Editing Audio with Peak

Peak software provides you with a uniquely powerful interactive, non-destructive environment for editing and manipulating audio. In this environment, not only are virtually all editing actions completely "undo-able", but they can be performed interactively while audio playback is engaged.

Interactive Editing

Interactive editing means that you can cut, paste, loop, and process audio with Plug-Ins even while playing back the very audio that you are editing. You can for example, start playback, cut a selection of audio and paste or insert it later in the document, and when Peak reaches the location of the inserted audio, it will play it as if it were there all along. This revolutionary capability makes Peak a supremely fast and flexible audio production tool that makes conventional recording and editing methods such as analog tape and a razor blade seem archaic by comparison.

Non-Destructive Editing

Peak's non-destructive editing capabilities mean that the edits you perform to an audio document do not perma-nently change the original source recording until you finally save the document. Thus, you can cut, copy, paste, fade in and out of, and otherwise completely change a recording, and still be able to return back to square one—the original untouched state of the recording—up until the time that you save the document to disk. At that time, all edits are permanently written into the document.

Unlimited Undo

As an editing session progresses, Peak maintains an internal list of the edits that you perform. Changes that you make to an audio document are never permanently applied to the file until you ultimately save it. This is what gives Peak its unprecedented unlimited undo capability. Through the use of the Macintosh's standard Undo command, you can undo your actions sequentially, or by using the powerful Edits command, using a "playlist-style" editing event list. This is a very exciting technology which allows you to maintain complete creative freedom of choice—right up until the last moment before you save your project to disk. By making good use of these non-destructive, interactive editing capabilities, you will be able to perform feats of audio production that until recently were virtually impossible with traditional tools.

Selections

A selection is just what it sounds like: a portion of audio that you have selected with the mouse. You must select audio in order to perform an editing action on it. To make good selections for editing, the best rule of thumb is to begin a selection just before a peak in the waveform and end it just after a peak in the waveform. In other words, try to make selections start and end in areas of low amplitude ("valleys" in the waveform).

It is also important, when possible, to begin and end a selection at a point where the waveform meets the zero crossing line (the center line through the waveform). This helps you avoid creating pops and clicks if you later cut or paste the audio because the point at which the waveform meets the zero crossing is a point of low amplitude in the sound wave. Pops and click generally only occur if you make a careless selection and begin or end on a portion of the soundwave where the amplitude is high (where the waveform is high above the center point). The Zoom In function helps you make very precise selections by letting you zoom in to a higher magnification and select exactly the portion of the waveform you desire.

Audio Between Adjacent Markers
Audio between adjacent markers refers to a section of audio that is bounded by markers. In the illustration above, the area that falls between the Break #1 and Break #2 markers is audio between markers. (Note: A selection of audio between markers is different than an audio Region. Regions are described later in this chapter, as well as in Chapter 7, Playlists and Audio CD Burning.)

Regions
The audio events that are played back in a Playlist are Regions , which are portions of an audio document defined using the New Region command from the Action menu or Toolbar. A Region is bounded by Region Markers in the audio document window. All Regions defined in open audio documents will also appear in the Contents palette. Two of the main windows you will use to organize Regions are the Contents Palette and the Playlist. The Contents Palette is available under the Window menu, and will show all of the regions in open audio documents at a glance. You can drag and drop regions from this window into the Playlist. To display all of the regions in open documents, click on the left "tab" in the Contents Palette.

Regions can be saved only into AIFF and Sound Designer II files created by Peak. However, Peak will also read Playlist Regions stored from other programs in Sound Designer II files. The method Peak uses to store Regions in AIFF files is specific to Peak and is not supported by other software applications. If you are planning to use Regions with other programs, you will want to store your files as Sound Designer II files.

Blending
Blending is an automatic crossfade function with a user-editable envelope. Peak can apply blending to areas of an audio document where they are modified by cutting, pasting, or other editing processes in order to smooth abrupt transitions between waveform amplitudes. It can be very useful for creating a smooth transition between edits that would otherwise sound too abrupt. If you are going to cut, paste, or insert audio into a document, you may wish to enable blending to smooth things out a bit. You can toggle blending on or off by choosing the Blending com-mand from the Toolbar, or by clicking the Blend enable/disable button in the Cursor Palette.

Info Strip
The Info Strip is anchored to the bottom of the screen. This strip contains three areas–the cursor location display, a time display, and audio bar graph meters with clip/peak indicators. The Info Strip is a useful editing and recording tool. It contains dynamically updated information about where the cursor is, the duration of the current selection, elapsed time during playback, and the relative volume of the audio signal as it plays. Each area also shows additional information during different Peak actions, as described below.

Cursor Location Display
The cursor location diplay tracks the vertical and horizontal movement of the cursor. If audio is selected, it also displays information about the duration of the selection.

[L]= the cursor is currently positioned over the left channel of the audio
[R]= the cursor is currently positioned over the right channel of the audio
t= the current cursor position in time
y= the current cursor position along the vertical scale (amplitude) or start point of a selection
X= the current cursor position in samples
dtr= distance in current units to the nearest reference marker
sel = the duration of the current selection
+ or - indicates positive or negative phase

The time format displayed in this field depends on which time format (samples or seconds) you have chosen with the Units command in the Preference menu.

Progress Bar
The Cursor Location display changes to a progress bar during audio processing, and while saving or opening audio files.

Time Display
The Time Display is like a counter. It shows elapsed time and tracks the "playback head" as audio plays. Clicking on the waveform when playback is stopped will cause the current cursor location to appear in the Time Display. This display will also show the time remaining while performing Open, Save or DSP processing actions.

Meters
Peak's meters are much like the VU or LED meters on a mixing board or tape recorder. They are bar graph meters that show the relative volume or loudness of the audio as it plays. They are also designed to show peak volume and whether the signal has "clipped," or distorted.

The Meters Dialog
You can configure the Meters display by choosing Meters from the Audio menu, or clicking the appropri-ate button in the Toolbar. Using the Meters dialog box, you can select the Peak Hold time, Clip Indicator Hold Time, and also configure the MIDI Meters. The Peak Hold indicators appear as yellow bars at the far right of each of the bargraphs as audio plays, and selecting a hold time causes the indicator to pause for easy reading of the peak value during playback. The Clip Indicators appear as red bars at the far right of each of the bargraphs as audio plays, and are triggered when audio distorts, or "clips, " and selecting a hold time causes the indicator to pause for easy reading of any clipping or distortion that occurs during playback. Setting the Peak Hold and Clip Indicator Hold Times to None turns these features off.

Vertical Scaling
Peak allows you to control the vertical magnification of audio samples.   This feature is useful if you are editing and viewing a document with very quiet audio material.

To increase the vertical scaling magnification:
1.   Hold the control key down and press the up arrow key.

To decrease the vertical scaling magnification:
1.   Hold the control key down and press the down arrow key.