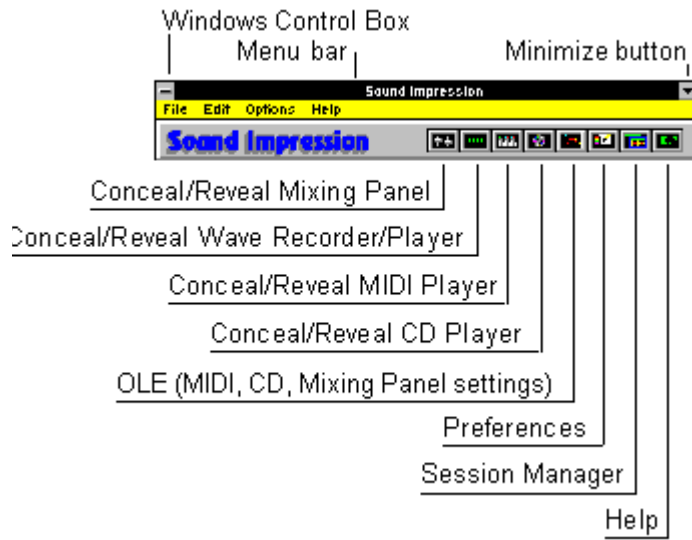
To access menu bar items using your keyboard, press the Alt key, then the first letter of the menu bar item, then the access character (the underlined character) for the dropdown item you need.   For example, pressing Alt,E,W calls the Waveform Editor.

*Important:* Menu shortcut/access key combinations will only work if the main screen has the focus-- that is, if the main Sound Impression screen is the selected window on your desktop.   If the main screen does *not* have the focus, your key command will be sent to whatever other window *does* has the focus.   This mistake can produce undesired results.   You could, for example, mistakenly close some other application by pressing Alt,F,X   or Alt+F4 when the intention was to close Sound Impression.   To avoid such problems, make sure you have the correct window selected before sending key commands.

## Menu bar items

Click any of the items on the list below for descriptions of menu items and their button equivalents.

File menu

Edit menu

Options menu

Help menu

Control box and the Minimize button

## Hiding the Title Panel

Both the menu bar and button bar are visible by default, but either can be switched on or off.

To hide the menu bar for subsequent sessions, use the Preferences dialog.

To turn off the button bar (along with the rest of the Title Panel interface except the title bar and menu bar), choose the Title Panel item in the control box menu.   This turns off the button bar and background panel for the current session only.

# Minimize/maximize
# and control box functions

You can open the control box menu either by clicking the "hyphen" button in the top left corner of any window or by pressing Alt,Spacebar.    Control box functions can be implemented with key combinations by pressing an access key (an item's underlined key) after opening the box with Alt,Spacebar.    Some items, such as Close, also have "hot key" combinations that allow direct keyboard implementation.

- **Minimize** (Alt,Spacebar,N), reduces a window to an icon.    The command is also available via a button on the upper right corner.    When a window is minimized you can access its control box functions by clicking its icon or pressing Enter when the icon is selected.    To select an iconized window using the keyboard, press Alt+Tab until the title of the icon you want is highlighted.    You can close Sound Impression while the Rack is iconized by highlighting the Rack icon and pressing Alt+F4.

- **Maximize** (Alt,Spacebar,X).    Waveform Editor only.    Maximize enlarges an edit session to full screen, allowing you to perform more detailed editing tasks.    When a session is maximized, you can reduce it again by clicking the Minimize button (or choosing the Minimize command from the control box), which reduces the session to an icon, or you can click the Restore button (or choose Restore from the control box) to reduce the session to the size it was before it was maximized. *Note:* The Rack window size is fixed (it can't be enlarged or reduced, except to an icon), so this item is disabled in its control box menu.

- **Restore** (Alt,Spacebar,R) replaces Minimize as an enabled item when a window is minimized. Restore brings the window out of its iconized state and restores it to what it was before it was minimized.

- **Move** (Alt,Spacebar,M) lets you drag a window to another position on your desktop.    *Note:* a window can also be repositioned by clicking and dragging its title bar.

- **Size** (Alt,Spacebar,Z).    Waveform Editor only.    Size lets you use your arrow keys to enlarge or reduce the area of an edit session window.    You can also resize an edit window by clicking and dragging its borders.    You can reduce the size of an edit window that you've previously enlarged, but you can't make it any smaller than its default size.    *Note:* The Rack window size is fixed (it can't be enlarged or reduced, except to an icon), so this item is disabled in its control box menu.

- **Close** (Alt,Spacebar,C or Alt+F4).    Rack only.    Ends your Sound Impression session.    You can also quit Sound Impression by choosing Exit from the Title Panel's File menu (Alt,F,X).    *Note:* If you have unsaved work in any Waveform Editor window, you'll be warned of the fact and asked if you want to save your work before the program quits.    You'll also be prevented from using Close or Exit while a file or CD track is playing; you either have to stop the sound or wait until it is finished playing.

- **Switch To...** (Ctrl+Esc) lets you switch to another program or through the Windows Task List.

- **Always On Top** (Alt,Spacebar,T) allows a window or edit session to remain "in front" of other windows on the desktop, even if you select a window behind the one that has this attribute set. When more than one window is designated Topmost, the active window has precedence and will cover others that have the attribute set.    Always On Top also keeps your icons on top of any open window, including maximized edit sessions that don't also have the attribute set.    The attribute can be toggled off any time.

- **Hide** (Alt+Spacebar,H) Waveform Editor window only.    Hiding a window removes both the window and its icon from view.    A hidden edit window retains its contents, and can be recalled any time from the Wave Recorder/Player by clicking Skip to switch to the window number, then clicking the Waveform Editor button to call the window forward.

- **About** (Alt,Spacebar,A) calls a message box that contains the version number of your copy of Sound Impression as well as some information about Sound Impression's developer.    This item is also available in the Title Panel's Help menu (Alt,H,A).

**Wave Recorder/Player**

In addition to being an easy-to-use wave recorder and player, this component serves as the gateway to Sound Impression's editing and composing departments.   The Wave Recorder/Player contains two sessions, which are always available for loading or recording.

# Wave Recorder/Player diagram
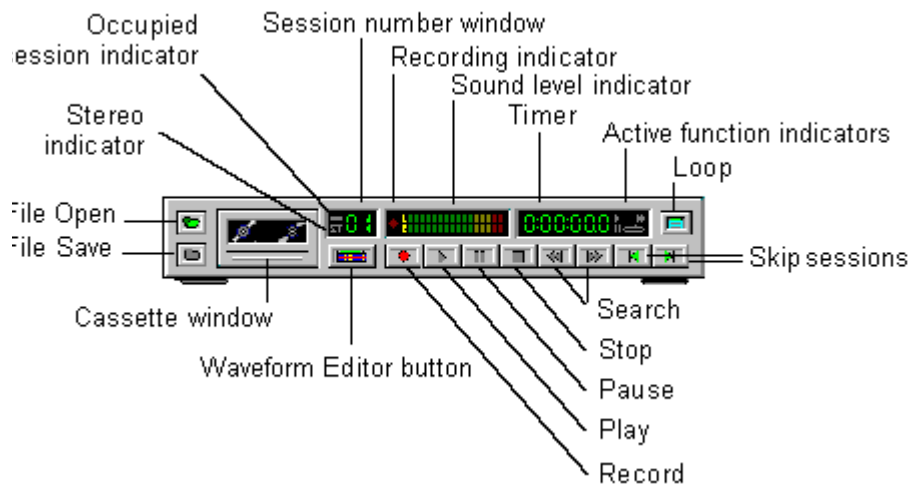
# Wave Recorder/Player

 Click for diagram

In addition to being an easy-to-use wave recorder and player, this component serves as the gateway to Sound Impression's editing and composing departments.   The Wave Recorder/Player contains two sessions, which are always available for loading or recording.

The Wave Recorder/Player uses files with the *.WAV extension, popularly known as "waves."

When you want to see your files or recordings in detail you can quickly call the Waveform Editor window window for the session you want to see.   You can also call a "blank" edit window into which you can load or record files, then use the edit window's full complement of waveform editing tools to adjust or enhance the file.   To call an edit window, choose the session number you want to see by clicking the Skip buttons on the Wave Recorder/Player, then click the Waveform Editor button beneath the session number display.

# Session number display

The Wave Recorder/Player's session number display contains three pieces of information:

- An occupied session indicator (the small oval in the upper left portion of the display) indicates whether or not the current session is occupied by a wave file, segment, or recording.   If the indicator is yellow, the session is occupied.   If it's gray, the session is unoccupied.

- A stereo format indicator.   If the characters "ST" (lower left portion of the display) are gray, as shown above, the current session is in mono format.   If the characters are yellow, the session is in stereo format.

- A session number indicator, which displays the number of the current session.   This is the session that will appear if you click the Waveform Editor button beneath the display.

# Wave Recorder/Player features and functions

File Open

File Save

Info Cassette

Session number display

Waveform Editor button

Record

Play

Pause

Stop

Search

Skip sessions

Loop

# File Open

Wave Recorder/Player (File Open), MIDI Player (File Open, Session Open)

Waveform Editor

On all components *other* than the CD Player, File Open calls a standard Windows file open dialog box from which you can load one or more sound files.

You can also call a file open dialog from the Title Panel's menu bar by choosing File and then selecting Wave (Alt,F,W) or MIDI (Alt,F,M).

The default MIDI File Open dialog lists files with the *.MID extension, but you can choose to list *.RMI (RIFF MIDI) files or *.MDS Play Lists.   To choose one of the alternative extensions, use the List Files of Type list box at the bottom of the dialog.   For more on *.MDS loading, see the last section of this topic.

On the CD Player, this button initializes a compact disc in your CD-ROM drive.

## Loading more than one wave at a time

To load two wave files into the Wave Recorder/Player at once:

1. Call File Manager (or equivalent file management utility).
2. Open a directory window for a directory containing several files with the *.WAV extension.   Place the window to one side, so that a portion of the Wave Recorder/Player is visible.
3. Select two files from the file list.
4. Holding down your left mouse button on any of the selected files, drag the selected files to any visible portion of the Wave Recorder/Player.   When the mouse pointer is on the component it changes to a "multipage" graphic.   At that point you can release the mouse button and the files will be loaded.

*Note*: If you select more than two files, only the first two (as they appear in the file list) will be loaded.

## Loading more than one MIDI file at a time

As many as eight *.MID or *.RMI files can be loaded into the MIDI Player at once.

You can use the same four steps listed above for multiple wave-loading (using MIDI files and the MIDI Player instead of wave files and the Wave Recorder/Player) or you can do it directly from the MIDI file open dialog box.

To select an entire directory of files or a group of files that appear consecutively in the dialog box's file list,   "sweep" the group by dragging your mouse down the list of files you want.   Another way is to click the top file of a group of files, then move to the bottom of the group, and, holding down the Shift key, click the last file of the group; the two selected files and all files in between will be highlighted.   Click OK and the entire group will be opened at once.

You can also choose individual files in a directory by holding down the Control key and clicking only the files you want.

Multiple file-opening can only be done from a single directory, and files will always load into the player in alphabetical order, regardless of the order in which they were selected.   As each file opens into the player, it assumes the next available track number (up to track number 8).

You can perform multiple file-opening on a group of files from one directory, then open a second directory and open another group.   The second group will be loaded--in alphabetical order-- beginning at the track number following the last file opened from the first group.

To load the same file or group of files several times, repeat the File Open or multiple file-opening procedure.

After opening a group you can examine the file order by calling the MIDI List, then change the order using the Program Panel.

## Loading a MIDI Session

The MIDI File Open button doubles as a session-opener, which lets you load entire track

arrangements (Play Lists) that were saved to disk as *.MDS files.

To load a previously saved MIDI session, choose *.MDS from the List Files of Type list at the bottom of the File Open dialog, then locate and select an *.MDS file.

Files currently loaded into the MIDI Player are removed and replaced by those in the *.MDS session load.

# File Save

**Saving waves: Wave Recorder/Player**

If the current session is occupied, the Wave Recorder/Player's File Save button calls a standard file save dialog box that lets you choose where and by what name you want to save the file or segment contained in the current session.

If the file in the current session was loaded from disk, the dialog box shows the directory and file name from which the file was loaded.   You can then choose to save the file under its current name (thus saving any edits or modifications to the file, if you made any), or choose a new name and location for the file.

If the current session is unoccupied, the button is unavailable.

**Auto-saving waves: Waveform Editor**

The File Save button, like its counterpart on the Wave Recorder/Player, is available only if the current session is occupied by a wave file or segment.   In addition, the button is grayed (unavailable) if the current session was loaded from an existing disk file and has not been edited or modified.

When the current session is edited or modified, the File Save button becomes available for automatically saving the changed file to its current directory location and under its existing name. **Important:** This "autosave" feature should be used with caution.   When you edit a file and then click this button, the previous version of the file is overwritten on disk by the changed version.   If you want to save an edited or modified version of a file under a new name, use File Save As instead.

**Safe wave saves (File Save As): Waveform Editor**

If you want to keep previous versions of an existing wave file, use the File Save As button after making any edits or modifications in a Waveform Editor window.

The Waveform Editor's File Save As button calls the same standard file save dialog box as the Wave Recorder/Player.

**Saving MIDI sessions: MIDI Player**

If the MIDI Player contains one or more files, the Session Save button calls a dialog box that lets you save the current track arrangement (the Play List) to a file with an *.MDS extension.

# Play  ▶

### Rack components (Wave Recorder/Player, MIDI Player, CD Player)

Plays the current track or selection.

Use the Skip buttons to locate the session or track you want to play, then use the Search buttons to locate the starting point.

When Play is active the mouse pointer changes to a set of headphones and elapsed time is shown in the Timer window.   On the Wave Recorder/Player, the Sound Level indicator is activated.

If playing a single track or session, the track or session automatically returns to the beginning when finished.   If Loop is active, play continues until you click either the Pause or Stop button.

### Waveform Editor

Playing waves in a Waveform Editor has the advantage of precision: You can set starting and ending points to less than a millisecond when playing sound in a Waveform Editor, while on the Wave Recorder/Player, the starting point can only be set to the nearest second.

To set the starting point and ending points in an edit window, you need only drag the mouse across the edit window to select the general portion of the wave you want to play, then use the Shift+Right Arrow or Shift+Left Arrow keys to expand or contract the selection to the exact points you need.

# Pause ▮▮

Interrupts play of a session or track on the active Rack component; also pauses a recording on the Wave Recorder Editor or in an edit session.

To resume playing or recording, press Pause again.

When activated on the Waveform Editor, the Pause button graphic changes to yellow.

When activated on a Rack component, a double-bar indicator light comes on in the right digital display window next to the component's timer, and the timer shows the point at which the track was interrupted.

While play is paused on a Rack component, you can still use the Search buttons to move forward or backward to another point in the current session or track, or you can click the Stop button to halt playing or recording.

# Stop

Immediately stops any playing or recording activity on the current track or session.   If Loop is active, Stop deactivates it.

*Note:* Your microphone on/off switch will cut off input, but it won't stop a recording.    You must press the Stop button to stop recording.

# Search

Takes you to a new point in time in the current session or track.   These buttons emulate the "fast forward" and "rewind" functions on an analog device.

A single click takes you forward or backward one second.   The component's timer shows the current point in time as you move.

# Skip  ⏮ ⏭

Moves you to the next session or track.

Press and hold your left mouse button on a Skip button to move forward or backward through all edit sessions on the Wave Recorder/Player or through all available tracks on the MIDI or CD players. The session or track number display changes as you skip.   To move one track or session at a time, use single clicks.

# Loop

Wave Recorder/Player, MIDI Program Panel, CD Program Panel

Waveform Editor

Click this button then click Play to run all occupied tracks in sequence in a continuous loop.   An indicator will light up in the digital display window.   You can use the Pause or Stop buttons to interrupt the loop at any time.

To deactivate the function, click the Loop button a second time.

The MIDI Player and CD Player Loop buttons are located on the Program Panels of the respective components.   To access the Program Panel, click the Show Program Panel button on the right side of the component (see note above).

You can add a *segment* of a Wave file to a loop by opening a Waveform Editor session and selecting a segment.   To deselect the segment and include the entire file in the loop, click anywhere in the session's Edit Area.

The Loop indicator in the Active Function area remains highlighted while Loop is active.

A running loop can be paused any time or stopped by clicking either the Loop or Stop buttons.

You can start a loop at any session number, but the playing order   will always follow the session number sequence (lowest to highest).   You can plan a loop sequence in advance by loading files in the order in which you want them played.

# Program Panel Entry

This button transforms the MIDI Player or CD Player into a programming panel that lets you select and arrange all current tracks.

The program panels also allow you to loop selected MIDI and CD tracks.

Details:

MIDI Program Panel

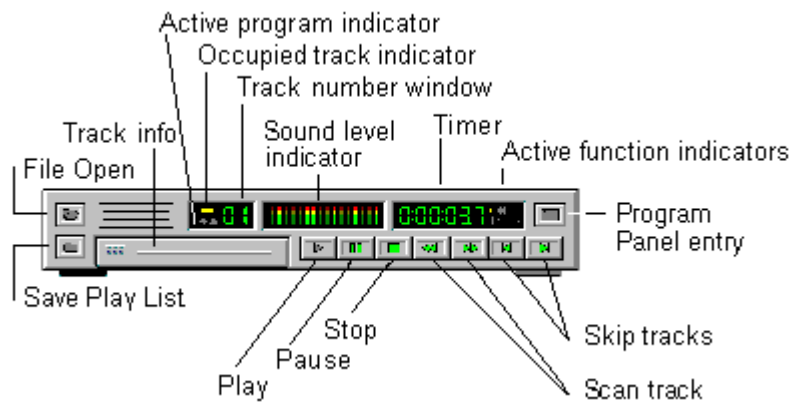CD Program Panel

**MIDI Player**

Plays single MIDI tunes or batches of *.MID or *.RMI files in a loop.
The component also offers a handy track list that lets you jump to any
displayed title, and a Program Panel in which you can select and
arrange tracks.   MIDI Play Lists can be saved to disk as *.MDS files.

# MIDI Player diagram

**Also see: MIDI Program Panel**

# MIDI Player

 Click for diagram

This component lets you load, select from and play as many as eight *.MID (general MIDI) or *.RMI (RIFF MIDI) files.

You can play your MIDI files one at a time or in a loop.   The component also offers a handy track list that lets you jump to any displayed title, and a Program Panel in which you can select and arrange tracks.   MIDI Play Lists can be saved to disk as *.MDS files.

**Playing a MID**

To open and play a single MIDI file,   click the File Open button on the MIDI Player and use the dialog box to locate a file with the .MID extension (the default offered in the dialog).

You can also call the file open dialog from the Title Panel's menu bar by choosing MIDI from the File menu (Alt,F,M).

Click the Play button to hear your MIDI tune.   Use the MIDI and Master sliding levers on the Mixing Panel to adjust volume and balance.

As the track plays, elapsed playing time is shown in the Timer window.

At any time, even while the current track is playing, you can move to any point in the track using the Search   buttons.

**MIDI player functions and features**

   File Open

   File Save

   MIDI Track Info

   Track Number

   Play

   Pause

   Stop

   Search

   Skip Tracks

   Program Panel entry

# About MIDI

The Musical Instrument Digital Interface (MIDI) standard provides a link between computers and traditional musical instruments.

MIDI files are composed of encoded instrument instructions, making them considerably smaller than digitally-sampled .WAV files.

Despite the small file sizes, this efficient, notation-based form of computer sound generation is capable of producing complex musical forms.   As the format of choice for many professional musicians and sound studios, MIDI files range in levels of sophistication from simple single-channel choral melodies to the most eloquent symphonic arrangements.

*.MID and *.RMI files can be found on most public and private bulletin board systems and information services.   Collections can also be obtained from many software and computer music dealers.

# MIDI Program Panel

Click for diagram

The Program Panel lets you select from all currently loaded MIDI files and arrange those files into a Play List.

The Panel is accessed by clicking the Program Panel entry button on the far right side of the MIDI Player.

The Program Panel consists of two rows of numbered windows and three buttons.

The bottom row of windows, the Selection List, represents all the files currently loaded into the MIDI Player.   If you have more than 12 files loaded, arrows appear at either end of the window row. Click the arrows to see additional window numbers.

The top row of numbers, the Play List, is where you organize the play order.   When you first call the panel, the Play List order is a duplicate of the Selection List.

You can reorder the Play List in the following ways:

- To remove any single track from the Play List row, click its numbered box.
- To add a track to the end of the Play List row, click a track number from the Selection List.   You can add the same track as many times as you like (up to the 99-track limit).
- To clear the Play List, click the "X" button on the right side of the panel.

You can also set the player to play your MIDI files in a continuous loop by clicking the Loop button on the right side of the Program Panel.   To exit the panel and return to the MIDI Player, click the Return button.

## Saving the Play List

You can save a Play List to disk using the Save Session button on the left side of the MIDI Player.

The Save MIDI Session dialog box lets you name your Play List and save it to any drive or directory (the default is the last directory from which you opened a file).

The default session extension is .MDS.   In order to avoid confusion when retrieving sessions, it is recommended that you use this extension.

To retrieve and load a saved session:

1. Click the File Open button to call the file open dialog.
2. Choose MIDI Session from the "List Files of Type:" box (to search for and list all files with the .MDS extension).
3. Choose your saved session and then click OK.   The session will be loaded and ordered just as you programmed it.

## Program Panel buttons

Loop. Click here before exiting the Program Panel and your Play List will be played in a continuous loop.
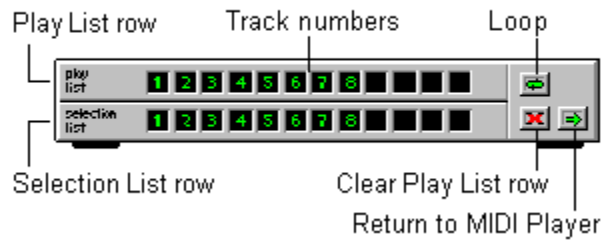
Return to MIDI Player.

Clear Play List.

If more than 12 tracks are present, arrows appear on either side of the Selection List and Play List rows to let you scan through all available tracks.

# MIDI Program Panel

# MIDI Info

You can get basic information on the current track by clicking and holding your left mouse button on the MIDI Player's "faceplate."

The box opens to reveal a window containing the current file's name and length (in hours, minutes and seconds).

The current track number is displayed in the Track Number window. To change the current track, use the Skip buttons. Single clicks take you forward or backward one track; for more rapid "paging," press and hold your mouse button on either Skip button. You can use the Skip buttons to change tracks any time--even while a song is playing.
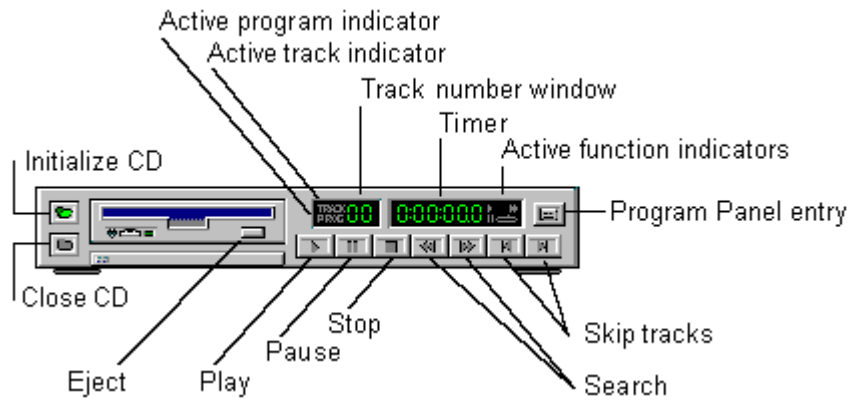
**CD Player**
   Plays audio Compact Discs.

# CD Player diagram

**Also see: CD Program Panel**

# CD Player

 Click for diagram

Sound Impression's Compact Disc Player plays audio CDs and allows you to arrange tracks into Play Lists that can be stored and later retrieved when you use the same CD.   For more on programming Play Lists, see the CD Program Panel topic.

Your system must be equipped with a CD-ROM drive in order to use this component.

##   Initializing a CD

Any time you load a new compact disc into your CD-ROM drive, you must initialize the disc by clicking the Initialize CD button (the File Open button on the other components).

*Important:*   Some CD-ROM drives are slow to respond to the initialization request.   In some cases, a CD can take up to a minute to initialize.   If you click the Play button before the disc is properly initialized, you'll receive a "CD Player not available" message.   If you receive this message, click the Close CD button, remove the disc, reinsert it, then try again by clicking initialize and waiting a little longer before trying to play the disc.

The disc initialization function is also available by choosing CD from the File menu on the Title Panel's menu bar (Alt,F,C).

Both the Initialize CD button and the File|CD menu item are disabled while a disc is playing.

*Note:* If you click the Initialize CD button when a disc has already been initialized, the Play List automatically resets to its default or programmed order.   For more on the Play List, see the CD Program Panel topic

## Ejecting a CD

The CD-ROM graphic on the CD Player includes an "eject" button.   This button will eject a disc from many CD-ROM drives, but on some brands of drives it could provoke to a "CD Player not available" message the next time you try to play a disc.

The reason is that the eject button sends an "eject mode" message to the CD-ROM drive.   On most drives, the eject mode message is carried out through full ejection of the disc; on some, however, it merely puts the drive into a suspended mechanical state which, in effect, has it waiting for a second eject message that can only be sent by using the eject button on the CD-ROM drive itself.

If you encounter this problem, manually eject the disc from the drive, then reinsert and reinitialize the disc.

## Other CD Player buttons

*Click for details*

     Close CD

     Play

     Pause

     Stop

     Program Panel Entry

     Search

     Skip Tracks

# About CD sound

Since their commercial market debut in 1983, compact discs have become a clear favorite of serious audiophiles.   Offering impeccable 44.1KHz quality, CDs have long been established as the main players in modern home entertainment systems, and now their versatility and unlimited potential as a multimedia vehicle are providing them with a central role in the world of computer audio.

Sound Impression's CD Player operates as cleanly and crisply as CD sound itself.   With two clicks of the mouse you can initialize your disk, play an audio CD, then turn to any other Sound Impression or Windows task and enjoy the sounds in the background.

# CD Program Panel

 Click for diagram

The Program Panel entry button converts the CD Player into a programming panel in which you can select or exclude tracks and create a Play List that can be stored and retrieved whenever you load the same compact disc.

The panel's track lists are arranged on two horizontal rows--each offering 12 track windows-

The upper track row, the Play List row, shows the order in which tracks will be played when you return to the main panel and select Play.

You can remove tracks from the Play List simply by clicking on the number of the track you want to remove.   If you want to remove the entire Play List at once,   click the Clear button (the "X" button) on the right side of the panel.   You can then build a new Play List with selections from the bottom row of tracks.

The lower row, the Selection List row, lets you choose individual tracks to add to the Play List. When you click on a Selection List track number, the track is appended to the Play List row.

You can add any number of tracks to the Play List in any order you wish.   You can even place the same track several times in a row.

*Note:* the Selection List row shows the number of tracks available on your disc.   If your disc has fewer than 12 tracks, you'll have blank windows at the end of the Selection List.   If the disc has more than 12 tracks, arrows are added to the either end of the panel to allow you to scan forward and backward.   Just click on the arrows (or click and hold for speed scanning) to locate additional tracks.

To play your Play List in a continuous loop, choose the Loop button.   When selected, the Loop button changes from green to yellow; an indicator will also show in the timer window when you return to the CD Player.   When a loop is playing you can, from the CD Player, pause or stop the loop any time or skip to the next track in a loop.

When you're satisfied with your Play List arrangement, exit the programming panel and return to the CD Player interface by clicking the Return button.

After you've arranged a Play List and returned to the CD Player, the active program indicator ("PROG") appears in the CD Player's track number display.

Click the CD Player's Play button to hear your new track arrangement.

## Maintaining the order

To save your programmed Play List for future sessions, click the Save Play List button before exiting the Program Panel.   The Play List will automatically be restored each time you load and initialize the same CD.   You can change the Play List again any time and click the Save Play List button to save the new order.

## Program Panel buttons:

   Loop. Click here before exiting the Program Panel and your Play List will be played in a continuous loop.

   Save Play List.

   Return to CD Player.

   Clear the Play List.

   If more than 12 tracks are present, arrows appear on either side of the Selection List and Play List rows to let you scan through all available tracks.

# CD Program Panel diagram

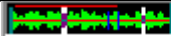Play List row — Scan List arrows — Track numbers — Save Play List — Loop

play list ‹‹ 1 2 3 4 5 6 7 8 9 10 11 12 ››

selection list ‹‹ 1 2 3 4 5 6 7 8 9 10 11 12 ››

Selection List row — Clear Play List row — Return to CD Player
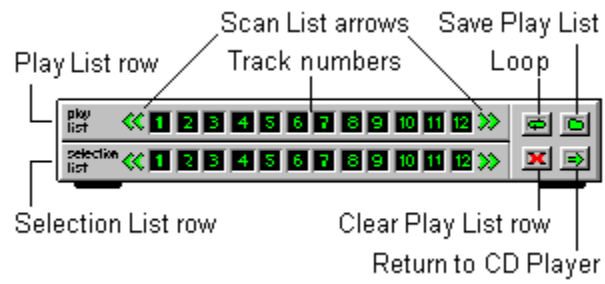
# Waveform Editor diagram

# Waveform Editor

Click for diagram

Sound Impression's Wave file production studio lets you play, record, edit, modify and add special effects to any existing wave file or newly created waveform.   Sixteeen Waveform Editors, or edit windows, are available during your Sound Impression session.

Each edit window is an independent module.   You can move, enlarge, minimize, maximize or hide them independent of the main Rack and independent of one another.

You can work in an unoccupied edit session as if it were a blank page in a Windows word processor or graphics program.

The main elements of a Waveform Editor "page" are two view windows, four rows of editing and modification tool buttons, a Paste Bar with positioning cursor, a set of dynamic positioning displays, a set of volume controls and a Pitch Scroll bar.

Among the tasks you can perform in any Waveform Editor window:

- Cut or copy entire waveforms or selected segments, then paste the data into a second edit window or into another location in the same window.
- Quickly "clean up" a waveform using Noise Filter, Remove Silence, Add Silence, Cut, Crop and other tools.
- Add special effects such as Echo, Chorus, Flange, Fade, Pan and Crossfade to entire sessions or segments.
- Use the Pitch Scroll or Falsify function to speed up or slow down the sound of a waveform.
- Modify the data format of any file, changing sample sizes and rates and switching between mono and stereo.
- Increase or decrease volume (gain) for an entire session or segment.
- Control wave, input and master volume without having to return to the Rack.
- Use markers for more precise editing capabilities.
- Save selected segments of a wave file to disk.
- Use markers for more precise editing capabilities.

# Calling an edit session window

To call a Waveform Editor session window:

- Click the Waveform Editor button on the Wave Recorder/Player; or
- Choose the Wave Editor item from the Title Panel's Edit menu (keyboard: Alt,E,W); or

# Loading an edit session

There are three ways to load wave files into Waveform Editor windows:

**Method 1: Double-click on any \*.WAV file in File Manager (or equivalent utility)**

If Sound Impression is open, double-clicking on a file with a \*.WAV extension in File Manager (or an equivalent directory management program) loads the file into the next available session in the Wave Recorder/Player and displays the edit window containing the newly loaded file.

If Sound Impression isn't open, the action launches the program with the selected file loaded into the Wave Recorder/Player and the first Waveform Editor session.

**Method 2: Drag-and-drop.**

To load a group of Wave files:

1. Activate File Manager (or equivalent) and locate a directory containing one or more Wave files. Position the directory on your screen so that some portion of the Wave Recorder/Player is visible behind File Manager.

2. Select one or more Wave files.   Use your shift or control keys to make group selections (check your Windows manual if you're not familiar with group selection procedures).

3. Press and hold your mouse button on any of the selected file names and, still holding the mouse button down, drag the file or group of files across your screen to the visible part of the WR/P.

4. Release the mouse button to drop the selection onto the WR/P graphic.

Files are loaded into the Wave Recorder/Player in alphabetical order.   The first file is dropped into the current session.   If the current session is occupied but the occupant file hasn't been changed, the new file automatically replaces it.   If the occupant file   has been changed but not saved, you're given an opportunity to save it.

Other files in the group are loaded in order into unoccupied sessions.   If there are more files than unoccupied sessions, the extra files aren't loaded.

**Method 3: Use the Wave Recorder/Player's File Open button to load the current session.**

Use the Skip buttons to move to an unoccupied session (one in which the Occupied Session indicator is grayed), then click File Open and load a file.   You can also load files into an occupied session, but if the occupant file hasn't been changed, the new file automatically replaces it.

**Method 4: Open a Waveform Editor session and use its File Open button.**

1. Open an edit session.

2. Click File Open and choose a file.   If the session is occupied but the occupant waveform hasn't been saved, you'll be given an opportunity to save it before the new file loads.

# The View/Scroll Area

An edit window's lower viewing area--the View/Scroll Area--always displays the waveform in its entirety.

The window has two moving parts--two vertical bars that are initially located on the left and right sides of the window.   You can drag these Zoom Bars horizontally to any position in the View/Scroll Area.

As either or both of the bars are drawn inward, the upper viewing area--the Edit Area--is redrawn to display the portion of the waveform contained between the Zoom Bars. Drag the bars closer together to zoom in on a specific segment of the waveform, drag them further apart to zoom out again.

If you select a segment of the Edit Area, the selection will also be highlighted in the View/Scroll Area to show the selection's position relative to the length of the waveform.

The View/Scroll Area also contains a cursor locator that shows the location of the paste bar cursor relative to the total length of the waveform.   This feature is handy when you're zoomed in on a waveform segment.

## Scrolling Waves

The View/Scroll Area acts as a "scroll bar" for the Edit Area:

- When you're zoomed in on the waveform (that is, when the Zoom bars are positioned anywhere but in their default positions at either side of the View/Scroll Area), you can place your mouse on any point *between* the Zoom bars and drag left or right to rapidly scroll across the waveform.   As you scroll, the Edit Area displays the segment contained between the Zoom bars.

- If you click on the View/Scroll Area *outside* of the Zoom bars, the zoomed segment shifts to the point at which you clicked.

- Click on the "home" points for the Zoom bars at either end of the View/Scroll Area to shift the zoomed segment left or right in small increments.
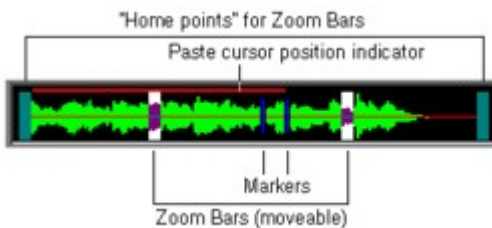
# The Edit Area

You can select any portion of the waveform that appears in the Edit Area, then cut, copy, paste, play or modify the selected portion.   You can even cut or copy a selection from one edit session and paste it into any point in any other session.

**The selection process**

To select the entire contents of the Edit Area, double-click anywhere in the window's box.

To select only a segment of the Edit Area, position your mouse at any point and drag horizontally in either direction.   As you move the mouse, the portion of the waveform over which you drag is highlighted (see diagram above).   When you release the mouse button, the selected portion remains highlighted.   You can then play the selected portion or edit it using any of the Waveform Editor tools.

If you want to see the selected segment in more detail, click the Zoom button on the lower toolbar. With a little practice, you can zoom in and select "slivers" of sound smaller than a thousandth of a second.

To extend or retract the selection, position your mouse cursor over the rightmost or leftmost point of the selection, press and hold down your *right* mouse button, and drag in either direction.   The selection extends or retracts as you drag.   You can also extend or retract the selection by using the Shift+Left Arrow and Shift+Right Arrow keys.

The diagram below shows an Edit Area containing a stereo waveform with two markers in place. The small "indentation" on the Paste bar is a play progess indicator, which appears only when a waveform is being played.   The diagram shows the cursor in Play mode; clicking the cursor alternates it between Play and Paste modes.
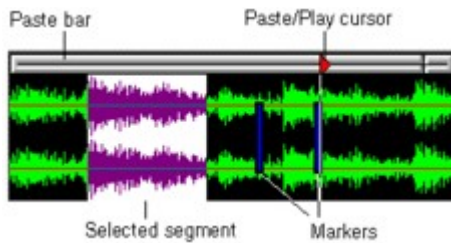
# The Paste bar and Paste/Play cursor

The Paste/Play cursor rides horizontally along the Paste bar above the Edit Area.   The cursor can be in one of two modes--Paste or Play--which you can alternate by clicking anywhere on the Paste bar.

In the picture below, the Paste cursor is active; if you were to click the Play button, play would commence from the beginning of the waveform.   If any portion of the waveform were highlighted, play would commence from the beginning of the highlighted segment.
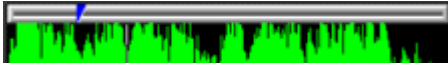


In this next example, the Play cursor is active; if you were to click the Play button, play would commence from the cursor position rather than from the beginning of the selected segment.



Whether the cursor is in Paste or Play mode, its essential function remains the same: it marks the point at which data will be pasted into the Edit Area.

The cursor can be moved to any point in the waveform by dragging it right or left along the Paste Bar.   Its precise position is displayed in the top information display next to the Edit Area.   The cursor position is also tracked in the lower View/Scroll Area to allow you to see its position relative to the waveform as a whole when you're zoomed in on a segment.

When you move the cursor in Paste mode, its position is marked by a thin vertical line running through the Edit Area.

# The Pitch Scroll Bar

The panel between the two view windows features a scroll bar that lets you quickly change the pitch of the current waveform.

To use the Pitch Scroll, simply slide the scroll bar button to establish a new sample rate for the current waveform.   Move it to the right to "speed up" the sound of the waveform or move it to the left to "slow" the sound.   For even more precise control:

- Click an arrow button at either end of the scroll bar to change the waveform's sample rate in increments of one.
- Click on the bar beside the scroll bar button to change the sample rate in increments of ten.

# Dialog box notes

All settings boxes are offered with startup defaults (noted in the descriptions of each dialog and displayed in each diagram).   Whenever you change a setting, however, Sound Impression maintains the new setting until you change it again or close Sound Impression.   The next time you open the program, the dialogs will once again contain their default settings.   The only exception is in the Preferences and Modify Wave File Format dialogs, which allow you to save settings for subsequent startups.

# Using the keyboard in edit sessions

You can use the following keys whenever a Waveform Editor session is active:

### I/O functions

| Key | Action |
| --- | --- |
| **R** | Record |
| **P** | Play |
| **S** | Stop |
| **Spacebar** | Pause |

### Waveform segment selection

| Key | Action |
| --- | --- |
| **Shift+Right Arrow** | Extend selection right |
| **Shift+Left Arrow** | Extend selection left |
| **Del** | Deselect highlighted selection |

### Editing functions

| Key | Action |
| --- | --- |
| **Ctrl+Del** | Cut |
| **Ctrl+Ins** | Copy |
| **Ctrl+C** | Crop |
| **Ins** | Paste |

### Other functions

| Key | Action |
| --- | --- |
| **M** | Drop a marker at the current Paste Cursor location |

# Positioning/Measurement displays

The set of five digital display windows next to the Edit Area offers the following information:
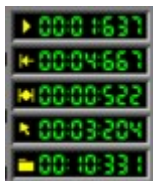


Current location of Paste/Play cursor

Left edge of highlighted segment

Length of highlighted segment

Current mouse pointer position in Edit Area

Length of waveform

# Using the View/Scroll window

The bottom portion of each Waveform Editor window offers a full-length view of the waveform.

This section has its own positioning system that lets you quickly zoom in on any portion of the signal.   The system is comprised of two vertical bars that are initially located on the left and right sides of the section.   You can click on either of these bars, and, holding down your mouse button,

reposition the bar anywhere along the waveform.

The top section of the window is actually a view of all that falls between these two bars.   So as either or both of the bars are drawn inward, the top section will change to reflect the zoom.   Draw the bars closer together to zoom in on a specific segment of the waveform, draw them further apart to zoom out again.
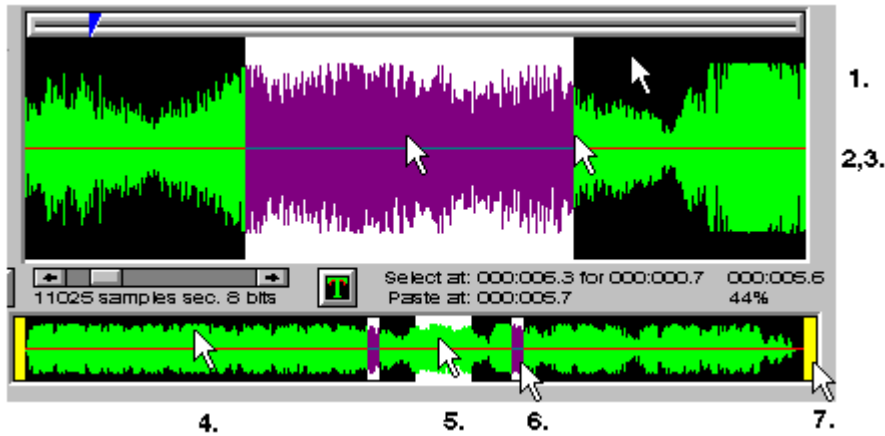


### Zooming and selecting

1. Double-click anywhere on the Edit window to select (highlight) the entire visible window.

2. Press and hold your right mouse button in the midst of a selection in the Edit window and drag left or right to shift the selection width to a new area of the waveform.

3. Press and hold your right mouse button on either side of a selection and drag left or right to expand or retract the selection.

4. Click any area (right or left) of the View/Scroll window outside the Zoom Bars to shift the bars and the zoomed   segment they contain.   (See #6 for shifting in smaller increments.)

5. Press and hold your left mouse button between the Zoom Bars and drag right or left to shift the bars and the zoomed segment they contain.

6. Press and hold your left mouse button on a Zoom Bar and drag it left or right.

7. Click on either end of the View/Scroll window to shift the Zoom Bars and the zoomed segment they contain right or left.   This produces a shift in small increments.   To shift in larger increments, see #4.

# Clear Session

Clears the edit session to produce an unoccupied, untitled session.   If the session contains a file that has been changed, you're given an opportunity to save it.

# Noise Filter

One-step removal of pop and hiss from the entire waveform or segment.

# Gain

Increases or decreases the amplitude of a waveform or segment.   If the current session contains a waveform formatted in stereo, the adjustment can be made to either the left or right channel or to both channels simultaneously.

Gain is used when you want a waveform or segment to be louder or quieter *relative* to other waveforms or other parts of the same waveform when played back at the same volume.

If, for example, you want each track in a composition to have the same intensity of volume,you can either decrease the Gain on the stronger waveforms or increase the Gain on the weaker waveforms before adding them to the composition.

Range of adjustment is --100 (which creates silence) to 300 percent.

The Gain dialog can be revisited as many times as is necessary.

# Reverse

Reverses a waveform or a selected portion so it plays backward.

# Fader

Sound Impression's Fader doesn't limit you to standard fade-ins and fade-outs: it also lets you fade in at the end or fade out at the beginning of a selected segment.

The Fader dialog box lets you set the high and low fade limits.   The **High limit** establishes the highest amplitude within the area of the fade.   For example, if you have a two-second fade-in at the beginning of a session and you set the High limit to 50 percent, there will be a sharp increase in amplitude when the session comes out of its fade at the two-second mark.    The High limit is initially set at 100 percent.

The **Low limit**, initially set to zero, establishes the lowest amplitude within the area of the fade.   If, for example, you set a two-second fade-out at the beginning of a session and use the default High/Low limits, the sound will open with a fade from full amplitude to zero amplitude and then jump to full amplitude again at the two-second mark.

The **Fade In** and **Fade Out** selection boxes are initially set for the standard effect:   Fade in at the beginning of the session and Fade out at the end.   To set a fade-out at   the *beginning* of a session, first select "Do not fade out" in the Fade Out box, then "Fade in at beginning" in the Fade In area. This automatically makes the "Fade in at end" choice available in the Fade Out area, which you can choose if you want to balance the effects at either end of the session.

The final step is to set the **length** of the fades.   They can be set independently, with upper limits of 25 seconds each.    If you use only one fade and set the fade-length longer than the playing length of the session, the fade-length you set will be ignored and the actual fade will be adjusted to session length (though the fade-length you set will still appear in the dialog box).   For example, if you set a 10-second fade-in on a five-second session, and use Low/High settings of zero and 100, the fade will still be five seconds, with full amplitude at the end of the session.

The same rule applies if you set both fade in and fade out and the sum of the two fade-lengths exceeds the length of the session.   Your fade-length settings will be ignored and the fade will be produced as if you had set a balanced fade.   A side effect of this is a reduction in the maximum amplitude.   The amount of reduction depends on the extent to which your summed fade-lengths exceed the session length.

# Integrate sessions

Unlike Merge, which places a second file into a separate channel to create a stereo effect (see later in this section), this function *integrates* a second session into the current session.

Multiple sessions can be integrated, but you must add them one at a time.

To integrate a session into the current session, click the Add button in the Integrate dialog box, then choose a waveform from the button list of available sessions.

If a session contains a waveform, its button number is blue; if the session is blank, its number is gray.   When you select a session for integration, its button number changes to yellow.

If a segment of the session in which you're working is highlighted, the integrated session will be inserted at the beginning of the highlighted area.   If the integrated session is longer than the highlighted area or longer than the session into which it is being integrated, it is truncated.

Click the Integration dialog's Subtract button to remove sessions that have already been integrated.

The integration principle also allows you to use Subtract to bring another session *into* the mix: if you Subtract a session that is not already present, you are, in effect, ordering the session to be Added.

# Add or Remove Silence

**Note:** Both the Add Silence and Remove Silence functions are disabled if the current waveform is virtualized

## Add Silence

Lets you add as much as 20 seconds of silence beginning at a selected point in a waveform. Silence is inserted at the current paste cursor location.

As with any paste operation in Sound Impression, the insertion is processed immediately, so make sure the paste cursor is exactly where you want it before clicking the OK button in the Add Silence dialog box.

The default insertion amount is half a second.   The setting is changed using the scroll bar in the dialog: click the arrow buttons at either end of the bar to increase or decrease the amount by a hundredth of a second, click *on* the bar to move it in tenth-of-a-second increments.   For more rapid change, drag the button on the scroll bar right or left.

## Remove Silence

Deletes selected ranges of silence in a waveform.

The Remove Silence dialog box lets you decide which areas to search (beginning, middle or end) and the minimum and maximum amounts silence you want to cut.

You can set the function to search for instances as brief as a tenth of a second and as long as 20 seconds.   Any silence found within the range will be eliminated from the search areas that you select.

If you check "Beginning," the program searches the area between the beginning of the session and the first audible sound.   If you check "End," the search area falls between the last audible sound and the end of the session.   "Middle" conducts a search between the first and last audible sounds. If you select all three search areas, the program cuts all patches of silence that fall within the range.

The Silence Threshold Level is your definition of what constitutes "silence."   If you set it at the maximum 99.9 percent, almost all samples that fall within the search ranges will be targeted for removal.   Minimum silence threshold is 0.01 percent.

All three search areas are checked at startup.   The default deletion range is 0.2 to 5.0 seconds. Default silence threshold level is 2 percent.

# Echo

The echo dialog box lets you choose from either standard Echo, Chorus or Flange effects.   Only one of the three can be selected from the Activate box in each visit to the dialog, but if you choose standard Echo, you can set as many as three separate levels and adjust each level independently.

Any of the three echo types can be applied to an entire waveform or a selected segment.

The first step in applying echo effects is to choose the type of echo from the **Activate** group box.

**Chorus** activates the Group Size and Crowding settings box.   The range for both effects is 1 to 10. Group Size is initially set to a value of 7, Crowding to 6.

Chorus generates a single echo, the strength and delay of which is established by the Group and Crowding settings.   Group establishes the volume.   When Group is set at its maximum volume (10), the echo matches the volume of the original sound.

The length of the gap between the original sound and the echo is determined by the difference between the Group and Crowding settings.   If Crowding is equal to group, the echo will be offset only slightly, enhancing the original sound.   If Crowding is set higher than Group, the enrichment becomes less discernible and, if the "negative gap" is too wide, the echo will simply blend into the original, with the only noticeable change being a slight increase in volume.

**Flange** activates the Flange Delay and Ratesettings box.

Flange produces a "bounce-back" effect of varying depth and delay, much like the echo that emanates from buildings and other objects as a plane passes overhead.   Flange works best on clear, sharp vocal and instrumental sounds.

Flange Delay is the gap, in milliseconds, between the echo and the original sound.    Delay ranges from 1 to 9,999 milliseconds (up to 10 seconds), with an initial setting of 230ms.    Flange Rate, which controls the intensity of the effect, ranges from 0.1 to 10.0, with an initial setting of 3.0.

Chorus or Flange effects are are available when any of the three **Echo levels** are checked in the Activate box.

You can apply any of the three Echo levels as a single effect, or you can add them in any combination.   Each Echo level has its own Delay and Decay settings box.

**Delay** is the amount of time which separates each echo; it can range from 1 to 9,999 milliseconds (10 seconds).

Long echo Delays can provide interesting results on a long session, but serve no purpose in a short session.

For example, if you have a recording of the word "testing" in the middle of a three-second file and you set only Echo One with a two-second (2,000 ms) Delay and the default 48 percent Decay, the first incidence of the echo of the word "testing" would not be heard, because it would just be starting as the session was ending.   If, however, you were to add six or seven seconds of silence to the end of the same session, and then repeated the echo settings, you would hear several decaying echoes of "testing," spaced two seconds apart, before the session finished.

**Decay** is the level to which the echoed sound decreases in amplitude, or "fades away"; it ranges from zero to 99 percent.

Setting Decay to zero will, of course, provide you with echoed duplicates of the original sound, spaced by the amount of Delay you set.   With a small Delay, each instance of the echo would be practically indistinguishable from its predecessor, and, depending on its contents, the entire waveform could turn into a noisy muddle.

Setting Decay to its highest level is equally impractical for most applications: the echo would drop away so dramatically that even its first instance would be nearly inaudible.

# Pan/Crossfade   

This dialog lets you apply single Pan effects between channels either way or use a Crossfade, in which the left channel fades to the right channel while the left channel "crosses" it and fades to the right.

You can set both the extent and the limits of the fades.

The function works only on stereo files, and the button is disabled if the current waveform is not formatted in stereo.

# Time Scale Definition 

Calls a dialog box that lets you set the basis for the positioning and measurement information displays next to the volume controls..

The dialog offers four choices: Music Beats, SMPTE (Society of Motion Picture and Television Engineers) Time Code, Samples, and Minutes/Seconds/Milliseconds.   When you switch modes, the button graphic changes to indicate the current mode (default mode is Minutes/Seconds/Milliseconds, represented on the button as a "T").

## Using the Music Beat definition with markers

If you choose Music Beats you can set beats per measure, tempo and ticks by simply typing them into the edit boxes in the definition dialog.

If you want to calculate the tempo of a particular piece of music, follow these steps:

1. Load a music file.

2. Place one finger above the "M" key on your keyboard and another above the "P" key.

3. Press the "P" key to start the music.   Tap the "M" key to the music beat.   As you tap, markers are dropped into the Edit Area.

4. When the music stops, call the Time Definition Scale dialog.   Click the "Average" button to reveal the average tempo of the music.

# Waveform views: Real/Absolute

Default is Real view, which shows the waveform both above and below the baseline.   Absolute view places the entire waveform above the baseline, which is reestablished at the bottom of the Edit Area.

To switch views, click the button.   The button graphic reflects the current view.

# Waveform views: Envelope/Line   

Default is Envelope view, a "filled" view of the waveform signal.   The Line view shows a single line tracing of the signal.

To switch views, click the button.   The button graphic reflects the current view.

# Change Edit Area magnification

Changes the level of magnification of the waveform in the Edit Area without affecting the waveform's amplitude.

You can step through magnification levels with single button clicks.

# Merge into Stereo/Split into Mono

If the current edit session contains a mono session, you can use Merge to import a second signal and insert it into the right channel to create a stereo effect.

A dialog box lets you choose a session to merge from among the occupied sessions. Sessions that contain signals available for importing are   represented with blue button numbers.   When you select a session, its button number changes to yellow.   Gray-numbered buttons represent blank sessions, which are unavailable for importing.

The inserted waveform appears in the top portion of the edit session (the right channel).   The session from which the inserted waveform is copied is not affected.

If the edit session already contains a stereo session, clicking the Merge/Split button lets you export, or "split" the right channel into a session of its own.

The Split intoMono Sessions dialog box offers the same set of session buttons described above, except the blue-numbered buttons represent unoccupied sessions. Only unoccupied sessions can receive a waveform exported by the Split function.

**Note:** This feature is disabled if the current waveform is virtualized.

# Modify Wave Data Format

Use this button to change any of the three basic attributes of a Wave file: the number of channels, the sample rate, and the sample size.    Format also offers a toggle called Falsify, which lets you change the speed of the waveform without actually changing its data.

Format settings always match the settings of a newly-loaded session.   If you open a mono session, for example, and then merge a second file to create a stereo effect, the settings automatically change to stereo.   If you split off one of the sessions, the Channel setting changes back to mono.

If you clear a session, however, the format of the previous occupant of the session will be retained until you change it or until a new file is opened into the session with different settings.

Data Format defaults (for new recordings) are mono, 8-bit sample size, and 11025 Hz (Hertz, or samples per second) sample rate.   To create new defaults for subsequent Sound Impression sessions, change the settings and click the Save button.   To return to the previously-saved set of defaults, click the Defaults button.   The Restore button lets you undo a change while still in the dialog box.

The only item that isn't retained by the Save function is Falsify.    This special effect is used only when you want to speed up or slow down the sound of a waveform by 100 percent.   You must check it each time you want to use it, then choose "Yes" when asked if you want to retain the changes.

For example, if you check Falsify then change Sample Rate to 22,050 from 11,025, the playing length of the file will be reduced by 100 percent but the actual amount of data is unchanged, so the file size remains the same.

The same rule applies if you check Falsify and then double the sample size to 16 bits or change the file to stereo.

The net effect of Format changes depend entirely on the capabilities of your sound card.   Changing a mono file to stereo is an immediately visible procedure, and, with most sound cards, you'll notice the change when you play the file.

Increasing the sample rate or size is not so apparent, however, and may have little or no effect on sound quality unless your card supports the higher-level attributes.   If it doesn't, you'll only be needlessly enlarging your file.

For example,   boosting a file with a sample rate of 11,025 to 22,050 Hz will double the size of the file with no appreciable difference in quality when played on a card hat can only support the lower rate.

# Crop

Lets you delete everything except a selected portion of the session.   Just select the portion of the
signal you want to keep and click the Crop button to delete the rest.

# Cut, Copy, Paste

These three functions work just as they do in most other Windows applications--except they use Sound Impression's own internal clipboard instead of the Windows clipboard.

Just select the portion you want to cut or copy and click the appropriate button.   You can then use the Paste command to insert the cut or copied signal portion elsewhere in the same file or into any other Waveform Editor session.

Pastes are inserted at the position of the Paste Cursor, and the inserted waveform flows to the right of the cursor position.

# Zoom

The Zoom button lets you zoom in on a selected segment of the current waveform.

When you click the button the Edit Area is filled with a zoomed picture of the selected segment.   To zoom in closer, select another segment and click the Zoom button again.   As you move in for more detail, the View/Scroll Area displays the position of the zoomed portion relative to the entire file.

Clicking the Zoom button with nothing selected in the Edit Area alternates the view between the current zoomed area (the area between the Zoom Bars in the View/Scroll Area) and full length view.

# Edit session volume controls

The three "knobs" on the left side of all edit windows let you establish volume for the Wave, Input and Master controls without returning to the Rack.

When you change volume with these controls in any edit window, matching controls on the Rack and in all other edit windows are changed to match the new settings.
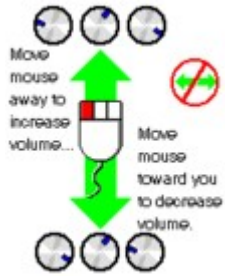
Click the **Back** button on the panel above to return to the previous screen.

Click the labels for definitions of component features and functions.
To return to the previous screen, click the **Back** button on the panel
above.

**Wave**

A sound file format (extension *.WAV) used by Windows multimedia applications.

**MIDI**

Acronym for Musical Instrument Digital Interface.   Sound Impression uses general MIDI files (*.MID extension) and RIFF MIDI files (*.RMI extension).

**Reveal/conceal Mixing Panel**

Check this box to have the Mixing Panel appear at startup.   Remove the check (by clicking the box) to have the Mixing Panel hidden at startup.   (Shipped default: Revealed.)

**Reveal/conceal Wave Recorder/Player**

Check this box to have the Wave Recorder/Player appear at startup.
Remove the check (by clicking the box) to have the Wave
Recorder/Player hidden at startup.   (Shipped default: Revealed.)

**Reveal/conceal MIDI Player**

Check this box to have the MIDI Player appear at startup.   Remove the check (by clicking the box) to have the MIDI Player hidden at startup.   Shipped default: Reveal.

**Reveal/conceal CD Player at startup**

Check this box to have the CD Player appear at startup.  Remove the check (by clicking the box) to have the CD Player hidden at startup. (Shipped default: Revealed.)

**Start with Rack normal size or minimized**

  Toggle this check box to have the Rack (main screen) start normally or minimized when you launch Sound Impression.   (Shipped default: Normal size.)

**Reveal/conceal Menu Bar at startup**

Toggle this check box to have the Menu Bar revealed or concealed when you launch Sound Impression.   (Shipped default: Revealed.)

**Reveal/conceal Menu Bar at startup**

   Toggle this check box to have Sound Impression start with a dark
   ("steel gray") panel background.   (Shipped default: Light gray panel
   background.)

**Start with an open Edit session window**
   Check this box if you want an Edit session window open and in the
   forefront whenever you start Sound Impression.   (Shipped default: Do
   not show window.)

**Saving your startup configuration changes**

Be sure to click the Save button after making any startup configuration changes.   Otherwise, your changes won't be saved and the current configuration will apply the next time you start Sound Impression.

**Closing the Preference dialog box**

If you made any changes to the startup configuration or to the color map, remember to click the appropriate Save button before clicking the Close button.   Otherwise, your changes won't be saved.

**Saving your color changes**

When you get the right color mix for your selected features, click the save button and either close the dialog or choose another feature to change.   You'll see the changes the next time you access any edit window.

**Resetting colors to the defaults**

This button resets colors to the Shipped defaults.   Original program color values are noted in the description of each item.   Click the item name in the sample Preferences dialog shown here to jump to the description.

**Color change display**

Current color levels show in the box beside the scroll buttons, and the numbers change as you scroll.   The overall color mix, shown in the box in the bottom right corner of the dialog, also changes as you scroll, letting you see the effects of your adjustments as you make them.

**Changing color values: single increments**

The left scroll buttons add or subtract base color from the mix in 10-unit increments, while the right buttons let you add or remove color one unit at a time.   Clicking and holding down the mouse button on any scroll button accelerates the adjustment.

**Changing color values: 10-unit increments**

The left scroll buttons add or subtract base color from the mix in 10-unit increments, while the right buttons let you add or remove color one unit at a time.   Clicking and holding down the mouse button on any scroll button accelerates the adjustment.

## Mixing new color values

Select an object from the list and then mix a new color from the available   red, green and blue "inks."   Each color has a range of intensity from zero to 255, and each has its own pair of scroll buttons with which you can adjust the overall color balance.

**Changing colors: Markers**

Changes the color of the markers that can be dropped into the Edit and View/Scoll areas of a Waveform Editor window.   (Shipped default: Blue.)

**Changing colors: Scroll end caps**
Changes the color of the Waveform Editor's two View/Scroll Area end
caps (the moveable bars that normally reside at either end of the area).

**Changing colors: Selection highlighting**

Changes the color of the highlighting in the Edit Area of a Waveform Editor session window.

**Changing colors: Waveform background**
   Changes the background color in the Edit Area of a Waveform Editor
   session window.   Default: black.

**Changing colors: Waveform baselines**

Changes the color of the horizontal line (or lines, if stereo in effect) that runs horizontally through the center of a waveform in a Waveform Editor session window.

**Changing colors: Waveform tracing**

Changes the color of the waveform "signal" contained in the Edit Area of a Waveform Editor session window.

**Changing colors: Window background**

Changes the window background panel color of Waveform Editor sessions.

**Changing colors: Window text**

Changes the color of the information panel text in Waveform Editor sessions.

**Windows control box**

The box in the top left-hand corner of most windows and dialog boxes. The control box offers a menu of basic screen and program management functions.   Menu items may differ in different windows, depending on the type of window accessed.   Control box functions are also available by clicking a window's icon when it is minimized.

**Menu bar**

Sound Impression's menu bar, located on the Title Panel, offers a variety of basic file and screen management functions, most of which are available as buttons elsewhere in the program.   Menu items can be accessed by clicking one of the four main menu choices (File, Edit, Options or Help) and then selecting an item from the dropdown list, or via keyboard combinations.   To use the keyboard, press Alt, then the first letter of the main menu choice (F, E, O or H), then the underlined character (or first character) of the item you want to activate.   A selection in the startup configuration options section of the Preferences dialog box lets you hide the menu bar for subsequent Sound Impression sessions.

**The Minimize Button**

Minimize, the button with the downward-pointing arrow on the top right-hand corner of most windows, is used to reduce the window to an icon. Minimize is also available via the Windows control box (the box in the top left-hand corner) on most windows.

**Conceal/Reveal components**

Any component except the Title Panel can be alternately concealed or revealed any time, either by clicking the component's button on the Title Panel or by selecting the component's item in the Options menu.

**Preferences**

The preferences dialog box, available by clicking the Preferences button on the Title Panel or by selecting the Preferences item in the Options menu, lets you set alternate startup configurations and to change the colors of many elements of the Waveform Editor.

**Help**

You can call online Help from three places in Sound Impression: from the Title Panel (Help button or Help menu), or from a button on the Waveform Editor.   The latter button takes you directly to the Help topic for the edit session window.

**Volume Controls**

Vertical levers control volume for left and right channels.   Separate controls are available for <u>input devices</u>, each of the three "<u>playing</u>" <u>components</u> and for <u>Master volume</u>.   To adjust left/right volume simultaneously, drag the area between the levers.

**Input Buttons**

These three buttons let you select an input source from which to pipe sound to the Wave recorder.

**Playing components**

The three "playing components"--the Wave Recorder/Player, the MIDI Player and the CD Player--each have separate volume and balance controls on the Mixing Panel.

**Master volume controls**

Volume for any of the input sources or the three "playing components" is established at the **lesser** of the volume setting for the component (or source) and the Master volume setting.   Thus, if the right channel setting for the CD Player is set at half-volume and the Master control is at full volume, CD sound will be heard at half of its maximum volume.

**Mixing mode selector\indicators**

These small Mixing Panel indicators let you establish separate volume and balance settings for Play or Record modes for each component or source.   Just click the indicator to change it from Play mode (green) or Record mode (red).

**Balance controls**

These vertical levers let you set separate left/right balance for any component or source.

**Input volume controls**

You can establish separate volume settings for any input source by clicking one of the Input Source buttons then using the input volume control.

**Edit Area**

The area of a Waveform Editor session that provides a detail view of a waveform and in which waveforms can be edited.

More...

**Waveform baselines**

The horizontal line (or lines, if stereo in effect) that runs horizontally through the center of a waveform in a Waveform Editor session window.

**Paste bar**

The gray bar that runs horizontally above the Edit Area in a Waveform Editor session.   The Paste bar is the anchor for the Paste cursor, which marks the point at which any pasted waveform segments enter the picture.

More...

**Paste cursor**

Marks the point at which cut or copied waveform segments are pasted into the current waveform.

**Maximize button**

Available only on Waveform Editor sessions, the Maximize button is the upward-pointing arrow

**'Side' toolbar**
A set of five buttons that let you change the view of a waveform.

**Real view**

    Real view shows a waveform both above and below the baseline.

More...

**Absolute view**

Absolute view places the entire waveform above the baseline, which is
reestablished at the bottom of the Edit Area.

**Line view**

Line view shows a single line tracing of the waveform.

**Envelope view**

Envelope provides a "filled" view of a waveform.

[More...](#)

**Change view area magnification**

Changes the level of magnification of the waveform in the Edit Area without affecting the waveform's amplitude.

More...AMPLITUDE

**View/Scroll Area**

The lower waveform viewing area.   This box provides a view of the
waveform in its entirety, and lets you zoom in on selected segments.
More...

**Zoom bars**

The two vertical bars at either end of the View/Scroll Area let you zoom in on any segment of a waveform.   The area between the bars appears in the Edit Area.

More...

**'Top' toolbar**
This row of buttons provides file management functions as well as waveform modification, adjustment and special effect functions.

**Clear Session**

Clears the edit session to produce an unoccupied, untitled session.   If the session contains a file that has been changed, you're given an opportunity to save it.

More...

**File Save As**

Saves a waveform or segment using a standard File Save dialog box, which lets you choose the name and location for the Wave file.

More...

**Noise Filter**

One-step removal of pop and hiss from the entire waveform or segment.

**Gain**

Increases or decreases the amplitude of a waveform or segment. Gain is used when you want a waveform or segment to be louder or quieter *relative* to other waveforms or other parts of the same waveform when played back at the same volume.

More...

**Reverse**

Reverses a waveform or a selected portion so it plays backward.

**Integrate sessions**

Unlike Merge, which places a second file into a separate channel to create a stereo effect (see later in this section), this function *integrates* a second session into the current session.

More...

**Add silence**

Lets you add as much as 20 seconds of silence beginning at a selected point in a waveform.   Silence is inserted at the Paste Cursor location.

More...

**Remove silence**

Deletes selected ranges of silence in a waveform.   The Remove Silence dialog box lets you decide which areas to search (beginning, middle or end) and the minimum and maximum amounts silence you want to cut.

More...

**Echo**

The echo dialog box lets you choose from either standard Echo, Chorus or Flange effects.   Standard Echo lets you can set as many as three separate levels and adjust each level independently.   Any of the three echo types can be applied to an entire waveform or a selected segment.

More...

**Fader**

Sound Impression's Fader offers standard fade-ins and fade-outs and also allows you to fade in at the end or fade out at the beginning of a selected segment.

More...

**Pan/Crossfade**

The dialog box called by this button lets you apply single Pan effects between channels either way or use a Crossfade, in which the left channel fades to the right channel while the left channel "crosses" it and fades to the right.

More...

**Time scale definition**

Calls a dialog box that lets you set the basis for the information provided in the Information Panel.   The dialog offers three choices: Music Beats, Samples and Hours/Minutes/Seconds.   If you choose Music Beats you can set beats per measure and tempo, and have your highlighted selections snap to the chosen beat.

<u>More...</u>

**Volume control**

Controls the volume of the current waveform, master volume and input device volume.   To use the controls, hold down your left mouse button and slide the mouse straight forward to increase volume, or draw it straight backward to lower volume.   Side-to-side mouse movement has no effect.

More...

**Pitch scroll**

The Pitch Scroll lets you quickly establish a new sample rate for the current waveform.   Move it to the right to "speed up" the sound of the waveform or move it to the left to "slow" the sound.

More...

**'Bottom' toolbar**

Offers a set of input/output controls plus a range of waveform modification functions.

**Merge into Stereo/Split into Mono**

   If the current edit session contains a mono session, you can use Merge
   to import a second signal and insert it into the right channel to create a
   stereo effect.   If the edit session already contains a stereo session,
   clicking the Merge/Split button lets you export, or "split" the right
   channel into a session of its own.

More...

**Crop**

Lets you delete everything except a selected portion of the session. Just select the portion of the signal you want to keep and click the Crop button to delete the rest.

More...

**Cut**

Works the same as the cut function in most other Windows applications, except it uses Sound Impression's own internal clipboard instead of the Windows clipboard.

More...

**Copy**

Works the same as the copy function in most other Windows
applications, except it uses Sound Impression's own internal clipboard
instead of the Windows clipboard.   Just select the portion you want to
copy, then click this button.   You can then use the Paste command to
insert the copied signal portion elsewhere in the same file or into any
other Waveform Editor session.

<u>More...</u>

**Paste**

Works the same as the paste function in most other Windows applications, except it uses Sound Impression's own internal clipboard instead of the Windows clipboard.   The Paste command inserts a cut or copied signal portion elsewhere in the same file or into any other Waveform Editor session.   Pastes are inserted at the position of the Paste Cursor, and the inserted waveform flows to the right of the cursor position.

More...

**Zoom selection**

Clicking this button fills the Edit Area with a zoomed picture of a selected segment of the waveform.   To zoom in closer, select another segment and click the Zoom button again.   As you move in for more detail, the View/Scroll Area displays the position of the zoomed portion relative to the entire file.   Clicking the Zoom button with nothing selected in the Edit Area restores the full session view in both view areas.

More...

**Modify Wave Data Format**

Use this button to change any of the three basic attributes of a Wave file: the number of channels, the sample rate, and the sample size. Format also offers a toggle called Falsify, which lets you change the speed of the waveform without actually changing its data.

**Active track indicator**
   "Lights up" when the current track is available for playing.

**Eject CD**

Click this button to eject a CD from the CD-ROM drive. Some CD-ROM drives require manual ejection of discs. Note: If your disc does not reinitialize after clicking this button, see the "Eject button" note in the <u>CD Player</u> topic.

**Close CD (deinitialize)**

What serves as the save button on the other components is used by the CD Player to deinitialize, or "close," the disc in the CD drive. Clicking the Close CD button   causes all component buttons except Initialize CD to be dimmed.

**Initialize CD**

This button, used to call the File Open dialog on the Wave Recorder/Player and the MIDI Player, is used to initialize the disc in your CD-ROM drive.   When this button is clicked the component's Play, Scan, Skip and Play List buttons are highlighted in preparation for playing.   The disc initialization function is also available by choosing CD from the File menu on the Title Panel's menu bar (Alt,F,C).

**Active program indicator**

"Lights up" when a MIDI Play List has been loaded or programmed
using the Program Panel.

**Occupied track indicator**

"Lights up" when the current MIDI session is occupied and available for playing.

**Track number window**

Shows the current track number.   On the MIDI Player, you can click
this window to call the MIDI Play List.

**Save MIDI Session**

Calls a standard file save dialog box, except the purpose is to save your MIDI Play List instead of a file.

**Open MIDI file(s)**

You can load as many as eight files at once through the MIDI Player file open dialog box.

**Track information**

Click the "faceplate" graphic to reveal basic information about the current MIDI track.   To conceal the information, click the graphic a second time.

**Active function indicators**

Indicators located beside the Timer that "light up" when the Loop, Pause, or Search functions are active.

**Timer window**

Shows the elapsed time while playing or recording a Wave session or playing a MIDI or CD track.

**Loop**

Click this button then click Play to run all occupied tracks in sequence
in a continuous loop.   An indicator will light up in the digital display
window.   You can use the Pause or Stop buttons to interrupt the loop
at any time.   To deactivate the function, click the Loop button a second
time.

More...

**Skip sessions/tracks**

Changes the current session or track.   Click once or press and hold your left mouse button on a Skip button to switch sessions on the Wave Recorder/Player or through all available tracks on the MIDI or CD players.   The current session or track number changes as you skip.

**Sound level indicator**

These indicators respond to signal strength when a file is played or recorded using the Wave Recorder/Player.   Waveform Editor windows have their own set of "VU meters" on either side of the Edit Area.

**Sound level indicator**

The MIDI Player's sound level indicators display activity on each of 16 channels when a MIDI file is played.

**Session number window**

    Shows the number of the current session.   This is the file that will be played if you click the Play button or edited if you click the Waveform Editor.

**Recording indicator**

"Lights up" when the Record button is pressed on either the Wave Recorder/Player or in a Waveform Editor session.

**Stereo indicator**

"Lights up" when the current session contains a waveform formatted in stereo.

**Waveform Editor button**
Calls the current Waveform Editor session to the forefront.

**Session information (Cassette panel)**

Click the Cassette graphic to reveal basic information about the Wave file that occupies the current session.   To close the information window, click the graphic a second time.

**File Save**

Saves the current session or track to disk.   File Save calls a standard Windows file save dialog box, which lets you decide where and by what name you want to save the current session or track.

More...

**File Open**

On all components *other* than the CD Player, File Open calls a standard Windows dialog box from which you can select a file to insert into the current session or into your MIDI Player's Playlist.   The MIDI Player allows the opening of several files at a time.   You can also call File Open from the Title Panel's menu bar by choosing File and then selecting Wave (Alt,F,W) or MIDI (Alt,F,M).

More...

**Occupied session indicator**

This indicator "lights up" when the current session contains a waveform, even if unsaved or untitled.

**Search**

Takes you to a new point in time in the current session.   These buttons
emulate the Fast Forward and Rewind functions on an analog device.

**Stop**

Immediately stops any playing or recording activity on the current session.   If Loop is active, Stop deactivates it.

**Pause**

    Interrupts play of a Wave session or MIDI or CD track.

**Play**
Click the Play button on the appropriate component or window to hear the current Wave session, composition, or MIDI or CD track.   To play your sounds in a continous loop, click the Loop button then click Play.

More...

**Record**

Records from the currently selected input device to the current Wave session.

**Extended marker functions**

This feature is not available in this edition of Sound Impression.   For information on the extended version of the program, which contains this and other advanced features, check the inserts that accompanied your Sound Impression program disk.

Also see Extended Edition Information

**Place waveform marker**

Click this button to place a marker at the current Paste Cursor position. The mark begins at the left edge of the marker graphic.   The marker also appears in the Zoom Area.

**Remove waveform marker**

Removes markers from the Edit Area.   Each time you click this button the marker closest to the current position of the Paste Cursor is removed.   The marker is also removed from the Edit Area window.

**Waveform marker**

These bars are used to mark precise reference points in a waveform. Markers are placed at the current Paste Cursor position in the Edit Area when you click the Place Waveform Marker button.   To remove a marker, click the Remove Waveform Marker button.

**File length display**

Shows the total current length of the waveform.   Depending on the
Time Definition setting the display can indicate the waveform length in
one of the following ways:
- Minutes/seconds/milliseconds (default)
- Samples (actual byte length of the file)
- Music beats
- SMPTE scaling

**Mouse pointer position display**

    Shows the current position of the mouse pointer in the waveform.

**Paste cursor position display**
    Shows the current Paste Cursor position.

**Selection length display**
   Shows the length of a highlighted area of the waveform.

**Selection starting point display**

Shows the starting point of a highlighted area of the waveform.

**Modified waveform indicator**
Lights up (yellow) to alert you that the format of the current waveform has been modified.

**OLE indicator**
Lights up (yellow) when the waveform is the subject of an OLE link.
(Note: OLE is not available in this edition of Sound Impression.)

**Waveform format display**
   Shows the sample size and sample rate of the current waveform.

**Zoom line**

This Zoom Area reference points to the current position of the Paste
Cursor.

**Link or embed Waveform**

Lets you link or embed the waveform into another Windows application.

Also see <u>Sound Impression OLE.</u>

**Link/Embed**

Lets you link CD sound segments or current mixing panel settings, or link or embed the current MIDI track into another Windows application. Also see Sound Impression OLE.

**Session Manager**

This feature is not available in this edition of Sound Impression.   For information on the extended version of the program, which contains this and other advanced features, check the inserts that accompanied your Sound Impression program disk.

Also see Extended Edition Information

**Waveform selection**

Drag your mouse cursor across the Edit Area to select a portion of the waveform.   You can then play, copy, cut, apply special effect or perform most any other editing or modification task on the highlighted portion.

**Undo**

This feature is not available in this edition of Sound Impression.   For information on the extended version of the program, which contains this and other advanced features, check the inserts that accompanied your Sound Impression program disk.
Also see Extended Edition Information

**Sound level meters**

Respond to playing and recording in an edit window.

**Return to MIDI Player**
   Switches from the Program Panel back to the MIDI Player component.

**Return to CD Player**
   Switches from the Program Panel back to the CD Player component.

**Save CD Play List**

Saves a programmed Play List for future sessions.   The Play List will automatically be restored each time you load and initialize the same CD in subsequent Sound Impression sessions.

**Clear Play List row**

   Removes the entire Play List at once.   You can then build a new Play
   List with selections from the bottom row of tracks.

**Track scan arrows**

If more than 12 tracks are loaded into the MIDI Player or if the currently loaded CD has more than 12 tracks, arrows are added to the either end of the Selection List to allow you to scan forward and backward. If you add more than 12 tracks to the Play List, the arrows will appear at either end of that row as well.   Just click on the arrows (or click and hold for speed scanning) to locate additional tracks.

**Selection List row**

Lets you choose individual tracks to add to the Play List.   When you click on any of the 12 visible track windows, the track number you select is appended to the Play List row.

**Play List row**

Shows the order in which tracks will be played when you return to the main panel and select Play.   The Play List row is filled by clicking on boxes from the lower Selection List.

## Track numbers

MIDI or CD tracks are represented by numbered boxes.   Selections made from the lower row of numbers are appended to the Play List row.

**Program Panel entry button**

Provides access to the MIDI or CD Program Panels, which let you create a Play List from available tracks.

# News/Updates

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# Virtualized waveforms

Sound Impression uses a special "virtualization" process to enable you to load, display and work on large waveforms with greater speed and efficiency.

The process takes into account several factors, primary among which are the amount of Random Access Memory (RAM) on your system (it is reviewed each time you start Sound Impression) and the total amount of available virtual memory available in Windows whenever you perform an operation on a wave file.   It then weighs these factors against the size of the file you're working on and assigns a working mode to the file.

If the file is small enough to perform comfortably in existing memory, it is not virtualized.   If the file is large (relative to RAM), it is immediately placed in virtualized mode and the **<virtualized>** label appears on the edit session's title bar. When an edit window containing a virtualized waveform is minimized, the characters **<v>** appear beneath the session's icon.

File generally exceed the "virtual boundary" when they are one-eighth the size of your actual RAM.  In other words, if your system carries 8MB of RAM, files that exceed 1MB will be virtualized.   **Note:** RAM means the amount of RAM actually plugged into your motherboard--the amount usually displayed when you start your computer--*not* Windows virtual memory, which should be a much higher figure when running in 386 enhanced mode.

When a waveform is virtualized, three edit functions--Add Silence, Remove Silence and Split/Merge--are disabled in the session in which the virtualized waveform appears.   These three functions do not lend themselves to efficient operation under the virtualized process.   All other edit window functions and features are enabled and available in a virtualized edit session, and all functions remain enabled in other windows that do not contain virtualized waveforms.

   *Title bar of edit window containing a virtualized waveform.*

This feature is not available in this edition of Sound Impression.   For information on the extended version of the program, which contains this and other advanced features, check the inserts that accompanied your Sound Impression program disk.

**Also see Extended Edition Information**

# A note about Windows fundamentals

You'll note that now and again we advise you to check your Windows manual regarding certain procedures.   Most of these are routine Windows operations, and all are covered in your Windows User's Guide.

Please refer to the Windows User's Guide if you aren't familiar with such fundamentals as the proper use of your mouse for clicking, dragging or otherwise controlling screen elements such as menu bars, scroll bars, and icons; using core Windows programs (e.g., Program Manager, File Manager, Control Panel); and using dialog boxes to change settings or to locate, open or save files.

When we do discuss fundamental Windows operations or features, it is, in most cases, only for the sake of continuity.

**Related topics**

# Button Help

To check the function of any button--active or not--just press and hold your *right mouse button* on the button you want to identify.   A label will pop up describing the button's function.

Tech Note Contents

# Conventions

**Key issues**

Sound Impression is largely mouse-driven, but keyboard shortcuts are available in the following areas:

- You can use access key combinations to activate any command or function on the main screen Menu Bar or in the Windows Control Box of any Sound Impression screen.
- While working in a Waveform Editor session, you can use most of the standard Windows editing key combinations to edit waveforms and use shortcut keys for sound input/output functions.

**Forms of reference**

The following conventions are used to describe keyboard usage in Sound Impression:

- To use a key combination that includes one or more commas in its description (e.g., Alt,Key1,Key2), press the Alt key, then Key1, then Key2.   Example: "You can close Sound Impression by choosing Exit from the File menu (Alt,F,X)."
- To use a key combination that includes a plus sign in its description (e.g., Alt+Key1), press the Alt key and Key1 *simultaneously*.   Example: "You can cut the highlighted selection by clicking the Cut button or pressing Shift+Insert."

**Related topic:**
[Keyboard shortcuts in the Waveform Editor](#)

# Wave watching

"Wave" is the popular name for the *.WAV file format that has given voice to Windows and is used by Sound Impression's recording and editing features.

Wave files can be large.   Not only do they require a lot of storage space on your hard disk, but they require a great deal of disk space and virtual memory while you work on them.   You should be particularly mindful of available disk space when reformatting or recording a file.   Otherwise, you could exceed available system resources in the midst of an editing procedure, risking data loss or system "freezes".

The rule of thumb: make sure you have at least twice as much virtual memory and twice as much available disk space than is required by any single edit session.

How big are Wave files?   Click here for the Wave file size formula and examples.

**Related topics**

# The Wave file-size formula



**Wave size = Rate X Length**
**X 2 if stereo**
**X 2 if 16-bit**
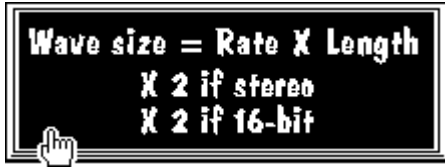
**For definitions, click terms on the "board"**

## Examples

File Length: **10 seconds**

| Sample rate (samples/sec.) | 8-bit mono | Sample size/Channels 8-bit stereo | 16-bit mono | 16-bit stereo |
|---|---|---|---|---|
| 11kHz (**11,025**) = | 110K | 220K | 220K | 440K |
| 22kHz (**22,050**) = | 220K | 440K | 440K | 880K |
| 44kHz (**44,100**) = | 440K | 880K | 880K | 1.76MB |

File Length: **60 seconds**

| Sample rate (samples/sec.) | 8-bit mono | Sample size/Channels 8-bit stereo | 16-bit mono | 16-bit stereo |
|---|---|---|---|---|
| 11kHz (**11,025**) = | 662K | 1.32MB | 1.32MB | 2.64MB |
| 22kHz (**22,050**) = | 1.32MB | 2.64MB | 2.64MB | 5.28MB |
| 44kHz (**44,100**) = | 2.64MB | 5.28MB | 5.28MB | 10.56MB |

**Related topics**
Tech Note Contents

**Wave file size**

The byte size of a *.WAV file.   This is the actual amount of space the file takes up on your hard disk.   Wave files are created at more than a megabyte a minute at "voice quality" (8-bit/11kHz/mono) and more than 10 megabytes a minute at "CD quality" (16-bit/44kHz/stereo).

**Sample rate**

A sample is the construction unit of digital sound.   When analog sound is digitized, it must be sampled (converted to samples) to allow a computer to store and retrieve it.   The sample rate is the number of units per second at which a particular sound is sampled.   For example, at the standard sample rate of 11kHz, sound is created (or recreated, when you reformat) at 11,025, samples per second.   At 22kHz, or 22,050 samples per second, the sound quality is significantly better because twice as many samples are packed into each second of sound.

**Recording length**

The length of a Wave recording, in seconds.   Each second of a Wave file contains an enormous amount of information.   For example, a file recorded at 11kHz contains 11,025 sound "snapshots" packed into each second of running time.   File length, like all other variables in the Wave size equation, is readily available in each Waveform Editor window.

**Channels (stereo or mono)**

Wave files can be formatted in mono, for "voice" quality recordings, or "doubled" to stereo, for a fuller, richer sound.   The fuller, richer sound is achieved at a price: it requires twice as much storage space in terms of file size (bytes) on your hard disk drive.   A 600K mono file, for example, requires 1.2MB when reformatted to stereo.

**Sample size**

    Computers process and store information in byte-size quantities, and each byte is made up of eight bits.   Thus, an 8-bit sample size means that a sound is constructed of single bytes, whereas a 16-bit sample size means that two bytes, or 16 bits, are used to produce each sample "snapshot" of sound.   A 16-bit sample size produces better quality sound, of course, but requires twice as much storage space.

# System requirements

To run Sound Impression you need at least:

- A 386- or 486-based IBM PC or fully compatible personal computer.
- 4MB RAM.
- One floppy disk drive. *Note:* Sound Impression is packaged with 3.5-inch diskettes, but 5.25-inch diskettes are available; see package insert for details.
- A hard disk drive with at least 2.5MB free for program files.
- Microsoft Windows 3.1 running in 386 enhanced mode. *Note:* Windows 3.1 requires DOS 3.1 or later; DOS 5.0 is recommended.
- An EGA, VGA or higher resolution graphics adapter and matching monitor.
- Mouse or other pointing device.
- Arial TrueType font (for correct display of Sound Impression text attributes).
- A Windows multimedia-compatible sound card, with the appropriate drivers installed.
- A CD-ROM drive (required only by the CD Player; a CD-ROM drive is not otherwise required).

**Related topics**

# Troubleshooting

**q:**

I load an audio CD into my CD-ROM drive, click the Initialize CD button, then click Play.   I then get an error message telling me the CD-ROM isn't available.   I know my drivers are installed correctly, so what else could it be?

**a:** Some CD-ROM drives need as much as a minute to properly initialize a CD.   To find out if yours is one of these, click the Close CD button, remove your CD, then reload it and wait a little longer before clicking the Initialize button.

You can have a similar problem after clicking the eject button on the CD Player.   The CD-ROM graphic on the CD Player includes an "eject" button.   This button will eject a disc from many CD-ROM drives, but on some brands of drives it could provoke to a "CD Player not available" message the next time you try to play a disc.

The reason is that the eject button sends an "eject mode" message to the CD-ROM drive.   On most drives, the eject mode message is carried out through full ejection of the disc; on some, however, it merely puts the drive into a different mechanical state which, in effect, has it waiting for a second eject message that can only be sent by clicking the eject button on the device itself.

The solution, if yours is a drive that only partially carries out the message and thus delivers the "not available" message, is to physically eject the disc from the drive, click the deinitialize button (see below), then insert the disc again and reinitialize the disc and player.

**q:**

When I click the Play button on the Wave Recorder/Player, only a portion my session plays back. Where's the rest of it?

**a:** If you open the Waveform Editor for the session in question, you'll probably find that a portion of your session is highlighted.   When you select a segment of a waveform and then press Play--either from the editor or from the WR/P--Sound Impression plays back only that segment.   To deselect the segment,   click anywhere in the Edit area.    Make sure you don't drag your mouse and accidentally select a "sliver" of the waveform.   Then click the Waveform Editor's Play button and you should hear the entire session.

**q:**

I used the Preferences dialog box to change colors for the Waveform Editor and order an edit session window to appear when I start the program.   I restarted Sound Impression, and the Waveform Editor came up but my color changes were ignored.   Why?

**a:** You clicked the Save button to record your startup configuration change but you didn't click the Save button for your color changes.   If you make changes in both areas of the Preferences dialog, you must click both Save buttons.

**q:**

I click the Eject button on the CD Player, but my CD doesn't eject.

**a:**   Not all CD-ROM drives will eject a CD when you use this feature.   With some, you have to use the eject button on the CD-ROM drive.

**q:**

A friend gave me some Wave files, but they don't play on Sound Impression.   Why not?

**a:**   Your friend's files may be Waves in name only.   Wave files have a specific format, and simply adding a *.WAV extension to sound files created in other formats--which your friend apparently did--doesn't make them Waves.   Same goes for *.MID files.   You can't load a non-compliant MIDI file into the MIDI Player.   If you have a binary file viewer you can check on the veracity of Wave and MIDI files.   Waves have the word "RIFF" at the top of the file and the identification "WAVEfmt" following shortly thereafter.   MIDI files begin with the characters "MThd" with "MTrk" following close

behind (the two identifying strings are separated by other characters).

**Related topics**

# Introduction

Sound Impression is a full-featured sound recording and production system for the Microsoft Windows 3.1 environment.

It offers an intuitive stereo component rack-mount interface that lets you play, record, edit, modify, mix, compose and combine sound and music from a range of sources with just a click or two of the mouse.   As easy as it is to learn and use, however, the program packs all the power and sophistication you'll need to get the most out of your multimedia-compatible hardware.

Sound Impression is designed to handle the most advanced digital audio specifications available under the Windows 3.1 environment, which means it will easily keep pace with your growing multimedia needs and audio hardware investments.

**Also see Extended Edition Information**

# Sound Impression Extended Edition

Sound Impression Extended Edition is a product designed for business professionals, musicians and other users whose sound production workflow stands to benefit from additional Waveform Editor windows, advanced composition capabilities and other enhancements to the standard Sound Impression product.

The Extended Edition, available only from MidiSoft Corporation, includes all features of the standard edition plus the following professional-level features:

More Waveform Editor sessions (16).

Greater MIDI Player capacity (up to 48 tracks).

Synchronized Start capability, which lets you start two or three Rack components simultaneously or start a Wave Recording and one or both of the other Rack components simultaneously.

An advanced version of Sound Impressions Wave Composer, which lets you visually mix up to 16 waveforms into a single *.WAV file.

An extended Session Manager that lets you assign sound cards to Wave files (if you have more than one sound card), apply descriptions to Wave files and save the descriptions, along with all of your editing work-in-progress, to disk.

An Undo feature with an enabling/disabling switch.

**For Sound Impression Extended Edition pricing and order information, contact MidiSoft Corporation at (206) 881-7176 or fax to (206) 883-1368.**

# File menu

| Keys | Result |
|------|--------|
| Alt,F | Shows this dropdown menu. |
| Alt,F,W | Calls a Wave File Open dialog box. |
| Alt,F,M | Calls a MIDI Open dialog box. |
| Alt,F,C | Initializes a compact disc. |
| Alt,F,X | Closes Sound Impression. |

Click an item for details

# Edit menu

| Keys | Result |
|------|--------|
| Alt,E | Shows this dropdown menu. |
| Alt,E,W | Calls the current Waveform Editor window. |

Click an item for details

# Options menu

| Keys | Result |
|------|--------|
| Alt,O | Shows this dropdown menu. |
| Alt,O,M | Conceals/reveals the Mixing Panel. |
| Alt,O,W | Conceals/reveals the Wave Recorder/Player. |
| Alt,O,I | Conceals/reveals the MIDI Player |
| Alt,O,C | Conceals/reveals the CD Player |
| Alt,O,P | Calls the Preferences dialog box. |
| Alt,O,S | Session Manager (Extended Edition only). |
| Alt,O,L | Calls the MIDI List. |

Click an item for details

# Help menu

| Keys | Result |
|------|--------|
| Alt,H | Shows this dropdown menu. |
| Alt,H,C | Opens the Sound Impression Help System (this file). |
| Alt,H,A | Calls the Sound Impression About box. |

Click an item for details

# Waveform Editor

Calls the Waveform Editor window.
- Menu Bar location: **Edit, Edit**

- Keyboard: **Alt,E,E**

# Empty Clipboard command

Clears Sound Impression's internal clipboard (not the Windows Clipboard).

This function is only available from the Title Panel menu bar.

- Menu Bar location: **Edit/Empty Clipboard**
- Keyboard: **Alt,E,M**

# Preferences  Click button for Preferences dialog box

Used to customize colors on the Waveform Editor windows and set the startup configuration for Sound Impression.

The dialog box can be called either by clicking the button or via the Options menu on the Title Panel.

- Menu Bar location: **Options/Preferences**
- Keyboard: **Alt,O,P**

# Preferences dialog box

**For definitions, click on any dialog box feature**

## Preferences

You can define the startup configuration
of your Sound Impression Software...

- ☒ Start the Mixer Component
- ☒ Start the Wave Component
- ☒ Start the MIDI Component
- ☒ Start the CD Component
- ☐ Start the Component Rack minimized
- ☒ Turn the Menu Bar ON
- ☐ Show a Wave Editing Session
- ☐ Use the dark colored rack components.

[ Save ]    [ Close ]

You can change the colors of many of the parts of
the wave editing sessions...

[ Save ]

**Objects:**

| Waveform Markers |
| Scroll end caps |
| Selection Highlighting |
| Waveform Background |
| Waveform Baseline |
| Waveform Tracing |
| Waveform Time Line |
| Window Background |
| Window Text |

[ Defaults ]

Red: 0

Green: 0

Blue: 255

color

# Conceal/Reveal Components

These buttons are used to alternately conceal or reveal the four lower Sound Impression components.   Click a button once to conceal a component, once more to reveal it again.

From left to right, the buttons act on the Mixing Panel, Wave Recorder/Player, the MIDI Player, and the CD Player.

- Menu Bar locations:
   **Options, Mixer** to Conceal or Reveal the Mixing Panel
   **Options, Wave** to Conceal or Reveal the Wave Recorder/Player
   **Options, MIDI** to Conceal or Reveal the MIDI Player
   **Options, CD** to Conceal or Reveal the CD Player

- Keyboard:
   **Alt,O,M** to Conceal or Reveal the Mixing Panel
   **Alt,O,W** to Conceal or Reveal the Wave Recorder/Player
   **Alt,O,I** to Conceal or Reveal the MIDI Player
   **Alt,O,C** to Conceal or Reveal the CD Player

# Help/About  **HELP**

The **Help** command calls this Help system.

The first Help item on the menu bar--and the Help button on the Title Panel--takes you to the top of the system (main contents).   The other menu item takes you to the Help topic for the Waveform Editor.   This same direct access is also available via the Help button on the Edit window.

- Keyboard:

  **Alt,H,H**

  **Alt,H,E** for Waveform Editor Help

**About** shows the version number of your copy of Sound Impression.   It is available only as an item on the Title Panel's Help menu or on the Windows Control box menu (upper left corner of the Title Panel).

- Keyboard:
  **Alt,H,A** (Menu bar) or
  **Alt+Spacebar,A** (Windows Control box)

# Exit

Closes Sound Impression.

The program can only be closed by using this command, available on the Title Panel menu bar (File menu), or by selecting Close from the Windows Control box in the upper left corner of Sound Impression's main screen.

- Keyboard:

  Title Panel menu bar: **Alt + [F]ile, E[x]it**

  Windows Control box: **Alt + Spacebar, C**; or **Alt+F4**

If you have any unsaved edits or changes to any Waveform Editor window, you will be given an opportunity to either save them or cancel the shutdown operation.

# MIDI List

Another quick way to change tracks--and, while you're at it, see the name of the track you're moving to--is to use the MIDI List.

The list can be called anytime *after* you load your first track.   It can be called fro from either of two points:

▪ By choosing MIDI List from the Options menu on the Title Panel's menu bar (Alt,O,L); or

▪ By clicking the Track Number window.

The list shows you the track number and name of all files currently loaded into the MIDI Player.   You can make any track the current track by double-clicking its name on the list.

You can keep the MIDI List box open and in view while you play files or perform work elsewhere in Sound Impression.

To remove the MIDI List box from view, choose the list window's Control Box and then click the Close item.   (Alt,Spacebar,C or Alt+F4 when the list box is the active window).

  or

▪ Keyboard:

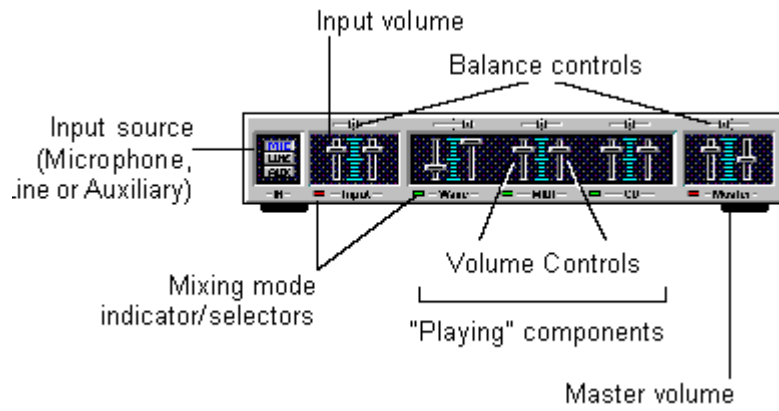Title Panel menu bar: **Alt + [O]ptions, MIDI [L]ist**
calls:

**Mixing Panel**

The Mixing Panel offers several features that let you maintain control over volume and balance for all components and input sources.

# Mixing Panel diagram

Input volume

Balance controls

Input source
(Microphone,
Line or Auxiliary)

Mixing mode
indicator/selectors

Volume Controls

"Playing" components

Master volume

# Mixing Panel

`[icon] Click for diagram`

The Mixing Panel offers several features that let you maintain control over volume and balance for all components and input sources.

Features include:

- **Slide controls** for adjusting the volume and left/right balance for all components and input devices, plus one set for Master control.
- **Input source buttons** let you select a port or device type for recording.
- **Mixing Mode indicator/selectors** allow you to adjust volume/balance levels separately for play and record modes.   Clicking a Mixing Mode indicator alternately changes its color from green (play mode) to red (record mode).

## Mixing modes

**Play mode** (green indicator) directs output to the speakers.   You can use this mode to test volume and balance adjustments in preparation for a recording.

**Record mode** (red indicator) directs output to the Wave recorder.   To record from any device, including the CD Player, switch the device's Mixing mode indicator to record mode, click the Record button on the Wave Recorder/Player, then start the input feed from the device.   To start the feed from the CD Player, click the component's Play button).

## Adjusting volume and balance

To change volume or balance hold your left mouse button on any sliding lever and drag the lever to a new setting.

Vertical levers control volume for left and right channels. To lock and move both levers simultaneously, position your mouse between them and drag them up or down.   Horizontal levers control balance.

The Master control adjusts overall volume and balance relative to the settings of the other controls. Volume for each channel is determined by the lesser of the Master control or the component control.

**Example:** in the Mixing Panel illustration at the top of this article, the Wave file sound level on the left channel will be one-quarter of the maximum volume (as determined by the Master control) while the right channel level will be half of the maximum volume (as determined by the Wave control).

# Initialize CD

This button, used to call the File Open dialog on the Wave Recorder/Player and the MIDI Player, is used to initialize the disc in your CD-ROM drive.   When this button is clicked the component's Play, Scan, Skip and Play List buttons are highlighted in preparation for playing.

The disc initialization function is also available by choosing CD from the File menu on the Title Panel's menu bar (Alt,F,C).

Both the button and the menu item are disabled while a CD is playing.

*Note:* If you click the Initialize CD button when a disc has already been initialized,   the Play List automatically resets to its default or programmed order.

# Opening Waves from the Wave Recorder/Player

The WR/P's File Open button calls a standard Windows file open dialog box from which you can load a Wave file into the edit session.

# Save MIDI Play List

Calls a standard file save dialog box, except the purpose is to save your programmed MIDI Play List instead of a file.

The dialog box appears with the default MDS MIDI Play List extension inserted into the file name box.   Simply move to the drive or directory where you keep your MIDI files and/or Play Lists, and replace the asterisk with a name for your Play List.

# Close CD

What serves as the save button on the other components is used by the CD Player to deinitialize, or "close," the disc in the CD drive.   Clicking the Close CD button   causes all component buttons except Initialize CD to be dimmed.

It's a good idea to use the Close CD function before changing discs.

# Info Cassette

You can get basic information about the file in the current session by clicking the cassette graphic next to the Session Number window.   The Session Info window contains the file name (if any) of the current session, along with its playing length, sample rate and sample size.
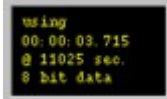
# Record

Records from the currently selected input device to the current Wave session.

Recording begins immediately if the current session is unoccupied.

If the session is occupied by an unchanged or saved file--a replaceable file, in other words--recording will begin immediately and the recording will replace the occupant file.

If the current session contains unsaved changes, recording is delayed; a message box appears to give you the opportunity to either save the session or cancel the Record operation.

When recording starts, the arrow cursor changes to a microphone and a red recording indicator comes on in the window directly above the Record button.   As you record, the Sound Level indicator moves in response to signal strength and the Timer displays the elapsed time of the recording.

To record:

1. Choose an input device by selecting one of the three Input Source buttons on the left side of the Mixing Panel.   You can also choose to record from the CD Player.   Whichever source you choose, switch the device's Mixing Mode indicator (located below the volume levers) to record mode (red).

2. Make any necessary volume or balance adjustments to the selected input device using the Input or Component controls and the Master control.

3. If using the CD Player as your source, load and initialize an audio CD, then select a track.

4. Click the Record button on the WR/P, then immediately start your Input feed or click the Play button on the CD Player.

5. When finished recording, click the Stop button on the WR/P, then stop the feed from the Input device or component.

The Timer on the WR/P will immediately reset.   You can then click Play to hear your recording.

# Sound Impression Setup notes

**Requirements and recommendations**

**Driver notes**

**Requirements and recommendations**
Hard disk space and the TEMP area
Virtual memory
Swap files
32-bit access
CPU note
DOS version recommendation
Windows version/mode requirements
Arial TrueType requirement
Mouse requirement

**Driver notes**
Wave audio drivers
MIDI drivers
CD-ROM drivers
Multimedia Timer driver

# Hard disk space and the TEMP area

**Minimum:** Sound Impression program files occupy approxomately 2MB of space on your hard disk drive.   Above that, the only disk space requirement is an amount that exceeds the byte size of the largest Wave file you are currently editing.   If, for example, you intend to reformat an 8-bit 300K mono Wave file to 16-bit stereo, you must first make certain that you have

**For best results:** Ensure that your "Temp" directory is assigned to the hard disk drive partition that has the most available disk space.

**What to look for:**   The Temp directory is an area of your hard disk that Windows and Windows applications such as this one use as a "storage bin" for temporary files.   To find out if you have a Temp directory explicitly assigned, use an ASCII text viewer to check your AUTOEXEC.BAT file (it's on the root directory of your startup drive) or drop to DOS and type SET at a DOS command line. Look for the word TEMP among the displayed variables.   If present, the assignment points to a hard disk directory (common reading: "TEMP=C:\WINDOWS\TEMP").   If no TEMP directory is assigned in AUTOEXEC.BAT, Windows takes care of the assignment itself, directing all temporary files generated by the environment and its applications into the main Windows directory.

It doesn't matter whether the directory is assigned explicitly or if Windows takes charge of it; the important thing is to ensure that the drive that receives temporary files has plenty of free disk space available.   You can check drive disk space (actual free disk space, not "Free Memory") using File Manager or a number of other Windows utilities.   You can also drop to DOS and run a DIR listing on each of your drive partitions (warning: do not use CHKDSK to check disk space while Windows is running).   Whichever drive has the most free disk space (and is likely to keep that space open) is the best candidate for your Temp directory.

To change the Temp directory assignment, close Windows and back up your AUTOEXEC.BAT file by copying it to a new file name (i.e., COPY AUTOEXEC.BAT AUTOEXEC.BA1).   Then open AUTOEXEC.BAT with a text editor and, at or near the bottom of the batch file, insert the line SET TEMP=X:\TEMP, where X is the letter of the drive you select for your Temp directory and Y is the name of the directory.   If you choose Temp as the directory name, create the directory by typing MD X:\TEMP.   Then reboot your machine.

**Why:** Temporary files are created by applications, including Sound Impression, while performing certain disk-based operations.   When they're no longer required by the program that issued them or when you exit the program normally, temporary files are erased.

Though they may do it for only a short period of time, these "invisible" files occupy hard disk space like any other file.   And they can be large, particularly when conducting operations on *.WAV files. For that reason the rule of thumb is to keep at least twice as much disk space open as the size of the largest *.WAV file you're working on.   For even greater comfort, work with a four-fold margin.

**Warning:** Since programs routinely "clean up" the Temp directory after using it, the directory can appear to be empty.   It may still, however, contain hidden files that are being used by a running application.   Deleting a temporary file while a program is using it is a potentially disastrous mistake. To be on the safe side, do **not** delete the Temp directory or any files in the Temp directory while working in Windows.   Temporary files can get "stuck" in the Temp directory after a system crash or other anomoly, but the safest time to clean out any such "leftovers" is after you exit Windows.

**Related topics**

# RAM/Virtual memory recommendations

**For Best Results:**

- 16MB or more of virtual memory, which should include:
  - 8MB or more of RAM;
  - A permanent swap file; and
  - 32-bit disk access.

Though Sound Impression will run with as little as 4MB of RAM, performance may be sluggish when working with large Wave files and the maximum size of Wave files that you can record or play in any single edit session will be restricted to an amount less than the environment's allowable maximum.

**Components of virtual memory**

RAM and free disk space are the main ingredients of virtual memory--Windows' way of allowing you to run more programs and access more data than would be possible using physical memory alone. Windows creates virtual memory by finding the largest contiguous block of space on your hard disk drive.   It reserves that space by installing a swap file--a hidden file that is used to swap data to and from the disk as needed.

A large virtual memory swap file gives Windows more "elbow room" in which to work with large files. More RAM lets Windows build a larger swap file and lets virtual memory work faster.

You can keep tabs on the amount of virtual memory currently available by using any resource monitoring utility or by checking Program Manager's About box.

To find the size and type of swap file that your system is using, you'll have to go to the place where the swap file is built--the 386 Enhanced section of the Control Panel.   The information you need is provided by clicking the section's Virtual Memory button, then the Change button.

Here's the way it should read:

- The swap file should be configured as Permanent (Windows offers a Temporary option as well, but for the sake of stability, keep it Permanent).
- The 32-bit disk access box should be checked.
- The swap file should be set to the Recommended Size.

The Recommended Size will be less than the Maximum Size, but don't bother setting the file to maximum--Windows won't use more than the Recommended amount.

The Maximum figure can be used to determine the amount of fragmentation on the selected disk drive.   If the Maximum Size is significantly less than the number shown in the Space Available box, your disk is probably fragmented.

As mentioned earlier, the Windows swap file occupies the largest contiguous block of space it can find on a selected drive.   If disk data is fragmented, that contiguous block won't be of optimal size.

To create a larger swap file, and thus increase your virtual memory, change the swap file type from permanent to "none," exit Windows, and use a disk optimization utility to defragment your disk. Then return to Control Panel and configure your swap file to the new Recommended size.

<u>The Windows Swap file</u>

# The Windows swap file

The swap file is one of the two primary components of virtual memory.   The other component is Random Access Memory (RAM).

The swap file can be created, checked or reconfigured using the Control Panel's 386 Enhanced/Virtual Memory utility.

If you don't have one already, create a permanent swap file on your hard disk drive, and set it at the maximum amount recommended by Windows.

If you have a Temporary swap file, we recommend that you reconfigure it as Permanent.

For instructions on creating or reconfiguring the swap file, see your Windows User's Guide.

**Related topics**

# CPU

**Requirement:** Sound Impression requires that your computer be equipped with at least an 80386 processor.

**For best results:** A 486-based computer is highly recommended for recording and playing back Wave files formatted at 44kHz or higher.

Many 386-based machines appear to have problems recording or playing back Wave files formatted at 44kHz or greater.   You may still be able to *produce* 44kHz files, but you probably won't be able to hear the results at peak quality unless you play back the same file on a 486 computer with a fast hard disk drive and a sound card capable of generating 44kHz output (some cards are limited to 22kHz).

The fundamental problem is that at 44kHz, data moves faster than an average 386 system can store it.   This limitation is more pronounced when dealing with 44kHz files formatted in stereo.   When such files are played on a 386-based system you may get erratic, interrupted output; at worst, the system could lock up.

**Related topics**

# DOS version recommendation

**Requirement:** Either MS-DOS or PC-DOS 3.3 can handle the demands of Windows 3.1 in <u>386 enhanced</u> mode, but DOS 5.0 is a more capable and efficient operating system than its predecessors.

**For Best Results:** We recommend DOS 5.0 or later (or its technical equivalent) as the operating system for this version of Sound Impression.

**Related topics**

# Windows 3.1/enhanced mode

**Requirement:** Sound Impression requires Windows version 3.1 or later.   It will not run on earlier versions.

Sound Impression also requires that Windows be run in 386 enhanced mode (as opposed to standard mode).   If you're not already running in 386 enhanced or you're unsure of your current operating mode, consult your Windows User's Guide for instructions on how to determine the mode and, if necessary, reconfigure Windows for 386 enhanced.

**Related topics**

# TrueType

**Requirement:** For correct display of some text elements, Sound Impression requires that TrueType be enabled.

If during Setup the status report list indicates that TrueType is not enabled, you should switch TrueType on after installing Sound Impression.   Instructions are contained in the Arial TrueType font topic.

If the Status report includes the line, "TrueType enable switch not present", then Setup was unabled to determine whether or not TrueType is enabled.   In this case, you should, after installation is complete, check the Control Panel/Fonts/TrueType dialog to make sure TrueType is actually enabled before using Sound Impression.   For instructions on how to check TrueType's current status, see the Arial TrueType font topic.

**Related topics**
Tech Note Contents
Arial TrueType font

# Arial TrueType font

**Requirement:** For correct display of some text elements, Sound Impression requires that the Arial TrueType font be present and on your Windows fonts list.

If during Setup the status report list indicates that the font is not present or is not on your font list, you should, after installation is complete, follow the instructions below to copy the font to your hard disk and place it on your font list.

If you're still in the Setup process, you can use the Edit/Copy menu item from the menu bar above to copy the instructions to the clipboard.   When Setup is complete, copy the clipboard text into a Notepad file and follow the instructions to make the necessary changes.   Note: The Windows clipboard can only hold one piece of information at a time.   If you copy the instructions to the clipboard and then later find that the text has been replaced by some other item before you had a chance to copy it to a Notepad file, you can retrieve the instructions again from the main Sound Impression Help file.   Just open the Help file on its own (Sound Impression doesn't have to be running), then search for the keyword Arial or TrueType.

**Checking for Arial**

The Arial font is part of the Windows 3.1 package but, like most fonts, it can be removed.

If you're not sure whether or not Arial is installed, open Windows' Control Panel and double-click the Fonts icon.   A dialog box shows the fonts currently installed on your system.

If Arial is listed, you should then check that TrueType fonts are enabled.   Click the TrueType button in the Fonts dialog and see if the Enable TrueType box is checked.   If it isn't, click the box and restart Windows.

If TrueType is enabled but the Arial font isn't present, click the Add button in the Fonts dialog. Locate the directory in which your system fonts are kept (usually the main Windows directory or its System subdirectory).   If Arial shows up among the available fonts, add it.   You need only add Arial "regular"; its Bold and Italic styles aren't needed by Sound Impression.

If Arial isn't on your hard disk, you must reinstall it from your Windows Setup Disks.   The font files are stored in compressed form on the disks.   Their compressed file names are ARIAL.TT_ and ARIAL.FO_ (TrueType fonts require two files each).   They will be expanded to ARIAL.TTF and ARIAL.FOT.

To expand them you need a Windows utility called EXPAND.EXE.   The utility should already be present in your main Windows directory (it was placed there when you installed Windows).   If EXPAND.EXE has been removed, copy it to your hard disk from your Windows Setup Disk set.   This file is not compressed.

To decompress and copy the Arial font files to your hard disk:

1. Drop to DOS and type the following at the DOS prompt:

   **expand a:arial.fo_ c:\windows\system\arial.fon**

2. Type the following at the next prompt:

   **expand a:arial.tt_ c:\windows\system\arial.ttf**

3. Return to Windows, activate Control Panel, and click the Fonts icon.

4. In the Fonts dialog box, click the Add button.

5. Choose Arial.

6. Close Control Panel and start Sound Impression.   All Sound Impression text elements will now display correctly.

**Related topics**
[Tech Note Contents](#)
[TrueType](#)

# Recommendation: 32-bit disk access

For best results, make sure Windows' 32-bit access mode is enabled.

This feature is highly recommended to enhance the performance of Sound Impression on most 80386- and 80486-based computers.

The only types of computers that may not benefit from 32-bit access capabilities are some models of battery-powered portables, and even then only when the machines' power-saving features are active.

The 32-bit access mode check box is available in the Virtual Memory section of the Control Panel's 386 Enhanced utility.

**Related topics**

# Requirements: Mouse

Though some shortcut and access key combinations are available for waveform editing and other tasks, Sound Impression requires a mouse for most functions.

If you don't have a mouse you can continue with Setup and install a mouse later.

Any Windows-compatible two- or three-button model will do.

**Related topics**

# Setting up: Wave audio drivers

If the line "**Wave audio driver not detected**" appears on the system status list during Setup, you will probably need to reinstall your sound card's Wave audio software driver(s).

Sound Impression will still appear, as you'll see if you choose to run the program at the end of Setup, but its functionality will be severely restricted (namely, the Play and Record functions will be unavailable on the Wave Recorder/Player).

This restriction will exist until you install the required driver. The drivers are normally installed through the Drivers utility in Windows Control Panel. Please consult your sound card manual or the Windows User's Guide for further assistance.

As an additional reminder, Setup will conceal the Wave Recorder/Editor from view the first time you start Sound Impression. You can change this order for subsequent startups by checking the box labeled "Start the Wave Component" in the Title Panel's Preferences dialog box (remember to save any Preference changes).

After installing your Wave audio driver, you can check the result either by running Setup again (which will automatically restore the startup configuration to its defaults) or by checking Wave audio output with Sound Impression or through your sound card's testing software.

**Related topics**
Tech Note Contents

# Setting up: CD-ROM drivers

If the line "**CD-ROM driver not detected**" appears on the system status list during Setup and you have a CD-ROM drive installed, you will probably need to reinstall one or more of the unit's software driver(s).

Windows requires the installation of three separate drivers in order to access a CD-ROM drive.

Two of these--the sound card system driver and the Microsoft CD-ROM driver--are installed at DOS level.   The third, MCICDA.DRV, is installed through Windows Control Panel.   The warning above is issued when Setup fails to find the latter driver in its proper location.

If you know you have the first two drivers correctly installed (you can test these at DOS level with your sound card testing software), you will need to install MCICDA.DRV.   Please consult your sound card manual or the Windows User's Guide for further assistance.

**NOTE:** Some sound cards **cannot** support a CD-ROM drive.   Check your sound card documentation to find out if your card does in fact support CD-ROM.   You can also check the Sound Impression Hardware Reference Guide for a list of cards known to lack such support.

**If you don't have a CD-ROM drive or if your sound card is unable to use a CD-ROM drive, you can ignore the status report warning.**

If you do have a CD-ROM drive and your card is designed to support it, you will be reminded of the absence of the correct CD-ROM driver(s) by the absence of the CD Player on startup.   You can change this order for subsequent startups by checking the box labeled "Start the CD Component" in the Title Panel's Preferences dialog box (remember to save any Preference changes).

After installing the correct CD-ROM software drivers, you can check the result either by running Setup again (which will automatically restore the startup configuration to its defaults) or by checking CD-ROM output with Sound Impression or through your sound card's Windows testing software.

**Related topics**

# Setting up: MIDI drivers

If the line "**MIDI driver not detected**" appears on the system status list during Setup and your sound card supports MIDI sequencing, you will probably need to reinstall one or more of your sound card's MIDI drivers.

**NOTE:** Some sound cards **cannot** support MIDI sequencing.   Check your sound card documentation to find out if your card is one of these.   You can also check the Sound Impression Hardware Reference Guide for a list of cards known to lack such support.

**If your sound card is unable to perform MIDI sequencing, you can ignore the status report warning.**

If your sound card does support MIDI sequencing, Windows requires the installation of two separate software drivers in order to access such services.   Both must be installed through Windows Control Panel.   The warning above is issued when Setup fails to find one of these drivers in its proper location.

**The sound card driver installation process should also install the correct MIDIMAP.CFG (which should also be supplied with your sound card)**   Please consult your sound card manual or the Windows User's Guide for driver installation assistance.   If the existing MIDIMAP.CFG does not match your sound card's MIDI driver, you may be prevented from playing MIDI sequences in Sound Impression (or in any other MIDI-capable Windows application).

As an a reminder of the lack of MIDI sequencing capability, Setup will conceal the MIDI Player from view the first time you start Sound Impression.   You can change this order for subsequent startups by checking the box labeled "Start the MIDI Component" in the Title Panel's Preferences dialog box (remember to save any Preference changes).

After installing the correct MIDI driver(s) and MIDIMAP.CFG, you can check the result either by running Setup again (which will automatically restore the startup configuration to its defaults) or by checking MIDI output with Sound Impression or through your sound card's Windows testing software.

**Related topics**
Tech Note Contents

# Setting up: Multimedia Timer driver

If the line "**Multimedia Timer not detected**" appears on the system status list during Setup, you may need to reinstall Windows' TIMER.DRV through the Windows Control Panel.

This driver, normally installed by Windows 3.1 during its own setup, controls the timing functions of Windows multimedia devices.   If it is not present and installed, you'll experience difficulties when attempting to run two or more multimedia devices simultaneously.

If the "Timer" item is listed among your drivers in the Control Panel's Drivers utility, the driver is probably installed and you may ignore the warning.

For instructions on installing the Multimedia Timer and other multimedia drivers, check your Windows User's Guide.

**Related topics**

**Windows 3.1/enhanced mode**

Sound Impression requires Windows version 3.1 or later.   It will not
run on earlier versions.   Sound Impression also requires that Windows
be run in 386 enhanced mode (as opposed to standard mode).   If
you're not already running in 386 enhanced or you're unsure of your
current operating mode, consult your Windows User's Guide for
instructions on how to determine the mode and, if necessary,
reconfigure Windows for 386 enhanced.

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# About Sound Impression

## Version: 3.5

See package insert for complete information on Technical Support
Services.

# Technical Support

See package insert for complete information on Technical Support Services.

**Related topics**

# Registering Sound Impression

See package insert for important Registration information.

**Related topics**
Technical support
Sound Impression Version Info (About)

# News/Updates list instructions

The News/Updates list represents a series of articles dealing with product updates, technical information and other items of interest that are offered as supplements to the Sound Impression Help System.

Not all of the "hotspots" will always call an article.   Only one text file, NEWS01.TXT, was shipped with this copy of Sound Impression.   The 12-item News/Updates list is offered in order to accommodate future supplements and make it easy for you to access the articles directly from the Help file.   Future articles will be made available via various online services and directly from Technical Support.   For more information on this and other Technical Support services, see the special insert in your Sound Impression package.

**If you click an item and receive a "File Not Found" message or other error message, the article probably hasn't yet been issued.**   You can also receive such a message, however, if the file in question has been renamed, moved off your system's path, or if the delivery vehicle for the article, Windows' Notepad, is not present on your path.   To see which files are available, check the directory that contains your Sound Impression program files.   The articles will be named as shown on the News/Updates list.   If you don't have Notepad on your system, you can read the files with any other ASCII text editor or viewer.

# Sound Impression OLE

Object Linking and Embedding (OLE) allows you to transfer any sound file or composition from Sound Impression to any other Windows application capable of receiving OLE data.

Sound Impression's unique implementation of OLE permits the transfer of any supported sound data--Wave, MIDI, CD, even the current Mixing Panel settings--to an OLE "client" application with just a few clicks or keystrokes.   The implementation is also self-registering, which means that Sound Impression takes care of all OLE registration issues for you.

**How to link sound data**

Link a Wave file

Link a MIDI file

Link a CD sound segment

Link the current Mixing Panel Settings

**How to embed sound data**

Embed a Wave file

Embed a MIDI file

# How to link a Wave file

To link a Sound Impression Wave file to a Windows OLE client application:

1. Open a Waveform Editor session.   You can load an existing file, record into an unoccupied session or paste in a segment from another session.

2. Click the session's OLE button (the button bearing the "chain-link" graphic).   A dialog box entitled "Embed and Link OLE Objects" appears.   Click the dialog's Link button.

3. Open the client application and document.   Place your cursor at the position in which you want to insert the waveform.

4. Choose Paste Link (or equivalent) from the client application's Edit menu.   The Sound Impression "Sound" icon (a microphone) is immediately inserted into the document at the cursor position.

**Playing or editing the link:**

To play the linked waveform, simply double-click the Sound icon or choose Activate (or equivalent) from the client application's Edit|Links menu.

To edit the sound, choose Edit from the client application's Edit|Links menu.   The command calls a single Sound Impression Waveform Editor session with the requested Wave file open and ready for editing.   After editing (or replacing) the file, click the session's OLE button and choose Update from the popup dialog.   The sound link in the client document will immediately reflect the changes.

# How to link a MIDI file

To link a Sound Impression MIDI file to a Windows client application:

1. Open a MIDI file into the MIDI Player.
2. Click the OLE button (the button bearing the "chain-link" graphic) on the main screen Title Panel. A dialog box entitled "OLE for MIDI and CD" appears.   Click the Link button in the MIDI section of the dialog.
3. Open the client application and document.   Place your cursor at the position in which you want to insert the MIDI file.
4. Choose Paste Link (or equivalent) from the client application's Edit menu.   The Sound Impression "Music" icon (a keyboard) is immediately inserted into the document at the cursor position.

**Playing or changing a MIDI link:**

To play a linked MIDI file, simply double-click the Music icon or choose Activate (or equivalent) from the client application's Edit|Links menu.   Sound Impression will open with the linked MIDI file loaded.   To halt play, click the Stop button on the MIDI Player.

To change a MIDI file link:

1. Choose Edit from the client application's Edit|Links menu.   The command opens Sound Impression (if it isn't already open) and loads the MIDI Player with the linked file.
2. Replace the linked file with a new file.
3. Click the Title Panel's OLE button, then click Update in the OLE dialog.   The client document will now contain the new MIDI file link.

Note: Many client applications also allow you to change links by simply choosing Change Link in the application's Edit|Links menu or dialog box.   The command calls a File Open dialog from which you can choose a new MIDI file.   The new link will offer the same functionality as its predecessor.

# How to link a CD sound segment

To link a Sound Impression CD sound segment to a Windows client application:

1. Initialize an audio CD in the CD Player.

2. Click the OLE button (the button bearing the "chain-link" graphic) on the main screen Title Panel. A dialog box entitled "OLE for MIDI and CD" appears.   The CD portion of the dialog lets you set a starting and ending time for the CD segment.   After setting the length, click the CD section's Link button.

3. Open the client application and document.   Place your cursor at the position in which you want to insert the CD sound segment.

4. Choose Paste Link (or equivalent) from the client application's Edit menu.   The Sound Impression "CD" icon is immediately inserted into the document at the cursor position.

**Playing or changing a CD sound segment link:**

To play a linked CD sound segment, simply double-click the CD icon or choose Activate (or equivalent) from the client application's Edit|Links menu.   Sound Impression will open and, if the CD bearing the requested sound segment is present in your CD-ROM drive, the program will automatically initialize the disc, locate the correct segment and play it.   If the CD isn't present in the CD-ROM drive, you'll be asked to insert it.   To halt play, click the Stop button on the CD Player.

To change a CD sound segment link:

1. Choose Edit from the client application's Edit|Links menu.   The command opens Sound Impression (if it isn't already open) and locates the CD segment as noted above.

2. Click the Title Panel's OLE button.   Change the time segment for the current audio CD or load and initialize a new CD and enter a new segment.

3. Click Update in the OLE dialog.   The client document will now contain the new CD sound segment link.

# How to embed a Wave file

To embed a waveform into an OLE client application:

1. Open a Waveform Editor session.   You can load an existing file, record into an unoccupied session or paste in a segment from another session.

2. Click the session's OLE button (the button bearing the "chain-link" graphic).   A dialog box entitled "OLE for Wave files" appears.   Click the dialog's Copy Embedded Object button.

3. Open the client application and document.   Place your cursor at the position in which you want to embed the Wave sound.

4. Choose Paste Special (or equivalent) from the client application's Edit menu.   The command calls an object selection dialog box.   Choose Sound object from the list.   The Sound Impression "Sound object" icon (a microphone) is immediately inserted into the document at the cursor position.

**Playing or editing the embedded Sound object:**

To play the embedded sound file, double-click the Sound icon or choose Sound Object|Play (or equivalent) from the client application's Edit menu.

To edit the waveform, choose Sound Object|Edit from the client application's Edit menu.   The command calls a single Sound Impression Waveform Editor session with the requested Wave file open and ready for editing.   After editing (or replacing) the file, click the session's OLE button and choose Update Object from the popup dialog.   The client document's embedded waveform will immediately reflect the changes.

# How to embed a MIDI file

To embed MIDI sounds into an OLE client application:

1. Open or select a MIDI track.

2. Click the Title Panel's OLE button (the button bearing the "chain-link" graphic).   A dialog box entitled "OLE for MIDI or CD" appears.   Click the Embed button in the dialog's MIDI section.

3. Open the client application and document.   Place your cursor at the position in which you want to embed the MIDI file.

4. Choose Paste Special (or equivalent) from the client application's Edit menu.   The command calls an object selection dialog box.   Choose Music object from the list.   The Sound Impression "Music object" icon (a keyboard) is immediately inserted into the document at the cursor position.

**Playing or editing the embedded Music object:**

To play the embedded MIDI file, double-click the Music icon or choose Sound Object|Play (or equivalent) from the client application's Edit menu.

# How to link Mixing Panel settings

To link the current Mixing Panel settings to a Windows client application:

1. Make your volume and balance adustments on the Mixing Panel.

2. Click the OLE button (the button bearing the "chain-link" graphic) on the main screen Title Panel. A dialog box entitled "OLE for MIDI and CD" appears.   Click the Link button in the Mixer Level Queue section of the dialog box.

3. Open the client application and document.   Place your cursor at the position in which you want to insert the Mixing Panel settings.

4. Choose Paste Link (or equivalent) from the client application's Edit menu.   The Sound Impression "Mixer" icon is immediately inserted into the document at the cursor position.

**Using the Mixing Panel settings link:**

To use the Mixing Panel settings link, simply double-click the Mixer icon or choose Activate (or equivalent) from the client application's Edit|Links menu.   Sound Impression will open (if it's not open already) and its Mixing Panel settings will immediately be reset to those that were saved in the link.

To change a Mixing Panel settings link:

1. Choose Edit from the client application's Edit|Links menu.   The command opens Sound Impression (if it isn't already open) and resets the Mixing Panel, as noted above.

2. Adjust the Mixing Panel's volume and balance controls to new settings.

3. Click the Title Panel's OLE button then click the Link button in the Mixer Panel Queue area of the dialog box.

3. Click Update in the OLE dialog.   The client document will now contain the new Mixing Panel settings.

# OLE overview

Object Linking and Embedding is the process of transferring data from one Windows application to another, enabling the destination ("client") application to use the data as if it were its own.   OLE also enables the client application to call up the source application (the "server") in order to edit or update data objects.

OLE clients (applications capable of receiving Sound, Music and CD sound objects from Sound Impression) include Windows Write, Cardfile, Word for Windows, and most of the popular word processing, spreadsheet, presentation and multimedia software created for Windows 3.1.

**Linking versus embedding**

When you transfer data using OLE, information is inserted into a client document, increasing its file size.   Embedding a sound file into a client document--particularly a Wave file--can increase the size of the document by a vast amount, since the file, packaged with a few other necessary pieces of information such as the icon that represents the sound, actually becomes *part* of the document. Linking requires less overhead, since it only transfers essential information about the form and function of the data, rather than the data itself.

Embedding is more secure, however, since the only way the data can be changed is through the client document.   If, for example, you embed a Wave file into a memo, the only way the sound portion of the memo can be changed is if the reader of the memo opts to edit it from *within* the application in which it is being read (and heard).

Linked data, on the other hand, can be changed or edited at either end of the link, which means that if you link a Wave file to a memo and later inadvertently change the contents of the file in Sound Impression, the next time you "hear" the memo, it will contain the new message, not the original one. This disadvantage can be turned to advantage, however: with linking, you can update Waves in documents without having to open the documents that contain them--a timesaver if, for example, you need to change an announcement that is linked to several different documents.

Another major difference between linking and embedding is that after you link a sound to a document, you can change the sound file that was the subject of the link, but you can't rename it or move it from the drive and directory it was in when you made the link.   If you do, the link will be "severed."   With embedding, you can do whatever you want with the original Wave; the embedded file is completely independent and can be moved with its host document.

Either way, the server application (Sound Impression or whatever other program delivers your sound objects) must always be accessible--that is, somewhere on the DOS path--in order for linked or embedded objects to be replayed or edited.

# Sound Impression's self-registration feature

Upon installation, Sound Impression assumes control of the "Sound" object in the Windows 3.1 environment.   This object, registered by Sound Impression to allow easy transfer of Wave data using Object Linking and Embedding, is normally assigned to a Windows applet called Sound Recorder.

Sound Impression also automatically reregisters itself as the Sound object each time it is run.   This "autoreregistration" protects the links you create with Sound Impression by preventing other applications from permanently establishing themselves as the Sound server.

In addition to the Sound object, Sound Impression automatically registers Music (MIDI) and Compact Disc (CD sound segment) objects.

Sound Impression's self-registering capability establishes automatic file associations between Sound Impression and all *WAV (Wave), *MID (Standard MIDI) and *RMI (RIFF MIDI) files.   This allows you to simply click on any of these file types in File Manager (or equivalent Windows file management utility) to start Sound Impression with a file loaded, or to drag-and-drop a file or group of files from File Manager into Sound Impression.