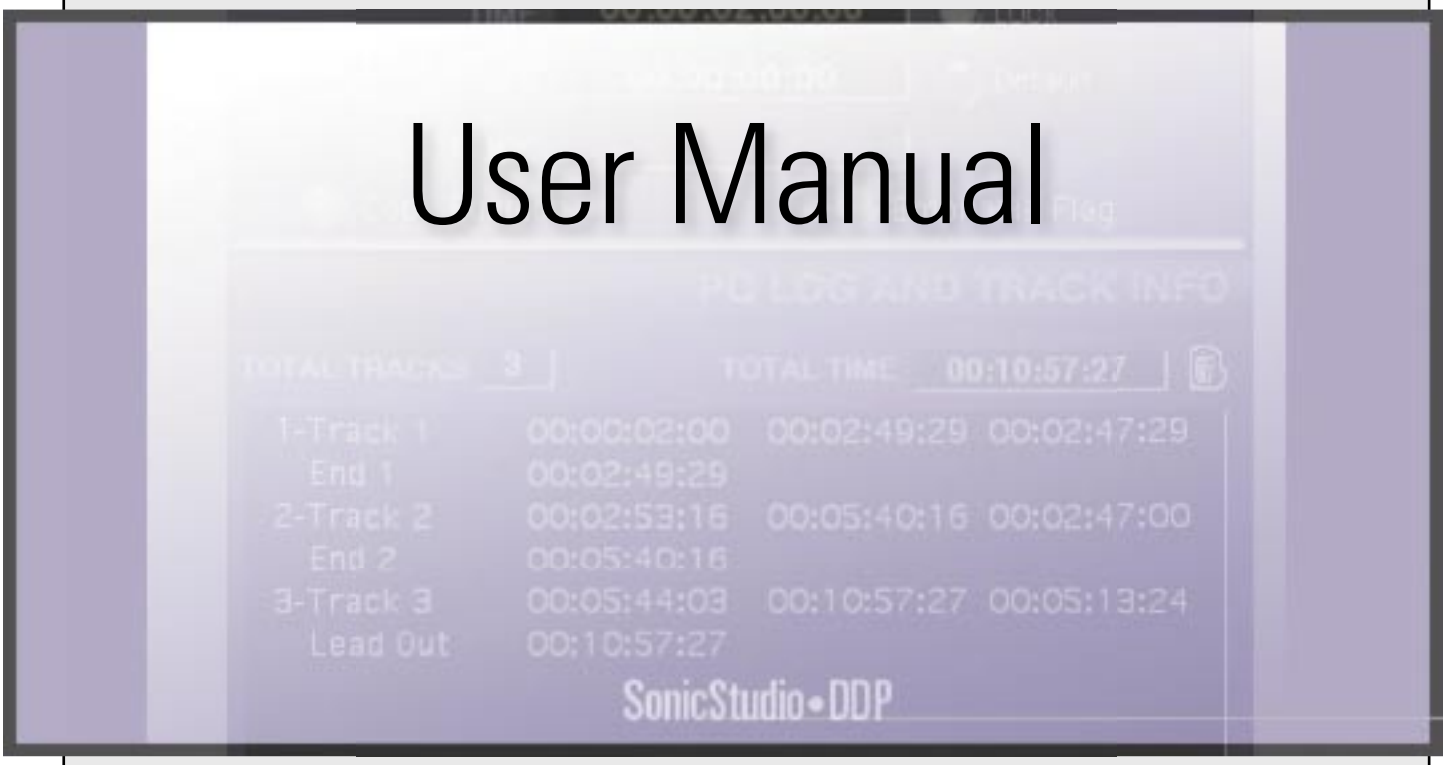
SonicStudio•DDP

User Manual



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Sonic Studio

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Chapter 1.....Introduction

SonicStudio•DDP is an easy to operate, task-specific tool for working with DDP image files. SonicStudio•DDP is ideal for:

- auditioning the audio in a DDP image.
- checking the locations of the PQ marks relative to the sound.
- verify metadata associated with a title.

SonicStudio•DDP allows you to audition and edit your DDP image without the need to tie up an expensive, DAW-based production system. You could, for instance, use SonicStudio•DDP to do a final check for imperfections in a program before the title is sent out for replication. Also, marks can be added, deleted or moved in time, while ISR codes and UPC/EAN entries can be verified and edited if necessary.

Optionally, SonicStudio•DDP can be fitted with the NoNOISE Manual DeClick option, an extensive collection of benchmark restoration tools to remove clicks, pops and distortion from compromised audio files. Finally, since SonicStudio•DDP runs on any Apple Macintosh running 10.3 or newer, including a laptop, it is highly portable.

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Chapter 2.....Installation & Minimum Requirements

2.1 Minimum Requirements for Hardware & Software

At a minimum, SonicStudio•DDP requires the following:

- Apple Macintosh G4 500 MHz, 1 GHz or faster preferred
- 1024 x 768 pixel or larger display
- 512 MB RAM minimum, 1 GB or more preferred
- OS 10.3 or newer

For delivery of the final DPP files, a data storage device, such as a CD-R, DVD-R, DLT or AIT drive is required as well. Since SonicStudio•DDP uses OS X's CoreAudio, the quality of audio playback will be entirely dependent on the hardware and driver(s) used.

Note that, though SonicStudio•DDP is not tested with prior versions of Macintosh hardware, operation with older hardware should be usable as long as the CPU supports the required OS version. Slower hardware may have difficulty "keeping up" with the application, however, resulting in drop–outs during playback and possible interruption during deliveries.

2.2 Installation of the Software

To install SonicStudio•DDP, please refer to the PDF copy of the Installation Guide provided on the supplied CD-ROM.

Chapter 3..... Basic Operation

3.1 General Workflow & Explanation of Terms Used

SonicStudio•DDP is meant to be used to create and modify DDP image files, offering basic sound editing and modification of metadata. It was also designed to check and modify existing DDP image files as well.

When opening a DDP image into SonicStudio•DDP, you are creating a copy of the image file in memory that you can manipulate. This copy is called a 'Project.' Within the Project, you can add and edit Marks that will generate PQ codes, and you can also place editing–related placeholders inside the Project as well. All this information can be saved and later recalled.

SonicStudio•DDP offers the capability to add sound information to the already existing DDP image. Sound can be imported from various file formats, including AIFF, WAV, BWF and SD2 as well as DDP image file sets. These sound files can in turn be edited, allowing you to compile a new program from various sources. Finally, none of your changes to the Project are saved to a DDP image until you intentionally write your changes back to a new DDP image file. This is done by performing a 'Delivery.'

3.2 Project Layout

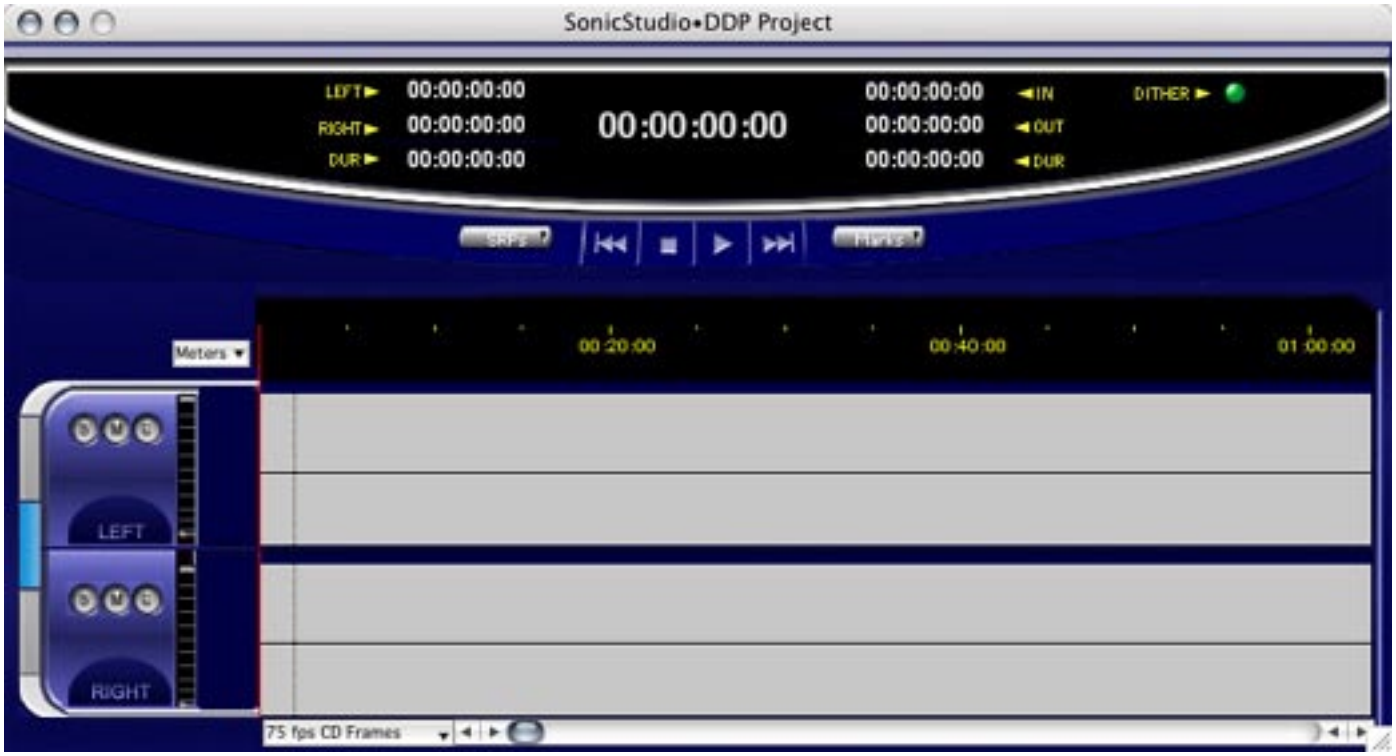

Figure 3.1: The Project window

In SonicStudio•DDP, all tasks are performed in a Project. The bottom of a Project shows two empty Panels, containers for stereo sound files and their accompanying waveform displays. The upper Panel shows the left channel while the lower Panel represents the right channel. A slider appears directly beneath the lower Panel, allowing you to scroll across the timeline. To the left of this slider, a drop down menu is available, where the time standard can be selected. The function of this time standard control is discussed further in section 3.7.1.

To the left of each Panel are solo and mute buttons, labeled with an S and M respectively, along with an amplitude meter. Also, a gain overlay button, labeled G, is available to the right of S and M buttons. The function of this button and the application feature it brings up will be discussed later in section 4.3.

Immediately above the waveforms is a black banner. At the top of the black area is the timeline for the waveforms. At the bottom of the black area are reserved for "PQ Marks," discussed in section 3.9. The whole of the 2 Panels with Marks and all data describing the audio program, is also referred to as the 'EDL' or Edit Decision List, and is saved as a separate file within the Project folder.

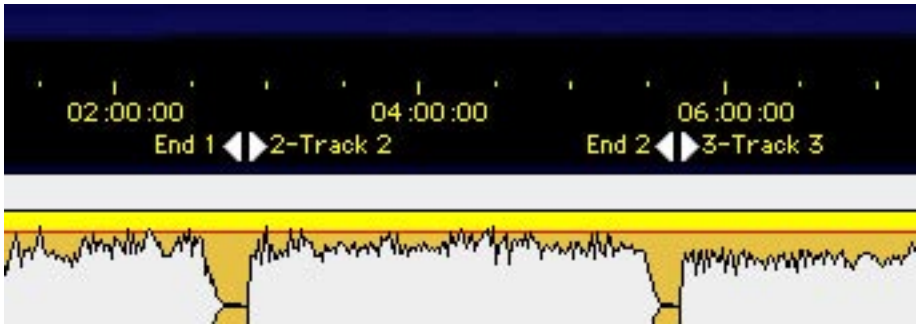

Figure 3.2: Waveforms display with Marks above the Panels

Above the banner with timeline and Marks are the Transport Controls. It offers dedicated buttons for play, stop, forward and rewind. Also in this bar are the Marks button and the SRP button. The function of these are explained in sections 3.9 and 4.4 respectively.

Finally, at the top of the main window are time displays on the left, for the Playhead, and, on the right, for edit locations. In the middle is a display showing the current location of the Playhead.

3.3 Starting a Project: Opening Files

To open an existing SonicStudio Project, select File > Open Project... from the menu bar. This brings up a standard Mac OS browser dialog for finding and selecting the desired Project file. Confirm your selection with Choose and the Project opens into a new Project window.

Alternatively, a DDP image file set can be opened by selecting File > Open DDP image... from the menu bar. This brings up a similar Mac OS dialog. Instead of selecting a file, here you are asked to select a folder containing the requested DDP image file set.

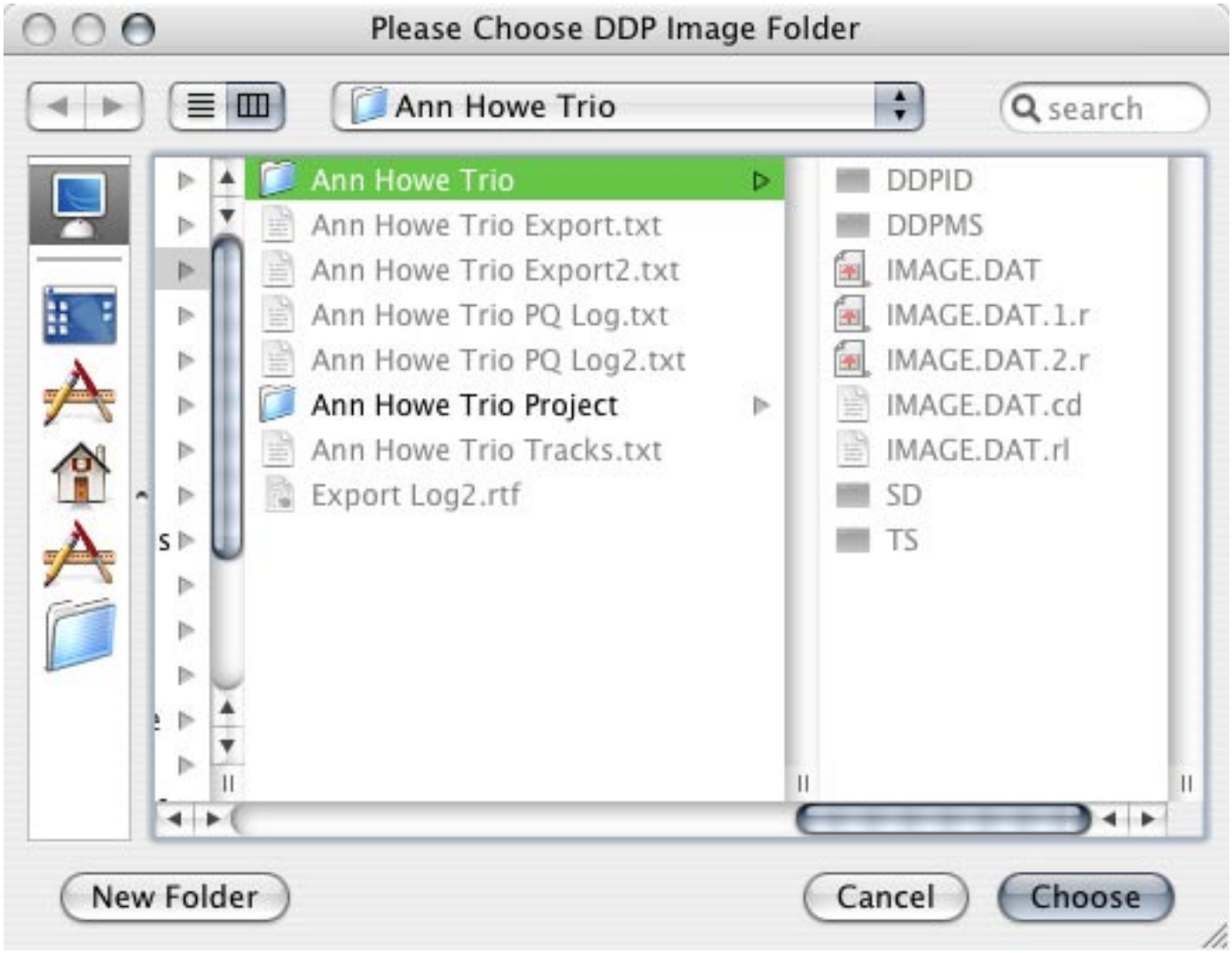

Figure 3.3: Mac OS browser dialog for opening a DDP file set

After highlighting your selection and clicking Choose, the DDP image will be opened, together with any available PQ metadata already saved in the DDP image file set.

A third way to open a DDP image is by simply dragging the DDP image file, often called "IMAGE" with a "dot 3" extension, from any folder into the top waveform Panel of either a new or existing Project. This will add the DDP image to the Project at the timeline location where you dropped the file.

Note that SonicStudio•DDP does not support non–audio or Split Track DDP file sets. This includes CD-ROM and CD+G variants, including CD Text. Split Track file set are also known as Track–At–Once mode file sets. SonicStudio•DDP opens only DDP file sets containing one project or single image files. You may want to visually inspect the contents of incoming file sets prior to processing them. If they contain multiple images, it's best to duplicate the entire folder as a safety, then rename split files temporarily so you may work on a specific one.

3.4 Waveforms

A waveform display provides visual reinforcement of audible cues when editing. Normally, DDP Image file folders contain the IMAGE.DAT file itself and, optionally, a number of other files with metadata and related information. Waveform information therefore has to be generated by SonicStudio•DDP itself. The application generates two "waveform files," one for each channel, in order to display high resolution waveforms in the Panels at any zoom level.

Figure 3.4: Display of a IMAGE.DAT file without waveform files

If waveform files are absent from a DDP Project or a DDP file set, SonicStudio•DDP will automatically start generating those files in the background.

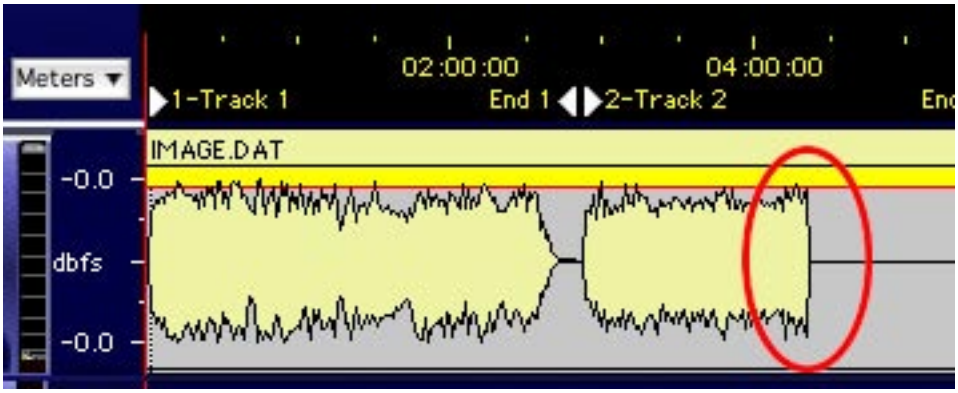

Figure 3.5: The building of waveform files in progress

Waveform files, named *filename.r*, are placed in the same folder as the audio files. You may want to delete these files when your job is finished as these files can only be read by Sonic Studio products.

3.5 Auditioning Sound

3.5.1 Playback

When you press the keyboard's Space Bar, the cursor changes to a "speaker & note" and playback starts. A vertical red line, the Playhead, moves across the Panel to indicate the location in the sound file that is being played back.

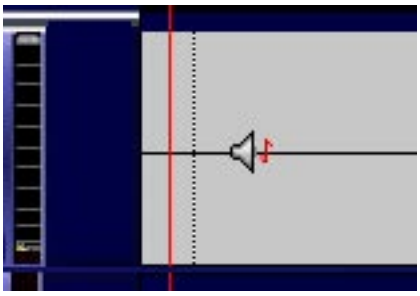

Figure 3.6: The cursor changes into a speaker & note shape during playback

When you first open an image file, playback, once started, will begin at the left edge of the audio. The Playhead will move to the right, across the file. When you hit the Space Bar again, playback ends and the Playhead stops moving. When you hit the space bar a third time, the Playhead will jump back to the left side of the waveform display, the beginning of the sound file, and playback will begin again.

3.5.2 Playback from Edit Point

When you click anywhere inside the waveform display, the entire Panel, or rectangle containing the waveform display, is selected. The selected Panel has a royal blue background and hairline red border. Once selected, a click in that Panel produces a thin vertical red line, with an inverted yellow triangle on top. This is the "Edit Point."

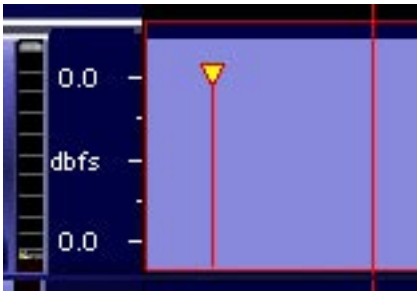

Figure 3.7: Empty Panels with Edit Point at left and Playhead at right

When the Edit Point is present, playback will always start from the Edit Point. When you stop playback and start again, the Playhead will jump back to the Edit Point and start playback from there.

You can move the Edit Point by clicking on a new location in the waveform display. The Edit Point will jump to the click location. Alternatively, you can click and drag the Edit Point's yellow triangle to move it to a new location.

3.5.3 Playback from Playhead

The Playhead itself can also be manipulated directly. By double clicking in the black timeline banner, the Playhead is moved to the click location. Clicking on the Play button in the Transport Controls will start playback at that new location. You can also select the Play > From Playhead command.

3.5.4 Time Displays

Finally, the large, central time code display in the center top of the Project window is live and editable. Clicking on any subdivision or click–dragging on the entire display will select the current address of the Playhead and allow you to modify it.

A single click in any subdivision will highlight that subdivision, allowing you to type in a value. By click/holding and dragging up or down, the cursor will change to an arrow and the numeric value displayed will increase (drag up) or decrease (drag down).

Figure 3.8: Click–dragging down to edit a time code address

All modifiable time code fields in SonicStudio•DDP support cut/copy and paste. Double clicking on any time field will select the entire field, allowing you to enter a complete time code address.

3.6 Navigating the Waveform Display

There are many tools for quickly moving around inside of the waveform display.

3.6.1 Scrolling

If you are zoomed all the way out, the entire waveform will be displayed. If you are not zoomed out all of the way, some of the waveform will be off the edge of the Panel. You can move the window view left or right by moving the slider control at the bottom of the waveform display. You can also move the window view left and right by using the Left and Right Arrow key respectively.

Finally, you can drag the view left or right by simultaneously holding the control, option and command keys. When you click–hold, the cursor changes to a hand to indicate you are in Move View mode.

3.6.2 Zooming

You can zoom in using the Down Arrow key, and zoom out using the Up Arrow key. To zoom all the way out, hit the E, for "entire," key.

3.6.2.1 Zoom around Edit Point

As you zoom in and out, it is likely that you will want to keep the Edit Point in view. To do this, hold down the Apple or command key as you use the Up Arrow or Down arrow keys. This will keep the Edit Point centered in the middle of the display.

3.6.2.2 Zoom to Selection

Clicking and dragging on the waveform selects a region, highlighted in yellow. Typing command-G or selecting View > Zoom to Selection... will zoom around the selected region. See section 3.7 for more information on region selection.

You can also zoom to a selection while making the selection. By holding down the command and option keys while click–dragging on the waveform will define a selection and zoom to that selection as well.

3.6.2.3 Zoom Around Time Selection

If you click and drag in the black timeline banner above the top Panel while holding down the Apple or command key, the Panel will zoom to display the region of the timeline that your click–drag defined.

3.7 Selections

Selections let you highlight a portion of the audio where you want to perform certain operations.

3.7.1 Selecting a Region

To select a region, click–drag on the waveform display. At the point that you want the selection to start, click and hold down the mouse button, then drag to complete the Selection. An area will be highlighted in yellow, indicating the selected region.

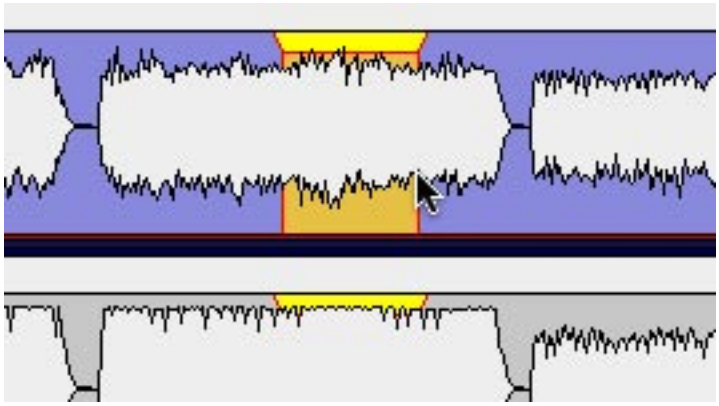

Figure 3.9: A region selected, indicated by the yellow highlight

You can click–drag either left or right to define a selection. In addition, you can fine tune the boundaries of a selected region. Hold down the shift key and click on either side of the selected region to expand or contract the selection.

While selecting regions, the LEFT, RIGHT and DUR fields at the top of the window are active and editable. See section 3.5.4 above for more information on manipulating time code addresses.

Note: The format in which all time fields are represented in SonicStudio•DDP is user selectable. By clicking in the time standard display to the left of the timeline slider, a drop down menu offering four choices becomes available.

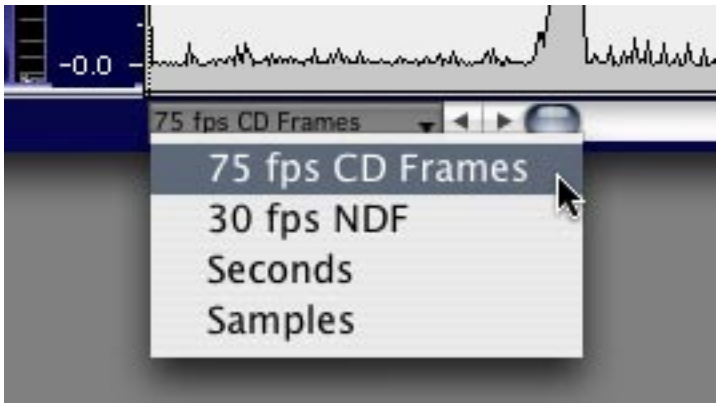

Figure 3.10: The time standard menu

Options are:

- 75 fps CD Frames
- 30 fps NDF
- Seconds
- Samples

75 fps CD Frames is the default setting and the internal timecode format for CD-DA discs. 30 fps NDF signifies non–drop frame time code, the default time code format used by DAWs to prepare material for CD release. This setting is a legacy of the 1600/1610/1630 era of Compact Disc preparation. The Seconds setting shows all times in multiples and fractions of seconds. Finally, Samples displays all times in absolute samples based on the CD sample rate of 44.1 kHz. These same selections can also be made in the Preference window. See section 5.9.2 for more information on time standard settings.

3.7.2 Selecting Segments

An entire sound file "segment," a representation of contiguous samples from a single sound file, can be chosen as a selection. Click on the white Title Bar at the top of any segment, which displays the source sound file name.

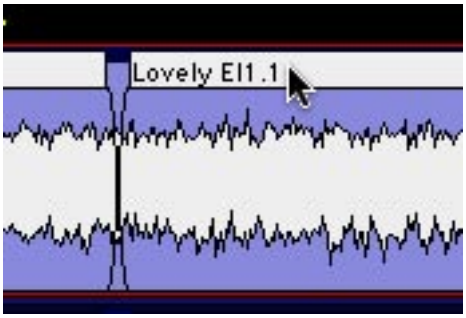

Figure 3.11: The Title Bar

The waveform highlights yellow and a yellow bar appears below it, running the entire length of the segment, to indicate that the segment has been selected.

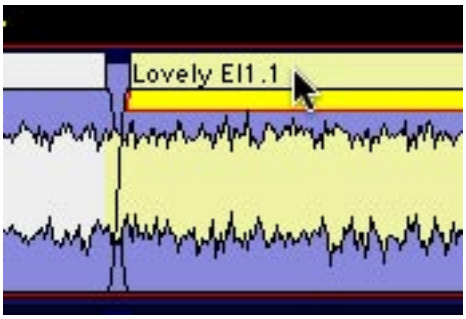

Figure 3.12: A selected segment, indicated by the yellow highlight

By holding down the shift key and simultaneously clicking in other segment's Title Bars, a selection of contiguous segments can be made. Also, while holding down the Apple or command key and clicking any Title Bars, a group of non–contiguous random segments can be selected simultaneously.

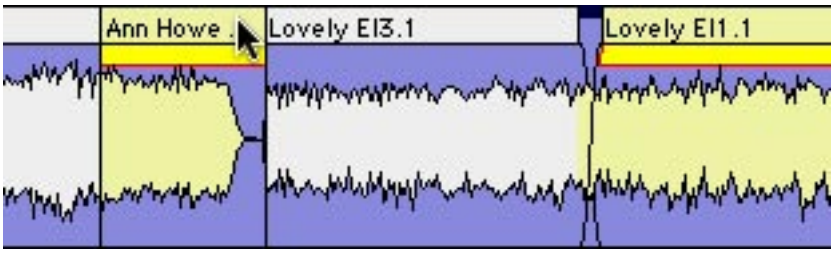

Figure 3.13: Multiple selected segments

3.8 Simple Editing

There will be occasions where sound files or DDP images need modifications before they can be used in a final version on CD. SonicStudio•DDP offers advanced editing features, as well as a simple tool to change amplitude.

3.8.1 The Fade Tool

Heads or tails of sound segments are represented in the display by a vertical edge. When zooming in, this edge will gradually change into a curve representing a 'fade' or amplitude envelope. Each segment starts with an Fade In and ends with an Fade Out. Fade Ins and Outs are both "Black Fades" where "black" refers to "Edited Black," the absence of data in the track.

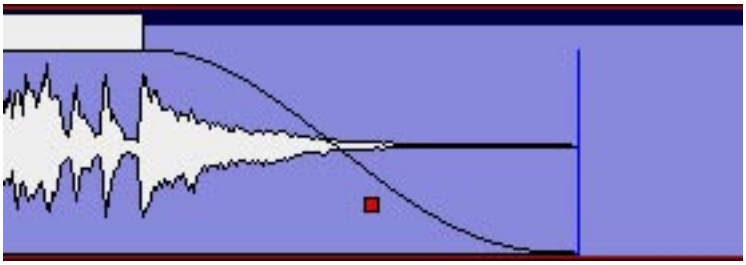

Figure 3.14: End of a segment with Fade Out glyph

Fades have a specific starting point and duration. Both parameters can be easily adjusted with the "Fade Tool."

First, the duration or length of the fade can be changed. To do so, click–drag on the upper inside edge of the fade to the desired location. Note that, with the cursor on the upper inside edge, the cursor changes into a cross with left, right and up arrows indicating you can change the duration.

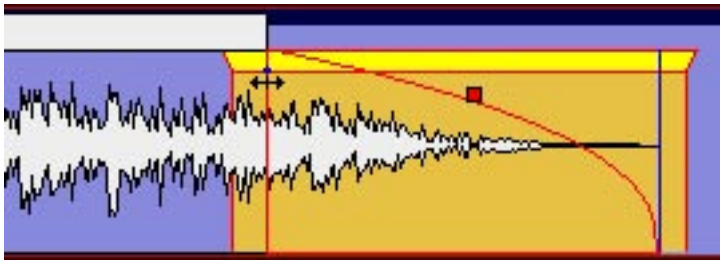

Figure 3.15: Fade tool symbol while moving top inside edge of the Fade

Of course, the length of a fade can also be changed by moving the lower or outside edge of a fade, leaving the inside edge in place. To do so, move the cursor over the fade near the bottom of the display until the cursor changes into the Fade Tool again. This time, the cursor changes into a cross with left, right and down arrows.

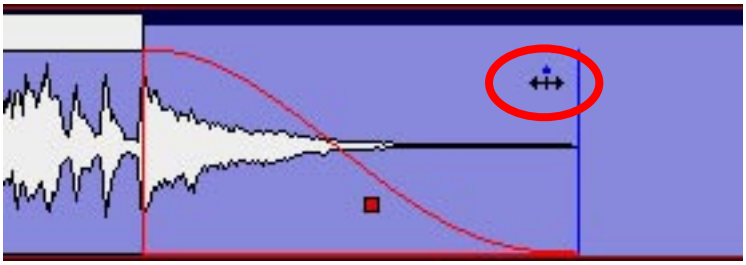

Figure 3.16: Fade tool symbol indicating you are changing the outside edge of the fade

Click and drag the bottom end of the fade to the desired position. Release the button to confirm the change.

If the cursor is moved over the middle portion of a fade, the Fade Tool (cursor) also appears but this time as a simple horizontal arrow. In this trim mode, you are able to move the entire fade left or right without changing the duration. This allows you to, by shortening the segment duration, hide or, by lengthening the segment duration, reveal portions of the underlying segment, trimming the segment as you go. Click on the fade and drag the fade left or right. Releasing the mouse button fixes the fade in that location. While you are moving or changing a fade with the Fade Tool, the waveform continuously changes to reflect the modifications you are making.

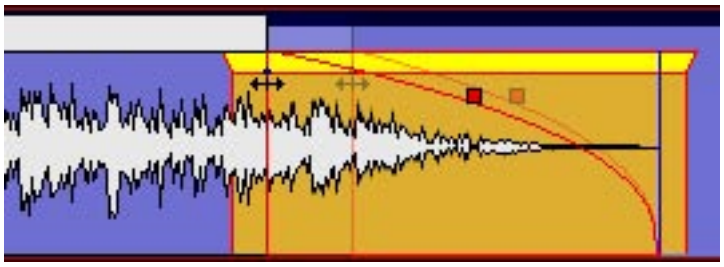

Figure 3.17: Dragging the inside edge to lengthen a Fade

Note that the maximum duration of a fade is equal to the underlying sound file duration. Also note that it is not possible to move a fade past the actual start or end of an underlying sound file.

Also, moving Black Fades so more than two overlap is not allowed as well. A modal "Check-ForTripleOverlap" dialog will pop up, telling you that your command would result in three Black Fades lying on top of each other.

3.8.2 Deleting Part of a Sound File

It may be necessary to edit out some part of a sound file. SonicStudio•DDP allows you to do so quickly or with great precision. To easily cut out a portion of a sound file, simply select the region that you want to remove. Then, select Edit > Delete Selection to remove the selected region and "slip" all downstream segments left to close the gap. More on this later...

More precise editing can be performed with In points and Out edit points, special marks you can place in the Panel. An In Point is shown as a vertical line with a triangle at the bottom, pointing right, while an Out Point has the triangle pointing left.

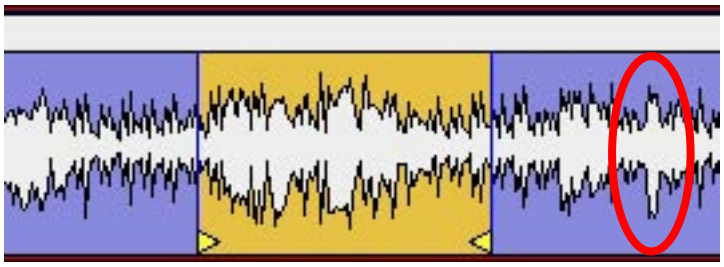

Figure 3.18: In Point and Out Point with highlighted area in between

There can be only one In Point and one Out Point in a Panel at any time. If both an In Point and Out Point are present, and if the In Point is to the left of the Out Point in the waveform display, then the area between the In and Out Point will be highlighted in yellow. The Selection > Set In Point command drops an In Point at the location of the Edit Point.

Note that the IN, OUT and DUR time fields at the top right of the main Project window are always active and fully editable. These fields allow you to precisely alter the location of, and duration between, the In and Out Points.

Once the region is selected, it can be cut out in two different ways. The region can be either deleted or cleared. To clear the selected region, leaving an empty area, select the Edit > Clear Selection command.

Figure 3.19: A cleared selection — the circled material has not moved

The selected region now is cleared of its contents, leaving the audio before and after the selected region in the same place. The In and Out Points also stay in place. Effectively, you have now created two new segments that can be further edited and/or moved independently.

Alternatively, the selection can be deleted. To do so, select Edit, Delete Selection from the main menu. Hitting the delete (backspace) key on the keyboard will perform the same action.

Figure 3.20: A deleted selection — the circled area has moved

As a result, the selected region will be deleted and all audio to the right of the selected region will be moved left to the beginning of the now deleted section, closing the "hole." Again, the In and Out Points stay in place.

Similar to clearing the selected region, you now have two new segments. When deleting the selection, however, the two new segments are joined together with a "Crossfade." It is represented in the waveform display as an overlapping Fade In and Out.

With Crossfades, the Fade Tool can also be used to modify or move the fades, either as a complete Crossfade or as individual Black Fades. When the cursor is moved over a Crossfade, it changes into a pair of parallel horizontal arrows. The Fade Out changes to red while the Fade In changes to green.

To move the whole Crossfade either left or right, simply click and drag the Crossfade to the desired location. Release the mouse button to drop the Crossfade at a specific spot.

To modify the fades individually, press the option key while modifying the Fade Out, and the Apple or command key while modifying the Fade In. With these modifier keys, the Fade Tool works as if the fades were isolated, as described in section 3.8.1 above. While operating on one fade of a Crossfade individually with modifier keys, the fade not being manipulated will deselect, indicated by changing its color to black.

Note that, to be able to do this with accuracy, it may be necessary to zoom in until the Crossfade extends over a large amount of the waveform display.

3.8.3 Changing the order of tracks

It is not uncommon that the order in which tracks or songs appear on the final CD needs to be changed. In order for that to work, the tracks or group of tracks you want to move need to be present as separate segments. This can be achieved by either creating a new Crossfade or deleting the space between tracks in an existing DDP image or sound file, meanwhile creating new segments that can be moved and edited independently.

To create a new Crossfade, simply move your cursor to the desired location, and double click. This will move the Edit Point to the click location. Then, select Edit > Create Crossfade. See section 3.8.2 above for information on deleting segments.

Once the material is divided in the required number of segments, the re–ordering can be done. There are several ways this can be achieved. First, segments can be selected, then dragged and dropped into place. This allows you to change the track order very quickly, but is inaccurate when placing the files with precision on the timeline.

To drag a segment, first select the segment by clicking on the white Title Bar (see figure 11 above) at the top of any segment. Notice the bright yellow Drag Bar that appears under the Title Bar in any selected segment.

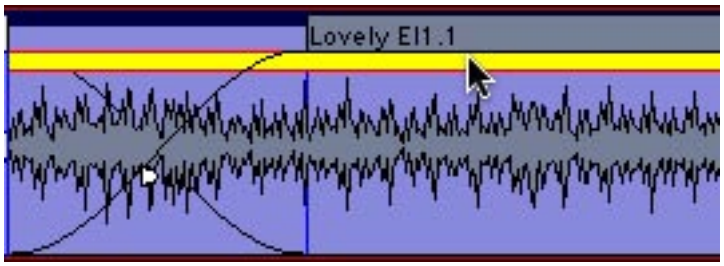

Figure 3.21: The Drag Bar

Click–drag the Drag Bar to move the segment to the desired location. Remember that shift–clicking or command–clicking on multiple segments will select contiguous or segments respectively.

Secondly, segments can be moved by altering their respective timeline positions directly via the Move Segments window. Select the desired segments, then select the Edit > Move Segments... command. The Move Segments modal dialog appears, showing the current position of the first, or only, selected segment.

The desired new segment start time can now be entered directly into the timecode address shown. Once the 'Move' button is clicked, the segment moves to the new location.

The Move Segments dialog offers three extra options. By clicking on the 'Where' button, you can select via a drop down menu:

- the current position of the Playhead
- the location of the In Point, or
- the location of the Out Point

As the new start time for the segment. By choosing one of the three options, the time display of the move segment window changes to the relevant time. After choosing your option, clicking the 'Move' button will move the segment and close the dialog. Clicking 'Cancel' leaves the segment at its original position and closes the dialog.

3.8.4 Spacing Tracks: Auto-space

Once all your segments are placed in the right order, the Auto-space function offers a simple but effective tool to change all pauses between tracks to a pre-defined value. Simply click–drag to select a region containing all tracks you want "auto–spaced." Then select Edit > Auto-Space all Segments and all segments will be moved on the timeline, with equal space between according to the Preference > Editing Tools > Auto-Spacing Duration setting. In Preferences, the length of the Auto-Space can be disabled or set to 1, 2 or 3 seconds.

Note that, if a song is composed of more than one segment, then the Auto-Space command should be used with care. To prevent Auto-Space from "breaking apart" a song into its component segments, only select regions that contain unsegmented songs.

3.9 PQ Marks

Once all tracks are put in the right order and spaces between the tracks are adjusted to taste, the PQ Marks can be created. PQ Marks generate the TOC or Table of Contents for the final replication master.

PQ Marks are shown in the black banner just below the timeline.

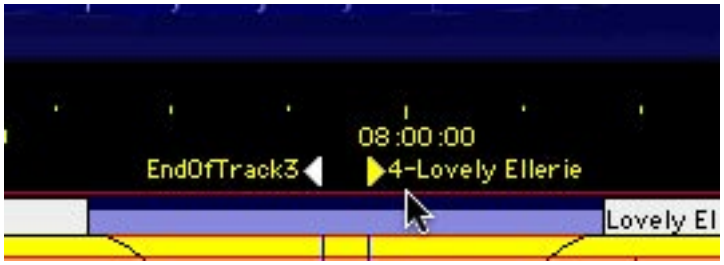

Figure 3.22: PQ Marks

Start of Track marks are indicated by a triangle pointing to the right while End of Track marks are indicated by a triangle pointing left. Index marks are indicated by a triangle pointing down.

3.9.1 Inserting PQ Marks Manually

To insert a new PQ Mark, place the Edit Point at the location where you want the new Mark to appear. Then select Mark > Track Start Mark, which adds the new Start of Track mark.

3.9.2 Moving PQ Marks

It's easy to move or relocate PQ Marks from one location to another. Simply hold down the option key, click on the Mark and drag it to the desired location.

3.9.3 Removing PQ Marks

To remove one or more PQ Marks, click–drag to select a region that includes the Mark(s) you want to remove. Then, select Mark > Delete Mark and all Marks in the selected region will be deleted.

3.9.4 Inserting PQ Marks Automatically

Apart from placing PQ Marks manually at the desired positions, SonicStudio•DDP has the ability to generate PQ Marks automatically. If the entire Project was created by editing each song/segment, the most efficient way to generate PQ Marks automatically is click–drag to select a region, then select the Mark > Edited Black To Marks command. SonicStudio•DDP automatically places Start and End of Track marks at the edges of all segments, using the location of Black Fades. The final result is a collection of marks accurately placed at the begin or end of each Black Fade.

If you've done a fair amount of editing, then the Edited Black To Marks will create many erroneous marks. Also, if only a small number of edits exist, then you may want place PQ Marks with the Analog Black to Marks function. This function measures the amplitude of your audio and places PQ Marks at the edges of long duration quiet passages. Both amplitude and duration are user adjustable.

To use, first click–drag to select a region on which to work. Then, select the Mark > Analog Black To Marks... command. In the resulting modal dialog, specify the amplitude and duration of the selected region you want to mark.

The results of the Analog Black To Marks function are not as accurate as Digital Black to Marks, but will provide usable PQ Mark placement even with unedited material. The placement accuracy is dependent on the settings used, as well as the assumption that tracks always start and end with an increase and decrease in amplitude. However, it is very likely that those same criteria also apply to other moments in the course of a musical piece so, the results of the Analog Black To Marks function should always needs to be checked for acceptable accuracy. You may also try the command, check the result and adjust the parameters prior to deleting marks and using the function again. See section 3.9.5 below for useful information on checking mark accuracy.

3.9.5 The Marks Button

In the Transport Controls, the Marks Button can be seen. Clicking on it reveals a list of all PQ Marks in the Project. Selecting one of the entries in the drop down list moves the Edit Point to the selected PQ Marks, without changing the zoom level. This allows for a quick and accurate check of the position of all PQ Marks.

3.10 Delivery

After completing the necessary editing of sound and PQ Marks, the next and final step in your production workflow is to start a "Delivery." This process creates a new DPP image file set, incorporating all edits and changes, ready to be sent to a replication service for further processing.

3.10.1 The PQ Delivery Tab

To begin the PQ Delivery process, select the Windows > Mark Info command. This opens the Mark Info window which has two tabs. Click on the PQ Delivery tab to reveal the Delivery window.

Figure 3.23: The PQ Delivery tab of the Mark Info window

3.10.2 The Execute Button

This button starts the process of creating a new DDP image file set, along with the options selected in the speed drop down menu and two check boxes, that is written to disk at the location shown in the "Path" field. When you click the Execute button, a standard Mac OS file browser opens, allowing you to specify the location that will be used. A new or empty folder should be specified to contain the newly created DDP image file set. Once the destination is specified, SonicStudio•DDP begins the process of creating the new file set, with progress shown in the status field at the bottom of the PQ Delivery window.

3.10.3 The Track List Button

This button generates a simple text file listing UPC/EAN, tracks, start times, end times and duration.

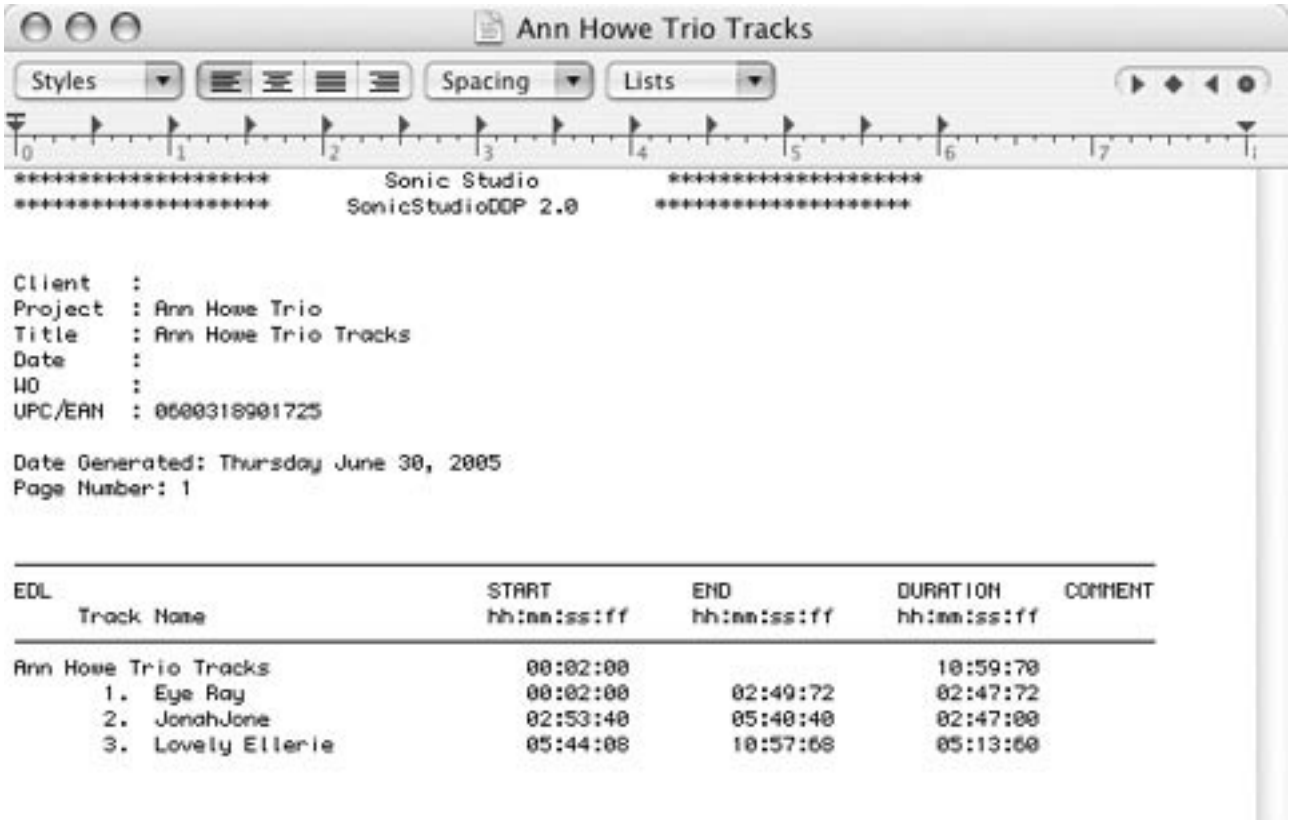

Figure 3.24: A Track List

3.10.4 The Export List Button

This button generates a tab–delimited text file listing track title, index number, timing, ISRC and type.

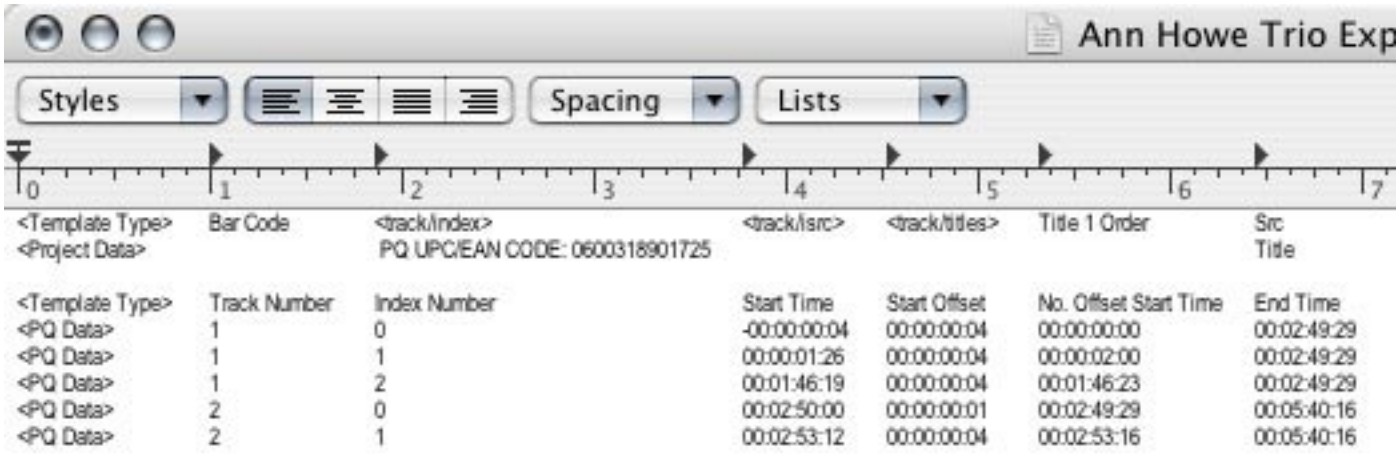

Figure 3.25: An exported Source List

Figure 25 shows a Source Listing that has been opened into TextEdit and reformatted.

3.10.5 The PQ List Button

This button generates a PQ List, the industry standard text representation of the compact disc's content. This file is typically printed and the hard copy sent, along with the DDP data set, to the replicator.

Figure 3.26: Portion of a PQ List

4.1 Fade Tool Options

4.1.1 Changing Parameters

SonicStudio•DDP offers a simple and intuitive tool for changing a fade's gain characteristics: the Fade Tool. In the previous chapter, we have seen how to use this to perform simple operations. The Fade Tool offers additional possibilities to alter fades according to your needs and preferences.

The Fade Tool is disabled by default. By holding the control key and typing A, you can enable or disable the Fade Tool. This is equivalent to the Edit > Editing Auto Tool Override command.

Alternately, you can force the Fade Tool on by default. In the EDL tab of the Windows > Preferences window, the Fade Tool check box will keep the Fade Tool enabled until you choose to disable it manually.

When moving the cursor over a fade with the Fade Tool enabled, the default cursor changes into the Fade Tool and the selected fade turns either green for an Fade In, red for an Fade Out or both. Depending on cursor location relative to the fade, the Fade Tool modifies either the start, end, length or position of the fade. See section 3.8.1 for basic information about the Fade Tool.

If you zoom in on a Fade so that more than about 10% of the waveform display is occupied by the fade, you will see the thin blue vertical line that represents the edit event (see section 4.1.3 below) and a diagonal line or "curve" that represents the gain law or change in amplitude dictated by the fade. Situated in the middle of the diagonal curve and attached to that line is a square "bead," the Control Point for the fade curve.

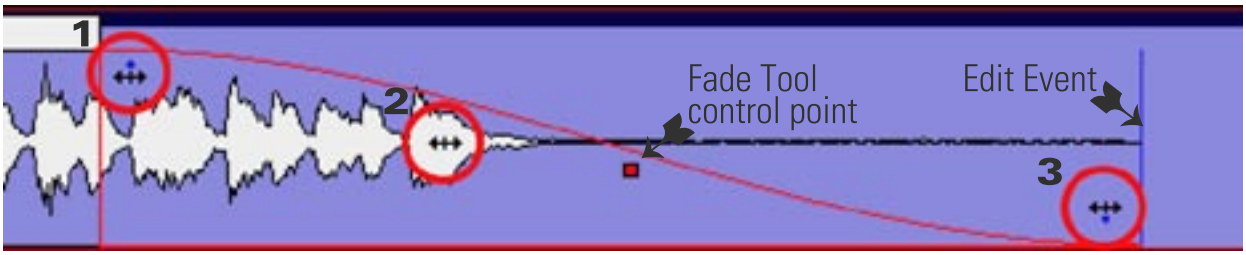

Figure 4.1: Anatomy of a Fade

Figure 4.1 above shows the some of the parts of a Fade and the various contextual shapes that the cursor assumes based on location. Note the Control Point and edit event, discussed in upcoming sections.

On the left, the #1 cursor is set for an "inboard" duration change. Placing the cursor at that location and click/dragging will increase or decrease the duration of the fade without changing the location, edit event or gain law. This is the preferred handle to use when changing duration.

Next is the #2 cursor shape, displayed when the cursor is set to change the overall location of the fade. Placing the cursor in that location and click/dragging will increase or decrease the location of the fade without changing the duration, edit event or gain law. Remember that you cannot move a fade past the head or tail of the underlying audio.

In position #3, the cursor is set for a duration change "toward the outside" of the Fade. Placing the cursor in that location and click/dragging will increase or decrease the duration of the fade without changing the location or gain law. These "outboard" handles do effect the location of the edit event, so it's recommended that you not use the outboard handle, employing the i

4.1.2 Changing the Shape

By clicking the Control Point "bead," shown in Figure 4.1, and dragging it up or down, you can adjust the "dB down" or rate of change setting for the fade. As you make this change, the fade curve will dynamically change in response and the underlying audio will also change since you're affecting the gain across the fade event.

When the Fade Tool is active, holding the control key brings up a contextual menu.

Figure 4.2: The Fade Tool contextual menu

The Fade Tool contextual menu offers the following choices for gain law or curve:

- Linear — default 6 dB down in the center
- Root Linear — 3 dB down in the center
- Cosine — default 3 dB down in the center
- Root Cosine — default 6 dB down in the center
- Exponential — provides very rapid reduction in gain across the Fade

4.1.3 Changing Duration

In the Fade Tool contextual menu, the Set Fade to Selection forces the fade duration to match the duration of an enclosing selected region. When a region is selected, this option stretches or shrinks the length of the Fade to match the position and length of the selected region.

The Fade Tool functions also apply to a Crossfade. Figure 4.3 below show the Fade Tool in Crossfade Mode. Notice that the cursor assumes a double horizontal arrow shape and both fades are highlighted, green and red.

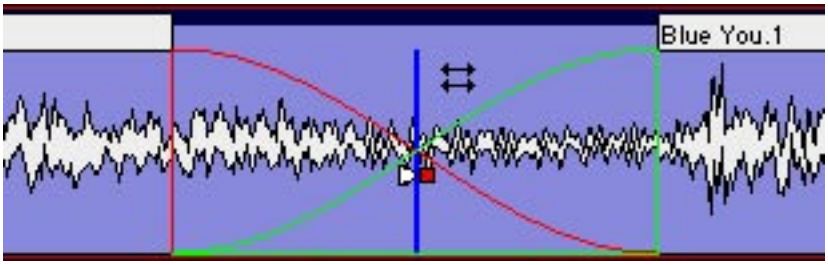

Figure 4.3: The Fade Tool in Crossfade Mode

By click/dragging left or right, the Crossfade location can be altered. By shift–click/dragging, the Crossfade duration can be altered. Holding the command key allows you to override Crossfade Mode and alter only the In Fade while holding the option key provides the same override mode for the Out Fade.

4.1.4 Changing the Type

The Fade Tool contextual menu also offers two choices for fade type. These choices allow you to change the context in which the fade will be used. For the purpose of CD preparation, Fade Ins and Fade Outs are fundamentally different from Crossfades. The difference is where the actual edit occurs in the underlying audio and this profoundly effects the accuracy of your PQ Marks and resulting metadata.

With a Crossfade, the edits occur at the very center of the two Black Fades (see section 3.8.1). Fade Ins and Fade Outs, on the other hand, are designed to be used as the transition from or to "Edited Black," where no audio is present on the timeline. Use the Set Fade to Crossfade option when you expect to connect its associated segment to another segment for a seamless edit between segments.

Reset to Defaults: These option force all fade parameters back to their appropriate defaults.

- Set Fade to Default Fade In: forces parameters to a default Fade In
- Set Fade to Default Fade Out: forces parameters to a default Fade Out
- Set Fade to Default CrossFade: forces parameters to a default Crossfade

When the Fade Tool is active, any change you make to the tool, to a Fade or to the underlying audio is real time. The default fade can be selected in the Editing Tools tab in the Windows > Preferences Window window.

4.2 Drag & Drop

4.2.1 AutoSpacing

For rapid assembly of program material, SonicStudio•DDP provides an easy method for automatically snapping to either 1, 2 or 3 seconds of Edited Black between segments. This function requires that the Snap to Start/End preference in the EDL tab of Windows > Preferences be enabled.

Once the Snap to Start/End preference is set, click on a segment's Title Bar to select it. After it's selected, all you have to do is click–drag on its Drag Bar as you move its head close to another segment's tail. You will see either a vertical red or blue bar appear, visually indicating you are in the snap zone.

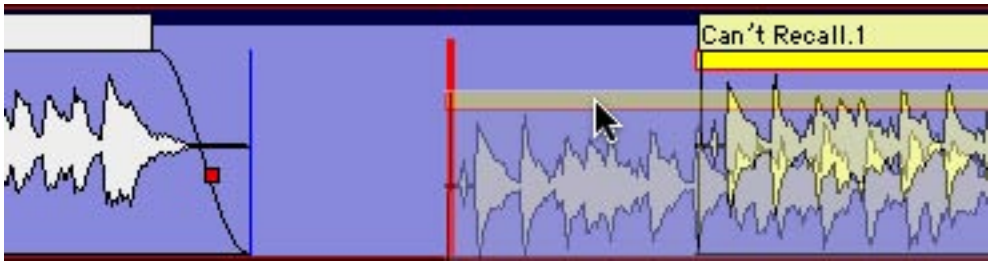

Figure 4.4: The auto–spaced snap indicator

Figure 4.5: The flush snap indicator

The thick blue bar indicates a "flush" snap where, if you drop at that location, the two segments will be tightly butted with no space between. The thick red bar indicates an auto–spaced snap where, if you drop at that location, the two segments will have a precise, predetermined space between. The duration of the inter–segment spacing is determined by the Auto-Spacing Duration selector in the Editing Tools tab of the Windows > Preferences window.

Drag and drop with auto–spacing is useful in conjunction with the Edit > Clear/Delete Selection commands to start with one long continuous segment, such as an existing DDP image, and quickly segment, space and resequence the individual songs.

The caps lock key provides a special function in conjunction with AutoSpacing. With the caps lock key down, all segments on the timeline snap into place without needing to carefully drag

into the snap zone. Dragging any segments will cause all segments to automatically snap according to the Snap to Start/End preference in the EDL tab of Windows > Preferences.

Drag and drop in conjunction with the caps lock key is useful for rapid resequencing of already segmented material. Simply drag a segment into a new location while watching for the red or blue snap zone indicator, and let go. It doesn't matter which indicator, red or blue, as SonicStudio•DDP will always autospace when the caps lock key is down.

4.3 Text Mode

Text Mode provides a playlist view of the Panel's contents, with editable segment names along with editable start and end times. Duration is also shown. To view Text Mode, select the EDL > Show Text View command. To switch back to Waveform mode, select the EDL > Hide Text View command.

4.3.1 Gain Adjustment

Compiling audio from different sources will usually make it necessary to alter the amplitude of some of your source material. The last column in Text Mode displays the current Gain of all segments. When Segments are opened or added to the EDL, the segment Gain is set to zero dB. By double-clicking on the Gain value of the selected segment, the Segment Gain modal dialog opens.

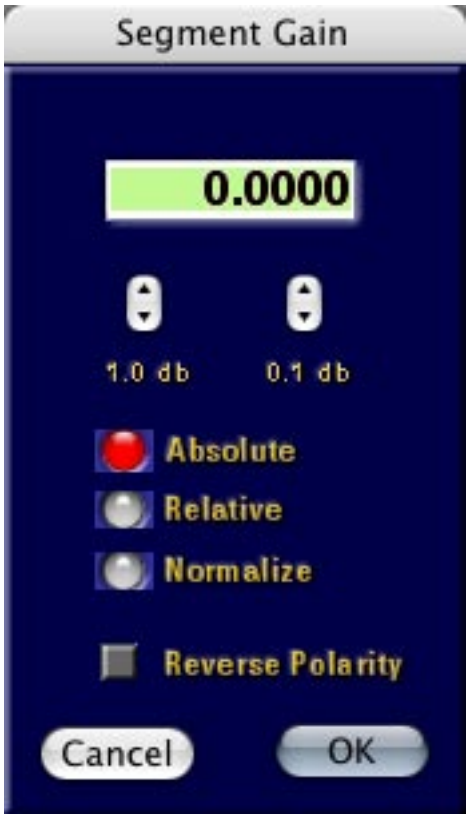

Figure 4.6: The Segment Gain dialog

The Segment Gain dialog offers several options for altering segment gain. The large central field lets you enter the gain directly. Alternatively, course and fine adjustments are available via up/down arrows. Simply click to increment or decrement gain in 1.0 or 0.1 dB steps.

Segment Gain can be applied in two different ways. First, it can be applied as 'Absolute' value, meaning that the entry in the central gain field will be applied in place of the previous value. The value entered in the gain fields will *replace* any previous state.

Alternatively, the gain can be applied as 'Relative' value. In relative mode, the entry in the central gain field will be added to the previous value. Positive values will be added to the previous state while negative values will be *subtracted from* the previous state.

A third 'Normalize' radio button is available. Choosing this option will cause the segment's sample amplitude to be evaluated, after which the amount of headroom or surplus level below 0 dBfs will be entered in the central gain field. In other words, this function shows how much gain can be added before digital clipping will occur. The value given is relative to the current gain state.

Finally, a 'Reverse Polarity' check box allows you to change the absolute polarity of the segment. Reversed segments exhibit, in Waveform Mode, a red indicator in the left corner of the Title Bar and, in Text Mode, the Gain entry turns red.

As with other modal dialogs in SonicStudio•DDP, gain changes will not be applied unless the OK button is clicked. The Segment Gain dialog is also available via a segment's Title Bar contextual menu. Control–click on any Title Bar to invoke the Segment Gain dialog. Other functions, like Reverse Polarity and Build Waveforms, are also available.

Segment gain can be applied to multiple segments at once. Simply command–click on the desired segments in the Text View list, then open the Segment Gain window to make a change. Changes in Segment Gain will be applied to all segments equally, as described above. This implies that, in relative mode, the gain changes will retain any relative loudness differences between selected segments.

4.4 Gain Overlay Mode

As described in section 4.3 above, the gain of individual segments can be easily changed with the Segment Gain dialog. SonicStudio•DDP offers another, more global way of changing amplitude across your entire program. Gain Overlay Mode can be used to change level independent of segments and fades and works as a master automated fader.

Gain Overlay Mode is enabled by clicking on the G button to the left of a Panel, and is available only when in Waveform Display Mode. When enabled, a red line appears superimposed on the waveform display. The waveform display's amplitude scale, along the left edge, switches to a new scale that ranges from -144 to +24 dB, the range of gain change available. Initially, the Gain Overlay is flat at the 0 dB setting.

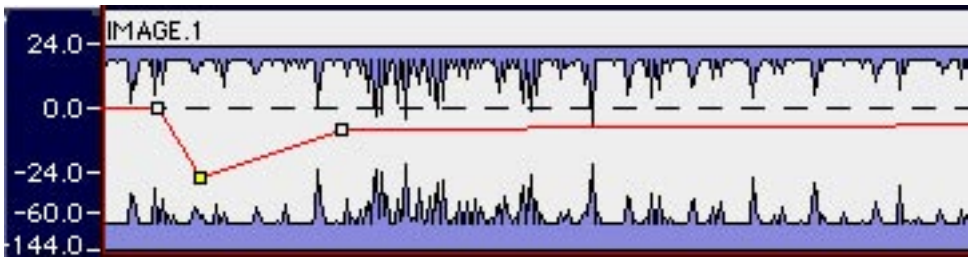

Figure 4.7: Gain Overlay function activated, showing the red Overlay and Nodes

To change gain, simply point at the desired time location and click on the Overlay. The cursor changes to a round shape and a square Node will appear. Nodes can only be added, deleted or modified while playback is stopped.

When you add a node, a yellow highlighted Gain Callout appears in the Title Bar of the associated segment.

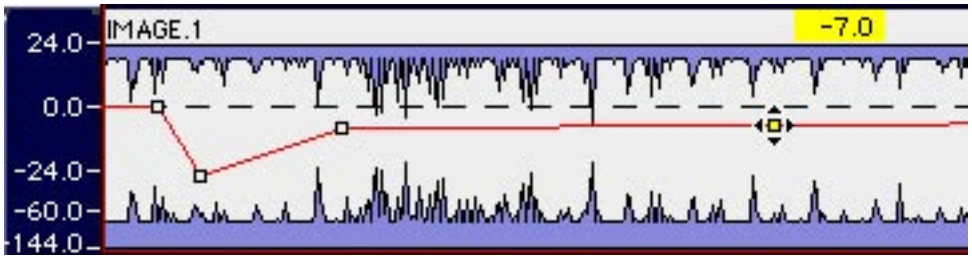

Figure 4.8: A newly created Gain Node with its Gain Callout

If you click–drag a Gain Node, it can be moved both horizontally and vertically. Dragging a Gain Node horizontally moves it to a different time location while dragging it vertically changes the gain. The momentary gain value of that node is continuously shown in the yellow Gain Callout.

When moving Gain Nodes vertically, the gain changes in steps of 1 dB. By holding the option key while dragging a Gain Node, the resolution of the gain change increases to 0.1 dB.

Note that gain changes between Gain Nodes follows a linear gain law. By adding multiple Nodes, other curves can be emulated. Unwanted Gain Nodes can be deleted by holding down the option key while clicking on the Node.

You can make changes to a group of Gain Nodes simultaneously. To do so, select a region that includes the Node on which you want to work. Then, select the EDL > Select Gain Nodes command. All selected Gain Nodes will fill with yellow to indicate their state. You can also shift–click to "gather" a collection of grouped Nodes.

When grouped, only the gain can be modified. When changing the gain of grouped Nodes, the Gain Callout shows both the current value and gain delta or difference from the original value. Also, when grouped, holding the option key for fine gain adjustment is disabled.

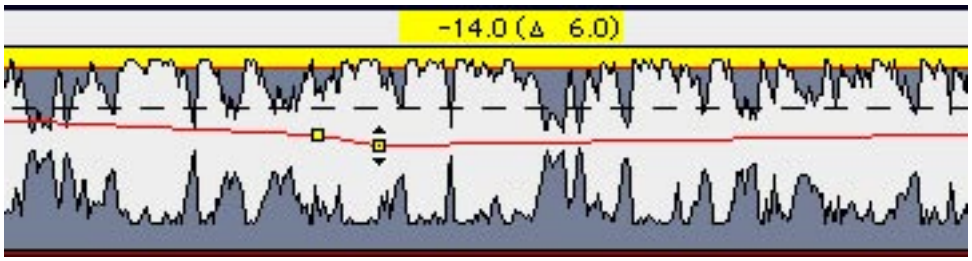

Figure 4.9: The Gain Callout for grouped Nodes

Once your Gain Overlay is configured according to taste, all or some Gain Nodes can be locked against unwanted changes. To do so, first click–drag to select a region containing the Gain Nodes you want to lock. Then, move the mouse over one of the selected Gain Nodes and control–click to invoke a contextual menu.

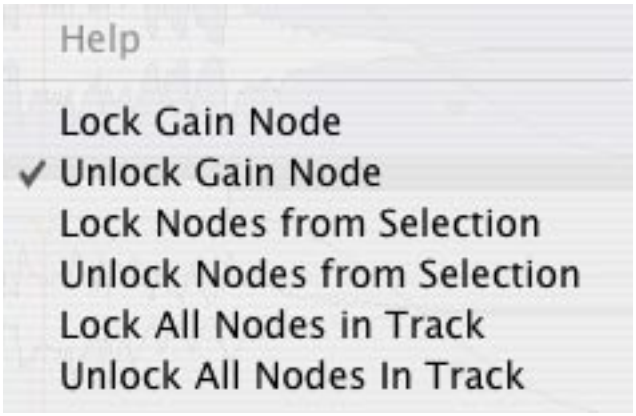

Figure 4.10: The Gain Node contextual menu

By default, the Unlock Gain Node option will be checked. To lock the selected Gain Nodes, click on the GainOverlayNode Locked option. The selected Gain Nodes will now turn red to indicate their locked status. Unlocking the Gain Nodes simply requires selecting the GainOverlayNode Unlocked option.

In the same contextual menu, Nodes can also be locked and unlocked for the whole Panel by selecting the Lock/Unlock All Nodes In Track options.

Once Gain Overlay is used, the gain changes stay active in the output of SonicStudio•DDP, both during playback and Delivery. To temporarily bypass the Gain Overlay, select the EDL > Bypass Gain Overlay command. Also, the Gain Overlay can be put in bypass mode by option–clicking the "G" or Gain button on the left side of each Panel. In both cases, the Gain Overlay line will turn grey and the Gain button will turn yellow, both indicating the bypass state. Once in Bypass, Gain Overlay can only be activated again by selecting the same command, which changes to Activate Gain Overlay. When off or disabled, the Gain turns grey.

Note that, while in Gain Overlay Mode, all normal editing functions are disabled and only the gain nodes can be manipulated. Reverting to normal Editing can only be achieved by selecting the Hide Gain Overlay command.

4.4 SRPs

SRPs or Selection Reference Points are placeholders that are saved in a Project. SRP commands are under the Selection menu and are placed either with the Edit Point or a selected region. They can be locked, unlocked and deleted. Option–clicking allows you to drag them to a new location on the timeline. They also carry a optional comment label that's useful to jog your memory at a later date.

As with many objects in SonicStudio•DDP, SRPs have their own contextual menu. Control–clicking on an SRP brings up the following menu;

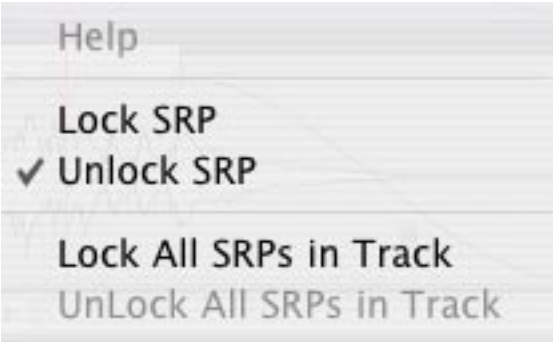

Figure 4.11: The SRP contextual menu

The menu offers the following options:

- Lock SRP
- Unlock SRP
- Lock All SRPs in Track
- Unlock All SRPs in Track

The last two options are global in nature and will change the state of all SRPs present, regardless of region selection.

4.5 Edit Groups

Sometimes a monaural edit is needed on a stereo pair. SonicStudio•DDP provides a simple "Edit Group" control to depart from the default behavior of performing edits on both channels of a stereo pair when you operate on only one. The default Edit Group mode is stereo, as indicated by the stereo Edit Group indicator.

Figure 4.12: Stereo editing mode

The stereo editing mode selector straddles the two Panels. Above and below the stereo editing mode selector are the two mono mode selectors for each channel.

Figure 4.13: Mono editing mode

Simply click on either mono selector to make changes to one channel or the other exclusively.

4.6 Advanced PQ

All PQ information and additional metadata can be viewed and modified with the help of the Mark Info window. It can be opened by selecting the Windows > Mark Info command.

Figure 4.14: The PQ Info window

Apart from the PQ information, this window contains additional fields for Album Title, Album Artist, Track Title and, for compilations, Track Artist. These fields provide input for the generation of CD-Text metadata. Additionally, ISR Codes (ISRC) and Universal Product Code/European Article Number, or UPC/EAN, codes can be entered as well.

Creation of PQ Marks must follow a few simple rules, laid down in the "Red Book" or Compact Disc–Digital Audio specification. The most important of these rules are:

- There is a maximum of 99 tracks allowed on a CD

- There is a maximum of 99 indexes allowed within each track
- Index Markers are not allowed between End of Track and Start of Track marks
- The minimum duration of a track, the minimum distance between Start of Track and End of Track marks or two consecutive Start of Track marks, must be 4 seconds, including offset.
- Two consecutive End of Track marks are not allowed but two consecutive Start of Track marks are allowed

SonicStudio•DDP validates the PQ Marks against Red Book specifications and shows the result at the bottom of the PQ Window.

4.6.1 Album Info

4.6.1.1 Album Title

In this field, the title of the album can be entered.

4.6.1.2 Album Artist

In this field, the artist's name can be entered.

4.6.2 PQ Offsets

Offsets are often applied to PQ marks. This area of the window is for adjusting the offsets. Offset are correction factors subtracted from absolute song timing, to compensate for latencies in CD transports, especially inexpensive models.

Note that, as a rule, offsets are applied during the delivery of an original DDP image. Since SonicStudio•DDP is designed to modify existing DDP file sets, a default of zero is used for the offsets. Since offsets are merged with the PQ mark times during generation of DDP file set, it is impossible to recover the original offset values when editing an existing DDP file set.

Offsets can be applied globally or individually to PQ Marks, depending upon their type and placement. Additionally, offsets can be disabled or modified per Mark in the Track Info section of this tab.

4.6.2.1 Display Offsets

Uncorrected or non–offset PQ Code timing is displayed in the PQ Log and Tracks Info section of the PQ Info window. If Display Offsets is enabled, the times will be displayed with the offset corrections subtracted.

4.6.2.2 Disable Offsets

If this button is enabled, the offsets shown in the offset windows will not be subtracted from the PQ mark times, either for display or for delivery.

4.6.2.3 Start Offset

It takes a typical CD player about two to twenty frames to fill its buffer and start producing valid audio data after it has located the correct Track Start. The Start Offset back times the Track Start time that the player reads to ensure that the beginning of the track will not be cut off by the player.

4.6.2.4 End Offset

The End Offset prevents the player from muting too early at the end of the track. This offset value applies to all End of Track marks, including the last.

4.6.2.5 Splice Offset

If a Start of Track mark is not preceded by an End of Track mark from the previous track, it is considered to be a "splice" or segue. The Splice Offset applies only to the special case of splices. The Splice Offset must always be equal to or less than the Start Offset. Splice Offsets are typically a bit more than half of the normal Start of Track offset.

4.6.2.6 Track 1 Offset

This setting allows the Start of Track Mark for Track 1 to have it's own offset value. This is because Track 1 on a Compact Disc is different from the remaining tracks and requires an extra long offset to allow CD transports to initialize prior to the onset of audio data recovery.

4.6.2.7 UPC/EAN Code

This is the product's Universal Product Code/European Article Number, usually displayed as a barcode on the package. UPC/EAN barcodes are 13 digits and, in the United States, the leading digit or country code should be set to zero before entering the additional 12 trailing digits.

4.6.3 Track Info

4.6.3.1 Track Title and Track Artist

The text field directly under "Track Info" represent the title and artist of the selected track.

SonicStudio•DDP assigns default names to marks. The Start Marks are numbered and called Track 1, Track 2, Track 3, etc. The End Marks and Index Marks are not numbered, and are called End and Index respectively.

You can assign your own names to the marks. Just select a mark from the PQ Log and Tracks Info list at the bottom of the window, type a new name into the Track Title field, and hit the enter key. The new name will appear in the list and also next to the mark above the top Panel. These names will be saved as part of the Project.

4.6.3.2 Time

This box displays the location of the selected mark. The time value can be edited by typing directly into this field. The corresponding PQ mark will be moved accordingly.

4.6.3.3 Offset

This field shows the offset, if any, that is applied to the selected mark. If the default offset is not appropriate, you can enter a custom offset for this mark alone.

4.6.3.4 ISRC Code

This field shows the ISRC Code, if any, that is associated with the selected Start of Track mark.

4.6.3.5 Mark Type

This drop down menu indicates the current type and allows you to change the type by selecting a different option.

4.6.3.6 Lock button

This button locks all attributes of the selected mark.

4.6.3.7 Default button

This button determines where the default offset, if any, applies to the selected mark or a custom value will be used instead. If selected, the custom value can be entered in the Offset field.

4.6.3.8 Copy Enabled

This button displays and controls the state of the SCMS (Serial Copy Management Scheme) Copy Enable bit. Copying is enabled when the button is red. The default state for this button is off. That is, copying is not allowed.

4.6.3.9 Emphasis Flag

This button shows and controls the state of the Emphasis Flag bit of the selected track. When the Emphasis Flag is set, the player will de-emphasize the track on playback. The Emphasis flag is set when the button is red.

4.6.4 PQ Log and Track Info

4.6.4.1 Total Tracks

This field shows the total number of Start Marks that will appear on the disc.

4.6.4.2 Total Duration

This field shows the total playing time of the CD.

4.6.4.3 Delete Mark

This button, to the right of the Total Duration field, deletes the selected mark.

4.6.4.4 Listing

This field shows a list of all marks present. For Start of Track marks, each entry shows the track number and name, the start and end times along with the duration. End of Track and Indexes are also listed, along with their time location.

Any individual mark can be selected by clicking on that row in the list. A selected track is highlighted in yellow while information on the highlighted mark will appear in the fields above within the Track Info section. See section 4.6.3 above for more information on Track Info.

4.6.4.5 PQ Validator

SonicStudio•DDP checks to see that all PQ entries conform to the Red Book specifications. If they meet the requirements, the indicator at the lower left corner will be green and a message will say "PQ Information is valid." If the PQ marks violate the Red Book requirements, the button will be yellow, and a message will appear describing what is wrong with the entered parameters.

Chapter 5..... Menus

For all menus, the keyboard equivalents for all commands are listed in Appendix 1. Also note that the word folder is used to describe disk directories, in keeping with Mac OS tradition. Finally, all edits in SonicStudio•DDP are both instantaneous and non–destructive. The only exception is the File > Save Reversed command, which "renders" or creates a new sound file of the reversed material.

5.1 The File Menu

Figure 5.1: The File menu

5.1.1 New Project

Selecting New Project from the File menu will open a new, empty Project. Any currently active Projects are unaffected but moved to the background. SonicStudio•DDP allows you to have as many open Projects but, when the application runs out of RAM, it will begin to use virtual memory, slowing down the application.

5.1.2 Open Project

A Project file lets you save your editing work in a set of files, along with most of the editing metadata you added. An additional feature of a Project is that you can save your edit decisions without committing them back to a DDP file set. The Project file saves all segment names, SRPs, marks and edits and they are all restored upon re–opening a Project.

Selecting File > Open Project brings up a standard Mac OS file browser. Locate the requested Project file and select it to open the Project in a new window.

5.1.3 Open DDP Image...

This command opens the DDP Image or DDP file set that you are going to audition or edit. To open a "DDP image," you are opening an entire set of files in their enclosing folder rather than a single file. Select the entire enclosing folder in the Mac OS file browser, which loads the DDP image file set into a new Project.

Apart from opening complete DDP file sets, SonicStudio•DDP is also able to open the stand–alone audio files that accompany DDP file sets without their associated metadata. Files named IMAGE.DAT and IMAGE.TRK will be recognized, as well as audio files with a file type of "IMAGE." To open these files stand–alone, simply drag and drop the file into the top Panel of a new, empty Project. SonicStudio•DDP will automatically place the sound file head on the timeline starting at 2 seconds.

5.1.4 Open Sound File...

This command opens a Mac OS file browser, allowing you to select any sound file recognized by SonicStudio•DDP. This includes AIFF, WAV, MP3, BWAV files along with SD2 with region definitions.

5.1.5 Close Window

This command closes the currently active window. This can be a Project, the Mark Info window, Status Window or, the Preferences window. Upon closing a Project that contains unsaved changes, SonicStudio•DDP will open a dialog asking for changes to be saved, discarded or offering to cancel the close window operation.

5.1.6 Save Project

This will save the current state of the active Project. It is saved with its current name and path. This command will overwrite any previously saved Project file with that name and path.

5.1.7 Save Project As...

This command lets you save a copy of the active Project under a new file name or different path. SonicStudio•DDP allows you to choose either a destination folder or, you can navigate to an existing folder. If the destination is empty, SonicStudio•DDP simply writes the audio and/or metadata files as directed. If, however, the destination folder is not empty, SonicStudio•DDP alerts you that a potential conflict exists to overwrite files and asks for more direction.

5.1.8 Build Sound Waveform...

The DDP Image file includes sample values but does not contain the amplitude-specific data needed to draw the detailed audio pictures. So, if you would like to have a waveform while auditioning or editing and have unchecked the default preference to create waveforms when you open files, you must select the Build Sound Waveform... command.

First, select the sound file by clicking on the segment's Title Bar. The Title Bar will turn yellow to show that it is selected. Then, select the File > Build Sound Waveform... command.

5.1.9 Save Reversed

This command saves one or more selected segments or regions in reversed time order, creating a new segment that "plays backwards." After invoking the command, a Mac OS file browser appears in order to select the location and file name of the new file to be created. After the operation is complete, the reversed material will be edited back into the Project's EDL, replacing the original segment(s) or region(s).

Note that this operation may take a lot of time, depending upon your system configuration and the length of the selected file(s) or region, during which time SonicStudio•DDP may appear to be inactive.

5.1.10 System Information

5.1.10.1 Status Window

Invoking this command opens up the Status Window. While SonicStudio•DDP is running, it outputs information to the Status Window, providing more information on installed options, system status and actions undertaken by the program. Also, at the command of the user, certain information regarding EDL or Projects can be output to the Status Window. See the following sections for more information on user selectable printing to the Status Window.

5.1.10.2 Print EDL Sound File Paths

This commands outputs a list of all locations of all sound files in use in the current Project. The output is written into the Status Window.

This command is useful if you work in a facility with multiple drives, networked storage or servers on which some of your material resides. Printing the explicit path allows you to keep track of the location of all source material, for both documentation and backup.

5.1.10.3 Print Segment Info

This command prints highly detailed information on all segments in the current EDL. The output is written into the Status Window.

5.1.10.4 Print Selected Segment info Formatted

This command prints user information on the currently selected segment(s). The output is written to the Status Window in the form of a table showing the file name, start and end time, duration and gain in dB.

5.1.10.5 Print Selected Segment Info

This command prints highly detailed information on all selected segments in the current EDL. The output is written into the Status Window.

5.1.10.6 Print SRP Info

This command prints detailed information on all SRPs in the active Panel. The output is written into the Status Window.

5.1.10.7 Write SRP Info to File

This command prints detailed information on all SRPs in the active Panel to a new file. The output is formatted in a table with details on track location, ordinal number, lock status and type, as well as any textual label added to the SRPs. Lock status is indicated by an "L" for locked and a "U" for unlocked. Standard SRPs have a "C" type indication while Sync SRPs show an "S" type.

Note that, though the default name of the file created with this command has a ".srp" suffix, you should manually remove that suffix and replace it with a ".txt" file extension.

5.1.11 Quit

Selecting Quit from the File menu closes the SonicStudio•DDP application. Any open Projects that have been modified will produce a modal dialog asking you to determine the Project's disposition. See section 5.1.7 above for more information on this dialog.

5.2 The Edit Menu

Figure 5.2: The Edit menu

5.2.1 Undo

This command reverts the last command executed. For clarification, the Undo command also appends the last action performed to the menu name.

SonicStudio•DDP provide an almost unlimited number of undos. The only limiting factor is the amount of RAM which, when completely used, will force the operating system to use virtual memory. This will slow down the operation of SonicStudio•DDP.

Note that some individual commands actually perform several functions "behind the scenes" though, to you the user, it appears to be only one function. For that reason, you may have to Undo several times recover a state that was reached with a single command.

5.2.2 Redo

This command reverts the last undo command, reinstating the last command performed. Additionally, for clarification the Undo command in this menu shows the last action undone.

5.2.3 Cut

The Cut command operates on a selected region, sound file or segment, removing the selected item from the Project and placing it in SonicStudio•DDP's Clipboard. The Clipboard is a temporary memory location reserved by the operating system for each running application.

5.2.4 Copy

The Copy command operates on a selected region, sound file or segment, copy the selected item from the Project and placing it in SonicStudio•DDP's Clipboard. Unlike the Cut command, the Copy command leaves the selection intact instead of deleting it after copying the selection to the Clipboard.

5.2.5 Paste

The Paste command inserts the content of the Clipboard into the EDL, replacing the contents from the Playhead position on, for the duration of the audio currently of the Clipboard. The inserted content is placed between Crossfades and the Edit Point is moved to the end of the inserted material.

5.2.6 Select/Deselect All

These commands select or deselect all segments in the current Project.

5.2.7 Delete Selection

If a region or segment is selected, this command will delete the region. It will then move left any audio after the deleted region or segment, filling in the space formerly occupied by the selected segment or region. A Crossfade is placed to transition across the deletion.

If both an In and Out Point are present, and the Out point is after the In Point, then they take precedents over both selected region and segments. If only an In Point is present, then the command will not work. Finally, if both an In and Out Point are present, the Out point is after the In Point, and the edit points are inside "Edited Black," the empty area between segments. Then that region defined by the edit points will be deleted and "downstream" audio will be moved left.

5.2.8 Clear Selection

Clear Selection works similarly to the Delete Selection command. The Clear Selection command clears the selected segment, region or area defined by edit points, but does not move any other audio on the timeline.

5.2.9 Create Crossfade/Create Crossfade from In Point

The Create Crossfade command creates a Crossfade at the position of the Playhead. If an In Point is present, Create Crossfade from In Point creates a Crossfade at the location of the In Point.

5.2.10 Delete Crossfade

The Delete Crossfade command deletes all "frivolous" Crossfades, ones that cause no audible change in the underlying audio, from the selected region. Superfluous Crossfades are usually created with the Create Crossfade command, discussed in the previous section and, after an extensive editing session, the Delete Crossfade command will clear any visual clutter, making it easier to see the operative edits.

5.2.11 Move Segments

The Move Segment command allows the user to move one or more segments to another location on the timeline. Selecting this command opens the Move Segments modal dialog, which shows the current position of the head or start of the first selected segment.

Entering a new start time and clicking the Move button causes the head of the first selected segment to move to the new location. All selected segments will also more by the same amount, maintaining their relative position to each other.

Additionally, this dialog offers three extra options. By clicking the Where button, you can load either the current position of the Playhead or the location of the In point or Out Point, if present, from a drop down menu. Then, by clicking the Move button, the segment(s) shift to the new location. Clicking the Cancel button leaves the selected segments at their original position.

5.2.12 Reverse Polarity

The Reverse Polarity command inverts the polarity of the selected segment(s). This allows you to manipulate polarity in those rare situations where incoming material was recorded with inverted polarity.

Note that, to change the polarity relationship between a stereo pair, this command must be applied to only one channel of the pair. To do this, change the Edit Group Selector of one Panel, located on the left edge of both Panels, from the default stereo setting to mono. To read more about Edit Group Selectors, refer to section 4.5 for more information. To read more about using Text Mode to reverse polarity, see section 4.3 for more information.

5.2.13 Nudge Segment Left/Right

The Nudge Segment commands move or "nudge" the selected segment(s) left or right, earlier or later on the timeline, by a predefined value. The default "Nudge B" value used is defined in the Time Display tab of Preferences window. See section 5.9.2 for more information on the Time Display preferences.

5.2.14 Edit Segment Name

When a segment is selected, choosing the Edit Segment Name command allows the user to edit the name of the segment as it appears in the Title Bar, and in the Text Mode view. Changing the Segment name has no effect on the actual filename. This command is equivalent to double clicking on the Title Bar.

5.2.15 Editing Auto Tool Override

This commands toggles the Editing Auto Tools state, either enabled or disabled. See section 5.9.3 for more information on the EDL preferences.

5.3 The EDL Menu

Figure 5.3; The EDL menu

5.3.1 Show/Hide Text View

The Show/Hide Text View command toggles the display of the selected Panel between Text Mode view and Waveform Mode.

5.3.2 Show/Hide Gain Overlay

This command forces the selected Panel to show or hide the Gain Overlay feature. The Gain Overlay is only visible in Waveform Mode, and is shown as a thin red line superimposed on the waveform display. Projects saved with Gain Overlay will open with Gain Overlay visible upon reopening.

Note that, although Gain Overlay may not be shown, when activated it is always active in the audio output path. Only the EDL > Bypass Gain Overlay command will bypass any Gain Overlay functionality. See section 5.3.3 below for more information on the Bypass Gain Overlay command.

5.3.3 Bypass/Activate Gain Overlay

This command bypasses or engages the Gain Overlay function. When in bypass, the Gain Overlay line in the waveform display turns grey and the corresponding Gain Overlay Button(s) on the left side of each Panel turn yellow.

Note that the Bypass/Activate Gain Overlay function can only be selected when Gain Overlay is shown. Option–clicking on a Gain Overlay Button will also bypass the Gain Overlay function.

5.3.4 Create Gain Nodes

With Gain Overlay enabled and a region of the timeline selected, this command creates Gain Overlay nodes at the boundaries of the region. To use this function, first click–drag within the waveform display to select a region. Then, select Edit > Create Gain Nodes to add two nodes at the intersection of the Gain Overlay and the selected region. For more information on working with Gain Overlay and how to add nodes, see section 4.3 above.

5.3.5 Select Gain Nodes

This command selects all Gain Nodes contained within the currently selected region. Selected Gain Nodes can then be subject to simultaneous changes such as gain setting, lock state, or deletion.

For more information on working with Gain Overlay mode, see section 4.3 above.

5.3.6 Refresh

The Refresh command redraws the current waveform display for the selected Panel. This command is especially useful after rebuilding the waveform files of one or more segments, to force the waveform display to display the updated information.

5.3.7 Standard/Large Track Size

The Standard and Large Track Size commands resize the selected Panel(s) to standard or large vertical size. Large sized Panels are two times as tall as standard size, offering a better display with large desktop settings. A Large Panel also list more segments in Text Mode.

5.4 The Play Menu

Figure 5.4: The Play menu

5.4.1 Play From Selection

This command starts playback from the beginning of a selected region. If no region is selected, then playback starts at the Edit Point. If the Edit Point is not available, playback commences at the start of the first segment in the Project. This command is equivalent to tapping the Spacebar on the keyboard. The Play From Selection command will continue to play until either the Spacebar is hit again or the Playhead reaches 23:59:59.

5.4.2 Play Selection

This command plays a selected region or selected segments. Whereas the Play From Selection command mentioned in section 5.4.1 above will continue to play until stopped, the play Selection command stops automatically at the end of the selection.

5.4.3 Play From Playhead

In normal operation, when you tap the Spacebar to start playback, the Playhead will jump to the Edit Point or, the start of the file if there is no Edit Point, and begin playback. The Play From Playhead command emulates a tape transport, with playback starting at the current Playhead location.

5.4.4 Repeat Play

If there is a selected region, the Repeat Play command will repeatedly play the region until stopped. If there is not a selected region, SonicStudio•DDP will repeatedly play the entire Panel. Repeat playback continues until you stop play with the menu command or by hitting the Spacebar.

5.4.5 Stop All

This command stops all playback and is equivalent to tapping the Spacebar during playback.

5.4.6 Around Selection Center

This command plays a section of sound centered around a selected region. When you choose Play Around Selection Center, a submenu appears, allowing you to select the length of playback time.

Figure 5.5: Play Around Selection Center submenu

5.4.7 Play from Selection

Like the Play Around Selection Center discussed in section 5.4.6 above, this command requires that you first select a region. Also, this command offers a submenu with duration choices for playback. Unlike the Play Around Selection Center discussed in section 5.4.6 above, this command begins playback at the left edge of the selection and continues, for the specified duration,

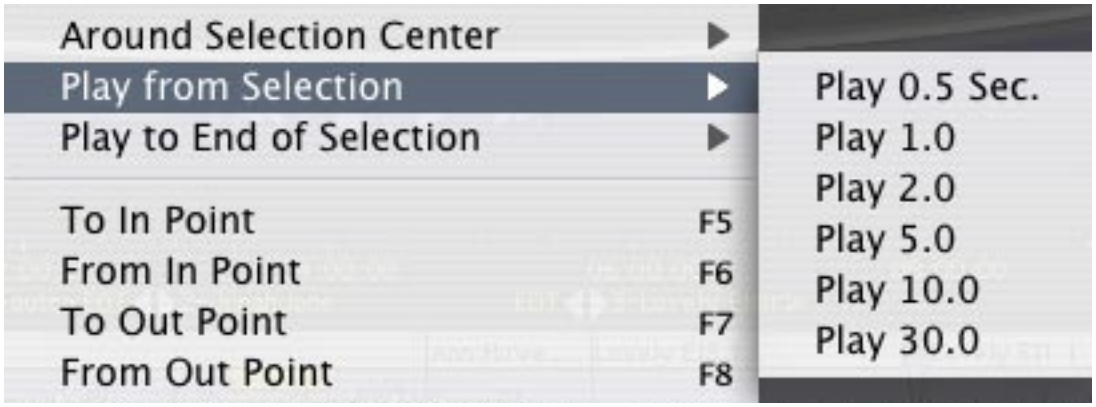

Figure 5.6: Play from Selection

5.4.8 Play to End of Selection

This command is the opposite of the Play from Selection discussed in section 5.4.7 above, except that playback ends at the trailing edge or right side of a selected region. If there is not a selected region, playback ends at the Edit Point. This command also offers a submenu with a number of choices for the duration of the playback.

Figure 5.7: Play to End of Selection submenu

5.4.9 Play to In Point

This command plays a section of sound up to the In Point. The duration of playback is preset by the Play Around In Point preference. See section 5.9.3.5 for more information on the Time Display preferences.

5.4.10 Play From In Point

This command plays a section of sound starting at the In Point. The duration of playback is preset by the Play Around In Point preference. See section 5.9.3.5 for more information on the Time Display preferences.

5.4.11 Play to Out Point

This command plays a section of sound up to the Out Point. The duration of playback is preset by the Play Around Out Point preference. See section 5.9.2 for more information on the Time Display preferences.

5.4.12 Play From Out Point

This command plays a section of sound starting at the Out Point. The duration of playback is preset by the Play Around Out Point preference. See section 5.9.2 for more information on the Time Display preferences.

5.4.13 Play Between In and Out Points

This command starts playback at the In Point and continues to the Out Point.

5.4.14 Move Playhead

This command lets you place the Playhead at a specific location on the timeline. When you select this menu item, the Move Playhead modal dialog appears.

Figure 5.8: The Move Playhead dialog

When you enter a new timecode address in the Move Playhead dialog and click Move, the Playhead will jump to the new location. Besides manually entering a new location, you can also use the Where button to load the address of the In or Out Point, if present, while the SRP button loads the locations of any existing SRPs. Clicking the Cancel button leaves the Playhead at its original location.

Note that, when the Playhead is visible and you can hover the cursor over the Playhead, the cursor changes its shape to a sine wave–with–vertical line. Once in that mode, you can click–drag the Playhead to a new location.

5.4.15 Hide Playhead When Stopped

This command toggles between a visible and invisible Playhead when playback is stopped. A check mark appears next to this menu item when the Playhead is hidden. Since this command only hides the Playhead in the Panels, not on the timeline, this command is useful if you find yourself grabbing the Playhead accidentally while attempting to edit or modify some other object in a Project.

5.5 The Mark Menu

Figure 5.9: The Mark menu

5.5.1 Mark Info

The Mark Info command opens the Mark Info window. This command is equivalent to the Windows > Mark Info command.

5.5.2 Track Start Mark

The Track Start Mark command inserts a Start of Track PQ mark at the location of the Edit Point.

5.5.3 Track End Mark

The Track End Mark command inserts an End of Track PQ mark at the location of the Edit Point.

5.5.4 Index Mark

The Index Mark command inserts an Index PQ mark at the location of the Edit Point.

5.5.5 Delete Mark

The Delete Mark command is used to remove existing PQ marks. If a region is selected in a Panel, all of the PQ marks inside the selection are deleted. If no region is selected, this command will remove a PQ mark if the Edit Point is at the exact time location of that mark.

5.5.6 Lock Marks from Selection

The Lock Marks from Selection command is used to lock PQ marks to the timeline. This command locks all PQ marks inside a selected region. Once locked, mark locations cannot be modified until they are unlocked. This command is equivalent to clicking the Lock button, if disabled, in the PQ Info tab of the Windows > Mark Info window.

Note that this command does not affect the ability to change Title, emphasis, ISCR or SCMS metadata associated with a mark. Also not that this command does not attach marks to audio segments. Editing any audio with locked PQ marks will change the time relationship between those marks and the associated audio.

5.5.7 Unlock Marks from Selection

The Unlock Marks from Selection command is used to unlock PQ marks within a selected region. This command is equivalent to clicking the Lock button, if engaged, in the PQ Info tab of the Windows > Mark Info window.

5.5.8 Lock All Marks

This command locks all PQ marks on the timeline, regardless of selected regions or segments. Once locked, the location of PQ marks cannot be altered until they are unlocked.

5.5.9 Unlock All Marks

This command unlocks all PQ marks on the timeline.

5.5.10 Analog Black to Marks

This function measures the amplitude and duration of the audio in a selected region, placing End of track and Start of Track marks in locations that approximate the end of one track and beginning of the next. Both amplitude and duration are user defined. The default amplitude is set in the Editing Tools tab of the Windows > Preferences window.

When invoking this function, the Analog Black to Marks modal dialog appears. In the dialog, the default parameters can be changed, after which the Analog Black to Marks function is start-

ed by selecting OK. By clicking on the Cancel button, the operation is stopped without further action.

Note that the results of the Analog Black to Marks function is never as accurate as the Edited Black to Marks function, discussed in section 5.5.11 below. The accuracy of the mark placement depends entirely on the accuracy of the parameters used so, you may want to zoom in and, with the Show Track Scale in dB preference set (Editing Tools tab of the Windows > Preferences window), visually estimate amplitudes of your fade outs. The result of the Analog Black to Marks function should always be checked for errors and unintended placement.

5.5.11 Edited Black to Marks

The Edited Black to Marks command automatically places Start and End of Track PQ marks at the beginning and end of all Fade Ins and Fade Outs respectively. To use the Edited Black to Marks command, you must first select a region, allowing the command to be applied to all fades or to a selection only.

5.6 The Selection Menu

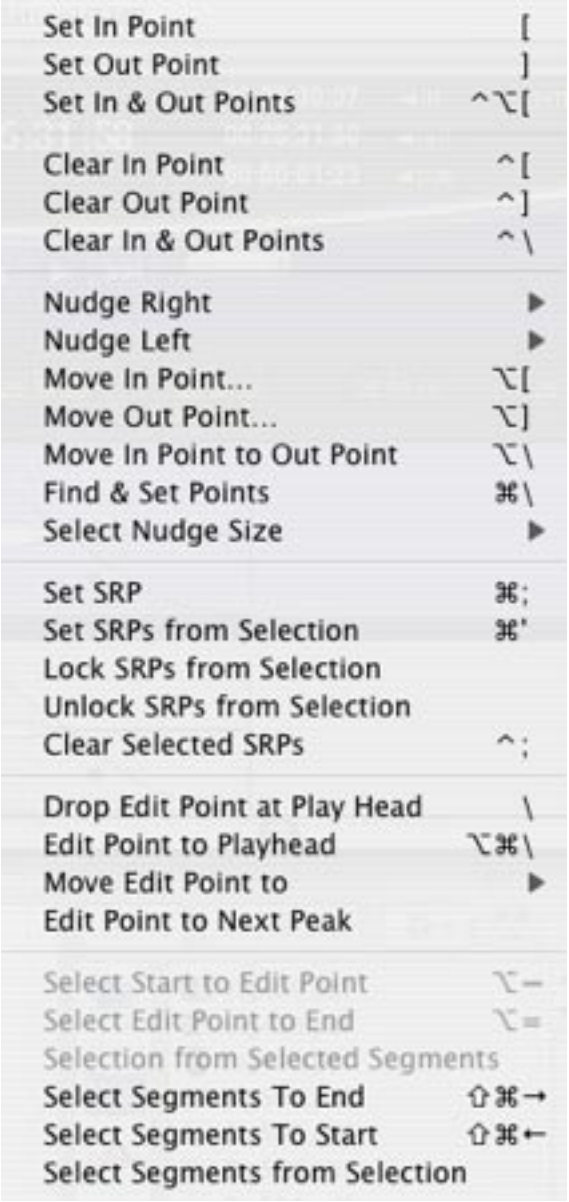

Figure 5.10: The Selection menu

5.6.1 Set In Point

The Set In Point command drops an In Point at the location of the Edit Point. There can only be one In Point in a Panel at any time.

Note that the IN, OUT and DUR time fields at the top right of the Project window are always active and fully editable. These fields allow you to precisely set the location of, and duration between, the In and Out Points.

5.6.2 Set Out Point

This command places an Out Point at the location of the Edit Point. There can only be one In Point in an EDL at any time.

5.6.3 Set In & Out Points

If there is a selected region in the Panel, then Set In & Out Points will create an In Point at the start of the selected region and an Out Point at the end.

5.6.4 Clear In Point

Clear In Point will, if present, remove the In Point.

5.6.5 Clear Out Point

Clear Out Point will, if present, remove the Out Point.

5.6.6 Clear In & Out Points

Clear In & Out Points will, if either is present, remove both the In Point and the Out Point from the Project.

5.6.7 Nudge Right/Left

These commands makes it easy to slightly move or "nudge" an In and/or Out Point to the right or left. When you select this command, a submenu comes up allowing you to advance or retard an In Point, an Out Point, or both simultaneously.

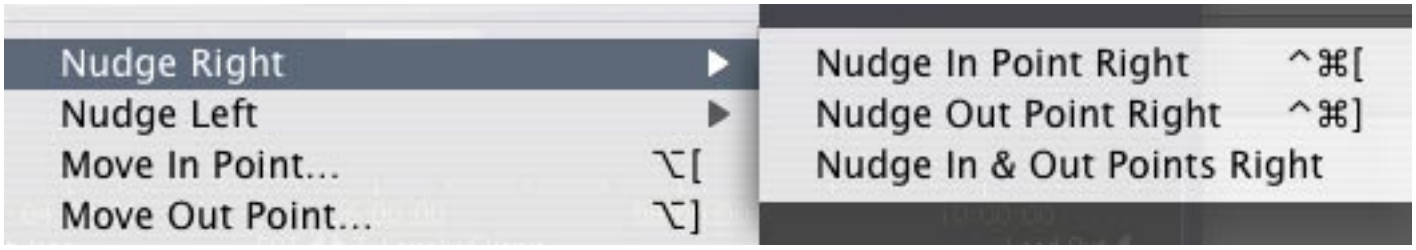

Figure 5.11: The Nudge Right command and submenu

The nudge amount is set in the Time Display tab of the Windows > Preferences window. See section 5.9.2 for more information on the Time Display preferences.

5.6.8 Move In Point.../Move Out Point...

When you select either of these commands, this brings up the Edit In/Out Point modal dialog.

Figure 5.12: The Edit In Point dialog

When you enter a new timecode address in the Edit In/Out Point dialog and click Move, the appropriate Edit Point will move to the new location. Besides manually entering a new location, you can also use the Where button to load the address of the Playhead or other Edit Point, if present. The SRP button loads the locations of any existing SRP while clicking the Cancel button leaves the Edit Point at its original location.

5.6.9 Move In Point to Out Point

This command forces the In Point to replace the Out Point.

5.6.10 Find & Set Points

This command places an In Point at the beginning and an Out Point at the end of a selected segment. If multiple segments are selected, the In Point is placed at the beginning of the first selected segment, and the Out Point is placed at the end of the last selected segment.

Note that this command does not operate on selected regions.

5.6.11 Select Nudge Size

This command allows you to select one of the three nudge presets used by the Selection > Nudge Right/Left and Edit > Nudge Segment commands. The presets are defined in the Time Display tab of the Windows > Preferences window. See section 5.9.2 for more information on the Time Display preferences.

5.6.12 Set SRP

This command places an SRP in the selected Panel at the location of the Playhead.

5.6.13 Set SRP with Text

This command places an SRP in the selected Panel at the location of the Playhead while selecting that SRP's associated label field for entry.

5.6.14 SRP from Selection

This command places an SRP at the beginning and end of a selected region.

5.6.15 SRP from Segment Edit Points

This command places an SRP at the beginning and end of selected segments, if present. If multiple segments are selected, SRPs are placed at the head and tail of all selected segments.

5.6.16 Clear Selected SRPs

This command removes all SRPs within a selected region, whether they are locked or not.

5.6.17 Drop Edit Point at Playhead

This command moves the Edit Point to the current location of the Playhead.

5.6.18 Edit Point to Playhead

This command toggles a mode on or off whereby when playback is stopped, the Edit Point jumps to the location of the playhead.

5.6.19 Move Edit Point to...

This command has a submenu, with ten possible choices.

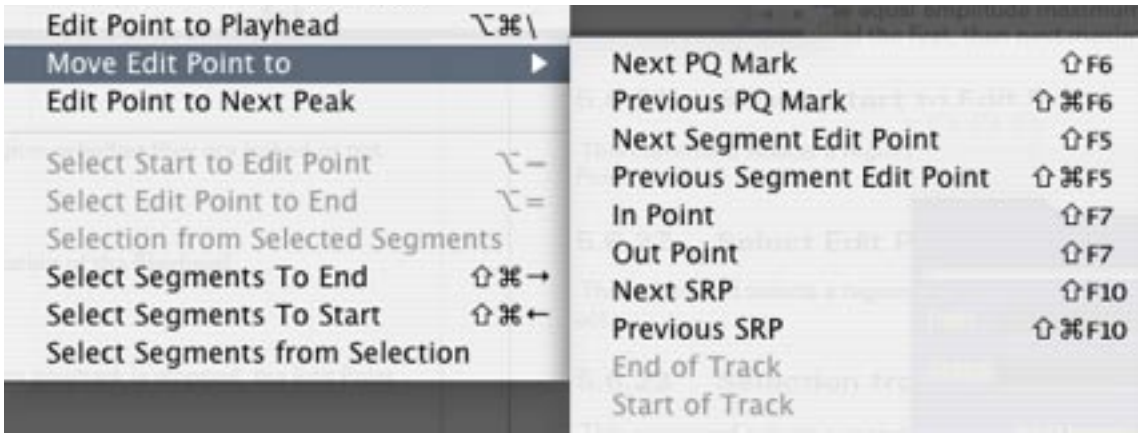

Figure 5.13: The Move Edit Point to submenu

With this set of choices, the Edit Point can be quickly moved to a number of predefined positions:

- The next PQ mark
- The previous PQ mark

- The next Segment Edit Point ...the Black Fade or Crossfade
- The previous Segment Edit Point ...the previous Black Fade or Crossfade
- The In Point
- The Out Point
- The next SRP
- The previous SRP
- The End of Track ...the last Fade Out of the Project
- The Start of Track ...the first Fade In of the Project

5.6.20 Edit Point to Next Peak

This command examines the amplitude of all audio samples in the selected region or segments, and moves the Edit Point to the location of the maximum sample within the selection. If there are more than one equal amplitude maximum samples, then the command moves the Edit Point to the location of the first, then next maximum samples in turn.

5.6.21 Select Start to Edit Point

This command selects a region from the first Fade In of the Project to the location of the Edit Point.

5.6.22 Select Edit Point to End

This command selects a region from location of the Edit Point to the last Fade Out of the Project.

5.6.23 Selection from Selected Segments

This command selects a region from the first Fade In of the first selected segment to the last Fade Out of the last selected segment.

5.6.24 Select Segment to End

This command selects all segments from the Edit Point to the last segment in the Project, including the segment in which the Edit Point is located. If the Edit Point has not been placed, the command selects all segments from the first selected segment to the last segment in the Project.

Note that, to quickly determine if the Edit Point is placed somewhere in the Project regardless of zoom level, simply check the left DUR or duration field at the top of the Project. Since the Edit Point is really a zero duration selection, the DUR field will show a zero value whenever the Edit Point is present, even though it may not currently be in view.

Figure 5.14: The DUR field showing the presence of the Edit Point

5.6.25 Select Segment to Start

This command selects all segments from the first segment in the Project to the Edit Point, including the segment in which the Edit Point is located. If the Edit Point has not been placed, the command selects all segments from the first segment in the Project to the selected segment.

5.6.26 Select Segments from Selection

This command selects all segments that are part of the selected region, including the segments in which the start and end of the selection is located.

5.7 The View Menu

Figure 5.15: The View menu

5.7.1 Move Forward/Backward

These commands move the contents of the Panel forward and backward along the timeline. The zoom factor or magnification stays the same.

5.7.2 Zoom In/Out

The zoom commands change the zoom factor or magnification, expanding or reducing the time scale by 90%. Zooming in provides more detail while zooming out lets you see more of the overall program.

5.7.3 Zoom Around In/Out Point

These commands change the magnification of the waveform display while centering the waveform display on the In Point or Out Point. The amount of time shown around the In or Out Point is defined by the Zoom to In/Out setting in the Time Display tab of the Windows > Preferences Window window. See section 5.9.2 for information on the Time Display tab.

5.7.4 Zoom In/Out around Edit Point

These commands change magnification while keeping the waveform display centered on either the Edit Point. The amount of time shown around the In or Out Point is defined by the Zoom to In/Out setting in the Time Display tab of the Windows > Preferences Window window. See section 5.9.2 for information on the Time Display tab.

5.7.5 Zoom In/Out around Playhead

These commands combine a Zoom In/Out command while keeping the waveform display centered on the playhead.

5.7.6 Zoom to Previous/Next

These commands are like Undo/Redo for zoom commands. SonicStudio•DDP remembers the last zoom level. To return to an prior zoom level, choose Zoom to Previous. To return to the more recent zoom lever, choose Zoom to Next.

5.7.7 Zoom around Playhead

This command zooms with the Playhead in the center of the waveform display. The level of zoom is determined by a submenu.

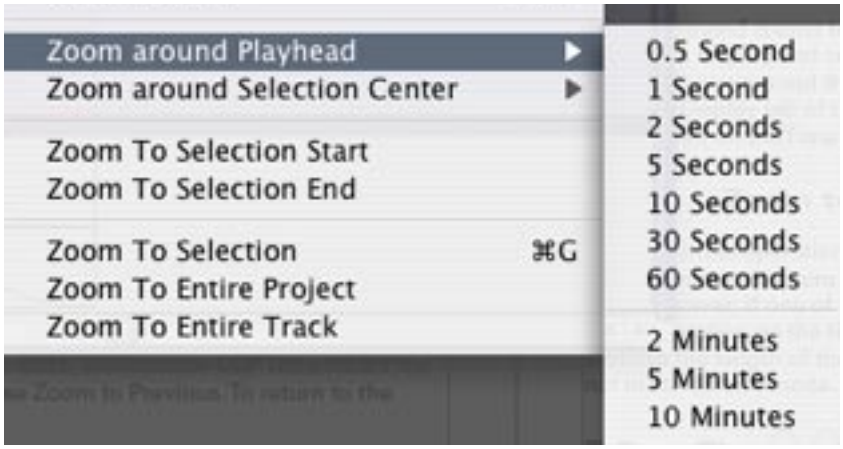

Figure 5.16: The Zoom around Playhead menu

The amount of time chosen in the submenu indicates the total amount of time shown in the display after the Zoom Around Playhead command is selected. The amount of time will be equally divided between the area to the left and right of the playhead position.

5.7.8 Zoom around Selection Center

This command is similar to Zoom around Playhead, except that instead the display is centered around the centre of a selected region or selected segment(s).

5.7.9 Zoom to Selection Start/End

This command zooms the waveform display to the start or end of the current selection with the start or end of the selection centered in the waveform display. The amount of time shown around the selection boundaries is defined by the Zoom to Sel Start/ setting in the Time Display tab of the Windows > Preferences Window window. See section 5.9.2 below for information on the Time Display tab.

5.7.10 Zoom to Selection

This command zooms to the currently selected region such that the selection is centered in the waveform display and covers a preset percentage of the waveform display area. The amount of time shown around the selection boundaries is defined by the Zoom to Sel Start/ setting in the Time Display tab of the Windows > Preferences Window window. See section 5.9.2 for more information on the Time Display tab.

5.7.10 Zoom to Entire Project/Track

Under normal operation with a stereo Project, these two menu commands work identically. These commands zoom so that the entire program is shown across the entire waveform display. However, if one of the two Panels contains more audio information, stretching over a longer duration on the timeline than the other channel, the Zoom to Entire Track command will zoom to the length of the selected track, which will then be different for the two tracks when not in stereo edit mode.

5.8 The NoNOISE Menu

The NoNOISE option is discussed in detail in chapter 6, the Manual DeClick User Guide.

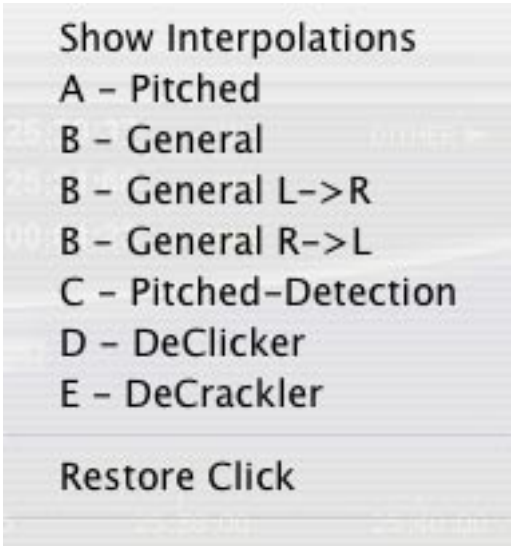

Figure 5.17: The NoNOISE menu

5.8.1 Show Interpolations

The Show Interpolations command toggles between showing and hiding interpolation sites, marked by “Restore Bars,” the red bar that delineates repaired samples.

Note that, when the waveform contains many Restore Bars, the display may slow down significantly.

5.8.2 A - Pitched

This command performs a A Type interpolation on the selected region.

5.8.2 B - General

This command performs a B Type interpolation on the selected region.

5.8.3 B - General L->R

This command performs a B Type interpolation on the selected region, using only content before the selected region to calculate the interpolation.

5.8.4 B - General R->L

This command performs a B Type interpolation on the selected region, using only content after the selected region to calculate the interpolation.

5.8.5 C - Pitched-Detection

This command performs a C Type interpolation on the selected region.

5.8.6 D - Declicker

This command performs a D Type interpolation on the selected region.

5.8.7 E - Decrackler

This command performs a E Type interpolation on the selected region.

5.8.8 Restore Click

This command restores the original contents of a repaired region. The Restore Click command only operates on a selected region containing Restore Bars.

5.9 The Preferences Menu

Some of the functions and commands within SonicStudio•DDP can be changed to adhere to some preferred values or behavior. All of these preferences can be adjusted in the Preference Window

Figure 5.18: The Preference window

The Preference window is displayed by selecting the Windows > Preferences command.

5.9.1 Editing Tools Tab

5.9.1.1 Playing Auto Tools

The Playing Auto Tools section has the following settings:

Autoscroll Playhead: when selected, the playhead will move as normal until it reaches the right edge of the waveform display. Then, the Move Forward command automatically takes place, moving the waveform view to the right.

AutoScroll Track: when selected, the playhead stays centered in the waveform display while the underlying waveform display continuously scrolls.

Note: Both the Autoscroll playhead and AutoScroll Track function rely heavily upon the performance capabilities of your display subsystem.

5.9.1.2 Display Auto Tools

The Display Auto Tools has the following options:

AutoScale On: When enabled, the display is scaled vertically so that the maximum peak within the entire track becomes full scale.

Scale to View: When enabled, the display is scaled vertically so that the maximum peak within the currently visible waveform becomes full scale.

Show Track Scale in dB: When enabled, the amplitude scale is shown in dBfs, or dB full scale referenced to a "full" 24 bit AES/EBU data word. When off, the track scale is shown as a non–dimensional normalized value ranging from 0 or silence, to ±1 or full scale.

5.9.1.3 Editing Auto Tools

The Editing Auto Tools section has the following options:

Analog Black threshold: This field shows the default value used by the Mark > Analog Black to Marks command for the amplitude threshold. This value, expressed as dB below 0 dBfs, sets the loudness threshold below which a Start of Track or End of Track mark will be placed. See section 3.9.4 for more information on automatically placing PQ Marks.

Auto-spacing duration: As described in section 4.2, Auto-Space uses a pre-selected time value to space the segments. Here, this value can be selected between 1 and 3 seconds. Alternatively, Auto-Space can be turned off here as well.

5.9.1.4 Default Fade

This selector determines the default fade curve used when any new fades are created SonicStudio•DDP. The five curve options are:

- Cosine
- Root Cosine
- Linear
- Root Linear
- Exponential

Section 4.1.2 briefly discusses the five curve shape options.

5.9.2 Time Display Tab

5.9.2.1 Time Display

The Time Display time code format selector allows you to preset the display time code format to 75 fps, 30 fps NDF, seconds or samples. Compact Discs use a special time code format, 75 fps, not used elsewhere while 30NDF (30 frames per second, non–drop frame) is the standard used by the original, 1600 series video cassette–based CD preparation systems.

5.9.2.2 Nudge A/B/C

The values in these fields define the amount of time that segments will be 'nudged' when the Edit > Nudge Left/Right commands are applied. For a complete description of the working of these commands, see section 5.2.13.

5.9.2.3 Zoom to In/Out

The time value entered here defines the amount of time in the total display after a View > Zoom Around In/Out Point command. See chapter 5.7.3 for a full description of these commands.

5.9.3.4 Zoom to Selection

The time value in this field defines how much time will be displayed when the View > Zoom to Selection command is applied. For a full description of this command, see section 5.7.10.

5.9.3.5 Play Around In/Out Point

The values in these fields define how much time will be auditioned when the Play > Play Around In and Out Point commands are invoked. For a full description of these commands, please see sections 5.4.10 and 5.4.11.

5.9.3 EDL Tab

5.9.3.1 View

The View section has the following options:

Show Segment Names: When checked, segment names will show in the Title Bar. When unchecked, the Title Bar of segments remains empty.

Background Waveform. When checked, waveforms will be generated in the background upon opening sound files from other DAWs. When unchecked, no graphical "waveform files" will be produced automatically. The File > Build Waveform... command will manually generate waveform files.

Zoom factor: When zooming in or out, the display will be zoomed by the factor defined in this field.

5.9.3.2 Editing Auto Tools

The editing auto tools section has the following options:

Fade Tool: When checked, the Fade Tool will be enabled for editing. For a full description of the Fade Tool and its properties, see section 3.8.1 and 4.1 for a full description.

Snap to Edit Point ON. When checked, dragging a segment near the position of the Edit Point will cause the segment to auto–snap.

Snap to Start/End. When checked, dragging a segment near the start or end of another segment will cause the segment to auto–snap. See section 4.2 for more information on the drag & drop, auto–snap function.

5.9.4 I/O Tab

5.9.4.1 Import: SDII Regions Into Segments

When on, Sound Designer II regions, if present, will automatically be converted to separate segments upon opening in SonicStudio•DDP. When off, the entire SDII image will be imported as one continuous segment.

5.9.4.2 Output: Dither on Output

When on, dither will be applied to the output at all times, redithering the output to 16 bits of resolution. When off, both the monitor and delivery outputs will be bit transparent. The DITHER indicator in the upper right of the Project window reflects the current state of the Dither on Output preference.

Chapter 6.....Manual DeClick — User Guide

Sonic Studios' NoNOISE is the world's premier tool for restoring vintage and problematic audio recordings. The Manual DeClicking option provides tools for isolating and removing individual transient impairments in a sound file.

Manual DeClicking assists in removing unwanted noises such as clicks, pops and thumps. It offers five different interpolation algorithms that are capable of correcting even difficult audio anomalies.

The algorithms analyze audio on either side of the anomaly and, based on this information, synthesize replacement samples. Manual DeClicking substitutes the repaired samples for the original program material.

Manual DeClick is generally used, with the exception of the E Type, on very short duration regions; 14 msec. or less. Though the the algorithms are capable of

6.1 Interpolation Algorithms

There are several interpolators that are available in SonicStudio•DDP. Each is suited to a particular type of audio problem and context.

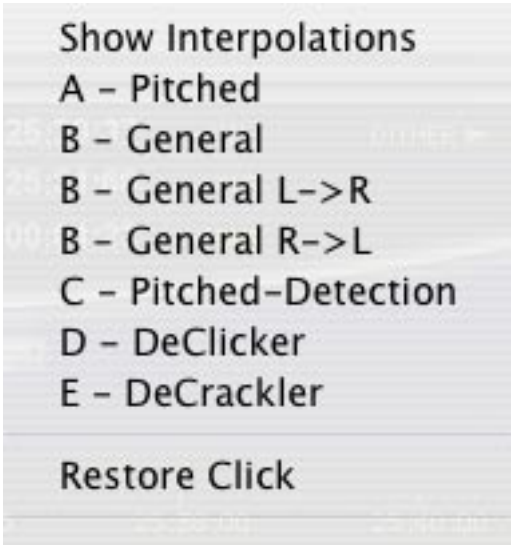

Figure 6.1: The NoNOISE menu

6.1.1 The B Type General Interpolator

The Type B interpolator is the general purpose algorithm. The majority of declicking situations can be handled by simply choosing this option.

The default Type B interpolator examines the audio on either side of the selection to determine the context for resynthesizing audio to fill the gap. For the B Type, there are two additional variations of the command that bias the context in a particular "direction," ignoring the material before or after the impairment.

If, for example, a click occurs just after a percussive event, the default Type B interpolator would include part of the percussive event in its resynthesis, producing a unconvincing repair. The B - General R-> L option would ignore the audio to the left, using only the samples after the selection is build the repair. Conversely, the B - General L-> R option uses only samples before the selection to resynthesize a repair.

Here are three examples:

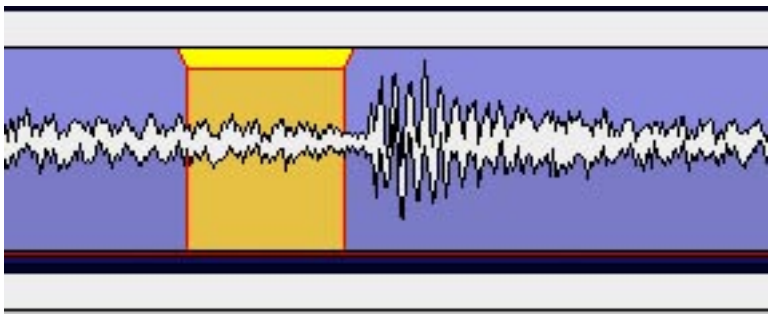

Figure 6.2: The original material

Figure 6.3: A "repair," using the default B Type algorithm

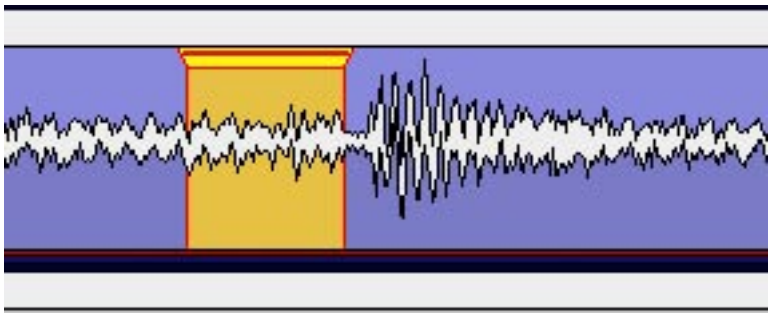

Figure 6.4: A better "repair," using the B - General L-> R option

Though the above examples are extreme, a 60 msec. selection to clearly show the result, they should illustrate the concept of using the left–oriented or right–oriented B Type option when needed.

6.1.2 The A & C Type Pitched Interpolators

The Type A and Type C interpolators are designed for pitched or periodic material, such as solo instruments or any time the fine structure of a waveform is visually repetitive. The difference between these two options is that the C Type has validation built into it for certain cases in which the interpolator may produce less than perfect results. The A Type lacks these "protections," so its results may occasionally be unusable. In addition, both the A and C Type may fail to find an "acceptable" periodicity and will alert you to try a different algorithm. If this occurs, try the D Type or, select a slightly different region of audio and try again.

The A and C Type interpolators take contextual information from six periods to the left and right of the selection. After interpolation, the Restore Bar may extend for some distance outside the selected region. This is because these interpolators are repairing based on wavelength in addition to simple selection duration.

6.1.3 The D Type DeClicker

These are very high-order algorithms used to correct problems that elude other repairs. Both interpolators use 80 bit precision to produce very high quality interpolations.

The Type D DeClicker is tailored for use on the human voice, though it will provide excellent results on most any semi–periodic material. It is only capable of replacing about 80 milliseconds worth of samples before it bogs down. Even so, a repair half that duration will still take quite a while, even on a fast computer.

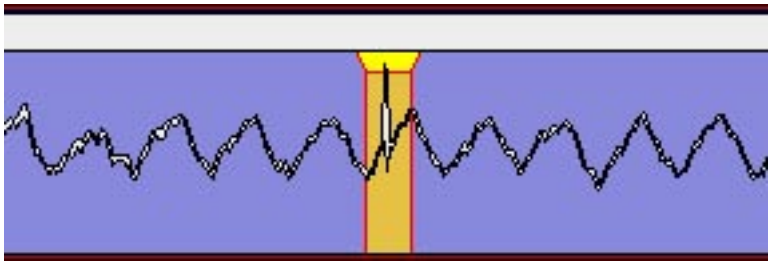

Figure 6.5: A fairly periodic section with click

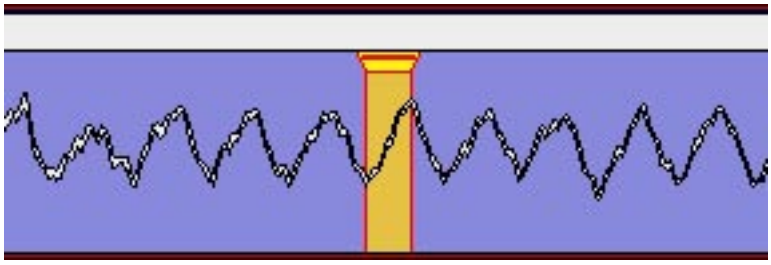

Figure 6.6: The repair using D Type

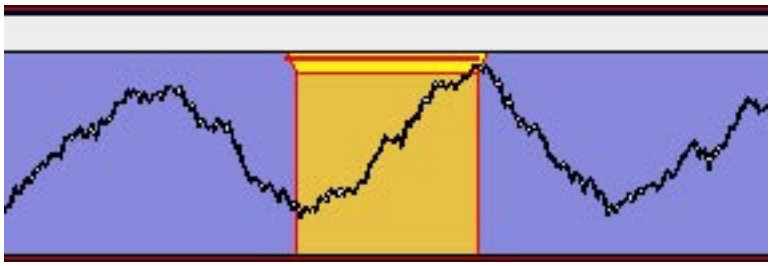

Figure 6.7: A zoomed in view of the above repair

6.1.4 The E Type DeCrackler

The Type E Interpolator, though fundamentally similar to the D Type, is implemented so it can be applied to passages of unlimited duration. As with the D Type, expect to wait a while for your result but, it's worth it. The E Type DeCrackler is capable of reducing distortion, including offensive, harsh sounding material. Its micro–repairs leave the audio sounding better without resorting to low pass filtering.

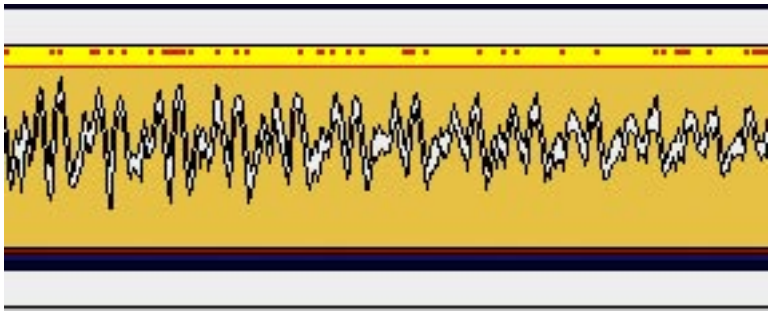

Figure 6.8: E Type's micro–repairs

6.2 Using Manual DeClick

Manual DeClick performs stereo repairs. Either channel of a stereo pair can be operated on, the repair will be performed on both.

6.2.1 Removing Clicks

1. Using the Waveform display and playback, identify the location of an impairment.
2. Zoom in until you can clearly see the "click."
3. Click–drag in the Panel to create a time selection that fully contains the damaged samples.
4. From the NoNOISE menu, select one of the Manual DeClick types.

NoNOISE replaces the compromised audio with repaired samples. Don't worry about selecting on zero crossing boundaries, the software's intelligence will provide a seamless transition.

6.2.2 Restoring Clicks

1. Zoom in on the waveform and locate the red "Restore Bar."
2. Click–drag in the Panel to select a region that contains the Restore Bar.
3. From the NoNOISE menu, choose Restore Click.

NoNOISE replaces the interpolated audio with the original audio containing the anomaly.

6.3 Obscenity Reduction

In addition to restoration duties, Manual DeClicking can be used to insure the public acceptability of obscene material or to conceal any audio that may not "pass muster" with downstream listeners. Simply select the obscenity as though it were an impairment, and choose your Type. The B Type, when given a one second region to "repair," does a great job of removing the objectionable material and inserting something that will often be preferable to editing in replacement audio. An additional consideration is that, since no material is added or removed, the timing or tempo is not affected.

Appendix 1 ..... Best Practices

A3.1 Introduction

Although versatile in many ways, not every function that SonicStudio•DDP offers is the best way of structuring your DDP workflow. Some solutions are better than others, either for quality reasons or other reasons beyond the scope of this manual. In this appendix, we'd like to provide some guidelines in order to get the best out your software and establish a smooth and efficient production flow.

A3.2 Source Material Considerations

SonicStudio•DDP handles a variety of source file formats. It is therefor very tempting to 'grab' what you need and add it to your Project. However, some source material might be in formats other than the final 44.1 kHz sample rate and 16 bits word length necessary for CD production. SonicStudio•DDP determines the characteristics of the files you import based on the metadata they contain. It will warn you if the sample rate is not the required 44.1 kHz where necessary, while resolutions longer than 16 bits are rounded down and redithered to 16 bits during the delivery stage. Although all of the conversions implemented by SonicStudio•DDP are of very high quality, you may consider modifying your audio material beforehand with your favorite hard or software option.

It's a good practice to prepare all source material needed before moving forward with sequencing, editing and finishing a new DDP file set. By organizing your source material and storing all relevant data in the same directory, your projects will be highly portable and you'll avoid situations where files have "gone missing" from a job because they were not included in the Project subfolder.

A3.3 Hardware Considerations

SonicStudio-DDP is fully compliant with OSX 10.3 and higher. Therefore, sound material can be used from any drive that your computer can access. This includes network–attached and removable drives as well near–line optical drives. That said, not all mountable storage devices are suitable for reliable real-time or higher speed reads and writes of sound files. In order to ensure a smooth and uneventful workflow, we suggest the following guidelines:

1. Reserve the drive containing your operating system, the " boot volume," for just that, the operating system.
2. Use a dedicated, separate IDE or SCSI hard disk, with more than enough free space, to store, record and playback all of your sound files. Optimize the performance of this dedicated drive by regular maintenance.

3. Speaking of maintenance, be sure to regularly check your boot volume for problems with a proven file system utility, like Alsoft's DiskWarrior < www.alsoft.com>.

4. Although you may find it will actually work, never use network, flexible media or optical drives to record or playback sound files due to their excessive latency. Always copy files from those drive types to a dedicated, local direct–attached hard disk first, then use that disk for all SonicStudio•DDP work.

5. Do not use audio files with the same file name within a Project. Rename beforehand, where necessary, with a descriptive name for later ease of archiving and restoration.

Appendix 2 ..... Keyboard Shortcuts

File & Project

New Project	command + N
Open Project	command + O
Save Project	command + S
Close Window	command + W
Open DDP Image	command + option + O
Open Soundfile	command + shift + O
Quit (application)	command + Q

Playback

Stop/Start Playback	spacebar
Play Selection	command + spacebar
Play from Playhead	option + spacebar
Repeat Play	command + option + spacebar
Play to In Point	F5
Play from In Point	F6
Play to Out Point	F7
Play from Out Point	F8
Play between In & Out Points	command + control + F5
Hide Playhead When Stopped	option + P

Edit

Undo last Edit	command + Z
Redo last Undo	command + shift + Z
Select All	command + A
Deselect All	command + D
Cut	command + X
Copy	command + C
Paste	command + V
Paste (Insert)	command + option + V
Paste (Overlay)	shift + V
Delete Selection	delete (backspace)
Clear Selection	option + delete (backspace)

Create Crossfade	control + G
Create Crossfade from In Point	control + option + G
Crfeate Segment from In & Out points	control + option + G
Replace	F1
Insert	F2
Replace Left	command + F1
Replace Constrained	control + F1
Set In Point	left bracket
Set Out Point	right bracket
Set In & Out Points	control + option + left bracket
Clear In Point	control + left bracket
Clear Out Point	control + right bracket
Clear In & Out Points	control + backslash
Nudge In Point Right	control + command + left bracket
Nudge Out Point Right	control + command + right bracket
Nudge In Point Left	option + command + left bracket
Nudge Out Point Right	option + command + right bracket
Move In Point	option + left bracket
Move Out Point	option + right bracket
Move In Point to Out Point	option + backslash
Find & Set Points	command + backslash
Drop Edit Point	backslash
Edit Point to Playhead	option + command + backslash
Move Edit Point to Next PQ Mark	shift + F6
Move Edit Point to Previous PQ Mark	shift + command + F6
Move Edit Point to Next Segment Edit Point	shift + F5
Move Edit Point to Previous Segment Edit Point	shift + command + F5
Move Edit Point To In Point	shift + F7
Move Edit Point to Out Point	shift + F7
Move Edit Point to next SRP	shift + F10
Move Edit Point to previous SRP	shift + command + F10
Select Start to Edit Point	option + dash
Select Edit Point to End	option + equal to
Select Segments to End	shift + command +right arrow
Select Segments To Start	shift + command + left arrow
Change Crossfade duration	shift + click/drag with Crossfade Tool

View

Show Text View	option + T

Show Gain Overlay	option + G
Refresh (build waveforms)	command + R
Standard Track Size	option + 5
Large Track Size	option + 6
Move Forward	right arrow
Move Forward/Backward	command + option + control + click/drag on waveform
Move Backward	left arrow
Zoom In	down arrow
Zoom Out	up arrow
Zoom Around In Point	plus sign
Zoom Around Out Point	command + arrow left
Zoom Around Edit Point	command + arrow down
Zoom Out Around Edit Point	command + arrow up
Zoom In Around Playhead	option + arrow down
Zoom Out Around Playhead	option + arrow up
Zoom to Previous	command + P
Zoom to Next	command + option + P
Zoom to selection	command + G
Zoom to selection	command + option + click/drag on waveform
Zoom to entire EDL	command + E
Zoom to Timeline Selection	command + click/drag right on timeline
Zoom to waveform selection	command + option + click/drag on waveform

CD Prep

Create Track Start Mark	F9
Create Track End Mark	F10
Create Index Mark	F11
Delete Marks	command + F12
Edited Black to Marks	shift + F12
Mark Info (window)	command + M

System

Audio I/O Setup	option + A
Preferences	command + comma
Select Nudge Size A	control + 1
Select Nudge Size B	control + 2
Select Nudge Size C	control + 3

Appendix 3 .....Contextual Menus

Control–Click...

In the Waveform —

With only the Edit Point placed within a segment:

Create Segment = Create Crossfade command

With a selection active:

Create Segment = Create Segment from Selection command

With a segment selected:

Create Segment = Create Segment from Selection

Reveal Selected Segments in Finder — shows the location of the selected segment with Mac OS browser

With Gain Overlay on —

On a Gain Node:

GainOverlayNode Locked — locks the selected Gain Nodes

GainOverlayNode Unlocked — unlocks the selected Gain Nodes

Lock Nodes from Selection — locks all nodes within the current selection

Unlopck Nodes from Selection — unlocks all nodes within the current selection

Lock All Nodes in track — locks all nodes in the Panel

Unlock All Nodes in track — unlocks all nodes in the Panel

With segments —

On the Title Bar:

Help — not implemented

Move Segments = Move Segment Command

Segment Gain — opens the Segment Gain window

Reverse Polarity = Reverse Polarity command

Set Polarity — not implemented

Reset Polarity — not implemented

Build Wavforms = Build Waveform command

On a segment's Drag Bar:

Create Segment — not implemented

Reveal Selected Segments in Finder — shows the location of the selected segment with Mac OS browser

On a selected region's Drag Bar:

Create Segment = Create Segment from Selection command

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