

ACID™ 3.0

After ACID is installed and you start it for the first time, the registration wizard will appear. This wizard offers easy steps that enable you to register ACID online with Sonic Foundry. Alternatively, you may register ACID online at www.sonicfoundry.com at any time.

Registering your product will provide you with exclusive access to a variety of technical support options, notification of product updates, and special promotions exclusive to ACID registered users.

Registration Assistance

If you do not have access to the Internet, registration assistance is available. Please contact our Customer Service Department.

Registration assistance is currently available during normal office hours by dialing the following numbers:

Telephone/Fax

1-800-577-6642 (toll-free)
+800-000-76642 (toll-free)

+608-204-7703
1-608-250-1745 (Fax)

Country

US, Canada, and Virgin Islands
Australia, Denmark, France, Germany, Italy, Sweden, UK,
Netherlands, and Japan
for all other countries
All countries

Customer Service/Sales

For a detailed list of Customer Service options, we encourage you to visit www.sonicfoundry.com. Telephone support during normal office hours:

Telephone/Fax/E-mail	Country
1-800-577-6642 (toll-free)	US, Canada, and Virgin Islands
+800-000-76642 (toll-free)	Australia, Denmark, France, Germany, Italy, Sweden, UK, Netherlands, and Japan
+608-204-7703	for all other countries
1-608-250-1745 (Fax)	All countries
customerservice@sonicfoundry.com	

Technical Support

For a detailed list of Technical Support options, we encourage you to visit www.sonicfoundry.com/support.

- To listen to your support options please call 608-256-5555
- Customers who have purchased ACID Pro receive 60 days of complimentary phone support. The complimentary support begins when the Pro product is registered. (Registration is required to received this complimentary support.) Please call (608) 204-7704 if you need assistance with your Pro version product.

Sonic Foundry, Inc.

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Madison, WI 53704
USA

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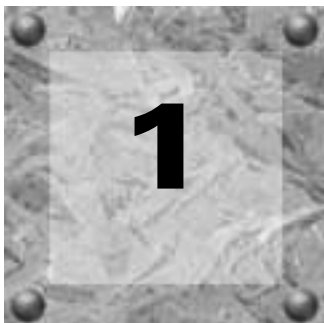
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Introduction

Welcome to Sonic Foundry ACID

Congratulations on purchasing a revolutionary software application for Windows. Using Sonic Foundry ACID™ you can create great music by simply picking, painting, and playing.

Using the manual

ACID was designed to make creating music easy and intuitive. By reading the manual, you can become familiar with all that ACID has to offer. Experienced users can learn about our great new features, while new ACID users can quickly learn to begin making music.

About the manual's design

The ACID user manual is divided into several chapters and appendices. The chapters are designed to explain project techniques at specific knowledge levels: Basic, Intermediate, and Advanced.

The remaining chapters and appendices are designed to explain specific ACID features and provide useful reference information.

Manual overview

The following table outlines the manual's contents and what information is described in each chapter and appendix.

	Titles	Descriptions
Chp. 1	Introduction	This chapter covers general information about installing ACID, registering it, an overview of the ACID interface, and shortcut keys.
Chp. 2	Basic Project Techniques	This chapter provides information and procedures to create a simple project quickly and easily.
Chp. 3	Intermediate Project Techniques	This chapter provides information and procedures for adding more complexity to a project.
Chp. 4	Advanced Project Techniques	This chapter provides professional-level information and procedures for creating complex projects.
Chp. 5	Working with Video	This appendix explains how to use finished video material in your ACID project.
Chp. 6	Recording in ACID	This chapter explains how to record material directly into ACID.
Chp. 7	Working with MIDI	This chapter explains how to record and incorporate MIDI files into your project.
App. A	Customizing ACID	This appendix provides information and procedures for tailoring ACID to suit your preferences.
App. B	Glossary	This appendix provides music and ACID related terms and definitions for your reference.

System requirements

In order to use ACID, your computer must satisfy the following minimum specifications:

- 300 MHz processor*
- Microsoft Windows 98, Me, or 2000*
- 64 MB RAM (128 MB recommended)
- 60 MB hard-disk space for program installation
- Windows-compatible sound card
- CD-ROM drive
- Supported CD recordable drive (required for creating CDs)
- DirectX Media 8.0 Run Time (included)
- Internet Explorer, version 5.0 or higher (included)

*400 MHz processor, Windows 98SE, Me, or 2000 required for video scoring.

Installing ACID

Prior to installing ACID, we recommend that you exit all open applications and temporarily disable any virus protection.

1. Insert the ACID CD-ROM. The ACID Installation screen is displayed if CD-ROM AutoPlay is enabled.

If CD-ROM AutoPlay is turned off, click  and choose **Run**. The Run dialog displays.

2. In the Run dialog, enter the CD-ROM drive's letter and add `:setup.exe`.
3. Click **OK** to begin installation.
4. Click **Install Software** to begin the installation process.
5. Follow the on-screen prompts and enter the necessary information when required.
6. At the final screen prompt, click **Finish**.

If you're installing ACID with Windows 2000, your user account needs to be a member of the Administrators group to install ACID, and you need to be a member of the Power Users group (or higher) to register ACID.

About the serial number

The first time you start ACID, the Please Enter Your Serial Number dialog displays. Select one of the following options:

- I would like to run the Sonic Foundry ACID Pro demo.
- I have a Serial Number.

Download

If you have purchased ACID Pro 3.0 from the Sonic Foundry Web site, you will receive your serial number via e-mail. The serial number allows you to run ACID for a limited time without registering the product. If you do not register, ACID will time out.

However, if you have started a project and ACID times out, the project will not be lost. It will be restored after you register ACID.

CD

If you have purchased the boxed version of ACID Pro 3.0, you will find the serial number on the first page of the Quick Start Guide.

Using the online Help

ACID includes HTML Help. To view the online Help, you must have Internet Explorer 4.0 or later installed on your system. For your convenience, Internet Explorer 5.0 is included on the ACID CD-ROM.

Accessing Help

The online Help is available in two forms: an HTML Help window or What's This? help window. Both forms are available via the keyboard or the **Help** menu.

Main help window

The main Help window is accessed either by choosing **Contents and Index** from the **Help** menu or pressing the **F1** key. This window has three tabs that you can use to find the information that you need.

- The **Contents** tab provides a categorized listing of available Help topics. Click on the book (📖), then on the topic page (🔍) you want information about.
- The **Index** tab provides a complete listing of the Help topics available. Use the scroll bar to scroll through the list of available topics or type a word in the text field to quickly locate topics related to the word. Select the topic and click the **Display** button.
- The **Search** tab allows you to enter a keyword and display all of the topics in the online Help that contain the keyword you have entered. Type a keyword in the text field and click on the **List Topics** button. Select the topic from the list and click the **Display** button.

What's This? help

What's This? help allows you to view pop-up window descriptions for ACID menus, buttons, and dialog boxes. Choose **What's This?** from the **Help** menu, press the **Shift+F1** keys, or the **What's This? help** (🔍) button on the toolbar and then click on any ACID item. To use What's This? help in a dialog box, click on the question mark (❓) button in the upper-right hand corner of the dialog box, then on an item.

PDF manual

A full version of the ACID User Manual can be found on the ACID CD-ROM in PDF format. The PDF manual contains more detailed information on using the ACID product. To view this manual, you will need Adobe® Acrobat® Reader™.

Help on the Web

Additional ACID help and information is available on the Sonic Foundry Web site. Choose **Sonic Foundry on the Web** from the **Help** menu to view a listing of Web pages pertaining to ACID and Sonic Foundry. If your browser is not already open, ACID will automatically start it for you.

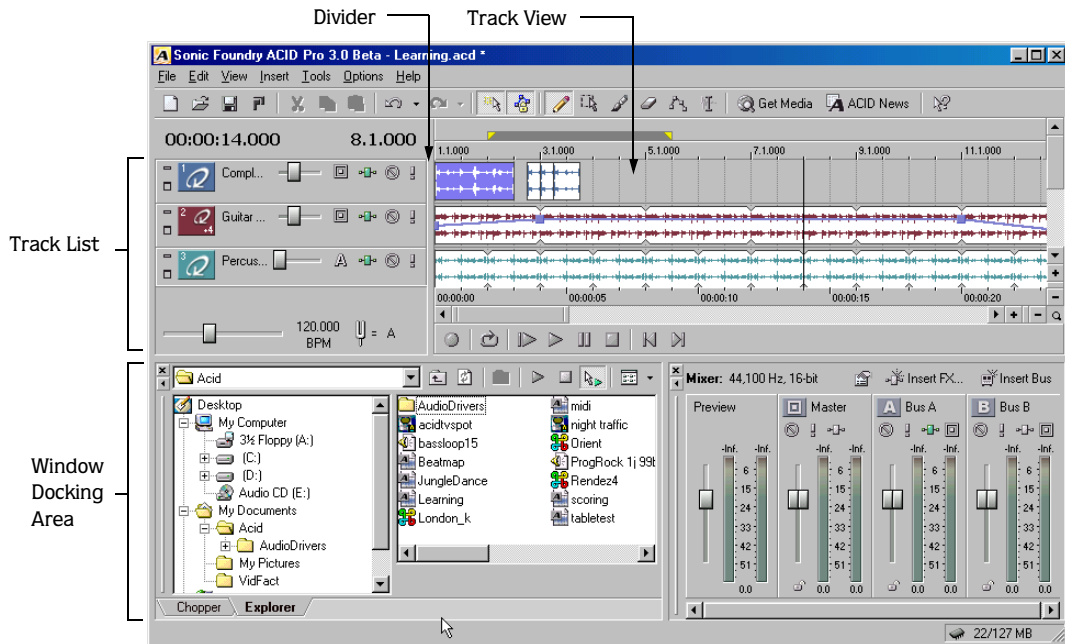
Overview of ACID

ACID is designed to be a powerful and flexible, but easy-to-use music creation application. Many of the ACID operations, menu items, and shortcut keys are common to other Sonic Foundry applications.

The following sections provide a tour of the ACID work area. Please take a moment to familiarize yourself with the interface, as the procedures and tutorials in this manual use the terminology found in these sections.

Main interface


















The work area is primarily three frames: the Track List, the Track View, and the Window Docking Area. The other parts of the interface are tools and features used while creating and working with your project. The Track List, Track View, and Window Docking Area components can be resized by dragging the dividers between them.



Toolbar

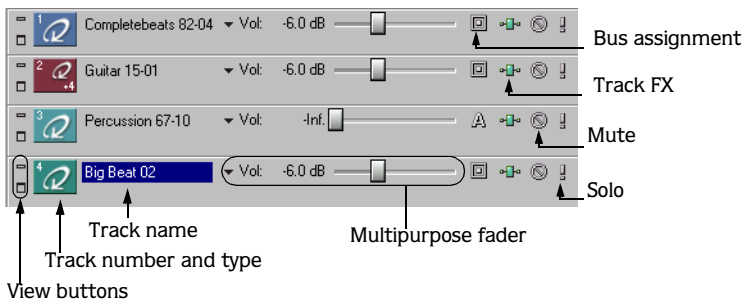
The toolbar allows you to quickly access the most commonly used functions and features in ACID.



- | | |
|--|--|
| <p> Opens a new project. You will be prompted to save any changes to the current project.</p> <hr/> <p> Displays the Open File dialog. From this window, you can browse all of the available drives to select an ACID project or audio file to open.</p> <hr/> <p> Saves any changes to the current project. The first time you save a project, the Save As dialog is displayed.</p> <hr/> <p> Opens the Publish wizard so you can share your ACID creation on the Web.</p> <hr/> <p> Clears the selected items from the Track View and places them on the ACID clipboard. You can then paste them to a new location.</p> <hr/> <p> Creates a copy of the selected items from the Track View on the ACID clipboard. You can then paste them to a new location.</p> <hr/> <p> Inserts the contents of the ACID clipboard at the current cursor position. The pasted items will cover any existing events. To make room for pasted <i>events</i>, choose Paste Insert from the Edit menu.</p> <hr/> <p> Reverses the last action performed. ACID allows you to perform unlimited Undos, allowing you to restore the project to any state since the last Save command.</p> <hr/> <p> Reverses an Undo command.</p> <hr/> <p> Turns the snapping feature on or off. With snapping enabled, you can decide whether to snap to the grid or to all elements (markers, regions, etc.).</p> | <p> Locks envelope points and position so they move with an event when it is moved along the timeline.</p> <hr/> <p> Activates the Draw tool to add and edit events.</p> <hr/> <p> Activates the Selection tool to select multiple events.</p> <hr/> <p> Activates the Paint tool to insert events across multiple tracks.
When used in conjunction with Ctrl key, it can paint an entire one-shot event with one click.</p> <hr/> <p> Activates the Erase tool to erase events or parts of events.
When used in conjunction with the Ctrl key, it can erase an entire one-shot, MIDI track, or Beatmapped track with one click.</p> <hr/> <p> Activates the Envelope tool to manipulate envelopes in events.</p> <hr/> <p> Activates the Time Selection tool to quickly select all events within range of time.</p> <hr/> <p> Opens a dialog that where you can locate media on the Internet.</p> <hr/> <p> Opens a frequently updated Web page containing special offers, tips, tricks, and other good stuff.</p> <hr/> <p> Activates What's This ? help to obtain information about a specific option, menu, or part of the ACID window.</p> |
|--|--|

Track List

This list identifies the track order in your project and contains the track's controls. The following sections identify and briefly explain the controls located in the Track List.



View buttons

These buttons control the track's appearance (size) on the Track List and the Track View.

Track number and type

This area identifies the type of file (loop, one-shots, MIDI, Beatmapped) contained in the track as well as the track's number in the project. The track order is quickly changed by dragging selected tracks within the Track List.

Track name

When a file is added to a project, the track name is initially the same name as the file's name. Right-click the track name and choose **Rename** from the shortcut menu (or double-click) to provide the track with a more meaningful name.


Track FX button

This button (□+) accesses the Audio Plug-in dialog from which you can add, edit, and apply effects to the track's event. *For more information, see [Using track effects](#) on page 108.*


Bus assignment

Clicking this button (□) and selecting a letter from the menu allows you to assign the corresponding track to the specified output bus. However, the button is only available in projects containing multiple busses. Busses can be added to a project on the Audio tab of the Project Properties dialog. *For more information, see [Using the Audio properties tab](#) on page 182.*

Mute button

Clicking this button () temporarily disables playback of the corresponding track, allowing you to focus on the project's remaining tracks. A muted track appears “grayed out” in the Track View. *For more information, see [Muting a track on page 50](#).*

Solo button

Clicking this button () isolates the track during playback by muting the project's remaining tracks. *For more information, see [Soloing a track on page 50](#).*

Multipurpose fader

This multipurpose fader allows you to control the following:

- A track's volume relative to the project's other tracks.
- A track's placement in the stereo spectrum.
- The level of the track's signal being routed to each of the project's busses.
- The level of the track's signal being routed to an assignable FX chain.

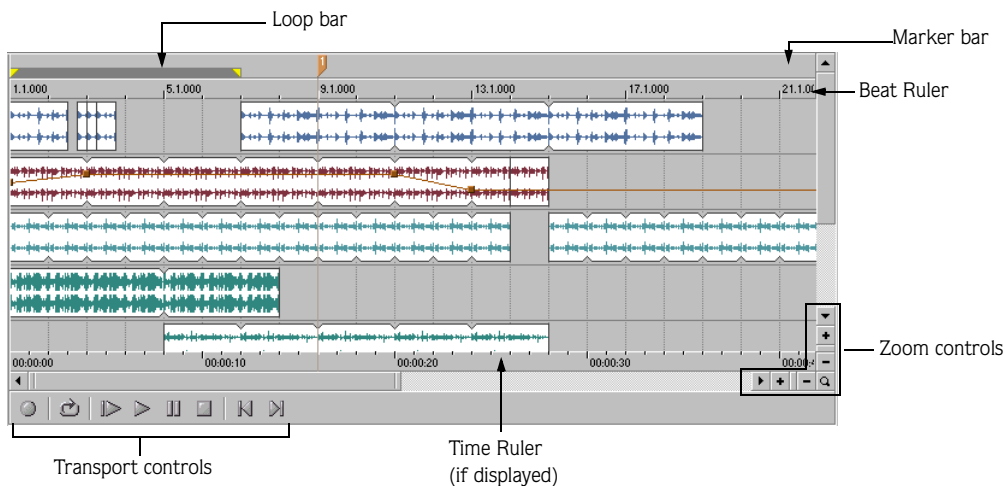
This control defaults to displaying a track's Volume control. ACID tracks are preset to -6.0 decibels (dB), but the volume range is -inf. to 12 dB. Each track's fader position is independent from the others; however, you can move faders simultaneously by selecting multiple tracks before making your adjustment. If you do not see this fader, expand the track.

This fader also controls the track's stereo panning, bus volume, and FX send volume. You may select what the fader controls by clicking the drop-down icon. Changing the fader type for one track changes it for all tracks so you can compare levels of the same control across the project.

Control	Function
Panning	ACID tracks are preset to center the signal. Use this slider to adjust the track's output left or right. As you move the fader, ACID displays the signal's percentage going to either the left or right channel. For example, moving the fader to 60%L means that 60 percent of the signal is mixed to the left channel, while 40 percent is mixed to the right.
Auxiliary bus volume	ACID projects can use multiple busses to enable you to send track signals to primary and secondary (auxiliary) busses. The primary bus is set using the Bus button on a track. The auxiliary bus sends signal to a separate bus independent of the primary bus without affecting the project's overall playback. <i>For more information, see Beatmapped-track settings on page 126.</i>
FX send volume	If you add an assignable FX control to your project, you send the track's signal directly to the FX and control its volume. <i>For more information, see Using assignable FX controls on page 136.</i>

Track View

In the Track View, you can view and edit the waveforms for the events in a track. The area in which events are displayed is the track space. The Track View contains other elements which are described in the following sections.



Marker bar

The marker bar runs the length of your project and contains the informational tags positioned along the project's timeline.

Beat Ruler









The Beat Ruler allows you to place events in reference to the musical time of bars and beats. This timeline is fixed and will not update when you change the tempo. This allows the events in the tracks to maintain their size when the tempo is adjusted.

Time Ruler



The Time Ruler provides a timeline for your project. This timeline can show real time in many different formats. *For more information, see [Changing the Time ruler format on page 174](#).* The timeline also changes with tempo, since the number of beats and beats per second of real-time changes with tempo.



Transport controls

The Transport bar contains the playback and cursor positioning buttons frequently used while working on your project.


 Record new track	 Stop playback
 Loop playback	 Move cursor to start of project
 Play back from beginning of project	 Move cursor to end of project
 Play back project from cursor position	 Pause project playback

Zoom controls

To the right of the horizontal scroll bar are the Time Zoom controls. Clicking on the Zoom In Time () button increases the horizontal magnification of the project. To decrease the level of magnification, click the Zoom Out Time () button.

Directly below the vertical scroll bar are the dedicated Track Height Zoom controls. Clicking on the Zoom In Track Height () button increases the vertical magnification of the project. To decrease the level of magnification, click the Zoom Out Track Height () button.

Double-clicking the horizontal or vertical scroll bars adjusts the magnification so that as much of the project (either horizontally or vertically) is displayed as possible.

Click the Zoom () button in the corner of the Track View to temporarily change the cursor into the Zoom tool. Select an area of the Track View that you want to magnify, and the cursor will revert to the previously active tool.

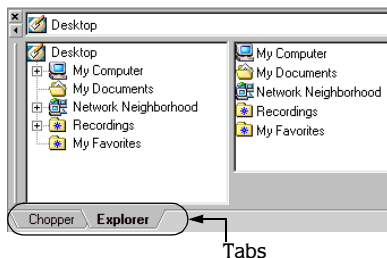
Double-clicking the Zoom tool adjusts both the horizontal and vertical magnification so that as much of the project is displayed as possible.

Window Docking Area

This area allows you to keep frequently-used windows available, but hidden while working on a project. Windows located in this area can be docked or arranged throughout the workspace. *For more information, see [Docking/Floating ACID windows](#) on page 168.*

Two windows are displayed in the Window Docking Area when ACID is started for the first time: the Explorer and the Mixer. The Chopper™, Video, Track Properties, and Audio Plug-In windows can be docked or undocked after they are displayed by choosing the desired window from the **View** menu.

When a window is docked in the Docking Area, it is placed in a stack with additional windows. To display a specific window, simply click its tab.



Explorer window

The Explorer window works similarly to the Windows Explorer. Use the ACID Explorer window to locate, preview and select media files to be added to your project. *For more information, see [Using the Explorer window](#) on page 169.*

Mixer

The Mixer window provides access to the current project's properties, bus assignments, output levels, and plug-in FX chains. *For more information, see [Using the Mixer window](#) on page 55.*


Chopper

The Chopper allows you to isolate audio events so that they may be dissected and reinserted into a project, producing elaborate “slice-n-dice” effects with minimal effort. *For more information, see [The Chopper](#) on page 83.* Display the Chopper by choosing **Chopper** from the **View** menu or pressing **[Alt]+[Z]**.

Video

This window displays pre-rendered video files that can be imported and synchronized with an ACID project. The video file will be displayed during project playback and can be rendered with the project to an appropriate format. Display the Video window by choosing **Video** from the **View** menu or pressing **Alt+4**. *For more information, see [The Video window](#) on page 147.*

Audio Plug-In

This window displays FX chains and settings for assignable, bus, and track FX. Display the Audio Plug-In window by clicking any FX () button or by pressing **Alt+5**.

Track Properties

This window allows you to change track attributes. Display the Track Properties window by double-clicking a track's icon or by pressing **Alt+6**.

Keyboard command reference

The ACID keyboard commands are shortcuts that you can use while working with your project.

Project file

These commands refer to the overall project.

Description	Keys
Create new project	Ctrl+N
Create new project and bypass the Project Properties dialog	Ctrl+Shift+N
Open existing project or media file	Ctrl+O
Save project	Ctrl+S
Open project's properties	Alt+Enter
Close the current project	Ctrl+F4

Window view commands

These commands display and hide the dockable windows and control other aspects of the main ACID window.

Description	Keys
Explorer	Alt+1
Chopper	Alt+2
Mixer	Alt+3
Video	Alt+4
Audio Plug-In	Alt+5
Track Properties	Alt+6
Shifts focus forward through open ACID windows	F6
Shifts focus backward through open ACID windows	Shift+F6
Minimizes/restores the Window Docking Area	F11
Minimizes/restores the Track List	Shift+F11
Minimizes/restores the Track List and the Window Docking Area simultaneously	Ctrl+F11

Cursor placement commands

These commands refer to cursor navigation within the Track View.

Description	Keys	Description	Keys
Go to beginning of active loop region or view (if no selection)	Home	Center in view	\
Go to end of active loop region or view (if no selection)	End	Move cursor to opposite end of time selection or loop bar	Keypad 5
Go to beginning of project	Ctrl+Home or W	Move left to marker(s)	Ctrl+Left Arrow
Go to end of project	Ctrl+End or E	Move right to marker(s)	Ctrl+Right Arrow
Move left by grid marks	Page Up	Move left to event edit points including fade edges	Ctrl+Alt+Left Arrow
Move right by grid marks	Page Down	Move right to event edit points including fade edges	Ctrl+Alt+Right Arrow
Go to (using measures, beats, and ticks)	Ctrl+G	Move by one pixel	Left or Right Arrow
Go to (using absolute time)	Shift+G	Move through a video event one frame at a time	Alt+ Left or Right Arrow
Move cursor to corresponding marker	Number keys (not on keypad)		

Loop region commands

A loop region is defined by the loop bar above the Track View. These commands refer to creating and adjusting the loop region regardless of the current editing tool or whether the loop region is active.

Description	Keys
Make a loop region	Shift+Left or Right Arrow
Extend loop region left by grid marks	Shift+Page Up
Extend loop region right by grid marks	Shift+Page Down
Expand loop region one pixel	Shift+Left or Right Arrow
Make a loop region during playback	I (in) and O (out)
Restore past loop regions (up to last five)	Backspace
Double loop region length	' (apostrophe)
Halve loop region length	; (semi-colon)
Shift loop region left	, (comma)
Shift loop region right	. (period)
Snap loop region to event edges	Ctrl+Shift+Alt+ Left or Right Arrow
Expand loop region by one video frame	Shift+Alt+Left or Right Arrow

Selection commands

These commands refer to creating selections.

Description	Keys
Range selection (events)	Shift+click range of objects
Multiple selection (events)	Ctrl+click individual objects
Select all	Ctrl+A
Unselect all	Ctrl+Shift+A

Event commands

These commands refer to moving and editing events.

Description	Keys
Paint the entire media file as an event for one-shots, Beatmapped, and MIDI tracks	Ctrl+click (on track with Paint tool enabled)
Erase entire event for one-shots, Beatmapped, and MIDI tracks.	Ctrl+click (on event with Erase tool enabled)
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Cut selection	Ctrl+X
Copy selection	Ctrl+C
Paste from clipboard	Ctrl+V
Paste repeat	Ctrl+B
Paste insert	Ctrl+Shift+V
Delete selection	Delete
Move selected event(s) right one pixel	Keypad 6
Move selected event(s) left one pixel	Keypad 4
Split event(s)	S
Join events	J
Create fades	F
Render to new track	Ctrl+M
Trim/Crop time-selected events only	Ctrl+T

Description	Keys
Slip Trim: moves the media with the edge as it is trimmed	Alt+drag edge of event
Slip: move media within event without moving the event	Alt+drag inside the event
Slide: move the event while leaving the relative position of the media in place	Ctrl+Alt+drag event
Copy event	Ctrl+drag event
Pitch down one semitone	Keypad -
Pitch up one semitone	Keypad +
Pitch down one octave	Ctrl+Keypad -
Pitch up one octave	Ctrl+Keypad +
Pitch down 4 semitones (Windows 2000 only)	Shift+Keypad -
Pitch up 4 semitones (Windows 2000 only)	Shift+Keypad +
Reset pitch (Windows 2000 only)	Ctrl+Shift+Keypad - or +
Change an event's gain value	Keypad / or *
Change an event's gain by 10%	Shift+Keypad / or *
Change an event's gain by 25%	Ctrl+Keypad / or *
Set an event's gain to unity	Shift+Ctrl+Keypad *
Set an event's gain to zero (silence)	Shift+Ctrl+Keypad /

Playback commands

These commands refer to the playback controls, which are also found on the Transport bar.

Description	Keys
Start/stop playback	Spacebar
Stop playback	Esc
Looped playback	L
Play from start	Shift+Space
Play back from any window	Ctrl+Spacebar or F12
Pause	Enter

Description	Keys
Record	Ctrl+R
Go to start	Ctrl+Home
Go to end	Ctrl+End
Skip backward	Page Up
Skip forward	Page Down

Track View commands

These commands refer to editing functions related to the tracks in your project.

Description	Keys
Record	Ctrl+R
Ripple edit mode	Ctrl+L
Draw tool	Ctrl+D
Select next edit tool in list	D
Select previous edit tool in list	Shift+D
Mark in point	I or [
Mark out point	O or]
Render to new track	Ctrl+M
Insert/Show/Hide track panning envelope	P
Remove track panning envelope	Shift+P

Description	Keys
Insert/Show/Hide track volume envelope	V
Remove track volume envelope	Shift+V
Insert region	R
Insert marker (standard)	M
Insert time marker	H
Insert command marker	C
Add tempo change marker	T
Add key change marker	K
Add tempo and key change marker	Shift+T
Change project tempo	Alt+drag time marker

Track List commands

These commands refer to navigating and editing in the Track List.

Description	Keys	Description	Keys
Pitch down one semitone	Keypad -	Move track selection up one track	Up Arrow
Pitch up one semitone	Keypad +	Move track selection down one track	Down Arrow
Pitch down four semitones (Windows 2000 only)	Shift+Keypad -	Multi-select tracks	Shift+Up or Down Arrow
Pitch up four semitones (Windows 2000 only)	Shift+Keypad +	Move track selection up one "page" of tracks	Page Up
Pitch down one octave	Ctrl+Keypad -	Move track selection down one "page" of tracks	Page Down
Pitch up one octave	Ctrl+Keypad +	Delete Track	Delete
Reset pitch (Windows 2000 only)	Ctrl+Shift+Keypad +/-	Select all tracks	Ctrl+A
Decrease fader value	Left Arrow	Unselect all tracks	Ctrl+Shift+A
Increase fader value	Right Arrow		

View commands

These commands refer to magnification of tracks and the events contained on them.

Description	Keys
Zoom time in/out small increments when Track View has focus. Zooms to the loop region first if one exists.	Up or Down Arrow
Zoom time in/out large increments when Track View has focus	Ctrl+Up or Down Arrow
Zoom track height in/out small increments when Track View has focus	Shift+Up or Down Arrow

Mixer commands

These commands control Mixer elements when the Mixer has focus.

Description	Keys	Description	Keys
Change selection of a mixer control	Left/Right Arrow	Moves the left channel of the fader for the selected Mixer control	Shift+Up/Down Arrow
Selects multiple, adjacent mixer controls	Shift+Left/Right Arrow	Moves the right channel of the fader for the selected Mixer control	Ctrl+Up/Down Arrow
Selects multiple nonadjacent mixer controls	Ctrl+Left/Right Arrow	Deletes the selected Bus or assignable FX control	Delete
Moves the fader of the selected mixer control. For assignable FX, this only moves the "out" fader	Up/Down Arrow		

Miscellaneous commands

Description	Keys	Description	Keys
Online Help	F1	Shortcut menu	Shift+F10
What's This? Help	Shift+F1	Refresh screen	F5
Enable/disable snapping	F8	Generate MIDI Timecode	F7
Toggles between snap to grid and snap to all	Ctrl+F8	Trigger from MIDI Timecode	Ctrl+F7
Temporarily disable Snap To	Shift+drag	Generate MIDI Clock	Shift+F7

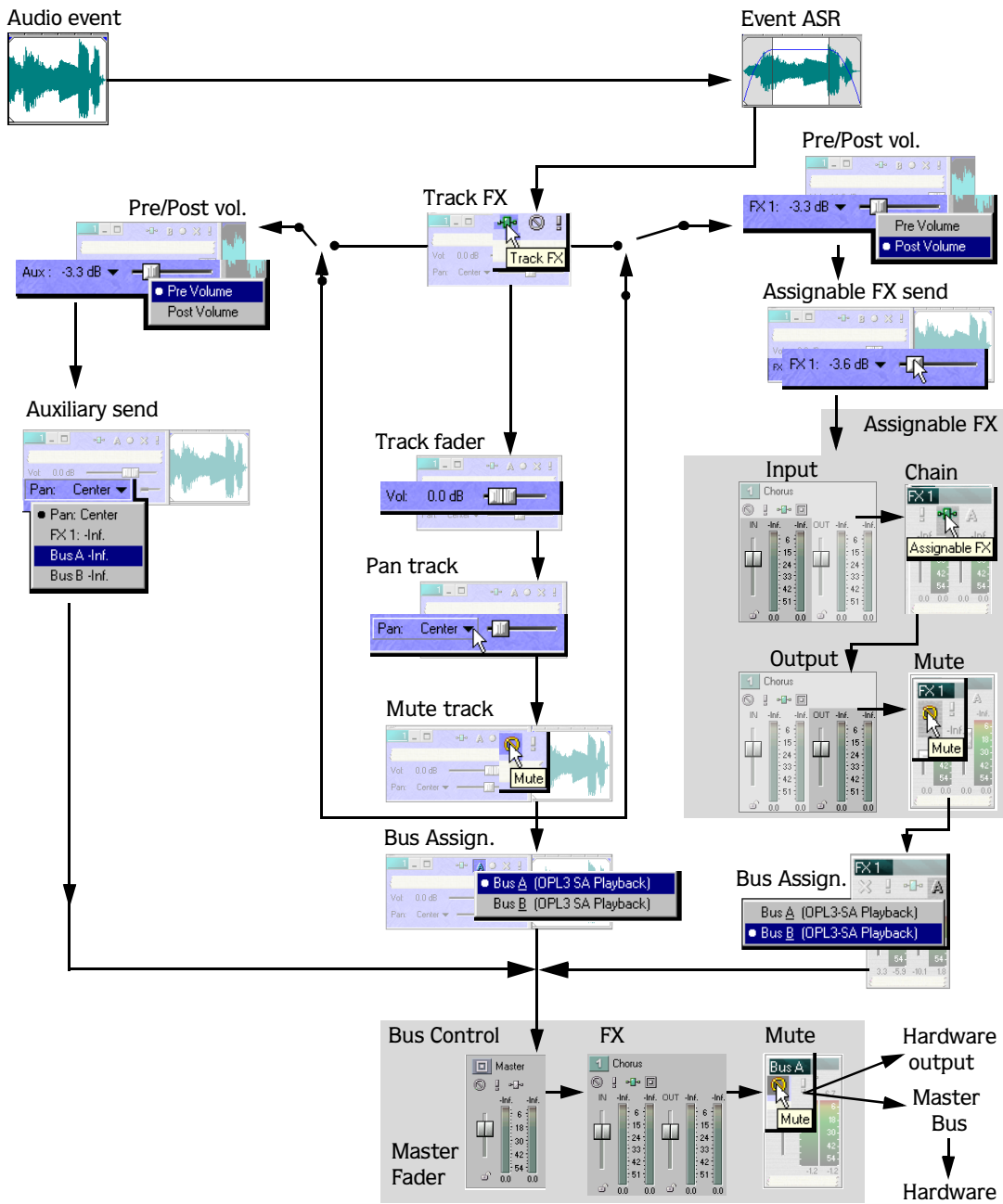
Mouse scroll-wheel shortcuts

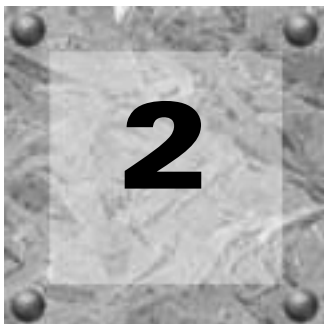
Description	Keys
Zoom in on timeline	Default mouse wheel behavior
Horizontal scroll	Shift+wheel
Vertical scroll	Ctrl+wheel
Moves by video frames	Ctrl+Shift+Alt+wheel
Moves the cursor in grid increments	Ctrl+Shift+wheel
Auto-scrolling	Press mouse wheel and move the mouse in the desired direction
Move fader	Wheel with mouse pointer over a fader
Make fine fader adjustments	Ctrl+wheel over a fader

Chopper commands

For more information, see [Chopper toolbar and keyboard commands](#) on page 85.

Signal flow





Basic Project Techniques

Now that you have an understanding of ACID's interface and controls, you are ready to begin learning the techniques needed to pick, paint, and play ACID projects. In this chapter you will learn the skills that will allow you to create music in ACID, from locating media files to writing the finished project to CD.

Starting a project

Double-clicking the ACID icon on the desktop will start ACID. You can immediately begin building your ACID project using the application's default project parameters. However, you may prefer to customize the project parameters prior to beginning the project.

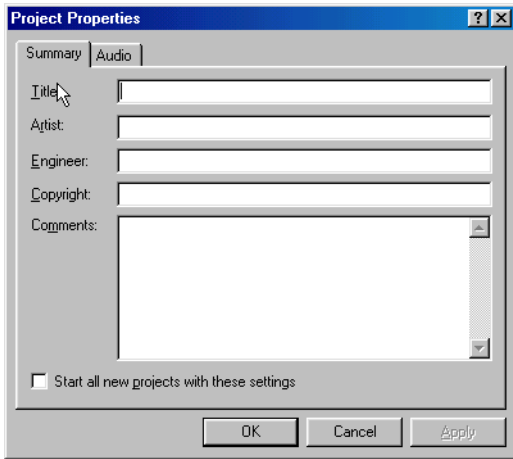
Project parameters

ACID allows you to configure project parameters and add summary information prior to beginning a project. Choosing **New** from the **File** menu will display the New Project dialog. This dialog contains two tabs: Summary and Audio. Selecting the Start all new projects with these settings check box will configure ACID to use the parameters and information in both tabs as defaults when starting all subsequent projects.

*Project parameters and summary information can be edited at any time. Choosing **Properties** from the **File** menu will display the Project Properties dialog, which contains the identical tabs and parameters as the New Project dialog.*

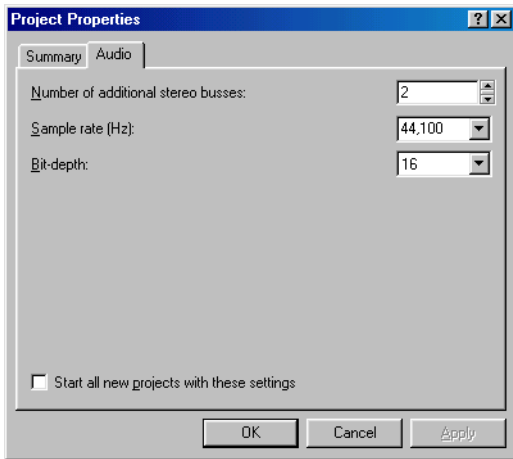
Summary tab

The Summary tab allows you add information to the project regarding its title, artist, engineer, and copyright. In addition, a Comments field allows you to add additional, relevant information to the project.



Audio tab

The Audio tab allows you to specify the project's audio attributes including sample rate and bit-depth. In addition, the Audio tab is used to configure how many stereo busses will be made available for the project, up to a maximum of 26.



To reconfigure the number of stereo busses, enter a new value in the Number of additional stereo busses edit box and click **Apply**. ACID will immediately add or remove an appropriate number of busses in the Mixer window. *For more information, see [Using the Mixer window](#) on page 55.*

Opening an existing project

Use the **Open** command from the **File** menu to access existing ACID projects.



When you open an .acd-zip project, the project file and all media files are copied to a temporary folder in the ACID program folder, typically C:\Program Files\Sonic Foundry\ACID 3.0\Temp\ACID Pro Temp x\. Any changes you make to the project will be saved to the files in this temporary folder until you save the .acd-zip file again.

1. From the **File** menu, choose **Open**. The Open dialog displays.
2. Choose a drive and folder from the Look in drop-down list.
3. Select a file in the browse window or type a name in the File name box. Detailed information about the selected file appears at the bottom of the dialog box.
4. Choose a file type from the Files of type drop-down list to limit the files displayed in the dialog box.
5. Click the **Open** button.

If ACID is unable to locate one of the media files when you open an ACID project, you can choose to leave the media offline and continue to edit events on the track. The events will point to the location of the source media file. If you restore the source media file at a later time, the project will open normally.



Previewing media from the Explorer window

Frequently when gathering media for ACID projects, you will encounter files with non-descriptive or cryptic names. This is especially true of the ACID Loop Library CD-ROMs, where you might find a multitude of .wav files in a folder simply named Beats or Bases. Without preview capabilities, a situation like this would require you to add the file to the project, paint it on the timeline, play the project, and then delete the file if it did not suit your needs. To avoid this, the Explorer window provides three ways to preview files without adding them to your project:


- The Start/Stop Preview () buttons.
- The Play Media command.
- The Auto Preview () button.

These methods will loop playback of the selected file at the current project tempo. In addition, any of these methods can be used in conjunction with playback of your project, thereby allowing you to preview how a file will sound in the project.



Start/Stop Preview

Clicking the **Start Preview** () button located in the toolbar of the Explorer window will play the selected file. Looped playback continues until the **Stop Preview** () button is clicked or a new file is selected.

Play Media

Right-clicking on a file and choosing **Play Media** from the shortcut menu will preview the file. Looped playback continues until the **Stop Preview** () button is clicked or a new file is selected.

Auto Preview

Clicking the **Auto Preview** () button in the toolbar of the Explorer window places ACID in Auto Preview mode and allows you to automatically preview any file by selecting it. Selecting a new file will interrupt the current preview and immediately preview the new file. Looped playback continues until the **Stop Preview** () button is clicked.

Placing the Explorer window in Auto Preview mode and using the keyboard's arrow keys to scroll through a folder is an excellent way of quickly previewing several files in a folder.

Adding media to the project

Media files must be added to a project before they can be painted, arranged, and processed. When a file is added to a project, a new track is automatically created to accommodate it, and its controls are displayed on the Track List. Be aware that a new track is added at the current volume of the Preview fader in the Mixer Window. There are several methods of adding media files to a project.

ACID may create proxy files for media whose compression scheme may cause working with them to be inefficient and slow. For more information, see [Proxy File](#) on page 197.

Before using long Beatmapped or long one-shot files from CDs or shared network folders, copy the media to your local drive for the best possible performance.

A note about the ACID Temp directory

When a media file is added to a project from a removable device, ACID stores a copy of the media file in a temporary subfolder within the ACID program folder. This keeps the media file available for use even if the source of the media is no longer accessible.

Be aware that these subfolders are cleared when you close ACID. However, they are not cleared if ACID closes inappropriately.

Adding media files from the Explorer window

The Explorer window will likely be your primary means of locating media files used in projects. Display the Explorer, if needed, by choosing **Explorer** from the **View** menu, or by pressing **[Alt]+[I]**

There are three ways of adding media files from the Explorer window:

- Double-click the desired file.
- Drag the file from the Explorer to the Track View or Track List. Dragging a file from the Explorer to the track *name* of an existing track allows you to replace the original file with the new file, while all events remain in place.
- Right-click and drag a file to the Track View or Track List to specify the type of track that will be created. When you drop the file, a shortcut menu is displayed that allows you to choose whether the file will be treated as a loop, one-shot, Beatmapped track, or as an autodetected type.

Adding media files from the Open dialog

There are three ways of adding media files from the Open dialog:

- Select the desired file and click **Open**.
- Right-click the selected file and choose **Select** from the shortcut menu.
- Double-click the selected file.

Adding media files from outside the application


A media file can also be added to a project by dragging it from Windows Explorer and dropping it in the Track View.

Adding multiple media files simultaneously

To add multiple media files to the project, **Ctrl**+click (or **Shift**+click) to select the files and drag them to the Track View or the Track List.

Extracting media files from CD

ACID allows you to extract 44,100Hz, 16-bit, stereo data from CD. Data extracted from CD can be opened as a track in ACID.

1. Insert a CD in the CD-ROM drive.
2. From the **Tools** menu, choose **Extract Audio from CD**. The Extract Audio from CD dialog displays and all audio files are listed.
3. From the Drive drop-down list, choose the CD drive that contains the audio you want to extract.
4. Select the audio you want to extract and click **OK**. ACID begins extracting data from the CD and displays a progress meter. If the file is longer than 30 seconds, the Beatmapper™ Wizard displays.
5. Use the Beatmapper Wizard or choose to open the file as a one-shot. The file is then inserted in a track. *For more information, see [Beatmapper](#) on page 112.*
6. Use the Draw () tool to draw the waveform on the track.

You can also double-click a .cda in the Explorer window (or drag it to the Track View) to extract a CD track without opening the Extract Audio from CD dialog.

*When adding media from multiple CDs, you may need to press **F5** to refresh the Explorer window to view the new CD's contents.*

Downloading media from the Web

The **Get Media from the Web** command allows you to view and download various audio and video files available on the Internet.

1. From the **File** menu, choose **Get Media from the Web**.
2. Choose an icon from the left frame to specify the media provider from which you want to download files.
3. Preview the file, select the file you want to open and click **Download**. The Browse for Folder dialog displays.

4. Select a folder for the download. The selected file is downloaded to the folder specified in the Destination box.
5. When you are done downloading, close the Get Media from the Web dialog. The file(s) is added to your project.

Click the **Show Details** button to display additional information about your download. In this mode, you can add files to a download queue, specify where the downloaded files should be stored, and monitor the progress of your downloads. Click **Start** to begin downloading queued files, or click **Hide Details** to return to simple mode.

Audio event basics

The following sections describe three basic techniques used when working with audio events: painting, deleting, and moving.


Painting events

When a media file is added to a project and displayed in the Track List, it is not immediately audible, and initiating playback using any of the available methods will result in silence. The media file must first be painted on the timeline, at which point it is displayed as a waveform and becomes an event. Events can be painted on the timeline using either the **Draw** tool or the **Paint** tool.

Media files must be added to the project before either of these tools can be used to paint events.


Placing an event with the Draw tool

The **Draw** tool is the most common method of placing events on the timeline. This tool allows you to add track-specific events, one at a time. In addition, the **Draw** tool can be used to select, edit, and move events. *For more information, see [Basic event editing](#) on page 43.*

1. Click the **Draw** () tool or choose **Editing Tool** from the **Edit** menu and **Draw** from the submenu. The pointer is displayed as a pencil icon.
2. Place the **Draw** tool at the left-hand edge of any track containing a media file.
3. Click and hold the mouse button while dragging the **Draw** tool to the right. A waveform representing the event displays on the timeline as you drag the mouse.



Notice that if you are placing a looped .wav file on the timeline, small indentations are created along the top and bottom edges of the event indicating the start and end points of each individual loop.

Events can be also be drawn from right (end) to left (beginning).

4. Release the mouse button to end the event.
5. Click the Play from Start () button in the Transport toolbar. The event is played back.

Painting an event with the Paint tool


Unlike the Draw tool, the Paint tool allows you to quickly paint multiple events across several tracks. This can be useful when you need to quickly add several, seemingly random events to a project. The Paint tool is also best used for painting multiple, one-shot events that will be evenly spaced on the grid lines.

1. Click the Paint () tool or choose **Editing Tool** from the **Edit** menu and **Paint** from the submenu. The mouse pointer displays as a brush icon.
2. Click and hold the mouse button while dragging the Paint tool randomly across the several tracks. Notice that events are painted in every grid space the Paint tool contacts.
3. Release the mouse button to stop adding events.
4. Click the Play from Start () button in the Transport toolbar. All new events are played back.

*With the Paint tool enabled, you can use **[Ctrl]+** left click to paint an entire event for one-shots, Beatmapped, and MIDI tracks.*


Changing the length of an event

After an event is painted on the Track View, you may discover that it is too long or not long enough; however, ACID makes it easy to change the length of an event. You may find it helpful to turn snapping options on by choosing **Snapping** from the **Options** menu and choosing **Enable** from the shortcut menu.

To alter an event's length, select the Draw () tool and drag either end of the event. When you drag the event past the end of the file, looped files will repeat, but one-shots and Beatmapped tracks will draw silence.

Erasing sections of an event

Occasionally you may need to delete only specific sections of an event and leave the rest of it intact. The easiest method of deleting a section of an event is to use the **Erase** tool.

1. Select the **Erase** () tool or choose **Editing Tool** from the **Edit** menu and **Erase** from the submenu. The pointer is displayed as an eraser icon.
2. Click and drag the **Eraser** in the **Track View** to delete all event data it contacts.


*With the Erase tool, you can delete an entire one-shot, Beatmapped, or MIDI event. Just hold the **Ctrl** key while you left-click the event.*

Moving Events

The position of the left edge of an event indicates when the event will become audible during playback. Events may be moved along the timeline either individually or as a group.

In addition, events can be stacked on top of one another. A longer event placed over a smaller event will conceal it and the smaller event will become inaudible. A smaller event placed over a larger event will be audible and render the section of the longer event it covers inaudible.

To move an event, do the following:

1. Select the **Draw** () tool.
2. Click the event to be moved. The event is highlighted to indicate that it is selected.

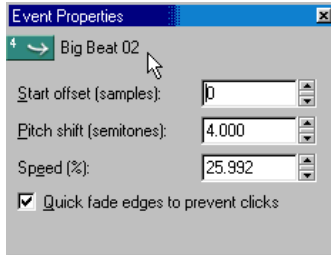
You can hold the **Ctrl** or **Shift** key to select multiple events.

3. Drag the mouse left/right.
4. Release the mouse button. The event is dropped in its new location.


Multiple selected events move in relation to the event being dragged.

Changing event properties

To access event properties, right-click the event and choose **Properties** from the shortcut menu, or simply double-click the event. These properties are saved only with a project and are not saved into the file when a track is saved from Track Properties.




The following table describes each of the settings in the Properties dialog.

Item	Description
Start offset	The Start offset for an event specifies a playback starting position that is different than the beginning of the file. This is especially useful for loops; you can change the feel by simply starting a loop at beat 2 rather than beat 1.
Pitch shift	The Pitch shift value specifies a pitch shift for the selected event. Event-based pitch shift is calculated after the project key and any pitch shift assigned to a track.
Speed	The Speed setting allows you to change the playback speed of an event on a one-shot track. Changing the speed will also change the pitch.
Quick fade edges to prevent clicks	<p>When you add an offset to an event so that it does not end on a loop point, you can introduce an audible click at the edges of the event. Select the Quick fade edges to prevent clicks check box, and ACID will perform a quick fade-in or fade-out on the event edges.</p> <p>To adjust a quick fade, zoom into the event and hover over the upper-left or upper-right corner of an event until the cursor is displayed as +. Drag the edge of the fade to adjust its duration.</p>

Using the Cursor

ACID's cursor is a flashing vertical line that spans the Track View of the entire project, regardless of the number of tracks. Cursor position can be used to determine where events are split, where playback/recording is started, and where clipboard contents are pasted. In addition, the positioning of the cursor is essential to the creation of time selections.

To place the cursor using the mouse, do the following:

1. Select the Draw () tool.
2. Click in the Track View. The cursor is placed in the Track View.

Positioning the cursor with the keyboard

While using the mouse to position the cursor in the timeline is quick and intuitive, it is not always precise. For example, you may want the beginning of a guitar solo to coincide with a snare drum hit or background vocals to enter exactly 3 minutes and 24 seconds into a song. For these reasons, ACID also allows you to position the cursor using your keyboard. *For more information, see [Cursor placement commands](#) on page 22.*

Positioning the cursor with the Go To command

The GoTo command is used to place the cursor at a specific location in the ACID project.

- Press **Ctrl+G** to position the cursor based on the time displayed on the Beat ruler. Specify a time in the edit box that appears in the Time Display and press **Enter**.

00:01:26.649

- Press **Shift+G** to position the cursor based on the time displayed on the Time ruler. Specify a time in the edit box that appears in the Time Display and press **Enter**.


15.1.000

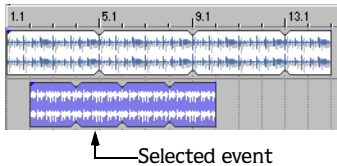
You can also open the edit boxes in the Time Display by double-clicking the desired time value.

Making selections

Events must be selected before they can be moved or edited.

Selecting an event

1. Select the Draw () tool.
2. Click an event. The event is highlighted.



Selecting multiple events

ACID provides you with several methods of selecting multiple events:

- Using the **[Ctrl]** or **[Shift]** keys while clicking events.
- Using the **Select All on Track** command.
- Using the **Select All** command.
- Using the **Selection** tool.

Unless stated otherwise, selections can only be made using the Draw tool.

Selecting multiple events using the keyboard and mouse

Holding the **[Ctrl]** key while clicking events allows you to select multiple, nonadjacent events that reside on any track. This method is useful when you need to move several scattered events by an equal amount within the project.

Holding the **[Shift]** key allows you to select multiple, adjacent events. Selecting any two events while holding **[Shift]** automatically selects all events located between the selected events. Events may be selected from the same track or across tracks. This method is useful when you want to move several adjacent events by an equal amount within the project.

Selecting events using the Select All on Track command

Right-clicking on any track in the Track View and choosing **Select All on Track** from the shortcut menu will select every event on the track.

Selecting events using the Select All command


Choosing **Select All** from the **Edit** menu will select all events in a project.

Selecting multiple events using the Selection tool

When selecting several events across multiple tracks, it is frequently advantageous to use the **Selection** tool. This tool allows you to quickly select events using three methods: Vertical, Horizontal, and Free Selection. The following table briefly describes each of these selection methods:


Method	Description	Displayed as...
Vertical	Allows you to select all events on all tracks within an interval of time.	Parallel dashed line spanning the vertical length of the project.
Horizontal	Allows you to select all events on a track or several adjacent tracks.	Parallel dashed line spanning the horizontal length of the project.
Free Selection	Allows you to select a group of adjacent events on adjacent tracks. This is ACID's default selection method.	Dashed line box.

The following steps demonstrate using the **Selection** tool:

1. Click the **Selection** () tool or choose **Editing Tool** from the **Edit** menu, followed by **Selection** from the submenu.
2. Place the pointer on the Track View. The pointer is displayed as an arrow with an adjacent dotted box.
3. Click and drag the mouse on the Track View. A dashed rectangular box is created on the Track View and all events within and adjacent to it are selected.
4. While holding the left mouse button, click and release the right mouse button (referred to as toggle-clicking). The selection method is changed to vertical and again, all events within and adjacent the selection area are selected.
5. Toggle-click the mouse once more. The selection method is changed to horizontal and all events within and adjacent to the selection area are selected.

Creating a time selection


ACID does not limit you to selecting events. Frequently, you may want to select only audio events occurring within a time selection. This is accomplished using the **Time Selection** tool.

1. Click the **Time Selection** () tool or choose **Editing Tool** from the **Edit** menu and **Time Select** from the submenu. The pointer displays with an adjacent bi-directional arrow.
2. Click in the Track View and drag the mouse to the left/right. The selection area is highlighted on the Track View.
3. Release the mouse button. A time selection is created and all events within it are selected.

*If the selection area is automatically snapping the Track View's grid lines, ACID's Snapping feature is turned on. This feature can be turned off by pressing **F8**.*

Creating event selections within a time selection

ACID also allows you to select specific events within a general time selection. This technique is useful for selecting individual instruments from a particular section of a song. For example, you may want to copy all percussion events from a song's bridge and re-use them in the coda.

1. Click the **Time Selection** () tool or choose **Editing Tool** from the **Edit** menu and **Time Select** from the submenu. The pointer displays with an adjacent bi-directional arrow.
2. Click in the Track View and drag the mouse to the left/right. The selection area is highlighted on the Track View.
3. Release the mouse button. A selection is created and all events within it are selected.
4. Hold the **Ctrl** key and select any event that expands beyond the time selection. The entire event appears highlighted; however, only the section of the event contained within the time selection is actually selected.

*You can select additional events within the time selection by continuing to hold the **Ctrl** key while clicking events. In addition, holding the **Shift** key allows you to select the events of multiple adjacent tracks within a selection.*


Basic event editing

Like many applications you are already familiar with, ACID derives a great deal its editing power from a few basic functions: **Copy**, **Paste**, **Cut**, **Trim**, and **Delete**. The following sections briefly describe using these commands in the process of building an ACID project.

Prior to performing the procedures in these sections, verify that ACID's **Ripple Edits** function is turned off. **Ripple Edits** are an extremely powerful editing option and their scope is beyond that of this chapter. **Ripple Edits** are turned on by default when ACID is started, but can be turned off by choosing **Ripple Edits** from the **Options** menu or by pressing **Ctrl+L**. *For more information, see [Using Ripple Edits](#) on page 92.*

Copying events

Copying an event, a time selection, or event within a time selection will place an exact copy of the selected event(s) on the clipboard, but leave the Track View unchanged. Events copied to the clipboard can be pasted in the project an unlimited number of times. In addition, clipboard content remains on the clipboard until replaced by new content.

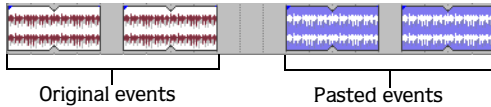
1. Select the event data you want to copy or make a time selection. *For more information, see [Making selections](#) on page 40.*
2. Copy the event data using any of the following methods:
 - Click the Copy () button in the toolbar.
 - Choose **Copy** from the **Edit** menu.
 - Right-click the selection and choose **Copy** from the shortcut menu.
 - Press **Ctrl+C** on the keyboard.

Pasting events

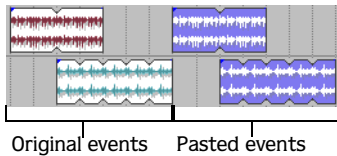
The clipboard's contents can be pasted in a project an unlimited number of times, but it will always be pasted in the track it was copied/cut from. In addition, pasting the contents of the clipboard over an existing event will result in the pasted event overlapping the existing event. To avoid pasting over existing events, you have two options:

- Use the **Paste Insert** command. *For more information, see [Using Paste Insert](#) on page 45.*
- Enable the **Ripple Edits** option. *For more information, see [Using Ripple Edits](#) on page 92.*


When events are cut/copied to the clipboard and subsequently pasted into a project, ACID will maintain and paste the time data inherent in the cut/copied events. For example, if you select two events on the same track that are separated by five seconds of silence, copying and pasting these events will result in the five seconds of silence also being pasted into the project.



Taking this concept a step further, if you select discontinuous events from several tracks, copying and pasting these events will result in any selected time data being pasted into the project as well. This maintains the relative position of events in the project.





Using the Paste command

1. Place the cursor at the desired position on the timeline.
2. Paste the clipboard contents using any of the following methods:
 - Click the Paste () button in the toolbar.
 - Choose Paste from the **Edit** menu.
 - Right-click the Track View and choose Paste from the shortcut menu.
 - Press **Ctrl+V** on the keyboard.

Using Paste Repeat

When building projects, you will often need to paste the contents of the clipboard several times. Rather than repeatedly pasting and moving the content, the **Paste Repeat** command allows you to specify the number of times and at what interval the clipboard's contents will be pasted on the Track View. This is a useful way of quickly building a project that uses a repetitive riff or structure. For example, you can build the backing tracks for a 12-bar blues, copy them, and use **Paste Repeat** to paste several copies of it in the project.

1. Click the Time Selection () tool.
2. Drag the mouse in the Track View to create a time selection spanning several events and copy it to the clipboard.
3. Click the Go To End () button in the Transport toolbar or press **Ctrl+End** to send the cursor to the end of the project.

4. Choose **Paste Repeat** from the **Edit** menu or press **Ctrl+B** on the keyboard. The Paste Repeat dialog displays.
5. Enter a number in the Number of times to paste box.
6. Select the End to end radio button and click **OK**. The events are pasted end to end the number of times specified in Step 5, starting at the cursor position.

Using Paste Insert


To insert the contents of the ACID clipboard at the current cursor position and force existing events to move in time to accommodate the pasted events, choose **Paste Insert** from the **Edit** menu.

If the cursor is in the middle of an event, the event will be split at the cursor position when the new events are pasted.

This feature is useful when rearranging a project by moving verses and choruses.

Cutting events

Cutting an event, a time selection, or an event within a time selection removes the audio data from the Track View and places it on the clipboard. Once data is placed on the clipboard, it can be pasted back into the project an unlimited number of times. Clipboard content remains on the clipboard until it is replaced by new data.


1. Select the event data you want to cut or make a time selection. *For more information, see [Making selections](#) on page 40.*
2. Cut the event data using any of the following methods:
 - Click the Cut () button in the toolbar.
 - Choose **Cut** from the **Edit** menu.
 - Right-click the selection and choose **Cut** from the shortcut menu.
 - Press **Ctrl+X** on the keyboard.

All selected events are removed from the Track View and placed on the clipboard.

Deleting events

Deleting an event, a time selection, or an event within a time selection will remove the data from the Track View and discard it. Deleted events are not placed on the clipboard and will not replace or interfere with current clipboard content. In addition, deleted events cannot be pasted back into a project.

*Deleted data can only be replaced in a project using the **Redo** command. For more information, see [Using the Redo command](#) on page 52.*

1. Select the event data you want to delete or make a time selection. *For more information, see [Making selections](#) on page 40.*
2. Delete the event data using any of the following methods:
 - Click the **Delete** () button in the toolbar.
 - Choose **Delete** from the **Edit** menu.
 - Right-click the selected event and choose **Delete** from the shortcut menu.
 - Press **[Delete]** on the keyboard.

All selected events are removed from the Track View and discarded.

Trimming events

Whereas the **Delete** command allows you to select event data to be removed from the project, the **Trim** command allows you to select the data that will remain. Trimming is performed by creating a time selection or selecting an event within a time selection and subsequently deleting all unselected data.

1. Create a time selection or select specific events within a time selection. *For more information, see [Creating a time selection](#) on page 42.*
2. Press **[Ctrl]+[T]** to trim the data within the selection. All unselected event data is removed from the Track View and discarded.

Track basics

ACID automatically creates a track for each media file added to the project and events derived from that file can only be placed on that track. However, tracks can be rearranged, duplicated, resized, and deleted.

Track types

Loops

Loops are small chunks of audio that are designed to create a continuous beat or pattern when played repeatedly. They are usually one to four measures long. Loops are the type of file that you will use most frequently.

One-shots

One-shots are chunks of audio that are not designed to loop, and they are streamed from the hard disk rather than stored in RAM if they are longer than three seconds. Things such as cymbal crashes and sound bites could be considered one-shots.

Unlike loops, one-shots will not change pitch or tempo with the rest of a project.

Beatmapped

When a file that is longer than thirty seconds is added to a project, the Beatmapper Wizard starts to allow you to add tempo information to the file. As a result, these tracks will respond to tempo and key changes, just like loops. *For more information, see [Beatmapper](#) on page 112.*

The length of the file that will start the Beatmapper can be changed in the Audio Preferences tab. For more information, see [Using the Audio preferences tab](#) on page 185.

MIDI

A MIDI track is created when you open a .mid, .smf, or .rmi file. You can use MIDI tracks to record data from and play back through synthesizers and other MIDI-compliant equipment. MIDI files must be edited through an external MIDI editor. *For more information, see [Working with MIDI](#) on page 157.*

Working with tracks

ACID will automatically create a new track for each media file added to a project and events placed on the track must be derived from that file. Because of this, track-level functions can be used to affect every event on the track. The following sections explain several basic track functions and features.

Reordering tracks

When building an ACID project, you may want to reorder the tracks to place similar instruments in proximity to one another. For example, placing all drum loops together in the Track View will make it easier for you to fine-tune the mix of the song's overall drum sound.

3. Drag the track header to a new location in the Track List. A heavy black horizontal line is displayed on the Track List to indicate where the track will be placed.
4. Release the mouse button. The track is dropped in the new location and the entire Track List/ Track View is adjusted accordingly.

*You can reorder multiple tracks by holding the **Ctrl** or **Shift** key while selecting tracks. For more information, see [Selecting multiple events](#) on page 40.*

Resizing a track

ACID allows you to change the height of a track, thereby affecting how many tracks can be displayed in the Track View. This is especially useful when building a project with a large number of tracks. In addition, the track's height can be decreased until only the Volume fader, Track FX button, Mute button, and Solo button are visible.

1. Drag the bottom edge of a track up or down in the Track List. The pointer is displayed as a vertical stretch icon.
2. Release the mouse button to establish the track's new height.

*Right-click the newly resized track in the Track List and choose **Set as Default Track Height** from to shortcut menu to resize all tracks in the project.*

Changing the track color

As mentioned previously, ACID automatically creates tracks to accommodate new media files. ACID also supplies these tracks with a default color. However, the track color can easily be changed to help you identify specific tracks in a project. To change the color, right-click the track in the Track List, choose **Track Display Color** from the shortcut menu, and choose the desired color from the submenu.

Renaming a track

To rename a track, right-click the track label and choose **Rename** from the shortcut menu, or double-click the track name. Renaming a track applies to the project only and does not change the file associated with the track.

Duplicating a track

To duplicate a track, right click it and choose **Duplicate Track** from the shortcut menu. An exact copy of the track and its events is created and displayed below the original track in the project. The words "Copy of" are placed before the name of the duplicate track to identify it in the Track List.


Deleting tracks

Unnecessary tracks should be deleted from a project by selecting the track and using any of the following methods:


- Choosing **Delete** from the **Edit** menu.
- Right-clicking and choosing **Delete Track** from the shortcut menu.
- Pressing [Delete].

Copying, cutting, and pasting tracks


Copying a track will place an exact copy of the selected track on the clipboard, but leave the Track View unchanged. To copy a track, select the track and do one of the following:

- Click the Copy () button in the toolbar.
- Choose **Copy** from the **Edit** menu.
- Right-click the selection and choose **Copy** from the shortcut menu.
- Press [Ctrl]+[C] on the keyboard.

Cutting a track removes it from the Track View and places it on the clipboard. To cut a track, select it and do one of the following:

- Click the Cut () button in the toolbar.
- Choose **Cut** from the **Edit** menu.
- Right-click the selection and choose **Cut** from the shortcut menu.
- Press [Ctrl]+[X] on the keyboard.

Tracks that are copied or cut to the clipboard can be pasted back into the current project or into a different project an unlimited number of times. This is a useful way to share tracks between different compositions. You can paste a track in one of the following ways:

- Click the Paste () button in the toolbar.
- Choose **Paste** from the **Edit** menu.
- Right-click the Track View and choose **Paste** from the shortcut menu.
- Press [Ctrl]+[V] on the keyboard.

Adjusting the mix

Use the multipurpose fader to adjust the mix of a specific track.





The following table describes the functions available in the drop-down list.

Function	Description
Volume	Controls how loud a track is in the mix. A value of 0 dB means that the track is played with no boost or cut from ACID. Dragging the fader to the left decreases the volume; dragging to the right increases the volume.
Pan	Controls the position of a track in the stereo field. Dragging the fader to the left will place the track in the left speaker more than the right, while moving the fader to the right will place the track in the right speaker.
FX	The FX fader controls the level of the track sent to each of the assignable FX chains that you have created. Dragging the fader to the left decreases the volume; dragging to the right increases the volume.
Bus	The Bus fader controls the level of the track sent to each of the additional busses that you have created for your project. Dragging the fader to the left cuts the volume; dragging the fader to the right boosts the volume.



Once you have selected a function, drag the fader handle to adjust the level. If multiple tracks are selected, the faders will all move together as a group.

When adjusting the mix of your tracks, remember to look at the meters on the Mixer. Because you are adding the volumes of all the track together, it is easy to clip the audio output. Make sure that the meters never display the red clip indication during playback.

Muting a track

Each track has a dedicated Mute () button. Clicking this button will shade the corresponding track (to indicate that it is muted) and render it inaudible during playback. Clicking  a second time will disable the mute and return the track to its original level in the mix. Toggle-muting a track is an effective way of determining whether a track contributes to the overall sound of a project.

Soloing a track

Located adjacent to the Mute button, the Solo () button allows you isolate tracks in a project during playback. When this button is clicked during playback, the corresponding track remains audible and all other tracks are muted. Clicking  a second time will return all tracks to their original levels in the mix. Toggle-soloing a track is an effective method of configuring and previewing isolated Track FX against how they will sound in the project.

Working with a group of tracks

Select a group of tracks by holding the **[Ctrl]** key while you click the track header of the desired tracks. Now you can adjust the volume, pan, mute, solo, and change track color on all the tracks simultaneously.


*To change from soloing a group of tracks to just one track, hold the **[Ctrl]** key while clicking the Solo button on the new track.*

Using the Undo and Redo commands

ACID provides unlimited undo and redo capabilities. An undo history is created for each edit performed on the project, and this allows you to quickly restore the project to any of its previous states. In addition, undoing an edit automatically places it in the project's redo history where it can be quickly re-performed. However, any new edit performed on the project will overwrite the redo history.


The undo and redo histories are cleared when the project is closed or ACID is exited.


Using the Undo command

To undo an edit, click the Undo () button on the toolbar or press **[Ctrl]+[Z]**. Edits are undone in the reverse order they were performed. Each time the Undo command is executed, another edit will be undone.

*You can also undo the most recent edit by choosing Undo from the **Edit** menu.*

Undoing a series of edits

Clicking the down arrow located adjacent to the **Undo** () button will display the project's undo history. The history is displayed as a drop-down list with the most recent edit located at the top. Undoing an edit in the list requires all subsequent edits to be undone as well.


1. Click the arrow to the right of the **Undo** () button. The undo history is displayed.
2. Locate the edit to be undone. Notice that all subsequent edits are automatically selected and the total number of edits to be undone is indicated at the bottom of the drop-down list.
3. Click the edit to be undone. The project is restored to the state it was in prior to the selected edit.

*Clicking on the desktop outside the drop-down list will cancel the **Undo** operation.*

Undoing all edits


Choosing **Undo All** from the **Edit** menu will undo all project edits and automatically add them to the redo history.


Using the Redo command

To redo an edit, click the **Redo** () button on the toolbar or press **Ctrl+Shift+Z**. Edits are re-performed in the reverse order they were undone and each time the **Redo** command is executed, another edit will be re-performed.

*You can also redo the most recent undone edit by choosing **Redo** from the **Edit** menu.*

Redoing a series of edits

Clicking the down arrow located adjacent to the **Redo** () button will display the project's redo history. The history is displayed as a drop-down list with the most recently undone edit located at the top. Redoing an edit in the list requires all subsequently undone edits to be re-performed as well.

1. Click the arrow to the right of the **Redo** () button. The redo history displays.
2. Locate the edit to be redone. Notice that all subsequently undone edits are automatically selected and the total number of edits to be redone is indicated at the bottom of the drop-down list.
3. Click the edit to be redone. The project is restored to the state it was in prior to the selected undone edit.

Clicking on the desktop outside the drop-down list will cancel the Redo operation.

Clearing the undo history

ACID allows you to clear the undo and redo histories without closing the project or exiting the application. After the histories are cleared, ACID will create new ones as you continue building the project.

1. From the **Edit** menu, choose **Clear Undo History**. A confirmation dialog displays, alerting you that this action will permanently delete the current edit histories.
2. Click **Yes** to clear the edit histories or **No** to cancel the operation retain the current edit histories.

Playing the project

Sooner or later you will want to play your project. ACID provides several methods of playing projects within the application as well as methods of previewing playback within several media player applications.

Using the Transport toolbar

All buttons required to play your project are located on ACID's Transport toolbar. This toolbar should look somewhat familiar to you, as it contains buttons found on most home CD and cassette players. *For more information, see [Transport controls](#) on page 18.*

Playback within ACID

As you build a project, you will likely have different playback needs. For example, you may want to hear the project in its entirety when checking the final mix, but not when you are working on the ending. Because of this, ACID offers three playback options:

- Playing the entire project.
- Playing from the cursor position.
- Looped playback.

Playing the entire project

To begin playback from the beginning of the project, click the Transport toolbar's **Play From Start** (▶) button or press **[Shift]+[Space]** on the keyboard. To stop playback, click the Transport toolbar's **Stop** (■) button or press **[Space]**.

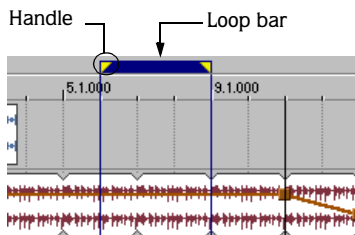
Playing from the cursor position

To begin playback from the current cursor position, click the Transport toolbar's **Play** (▶) button or press **[Space]**. To stop playback, click the Transport toolbar's **Stop** (■) button or press **[Space]**.

Looped playback

You are also able to limit playback to a specific loop region on the Track View. This playback method is frequently used in conjunction with the Transport toolbar's **Loop Playback** (🔄) button and allows you to fine-tune mixes and effects while continually listening to the selected area. *For more information, see [Transport controls](#) on page 18.*

1. Drag the handles of the loop bar to create the desired loop region.



2. Click the **Loop Playback** (🔄) button to enable it.
3. Click the Transport toolbar's **Play** (▶) button or press **[Space]**. ACID begins playback of the selected area. To stop playback, click the Transport toolbar's **Stop** (■) button or press **[Space]**.

Using the Mixer window

The Mixer window is a dockable window with a default location in the lower right-hand corner of the ACID workspace. The Mixer window contains the following controls:

- A Preview fader, which allows you to adjust the loudness of media files previewed from the Explorer window, Track Properties dialog, Beatmapper, or the Chopper. Also, the Preview fader's volume determines the volume of new tracks added to the project. This allows you to set up a quick mix while you are adding media to your project.
- A Master fader, which controls the overall volume.
- Faders for up to 26 project busses when added to the project.
- Faders for up to 32 assignable FX when added to the project.




The function of the bus and FX controls are beyond the scope of this chapter. *For more information, see [Advanced Project Techniques](#) on page 121.*

Viewing the Mixer window

The Mixer window is displayed by default when ACID is started, but it can be hidden (to provide more area for the Explorer window) by choosing **Mixer** from the **View** menu or pressing **Alt+3**. To display the Mixer window, choose **Mixer** from the **View** menu again (a check mark displayed adjacent to the command indicates that it is active) or press **Alt+3**.

Using the Mixer toolbar

The Mixer window toolbar contains three buttons: Project Audio Properties, Insert FX and Insert Bus.

Button	Description
	Displays the Project Properties dialog.
	Adds an Assignable FX send to your project. The Plug-In Chooser dialog displays so you can create a plug-in chain for a new FX send.
	Adds another bus to your project. The Audio tab in the Project Properties dialog is updated to reflect the new number of busses.

Renaming a Mixer control

Double-clicking a Mixer control name allows you to rename the control. Press **Enter** to save the change.



Using the Mixer's faders

Adjusting the Preview fader

To adjust the Preview fader, drag the thumb up or down.

- Dragging the thumb up will increase the preview volume.
- Dragging the thumb down will decrease the preview volume.

Hiding the Preview fader


Once you have added all desired media files to a project, you may want to hide the Preview fader to make room for additional busses and assignable FX. To hide the Preview fader, right-click within the Mixer window and choose **Show Preview Fader** from the shortcut menu. The fader remains hidden until **Show Preview Fader** is again chosen from the shortcut menu.

Adjusting a split fader in the Mixer

Unlike the Preview fader, the thumbs of the Master, bus, and assignable FX faders are split. This allows you to adjust the levels of the left and right channels independently.

To move the faders individually, drag the thumb for the desired channel and release the mouse when it is in the correct position.

However, you can adjust both channels simultaneously by doing either of the following:

- Click and hold the mouse button in the middle of the fader's thumb while making your adjustment.
- Click the Lock Fader Channels () button before adjusting the fader.

You can affect the fader's thumb by double-clicking:

- Double-clicking the thumb will reset the fader to 0.0 dB.
- If you have set each channel differently, double-clicking either channel of the fader's thumb will match the remaining channel to it.

Changing meter resolution

ACID allows you select the meter resolution. This is useful when building a project from several media source pools that have varying volume levels. To change the resolution, right-click a meter and choose the desired resolution from the shortcut menu.

Changing the meter resolution of one fader automatically reconfigures all other meters in the Mixer to match the selected resolution.

Adjusting for clipping

The volume of certain media files may cause a meter to clip. This will result in the clipping value being displayed in a red indicator at the top of the meter as well as a distorted audio signal. If the meter clips, lower the volume and click the red clip indicator to reset the meter. Continue adjusting the fader and resetting the meter until clipping is eliminated.

A meter can also be reset by right-clicking on it and choosing Reset Clip from the shortcut menu.

Saving and rendering a project

Though ACID provides you with the tools to quickly build impressive musical projects, you may find yourself building elaborate projects over a period of weeks or even months. While they are being built, ACID projects should be saved in the application's native format, the ACID Project File (.acd).

If you save an ACID 1.0 or 2.0 project in ACID 3.0, it will be unusable in earlier versions of ACID. Use the Save As dialog to save the project with a new name after editing it in ACID 3.0.

When you are finished building a project, ACID allows you to render projects in a variety of formats. The project's final format (or formats) should be determined by how the media will be delivered. For example, you would not want to render your project to the RealMedia format if you plan to write it to CD.


Be aware that projects containing MIDI files that are routed to external MIDI ports must be rerouted to the internal DirectX 8 SoftSynth to be rendered.

Saving a project

ACID Project File (.acd) is the default format for saving a new project and should be used for saving unfinished projects. There are two ACID project file types.

Format	Extension	Description
ACID Project File	.acd	Contains all information regarding the project including track layout, envelope settings, and effects parameters. However, this type of file does not contain actual audio, only references to the audio files.
ACID Project with Embedded Media	.acd-zip	<p>Contains all information regarding the project including track layout, envelope settings, and effects parameters. In addition, all audio files used in the project are embedded into the project file.</p> <p>If you save a project in .acd-zip format, the project file and all media files are copied to a temporary folder in the ACID program folder, typically C:\Program Files\Sonic Foundry\ACID 3.0\Temp\ACID Pro Temp x\.</p> <p>If you continue to work on your project after saving the .acd-zip file, your changes will be saved to the files in this temporary folder.</p>

Use the procedure below to save a project for the first time:

1. Display the Save As dialog using any of the following options:
 - Click the **Save** () button in the toolbar.
 - From the **Edit** menu, choose **Save**.
 - Press **Ctrl+S** on the keyboard.
2. Select the drive and directory where the file will be saved using the Save in drop-down list.
3. Enter a name for the project in the File name field.
4. Specify the desired ACID project file in the Save as type drop-down list.
5. If you want ACID to save a copy of each of the project's media files to the same location as your project file, select the Copy all media with project check box. This is available when saving as an ACID project file.
6. Click **Save**. The project is saved.

After the project is saved for the first time, subsequent saves will bypass the Save As dialog and automatically save changes to the project using the existing file name.

Once the project is saved, you can use the **Save As** command from the **File** menu to create a copy of the project with a new name or to a different ACID project file format.

Rendering a project

Rendering refers to the process of converting the ACID project into a file that is formatted for a specific playback method. Possible playback methods include media player applications, Internet streaming media, and CD-ROM. When an ACID project is rendered, it is not overwritten, deleted, or altered and you are able to return to the original project to make changes and re-render.

1. From the **File** menu, choose **Render As**. The Render As dialog displays.
2. Select the drive and folder where the file will be saved, using the Save in drop-down list.
3. Enter a new name for the project in the File name field.
4. Specify the desired file format in the Save as type drop-down list.
5. If the selected file type supports it, you can choose an encoding template from the Template drop-down list, or click the **Custom** button to create a new template. *For more information, see [Creating an encoding template](#) on page 62.*

When you render to Sonic Foundry Audio (.sfa), Perfect Clarity Audio (.pca), Wave64 (.w64), or Wave (.wav) formats, you can save each bus to a separate file. Choose one of the Multiple Stereo or Multiple Mono settings from the Template drop-down list. For example, if you'd entered My Remix.wav in the File name box, ACID will create My Remix Master.wav, My Remix Bus A.wav, and so on for each bus in your project.

6. Select the Render loop region only check box if you want to save only the portion of the project that is contained within the loop region. The loop region does not need to be active for this option to work.
7. If the selected file type supports it, you can select the Save project markers in media file check box to include markers and regions in the rendered media file.

8. Select **Save each Track as a separate file** check box if you want to render each track in the project to its own file. File name is changed to Folder, which displays name of the folder in the Save in box.
9. Click **Save**. A progress dialog displays.

When rendering is complete, you can choose one of the following options:

- The **Open** button starts the associated media player and plays the newly rendered file.
- The **Open Folder** button opens Windows Explorer to display the location of the newly rendered file.
- The **Close** button closes the progress dialog and returns you to the ACID window.

Supported formats for rendering


The following table briefly describes the file formats available for rendering a project:

Format	Extension	Description
AIFF File	.aif	The standard audio file format for audio used on Macintosh computers.
Wave File	.wav	The standard audio file format used on Windows-based computers.
RealMedia	.rm	The RealNetworks standard for streaming media via the Web. This option renders both audio and video into one file.
MPEG Layer 3	.mp3	A highly compressed format used for portable digital players and Internet sharing of media.
Video for Windows	.avi	The standard video file format used on Windows-based computers.
OGG Vorbis	.ogg	A patent-free audio encoding and streaming technology.
Quicktime	.mov	QuickTime for Microsoft Windows.
Windows Media 7	.wma, .wmv	The Microsoft audio and video format used to create files for streaming or downloading via the Web.
Sonic Foundry Perfect Clarity Audio	.pca	A Sonic Foundry proprietary lossless audio compression format.
Sonic Foundry Audio	.sfa	A Sonic Foundry proprietary, uncompressed format that should only be used for compatibility with other Sonic Foundry applications. It is not recommended for use as a rendering format as it is not universally supported.
Wave64	.w64	A Sonic Foundry proprietary wave format that does not have a restricted file size (Unlike Windows standard .wav format which is limited to ~2GB).

Some plug-ins, such as MP3, may require registration to use them.

Creating an encoding template

The Custom Settings dialog displays when you click the **Custom** button on the Save As dialog. You can use the Custom Settings dialog to create custom encoding templates for many of the file formats available in ACID.

1. From the **File** menu, choose **Render As**. The Render As dialog displays.
2. Choose your preferred file format from the Save as type drop-down list. If the format allows you to create custom settings, the **Custom** button will become active.
3. Click the **Custom** button. The Custom Settings dialog displays.
4. Make the appropriate setting changes for the chosen file format.
5. Enter a name for the template in the Template box and click the **Save** () button.
6. Click **OK**. The Custom Settings dialog closes. The new template name is displayed in the Template drop-down box on the Render As dialog.

Publishing to the Internet

When your project is finished, you have the option of publishing it to the Internet. The most common place to publish your project is ACIDplanet.com, a virtual community of ACID users. ACIDplanet.com allows you to do the following:

- share your music.
- listen to projects built by other ACID enthusiasts.
- download free loops.
- enter remix contests co-sponsored by Sonic Foundry and major record labels.

Publishing your project to the Internet involves two distinct procedures: creating a personal account and uploading the project.

Creating a personal account

Publish setup allows you to create accounts at Web sites where you can publish your song files. Each Web site that offers publishing directly through ACID will guide you through its own account creation process. If you haven't created an account and you attempt to publish a song, you will be directed to Publish Setup.

1. From the **File** menu, choose **Publish Setup**.
2. Follow the on-screen instructions to set up your account.

At any time, you can go back to **Publish Setup** and create another account at a different Web site. The Web site you are currently logged into in **Publish Setup** is where ACID will publish your song when you choose **Publish**.

Uploading a project

Publishing a project file copies your media to the Web so you can share it with other Web users. The following procedure assumes you already have an account set up with a publish provider. If not, you will first be redirected to Publish Setup. After successfully creating an account, you will be directed back to the Publish feature.

1. From the **File** menu, choose **Publish**. The Publish dialog displays.
2. Select the appropriate radio button to specify whether the song to be published is the current ACID song or a different song.
 - To publish your current ACID song, choose a streaming format and bitrate.
 - To publish a different song, enter the path to the song or click the **Browse** button to locate the file. This song must already be in a streaming format.
3. Click **Next**. If you are publishing the current ACID song, it will be rendered in the format and bitrate you specified. A window displays from the publish provider with directions for completing the publishing process.
4. Follow the instructions provided by the publish provider. ACID begins uploading the file to the provider. A progress dialog will inform you when the upload is finished.
5. Click **OK**. The publish provider will provide a link to the song on their Web site; however, this may vary depending on provider.

Writing to CD

Finally, ACID allows you to write your projects to CD using supported CD-R/CD-RW drives. The application will automatically reformat your project so it can be played on consumer CD players; however, the disc must be closed before it can be played in a CD player.

CD sample rate

Prior to writing a track to CD, you should verify that the project's sample rate is configured to 44,100Hz. Sample rates other than 44,100Hz will result in the CD's track lengths being miscalculated by CD players.

To change the project's sample rate:

1. Display the Project Properties dialog using one of the following methods:
 - Choose **Properties** from the **File** menu.
 - Press **Alt+Enter** on the keyboard.
2. Click the Audio tab.
3. Specify 44,100 in the Sample rate (Hz) drop-down list and click **OK**.

Writing a track to CD

1. Insert a blank CD in a supported CD-R/CD-RW drive.
2. From the **Tools** menu choose **Create CD**.

Notice that the Create CD dialog indicates the amount of time that the current project will fill on the CD as well as the total amount of time remaining on the CD. If the Time needed for audio value exceeds the Time available on disc value, ACID will not allow the track to be written to the CD.

*If there is not a CD in the CD-R/CD-RW drive, only the **Cancel** button will be available in this dialog.*

3. Click the **Add Audio** button. ACID begins writing your project to the CD and displays a progress meter. Once ACID begins writing to the CD, cancelling the write operation will render the CD unusable.

When ACID finishes writing the track to the disc, a dialog will display a message indicating whether the track was written successfully.

4. Click **OK**.

Closing a CD

Once all desired tracks are written to the CD, it must be closed to allow it to be played on consumer CD players. Be aware that no additional tracks may be written to a CD after it is closed.

1. Verify that the CD to be closed is in the your CD-R/CD-RW drive.
2. From the **Tools** menu, choose **Create CD**. The Create CD dialog displays.

Notice that the Create CD dialog indicates the total amount of time remaining on the CD. Once the CD is closed, additional tracks cannot be written to it.

3. Click the **Close Disc** button. ACID begins closing the CD and displays a progress meter. Once ACID begins closing the CD, cancelling the operation will render the CD unusable.

When ACID finishes closing the disc, a dialog displays a message indicating whether the CD was closed successfully.

4. Click **OK**.

Tips and tricks

The following sections contain some creative suggestions for building projects in ACID as well as some little-known features.

Detuning a paired track

Detuning a paired track is a quick and easy way to thicken an audio track without adding the additional processing of effects. This trick works extremely well with synths, pads, strings and ambient sounds. However, that does not mean that you shouldn't use it to add body to drums, basses, and horns.

1. Right-click the project track to be detuned and choose **Duplicate Track** from the shortcut menu. The track is duplicated and the copy is added to the Track List.
2. Click the waveform of the duplicated track to highlight it.
3. Use the **[+]** and **[-]** keys on your numeric keypad to change the pitch of the duplicated track.

Octave intervals (+12, -12, -24) typically sound best when working with pitched audio; however, experimenting with other, less ordinary intervals may produce surprising results. When working with non-pitched audio, intervals do not matter, thereby allowing you to freely experiment with radical pitch shifting.

This technique typically works best when tuning the duplicate track to a lower octave than the original track, but that does not mean you cannot try raising the pitch of the duplicate track.

Panning in conjunction with detuning

Few things are as uninteresting as a series of tracks panned down the middle of a stereo image. Particularly after detuning a paired track, you should experiment with spatially positioning the tracks using the Pan control or the Pan envelope. Panning each track to a specific channel will produce a nice wide aural effect. If you are looking for something a little more dynamic, position the original track anywhere in the stereo image and use a Pan envelope to sweep the duplicate track from the left channel to the right channel the mix. *For more information, see [Track envelopes](#) on page 103.*

Double time/Half time

You can also produce interesting effects by misinforming ACID regarding the number of beats in an audio file. Configuring a file with half its actual number of beats will result in it being played at double time in the project. This is an easy way to add speed metal drum tracks to your project. This technique is also useful for adding a kick drum on every beat to producing a heavy dance foundation. Conversely, configuring a file with twice its actual number of beats will result in it being played at half time in a project.

1. Right-click the desired track in the Track List and choose **Properties** from the shortcut menu. The Properties dialog displays.
2. Click the Stretch tab.
3. Change the value in the Number of beats edit box.
 - Halving the current value will double the loop's playback speed.
 - Doubling the current value will halve the loop's playback speed.

The Wall of Sound

As mentioned previously, it is sometimes preferable to color and thicken mixes without resorting to effects and other digital processing. This trick has its roots in the musical producer who first utilized the studio as an instrument in music making. Working without the benefit of multitrack recording, Phil Spector colored his songs by having several instruments play slightly different parts. For example, he might use an acoustic bass, and electric bass, and the bass notes of a piano to all play slight variations on the same basic riffs. These variations, along with the differing timbre of the actual instruments, produced a dense sonic mass that became known as The Wall of Sound.

- To add this aural density to your projects, experiment with using two, three, or even four tracks of similar instrumentation.
- Altering the pitch of specific tracks will help them cut through the mix. *For more information, see [Changing a track's key](#) on page 100.*
- Further differentiate specific tracks using pan and volume envelopes to color the project and simulate actual human performance. *For more information, see [Track envelopes](#) on page 103.*
- This effect can be made even more pronounced by setting a start offset within specific individual events. *For more information, see [Changing event properties](#) on page 38.*



Intermediate Project Techniques

Using project markers and regions

ACID markers and regions identify areas of your project and provide navigational cue for quickly finding those areas. After markers and regions are placed, you may adjust their position along the project's timeline and label them with meaningful names for your reference.

Marker type		Description
Marker (standard)		Markers are used to identify specific reference points in your project. Points that you may want to identify are introductions, bridges, refrains, choruses, or whatever you choose.
Time Marker		Time markers are fixed to the Time Ruler and mark absolute time in your project. They are very useful when scoring video.
Command Marker		Command markers are used to indicate when an instruction or function will occur in a streaming media file.
Regions		Regions are used to subdivide your project into time segments. Regions have in and out points, which allow them to function as "permanent" time selections.

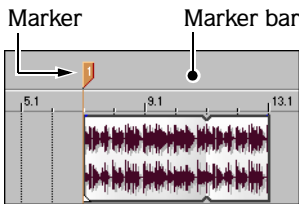
Working with standard markers

Markers are tools that can make creating music easier by identifying specific points along the project's timeline. They can be named, moved, and serve as snap and navigational points for the cursor and events. When you place markers, ACID automatically numbers them in the order that they were placed.


Placing and moving standard markers

Markers are placed at the cursor position. You may place a marker in one of the following ways:

- From the **Insert** menu, choose **Marker**.
- Right-click the Marker bar and choose **Markers/Regions** and from the submenu choose **Insert Marker**.
- Press the **M** key. You may use this method to place a marker while the project is playing.




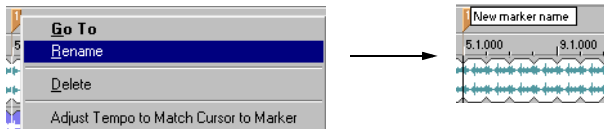
After a marker has been placed, you may move it at any time by doing the following:

1. Place the mouse pointer on the marker to be moved; the hand cursor () appears.
2. Drag the marker to the desired position.

Naming a standard marker

ACID allows you to name markers in your project. You may want to name markers based on parts of the project. For example, you may want to identify choruses, refrains, bridges, or instrument solos as reference points along the timeline.

1. Place the mouse pointer on the marker to be named; the hand cursor () appears.
2. Right-click the marker and choose **Rename** from the shortcut menu. A text box will appear next to the marker.

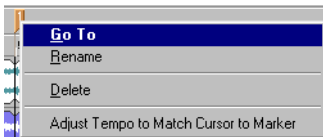


3. Type a marker name and press the **Enter** key to save the name.
4. Repeat steps 1-3 to rename the marker. To rename the marker you can double-click it and enter a new name.

Navigating to a standard marker

While you are working on your project, you may have scrolled to a portion of the project where the cursor is not visible. There are two ways to move the cursor directly to the selected marker:

- Right-click the marker and choose **Go To** from the shortcut menu.



- Click the marker once.
- Use the corresponding number keys, not on the numeric keypad.

*You may also navigate between markers in your project by pressing forward (**Ctrl**+**→**) or backward (**Ctrl**+**←**) shortcut keys.*


Adjust tempo to match cursor to marker

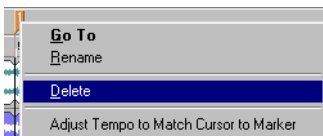
Position the cursor, right-click the marker tab, and choose **Adjust tempo to match cursor to marker** from the shortcut menu. The project tempo will change so the cursor position matches the selected marker.

Deleting standard markers

You may remove markers from the project at any time. Because markers are automatically numbered when they are placed, ACID will not renumber the remaining markers when one is deleted. The remaining markers will retain their numbers. However, if you add markers later, ACID will begin numbering to fill the sequence gap.

For example, if you have five markers in your project and delete markers 3 and 4, the remaining markers will be listed as 1, 2 and 5. When you add markers again, ACID will begin numbering the markers at 3 then 4.

1. Place the mouse pointer on the marker to be deleted; the hand cursor () appears.



2. Right-click the marker and choose **Delete** from the shortcut menu. The marker will be removed from the project.

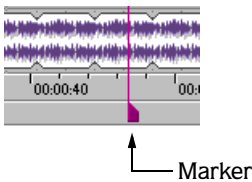
Working with time markers

Unlike standard markers, time markers are tied to absolute time within your project. They are added differently than standard markers and appear on the Time Ruler at the bottom of the Track View. Otherwise, time markers can be manipulated just like other markers.

Placing time markers

Time markers are placed at the cursor position. You may place a time marker in one of the following ways:

- From the **Insert** menu, choose **Time Marker**.
- Press the **[M]** key. You may use this method to place a time marker while the project is playing back.



ACID does not number time markers.

Adjust tempo to match marker to cursor

Using this function with time markers is particularly useful when scoring video. *For more information, see [Scoring video with ACID](#) on page 149.*

Position the cursor, right-click the marker tab, and choose **Adjust tempo to match marker to cursor** from the shortcut menu. The project tempo will change so the Time marker matches the cursor position.

You can also align the marker and cursor by holding the **[Alt]** key while dragging the marker. For example, hold **[Alt]** while dragging a time marker to a location on the Beat Ruler. The project tempo is adjusted so the time at the marker occurs on a specific beat. For example, if you place a time marker at 10 seconds on the Time Ruler and hold **[Alt]** while dragging the marker to 5.1 on the Beat Ruler, ACID will adjust the project's tempo so the first beat of measure five occurs at ten seconds.

Working with command markers

Command markers add interactivity to a multimedia presentation streamed over the Internet. As your video plays, any number of other actions can be programmed to execute. These commands are a part of the Windows Media and RealMedia streaming formats. Most frequently, these actions add text or open a related Web site where the viewer can find more information about the topic at hand. The specific commands available vary depending on the final format of your project.

Streaming media files can be played back from any hard drive or CD-ROM, but in order to stream properly across the Internet, the file must be placed on a special streaming media server. Please check with your Internet Service Provider for details and availability of this special service.

Defining streaming media commands

In a streaming media file, command markers can be used to display headlines, show captions, link to Web sites, or any other function you define.

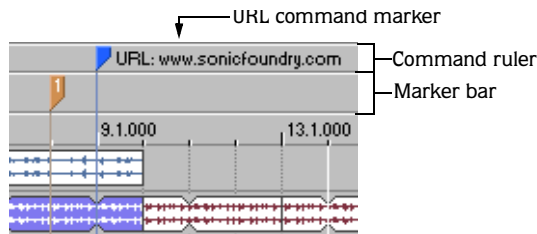
ACID includes several command types that you may add to a streaming media file. Some command types are exclusive to either the Windows Media (.wma or .wmv) or the RealMedia (.rm) player.

Command	Player Type	Description
URL	Windows Media and RealMedia	Indicates when an instruction is sent to the user's Internet browser to change the content being displayed. With this command, you enter the URL that will display at a specific time during the rendered project's playback.
Text	Windows Media	Displays text in the captioning area of the Windows Media Player located below the video display area. You enter the text that will display during playback.
WMClosedCaption	Windows Media	Displays the entered text in the captioning window that is defined by an HTML layout file.
WMTextBodyText	Windows Media	Displays the entered text in the text window that is defined by an HTML layout page.
WMTextHeadline	Windows Media	Displays the entered text in the headline window that is defined by an HTML layout file.
Title	Windows Media and RealMedia	Displays the entered text on the player's title bar.
Author	Windows Media and RealMedia	Displays the entered text (Author's name) when a user selects About this Presentation from the RealPlayer's shortcut menu or Properties from the Windows Media shortcut menu.
Copyright	Windows Media and RealMedia	Displays the entered copyright information when a user selects About this Presentation from the RealPlayer's shortcut menu or Properties from the Windows Media shortcut menu.
HotSpotPlay*	RealMedia	Allows you to define an area in the RealPlayer video display that users can click to jump to another RealMedia file.
HotSpotBrowse*	RealMedia	Allows you to define an area in the RealPlayer video display that users can click to jump to a Web page that you specify.
HotSpotSeek*	RealMedia	Allows you to define an area in the RealPlayer video display that users can click to jump to a point in the current RealMedia file.

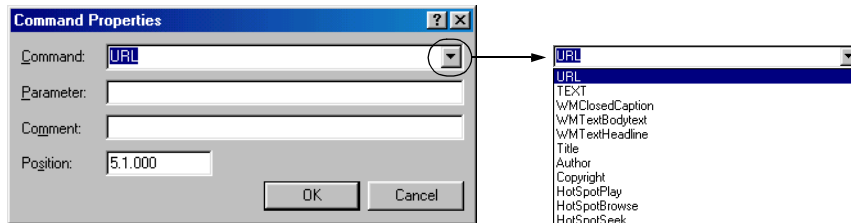
* A hotspot is defined by the bottom-left (x,y) and top-right (x,y) corners of a rectangle.

Placing a command marker

Command markers are placed at the cursor's position by choosing **Command** from the **Insert** menu. They can also be placed during playback by pressing the **[C]** key. Command markers appear on the Command ruler, which is above the Marker bar.



When you place command markers, the Command Properties dialog appears. The Command Properties dialog can be accessed at any time by double-clicking any command marker.



Use this dialog to define your own command from the drop-down list. This dialog is also where you edit the behavior of the selected command markers.

- The Command drop-down list allows you to select or enter the type of command to place.
- The Parameter box defines the behavior of the command.
- The Comments box is used to remind you of the command's purpose while you work on the project. Its function is similar to naming markers and regions.
- The Position box allows you to specify the timing of the command. Otherwise, command markers are automatically set to the current cursor position.

Once the command properties are set, click **OK** to place the command marker on the Command ruler. Command markers can be moved by dragging them to a new location.

Editing command marker properties

1. Double-click the command marker. The Command Properties dialog displays.
2. Change the command type, parameters, comments, or enter a new position along the timeline.
3. Click **OK** to assign the new properties or click **Cancel** to keep the command marker's original properties.

Adjust tempo to match cursor to marker

Position the cursor, right-click the marker tab, and choose **Adjust tempo to match cursor to marker** from the shortcut menu. The project tempo will change so the cursor position matches the selected command marker.

Deleting a command marker

To delete a command marker, right-click the marker and choose **Delete** from the shortcut menu.

Working with Regions

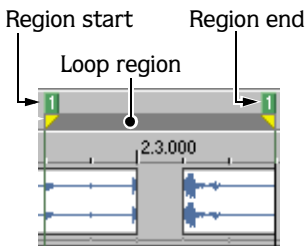
Regions are useful tools that allow you to subdivide your project into time sections by designating in and out points along the timeline. Regions can function as “permanent” time selections for playback and editing purposes. Like markers, regions can serve as reference points and may be moved, named, and provide snap points for the cursor and events.

When you place regions, ACID automatically numbers them in the order that they were placed.

Placing and moving regions

Regions are placed at the start and end points of a loop region or time selection. You may place a region in one of the following ways:

- From the **Insert** menu, choose **Region**.
- On the Marker bar, right-click and choose **Markers/Regions** and choose **Insert Region** from the submenu.
- Press the **[R]** key.



After a region has been placed, you may change its position by dragging the region tag to the desired position.



*You can move a region without changing its size by holding the **[Alt]** key while dragging either region tag.*

Naming regions

ACID allows you to name the placed regions in your project. You may want to name regions based on parts of the project or to define the amount of time that the regions encompass. For example, you may want to identify introductions, solos, or special time-related features in your project as reference points.

1. Right-click the region's *start* tag and choose **Rename** from the shortcut menu. A text box will appear next to the region's in tag.

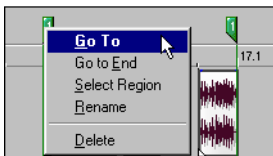


2. Type a region name and press the **Enter** key to save the name.
3. Repeat steps 1-3 to rename other regions.

Navigating to regions

While you are working on your project, you may have scrolled to a portion of the project where the cursor is not visible. You may click in the Track View to move and view the cursor or you may use region tags to bring the cursor into view.


To move the cursor to the selected region tag, right-click the region tag and choose **Go To** from the shortcut menu.

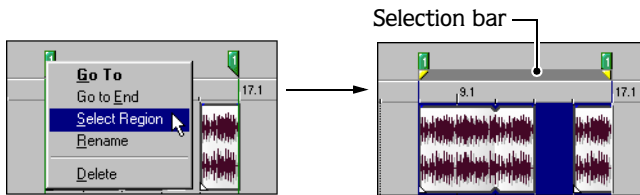


*You may also navigate between regions in your project by pressing forward (**Ctrl**+**→**) or backward (**Ctrl**+**←**) shortcut keys.*

Selecting a region

You may use the region's start and end tags to make a time selection across all tracks in your project. The information within the time selection can then be used for playback or editing.

1. Choose a time selection-type tool: **Selection**, **Edit Envelope**, or the **Time Selection**.
1. Place the mouse pointer on either the region's start or end tag; the hand cursor () appears.
2. Right-click the region tag and choose **Select Region** from the shortcut menu. The selection bar will appear between the region tags and the tracks will be highlighted.

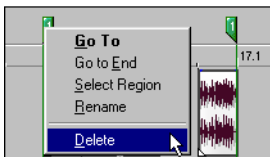


Deleting regions

You may remove regions from the project at any time. Because regions are automatically numbered when they are placed, ACID will not renumber the existing regions when one is removed. The existing regions will retain their numbers. However, if you add regions later, ACID will begin numbering to fill the sequence gap that exists.

For example, if you have six regions in your project and delete regions 4 and 5, the remaining regions will be listed as 1, 2, 3 and 6. When you add markers again, ACID will begin numbering the markers at 4 then 5.

To remove a region from a project, right-click the region tag marker and choose **Delete** from the shortcut menu.

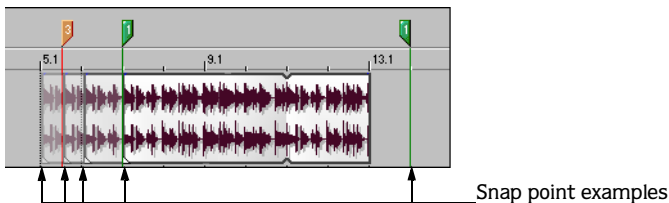


Snapping events

Snapping helps you to align events in your project with other items. ACID is preset to snap event edges to the project's grid lines as you drag an event along the track. If snapping is enabled, and the **Grid Only** option is turned off, the event's edges will automatically align to these designated snap points:

- Cursor position
- Grid lines
- Markers
- Regions start and end points
- Time selections in and out points

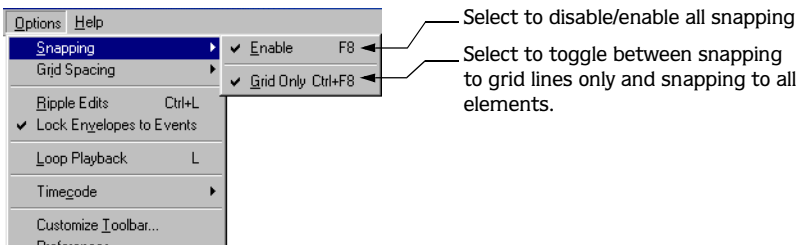
You may enable snapping to these elements in the project or limit snapping to grid lines.



Enabling/disabling snapping

If the snap function is preventing you from placing an event precisely where you want it, you may disable snapping. Disabling all snapping will prevent events from automatically aligning to the cursor, grid lines, markers, regions, and time selections.


The **Options** menu allows you to toggle snap functions. A check mark next to the **Enable** command indicates that snapping is enabled. The presence or absence of a check mark next to the **Grid Only** command indicates the type of snapping that is enabled.



You can temporarily disable snapping by holding down the **Shift** key.

Enabling/disabling snapping

You may enable/disable snapping in one of the following ways:

- Click the **Snap** () button on the Toolbar.
- From the **Options** menu, choose **Snapping** then choose **Enable** from the submenu.
- Press the **F8** shortcut key.

Enabling snapping to grid lines

With snapping enabled, you may choose to snap only to grid lines. From the **Options** menu, choose **Snapping** then choose **Grid Only** from the submenu. If grid only is enabled, a check mark displays next to the command.

Enabling snapping to all elements

With snapping enabled, you may choose to snap to all elements. From the **Options** menu, choose **Snapping** then choose **Grid Only** from the submenu. The check mark does *not* display next to the **Grid Only** command when snapping to all elements.

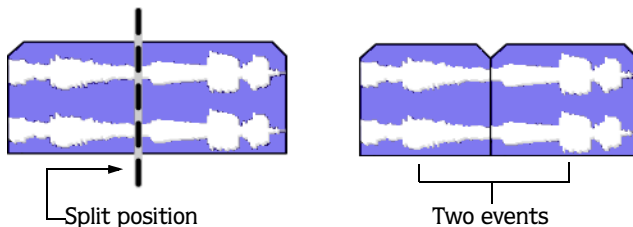
*Use the **Ctrl+F8** shortcut key to toggle between grid only and all elements.*

Splitting events

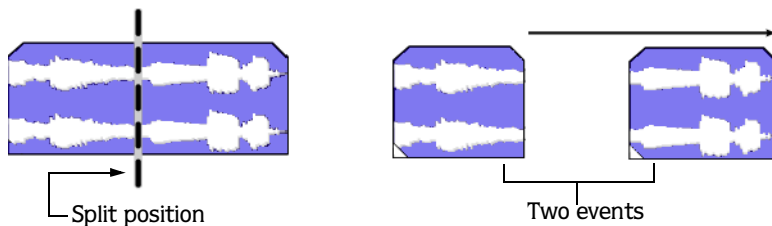
ACID allows you to split events in a number of ways. Splitting is a quick way to create independently functioning events from a single one. You might consider splitting an event if you want to adjust a small part of the track. For example, you may want to apply pitch shift to a guitar track for a few measures and then return the track to its original setting.

Splitting occurs at the cursor position or at the in and out points of a time selection. When you split an event, ACID creates a new ending point for the original event and creates a starting point for the newly created event.

When you split an event, the newly created events abut each other. If **Quick fade edges to prevent clicks** is selected in the **Event Properties** dialog, fades will be inserted at the split point.



However, you may move either of the events, which will create a gap.



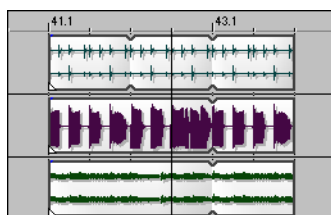
Splitting events

Splitting at the cursor position will split all selected events that the cursor crosses, on all tracks.

1. Select the event(s) that you want to split.
2. Place the cursor where you want the split to occur or make a time selection.
3. From the **Edit** menu, choose **Split** or press the **[S]** shortcut key. The result of the split depends on how events were selected:
 - Splitting at the cursor position will split all events, which the cursor crosses, on all tracks.

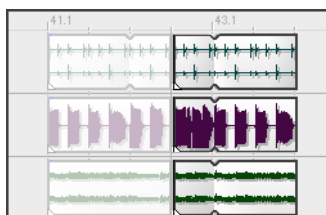
Splitting at the Cursor Position

Events before splitting



Cursor position
and split point

Events after splitting

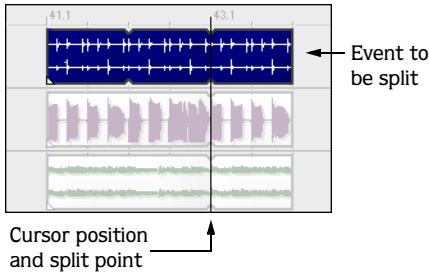


After the split, the three events
become six events

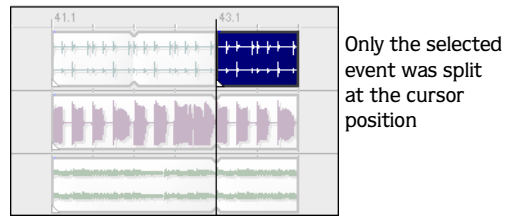
- Selecting a single event prior to splitting will prevent other events from being split at the cursor's position.

Splitting a single selected event

Events before splitting



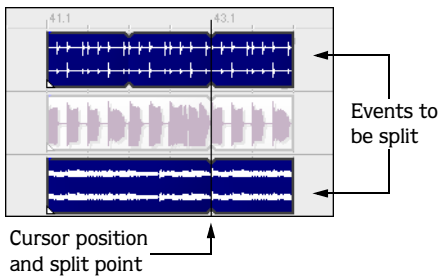
Events after splitting



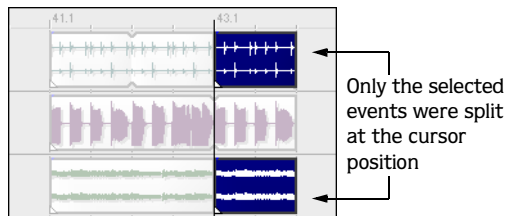
- Selecting multiple events causes only the selected events to be split at the cursor's position. Be sure to set your cursor position before selecting events. Attempting to set your cursor after selecting events will cause you to lose your event selection.

Splitting multiple selected events

Events before splitting

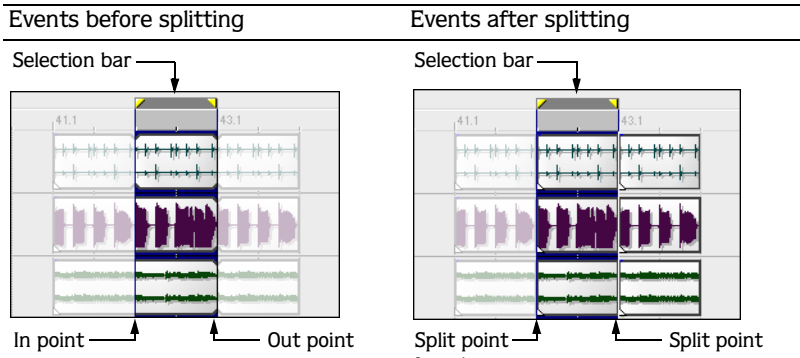


Events after splitting



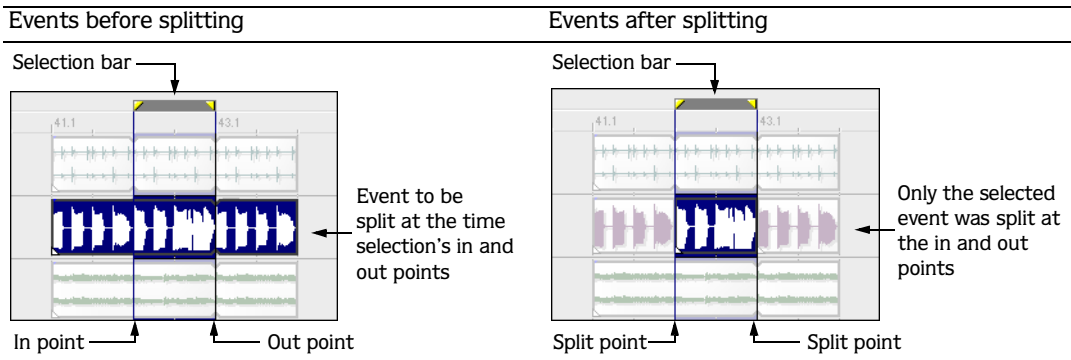
- Making a time selection will allow you to split events at the time selection's in and out points across all tracks.

Splitting a time only selection



- When selecting events within a time selection, only the selected events in the time range will be split at the in and out points.

Splitting selected events within a time selection

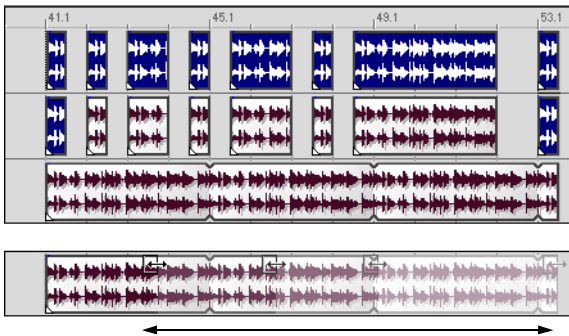


Joining events

On ACID tracks, you may join events that have been segmented along the timeline. Joining events is an efficient way to redraw an event and remove any splitting or silent regions between events.

You would want to join events if you decided that the event should playback uninterrupted over the specified time range.

1. Select the events or range of events that you want to join. *For more information, see [Selecting multiple events](#) on page 40.*
2. From the **Edit** menu, choose **Join** or press the **J** shortcut key. The selected events are joined.



Select all the events that you want to join.

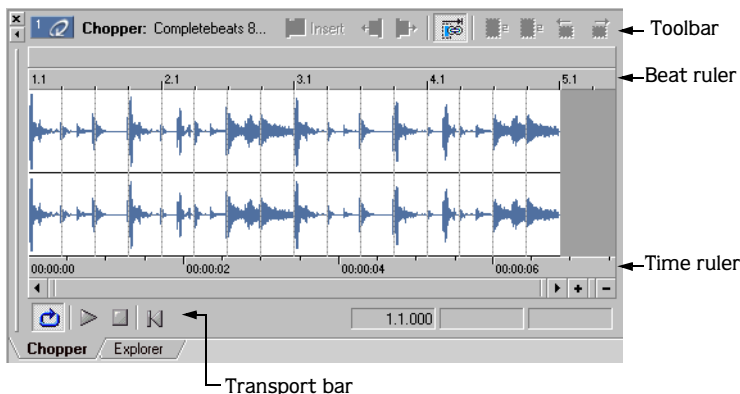
You can also select the first and last events you want to join: creating an event selection range.

After you join the events, a single event will appear.

Joining events is similar to dragging the edge of an existing event

The Chopper

The Chopper allows you to quickly create “slice-and-dice” effects that were possible, but somewhat time consuming in previous versions of ACID. Selecting a track automatically places a copy of the track’s file in the Chopper where it can be immediately manipulated and inserted into the Track View.



The Chopper Window

Viewing the Chopper

To display the Chopper, choose **Chopper** from the **View** menu or press **Alt+2**.

Chopper grid

The Chopper’s grid display uses the same increments available on the Track View. To change the grid display, right-click the waveform area of the Chopper, choose **Grid Spacing** from the shortcut menu, and choose the desired display from the submenu. This option defaults to **Ruler Marks**.

Chopper snapping

The snapping behavior of the Track View and Chopper are linked. To enable snapping in both components, choose **Snapping** from the **Options** menu and choose **Enable** from the submenu, or press **⌘**. A check mark is displayed adjacent to the command to indicate that snapping is active. To turn snapping off, choose **Snapping** from the **Options** menu and choose **Enable** again from the submenu.

When snapping is enabled, you can choose between snapping the grid only or snapping to all elements. For more information, see [Snapping events](#) on page 77.

Magnifying the Chopper

There are three ways of adjusting the magnification of the Chopper.









- Click the **+** and **-** buttons located in the lower right-hand corner of the window.
- Click within the Chopper and use the mousewheel.
- Quickly magnify a selection by right-clicking and choosing **Zoom Selection** from the shortcut menu. Right-click and choose **Zoom Selection** a second time to restore the selection to its original magnification.

Chopper transport bar

The Chopper contains a dedicated transport bar that can be used to preview selections prior to inserting them in the project.


Chopper toolbar and keyboard commands

In addition to the dedicated transport bar, the Chopper contains a dedicated toolbar, designed to make creating selections quick and easy. The following table briefly describes the toolbar buttons and the associated keyboard commands.

Button	Keyboard	Function
	/ or A	Inserts the Chopper selection in the Track View at the current cursor position.
	Ctrl + ←	Shifts the Track View's cursor position to the left by the length of the increment arrow.
	Ctrl + →	Shifts the Track View's cursor position to the right by the length of the increment arrow.
	N	Links the length of the increment arrow with the length of the selection. When toggled on, the length of the increment remains equal to the length of the selection. When toggled off, you can configure the increment independently of the Chopper selection.
	;	Halves the length of the Chopper selection.
	'	Doubles the length of the Chopper selection.
	< or ,	Shifts the Chopper selection to the left by the length of the selection.
	> or .	Shifts the Chopper selection to the right by the length of the selection.
	Ctrl + Shift + ←	Shifts the selection left by the increment length.
	Ctrl + Shift + →	Shifts the selection right by the increment length.
	Ctrl + ↑	Doubles the length of the increment arrow.
	Ctrl + ↓	Halves the length of the increment arrow.
	R	Inserts a region.
	M	Inserts a marker.
	I	Marks the start point of a loop region.
	O	Marks the end point of a loop region. Once the endpoint is established, the loop region will highlight.

Chopper markers and regions

When working with events on the Chopper, you are able to drop markers and create regions just like in the Track View. *For more information, see [Using project markers and regions](#) on page 67.*

These markers and regions will be saved with the project when it is saved. They can also be saved back to the original media file by using the **Save** () button in the Track Properties dialog.

Creating a selection in the Chopper

After an event is placed in the Chopper, you can use the toolbar, transport bar, and mouse (or their keyboard equivalents) to create and preview selections within the event. When the desired selection is achieved, it can be inserted in the Track View.

Placing a file on the Chopper

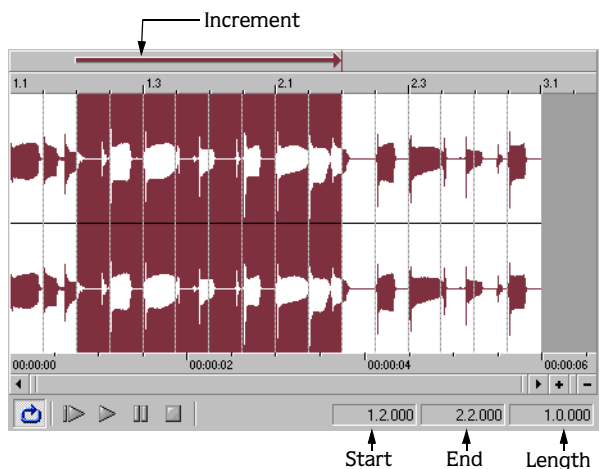
To place a file in the Chopper, do any the of the following:

- Select a track in the Track List.
- Select an event.
- Right-click an event and choose **Select in Chopper** from the shortcut menu.

*If you use **Select in Chopper** on an event that contains only a portion of a file, ACID will place the entire contents of the file in the Chopper. The part of the waveform selected, however, will match the contents of the selected event. This allows you to see the event in the context of the media file.*

Creating a selection

To create a selection, drag the mouse, or hold **Shift** while pressing the arrow keys. A shaded region displays on the Chopper to indicate the current selection, and its start point, end point, and length are displayed at the bottom right-hand corner of the window in M:B:T (measures:beats:ticks) format. You can preview the selection at any time by clicking the Play (**▶**) button on the Chopper's transport bar or pressing **Space**.



In addition, an increment arrow displays on the Track View above the selected block. For more information, see [Insert increments](#) on page 88.

As the selection is created on the Chopper, a colored block displays in the Track View. This block indicates where the selection will be placed on the Track View when it is inserted from the Chopper.




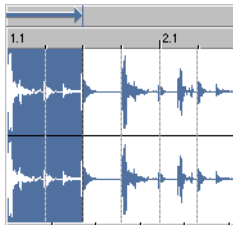
Creating a selection of a specific musical length

Frequently it is advantageous to create a selection with a length corresponding to a musical value. This is easily accomplished in ACID using the Chopper's selection shortcut menu.

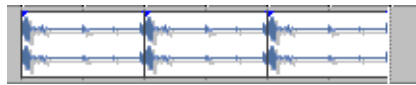
1. Create a selection or place the cursor in the Chopper. *For more information, see [Creating a selection](#) on page 87.*
2. Right-click and choose the desired musical length from the shortcut menu. ACID creates a selection equal to the specified musical length.

Insert increments

In addition to creating selections, the Chopper allows you to configure the sections of silence (or increments) between selections painted on a track. When the Link () button is selected, ACID links the increment arrow length with the selection length. This forces the increment and selection lengths to remain equal, thereby allowing you to insert selections seamlessly, end-to-end, in the project.



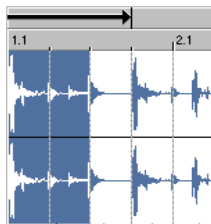
Selection and increment length



Chopper selection inserted end-to-end three times

When the Link button is toggled off, the increment arrow is displayed in black and you are able to establish an increment length that is independent of the selection length. The increment arrow can be set by dragging either end of the arrow or by using the increment shortcut menu.

When the increment length is greater than the length of the selection, ACID will insert an appropriate amount of silence following the selection when it is inserted in the Track View. This affects the track's insert position and allows you to paint selections separated by the specified increment.

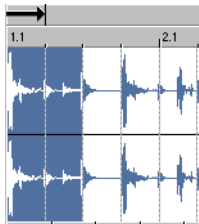


Increment greater than selection



Selection inserted with specified increment three times

When the increment length is less than the length of the selection, ACID will overlap the selections as they are painted in the Track View.




Increment less than selection



Selection overlapped when inserted three time


Creating an increment

1. Verify that the Link () button is toggled off and the increment arrow is displayed in black.
2. Drag the point of the arrow to configure an increment of the desired length.


While dragging the increment arrow, the Chopper's middle status field temporarily displays the length of the increment.

Creating an increment of a specific musical length

The increment shortcut menu, like the selection shortcut menu, allows you to create increments that correspond to the specified musical length.

1. Verify that the Link () button is toggled off and the increment arrow is displayed in black.
2. Right-click the increment arrow and choose the desired musical value from the shortcut menu. The increment length is automatically configured to the selected value in both the Chopper and the Track View.


Creating an increment of a custom musical length

1. Verify that the Link () button is toggled off and the increment arrow is displayed in black.
2. Right-click the increment arrow and choose **Custom Insert Increment Length** from the shortcut menu. The Custom Length dialog displays.
3. Choose the desired increment format from the drop-down menu.
4. Enter an appropriate value in the adjacent edit box and click **OK**. The increment length is automatically configured to the selected value in both the Chopper and the Track View.

It is possible to set an increment value will result in the increment arrow extending beyond the scope of the Chopper. If this occurs, an accurate depiction of the increment will still be displayed in the Track View.

Inserting a selection in the Track View

Using the Insert Selection button

After the desired selection and increment are created, they can be inserted in the project at the Track View's cursor position by clicking the Insert Selection () button. The cursor then moves to the end of the increment.

- If the increment length is equal to the selection length, selections will be painted end-to-end.
- If the increment length is greater than the selection length, an appropriate amount of silence will be painted prior to the next insert position.
- If the increment length is less than the selection length, selections will overlap.

Using Copy and Paste



You can right-click the selection in the Chopper and choose **Copy** from the shortcut menu to copy the current selection to the clipboard. You can then use the **Paste** command to insert the selection in the Track View. The cursor advances to the end of the pasted event.

When a selection is pasted from the Chopper to the Track View, the increment setting is ignored.

Dragging a selection


A Chopper selection can be dragged from the Chopper up to the Track View. The mouse is used to determine the insert position. The Track View cursor will not advance after inserting the selection.

Moving the insert position in the Track View


Clicking the Move Track View Cursor () and () buttons moves the current insert position in the Track View left/right by the increment length.

Using the Chopper with one-shots

Selections of loops and Beatmapped files transfer flawlessly between the Chopper and the Track View because the beats are clearly identified. However, one-shot files present more of a problem. The following method can be used to create accurate single-hit selections in one-shot files.


1. Verify that ACID's snapping options are active. If snapping is not active, choose **Snapping** from the **Options** menu and choose **Enable** from the submenu, or press **F8**.
2. Verify that the Link () button is clicked.
3. Create a selection of the desired musical length on the Chopper. *For more information, see [Creating a selection of a specific musical length](#) on page 88.*
4. Choose **Snapping** from the **Options** menu and **Enable** from the submenu, or press **F8** to toggle all snapping options off.

*Using the **Shift** key in conjunction with the mouse will temporarily toggle ACID's snapping options off.*

5. Click the Link () button to toggle the linking option off. The selection can now be adjusted without changing the increment.
6. Drag the middle of the increment arrow to reposition selection length on the Chopper.
7. Use the mouse and/or keyboard to fine-tune the selection. The increment arrow does not change.
8. Insert the desired selection data in the Track View. *For more information, see [Inserting a selection in the Track View](#) on page 90.*
9. Repeat steps 6 through 8 to insert all desired selections in the Track View.

Using Ripple Edits


ACID includes a Ripple edit feature. This feature is a timeline-based procedure that allows you to cut, delete, and paste events or portions of events within a time selection and simultaneously adjust existing events' timeline position on a selected track. The existing events' timeline position is adjusted by the total amount of the time selection that is being cut, deleted or pasted from the clipboard.


You may turn on Ripple Edit mode by clicking its Toolbar button () or pressing the **Ctrl+L** shortcut keys.

Ripple edits are only available when there is a time selection present.


Cutting events in ripple mode

Cutting events or portions of events removes them and their time information from their respective tracks. This information is placed on the clipboard from which you may paste the information back into your project.

1. Click the Ripple Edits () button on the toolbar.
2. Click the event to be cut or make a time selection.

To cut multiple events, use the **Ctrl** key, the **Shift** key, or the Selection () tool to select the events. *For more information, see [Selecting multiple events](#) on page 40.*

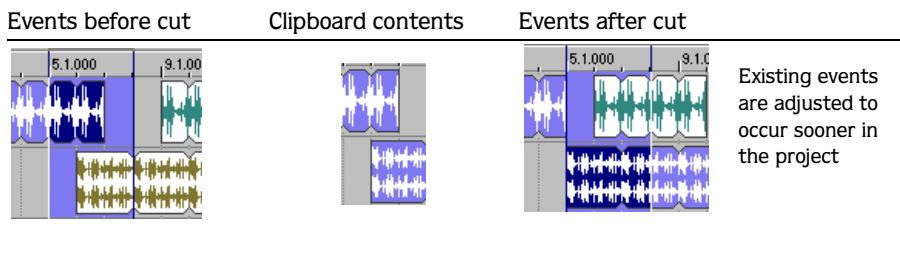
3. Cut the event(s) to the clipboard by doing one of the following:

- Press the **Ctrl**+**X** keys.
- Click the Cut () button on the toolbar.
- From the **Edit** menu, choose **Cut**.

The cut events and their time information are removed from the selected track(s) and placed on the clipboard. Existing events in the selected track(s) are adjusted to occupy the space created by the cut.

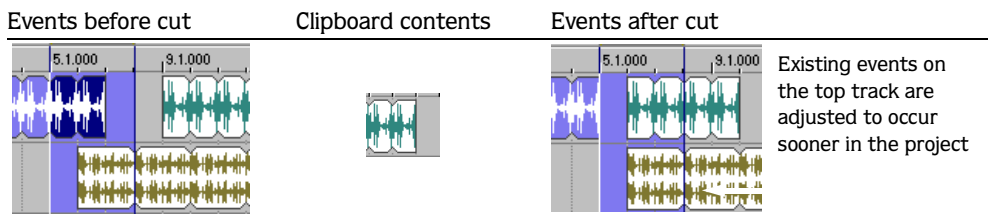
Cutting time selection with ripple mode

Events within the time selection are reproduced and placed on the clipboard. Also, the time information is placed on the clipboard. Existing events occurring after the time selection are moved forward in the project by the length of the time selection.




Cutting time and event selection with ripple mode


Events and portions of events within the time selection are reproduced and placed on the clipboard. Also, the time information is placed on the clipboard. Existing events occurring later than the time selection are moved forward by the length of the time selection. Only tracks containing selected events are affected by the ripple edit.



Deleting events in ripple mode

Deleting events or portions of events removes them and their time information from their respective tracks. However, this information is **not** placed on the clipboard. Existing events are adjusted forward when information is deleted from a selected track.

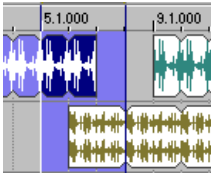
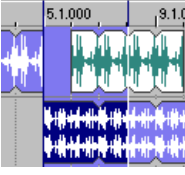
1. Click the Ripple Edits () button on the toolbar.
2. Click the event to be deleted or make a time selection.

To cut multiple events, use the **Ctrl** key, the **Shift** key, or the Selection () tool to select the events. *For more information, see [Selecting multiple events](#) on page 40.*

3. Delete the event(s) by doing one of the following:
 - Press the **Delete** key.
 - From the **Edit** menu, choose **Delete**.

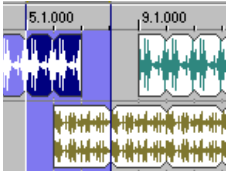
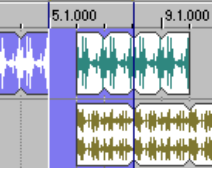
Deleting time selection with ripple mode

Events within the time selection and their time information are removed from the project. Existing events occurring after the time selection are moved forward in the project by the length of the time selection. When information is deleted, it is **not** placed on the clipboard.

Events before delete	Clipboard contents	Events after delete
	Deleted information is not placed on the clipboard.	
		Existing events are adjusted to occur sooner in the project

Deleting a time and event selection with ripple mode



Events within the time selection and their time information are removed from the project. Existing events occurring after the time selection are moved forward in the project by the length of the time selection. When information is deleted, it is **not** placed on the clipboard.

Events before delete	Clipboard contents	Events after delete
	Deleted information is not placed on the clipboard.	
		Existing events on the top track are adjusted to occur sooner in the project

Pasting events in ripple mode

Once information is copied to the clipboard, you may choose a variety of ways to paste the clipboard items into tracks. *For more information, see [Pasting events on page 43](#).* The following procedures explain pasting information when Ripple mode is enabled.

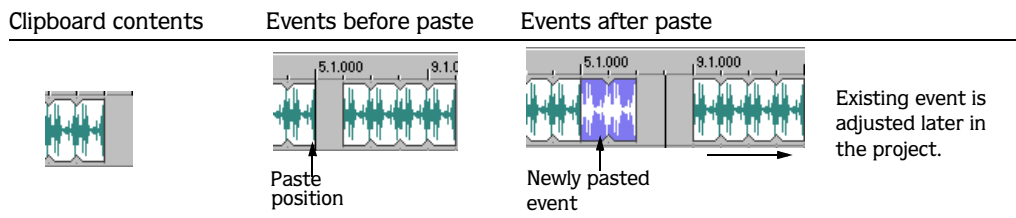
Events will always be pasted back into their own tracks at the cursor position.

1. Click the Ripple Edits () button on the toolbar.
2. Move the cursor to the desired timeline location.
3. Place the cursor within the track where you want to paste the event.
4. Paste the event into the track by doing one of the following:
 - Press the **Ctrl+V** keys.
 - Click the Paste () button on the toolbar.
 - From the **Edit** menu, choose **Paste**.

Clipboard information is pasted at the cursor's position on the track. Existing track events or portions of events after the cursor are adjusted to occur later in the project. The amount of adjustment is based on the total length of the information being pasted.

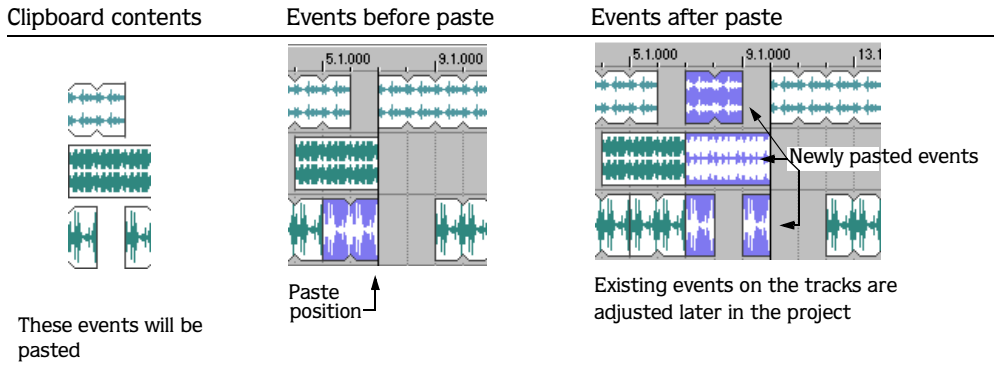
Pasting single track information with ripple mode

The information on the clipboard determines how many tracks will be affected when you paste. If you have copied or cut information from one track, only the selected track will be affected by the pasted event and time information.



Pasting multitrack information with ripple mode

ACID can paste multiple events as easily as single events.



*Pasting with ripple mode ripples only the events on the tracks that will receive the clipboard contents. If you want to ripple all tracks at the paste position, use the **Paste Insert** command from the **Edit** menu.*

Changing tempo and key

A project can be played at any tempo or key, and you can make tempo and key adjustments during playback.

ACID allows you to add specific tempo and key changes within a project using Tempo and Key Change markers. These markers are added on the Marker bar above the Track View. When the cursor passes over one of these markers, the master project tempo and/or key will change in real time.

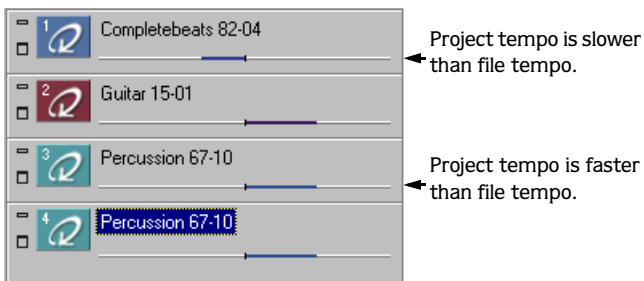
Changing project tempo

With ACID, you can change the tempo of a project without affecting the project's key.

Changing tempo using the Tempo slider

Place your cursor at the beginning of the project. Drag the Tempo slider in the Track List. Dragging the slider to the left slows the tempo, while dragging it to the right speeds the tempo.

When you click the Tempo slider, a colored bar displays under each track's name to represent the amount a track is being stretched to match the project tempo. The mark in the center of the bar represents the original tempo of a file. When the bar is to the right of the mark, the project tempo is faster than the original file; when the bar is to the left of the mark, the project tempo is slower than the original file.



*Double-click the Tempo text in the Track List to enter an exact value. The text will turn into an edit box where you can specify a tempo. Press **Enter** when you are finished.*

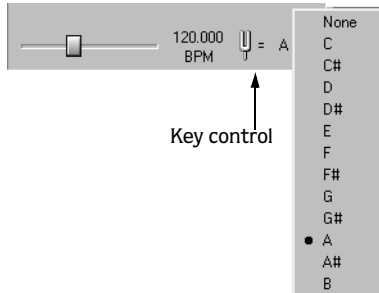


Changing project tempo to match file tempo

Each track's shortcut menu contains the option **Use Original Tempo**. To the right of this option is displayed the original tempo of the file used on the track. To change the project's tempo to match the original file tempo, simply choose **Use Original Tempo** from the shortcut menu.

Changing the project key

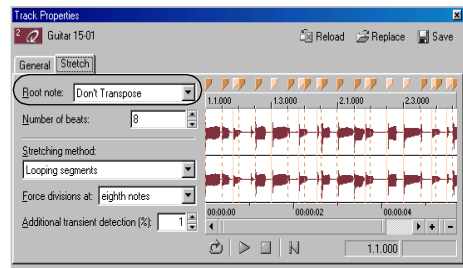
Click the Key control and select a key from the shortcut menu to adjust a project's key.



This feature makes it possible to use media that are in different keys in the same project: each loop that has a specified root note will be transposed to the key indicated by the Key control.

For example, if three loops that have root notes of A, B, and C, and your Key control is set to D, the loops will be pitched-shifted by 5, 3, and 2 semitones, respectively.

If the root note for a track is set to Don't Transpose in the Track Properties dialog, the track will not pitch shift with the rest of the project.

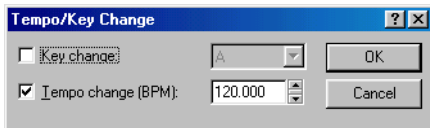


Working with tempo and key change markers

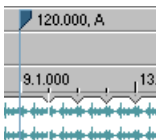
Tempo and key change markers allow you to make changes to the tempo and/or key at specified points in your project.

Adding a tempo or key change marker

1. From the **Insert** menu, choose **Tempo/Key Change**. The Tempo/Key Change dialog displays.



2. Select the check box for the type of marker you want to place. To insert a tempo *and* key change marker, make sure both boxes are selected.
 - **Tempo Change** changes the tempo of all tracks until ACID encounters another tempo change marker.
 - **Key Change** changes the key of all tracks until ACID encounters another key change marker.
 - **Tempo and Key Change** changes the tempo and key of all tracks until ACID encounters another tempo or key change marker.
3. Specify the desired tempo and/or key information and click **OK** to close the dialog. This creates a marker in the Marker bar that displays the tempo and/or key change information.



Editing a tempo or key change marker

There are two ways to edit the tempo and/or key of the marker:

- Place the cursor on or after the marker and adjust the Tempo slider or Key control. The marker's text reflects the change.
- Right-click the marker, choose **Edit** from the shortcut menu, and enter the appropriate tempo and/or key change.

Adjust tempo to match cursor to marker

Position the cursor, right-click the marker tab, and choose **Adjust tempo to match cursor to marker** from the shortcut menu. The project tempo will change so the cursor position matches the selected time marker.

Deleting a tempo or key change marker

To delete a marker, right-click the marker and choose **Delete** from the shortcut menu.

Changing a track's key

You can change the key of an entire track without affecting the project's key.

1. Right-click the track and choose Properties from the shortcut menu. The Track Properties dialog displays.
2. On the General tab, enter the number of semitones by which to adjust the tempo in the Pitch Shift box or use the spinner control. Use the minus (-) key for negative values.
3. Click (⌘) to close the Track Properties dialog. The pitch shift displays in the track's icon.



Another way to change the key of the track is to select the track in the Track List and use the + and - key on the numeric keypad.

Changing an event's key

You can change the key of an individual event without affecting the pitch of the track or project.

Right-click the event in the Track View, choose Pitch Shift from the shortcut menu, and choose Up Semitone or Down Semitone from the submenu. The pitch will shift one semitone in the direction specified, and the amount of shift will display on the event itself.



An event's key can also be changed using keyboard shortcut keys. *For more information, see [Event commands](#) on page 23.*

Using event envelopes

ACID enables you to use envelopes on individual events. Envelopes give you the ability to control each event's fade-in, fade-out, and overall volume. Envelopes are useful for transitional effects between events by subtly fading out one event's volume while another is being faded in.


In ACID 3.0 envelope points are used with track envelopes, not event envelopes.

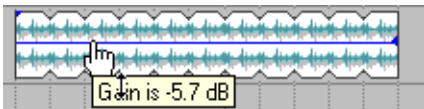
These envelopes are different than track envelopes because they affect only the event whereas track envelopes can affect multiple events on the track.

The event's volume level and fade curves are represented by a line that appears on the event.

Setting an event's volume envelope

You can control an event's overall volume by setting an envelope at the desired decibel (dB) level.

1. Place the mouse pointer at the top of the event; the envelope cursor () appears.
2. Drag the volume line to the desired level. As you drag the volume line down ACID displays the event's decibel level.




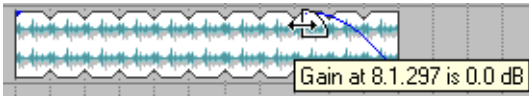
3. Release the mouse to set the event's dB level.

After the level is set, you may change it later by dragging the envelope line.

Setting an event's fade-in and -out envelope curve

You can control an event's envelope fade-in and -out characteristics by adjusting the event's envelope handles. These handles allow you to control the length and dB level of fade-ins and fade-outs. Also, you can change the type of curve that the event uses to control the volume's fade characteristics.

1. Place the mouse pointer on the upper corner of the event; the envelope cursor () appears.
2. Drag the envelope cursor and position the envelope curve. As you drag the cursor, ACID displays the following information:
 - The event decibel level.
 - The time, in the event, when the fade-in is maximized or when fade-out begins.

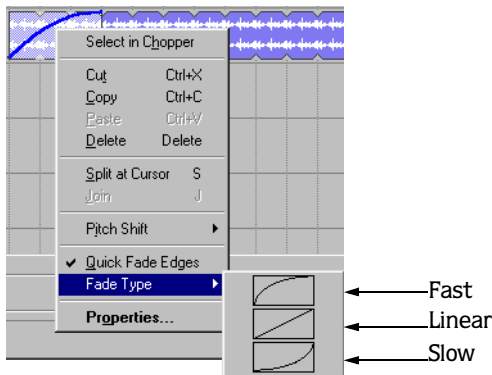


3. Release the mouse to set the fade-in or -out characteristics.

Changing the event's fade curve type

You can set the event's fade curves (fast, linear, or slow) that are used to raise or lower the volume over time.

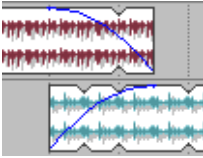
You can change the event's fade curve type from the fade types submenu. Right-click the fade region, select Fade Types from the submenu. Click the desired fade type to set it.



Create a crossfade between events

ACID allows you to quickly create perfect crossfades between overlapping events painted on different tracks.

1. Select two events. The events must overlap, but do not need to be on adjacent tracks.
2. Press the **F** key. The end of the first event is faded out, and the second event is faded in.



Track envelopes

Track envelopes allow you to control volume, panning, FX send levels, and bus levels for a specific track.

You can distinguish the various envelopes by their color.

Envelope type	Envelope color
Volume	Burgundy
Pan	Purple
Bus	Green
Assignable FX	Blue

In previous ACID versions, envelopes were applied and used on individual events. This version allows you to apply an envelope to the entire track and lock envelope points to a specific event.

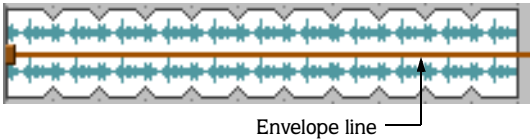
Adding track envelopes

This section describes how to add each type of track envelope.

Adding a volume or pan envelope

1. Select the track to which you want to add the volume envelope. (You may select multiple tracks.)
2. Add the envelope to the selected track(s) in one of following ways:
 - From the **Insert** menu, choose **Envelopes** and then choose **Volume** or **Pan** to select the type of envelope you want to insert.
 - Right-click in the Track List and choose **Add/Remove Envelope** from the shortcut menu, then select **Volume** or **Pan**.
 - Press the **Volume** envelope **[V]** or **Pan** envelope **[P]** shortcut key.

A burgundy line appears across the track(s) for a volume envelope, and a purple line appears across the track(s) for a pan envelope.



Adding a bus envelope

A bus envelope controls the level of a track sent to a particular bus. Before you can add a bus envelope, you need to add busses to the project. *For more information, see [Adding busses to the project](#) on page 129.*

1. Select the track to which you want to add the bus envelope. (You may select multiple tracks.)
2. Add the envelope to the selected track(s) in one of the following ways:
 - From the **Insert** menu, choose **Envelopes** and then choose the auxiliary bus for which you want to add an envelope.
 - Right-click in the Track List and choose **Add/Remove Envelope** from the shortcut menu, then select the appropriate bus from the submenu.

A green line appears across the track(s).

Adding an assignable FX envelope


An assignable FX envelope controls the level of a track sent to a particular FX chain. Before you can add an assignable FX envelope, you need to add an assignable FX to the project. For more information, see [Adding an assignable FX control](#) on page 137.

1. Select the track to which you want to add the assignable FX envelope. (You may select multiple tracks.)
2. Add the envelope to the selected track(s) in one of following ways:
 - From the **Insert** menu, choose **Envelopes** and then choose the assignable FX for which you want to add an envelope.
 - Right-click in the Track List and choose **Add/Remove Envelope** from the shortcut menu, then select the appropriate assignable FX from the submenu.

A blue line appears across the track(s).

Adding envelope points

Envelope points can be added to control the level of signal or amount of panning at specific points in time.

1. Place the mouse pointer on the envelope line; the envelope cursor () appears.
2. Add an envelope point in one of the following ways:
 - Double-click the envelope line.
 - Right-click the envelope line and choose **Add Point** from the shortcut menu.

*If you add too many points, you may delete a point by right-clicking it and choosing **Delete** from the shortcut menu. Or, you may clear all envelope points by selecting **Reset All** from the shortcut menu.*

Adjusting the envelope

If you want to adjust the overall level of an envelope, simply drag the envelope line up or down. An information box displays the amount of the adjustment. Envelopes can be adjusted in real-time.

You can also impact the level of an envelope over time by adjusting individual envelope points that you place along the envelope line.

Adjusting individual envelope points

You can set the level of each envelope point by dragging it up or down. As you move an envelope point, an information box displays both the point's occurrence on the timeline and its level.



Other ways to set the level include the following:

- Right-click an envelope point and choose a setting from the shortcut menu.
- Choose **Select All** from the shortcut menu to raise or lower all points on the envelope.
- Right-click an event and choose **Set To** from the shortcut menu. This displays an edit box in which you can specify a setting.


Changing the fade curve

Between each envelope point, you may set the type of fade curve: fast, linear, or slow. From the selected envelope point, fade curves are applied to the envelope line occurring later on the timeline. To change the fade curve, right-click an envelope point and select **Linear Fade**, **Fast Fade**, or **Slow Fade** from the shortcut menu.

Locking an envelope to an event

From the **Options** menu, choose **Lock Envelopes to Events** if you want envelope points and position to move with an event when it is moved along the timeline. A check mark next to the command indicates that the option is enabled.

The Envelope tool


The Envelope () tool is designed to manipulate multiple envelope points in events. Use the Envelope tool when you need to edit envelope points, but do not want to change events. With the Envelope tool selected, events cannot be moved or edited.

Setting envelope points with the Envelope tool



To select multiple envelope points, click the track that contains the envelope and drag your cursor in the Track View to select the points you want to move. Selected points are displayed in an alternate color. Click any selected point and drag it to the new position; all selected points will follow.

To deselect the points, click anywhere outside the selection.

Cutting, copying, and pasting envelope points

1. Enable the Envelope tool.
 - From the **Edit** menu, choose **Editing Tool**, and choose **Envelope** from the submenu.
 - Click the Envelope () tool in the toolbar.
2. Click within a track to select it.
3. Drag along the timeline to select envelope points.
4. From the **Edit** menu, choose **Cut** or **Copy**.
5. Click to position the cursor where you want to paste envelope points across a track.
6. From the **Edit** menu, choose **Paste**.

Copying an envelope to another track

1. Enable the Envelope tool.
 - From the **Edit** menu, choose **Editing Tool**, and choose **Envelope** from the submenu.
 - Click the Envelope () tool in the toolbar.
2. Click within a track to select it.
3. From the **Edit** menu, choose **Select All**.
4. From the **Edit** menu, choose **Cut** or **Copy**.
5. Click within a track to select it.
6. Click the **Go to Start** () button if you want the envelope to appear exactly as it was in the original track, or click to position the cursor where you want the envelope to start.
7. From the **Edit** menu, choose **Paste**.

Hiding an envelope

After you have created and set your envelope, you may hide it from the Track View. Hiding envelopes will not affect playback or the envelope point settings.

1. Select the track(s) whose envelope(s) you want to hide.
2. From the **View** menu, choose **Show Envelopes**. A submenu appears. A check mark next to an envelope type indicates that it will be visible in the Track View.
3. From the submenu, choose the type of envelope you want to hide. The specified envelope type will no longer appear in the Track View for the selected track.
4. Repeat steps 1-2 to display the envelope again.

Removing a track envelope

1. Select the track(s) from which you want to remove the envelope(s).
2. From the **Insert** menu, choose **Envelopes**. A submenu appears showing a check mark next to the envelopes that are currently being used.
3. From the submenu, choose the type of envelope you want to remove. The envelope type is removed from the selected track(s).

When you remove an envelope from a track and then add it again, you will need to reset the points.

Using track effects

ACID allows you to use DirectX plug-ins at the track level. Track-level plug-ins process everything on the selected track. ACID contains specific built-in DirectX plug-ins; however, if you have other DirectX plug-ins (either from Sonic Foundry or another manufacturer), you may also use them at the track level.

ACID enables you to create plug-in chains, adjust the order of plug-ins on a chain, bypass a plug-in, remove plug-ins from the chain, and save frequently used chains as presets.

The EQ plug-in will be assigned to all tracks by default; however, it does not use CPU power or affect the sound until you adjust its settings. It also can be removed. *For more information, see [Removing plug-ins from a chain](#) on page 110.*



We recommend you do not use time-altering effects (such as Time Stretch, Gapper/ Snipper, and Pitch-Shift without preserving duration) with an ACID project. Time-altering effects will cause a track to play out of synchronization with the waveform display in the Track View and with other tracks.

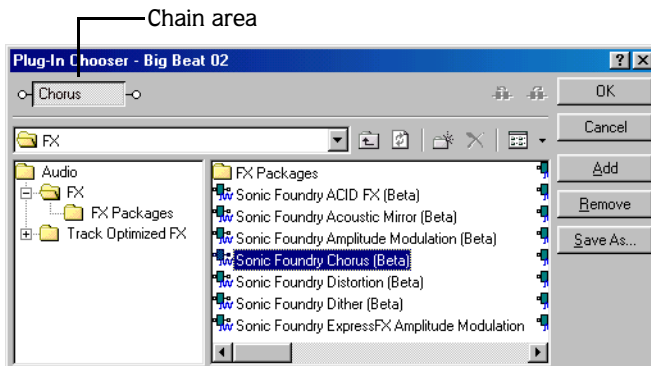
Creating or adding to a track plug-in chain

A plug-in chain can contain one or more plug-ins. When you add multiple plug-ins, you may set the processing order that the track's events will go through when the project is played back. Moreover, the plug-ins that you add to the chain may be added more than once. For example, a plug-in chain can look something like the this: EQ, Compression, EQ, and Noise Gate.


After the plug-in chain is created, the track's events will be processed by each plug-in in its respective order on the chain. The events' effects processing is cumulative, so in some cases, you may want to rearrange the order of plug-ins to achieve the desired sound. *For more information, see [Arranging the plug-in's chain order](#) on page 110.*


To create or add to a track plug-in chain, do the following:

1. Click the Track FX () button. The Audio Plug-In dialog appears.
2. Click the Edit Chain () button to display the Plug-In Chooser dialog.



3. Select the plug-ins that you want to add. The selected plug-ins appear in the chain area. There are three ways to add a plug-in to the chain:
 - Double-clicking the plug-in.
 - Dragging the plug-in to the chain area.
 - Selecting the plug-in and clicking the **Add** button.
4. Click the **OK** button to save the track's plug-in chain. The Plug-In Chooser dialog closes. The Audio Plug-In dialog opens and displays the plug-in chain and the settings for the plug-in last selected on the Plug-In Chooser dialog.
5. Click a specific plug-in button and use the bottom half of the dialog to adjust the effect's parameters. You can also reorder the plug-ins by dragging and dropping them within the chain.



You can save an effect's parameters as a preset to be used in other projects. To save a preset, enter a name in the Preset box and click the Save Preset () button.

6. Click the Close () button to close the Audio Plug-In dialog.




Arranging the plug-in's chain order

The plug-ins are cumulative during playback. For example, when the track's signal passes through the EQ, it “carries” the EQ's settings as it passes through the Compression plug-in, then the signal “carries” both those plug-in settings to the next plug-in.

Because of this cumulative effect, you may need to arrange plug-ins in a certain order so that one plug-in's processing does not adversely affect the next plug-in on the chain. There is no right or wrong way to order plug-ins, although some plug-ins work better when they follow another. However, the plug-in's order in the chain is strictly based on your preferences and desired output.

1. Click the Track FX () button. The Audio Plug-In dialog displays.
2. There are two ways to arrange plug-ins in your chain:
 - Drag the plug-in to a new location in the chain.
 - Right-click the plug-in button and select **Move Left** or **Move Right** from the shortcut menu.
3. Click the Close () button to save your changes and close the Audio Plug-In dialog.

Removing plug-ins from a chain

1. Click the Track FX () button. The Audio Plug-In dialog displays.
2. Right-click the plug-in's button and choose **Remove** from the shortcut menu, or click the **Remove Selected Plug-In** () button.
3. Repeat steps 2-3 to remove other plug-ins from the chain.
4. Click the Close () button to save your changes and close the Audio Plug-In dialog.


You can bypass a plug-in without removing it from the chain by clearing the check box in the plug-in button.





Saving plug-in chains as FX packages

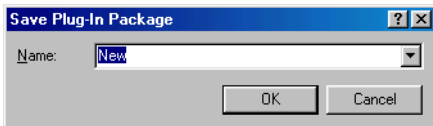
ACID allows you to save plug-in chains as packages, so that you may use them again with other projects. If you use a combination of plug-ins often, saving them as a package will save you time. FX packages retain their chain order and individual plug-in settings.

You may save plug-in chains as packages from existing chains on tracks or when you are creating a plug-in chain. The plug-in chains that you save as packages appear in the Plug-In Chooser dialog in the FX Packages folder. FX packages are applied to a track the same way you assign a plug-in to a track.

1. Click the Track FX () button. The Audio Plug-In dialog displays.


If no plug-in chain exists on the track, clicking the Track FX () button causes the Plug-In Chooser dialog to display.



2. Click the Edit Chain () button to display the Plug-In Chooser dialog.
3. Create a new plug-in chain or simply use the previously created chain that displays in the chain area.
4. Click the **Save As** button. The Save Plug-In Package dialog displays.



5. Enter a name that you want to use for the package.
6. Click the **OK** button to save the plug-in chain as an FX package.

Removing or bypassing track effects

A track can be cleared of all effects by right-clicking the Track FX () button and choosing **Delete All** from the shortcut menu.

A track's effects can be bypassed without removing them by right-clicking the Track FX () button and choosing **Bypass All** from the shortcut menu. To apply them again, right-click the Track FX () button and choose **Enable All** from the shortcut menu.

Beatmapper

When a file that is longer than thirty seconds added to a project, ACID's Beatmapper Wizard is started. This allows you to decide whether or not to add tempo information to the file.

- When a file goes through the Beatmapper, its downbeats and measures are identified, allowing it to stretch/compress in conjunction with the project's tempo.
- When adding a file without the Beatmapper, it behaves as a one-shot, maintaining its original length regardless of the project tempo.


To use the Beatmapper, do the following:

1. Add the file to your project. The Beatmapper Wizard starts if the file is longer than thirty seconds.




The length of the file that triggers the Beatmapper can be changed in the Audio tab of Preferences. For more information, see [Using the Audio preferences tab](#) on page 185.

2. Specify whether you want to use the Beatmapper Wizard:


- Select the **Yes** radio button and click **Next** to detect measures and downbeats. The file will be able to stretch/compress with the project's tempo.
- Select the **No** radio button and click **Finish** if you want to close the Beatmapper and add the file as a one-shot. The file will maintain its original length regardless of the project tempo.

3. Click the **Play** () button to verify the marker's position. If the marker is positioned on a downbeat, click **Next**. Otherwise, drag the marker to the appropriate location and click **Next**. The Beatmapper draws the file's waveform and places a region to indicate the length of the first measure.

*The **Reset** button sets the downbeat marker back to its detected position.*


4. Click the Play () button to verify the measure's length.
 - Select the Metronome check box to preview the measure with the assistance of a metronome.
 - Use the Halve Selection () or Double Selection () buttons to change the length of the selection. If the Beatmapper misdetects the length of the measure, it will always be by either half or double the actual amount.
 - If the region is positioned correctly, click **Next**. Otherwise, drag the region markers to the appropriate locations and click **Next**.

The waveform displays with measure lengths selected.

5. Drag the Measure slider to scroll through the song and click the Play () button to verify each measure's length. If the song's tempo is consistent, the measures will be placed correctly. If the tempo fluctuates, you can drag the end of the measure selection to change the measure's position.

Changing the measure length will affect the entire song; if adjusting the last measure of the song causes the first measure to be incorrect, the downbeat may not be positioned correctly, or the song's tempo may not be consistent enough for the Beatmapper.

6. Click **Next** when the measure lengths are correct. Tempo information is added to your file. The Beatmapper Wizard displays some additional options.
7. Specify your preferences for the following options:
 - Select the Change project tempo to match Beatmapped track check box if you want ACID to set your project tempo to match the tempo calculated by the Beatmapper Wizard. Selecting the check box will ensure that your Beatmapped track plays at the original tempo.
 - Select the Preserve the pitch of the Beatmapped track when the tempo changes check box to maintain the track's original pitch regardless of the project's tempo.
 - Select the Save Beatmapper information with file check box if you want the file to open with the Beatmapper settings each time you use the file.
8. Click **Finish** to close the Beatmapper Wizard. The file is added to the project as a Beatmapped track.
9. Draw the event in the Track View.

*You can place the entire event by using the Paint () tool. With the Paint tool enabled, press the **[Ctrl]** key while you click once in the track for the Beatmapped file.*

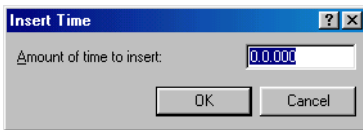
Adjusting time

ACID provides two commands for adjusting your project's timeline: Insert Time and Fit to Time.

Using Insert Time

Use the Insert Time command to insert a specified amount of blank space into the project at the current cursor position. This feature can be used to create space in the project for new events.

1. Position the cursor where you want to insert time.
2. From the **Insert** menu, choose **Time**. The Insert Time dialog displays.



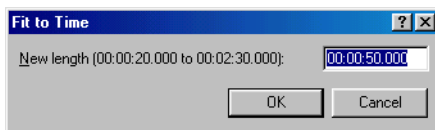
3. Enter the amount of time you want to insert and click **OK**.

The Insert Time dialog uses the measures:beats:ticks format used by the Beat ruler.

Using Fit to Time

The Fit to Time command allows you to adjust the project's overall length to a specified amount of time.

1. From the **Edit** menu, choose **Fit to Time**. The Fit to Time dialog displays with the current project length displayed in the New length box.



2. Enter the new project length in the New length box. The length is always entered in Time format, regardless of the format used on the Time ruler.
3. Click **OK**. The dialog closes and ACID adjusts the tempo to alter the project's length.

The maximum and minimum length is limited to reduce the possibility of creating audible artifacts through the compression/expansion process.

Mixing multiple tracks to a single track

ACID allows you to mix a selected group of tracks or an entire project to a single-track stereo event. However, if your project includes any muted tracks, ACID will not mix those events into the new track. The original tracks and their events are unaffected when you mix to a single track.

Typically, you would use this feature when you are finished refining a few tracks and want to combine them to conserve processing power. Also, when you mix multiple tracks to a single stereo track, any envelope or track effects that you applied will be rendered into the newly mixed-down track.

This option allows you to “destructively” process any plug-ins that you want to commit.

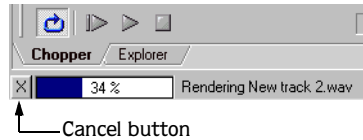
1. Solo the tracks you want to mix. To mix down the whole project, skip to step 2.
2. From the **Tools** menu, choose **Render to New Track** or press the **[Ctrl]+[M]** shortcut keys. The Render to New Track dialog displays.

The Render to New Track dialog has settings that you can apply to the newly mixed track.

- From the Save in drop-down list, select the drive or folder to save the new media file.
 - Enter a name for the track in the File name box.
 - From the Save as type drop-down list, choose the file format (.wav is the preset).
 - From the Template drop-down list, choose an audio format from the template list.
 - Clear the Render loop region only check box if you did not remove the time selection but want to include all the events in your project, except muted tracks, in the new mixed down track.
3. Click the **Save** button. The time selection or project are mixed down to a new track and a copy of the file is saved in the folder specified.

As the tracks are being mixed down, you will see a status bar appear in the lower left portion of ACID.

You may cancel the rendering process by clicking the Cancel (⌫) button on the status bar.



After ACID mixes down the new track, it will appear at the bottom of the Track View. If you mixed down the entire project, you may delete or mute the other tracks from the project, since they are all contained on the new track.

4. Use the Draw (🖌) tool to paint the waveform on the new track.

Tips and tricks

The following sections contain some creative suggestions for building projects in ACID.

Adding through subtraction

In the Basic Tips and Tricks section, we described creating a thicker sound by adding multiple tracks of similar instrumentation. Now let's look at a way of creating project dynamics by actually removing sections of events. You can erase sections of events from a project by using the Erase (🗑) tool.

To demonstrate using subtractive arranging, add three or four similar drum loops to a project and place each on its respective track. Using either of the available erase methods, delete specific sections of each event. For example, erase all snares from one track, all basses from another, high hats from the third, and so on. This will result in a tighter, more realistic drum sound for your project.

Experiment with taking this technique a step further and randomly remove sections from each track. When doing this, remember to keep at least one of the drum tracks playing at all times, unless you want the drums to completely drop out of the mix. Randomly removing sections of events will add additional realism to your projects by approximating how a live drummer plays with slight variations throughout a song.

Realistic dynamics

If you are attempting to build projects that escape the perceived limitations of computer-generated loop-based music, you should concentrate on reproducing the subtle (and not so subtle) dynamics that are associated with live instrumentation.

One of the simplest, but most effective examples of this is the build up. When musicians play live, there is a tendency to increase dynamics as a song enters a chorus or refrain. Think of how a drummer uses accents, drum rolls, and fills that steadily increase in volume to enter a song or indicate an approaching change from verse to chorus or chorus to bridge.

This effect is easily reproduced in ACID by adding a volume envelope to the track. Add points at the various drum beats and adjust them so that the volume steadily increases. *For more information, see [Adding a volume or pan envelope](#) on page 104.*

Overriding compress/expand

One of the most powerful features of ACID is its ability to compress/expand loops while maintaining their original pitch. However, there is nothing wrong with overriding this feature in order to produce specific effects in your projects.

1. View the desired track's Properties window.
2. Click the Stretch tab.
3. From the Stretching method drop-down list, choose Pitch shift segments. The track's pitch will now change in relation with the tempo of the project.

While this may seem like just a way of producing old school effects, it actually has practical applications as well. For example, specifying Pitch shift segments can actually improve the fidelity of drum loops recorded at a tempo near the project tempo. In addition, overriding the compress/expand feature allows you to create great bass grooves by slowing drum loops.

Duplicating with offset

Another way to add interesting dynamics to a project is to duplicate specific tracks and add an offset to one of the pair. This trick works well with most instrument loops and allows you to create different levels of effect. For example:

- Configuring a slight offset between duplicate tracks will create a natural chorus effect.
- Configuring small offsets will create various reverb effects.
- Configuring larger offsets will create interesting echoes.

To duplicate a track and create an offset, do the following:



1. Right-click the track to be duplicated and choose **Duplicate track** from the shortcut menu. The track is duplicated and the copy is added to the Track List immediately following the original.
2. Hold the **Alt** key while dragging the waveform of the duplicate track. Notice that the waveform moves within the event, which itself retains its size and position on the timeline.
3. Experiment with different offsets between the duplicate tracks.



As with most tricks, this method can be combined with Pan and Volume envelopes to produce an unlimited range of effects.

Chopper tricks





You can use the Chopper to create some interesting “slice-and-dice” effects.

Drum-roll buildups




1. Place an file/event in the Chopper.
2. Create a one-measure selection.
3. Click the **Insert Selection** () button once. The selection is pasted to the Track View.
4. Click the **Halve Selection** () button. This decreases the selected portion of the waveform by half.

5. Click Insert Selection () button twice.
6. Click Halve Selection () button.
7. Continue to double the number of inserts after each time you halve the selection, until you achieve the desired drum roll effect.

Creating drum fills



1. Place a file/event in the Chopper.
2. Create an eighth-note (or other length) selection of a drum track in the Chopper.
3. Click the Insert Selection () button.
4. Use the Shift Selection Left () and Shift Selection Right () buttons to move the selection randomly through the drum track, clicking the Insert Selection () button to insert drum hits.

Creating a one-track remix

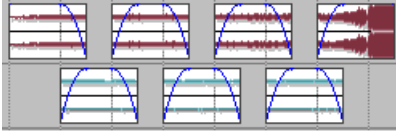
1. Open a Beatmapped track in the Chopper. *For more information, see [Beatmapper](#) on page 112.*
2. Create a selection in the Chopper.
3. Click Insert Selection () button twice.
4. Use the Shift Selection Right () button to move through the track, clicking the Insert Selection () button as desired to Insert events.

Creating DJ-style crossfades





You can use the Chopper and the Create Fades command to crossfade between two tracks much like a DJ will crossfade between two records.

1. Insert two Beatmapped tracks into your project. *For more information, see [Beatmapper](#) on page 112.*
2. Place the file from track one in the Chopper.
3. Turn off the Link Arrow to Selection () button.
4. Create a three-beat selection in the Chopper and drag the increment arrow length to four beats.
5. Click Insert Selection () button.
6. Press **Ctrl**+**←** to shift the selection right by the length of the insert increment arrow and repeat steps 5 and 6 as desired.
7. Place the file from track two in the Chopper.

8. Repeat steps four through six to insert events from track two.
9. Select all events on the two beatmapped tracks in the Track View.
10. Press the **⌘** key. ACID creates crossfades between your events.



Creating pseudo-granular synthesis

1. Create a sixty-fourth note (or shorter) selection in the Chopper.
2. Click the Insert Selection () button.
3. Use the Shift Selection Left () and Shift Selection Right () buttons to move the selection randomly through the track, clicking the Insert Selection () button to insert events.



Advanced Project Techniques

By now you should be comfortable with planning, building, and rendering ACID projects. This chapter describes advanced techniques that will allow you to create professional-quality projects. Topics covered in this chapter include configuring Stretch properties, exporting loops, and working with busses and assignable FX.

Stretch properties

All loops on the ACID 3.0 CD-ROM (as well as all loop library CD-ROMs) contain stretch properties. This simply means that tempo and key information is stored in the loops, thereby allowing the application to accurately perform its time stretching/compressing and pitch-shifting functions on these loops when placed in a project.

Understand that you do not need to designate stretch properties for loops that you create for ACID projects. The application will typically make an accurate estimate regarding the loop file's tempo. In addition, you can temporarily assign a root note to the file to allow it to be transposed to the project's key. However, when creating custom loops to be used in multiple projects, stretch properties should be defined.

You can set the stretch properties for loops and Beatmapped tracks. *For more information, see [Adjusting Stretch properties for a loop or Beatmapped track](#) on page 123.*

Configuring Track Properties

Double-click a track icon to display the Track Properties window.

When you edit a track in an external editor, changes to the sound file will be reflected immediately after you save the file. Changes to a media file's ACID properties will not be updated in your ACID project until you click the Reload button on the Track Properties dialog.

Adjusting general track properties (non-MIDI tracks)

The General tab displays information about the file associated with a track and allows you to change the track type, apply pitch shifting to all events on the track, and adjust time-stretching for Beatmapped tracks.

Changing track type

Choose a setting from the Track type drop-down list to change how ACID handles the track.

Track Type	Description
Loop	When Loop is selected, the track will be transposed to the key of the project and stretched to fit the project tempo. Loops can be drawn across the track and will repeat end-to-end.
One-Shot	When One-Shot is selected, the track is streamed from the hard disk rather than being stored in RAM if it is longer than thirty seconds, it will not change tempo with the rest of the loops, and will not be transposed to the project key. The Stretch tab is not available when One-Shot is selected.
Beatmapped	When a file that is longer than 30 seconds is added to a project, ACID's Beatmapper Wizard starts to allow you to add tempo information to the file.

Adjusting time-stretching (Beatmapped tracks only)


Select the Preserve pitch when stretching check box if you want ACID to preserve the track's pitch while you adjust the tempo. When the check box is cleared, you can still adjust the tempo of the track, but the pitch will also be affected.

Both track and event pitch can only be changed for Beatmapped tracks when the Preserve pitch when stretching check box is selected.

Adjusting pitch shift

Enter a value in the Pitch Shift box (or use the spinner control) to adjust the pitch of all events on the track.

Adjusting Stretch properties for a loop or Beatmapped track

The Stretch tab allows you to specify how ACID will handle pitch shifting and time stretching for loops or Beatmapped tracks. After you have edited a file's properties, click the Save As () button to embed ACID information with the file.

If you cannot or do not wish to save a new file, you can set the properties to suit your needs, and they will be saved with the ACID project. However, this means that you will have to set the properties for every project where you use the loop. Configuring the Stretch properties allows you to “set and forget” the properties so that it will work in any project.

If you edit the file in another audio-editing program, it is possible that the ACID-specific data will be removed. Simply perform the preceding procedure to set the Stretch properties again.

The Stretch tab for Beatmapped tracks is essentially the Beatmapper without the wizard.

Loop Settings




Item	Description
Root note	Choose a note from the drop-down list to set the base note for loops that you want to conform to the project key. If you do not want a track transposed to the project key (a track that contains a drum sample, for example) choose Don't transpose.
Number of beats	Choose a setting from the drop-down list to specify the length of the original file. Selecting a value that does not match the actual file will cause the loop to play at a different speed than normal. For example, specifying a length of 8 beats for a 4-beat loop will cause the loop to play at half speed at any given tempo. Misinforming ACID regarding the beat length of a loop can be used creatively. <i>For more information, see Double time/Half time on page 66.</i>

Item	Description
Stretching method	<p data-bbox="401 155 1197 228">Stretching properties determine how ACID performs time compression and expansion on audio events. If you hear audio anomalies due to time compression, try editing the stretching properties of the track.</p> <p data-bbox="401 245 1197 290">Looping segments is the default stretching method, and it will work well with most types of material.</p> <p data-bbox="401 306 1197 352">Choose Non looping segments for sustaining material such as synthesizer pads and held notes.</p> <p data-bbox="401 368 1197 492">Choose Pitch shift segments to shift the pitch of the track to adjust for increases or decreases in tempo. Using this option, you can eliminate some of the problems that occur with extreme tempo changes. For example, if you have slowed the project tempo down and hear echo artifacts, using the Pitch shift segments setting can eliminate these artifacts.</p>
Force divisions at	<p data-bbox="401 508 1197 633">Choose a setting from the drop-down list to adjust the resolution of beat detection. Higher settings increase resolution and lower settings decrease resolution. Audio that contains rapid notes—such as drum rolls—will benefit from setting the divisions at a smaller fraction of a beat. Slower-paced material, however, may actually suffer from high resolution.</p>
Additional transient detection	<p data-bbox="401 649 1197 722">Enter a value in the box or use the spin control to adjust the amount of extra beat detection that ACID will perform for the beat subdivision specified by the Force divisions at setting.</p> <p data-bbox="401 738 1197 808">A higher percentage will detect a greater number of transients. Increasing this number can be advantageous when working with audio that has complex rhythms. Lower numbers are more suitable for synthesizer pads and other basic material.</p>

Stretch markers for Loops








On the Stretch tab of the Track Properties dialog is a graphic of a track's waveform along with the stretch markers that ACID has automatically placed in the file. These markers correspond to detected subdivisions of beats in the audio file. Accurately detecting beats is essential to making quality time compression/expansion.

The color of the markers on the Beat Ruler provide you with additional information. The following table describes the correlation between marker color and status.

Marker Color	Description
	This is an auto-detected marker that has been placed on a beat by ACID.
	This is a custom marker. A file may contain custom markers if its stretch properties have been adjusted previously, like the loops on the ACID CD.
	This is a disabled marker.

Setting markers

Markers can be added to, moved within, disabled, and deleted from the track's Beat Ruler using the mouse. The following table briefly describes each of these actions.

Action	Description
Clicking 	Resets all markers to their default state, but also sets all other values on this page back to default.
Dragging a marker	Moves markers on the Beat Ruler. Moving an auto-detected () marker causes it to become a custom marker ()
Double-clicking an empty section of the marker ruler	Adds a new custom () marker to the Beat Ruler.
Double-clicking an existing marker	Disables the marker.
Double-clicking a disabled auto-detected () marker	Enables the marker and toggles it back to its default color (). Auto-detected markers cannot be removed.
Double-clicking a disabled custom () marker	Removes the marker from the Beat Ruler.

Right-clicking a marker displays a shortcut menu, which allows you to perform many of the same functions.



Beatmapped-track settings

Item	Description
Root note	Choose a note from the drop-down list to set the base note for tracks that you want to conform to the project key. If you do not want a track transposed to the project key, choose Don't transpose.
Original tempo	Displays the original tempo of the track as determined by the Beatmapper Wizard. Enter a value in the box or use the spin control to adjust the tempo.
Downbeat offset	Displays the location of the track's first downbeat as determined by the Beatmap wizard. Enter a value in the box or use the spin control to adjust the location.
Beatmap Wizard	Click the Beatmap Wizard button to adjust a track's tempo information. <i>For more information, see Beatmapper on page 112.</i>

Adjusting track properties for a MIDI track

Use the General tab to view MIDI file attributes and to change the track's pitch. Use the Voices tab to view information about which sounds are being played by each channel and to change voicings using DLS or DLS-2 files.

Muting, soloing, and adjusting volume and panning

Select the Mute () button to exclude a channel from playback, or select Solo () to solo a channel. You can add multiple channels to a solo group.

Drag the Volume fader or Pan slider to control the gain and panning of each channel. To set a specific volume or pan level, double-click the text to the right of the fader and enter the level in the edit box.

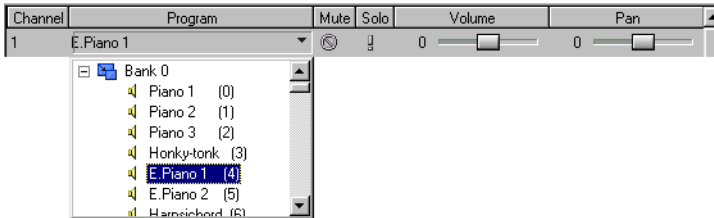


The Volume fader setting is added to the track volume and any volume information in the MIDI file. This allows you to manipulate the volume of the track and still maintain volume controller information that may be present in the file. The overall volume of the MIDI track, however, is bound at 0 and 127.

Changing voicing properties

You can change the voice set for a MIDI file using the General MIDI sound set or a DLS sound set. DLS is a bank of sounds that a MIDI file plays using Direct X SoftSynth. MIDI tracks that play using the DirectX SoftSynth and DLS sounds can be routed through effects just like normal audio tracks.

1. Click the Voices tab.
2. Choose a voice set from the drop-down list, or click **Load** to browse to a .dls file.
3. Click the Program drop-down list for a channel and browse to a bank and program. Any selected DLS voice set gets merged into the GS set; it does not replace it. Therefore, you have to look, typically under Bank 0, for the sounds that were just added.




To reset a voice mapping, choose Original from the drop-down list.

Reloading a file

Clicking the **Reload** ( Reload) button restores all settings from the media file. Any setting changes made on the Stretch tab of the Track Properties are discarded.


Using this button also updates the Track Properties dialog when changes are made to the properties from an external editor.

Replacing a file

Clicking the Replace File () button displays the Replace File dialog and allows you to replace the audio file on the current track with a new audio file. This feature only replaces the actual audio. All track timing, effects, and envelopes remain.

A file can also be replaced from the main ACID window by dragging an audio file from the Explorer and dropping it on the track name of the existing track.

Saving a file with properties

Click the Save () button to save the current track and certain track properties or export the data to a new file. If you specify a new file name, the track will be renamed in the Track List.

The track properties that are saved include the following:

- Track type.
- Media-specific markers and regions inserted in the Chopper or on the General tab of the Track Properties dialog.
- Everything on the Stretch tab for Beatmapped and loop files.

Exporting loops

From the **File** menu, choose **Export Loops** to create new loops using the original loop media files in your ACID project.

A new loop file is created for every tempo and/or key change in the project, which can result in multiple loop files being created from a single loop media file.


1. From the **File** menu, choose **Export Loops**. The Export Loops dialog displays.
2. From the Save in drop-down list, select the drive or folder to which the new files will be saved.
3. From the Save as type drop-down list, select the file format (.wav is the default).
4. From the Template drop-down list, select an audio format.
5. Click the **Save** button. A progress dialog displays for each track as it is rendered to a file. Tempo and key information are included in the file name for each loop file that is created (bassloop 120.000 BPM A).

Using busses


Busses can be thought of as virtual pathways where signals from multiple tracks or effects can be mixed. As many as 26 busses can be added to the Mixer window, providing you with a great deal of flexibility and mixing power. With busses, you can control signal levels on two discrete stereo channels (unless the project is in mono) and each bus may be muted, soloed, and have effects assigned to it. *For more information, see [Working with bus controls](#) on page 129.*

Busses are the last stage of the ACID signal flow and as such can be used to output audio signal to specific hardware. *For more information, see [Routing busses to system hardware](#) on page 134.*

Adding busses to the project

Add a bus to a project by clicking the **Insert Bus** () button in the Mixer window or by choosing **Bus** from the **Insert** menu.

Assigning a track to a bus

If your project contains multiple busses, you can assign each track to a specific bus output. To assign a track to a bus, click the **Bus** () button and specify the desired bus from the drop-down list.

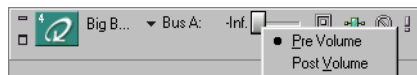
Assigning tracks to busses allows you to apply settings to a series of tracks and to route tracks to a particular hardware output.

The bus button will only be displayed if you have more than one bus in the project.

Adjusting the bus level

When a track is assigned to a bus, its level is set to $-\infty$ dB (mute) by default. Therefore, you will need to adjust its playback volume with the multipurpose fader in the Track List.

*Bus sends are pre-volume by default. To change to post-volume, right-click the Bus fader in the Track List and choose **Post Volume** from the shortcut menu.*



Working with bus controls

Busses may be adjusted, soloed, and muted independently.

Adjusting the bus fader

Of course, the bus levels can be adjusted during playback and the results previewed in real-time. In addition, the thumbs of the stereo bus faders are split. This allows you to adjust the levels of the left and right channels independently of one another. *For more information, see [Adjusting a split fader in the Mixer](#) on page 56.*

Changing the bus meter's resolution

You may specify the meter resolution at which the bus displays its signal levels. When a bus's meter resolution is changed, all meters in the Mixer window are automatically changed to reflect the new resolution setting. To change the meter resolution, right-click the meter and choose the desired resolution from the shortcut menu.

Setting the bus level

When signals are routed through the bus, their level may cause the meter to clip. If the meter clips, the level is displayed in red at the top of the meter and the audio is distorted. You can lower the bus level and click the red display to reset the meter. A better way to reduce clipping, however, is to adjust the volume of each track.

*The clip can also be reset by right-clicking on the meter and choosing **Reset Clip** from the shortcut menu.*

Muting a bus

Clicking a bus' **Mute** (🔇) button will temporarily disable playback of the bus. When a bus is muted, it appears "grayed out" and the word **Muted** is displayed at the bottom of the meter. Clicking the **Mute** (🔇) button a second time will return the bus to normal playback.

Soloing a bus

Clicking a bus' **Solo** (🔊) button isolates the bus' playback by muting all other busses. When a bus is soloed, all remaining busses appear "grayed out" and the word **Muted** is displayed at the bottom of their respective meters. Clicking the **Solo** (🔊) button a second time will return all busses to normal playback.

Working with multiple controls

When multiple bus and/or FX controls are selected, you can perform functions on the controls simultaneously. These functions include the following:

- Change bus or hardware routing
- Mute/Solo

- Delete bus or FX control (by Delete key or shortcut menu)
- Change fader level

Multiple, nonadjacent controls can be selected by holding the **Ctrl** key while clicking each control's name. Multiple, adjacent controls can be selected by clicking the first control, and holding the **Shift** key while clicking the last control in the range.

The Preview fader cannot be grouped in this manner with other Mixer controls.


Using bus effects

ACID allows you to add DirectX compatible plug-ins, either individually or as a chain, to a bus. Plug-in chains can be built from any DirectX compatible plug-ins installed on your system. Plug-ins (individually or as pieces of a chain) may be added to a bus at any time and once added, may be reordered, removed, and combined with additional plug-ins to achieve the desired effect.

Adding a plug-in to a bus will result in the track signals assigned to that bus being processed by the plug-in. However, you must understand that plug-ins assigned at the track level will be processed before plug-ins added at the bus level. *For more information, see [Using track effects](#) on page 108.*


Do not use time-altering effects (such as Time Stretch, Gapper/Snipper, and Pitch-Shift without preserving duration) with an ACID project. Time-altering effects will cause a track to play out of synchronization with the waveform display in the Track View and with other tracks.

Adding a plug-in chain



1. Click the **Bus FX** () button. The Plug-In Chooser dialog appears.
2. Select the plug-ins that you want to add. The selected plug-ins appear in the chain area. There are three ways to add a plug-in to the chain:
 - Double-clicking the plug-in.
 - Dragging the plug-in to the chain area.
 - Selecting the plug-in and clicking the **Add** button.

If you have saved any plug-in chain packages, double-click the FX Packages folder to view those packages.

3. Click the **OK** button to save the plug-in chain. The Plug-In Chooser dialog closes. The Audio Plug-In dialog opens and displays the plug-in chain and the settings for the plug-in last selected on the Plug-In Chooser dialog.
4. Click a specific plug-in button and adjust the effect's parameters manually, or choose one of the presets from the Preset drop-down list. Also, you can reorder the plug-ins by dragging them within the chain.

You can save an effect's parameters as a preset to be used in other projects. To save a preset, enter a name in the Preset box and click the Save Preset () button.

Adding a plug-in to an existing chain

1. Click the **Bus FX** () button. The Audio Plug-In dialog displays.
2. Click the **Edit Chain** () button. The Plug-In Chooser dialog displays.
3. Add the desired plug-in(s) by doing any of the following:
 - Double-clicking the plug-in.
 - Dragging the plug-in to the chain area.
 - Selecting the plug-in and clicking the **Add** button.
4. Click the **OK** button to save the plug-in chain. The Plug-In Chooser dialog closes. The Audio Plug-In dialog opens and displays the plug-in chain and the settings for the plug-in last selected on the Plug-In Chooser dialog.

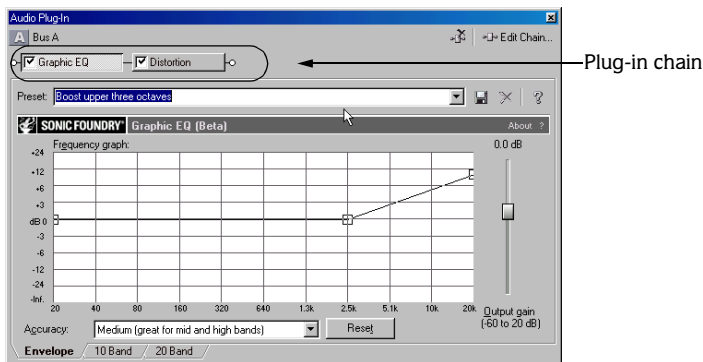
5. Click a specific plug-in button and adjust the effect's parameters manually, or choose one of the presets from the Preset drop-down list. Also, you can reorder the plug-ins by dragging and dropping them within the chain.
6. Click the Close (✕) button to save your changes and close the Audio Plug-In dialog.

Arranging bus plug-ins on the chain

The effect of plug-ins placed on a chain is cumulative. For example, when a signal passes through a plug-in, it “carries” those settings through the next plug-in, and “carries” both settings through the next plug-in, and so on. Because of this cumulative effect, you may need to rearrange the plug-ins on the chain so that one plug-in’s processing does not adversely affect the next one in the chain.

There is no right or wrong way to order plug-ins, and the chain’s plug-in order is strictly based on your preferences and desired output. However, certain plug-ins function better at specific points in the chain. For example, the Dither plug-in typically works best as the last plug-in on a chain.




1. Click the Bus FX (🔊) button. The Audio Plug-In dialog displays.



2. There are two ways to arrange plug-ins in your chain:
 - Drag the plug-in to a new location in the chain.
 - Right-click the plug-in button and select Move Left or Move Right from the shortcut menu.
3. Click the Close (✕) button to save your changes and close the Audio Plug-In dialog.

Removing plug-ins from the bus chain


If after adding a plug-in you discover that it is not needed, it should be removed from the chain. Plug-ins can be removed from plug-in chains at any time.



1. Click the **Bus FX** () button. The Audio Plug-In dialog displays.
2. Right-click the plug-in's button and choose **Remove** from the shortcut menu, or click the **Remove Selected Plug-In** () button.
3. Repeat step 2 to remove other plug-ins from the chain.
4. Click the **Close** () button to save your changes and close the Audio Plug-In dialog.

You can bypass a plug-in without removing it from the chain by clearing the check box in the plug-in button.



Removing or bypassing bus effects

A bus can be cleared of all effects by right-clicking the **Bus FX** () button and choosing **Delete All** from the shortcut menu.

A bus' effects can be bypassed without removing them by right-clicking the **Bus FX** () button and choosing **Bypass All** from the shortcut menu. To apply them again, right-click the **Bus FX** () button and choose **Enable All** from the shortcut menu.

Routing busses to system hardware

Individual busses can be routed to specific system hardware for output. This allows you to configure busses to route output (projects or individual tracks) to sound cards, recording devices, mixing boards, etc.


By default, all busses are assigned to the Master bus. In this configuration, you can use them for creating subgroups of tracks - for example, you could route all your drum tracks to a bus so you can adjust their levels together without changing their relative levels. However, you can also route busses to hardware outputs so you can use busses for sending tracks to external effects processors or for mixing on an external mixer.

When you installed ACID, the application automatically identified all hardware available for output on your computer and listed these components as options on the Audio tab in Preferences. *For more information, see [Using the Audio preferences tab](#) on page 185.*

To route busses to hardware, first verify that you are using Windows Classic Wave Driver then choose the hardware device in the Mixer window:

1. From the **Options** menu, choose **Preferences** and click the Audio tab.
2. From the Audio device type drop-down list, choose Windows Classic Wave Driver.
3. Click **OK** to close the Preferences dialog.

If you have selected Microsoft Sound Mapper in the Audio device type drop-down list on the Audio Preferences tab, you will not be able to assign the bus to a different device.

4. In the Mixer window, click the **Playback Device Selector** () button on the bus you want to route.
5. Choose a hardware device from the submenu.

Deleting busses

Just as busses can be added to a project at any time, superfluous busses can be deleted. When a bus is deleted from a project, tracks assigned to it are reassigned to the previous bus in the Mixer window. For example, if you have tracks assigned to four busses (Bus A-D) and remove Bus D, the tracks assigned to Bus D are reassigned to Bus C.

One way to remove a bus is to right-click the bus control in the mixer and choose **Delete** from the shortcut menu.

Another way to remove a bus is from the Project Properties dialog:







1. Display the Project Properties dialog using one of the following methods:
 - Choose **Properties** from the **File** menu.
 - Press **Alt+Enter** on the keyboard.
2. Click the Audio tab.
3. Enter a value in the Number of stereo busses edit box and click **OK**. The appropriate number of busses are removed from the Mixer window.

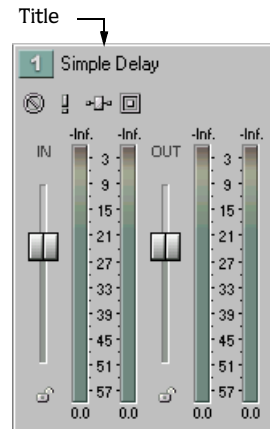
Using assignable FX controls

Assignable FX are used when you want to send various levels of multiple tracks to a single effect chain. Like busses, these controls reside in the Mixer window and support plug-in chains. In addition, assignable FX outputs can be routed to project busses. Up to thirty-two assignable FX controls can be added to a project and each control will support as many as thirty-two DirectX plug-ins on its chain.

Assignable FX controls


An assignable FX control is displayed in the in the Mixer window when at least one plug-in is assigned to it.

Item	Name	Description
	Title	Displays the name of the effect. To rename the assignable FX, double-click the title, enter the name, and press Enter .
	Mute	Mutes the assignable FX.
	Solo	Plays only the output of that assignable FX chain.
	Assignable FX	Displays the Plug-In Chooser dialog and allows you to adjust the assignable FX attributes.
	Bus Assignment	Displays a list of the available busses in your project. Select the bus to which you want to route the assignable FX chain. The bus assignment icon will display as  for the Master Bus or will display as the letter of the selected bus.
	Master Input Fader	Adjusts the input volume of the assignable FX.
	Master Output Fader	Adjusts the output volume of the assignable FX.
	Meter	Displays the playback level at the output of the assignable FX. This is the level that will be sent to the selected audio device.
	Lock/Unlock Fader Channels	Click to lock the faders so the left and right channels of stereo files will always move together. Click again to unlock the faders.




Adding an assignable FX control


Do not use time-altering effects (such as Time Stretch, Gapper/Snipper, and Pitch-Shift without preserving duration) with an ACID project. Time-altering effects will cause a track to play out of synchronization with the waveform display in the Track View and with other tracks.

1. From the **Insert** menu, choose **Insert Assignable FX** or click the **Insert FX** () button in the Mixer window. The Plug-In Chooser dialog displays a list of the available plug-ins, and the assignable FX control is added to the Mixer window.
2. Add all desired plug-ins using one of the following methods:
 - Double-click the desired plug-in.
 - Drag the desired plug-in to the chain area.
 - Select the desired plug-in and click **Add**.




If you have preset plug-in chains saved, double-click the FX Packages folder to view those presets. For more information, see [Saving plug-in chains as FX packages](#) on page 111.

3. Click the **OK** button to assign the chain to the assignable FX control. The Plug-In Chooser dialog closes. The Audio Plug-In dialog opens and displays the plug-in chain and the settings for the plug-in last selected on the Plug-In Chooser dialog.
4. Click a specific plug-in button and adjust the effect's parameters manually, or choose one of the presets from the Preset drop-down list. Also, you can reorder the plug-ins by dragging them within the chain.

*You can save an effect's parameters as a preset to be used in other projects. To save a preset, enter a name in the Preset box and click the **Save Preset** () button.*

5. Click the **Close** () button to close the Audio Plug-In dialog.

Adding a plug-in to an existing chain

1. Click the **Assignable FX** () button. The Audio Plug-In dialog displays.
2. Click the **Edit Chain** () button. The Plug-In Chooser dialog displays.
3. Add the desired plug-in(s) by doing any of the following:
 - Double-clicking the plug-in.
 - Dragging the plug-in to the chain area.
 - Selecting the plug-in and clicking the **Add** button.
4. Click the **OK** button to save the plug-in chain. The Plug-In Chooser dialog closes. The Audio Plug-In dialog opens and displays the plug-in chain and the settings for the plug-in last selected on the Plug-In Chooser dialog.
5. Click a specific plug-in button and adjust the effect's parameters manually, or choose one of the presets from the Preset drop-down list. Also, you can reorder the plug-ins by dragging them within the chain.
6. Click the **Close** () button to save your changes and close the Audio Plug-In dialog.

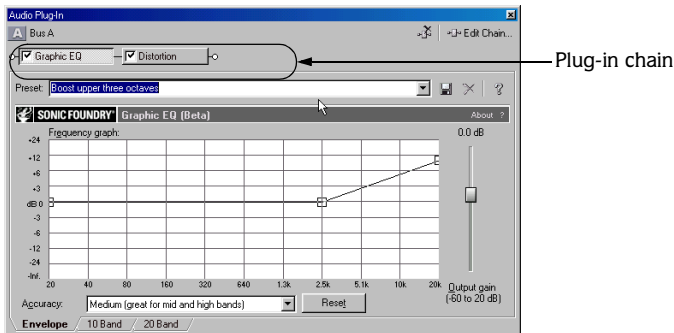
Arranging assignable FX plug-ins on the chain


The effect of plug-ins placed on a chain is cumulative. For example, when a signal passes through a plug-in, it “carries” those settings through the next plug-in, and “carries” both settings through the next plug-in, and so on. Because of this cumulative effect, you may need to rearrange the plug-ins on the chain so that one plug-in's processing does not adversely affect the next one in the chain.

There is no right or wrong way to order plug-ins and the chain's plug-in order is strictly based on your preferences and desired output. However, certain plug-ins function better at specific points in the chain. For example, the Dither plug-in typically works best as the last plug-in on a chain.



To arrange assignable FX plug-ins on the chain, do the following:

1. Click the Assignable FX () button. The Audio Plug-In dialog displays.



2. There are two ways to arrange plug-ins in the chain:
 - Drag the plug-in to a new location in the chain.
 - Right-click the plug-in button and select **Move Left** or **Move Right** from the shortcut menu.
3. Click the Close () button to save your changes and close the Audio Plug-In dialog.

Removing plug-ins from a chain

1. Click the Assignable FX () button. The Audio Plug-In dialog displays.
2. Right-click the plug-in's button and choose **Remove** from the shortcut menu.
3. Repeat step 2 to remove other plug-ins from the chain.
4. Click the Close () button to save your changes and close the Audio Plug-In dialog.

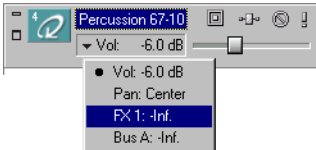
You can bypass a plug-in without removing it from the chain by clearing the check box in the plug-in button.



Routing a track to an assignable FX chain

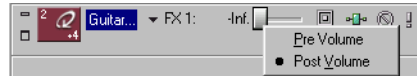
Routing tracks to an assignable FX chain allows you to assign multiple tracks to a plug-in chain.

1. Click the multipurpose fader button (this button displays **Volume** by default) and choose the desired assignable FX chain from the submenu. The button name changes to reflect the name of the assignable FX.



2. Drag the fader to adjust the level of the track sent to the assignable FX chain.


*Assignable FX are post-volume by default. To change to pre-volume, right-click the FX fader in the Track List and choose **Pre-volume** from the shortcut menu.*



If you set the Dry Out faders in your FX chain to -inf, you can adjust the wet/dry balance using the Volume and FX settings on the multipurpose fader. Volume will adjust the dry signal and FX will control the effect signals.

Routing assignable FX to busses

By default, assignable FX controls are routed to the Master Bus for output. The bus then mixes the assignable FX control's plug-ins with all tracks routed to the same bus and outputs the mixed signal to the appropriate output device. *For more information, see [Routing busses to system hardware](#) on page 134.*

To route an assignable FX to a different bus, click the () button on the assignable FX control and specify the desired bus from the drop-down list. The drop-down list displays all current busses in the project. *For more information, see [Adding busses to the project](#) on page 129.*



Working with assignable FX controls

Assignable FX controls in the Mixer window may be adjusted, soloed, and muted independently of one another.

Adjusting the assignable FX faders

Assignable FX controls contain two distinct faders, each of which utilizes a split thumb. The left fader is used to adjust the level of the input signal entering the control. The right fader is used to adjust the output level. The split thumbs allow you to adjust the levels of the left and right channels independently of one another. *For more information, see [Adjusting a split fader in the Mixer](#) on page 56.*

Changing the assignable FX meter resolution

You may specify the meter resolution at which the assignable FX control displays its signal levels. When a control's meter resolution is changed, all meters in the Mixer window are automatically changed to reflect the new resolution setting. To change the assignable FX control's meter resolution, right-click the meter and choose the desired meter resolution from the shortcut menu.

Setting the assignable FX level



When signals are routed through the assignable FX control, their level may cause the meter to clip. If the meter clips, the level is displayed in red at the top of the meter and the audio is distorted. If clipping occurs, lower the control level and click the red display to reset the meter. Continue adjusting the fader and resetting the meter until clipping is eliminated.

*The clip can also be reset by right-clicking on the meter and choosing **Reset Clip** from the shortcut menu.*

Muting an assignable FX

Clicking the control's **Mute** (M) button will temporarily disable playback of the assignable FX control. When an assignable FX control is muted, it appears "grayed out" and the word **Muted** displays at the bottom of the meter. Clicking the **Mute** (M) button a second time returns the assignable FX to normal playback.



Soloing an assignable FX

Clicking the control's Solo () button isolates the assignable FX control's playback by muting all other controls and busses in the Mixer window. This allows you to only hear the tracks coming through the soloed chain. When an assignable FX control is soloed, all remaining controls and busses appear “grayed out” and the word Muted is displayed at the bottom of their respective meters. Clicking the Solo () button a second time will return all controls and busses to normal playback.

Working with multiple controls


When multiple bus and/or FX controls are selected, you can perform functions on the controls simultaneously. These functions include the following:

- Change bus or hardware routing
- Mute/Solo
- Delete bus or FX control (by Delete key or shortcut menu)
- Change fader level

Multiple, nonadjacent controls can be selected by holding the  key while clicking each control's name. Multiple, adjacent controls can be selected by clicking the first control and holding the  key while clicking the last control in the range.

The Preview fader cannot be grouped in this manner with other Mixer controls.




Removing an assignable FX control from a project

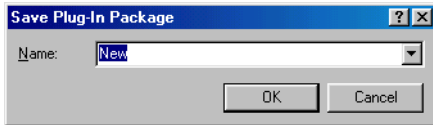
In the Mixer window, right-click the FX control you want to delete and choose **Delete** from the shortcut menu, or select the control and press the  key. The assignable FX control is removed from the Mixer window.

Saving plug-in chains as FX packages

ACID allows you to save plug-in chains as packages, so that you may use them again with other projects. If you use a combination of plug-ins often, saving them as a package will save you time. FX packages retain their chain order and individual plug-in settings.

You may save plug-in chains as packages from existing plug-in chains or in the Plug-In Chooser dialog during the actual creation of the chain. The plug-in chains that you save as packages appear in the Plug-In Chooser dialog in the FX Packages folder.

1. Click the **Assignable FX** () button. The Plug-In Chooser dialog displays if a plug-in chain does not already exist.
If you want to save an existing chain, click the **Assignable FX** () button and then the **Edit Chain** () button from the Audio Plug-In dialog.
2. Once the Plug-In Chooser dialog displays, create a new plug-in chain or simply use the previously created chain that is displayed in the chain area.
3. Click the **Save As** button. The Save Plug-In Package dialog displays.



4. Enter a name that you want to use for the package.
5. Click the **OK** button to save the plug-in chain as an FX package.

Organizing your plug-ins

ACID allows you to create folders for organizing your plug-ins within the Plug-In Chooser dialog. For example, if you have third-party DirectX plug-ins installed on your system, you can create a unique folder for storing them. You will notice that the Plug-In Chooser dialog functions similarly to Windows Explorer. However, the Plug-In Chooser dialog only allows you to work with plug-ins installed on your system.

Tips and tricks

The following sections contain some creative suggestions for building projects in ACID.

Building instrument solos

In the previous section we described using an extended technique to create challenging rhythmic variations in your projects. A slightly different version of the slice and dice technique can be used to build instrument solos for your projects. To demonstrate this, let's start with an event containing a simple bass riff.

1. Slice and dice individual events to create new riffs. *For more information, see [The Chopper](#) on page 83.*
2. Use the **Pitch Shift** feature to transpose individual notes. *For more information, see [Changing an event's key](#) on page 100.*
3. Apply Volume envelopes to simulate the varying attacks associated with live soloing. *For more information, see [Adding a volume or pan envelope](#) on page 104.*
4. Use the **Tempo Change** feature to create passages with tempos that deviate from the project tempo. *For more information, see [Working with tempo and key change markers](#) on page 98.*

Building scales

Though it is well outside the intended scope of the application, you can use ACID to build unique scales from audio loops. To do this, you must start by isolating a specific note that the scale will be built from and determining exactly what note it is. This can be easily accomplished using Sound Forge's **Spectrum Analysis** function. Once the note is isolated and identified, use **Save As** to save the note as a new .wav file with a unique name. Finally, add the file to the ACID project and use **Pitch Shift** to create all remaining notes in the scale.



Working with Video

By adding a video track to your ACID project, you can use ACID as a scoring tool.

Video will always be added to the top track in the Track List. Depending on your horizontal zoom level, each frame displayed in the video track may represent multiple frames from the source video. As you zoom in, marks will be displayed to represent each frame, and you can zoom further to view individual frames.

Working with video

Adding or replacing a video file

Use the Explorer window to find the file you want to use, and then add it to the project by double-clicking it or dragging it into the Track View. The video will be placed in the top track, and if the file has an audio track, it will be placed as a separate, one-shot track in the Track View.

If your project already contains a video track, ACID will prompt you to replace the existing video if you open another video file.

A still image (.bmp, .jpg, .psd, .gif, .png, .tga) can also be added to the video track.

Removing the video track

Right-click anywhere in the video track and choose **Remove Video**.

Hiding and showing the video track

By default, video is displayed in the Track View when it is added to a project. You can hide or show the video track at any time by choosing **Show Video** from the **View** menu. A check mark next to the **Show Video** command indicates that the video track will display.

Synchronizing audio and video

Editing the audio associated with a video file can cause it to become out of sync with the video. To resynchronize the audio and video, right-click on the audio file and choose **Synchronize with Video** from the shortcut menu.

This will not work if you have changed the audio track to a loop.

Removing the video's audio

Right-click the audio track in the Track List and choose **Delete Track** from the shortcut menu. The audio track is removed, but the video is preserved.

Changing frame numbering

ACID numbers each frame in the video track.

To change the numbering format (or turn off frame numbering), select the Editing tab in the Preferences dialog and choose a setting from the Show source frame numbers on video thumbnails as drop-down list.

Editing a video event

ACID provides several video editing options to help you score your video.

Moving the video event

Click within the event and drag it to a new location along the timeline.

Trimming the video event

Drag either end of the video event. The video event stays in place, but the beginning or end of the video will move.

You cannot trim the beginning or end of the event past the event's original end. You cannot trim an event earlier than its starting point unless the event has been trimmed previously.

Shifting the contents of the video event (slipping)

Hold the **[Alt]** key while dragging the video event to move the position of the video within the event. The event itself will not move.

Slip-trimming a video event

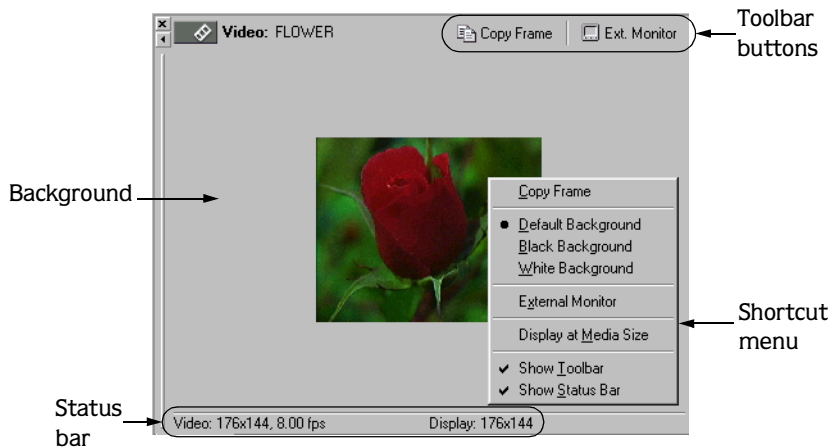
Hold the **[Alt]** key while dragging the beginning or end of a video event. The video will move with the event edge, and the opposite edge of the event will remain fixed.

Sliding a video event

Hold **[Ctrl]+[Alt]** while dragging the video event to move the event while leaving the video in place. The relative position of the video will change as when you slip an event.



The Video window

The Video window is used to view the video as it plays or to view the frame at the cursor position. To display the Video window, choose **Video** from the **View** menu, or press **[Alt]+[4]**.



Toolbar

The toolbar allows you to access two commonly used functions of the Video window.

Button	Description
	Copies the current frame to the Windows clipboard.
	Sends the preview to an external monitor.

Shortcut menu

Right-click anywhere in the Video window to display a shortcut menu with Video window options.


Item	Description
Copy Frame	Copies the current frame to the Windows clipboard.
Default Background	Sets the background color of the Video window to the default color.
Black Background	Sets the background color of the Video window to black.
White Background	Sets the background color of the Video window to white.
External Monitor	Sends the preview to an external monitor.
Display at Media Size	Displays video at the native resolution, clipping if necessary.
Show Toolbar	Toggles the display of the Video window Toolbar.
Show Status Bar	Toggles the display of the Video window Status Bar (it is off by default).

Status Bar

The Status Bar shows the video's frame size, color depth, and framerate.

External monitor



ACID allows you to use your system's external monitor for previewing video playback. You will need an OHCI IEEE-1394 adapter and a device to convert the DV signal to video, such as a DV camcorder, deck, or media converter.

To specify an external monitor, click the **External Monitor** () button in the Video window, or choose **Preferences** from the **Options** menu and click the Video tab.

Other settings for the external monitor can also be found on the Video tab. *For more information, see [Using the Video preferences tab](#) on page 187.*

Scoring video with ACID

ACID provides tools that allow you to adjust the tempo of a project to easily synchronize audio with specific video frames.

1. Add your audio track(s) and video to your project.
2. If the Video window is not displayed, choose **Video** from the **View** menu.
3. Click the **Play** () button to begin playback.
4. Press the **[H]** key each time you want to place a time marker at a frame you want to emphasize (where an explosion is heard, for example).
5. Click the **Stop** () key to stop playback.
6. Return to the left-most time marker and fine tune its placement so it coincides exactly with the desired video frame.

*Holding the **[Alt]** key while using the right and left arrow keys allows you to step the cursor through your video by individual frame. You may need to drag your time marker to the cursor to get it on the desired frame.*

7. Place the cursor at the point to which you want to synchronize your time marker. For example, you might want the frame that you marked in step 6 to coincide with a downbeat.
8. Right-click the time marker and select **Adjust Tempo to Match Marker to Cursor** from the shortcut menu. The new tempo displays in the Track List.
9. Press the **[T]** key to insert a tempo change marker. ACID detects the adjusted tempo and inserts it in the tempo marker's edit box. The tempo change marker will preserve synchronization between the time marker and location on the Beat Ruler as you perform editing further down the timeline. *For more information, see [Adding a tempo or key change marker](#) on page 99.*
10. Repeat steps 6 through 9 to synchronize the rest of your video.




Recording in ACID

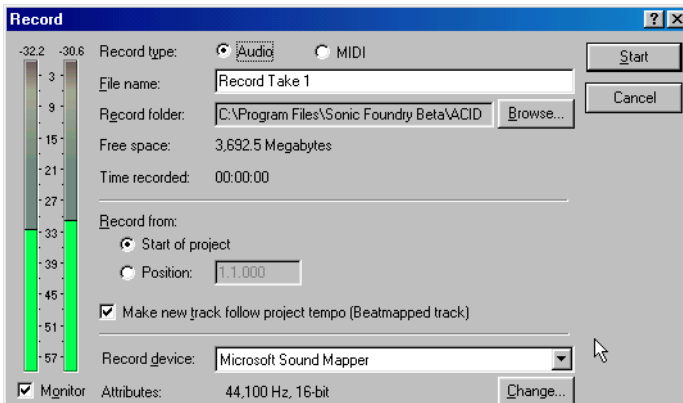
ACID is a loop-based audio-production tool. It is not designed for multi track recording projects. However, the application does allow you to record audio from your system's sound card. This limited recording capability makes it possible for you to record audio from an external source and place it in your project.

This feature actually makes ACID an excellent tool for recording song demos. A backing track of the appropriate length and tempo can be built using a variety of loops, then combined with a one-shot vocal or guitar track that you record.

Recording quickstart

If you are familiar with other Sonic Foundry applications, recording in ACID should be fairly intuitive. The following procedure briefly outlines the steps involved in recording audio.

1. Connect the audio source or MIDI device to your computer.
2. For audio recording, verify that the card is properly configured for the audio source (microphone, line level, etc.).
3. Place the cursor in the Track View at the position where recording will begin.
4. Click the Record () button. The Record dialog displays.



5. Set the desired recording properties. For more information, see [Setting ACID's recording properties](#) on page 152.
6. Click **Start** to begin recording. ACID creates a new track in the project and begins recording incoming audio signal into it.
7. Click **Stop** to halt recording. The recorded audio is placed on its track as a one-shot and can now be manipulated at the track or event level, like any other file in the project.

Setting ACID's recording properties

Prior to recording in ACID, you must configure the application's recording properties in the Record dialog. This will ensure that you are recording through the appropriate device with the desired attributes and stored in the specified folder.

Record type

Use these radio buttons to specify the type of recording you are about to make.

File name

This edit box allows you to name the recorded file prior to actually recording it. If no name is specified, ACID provides the default name Record Take and appends a unique number to identify it. Audio is saved as a .wav file and MIDI is saved as a .mid file.

Record folder

This edit box displays the path to the folder where recorded files will be stored. If you want to specify an alternate location, click **Browse** and specify the new folder.


Free space

This field indicates the amount of available free space in the current record folder.

Time recorded

This field provides you with a running summary of the length and size (in megabytes) of the audio currently being recorded.

Record from

By default, ACID will begin recording at the cursor position when the Record () button is clicked. However, the Record from radio buttons can be used to specify alternate starting points for recording.

- Selecting the Start of project radio button configures ACID to start recording at the beginning of the current project.
- Selecting the Position radio button activates the adjacent edit box and allows you to enter the recording start position in measures and beats format.

Make new track follow project tempo

Selecting this check box configures ACID to use its stretching features to expand/contract your recording in relation to the project tempo. However, if you are recording your audio track at the final project tempo, this check box should be cleared to allow ACID to treat the recorded file as a one-shot.

Record device

This drop-down list allows you to specify the hardware device that will be used to record your audio. If Microsoft Sound Mapper is specified in the Audio device type drop-down list in the Preferences dialog, you cannot choose a specific device. Choose a device other than the Sound Mapper to specify hardware devices. *For more information, see [Using the Audio preferences tab](#) on page 185.*

Attributes and the Change button

The Attributes field displays the recording sample rate and bit-depth. Sample rate is the number of samples per second, measured in Hertz (Hz), used to record audio. You can change the sample rate or bit-depth by clicking the **Change** button, which displays the Audio tab of the Project Properties dialog. *For more information, see [Using the Audio properties tab](#) on page 182.*

Attribute and the **Change** button do not apply when recording MIDI.


Monitor

Selecting this check box enables the meters, which display the incoming audio level at the specified recording device.

Setting recording levels

When recording audio, it is important to record with the highest possible signal without clipping. Clipping occurs when the incoming signal is too high to be represented as a digital value and is indicated visually by a red Clip warning displayed at the top of the meters. The aural result of clipping is distortion. Be assured that digital clipping distortion is very different from analog clipping distortion. The saturation level of analog tape is non-exact and pushing the levels into the red will often create a nice overdriven effect. However, the saturation point of digital recording is exactly 0 dB and levels surpassing that result in ugly digital distortion that can easily ruin a project.


To set the recording level:

1. Connect the audio source to the sound card's input and verify that the card is properly configured for the audio source (microphone, line level, etc.).
2. Click the Record () button and set the desired recording properties. *For more information, see [Setting ACID's recording properties](#) on page 152.*
3. Select the Monitor check box. Incoming audio levels are displayed on the record meters and the peak signal level is displayed (in decibels) at the top of the meters. Keep in mind that a meter reading of 0 dB is the maximum for a digital signal and any signal that surpasses that will distort.
4. Continue adjusting the input level of the source audio until maximum levels are achieved without clipping.

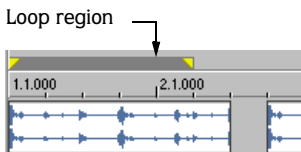
If the meter clips, decrease the source audio level and click the numbers at the top of the meter. The peak is reset and a new peak reading is calculated. Continue adjusting the levels and resetting the meter until the level is maximized.

Setting digital recording levels can be difficult. If you are not familiar with the source audio and have only one opportunity to capture the recording, always allow yourself plenty of headroom.

Recording multiple takes

Using the Loop Playback () button in conjunction with the record feature allows you to record multiple takes into an ACID project. All takes will be recorded into the same track and saved as one *.wav file. However, each take is delineated by creating a region that is saved with the recorded media file. To view the regions, open the recorded track's properties.

1. Create a loop region for the part of the project you want to play while recording your take.





2. Make sure loop playback is enabled.
3. Begin recording. ACID will playback the specified loop region while recording your takes on a new track.

If you are going to use this multiple take recording method to create loops, we recommend that you disable the Make new Track follow project tempo option. This will preserve the quality of the recorded audio and improve the time stretching quality.

Reviewing and saving a take

After all desired takes are recorded, you can review them and save only the best take.



1. Click **Cancel** to close the Record dialog.
2. Click the Solo () button corresponding to the track you just recorded.
3. Click Play From Start () and review all takes.
4. Create a time selection containing the take you want to keep.
5. From the **Tools** menu, choose **Render to New Track**. The Render to New Track dialog displays.
6. Enter a name for the new file in the File name edit box and click **Save**. The take is saved to a new file and a corresponding track is created.
7. Delete the track containing the original takes.



Working with MIDI

ACID allows you to record MIDI tracks and use MIDI files in your projects. However, MIDI files cannot be edited within ACID. To edit a MIDI file, right-click the track and choose **Edit in [editor name]** to open the file using the MIDI editor specified on the Editing tab of the Preferences dialog.

Adding MIDI tracks

You can add MIDI tracks to your project just as you would add other files. Just add the file to the project and use the **Draw** () tool or **Paint** () tool to add events to the track.

MIDI tracks are displayed with the MIDI  icon in the Track List. You can use MIDI tracks to record and play back data from synthesizers and other MIDI-compliant equipment. MIDI tracks can use .mid, .smf, and .rmi files.

Double-click the MIDI icon in the Track List to access the Track Properties dialog. This dialog provides additional track information and allows you to define attributes for the track. *For more information, see [Adjusting track properties for a MIDI track](#) on page 126.*


Recording MIDI tracks

The Record dialog allows you to record audio or MIDI tracks. *For more information, see [Recording in ACID](#) on page 151.*

MIDI track properties


Information on properties for all track types is covered in the Advanced chapter. *For more information, see [Adjusting track properties for a MIDI track](#) on page 126.*

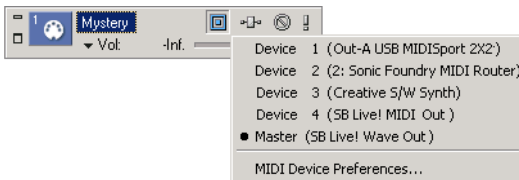
Playback device

Each track can be played through any device that is installed in your computer. To choose a playback device, click the **Device Selection** () button in the Track List.

To change the playback device for multiple tracks, select a track by clicking on its icon. While holding the **Shift** key, click another track in the Track List. All of the tracks in between will be selected. Using the **Ctrl** key in this manner will allow you to select multiple, nonadjacent tracks. Change the playback device for one track, and all will change.

Selecting a playback device

1. Click the **Device Selection** () button. A list of all the available devices displays.



2. Choose a device from the list to send the current track to that device.

When using DLS files for voicing your MIDI files, choose Master, or you will not be able to hear the track. Also, copy the DLS file to your local hard drive for optimum performance.

Setting device preferences

If the device you want to use is not displayed, choose **MIDI Device Preferences** from the shortcut menu to open the MIDI tab in the Preferences dialog and verify that the check box for the device is selected. *For more information, see [Using the MIDI preferences tab](#) on page 186.*

Rendering projects with MIDI tracks

In order to render projects that contain MIDI tracks, choose Master for playback of MIDI tracks. Tracks that are routed to an external MIDI device will not be included in the rendered file unless they are rerouted to the internal SoftSynth.

When MIDI is played back through a SoftSynth (soundcard/wave) it will be rendered using the sounds of the General MIDI sound set or the current DLS sound.

Timecode synchronization

ACID can generate MIDI timecode and MIDI clock as well as trigger from MIDI timecode. These features allow ACID to be synchronized with other audio applications and external audio hardware.

MIDI timecode

MIDI timecode (MTC) is a standard timecode that most applications and some hardware devices will use to synchronize themselves. ACID will generate stable MTC at all available frame rates for other applications to chase.

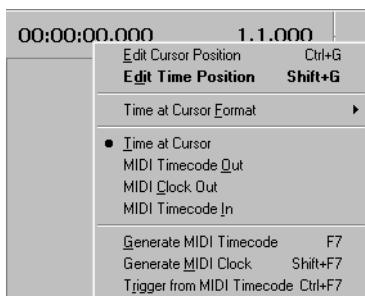
Generating MIDI timecode

1. Specify a MIDI Output device to which you will send the timecode and a Frame rate for the timecode. These options can be found on the Sync page of the Preferences dialog. For more information, see [Using the Sync preferences tab on page 188](#).
2. From the **Options** menu, choose **Generate MIDI Timecode**.

ACID will now generate MTC starting wherever you click Play (.

Viewing outgoing timecode

To view the outgoing timecode, use the Time Display directly above the Track List. Right-click the Time Display and choose **MIDI Timecode Out** from the shortcut menu. The text will now display the outgoing MTC time.



Trigger from MIDI timecode

You can trigger ACID playback using MIDI timecode (MTC). This means that ACID playback will be initiated by receiving timecode from another device.

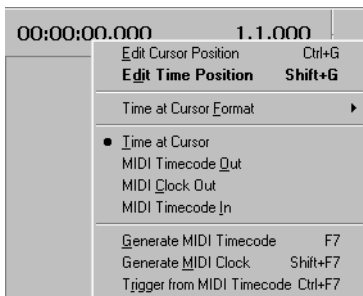
Triggering playback from MIDI timecode

1. Connect a word clock signal between your computer and triggering device to lock synchronization.
2. Configure your trigger device to send MIDI timecode (MTC) to your computer.
3. From the **Options** menu, choose **Preferences** and select the Sync tab to configure ACID to receive MTC.
 - From the Input device drop-down list, choose the port from which you will receive MTC.
 - From the Frame rate drop-down list, choose the frame rate that your trigger device will use to send MTC to ACID.
4. From the **Options** menu, choose **Timecode**, and choose **Trigger from MIDI Timecode** from the submenu.

When an incoming MTC signal is received, ACID will begin playing from the position indicated by the timecode. If ACID is not receiving MTC, you can play and edit normally.

Viewing incoming timecode

To view the incoming timecode, use the Time Display directly above the Track List. Right-click the Time Display and choose **MIDI Timecode In** from the shortcut menu. The text in the left-hand display will now show the incoming MTC time.



This display will also show status and error information. If **Trigger from MIDI Timecode** is enabled but no MTC is detected, the display will show *Listening...*; If the wrong frame rate of MTC is being detected the display will show *Wrong format*.


MIDI clock

MIDI clock differs from MTC in that it contains tempo as well as positional information. MIDI clock is essentially measured in ticks from the beginning of the project. MIDI clock sends 24 ticks per quarter note.

The advantage of using MIDI clock is that ACID can send its tempo changes to the chasing application and they will be preserved.

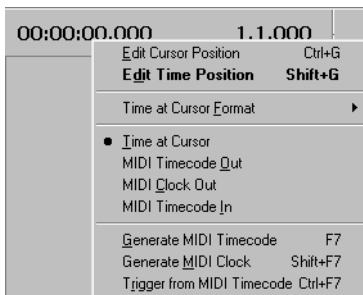
Generating MIDI clock

1. Specify a MIDI Output device to which you will send the clock. This option can be found on the Sync page of the Preferences dialog. *For more information, see [Using the Sync preferences tab](#) on page 188.*
2. From the **Options** menu, choose **Generate MIDI Clock**.

ACID will now generate MIDI clock when you click Play ()

Viewing outgoing MIDI clock

To view the outgoing clock, use the Time Display directly above the Track List. Right-click the Time Display and choose **MIDI Clock Out** from the shortcut menu. The text will now display the outgoing MIDI clock time.



The Sonic Foundry Virtual MIDI Router

The Sonic Foundry Virtual MIDI Router (VMR) is a software-only driver that allows you to control ACID from other MIDI-capable applications—and vice-versa—without using MIDI hardware.

A MIDI router transfers MIDI data from one port to another. The Sonic Foundry VMR driver transfers MIDI data but requires no hardware. The driver provides up to four devices for MIDI output and input. Each of the output devices sends all MIDI data to its corresponding input device.

If one application sends MIDI data through the #3 Sonic Foundry MIDI Router output device, another application can receive this MIDI data as input from the #3 Sonic Foundry MIDI Router input device.


The first character of the device name is a device number from 1 to 4. The device number is placed at the beginning of the name for compatibility with sequencer software that tries to display device names in very small spaces.

The Sonic Foundry VMR can be very useful for synchronizing two MIDI-capable applications. You can trigger ACID from your MIDI sequencer, or you can drive your MIDI sequencer from ACID using MTC or MIDI clock. This and more can be accomplished without using MIDI hardware for routing.

Installing the Sonic Foundry Virtual MIDI Router (VMR)


The Sonic Foundry Virtual MIDI Router (VMR) is included on the ACID content CD.

Installing VMR on Windows 98 or Me

1. Click the **Start** () button, choose **Settings**, and choose **Control Panel** from the submenu.
2. Double-click the **Add New Hardware** icon in the Control Panel window. The **Add New Hardware Wizard** displays.
3. Click the **Next** button. The **Add New Hardware Wizard** asks if you want Windows to automatically detect your hardware.
4. Click the **No** radio button.
5. Click the **Next** button. The next window allows you to select the type of hardware you want to install.

6. In the Hardware type list, click the Sound, video, and game controllers option and click the **Next** button. The next window allows you to select the manufacturer and model for your hardware.
7. Click the **Have Disk...** button.
8. Insert the ACID CD into your CD-ROM drive.
9. In the path list box, type E:\Extras\Virtual MIDI Router\Win9x (where “E” is your CD-ROM drive) and click the **OK** button.
10. In the Models list, click the Sonic Foundry Virtual MIDI Router, and click the **OK** button.
11. Click the **Finish** button.
12. Restart Windows. When Windows restarts, all programs that support MIDI (including ACID) can use the Virtual MIDI Router.

Installing VMR on Windows 2000

1. Click the  **Start** button, choose **Settings**, and choose **Control Panel** from the submenu.
2. Double-click the **Add/Remove Hardware** icon in the Control Panel window. The Add New Hardware Wizard displays.
3. Click the **Next** button. The Add/Remove Hardware Wizard asks what sort of hardware task you want to perform.
4. Click the **Add/Troubleshoot a device** radio button and click the **Next** button. The Add/Remove Hardware Wizard displays a list of hardware devices installed on your computer.
5. Choose **Add a new device** and click the **Next** button. The Add/Remove Hardware Wizard asks if you want Windows to automatically detect your hardware.
6. Click the **No, I want to select the hardware from a list** radio button and click the **Next** button. The next window allows you to select the type of hardware you want to install.
7. In the Hardware types list, click the Sound, video, and game controllers option and click the **Next** button. The next window allows you to select the manufacturer and model for your hardware.
8. Click the **Have Disk...** button.
9. Insert the ACID CD into your CD-ROM drive.
10. In the Copy manufacturer’s files from box, type E:\Extras\Virtual MIDI Router\WinNT\x86\OEMSETUP.inf (where “E” is your CD-ROM drive) and click the **OK** button.
11. In the Models list, click the Sonic Foundry Virtual MIDI Router, and click the **OK** button.
12. Click the **Next** button.

13. Click the **Next** button.
14. Select the number of ports you would like to enable from the Virtual MIDI Routing Ports list and click **OK**.
15. When the installation is complete, you are prompted to restart Windows to complete the driver installation. Click the **Yes** button.

Once Windows has restarted, all programs that support MIDI (including ACID) can use the Virtual MIDI Router.


Configuring the Virtual MIDI Router

After installing the Sonic Foundry Virtual MIDI Router (VMR), a new MIDI device is created with the name Sonic Foundry MIDI Router. If you want to install additional devices for MIDI routing (the VMR supports up to four), you must configure the VMR.


When only one routing device is used, the name of the driver is displayed as Sonic Foundry MIDI Router. When multiple ports are used, each port is labeled starting with a number (1 - the number of ports) to identify each connection.

Configuring VMR for Windows 98 and Me

If you have a large number of MIDI devices in your system, or a multi-port MIDI board such as an eight-port MIDI interface, you may have problems installing additional VMR MIDI interface ports. Windows 9x will crash on startup if more than 11 MIDI devices are installed. If you have trouble with MIDI devices causing system errors after installing the VMR, you should reduce the number of ports in use by the VMR, remove the VMR, or reduce the number of MIDI devices in your system.

1. Click the  **Start** button, choose **Settings**, and choose **Control Panel** from the submenu.
2. Double-click the Multimedia icon in the Control Panel window. The Multimedia Properties window displays.
3. Click the Devices tab.
4. Expand the MIDI Devices and Instruments list by double-clicking it.
5. Click the Sonic Foundry MIDI Router device and click **Properties**. The Sonic Foundry MIDI Router Properties window displays.
6. In the General page of the Properties window, click the **Settings** button. The Configure Sonic Foundry VMR window displays.
7. Select the number of ports you would like to enable from the Virtual MIDI Routing Ports list.
8. Click **OK** in all of the windows.
9. Restart Windows for the settings to take effect.

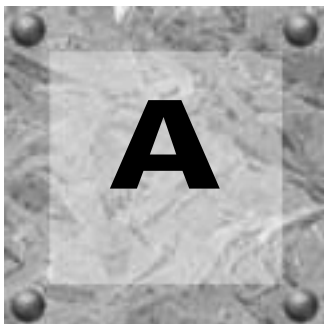
Configuring VRM for Windows 2000

1. Click the  button, choose **Settings**, and choose **Control Panel** from the submenu.
2. Double-click the Sounds and Multimedia icon in the Control Panel window. The Sounds and Multimedia Properties window displays.
3. Click the Hardware tab.
4. Select the Sonic Foundry Virtual MIDI Router from the list of devices and click the **Properties** button.
5. Click the Properties tab.
6. Double-click the MIDI Devices and Instruments icon.
7. Select the Sonic Foundry Virtual MIDI Router and click the **Properties** button.
8. Click the **Settings** button in the Properties window.
9. In the Configure Sonic Foundry VMR window, select the number of ports you would like to enable from the Virtual MIDI Routing Ports list.
10. Click **OK** in all of the windows.
11. Restart Windows for the settings to take effect.

Syncing ACID to other hardware

Another way of using ACID is to sync it to your desired hardware component.

- When working with MIDI sequencers, generate MIDI Clock for the desired component in the Sync tab of the Preferences dialog.
- When working with non-musical clocks (such as analog tape recorders), generate MIDI Time Code for the desired component in the Sync tab of the Preferences dialog.
- When working with digital equipment or applications, use a combination of MIDI timecode and hardware word clock.



Customizing ACID

ACID may be customized to your project needs and working preferences. You may change these settings at any time. If you use the same settings for all of your projects, you may set ACID to use your settings as ACID defaults (presets).

In this chapter, you will find information about functions that allow you to customize the appearance of ACID, set a project's properties, and set the application's preferences.

Working with ACID windows

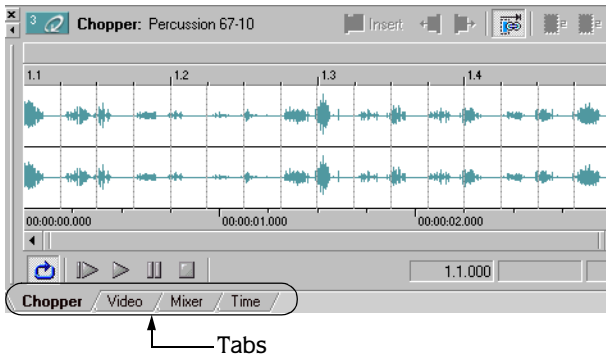
ACID has various windows that allow you to perform specific tasks related to your project or manage your media. These windows can “float” on the workspace or be “docked” in the Window Docking Area of ACID. All these windows may be viewed or hidden via the **View** menu or their respective shortcut keys. The following lists the windows as they appear on the **View** menu.

Window	Shortcut keys	Description
Explorer	Alt+1	Allows you to view and access your media files without leaving the work area. You may also preview media files and place them in your project from this window.
Chopper	Alt+2	Allows you to select portions of a media file that can be placed into tracks as events.
Mixer	Alt+3	Allows you to change the attributes of busses, assignable FX, and project properties.
Video	Alt+4	Displays a project's video output at the current cursor position in the timeline.
Audio Plug-In	Alt+5	Allows you to view and alter FX chains and settings for assignable, bus, and track FX.
Track Properties	Alt+6	Allows you to view and change track attributes.

Docking/Floating ACID windows

The Window Docking Area allows you to keep frequently used windows available, but out of the way, while you are working with a project. You can specify how the Docking Area looks by how you dock windows. Windows may be docked in the following ways:

- You may divide the area into sections (e.g. right, middle, and left) or a single section and “stack” them. Windows that are not visible will display a tab that you can click to display it. Also, you may use the window’s shortcut keys to display it.



- All windows can be docked so they are all visible. The size of your monitor will determine how wide each window will appear. This option may be useful if you want quick access to all windows and your system has a dual monitor setup.

When the last window in the Docking Area is closed or removed, the Docking Area minimizes automatically. When the Docking Area is minimized, dragging a dockable window over the bottom of the application window will cause the Docking Area to open again.

Docking a window

- If the window is floating on the workspace, click the window’s title bar and drag it below the Track View. As you drag the window, you will see the window’s outline appear.
- Position the window’s outline in the Docking Area where you want it and release the mouse.

Floating a window

You may float a window so that it does not appear in the Docking Area.

1. On the window that you want to float, click the move bar and drag the window to the workspace. As you drag the window, you will see the window's outline appear.
2. Position the window anywhere in the workspace and release the mouse. The floating window may be moved again by clicking and dragging it to the new position or docking it again.

Resizing a window

The Track List, Track View and Docking area components can be sized to your preferences by dragging the dividers between them.

Using the Explorer window

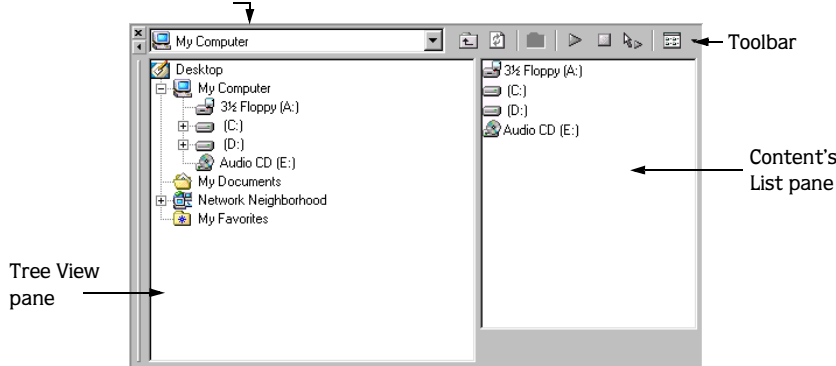
The ACID Explorer window works similarly to the Windows Explorer. Primarily, you will use the Explorer window to place media files into your projects. However, the Explorer window allows you to do the following:

- Locate, preview, rename, and delete media files.
- Create folders, rename existing folders, organize media files, and delete folders and their contents.

The Explorer window


The ACID Explorer window is a dockable window and is the primary window that you will use when creating a new project or adding media to an existing project. Below is an overview of the Explorer window.

Select drive/folder name



The Explorer toolbar

Button	Description
	Selects and opens the folder or drive one level above the active folder.
	Displays any content changes in the active folder or drive if a file was added, renamed or deleted.
	Adds the selected folder to your Favorites folder. The Favorites folder contains media files that you use most often.
	Plays the selected media file.

Button	Description
	Stops play back of the selected media file.
	When enabled, automatically plays a media file when it is selected.
	Displays Explorer viewing options.

Managing media

You may organize your media files in the Explorer window. In addition, you may preview media files prior to placing them in the project.

Finding media

The Explorer window's Tree View pane allows you to select the drive or folder and view its contents in the Contents List pane.

1. From the drop-down list, select the drive that you want to view, or select any drive or folder from the list that is already displaying in the Tree View pane.
2. Click the plus sign next to the drive or folder to display its contents. (The plus sign becomes a minus sign. Click the minus sign to hide the drive or folders contents.)
3. Click a folder from Tree View pane and the files in it will display in the Contents List pane.

Moving media files and folders

You may move single or multiple files and folders to different drives, or existing folders to better organize your media library.

1. Using the drop-down list, navigate to the drive that contains the file or folder that you want to move.
2. In the Tree View or Contents List pane, select the file or folder by clicking it. To select multiple folders, hold down either the **[Shift]** or **[Ctrl]** keys.
3. Drag the selected item(s) to the desired folder within the Tree View or Contents List pane. If you want to move the selected item(s) to a different drive, drag them to the desired drive in the Tree View pane.
4. Release the mouse and the selected item(s) will be placed in the new location.

If the folder contains media files that are being used in projects, ACID will prompt you to locate the media files when that project is opened again.

Creating new folders

You may create folders within the Explorer window to store media files or other folders.

1. Navigate to the drive and folder location where you want to create the new folder.
2. Right-click in a blank area of the Contents List pane and choose **New Folder** from the shortcut menu.
3. Enter the name of the new folder and press the **[Enter]** key to save the name.

Once the new folder is created, you may begin moving media files to it or move it to a new location.

Renaming media files and folders

You may rename media files and folders that are not currently being used in an open project within the Explorer window. You cannot rename media files that are being used in an open project. To rename these files, save and close the open project before renaming them.

1. Select a media file or folder in the Tree View or Contents List pane.
2. Right-click to display a shortcut menu.
3. From the shortcut menu, choose **Rename**.
4. Type the new name for the media file or folder and press the **[Enter]** key to save the name.

If the media file or folder that you renamed is being used in a project, ACID will prompt you to set the new path where the project's media file(s) reside.

Deleting media files and folders

You may delete media files and folders that are not currently being used in an open project within the Explorer window. You cannot delete media files that are being used in an open project. To delete these files, save and close the open project before deleting them.


1. Select a media file or folder in the Tree View or Contents List pane. To select multiple files, hold down either the **Shift** or **Ctrl** keys.
2. Right-click the file or folder and choose **Delete** from the shortcut menu. The Confirm Delete dialog will appear.
3. Click the **Yes** button to delete the media file or folder.

Click the **No** button to keep the media file or folder.

If the media file or folder that you deleted is being used in a project, ACID will notify you that the files are missing. Simply, delete the tracks from the project where the files were placed.

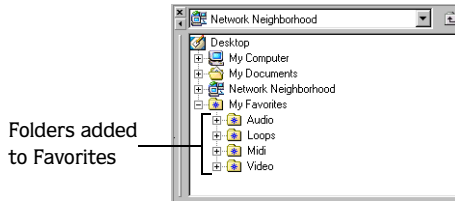
Adding media to ACID Favorites

ACID includes a Favorites folder found in the Tree View pane. You may add folders that contain media files that you frequently use in projects. Once the folder is added to Favorites, you may simply access it to find the media files and place them in your project.

1. Select a folder in the Tree View or Contents List pane. To select multiple folders, hold down either the **Shift** or **Ctrl** keys.
2. Click the **Add to Favorites** () button.

You can also right-click the selected folder to display a shortcut menu. From the shortcut menu, choose **Add to Favorites**.



The folder will appear within the Favorites folder in the Tree View pane.




Using the Explorer Transport controls


The Explorer window contains transport controls that allow you to listen to audio files before placing them into your project. When you play back a media file, you may monitor its volume level on the preview bus that is located in the Mixer window. *For more information, see [Using the Mixer window](#) on page 55.*

Previewing a media file


1. Select the media file that you want to preview.
2. Click Start Preview () button. The media file will begin looped playback. Its levels may be monitored on the preview bus.
3. Press the Stop Preview () button to quit playback.
4. Repeat steps 1-3 to preview other media files.

Using Auto Preview

The Auto Preview () button, when enabled, sets ACID to automatically play back media files when you select them in the Contents List pane. If your project is currently playing when you select a new file, the new file will play back along with your project. This feature allows you to listen to the media file in the context of your project.

The Auto Preview () button is a toggle feature, so it is either on or off. Click the button to turn Auto Preview on or off.

Using the Explorer view options

The Explorer window allows you to change the way the files and folders are displayed. You may toggle through the display options by clicking the **View** () button or selecting a display option from the button's submenu. Following are descriptions of each display option.

View	Description
Tree View	Displays all the drives and folders where media is located.
Summary View	Displays information about the selected media file: the media's storage path.
Details	Displays a media file's size and the date when it was created or last modified. The individual columns, in the Contents List view, are scalable so you can read longer text entry information.
All Files	Displays all file types, including non-media files, in the selected folder.

Changing the Time ruler format

You may specify a time format that the ACID Time ruler displays. The ruler, located below the Track View, displays real-time in several formats. You may change the ruler format in one of the following ways:

- From the **Options** menu, choose **Ruler Format** and select the desired format.
- Right-click the Time ruler and select the desired format from the shortcut menu. This can be done from the Track View, Chopper, and Track Properties dialog.

The following table describes the time formats available in ACID:

Time Format	Description
Samples	Displays the Time Ruler in samples.
Time	Displays the Time Ruler in hours:minutes:seconds.milliseconds.
Seconds	Displays the Time Ruler in seconds.
Time & Frames	Displays the Time Ruler in hours:minutes:seconds.frames with a frame rate equal to that of your video.
Absolute Frames	Displays the Time Ruler in total frames from the beginning of the project.
Feet & Frames 16 mm	Displays the Time Ruler in feet+frames at a rate of 40 frames per foot.
Feet & Frames 35 mm	Displays the Time Ruler in feet+frames at a rate of 16 frames per foot.
SMPTE Film Sync (24 fps)	Displays the Time Ruler in hours:minutes:seconds:frames with a frame rate of 24 frames per second for synchronizing with film.
SMPTE EBU (25 fps)	Displays the Time Ruler in hours:minutes:seconds:frames with a frame rate of 25 frames per second for European Broadcasting Union.
SMPTE Non-Drop (29.97 fps)	Displays the Time Ruler in hours:minutes:seconds:frames with a frame rate of 29.97 frames per second.
SMPTE Drop (29.97 fps)	Displays the Time Ruler in hours:minutes:seconds;frames with a frame rate of 29.97 frames per second using dropped frame numbers.
SMPTE 30 (30 fps)	Displays the Time Ruler in hours:minutes:seconds:frames with a frame rate of 30 frames per second.

Using the Ruler Offset

The Ruler Offset allows you to change the project's ruler settings to start at a specific time. Typically, this feature is used in conjunction with SMPTE and MIDI projects and when their timelines are the main reference. Basically, the Ruler Offset allows you to set the ACID Time ruler based on another project's timeline for reference purposes, i.e., the SMPTE or MIDI timelines.

When a new value is entered along the timeline, ACID will adjust the Ruler's time units at the cursor position and at the start of the timeline. For example, if the cursor is positioned at the 2:00 minute mark and you enter 15:00 minutes, the start of the project will be at 13:00 minutes. The Ruler Offset feature works the same for all time formats in ACID.

1. Position the cursor anywhere along the timeline.
2. On the Time ruler, right-click to display a shortcut menu.
3. From the shortcut menu, choose **Set Time at Cursor**. An edit box opens at the cursor position.



4. Enter a time value using the number keys.
5. Press the **Enter** key to set the cursor position's time value. The value that you enter at the cursor's position will affect all time values that precede and follow it.

Using the project grid

The project grid appears on the Track View and is mainly used to align the events in your project. The grid divides your project into equal units based on the setting that you choose. The grid setting can be based on the project type or how you prefer to work.

It is important to remember that in some cases the grid lines and the Ruler will not align or "match." This is because they are two independent functions. However, you may set the grid to align to the Ruler, which is the ACID default setting.

This table outlines the grid formats that you may use.

Ruler Marks	8th Note Triplets
Measures	16th Notes
Half Notes	16th Note Triplets
Quarter Notes	32 Notes
Quarter Note Triplets	32nd Note Triplets
8th Notes	

Setting the grid type

You may change the grid type at any time and apply it to your project. There are two ways to set the grid type for your project.

- From the **Options** menu, choose **Grid Spacing** and then the type of grid you want from the submenu.
- Right-click the Marker bar and choose **Grid Spacing** and then the type of grid that you want from the shortcut menu.

Using the Toolbar


ACID is preset to display the Toolbar below the Menu bar. However, you may hide and customize the Toolbar to suit your preferences. The settings that you apply to the Toolbar will remain set until you change them again.

Hiding and displaying the Toolbar

You may hide the Toolbar to create more workspace or if you prefer to use the ACID shortcut keys when working with your project.

Hiding the Toolbar

There are two ways to hide the Toolbar depending on whether it is docked or floating.

- If the Toolbar is docked or floating, choose **Toolbar** from the **View** menu. The check mark next to the command is removed and the Toolbar disappears. The Toolbar will remain hidden until you display it again.
- If the Toolbar is floating, you may simply click the Toolbar's close () button in the upper right hand corner.

Displaying the Toolbar

From the **View** menu, choose **Toolbar**. A check mark will appear next to the command and the Toolbar will appear in its preset position. The Toolbar will remain visible until you hide it again.

Reordering the Toolbar Buttons

ACID allows you to change the Toolbar's button order to suit your preferences. You may either reorder the buttons directly on the workspace or via the Customize Toolbar dialog.

Reordering buttons on the ACID workspace

1. Hold the **Shift** key and drag the button that you want to move to the new location on the Toolbar. You will see a hand icon (☞) within an outline of the button that you are moving.
2. Release the mouse to drop the button in its new location.

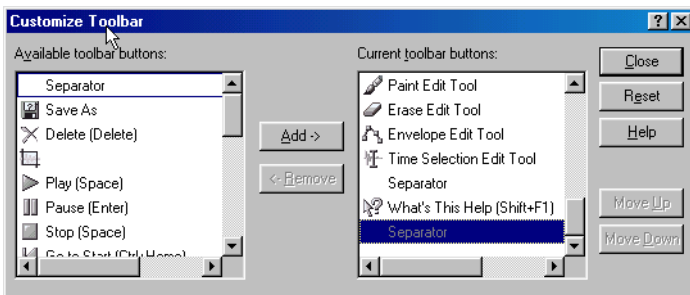
If you drag the button “off” the Toolbar, the button will be removed.

3. Repeat steps 1-3 to reorder more Toolbar buttons.

Reordering buttons on the Customize Toolbar dialog

The Customize Toolbar dialog allows you to control the order and functionality available on the Toolbar. You may return the Toolbar to its default settings by pressing the **Reset** button on this dialog.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog displays.



2. On the Current toolbar buttons pane, select the button that you want to move and click the **Move Up** or **Move Down** buttons.
3. Repeat step 2 to reorder more buttons.
4. Click the **Close** button to save the Toolbar changes and close the dialog.

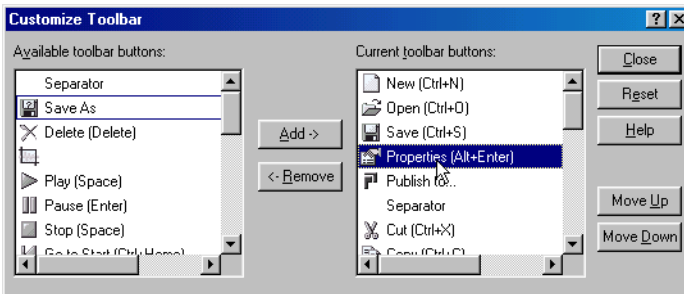
Adding buttons to the Toolbar

ACID includes a series of buttons that you may add to the Toolbar. These buttons are listed in the Customize Toolbar dialog. You may also add separators on the Toolbar to organize the buttons to your preferences.

You may return the Toolbar to its default settings by pressing the **Reset** button on the dialog.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog displays.
2. On the Available toolbar buttons pane, use the scroll bars to locate the button that you want to add and select it. The icons are what will be displayed on the Toolbar.
3. On the Current toolbar buttons pane, select the button that you want the newly added button to proceed in order.

For example, if you want to add the **Save As** button and want it to precede the **Properties** button, select the **Properties** button on the Current toolbar buttons pane.



4. Click the **Add** button. The new button will be added “above” the selected button on the Current toolbar buttons pane.


You may also double-click a button to add it to the Toolbar.

5. Repeat steps 2-4 to add more buttons to the Toolbar.
6. Click the **Close** button to save the Toolbar settings and close the dialog.

Removing buttons from the Toolbar

You may remove buttons and separators from the Toolbar. If you have added buttons to the Toolbar, removing unused or unwanted buttons allows you to maximize the Toolbar's space. You may remove Toolbar buttons either directly on the workspace or via the Customize Toolbar dialog.

Removing buttons on the ACID workspace

1. Hold the **[Shift]** key and drag the button that you want to remove "off" the Toolbar. You will see a hand icon () within an outline of the button that you are removing.
2. Release the mouse to remove the button.
3. Repeat steps 1-3 to move remove more Toolbar buttons.

Removing buttons on the Customize Toolbar dialog

You may return the Toolbar to its default settings by pressing the **Reset** button on this dialog.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog will appear.
2. On the Current toolbar buttons pane, select the button that you want to remove.
3. Click the **Remove** button. The button will be removed from the Current toolbar buttons pane and not appear on the Toolbar.

You may also double click the button to remove it.

4. Repeat steps 2-3 to remove more buttons from the Toolbar.
5. Click the **Close** button to save the Toolbar settings and exit the dialog.

Using the Time Display

The Time Display window above the Track List reflects the cursor's position on the timeline.

Changing cursor position

You can edit the cursor position using time as it is displayed on either the Time ruler or Beat ruler:

- To set the cursor's position based on the Time ruler, right-click the Time Display and choose **Edit Time Position** from the shortcut menu.
- To set the cursor's position based on the Beat ruler, right-click the Time Display and choose **Edit Cursor Position** from the shortcut menu.

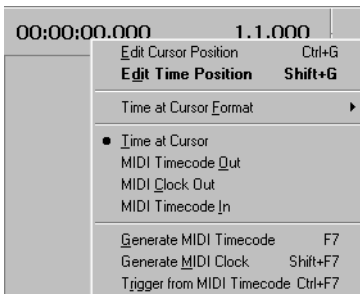
Once you make your selection from the shortcut menu, an edit box appears for the appropriate time display. Enter the cursor's new position and press **Enter**.

You can also edit the cursor position directly by double-clicking the desired Time Display field and entering the new cursor position.

Changing the Time Display

The Time Display window always reflects the format of the Time ruler. You may change the ruler settings for the Time ruler via the Time Display window.

1. Right-click the Time Display window to display a shortcut menu.



2. Choose **Time at Cursor Format** to display a submenu.
3. Choose the desired time format.

Both the Time window and Time ruler will display the chosen time format.

Setting the Time display monitor

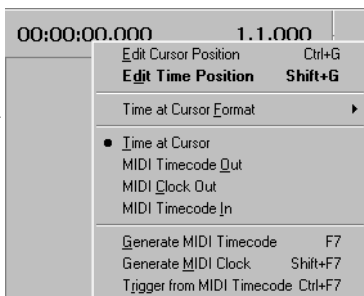
The Time Display window can be used to monitor incoming or outgoing MIDI timecode.

ACID can be set to monitor MIDI in the following ways:

- Display MIDI timecode generated from external sources.
- Display MIDI timecode and clock information that is being generated.

Within ACID, the Time Display settings work in conjunction with your project's properties and MIDI setup options.

1. Right-click the Time Display window to display a shortcut menu.



2. From the shortcut menu, choose the type of MIDI monitoring that ACID will display.

Once you have made your selection, the Time Display window displays both the MIDI code being input or output and a status message.

Setting project properties

ACID has many settings that you can use with a project. Some settings are simply informational details about the project, while others control how ACID will work and handle your project and its output. If you have multiple projects, ACID stores the settings used for each project, so you do not need to alter settings when you open a different project: saving you time.

The Project Properties dialog may be accessed two ways:

- From the **File** menu, choose **Properties**.
- Press the **Alt+Enter** shortcut keys.

The Project Properties dialog has two tabs: Summary and Audio. To display a properties page, click the desired tab. The following list describes how to work with the property tabs:

- To enter information, click inside a field and type.
- Press the **[Tab]** key to move to a different field.
- Click the **Apply** button to save information, but keep the Project Properties dialog open.
- Click the **OK** button or press the **[Enter]** key to save the information and close the Project Properties dialog.
- Click the **Cancel** button to keep the original information, if any existed, and close the Project Properties dialog.

Using the Summary properties tab

This tab allows you to enter information about the project. These fields may be left blank or if information exists, you may change it at any time.

Field	Description
Title	Enter the name or title of the open project.
Artist	Enter the name of the narrator, band, or artist(s) being recorded into the project.
Engineer	Enter the name(s) of the people who mixed and edited the project.
Copyright	Enter the date and ownership rights of the project.
Comments	Enter information that identifies and describes the project.
Check box	Click the Start all new projects with these settings check box if your projects' requirements do not change or you want consistent settings for future projects.

Using the Audio properties tab

This tab allows you to set different characteristics the project will use to handle the audio. Since audio requires a lot of disk space, this page displays the available drive space where ACID stores recorded audio.

Field	Description
Number of additional stereo busses	Enter the number of stereo busses that you want in your project. You may add up to 26 busses. The busses appear in the Mixer window.
Sample rate	Choose a sample rate from the drop-down list or enter your own rate. The sample rate range is 2,000 Hz to 96,000 Hz. Higher sample rates result in better quality sound, but also means larger audio files.
Bit-depth	Choose a bit depth from the drop-down list. A higher bit-depth results in better quality sound, but also means larger audio files.
Check box	Click the Start all new projects with these settings check box if your projects' requirements do not change or you want consistent settings for future projects.

Setting ACID preferences

From the **Options** menu, choose **Preferences** to display the Preferences dialog.

Using the General preferences tab

Item	Description
Automatically open last project on startup	Select this check box if you want ACID to reopen the project that was open the last time ACID was closed. When the check box is cleared, ACID starts with a blank project.
Show logo splash screen on startup	Select this box if you want the ACID logo splash screen to be displayed when ACID starts.
Use Net Notify to stay informed about Sonic Foundry products	When this check box is selected, ACID will periodically display information from Sonic Foundry at startup. Clear the check box to bypass the Net Notify dialog.
Draw contents of events	Select this check box if you want ACID to draw waveforms in events. Clearing the check box can improve performance on some systems.
Create undos for FX parameter changes	Select this check box if you want ACID to create Undos when a plug-in parameter is changed in the FX pages.
Confirm media file deletion when still in use	When this check box is selected, a message box will appear asking if you want to delete a media file that is currently in use by the project.
Close media files when ACID is not the active application	When this check box is selected, files can be edited in external editors while they are contained in events in ACID.
Enable multimedia keyboard support	When this check box is selected, you can use a multimedia keyboard to control playback of a project.
Automatically render large Wave files as Wave64	The .wav format is limited by a maximum file size of ~2GB. When this check box is selected, you can render larger files as Sonic Foundry Wave64 files.
Prompt for region and marker names if not playing	When this check box is selected, an edit box is displayed so you can name markers and regions as you place them.
Create project file backups on save (.acd-bak)	When this check box is selected, ACID will make a backup of project files when you open them. Backup files are stored in the same folder as your project and use the same extension .acd.bak. You can use backup project files to revert to a project's previous state.
Preserve pitch for new Beatmapped tracks when tempo changes	Select the check box if you want ACID maintain the pitch of Beatmapped tracks when the project tempo changes.
Automatically start the Beatmapper Wizard for long files	Select the check box if you want ACID to start the Beatmapper Wizard when you add a file that is longer than 30 seconds to your project.
Recently used project list	Select the check box and enter a number in the edit box if you want ACID to list your most recently used projects at the bottom of the File menu.

Item	Description
Temporary files folder	<p data-bbox="497 142 1241 207">Displays the folder where temporary files are created. Click the Browse button to specify a new folder.</p> <p data-bbox="497 207 1241 321">When a media file is added to a project from a removable device, ACID stores a copy of the media file in a temporary subfolder within the ACID program folder. This keeps the media file available for use even if the source of the media is no longer accessible.</p> <p data-bbox="497 321 1241 386">Be aware that these subfolders are cleared when you close ACID. However, they are not cleared if ACID closes inappropriately.</p>
Free storage space in selected folder	<p data-bbox="497 386 1241 443">This field displays the amount of space available in the folder specified in the Temporary storage folder box.</p>
Default All	<p data-bbox="497 443 1241 480">Restores the General page options to the default settings.</p>

Using the Audio preferences tab

Setting Audio preferences

Item	Description
Audio device type	Choose a driver type from the drop-down list. The Microsoft Sound Mapper is the default setting. If you want to activate specific sound cards, choose Windows Classic Wave Driver and choose a device from the Default audio playback device drop-down list.
Default audio playback device	Choose the device that you want to use for playing sound data. Selecting a device such as the Microsoft Sound Mapper allows Windows to select an appropriate device to use for the current sound data. If you have selected Microsoft Sound Mapper, you will not be able to assign busses to different devices.
Playback buffering	The Playback Buffering (seconds) slider specifies the total amount of buffering that ACID uses during playback. The larger the number, the more buffering that ACID will do during playback. This value must be as low as possible without gapping. To set it, start at .25 and play back a typical song. Move some of the track faders. If the playback gaps at all, try increasing this slider in small increments until the gapping stops. As you increase this slider, the RAM meter at the bottom of the ACID window will indicate more RAM usage. If you simply cannot get playback to be free of gapping, you need to either decrease the number of tracks you are trying to play simultaneously, install more RAM in your computer so you can increase buffering, buy a faster access hard drive, or minimize the number of DirectX plug-ins you are trying to use simultaneously.
Open files as loops if between (seconds)	Enter a lower and upper limit to specify which files ACID will open as loops if stretching properties are not saved in the file. Files that are shorter than the lower limit will be opened as one-shot tracks; files longer than the upper limit will start the Beatmapper Wizard.
Quick fade edit edges of audio events	When the check box is selected, ACID will place a rapid fade on the edges of audio events (10ms by default) to soften potentially harsh transitions. When the command is not selected, edges of new events are not faded (fades that were applied before the check box is cleared are not removed). Right-click an event and select or clear the Quick Fade Edges command to override the default event fade behavior for individual events.
Quick fade time	Enter a time (in milliseconds) to specify the duration of fades applied to the edges of events.

Setting advanced audio preferences

Hardware	
Audio Devices	This list displays all of the audio devices that are installed in your computer. Selecting a device allows you to set the options below for that device.
Interpolate position	When this box is checked, ACID will attempt to compensate for inaccurate devices by interpolating the playback or recording position. If you notice that your playback cursor is offset from what you are hearing, select this option for the playback device.
Position bias	If the position of playback or record does not match what you hear after you enable Interpolate position, you can attempt to compensate using the Position bias slider. Moving this slider will offset the position forward or backward to compensate for the inaccuracies of the device
Do not pre-roll buffers before starting playback	When this box is checked, ACID will not create buffers prior to starting playback. Some devices do not behave properly if this check box is cleared. If your audio stutters when you start playback, try selecting this option.
Record Latency	
Automatically detect and offset hardware recording latency	Select this check box to automatically compensate for offset between the time you initiate recording and when your sound card starts recording.
User recording latency offset	Drag this slider to specify an offset value.

Using the MIDI preferences tab

Item	Description
Make these devices available for MIDI track playback and synchronization	Select the MIDI devices that you want to be available when you click the Device Selection button in the Track List.
MIDI Thru device for recording	Choose a device from the drop-down list to send MIDI messages to a second device for playback. For example, if you are recording using a MIDI controller keyboard, that keyboard itself doesn't produce sound. In order to hear what you are playing set a MIDI Thru device. ACID will record MIDI messages and send them to the MIDI Thru device chosen so you can hear what you are playing/recording. SysEx messages are not sent to the MIDI Thru device.
Default DLS set for MIDI playback	From the drop-down list, choose the DLS set that you want to use when playing back MIDI tracks, or click Load to browse to a DLS file.
Default All	Restores all MIDI preferences to the default settings.

Using the Video preferences tab

Item	Description
Show source frame numbers on video thumbnails as	Choose a setting from the drop-down list to change the format used to display frame numbers in the video track, or choose None to turn off frame numbering.
External monitor device	Choose a DV output device from the drop-down list. This is the interface to which your video device is connected.
Details	Displays information about the device selected in the Device drop-down list.
If project format is invalid for DV output, conform to the following	If your source media does not conform to DV standards, choose a setting from the drop-down list. ACID will adjust the video to display properly on your external monitor.
Sync offset (frames)	If your audio is not synchronized with your external monitor, you can configure an offset for your hardware. Drag the slider to synchronize audio and video. This setting affects synchronization for previewing on an external monitor. Audio and video synchronization in your ACID project is unaffected.
Default All	Restores all Video preferences to the default settings.

Using the Editing preferences tab

Item	Description
Project tempo range	Use the up and down arrows or enter a value in the edit boxes to specify the minimum and maximum tempo available in the ACID project. Changing this option will affect the resolution of the Tempo slider.
Editing Application X	Enter the name of each editor you want to have displayed in the Track List shortcut menu. Right-click in the Track List, and choose Edit in [editor name] to edit the media file associated with a track. You can specify any editing tool you want to use; however, this feature was designed for use with destructive audio/MIDI editors.
Browse	Click Browse and select the .exe file for each editor you want to have available in the Track List shortcut menu.
Name	Enter the name that you want to use to identify each editor. The name is displayed in the Track List shortcut menu and the Tools menu.
Clear	Removes the specified editor from the Editing page.
Check for Sonic Foundry editors	When this check box is selected, ACID will automatically search for available Sonic Foundry editors on your computer. If one is located, it will be placed as an available editor in the Editing Application X field.
Default All	Restores all Editing preferences to the default settings.

Using the CD preferences tab

Item	Description
Write drive	Select the drive you want to use to create CDs from the drop-down list.
Write speed	Select the speed of your CD recorder from the drop-down list.
Audio extract optimization	If you experience gapping or glitching in tracks that you've extracted from CDs, adjust the slider.
Autoname extracted CD tracks	Select this check box if you want ACID to automatically assign file names to tracks that you've extracted from CDs. File names will include the CD's serial number and track number.
Default All	Restores all CD preferences to the default settings.

Using the Sync preferences tab

Setting Sync preferences

Generate MIDI Timecode settings

Output device	Select a MIDI device from the drop-down list. MIDI timecode will be sent to this device. The MTC slave should also be set to this device. This device will not be available for MIDI playback.
Frame rate	Select a frame rate from the drop-down list. ACID will use this frame rate to generate the MIDI timecode. The MTC slave must be set to the same frame rate.

Generate MIDI Clock settings

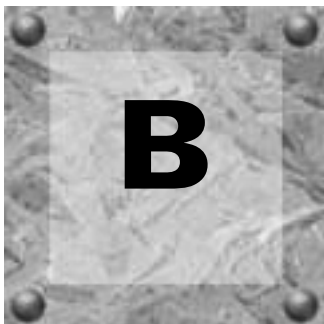
Output device	Select a MIDI device from the drop-down list. MIDI Clock will be sent to this device. The MIDI Clock slave should also be set to this device.
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Trigger from MIDI Timecode settings

Input device	Select a MIDI device from the drop-down list. MIDI timecode will be received from this device. The MTC master should also be set to this device.
Frame rate	Select a frame rate from the drop-down list. This value specifies the frame rate at which the MTC master will send timecode to ACID.
Advanced	Click to open the Advanced Sync Preferences dialog.
Default All	Restores all Sync preferences to the default settings.

Setting advanced Sync preferences

MTC Output	
Use internal timer for MTC generation	Select this check box if you want ACID to base its MTC on the CPU clock. When this check box is cleared, MTC will be generated from the clock on the sound card.
Internal time resolution	Select a resolution from the drop-down list if the Use internal timer for MTC generation box is selected. High numbers indicate low resolution and vice-versa.
Full-frame message generation	<p>Select a radio button to determine when ACID will send full-frame timecode messages while Generate MIDI Timecode is enabled. Full-frame messages are used by some external synchronizable audio devices to seek to a proper location prior to actually starting synchronization. Tape-based recorders especially benefit from seeking to full-frame messages because of the time it takes to move the transport to the proper location. However, full-frame messages are ignored by some devices, and may actually cause unexpected behavior in other devices.</p> <p>Refer to your hardware documentation to find out if your hardware supports full-frame messages.</p>
MIDI Clock Output	
Send Start instead of Continue when beginning playback	<p>Select this check box if you want ACID so send a Start command rather than a Continue command when Generate MIDI Clock is enabled.</p> <p>When the check box is cleared, ACID sends a Continue command, as this type of command allows the chasing device to start from a specific time. However, some older sequencers that support MIDI Clock chase do not support the Continue command and must start playback from the beginning every time.</p>
Song Position Pointer generation	<p>Select a radio button to determine when ACID will send Song Position Pointer messages while Generate MIDI Clock is enabled.</p> <p>Song Position Pointer messages are used by MIDI applications and devices to seek to a proper location prior to starting synchronization.</p>



Glossary

The glossary contains terms and their definitions that you may come across in the manual. However, this glossary does not simply deal with ACID, but also includes relevant industry terms.

.acd-zip

An ACID project file that contains all information regarding the project including track layout, envelope settings, and effects parameters. In addition, all audio files used in the project are embedded into the project file.

Activation Code

This number is based on the Computer ID number of the computer on which ACID is installed. Each computer has a unique number, similar to a license plate. An activation code is created based on that number. When you register ACID, Sonic Foundry will generate an activation code for you. Once the code is entered, ACID will not time out. Since the activation number is based on the Computer ID, it is important that you have ACID installed on the computer where you will be using it.

Adaptive Delta Pulse Code Modulation (ADPCM)

A method of compressing audio data. Although the theory for compression using ADPCM is standard, there are many different algorithms employed. For example, Microsoft's ADPCM algorithm is not compatible with the International Multimedia Association's (IMA) approved ADPCM.

Advanced Streaming Format (ASF)

See, *Windows Media Format*.

Aliasing

A type of distortion that occurs when digitally recording high frequencies with a low sample rate. For example, in a motion picture, when a car's wheels appear to slowly spin backward while the car is quickly moving forward, you are seeing the effects of aliasing. Similarly, when you try to record a frequency greater than one half of the sampling rate (the Nyquist Frequency), instead of hearing a high pitch, you may hear a low-frequency rumble.

To prevent aliasing, an anti-aliasing filter is used to remove high-frequencies before recording. Once the sound has been recorded, aliasing distortion is impossible to remove without also removing other frequencies from the sound. This same anti-aliasing filter must be applied when resampling to a lower sample rate.

Attack	The attack of a sound is the initial portion of the sound. Percussive sounds (drums, piano, guitar plucks) are said to have a fast attack. This means that the sound reaches its maximum amplitude in a very short time. Sounds that slowly swell up in volume (soft strings and wind sounds) are said to have a slow attack.
Audio Compression Manager (ACM)	The Audio Compression Manager, from Microsoft, is a standard interface for audio compression and signal processing for Windows. The ACM can be used by Windows programs to compress and decompress .wav files.
Audio Interchange File Format (AIFF)	An audio file format developed by Apple Computer.
Audio Proxy File (.sfap0)	See, Proxy File .
ASX File	ASF Stream Redirector file. See, Redirector File .
Attenuation	A decrease in the level of a signal.
Bandwidth	<p>When discussing audio equalization, each frequency band has a width associated with it that determines the range of frequencies that are affected by the EQ. An EQ band with a wide bandwidth will affect a wider range of frequencies than one with a narrow bandwidth.</p> <p>When discussing network connections, refers to the rate of signals transmitted; the amount of data that can be transmitted in a fixed amount of time (stated in bits/second): a 56 Kbps network connection is capable of receiving 56,000 bits of data per second.</p>
Beatmapped track	A file that has tempo information added to is as a result of going through the Beatmapper Wizard.
Beats Per Minute (BPM)	The tempo of a piece of music can be written as a number of beats in one minute. If the tempo is 60 BPM, a single beat will occur once every second.
Bit	The most elementary unit in digital systems. Its value can only be 1 or 0, corresponding to a voltage in an electronic circuit. Bits are used to represent values in the binary numbering system. As an example, the 8-bit binary number 10011010 represents the unsigned value of 154 in the decimal system. In digital sampling, a binary number is used to store individual sound levels, called samples.
Bit Depth	The number of bits used to represent a single sample. For example, 8- or 16-bit are common sample sizes. While 8-bit samples take up less memory (and hard disk space), they are inherently noisier than 16-bit samples.
Buffer	Memory used as an intermediate repository in which data is temporarily held while waiting to be transferred between two locations. A buffer ensures that there is an uninterrupted flow of data between computers. Media players may need to rebuffer when there is network congestion.
Bus	A virtual pathway where signals from tracks and effects are mixed. A bus's output is a physical audio device in the computer from which the signal will be heard.

Byte	Refers to a set of 8 bits. An 8-bit sample requires one byte of memory to store, while a 16-bit sample takes two bytes of memory to store.
Clipboard	The clipboard is where data that you have cut or copied from ACID is stored. You can then paste the data back into ACID at a different location.
Clipping	Occurs when the amplitude of a sound is above the maximum allowed recording level. In digital systems, clipping is seen as a clamping of the data to a maximum value, such as 32,767 in 16-bit data. Clipping causes sound to distort.
Codec	Coder/decoder: refers to any technology for compressing and decompressing data. The term codec can refer to software, hardware, or a combination of both technologies.
Compression Ratio (audio)	<p>A compression ratio controls the ratio of input to output levels above a specific threshold. This ratio determines how much a signal has to rise above the threshold for every 1 dB of increase in the output. For example, with a ratio of 3:1, the input level must increase by three decibels to produce a one-decibel output-level increase:</p> <ul style="list-style-type: none"> • Threshold = -10 dB • Compression Ratio = 3:1 • Input = -7dB • Output = -9 dB <p>Because the input is 3dB louder than the threshold and the compression ratio is 3:1, the resulting signal is 1 dB louder than the threshold.</p>
Compression Ratio (file size)	The ratio of the size of the original noncompressed file to the compressed contents. For example, a 3:1 compression ratio means that the compressed file is one-third the size of the original.
Computer ID	<p>Each computer has a unique number, similar to a license plate. An activation number is created based on that number. Since the activation number is based on the Computer ID, it is important that you have ACID installed on the computer where you will be using it. The Computer ID is automatically detected and provided to you when you install ACID.</p> <p>The Computer ID is used for registration purposes only. It doesn't give Sonic Foundry access to any personal information and can't be used for any purpose other than for generating a unique activation number for you to use ACID.</p>
Crossfade	Mixing two pieces of audio by fading one out as the other fades in.
DC Offset	<p>DC offset occurs when hardware, such as a sound card, adds DC current to a recorded audio signal. This current results in a recorded wave is not centered around the zero baseline. Glitches and other unexpected results can occur when sound effects are applied to files that contain DC offsets.</p> <p>In the following example, the red line represents 0 dB. The lower waveform exhibits DC offset; note that the waveform is centered approximately 2 dB above the baseline.</p>

Decibel (dB)	<p>A unit used to represent a ratio between two numbers using a logarithmic scale. For example, when comparing the numbers 14 and 7, you could say 14 is two times greater than the number 7; or you could say 14 is 6 dB greater than the number 7. Where did we pull that 6 dB from? Engineers use the equation $\text{dB} = 20 \times \log(V1/V2)$ when comparing two instantaneous values. Decibels are commonly used when dealing with sound because the ear perceives loudness in a logarithmic scale.</p> <p>In ACID, most measurements are given in decibels. For example, if you want to double the amplitude of a sound, you apply a 6 dB gain. A sample value of 32,767 (maximum positive sample value for 16-bit sound) can be referred to as having a value of 0 dB. Likewise, a sample value of 16,384 can be referred to having a value of -6 dB.</p>
Device Driver	<p>A program that enables Windows to connect different hardware and software. For example, a sound card device driver is used by Windows software to control sound card recording and playback.</p>
Digital Rights Management (DRM)	<p>A system for delivering songs, videos, and other media over the Internet in a file format that protects copyrighted material. Current proposals include some form of certificates that validate copyright ownership and restrict unauthorized redistribution.</p>
Digital Signal Processing (DSP)	<p>A general term describing anything that alters digital data. Signal processors have existed for a very long time (tone controls, distortion boxes, wah-wah pedals) in the analog (electrical) domain. Digital Signal Processors alter the data after it has been digitized by using a combination of programming and mathematical techniques. DSP techniques are used to perform many effects such as equalization and reverb simulation.</p> <p>Since most DSP is performed with simple arithmetic operations (additions and multiplications), both your computer's processor and specialized DSP chips can be used to perform any DSP operation. The difference is that DSP chips are optimized specifically for mathematical functions while your computer's microprocessor is not. This results in a difference in processing speed.</p>
DirectX	<p>A set of Application Program Interfaces designed by Microsoft for multimedia development. A DirectX plug-in, such as the Sonic Foundry Noise Reduction DirectX Plug-In, uses the DirectX Media Streaming Services (DMSS) API. Because DMSS is a standard API, a DirectX plug-in can be used in any application that supports DMSS.</p>
Disk-Based Files	<p>Disk-based files are usually longer audio clips that are played from hard disk rather than being stored in RAM. Disk-based files are used for vocals or any other long audio file that does not loop.</p>
Downbeat	<p>This term is used in the Beatmapper to mean the first beat of the first measure.</p>
Downloadable Sound (DLS)	<p>A DLS file stores a custom sound set, which you can load into your SoftSynth-giving you another set of voices for playback.</p>

Drag and Drop	A quick way to perform certain operations using the mouse. To drag and drop, you click and hold a highlighted selection, drag it (hold the left mouse button down and move the mouse) and drop it (let go of the mouse button) at another position on the screen.
Dynamic Range	The difference between the maximum and minimum signal levels. It can refer to a musical performance (high- volume vs. low-volume signals) or to electrical equipment (peak level before distortion vs. noise floor). For example, orchestral music has a wide dynamic range, while thrash metal has a very small (always loud) range.
Envelopes	Envelopes allow you to automate the change of a certain parameter over time. In the case of volume, you can create a fade out (which requires a change over time) by adding an envelope and creating a point in the line to indicate where the fade starts. Then you pull the end point of the envelope down to -infinity.
Equalization (EQ)	Equalizing a sound file is a process by which certain frequency bands are raised or lowered in level. EQ has various uses. The most common use for ACID users is to simply adjust the subjective timbral qualities of a sound.
Event	An instance of a media file on a track. An event may play an entire media file or a portion of the file.
File Format	A file format specifies the way in which data is stored on your floppy disks or hard drive. In Windows, the most common file format is the Microsoft .wav format.
Frame Rate	Audio uses frame rates only for the purposes of synching to video or other audio. To synchronize with audio a rate of 30 non-drop is typically used. To synchronize with video, 29.97 drop is usually used.
Frequency Spectrum	The frequency spectrum of a signal refers to its range of frequencies. In audio, the frequency range is basically 20 Hz to 20,000 Hz. The frequency spectrum sometimes refers to the distribution of these frequencies. For example, bass-heavy sounds have a large frequency content in the low end (20 Hz - 200 Hz) of the spectrum.
Hertz (Hz)	The unit of measurement for frequency or cycles per second (CPS).
Insert Increment	Sections of silence between selections that are made in the Chopper and painted into the track view.
Insertion Point	The insertion point (also referred to as the cursor position) is analogous to the cursor in a word processor. It is where markers or commands may be inserted depending on the operation. The Insertion Point appears as a vertical flashing black line and can be moved by clicking the left mouse button anywhere in the full-view control area.
Loop	Loops are small audio clips that are designed to create a repeating beat or pattern. Loops are usually one to four measures long and are stored completely in RAM for playback.

Marker	A marker is an anchored, accessible reference point in a file.
MIDI Channel	An informational pathway over which MIDI data can travel.
Media Control Interface (MCI)	A standard way for Windows programs to communicate with multimedia devices such as sound cards and CD players. If a device has an MCI device driver, it can easily be controlled by most multimedia Windows software.
Media File	Files that may be placed within the ACID project. After a media file is placed into the project, it is referred to as an event.
MIDI Clock	A MIDI device-specific timing reference. It is not absolute time like MIDI timecode (MTC); instead it is a tempo-dependent number of "ticks" per quarter note. MIDI clock is convenient for synchronizing devices that need to perform tempo changes mid-song. ACID supports MIDI clock out, but does not support MIDI clock in.
MIDI Port	A MIDI port is the physical MIDI connection on a piece of MIDI hardware. This port can be a MIDI in, out or through. Your computer must have a MIDI-capable card to output MIDI timecode to an external device or to receive MIDI timecode from an external device.
MIDI timecode (MTC)	MTC is an addendum to the MIDI 1.0 specification and provides a way to specify absolute time for synchronizing MIDI-capable applications. MTC is essentially a MIDI representation of SMPTE timecode.
Multiple-Bit-Rate Encoding	<p>Multiple-bit-rate encoding (also known as Intelligent Streaming for the Windows Media platform and SureStream™ for the RealMedia G2 platform) allows you to create a single file that contains streams for several bit rates. A multiple-bit-rate file can accommodate users with different Internet connection speeds, or these files can automatically change to a different bit rate to compensate for network congestion without interrupting playback.</p> <p>To take advantage of multiple-bit-rate encoding, you must publish your media files to a Windows Media server or a RealServerG2.</p>
Musical Instrument Device Interface (MIDI)	A standard language of control messages that provides for communication between any MIDI-compliant devices. Anything from synthesizers to lights to factory equipment can be controlled via MIDI. ACID uses MIDI for synchronization purposes.
Normalize	Refers to raising the volume so that the highest level sample in the file reaches a user defined level. Use normalization to make sure you are using all of the dynamic range available to you.
Nyquist Frequency	The Nyquist Frequency (or Nyquist Rate) is one half of the sample rate and represents the highest frequency that can be recorded using the sample rate without aliasing. For example, the Nyquist Frequency of 44,100 Hz is 22,050 Hz. Any frequencies higher than 22,050 Hz will produce aliasing distortion in the sample if no anti-aliasing filter is used while recording.

Offline Media	A media file that cannot be located on the computer. If you choose to leave the media offline, you can continue to edit events on the track; the events will point to the original location of the source media file.
One-Shot	One-shots are chunks of audio that are not designed to loop, and they are streamed from the hard disk rather than stored in RAM if they are longer than three seconds. Things such as cymbal crashes and sound bites could be considered one-shots. Unlike loops, one-shots will not change pitch or tempo with the rest of a project.
Pan	To place a mono or stereo sound source perceptually between 2 or more speakers.
Peak Data File	The file created by ACID when a file is opened for the first time. This file stores the information regarding the graphic display of the waveform so that opening a file is almost instantaneous. This file is stored in the directory where the audio file resides and has a .sfk extension. If this file is not in the same directory as the audio file or is deleted, it will be recalculated the next time you open the file.
Proxy File	Working with certain types of media files with particular audio compression schemes can be inefficient and slow. To compensate for this, ACID creates audio proxy files for these formats to dramatically increase speed and performance. The file is saved as a proprietary .sfap0 file, with the same name as the original media file and has the same characteristics as the original audio stream. The conversion happens automatically and does not result in a loss of quality or synchronization. Audio proxy files can be safely deleted at any time since ACID will recreate these files as needed.
Pulse Code Modulation (PCM)	PCM is the most common representation of uncompressed audio signals. This method of coding yields the highest fidelity possible when using digital storage. PCM is the standard format for .wav and .aif files.
Quantization	The correction of rhythms in a MIDI sequence.
Real-Time Streaming Protocol (RTSP)	A proposed standard for controlling broadcast of streaming media. RTSP was submitted by a body of companies including RealNetworks and Netscape.
Redirector File	A metafile that provides information to a media player about streaming-media files. To start a streaming media presentation, a Web page will include a link to a redirector file. Linking to a redirector file allows a file to stream; if you link to the media file, it will be downloaded before playback. Windows Media redirector files use the .asx or .wax extension; RealMedia redirector files use the .ram, .rpm, or .smi extension.
Region	A region in ACID is a section of time used to subdivide your project into segments.
Rendering	The process in which ACID saves the project to a specific file format like .wma or .mp3.

Resample

The act of recalculating samples in a sound file at a different rate than the file was originally recorded. If a sample is resampled at a lower rate, sample points are removed from the sound file, decreasing its size, but also decreasing its available frequency range. Resampling to a higher sample rate, ACID will interpolate extra sample points in the sound file. This increases the size of the sound file, but does not increase the quality. When down-sampling, one must be aware of aliasing.

Sample

The word sample is used in many different (and often confusing) ways when talking about digital sound. Here are some of the different meanings:

- A discrete point in time which a sound signal is divided into when digitizing. For example, an audio CD-ROM contains 44,100 samples per second. Each sample is really only a number that contains the amplitude value of a waveform measured over time.
- A sound that has been recorded in a digital format; used by musicians who make short recordings of musical instruments to be used for composition and performance of music or sound effects. These recordings are called samples. In this Help system, we try to use sound file instead of sample whenever referring to a digital recording.
- The act of recording sound digitally, i.e. to sample an instrument means to digitize and store it.

Sample Rate

The Sample Rate (also referred to as the Sampling Rate or Sampling Frequency) is the number of samples per second used to store a sound. High sample rates, such as 44,100 Hz provide higher fidelity than lower sample rates, such as 11,025 Hz. However, more storage space is required when using higher sample rates.

Sample Size

See, [Bit Depth](#).

Sample Value

The Sample Value (also referred to as sample amplitude) is the number stored by a single sample. In 16-bit audio, these values range from -32768 to 32767. In 8-bit audio, they range from -128 to 127. The maximum allowed sample value is often referred to as 100% or 0 dB.

Secure Digital Music Initiative (SDMI)

The Secure Digital Music Initiative (SDMI) is a consortium of recording industry and technology companies organized to develop standards for the secure distribution of digital music. The SDMI specification will answer consumer demand for convenient accessibility to quality digital music, enable copyright protection for artists' work, and enable technology and music companies to build successful businesses.

Shortcut Menu

A context-sensitive menu that appears when you click certain areas of the screen. The functions available in the shortcut menu depend on the object being clicked on as well as the state of the program. As with any menu, you can select an item from the shortcut menu to perform an operation. Shortcut menus are used frequently in ACID for quick access to many commands.

Signal-to-Noise Ratio	<p>The signal-to-noise ratio (SNR) is a measurement of the difference between a recorded signal and noise levels. A high SNR is always the goal.</p> <p>The maximum signal-to-noise ratio of digital audio is determined by the number of bits per sample. In 16-bit audio, the signal to noise ratio is 96 dB, while in 8-bit audio its 48 dB. However, in practice this SNR is never achieved, especially when using low-end electronics.</p>
Society of Motion Picture and Television Engineers (SMPTE)	<p>SMPTE timecode is used to synchronize time between devices. The timecode is calculated in Hours:Minutes:Second:Frames, where Frames are fractions of a second based on the frame rate. Frame rates for SMPTE timecode are 24, 25, 29.97 and 30 frames per second.</p>
Streaming	<p>A method of data transfer in which a file is played while it is downloading. Streaming technologies allow Internet users to receive data as a steady, continuous stream after a brief buffering period. Without streaming, users would have to download files completely before playback.</p>
Tempo	<p>Tempo is the rhythmic rate of a musical composition, usually specified in beats per minute (BPM).</p>
Threshold	<p>A threshold determines the level at which the signal processor begins acting on the signal. During normalization, levels above this threshold are attenuated (cut).</p>
Time Format	<p>The format by which ACID displays the Time Ruler and selection times. These can include: Time, Seconds, Frames and all standard SMPTE frame rates.</p>
Track	<p>A discrete timeline for audio data. Audio events sit on tracks and determine when a sound starts and stops. Multiple audio tracks are played together to give you a composite sound that you hear through your speakers.</p>
Track List	<p>The Track List contains the master controls for each track. From here you can adjust the mix, select playback devices, and reorder tracks.</p>
Track View	<p>The majority of the Track View is made up of the space where you will draw events on each track.</p>
μ-Law	<p>μ-Law (mu-Law) is a companded compression algorithm for voice signals defined by the Geneva Recommendations (G.711). The G.711 recommendation defines μ-Law as a method of encoding 16-bit PCM signals into a non-linear 8-bit format. The algorithm is commonly used in European and Asian telecommunications. μ-Law is very similar to A-Law, however, each uses a slightly different coder and decoder.</p>
Undo/Redo	<p>These commands allow you to change a project back to a previous state, when you don't like the changes you have made, or reapply the changes after you have undone them.</p>

Virtual MIDI Router (VMR)

A software-only router for MIDI data between programs. ACID uses the VMR to receive MIDI timecode and send MIDI clock. No MIDI hardware or cables are required for a VMR, so routing can only be performed between programs running on the same PC. Sonic Foundry supplies a VMR with ACID called the Sonic Foundry Virtual MIDI Router.

wav

An digital audio standard developed by Microsoft and IBM. One minute of uncompressed audio requires 10 MB of storage.

Waveform

A waveform is the visual representation of wave-like phenomena, such as sound or light. For example, when the amplitude of sound pressure is graphed over time, pressure variations usually form a smooth waveform.

Waveform Display

Each event shows a graph of the sound data waveform. The vertical axis corresponds to the amplitude of the wave. For 16-bit sounds, the amplitude range is -32,768 to +32,767. For 8-bit sounds, the range is -128 to +127. The horizontal axis corresponds to time, with the left-most point being the start of the waveform. In memory, the horizontal axis corresponds to the number of samples from the start of the sound file.

Windows Media Format

Microsoft's Windows Media file format that can handle audio and video presentations and other data such as scripts, URL flips, images and HTML tags. Advanced Streaming Format files can be saved with the .asf or .wma extensions.

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