360 Systems®

Shortcut™ 2000

PERSONAL AUDIO EDITOR

OWNER'S MANUAL

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360 Systems®

PROFESSIONAL DIGITAL AUDIO

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INTRODUCTION

Thank you for purchasing 360 Systems' new Shortcut™ Audio Editor. This unique product provides an unusual mix of capabilities: it serves as a stereo audio recorder, as a high-speed editor, and as a rapid way to access stored audio clips. You will find that Shortcut offers a *faster* way to record and edit audio, while being *easier* to use than earlier workstations. Key features of Shortcut include:

- Intuitive operation similar to tape recorders
- Scrub editing wheel accurately locates edit points
- Stereo waveform display visually identifies edit points
- Intuitive Cut-Copy-Paste style operation
- Real File names for identification and recall
- Built-in speakers and microphone preamplifier
- True 16-bit linear audio, with analog and digital I/O
- Compact size, ideal for field recording and remote trucks

This manual is divided into chapters, with greater detail in later chapters. If you are in a hurry, look over the first chapters describing the front and rear panels, followed by the chapters on specific operations. Come back to the Menu chapter at a later time, when you have a specific task to perform.

The Table of Contents will help you locate most operational descriptions. There is also an Index at the back to assist in locating operations by their name.

This book uses SMALL CAPS to denote the name of a front panel key and other physical features, or the name of a menu item. Values in menu items are shown in ALL CAPS.

Shortcut has three different operational modes: Record, Edit and Playback. Each mode has its own operational characteristics and display messages.

THE RECORD MODE

Audio is recorded into Shortcut in much the same way as a tape recorder. A special feature is the ability to begin recording with a single key press *at any time*. This can be done during edit operations, with work-in-progress left undisturbed. A number of special kinds of recording are offered by Shortcut.

- Insert Recording
- Replacement Insert Recording
- Recording initiated by an external GPI command

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THE EDIT MODE

Most operations will be performed in the Edit mode, also referred to as "the Editor". The display shows an audio waveform, a File name and the time location of the Cursor. As with word processors, selected portions of audio can appear in a highlighted area. A weighted SCRUB WHEEL and waveform display assist with accurate location of edit points. Edit marks appear on the display to clearly show beginning and end points. Basic editing operations include:

- Cut To a clipboard, or to a Hot Key & File
- Copy To a clipboard, or to a Hot Key & File
- Insert From a clipboard, a File or a Hot Key
- Erase A selected region
- Play A selected region
- Single or two-track editing

THE PLAYBACK MODES

Since the Shortcut editor is intended for rapid on-air use, a number of different playback options are provided:

- Play a recording selected in the Files Display
- Play a recording while editing it
- Play a recording stored on one of the 10 Hot Keys.

EXTERNAL STORAGE MEDIA

Shortcut provides an expansion port allowing the use of SCSI removable media drives to increase storage time and data transport flexibility. Material can be recorded, edited and played from an external drive, and copied to or from the internal drive. Also, material can be Imported to and Exported from DOS or HFS formatted Zip or Jaz disks in a variety of file formats. We recommend the following Iomega® products for use with Shortcut:

- Zip™ 100 disks store over 7 minutes of stereo audio in a compact and inexpensive disk. Shortcut can also Export audio to 360 Systems' DigiCart/II Plus and Instant Replay 2.0 format disks for playback.
- Jaz™ 2 Gigabyte disks store over 2 hours of stereo audio for full-length programs, backup and archiving.

Zip™ SCSI and Zip™ Plus drives are both compatible; Zip Parallel and Zip USB are ***not*** compatible. Performance of Jaz™ 1 Gigabyte drives or the use of 1 Gigabyte cartridges in 2 Gigabyte drives has not been verified by 360 Systems. Iomega products are available from most computer supply outlets.

Zip 250 MB SCSI drives are also compatible with Shortcut. A Zip 250 disk can store 17 minutes of audio at the 48KHz sampling rate. While it is possible to use 100 MB disks in 250 MB drives, this mode does not support direct recording. Material recorded on 100 MB disks can be played back from and copied to and from 100 MB disks using 250 MB drives. 250 MB disks are not supported by DigiCart/II Plus, however material can be Exported to 100 MB DigiCart/II Plus disks using a 250 MB drive.

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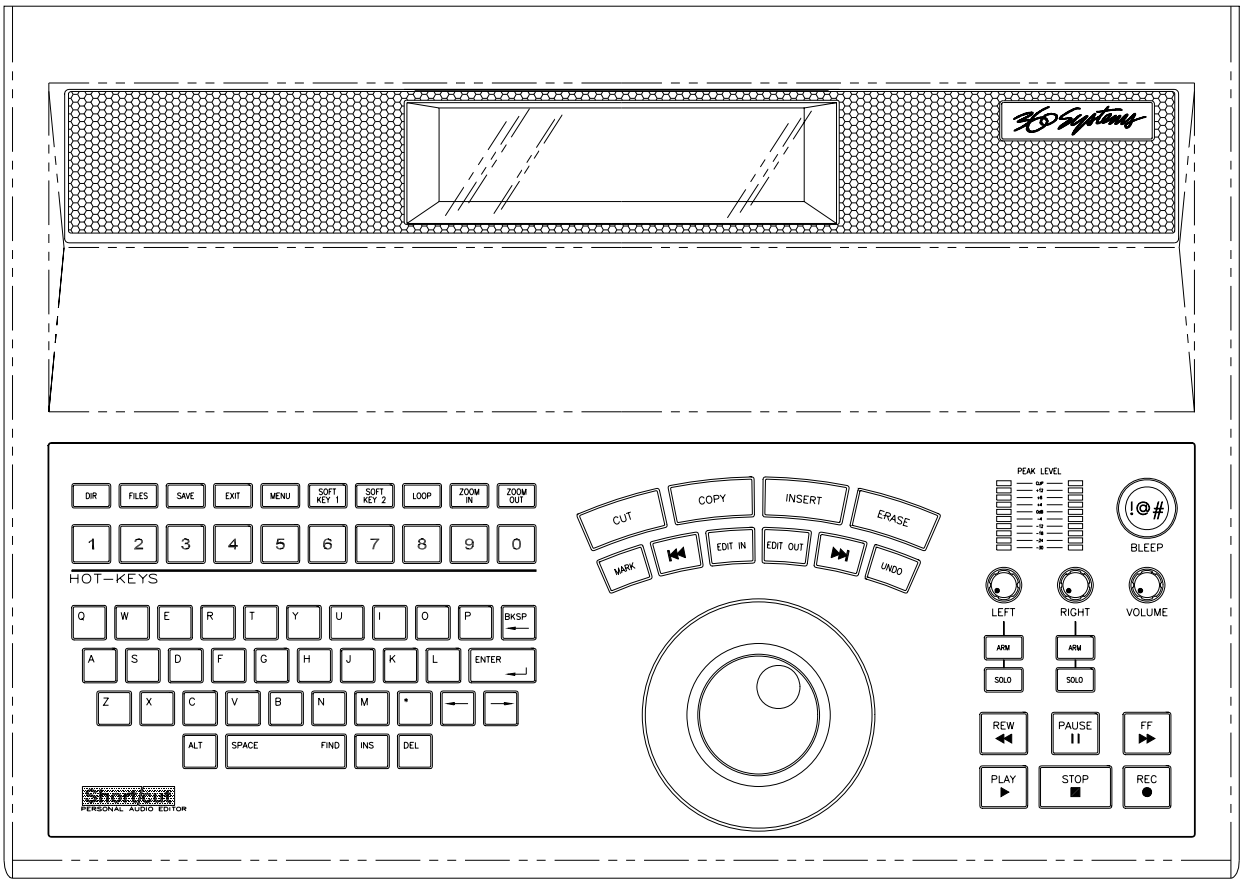
CHAPTER I

CONTROLS AND DISPLAYS

360 Systems' Shortcut audio editor has an exceptionally clear-cut front panel. It is sensibly arranged, has a minimum button count, and will make sense to creative staff members who are familiar with traditional tape editing or modern word processors.

This section offers a brief overview of the front panel controls and displays. Detailed operating instructions will be found in the following chapters.



FRONT PANEL OF THE SHORTCUT EDITOR

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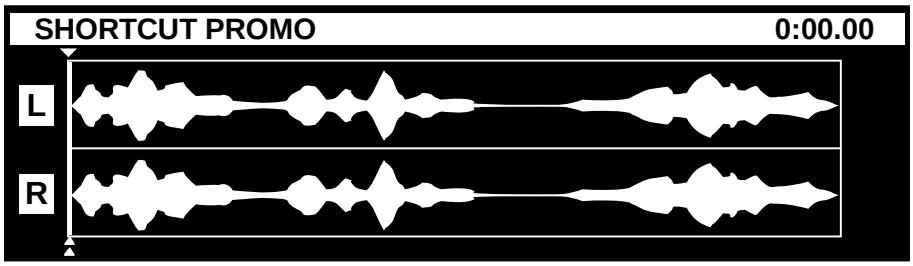
The Display

Shortcut features a backlit LCD display that provides extensive information about machine operations. The display can show monaural or stereo waveforms, listings with up to seven lines of text, or a combination of graphics and text. At times the display will become interactive and show options to assist the user. A control is provided on the rear panel to adjust the viewing angle (contrast). More detail about the display is presented throughout the manual.



Zoom In and Zoom Out

While editing, ZOOM IN will magnify the waveform display to allow more accurate editing. Conversely, ZOOM OUT expands the time scale. Four levels of resolution are available, showing a screen time display of 2, 5, 10 and 20 seconds. ZOOM operates only in the Edit mode, not during Record or Play.

Holding the ALT key while using the ZOOM IN and ZOOM OUT keys enlarges the waveform to show low level signals in greater detail, or reduces magnification so loud signals are fully displayed.

TRANSPORT CONTROLS

Record

A recording may be started at any time by pressing the REC button. A new file is automatically created, and previously recorded audio is *not* over-written. The REC key is illuminated when recording.

Stop

Stops all transport functions, including Record, Playback, Fast Forward and Rewind, and also cancels Pause mode. When working with menus, STOP will exit from the menu and return the Editor to an idle state. The STOP key is illuminated when active.

Play

For normal playback (any Cut selected from the File Select menu), the highlighted file will play <u>from its beginning</u>. In the Edit mode, a file is played <u>from the current Cursor position</u> at normal speed. PLAY is illuminated when active.

Play Selected Audio plays only material between the Edit In and Edit Out points. It is accessed by holding the ALT key and pressing PLAY. The EDIT IN and EDIT OUT buttons light to indicate that you are playing the selection. If no selection exists (Edit In = Edit Out) nothing will play. If LOOP is on, the selection will play repeatedly with a momentary pause between plays.

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Fast Forward

In Edit mode, FF (fast forward) will play audio at a speed beginning at twice normal, and increasing in speed after a few seconds. At higher speeds, audio will play in "chunks" like a CD player. The FF key is illuminated when active.

- Holding PLAY and pressing FF will play audio at twice normal speed.
- Pressing FF twice locates immediately to the end of the file.

Rewind

In Edit mode, the REW (rewind) key performs three functions:

- Press REW to roll audio backward like a tape recorder. The speed will begin at twice normal, and increase after a few seconds. At speeds above normal, audio will play in "chunks" like a CD player. The REW key is illuminated when active.
- Hold REW and press PLAY to play audio in reverse at *normal* speed.
- Pressing REW twice locates immediately to the beginning of the file.

Loop

When LOOP is active, Playback will repeat indefinitely. Looping is canceled by pressing LOOP again. When in Play with looping on, the PLAY key flashes. (STOP will cancel playback, but Loop remains active.) The LOOP key is illuminated when active.

Pause

Record or Playback can be temporarily interrupted by pressing PAUSE. A second press will continue. Other buttons that will release PAUSE are PLAY, REC, FAST FORWARD and REWIND. The PAUSE key is illuminated when active.

Bleep

Audio will be non-destructively replaced with a "bleep" tone when the BLEEP button is pressed. There are three operating modes:

- In Play mode, the BLEEP button replaces the audio output of the file being played. It has no effect on the file itself.
- In Record mode the BLEEP button replaces incoming audio with a tone. The tone is recorded to disc along with the original audio. The Bleep can be removed and the original audio will be restored.
- At the Edit level, an area of audio may be selected on the display and replaced with the bleep tone by holding INSERT and pressing BLEEP.

Hot Keys

The 10 numeric keys of the keyboard have the dual purpose of serving as storage locations for audio clips called "Hot Keys". A set of 10 Hot Key Assignments is stored with each Directory, and is recalled whenever the Directory is selected. HOT KEYS have two uses:

- Instant playback of pre-selected audio files
- Storage of audio intended for future use during edit operations.

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EDIT KEYS

All editing operations in Shortcut are accomplished by first defining a region of audio with two marks called Edit In and Edit Out. After these marks are placed, the audio waveform between them appears as a highlighted region. Once a region is defined, it is then possible to perform other operations such as Cut, Copy, Erase, Insert, etc.

Mark (Locating Marks) and Zero Mark

Locating Marks are used as "bookmarks" to find a particular spot in a recording at a later time. They are placed with the MARK key and are shown as a small "tick" at the top and bottom of the display. In practice, a Locating Mark can be placed in a file at any time— even during the original recording. They can speed up the editing process by marking "keepers" and avoiding a second review of an entire recording.

Marks are also automatically placed wherever an editing operation took place. It is therefore possible to return to a location and revise previous work.

There is also a special Zero Mark. It is used to designate a point in a file to return to immediately, skipping over other marks and edit points. It is placed at the current Cursor position by holding Mark and pressing the “0” key (HOT-KEY 0). Its position is marked by a small triangle below the waveform display. It does not affect the beginning of playback from the Files Display, or the display of Cursor Position time in the Editor.

To return to the Zero Mark, press FF twice to move from a point earlier in the file, or press REW twice to return from a point later in the file.

Go-To Keys

The GO TO keys appear above the SCRUB WHEEL and look like double arrows. These keys are used to search for Location Marks within a File. The GO TO keys move the Cursor backward to the previous Mark, or forward to the next Mark point. If pressed while a file is playing, playback will be stopped and the Cursor will jump to the closest Mark in that direction

When a menu screen is active, the GO TO Mark buttons act as arrow keys for selecting menu options.

Arm Keys

The left and right ARM keys select the track on which editing and Insert Record operations will be performed. New recordings always use both channels, and the ARM keys illuminate automatically when entering the Record mode.

Edit In

The EDIT IN button places a special mark above the current Cursor position on the waveform. This Edit In Mark specifies the position of:

1. The *beginning* of a range of audio to be operated on by an edit operation;
2. The insertion point of new audio;
3. The start point of an Insert Record operation.

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Edit Out

The EDIT OUT button places the Edit Out Mark above the current Cursor position on the waveform. When the Edit In and Edit Out marks have been placed at different points, the waveform between them will appear highlighted.

Cut

The Cut function removes highlighted audio between the Edit In and Edit Out marks, and transfers it to a clipboard memory for possible use in a subsequent Insert operation. After the Cut operation, the surrounding audio joins together, creating a continuous file.

Cut can also be used with a Crossfade. This causes the material at the Cut point to be overlapped by the specified Crossfade Time, and then a smooth transition is created between the overlapped sections. See the section on Editing for more details.

Copy

The Copy function makes a copy of a marked portion of audio, for subsequent transfer to another destination. Unlike Cut, it does not remove the audio, and the running time of the file remains the same.

- When used in the File Select display, COPY will call a menu that allows you to copy a file within the directory, or to a different directory or disk.
- To assign a file to a Hot Key, select the file in the files display, hold COPY and press the desired HOT KEY. The display warns you if another file is already assigned to the Hot Key; press ENTER to reassign the key.
- When used in the Directory Select display, COPY will call a menu that allows you to copy all files in a directory to another directory.

Insert

The Insert function inserts the current clipboard contents (from a Cut or Copy operation) at the location of the Edit In mark.

- Placing the Edit Out mark at the same point results in a simple insertion, moving all material after the marked point later in time, directly after the end of the inserted material.
- Placing Edit Out at a different point permits Insert to overwrite a defined range, replacing existing material. Unless the operation is Undone, this material is permanently erased from the file being edited. It will still exist in any copies of the file. If the file has not been saved since the edit, perform a Save As (ALT + SAVE) to preserve your edits in a new file and then get the replaced material from the file you were originally editing.

Insert can also be used in conjunction with Crossfade. See additional information in the chapter on Editing.

Gain Editing

Gain Editing functions include Adjust Level, Set Gain, Fade In, Fade Out and Relative Fade. These are accessed by pressing SOFT KEY 2 while in the Editor. Gain Edits are non-destructive. The gain is adjusted on playback, so the original audio data is unchanged and the effect of Gain Edits can be removed at any time. See the section on Editing for more details.

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Erase

The Erase function wipes any audio from the highlighted area and replaces it with silence. This operation does not affect the running time of the file. Erase is non-destructive, and Erased regions can be selected and "un-erased" at any time.

- When used in the File Select display, ERASE will delete a file.
- To clear a Hot Key assignment, hold ERASE and press the desired HOT KEY. This does *not* erase the file that was assigned to the Hot Key.
- When used in the Directory Select display, ERASE will delete all files in a Directory, including the file names.

Scrub Wheel

The SCRUB WHEEL plays audio forward or backward, at a speed proportional to the rate at which the wheel is turned. Its operation is similar to locating an edit point with analog tape recorders by manually rocking the reels back and forth; therefore the term “scrubbing” to a particular point within a file. The Cursor indicates the position of audio being played by the SCRUB WHEEL.

When a Menu is active, the SCRUB WHEEL will scroll the menu up or down.

Nudge Arrows

The LEFT and RIGHT ARROW buttons at the lower right of the keyboard may be used to nudge the Cursor by 10 mSec (.01 seconds) of time. In the zoomed-in mode most often used for detailed editing, this represents one pixel on the waveform display. When zoomed out it can take multiple presses to see the Cursor move; this is because nudge always works at the finest resolution available. "Nudge" will often be easier to use than the SCRUB WHEEL.

When a menu is active, the ARROWS will select items within the menu. When editing names, the ARROWS move the cursor forward and backward through the text.

Undo

The UNDO key reverses the last operation. It is also possible to reverse the last Undo. UNDO is also used with the MARK, ERASE and BLEEP keys to remove marks and restore regions of audio that have been Erased or replaced with a Bleep.

Soft Keys

Two keys marked SOFT KEY 1 and SOFT KEY 2 are provided for future expansion. At present, SOFT KEY 1 is programmed to select between digital and analog input sources. SOFT KEY 2 is programmed to turn the internal speakers on or off. In the Editor it is also used to select Gain Editing operations. Press the number corresponding to the selection of Audio Input, Speaker On/Off status or Gain Edit operation shown in the display. For example, pressing SOFT KEY 1 then the number 1 selects the Analog Input. Pressing either SOFT KEY a second time returns to the previous display without change.

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FILE MANAGEMENT KEYS

Audio is stored in the Editor as a "File", to which the user may attach an identifying name. For convenience in organizing a large number of files, ten "Directories" are provided, and each of these can also be given an identifying name. The user may find it convenient to store a File in a particular Directory according to project title, who did the work, what show it is for, or the type of audio.

The following keys are associated with the storage and retrieval of audio files:

DIR (Directory Select)

The DIR key presents a list of the Directory names present in the Editor. To recall a File, first select the Directory it is in. Use the SCRUB WHEEL or GO TO keys to highlight the desired Directory, then press ENTER. The Directory listing can be called up from any other display by pressing the DIR key.

```
 INTERNAL DIRECTORIES                    48K  TIME  3:45:17
5.   DIRECTORY 5
6.   DIRECTORY 6
7.   DIRECTORY 7
8.   DIRECTORY 8
9.   DIRECTORY 9
P.   PUBLIC  DIRECTORY
```

DIRECTORY LISTING

The reference to Internal Directories in the upper left shows whether the directories in the Internal or External Drive are being displayed.

At the right of the top line, the Sample Rate for the currently selected Directory is shown, along with the amount of space left on the drive expressed as available recording time at the current Sample Rate.

FILES (File Select)

When a Directory has been selected, a list of the audio File names within it will appear. The File listing looks like this:

```
 PUBLIC  DIRECTORY                       48K  TIME  3:45:17
A SHORTCUT PROMO EDITED                  [1]        0:36
A SHORTCUT PROMO ORIGINAL                           0:52
BOING                                    [8]        0:02
CAR DOOR                                 [5]        0:04
CAR PEEL OUT                             [7]        0:11
DOG GROWL                                [3]        0:06
```

FILE LISTING

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The Directory Name appears in the top line, along with the Sample Rate and Available Record Time. The File Names appear below, with their length at the right. If a file is assigned to a HOT-KEY, the Hot-Key number appears to the right of the file name enclosed in brackets.

To select a File, use the SCRUB WHEEL or GO TO keys to highlight the File name. If there are more than six files in the directory, the directory will scroll to show the other files as they are selected. Once you have selected a file:

- Press ENTER or EDIT IN to load the File for an edit session; or
- Press PLAY to hear the File without moving to the Edit level.
- Press COPY to copy the file.
- Press ERASE to permanently erase the file. (File erasures cannot be undone)

While working at most other tasks in the Editor, pressing the FILES key will immediately close the Editor (with a save dialog if the file is not saved) and present a File listing for the current Directory.

Save and Save As

The SAVE key saves a File but does not close it. When changes have been made to a File but not yet saved, the SAVE key will illuminate.

Holding ALT and pressing SAVE results in a prompt for a *new* File name. The file you were editing is left as it was when it was opened or when SAVE was last pressed. Subsequent editing is performed on and saved to the new file. This is useful when saving several versions of an edited File. It is a good idea to do this at least the first time you save an edited file so that your original recording is left unaltered. Copies of files use very little disk space, and it is good insurance in case a mistake is made in editing. Remember to erase all copies of a recording when clearing disk space for new recordings, as the disk space will be released only when all files that use that audio have been erased.

Save As can be used to recover from some editing errors, even if no copy of the file being edited exists. Editing always takes place on a temporary copy of the file you choose. Edits are not copied back to the file until it is Saved. Save As leaves the original file that you edited intact; any editing that was done between the last Save and the point at which the error is detected is saved to a new file. Then the original edit file can be opened and used to retrieve parts that were deleted in error, which can then be returned to the new file.

When you save a file, you are saving:

1. The data that describes what audio to play in what order.
2. The Location Marks.
3. The position of the Zero Mark.
4. The position of the Edit In and Edit Out marks.
5. The position of the Cursor.
6. The On / Off status of the ARM buttons.
7. The SOLO status.

Note that any changes to items 1-3 are considered significant changes and cause the SAVE button to light. However, you can press SAVE to save changes to items 4-7 at any time.

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Exit

The EXIT key performs several functions:

1. EXIT will cancel (or abandon) some machine operations;
2. EXIT ends an editing session and closes the file. A prompt "SAVE CHANGES?" will appear if a File has been altered but not saved. The operator may then:
   - Press SAVE to save to the same file name and exit, or
   - Press ALT + SAVE to save with a *new* File name and exit, or
   - Press ENTER to exit *without* saving; abandoning all edits since the last Save; or
   - Press UNDO to cancel the exit operation.

Find A File

The SPACE BAR doubles as a FIND key. This command can locate one File among many. Press FIND, type the desired File name, and then ENTER. The FIND key can also locate to a particular *time position* within a File that is loaded for editing. Simply press FIND and enter the desired time position. Detailed information on using the FIND command will be found in the General Operations chapter.

Alphanumeric Keyboard

The ALPHANUMERIC KEYBOARD is used for titling Files, for Find operations, and to enter information for certain Menu functions. It also contains some special function keys:

- The ten NUMERIC KEYS double as audio Hot Keys™.
- The ALT key is used in combination with other function keys to give fast access to specialized operations. The ALT key combinations will be found in the QUICK REFERENCE menu, appearing in all main menus. It is also reproduced at the end of the Menu chapter.
- The BKSP (backspace) key erases the character to the *left* of the present Cursor position.
- The DEL (delete) key is used to edit title entries. It erases the character to the *right* of the present position.
- The INS (Insert) key toggles on-and-off, and allows characters to be inserted in the middle of a text string.
- The ASTERISK key (*) is used with the FIND function. The text to be located is entered, with unknown letters or words replaced by a single asterisk.

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AUDIO CONTROLS

Input Levels

The LEFT and RIGHT level adjustments set the recording level for the analog inputs. They do not affect the digital inputs.

LED Level Indicators

Separate Left and Right PEAK LEVEL LED bar graphs show the peak recording level. Level display is based on a normal recording level of 0 dB (corresponding to an output level of +4 dBu), with headroom of +18 dB (full scale output is +22 dBu) and a minimum level display of -30 dB.

Headphone and Speaker Volume

This control adjusts the level of the stereo headphone jack and the internal speakers.

Speakers

Built in speakers provide stereo monitoring. Speakers can be turned on or off by a Setup Menu item, by a GPI input, or by menu selections under SOFT KEY 2.

Solo

The Left and Right SOLO keys select a single audio track when it is desirable to monitor just one channel. SOLO is canceled by pressing the illuminated SOLO key, or REC, EXIT, or any HOT KEY. A SOLO key is illuminated when active.

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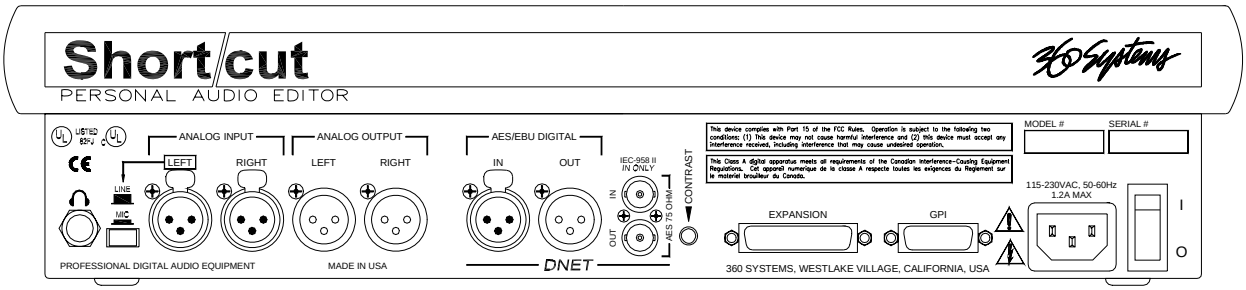
CHAPTER II

REAR PANEL FEATURES

All connections to the Shortcut Editor are made on the rear panel. Some connectors have a dual purpose, and are explained in detail in the Recording or General Operations chapter.



REAR PANEL OF SHORTCUT EDITOR

Analog Audio Inputs and Outputs

Analog inputs and outputs are provided on balanced XLR connectors at a nominal level of +4 dBu. Pin 2 is +, pin 3 is –, pin 1 is shield.

Microphone Preamplifier and Gain Switch

A microphone may be connected to the *left* channel XLR input connector. A push button switch next to this connector inserts a microphone preamplifier having a gain of 40 dB. This signal is recorded on the *left channel only*. The right channel can be used with a line level signal simultaneously. This is designed for a dynamic microphone; no phantom power is provided.

Digital Audio Inputs

A female XLR-3 connector accepts inputs in the AES/EBU format. A BNC connector accepts inputs in either the consumer IEC-958/II format or the 75-ohm AES3-ID format.

Digital Audio Outputs

A male XLR-3 connector provides a digital output in the AES/EBU format. A BNC connector provides a 75-ohm output in the professional AES-3ID format. Digital output in the IEC-958/II format is not provided.

D-NET File Transfer Ports

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The XLR and BNC digital outputs may be used as D-NET file transfer ports. D-NET is an audio network using standard digital audio protocols. It can transfer files with their names and audio data to 360 Systems DigiCart/II and Instant Replay units.D-NET signals from other 360 Systems devices can be Echoed through the Shortcut by connecting them to either the XLR or BNC digital inputs.

Power Supply

The power supply can be used with any voltage between 85 and 260 volts at 50 or 60 Hz. It is *not necessary* to switch it when making connection to different voltages. A detachable IEC mains cable is provided, with a connector appropriate for the destination country.

Power Switch

The power switch is located on the left edge of the rear panel, as viewed from the front of the Editor. The designation "1" means ON and "0" means OFF.

NEVER TURN THE POWER OFF OR DISCONNECT THE POWER CORD WHEN THE SHORTCUT EDITOR IS ACTIVELY PERFORMING ANY TASK.

Headphone Jack

A stereo 1/4” (6.35mm) female jack is provided for headphone monitoring.

Display Viewing Angle (Contrast Control)

A rotary control adjusts the viewing angle of the LCD display.

Serial Number

The serial number of the Shortcut Editor is affixed to the right side of the rear panel, as viewed from the rear. This coded number also contains the date of manufacture. The serial number should also appear on the inside front cover of the owner's manual.

GPI and Tally Outputs

GPI inputs for STOP, RECORD, PLAY, REWIND, FAST FORWARD and Speaker Mute, plus tally lamp outputs, are provided on a 15-pin D connector. These inputs can be reassigned in various combinations in the Setup Menu, allowing their use with Pause and up to four Hot-Keys. A contact closure to common will assert a GPI command. A +12 volt source and open collector outputs are provided for tally LEDs. The connector pinout and assignment options are presented below. Reassignment procedure is covered on page 51.

G.P.I. Connector Pin-Outs

The Shortcut Editor may be remotely controlled through a 15-pin "D" connector on its rear panel. Remote functions are asserted through a switch contact to Ground. If desired, a "tally" indicator light can be wired to show that a function has taken place. The lamp is controlled through an output on the same connector. For convenience, +12 volts is provided on the connector. This may be wired through the lamp, and then back to an appropriate pin on the connector. See page 16 for instructions on interfacing to telephone control systems.

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PIN #	SIGNAL NAME	DESCRIPTION
1	Ground	Ground for switch contacts
2	Speaker Mute Switch	Mute internal speakers
3	Fast Forward Switch	Enter Fast Forward
4	Rewind Switch	Enter Rewind
5	Play Switch	Enter Play
6	Stop Switch	Enter Stop
7	Record Switch	Enter Record
8	+12 Volts	Power to tally lamps; 150 mA max.
9	N/C	Do not connect
10	N/C	Do not connect
11	Fast Forward Lamp	Open collector to common; 40 mA max.
12	Rewind Tally Lamp	Open collector to common; 40 mA max.
13	Play Tally Lamp	Open collector to common; 40 mA max.
14	Stop Tally Lamp	Open collector to common; 40 mA max.
15	Record Tally Lamp	Open collector to common; 40 mA max.

G.P.I. CONNECTOR PIN ASSIGNMENTS

Setting LED Current

The operating current of an external tally LED must be set with a current limiting resistor. Given a +12 volt source, a resistor of 910Ω or 470Ω to will provide LED current of 10 mA or 20 mA respectively. A ¼-watt resistor is suitable.

GPI Input Assignment Options

The GPI Inputs can be assigned in five configurations. The default is FF,REW,STOP,REC. Play remains Play in all configurations. The second option is PAUSE,REW,STOP,REC which changes the FF input to activate Pause. This can be valuable to allow consecutive recordings in the same file without editing or insert recording. The third option is HK-1,HK-2,REC,STOP. The fourth option is HOT-KEYS 1-3,STOP. The fifth option is HOT-KEYS 1,2,3,4. The Tally outputs follow the functions of the reassigned inputs.

FF,REW,STOP, REC (Standard)	PAUSE,REW, STOP,REC	HK-1,HK-2, REC,STOP	HOT-KEYS 1-3, STOP	HOT-KEYS 1,2,3,4	**GPI INPUT**
FF	PAUSE	HOTKEY 1	HOTKEY 1	HOTKEY 1	**Pin 3**
REW	REW	HOTKEY 2	HOTKEY 2	HOTKEY 2	**Pin 4**
RECORD	RECORD	RECORD	HOTKEY 3	HOTKEY 3	**Pin 7**
STOP	STOP	STOP	STOP	HOTKEY 4	**Pin 6**
PLAY	PLAY	PLAY	PLAY	PLAY	**Pin 5**

GPI INPUT ASSIGNMENTS MAP TO FUNCTIONS AND GPI INPUT PINS.

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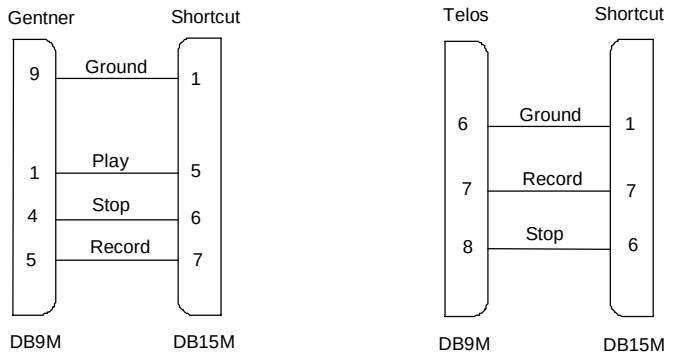
Connecting to Telephone Control Systems

Recording and editing telephone calls is made quick and easy by connecting a Shortcut directly to the two most popular digital telephone hybrid systems. Both systems allow you to:

- Instantly open a new Shortcut file and start recording from the hybrid's desktop switch control console.
- Record a single call to a single file
- Record multiple calls to a single file
- From the Shortcut you can either accept the default file name or put your own custom label on each file

Several popular systems are supported:
Gentner: Model TS-612 On Air Phone System.
Telos: Model 1A2 Multiline Telephone System, Model One-X-Six Talk Show System, and the Direct Interface Module.

Audio connection to each product is different. Refer to your Telos or Gentner owners manual for suggestions. Below are the diagrams for the necessary control interface cable from the telephone interface to the Short/cut GPI connector.



Gentner **Telos**

CONTROL INTERFACE WIRING FOR TELEPHONE CONTROL

Using External Sample Rate Synchronization

In order to use Shortcut with some digital mixers, routers, and multi-track recorders, it is necessary to reference its sample rate to an outside source. This is accomplished by connecting a digital audio signal from another unit that is to be the reference or is also synchronized to the reference.

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The reference signal must always be present and stable, and it must be within 4% of the chosen sample rate for the current directory. (46080-49920 Hz. for 48K, 42336-45864 Hz for 44.1.) Note that some older Shortcut units do not support frequency measurement and therefore will not detect that the sample rate is out of specification.

The signal is often the same signal that is used to input digital audio to the Shortcut, such as a buss or master output from a digital mixing console, the audio input feed from a router or an output of the digital multi-track. Any constant AES format digital audio signal that is derived from the master or house sync can be used. Shortcut cannot directly sync to word clock or video references.

The digital audio input used by the External Sync (and D-NET Echo) is selected independently of the audio input used for recording. To select this input:

1. Press MENU twice to select the Setup Menu.
2. Press the 8 KEY

   or

   Scroll down to item 8. SYNC/ECHO INPUT using the Scrub Wheel and press ENTER.
3. Use the ARROW KEYS or the SCRUB WHEEL to select either the XLR or BNC connectors.
4. Press ENTER to confirm your selection.

To set Shortcut to use an external reference:

1. Press MENU twice to select the SETUP MENU.
2. Press the 7 KEY

   or

   Scroll down to item 7. SYNC SOURCE using the SCRUB WHEEL and press ENTER.
3. Use the Arrow keys or the Scrub Wheel to select either EXTERNAL or INTERNAL.
4. Press ENTER to confirm your selection.

If the external reference signal is missing or bad, the STOP button will flash and the message "(SYNC INPUT BAD)" will be shown in the top line of the display. It is not possible to play or record while the unit is in this condition. When the correct signal is applied the unit will automatically lock to it and clear the error displays.

Note that when recording using the digital inputs, sync is always derived from the digital input being recorded, even if it is not the one selected for external sync. This only presents a problem when recording from a device that is not sync'ed to the sample rate of the monitoring system. During the recording, the connection from the Shortcut digital output to the monitoring system will not be locked to the sync reference. The recording itself will be unaffected and will sound perfect on subsequent playback. Once the recording is finished, the sync reference will return to the external reference input for playback.

All other operations are the same as when using internal sync.

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Expansion Connector and External Disk Drive Support

The Expansion connector allows for an external SCSI drive. This device must be able to be set to SCSI address 6. It can be a removable media drive such as an Iomega Zip® 100 or 250 SCSI drive, Zip 100 Plus, or Jaz® 2Gigabyte drive.

The drive cable must have a 25 pin male connector to plug into the Shortcut editor's EXPANSION port. This type of connector is known as a DB-25 and is commonly found on Apple Macintosh® computers. This type of connector is supplied as standard equipment with a SCSI Zip® or Zip Plus drive. The Jaz 2G comes with an adapter to go from its high-density connector to the DB-25.

Enable the SCSI termination on the external drive, and set the SCSI ID to 6. When an external drive is connected, Shortcut automatically turns off its internal terminator.

The Shortcut editor will always start up on the Internal Drive. To select the External Drive press DIR, then MENU, then select item 5 SELECT EXTERNAL DRIVE. (Pressing NUMERIC KEY 5 will directly select Menu item 5.) To return to the Internal Drive the process is the same, and the menu item will read: SELECT INTERNAL DRIVE.

The External drive has ten directories just like the Internal drive. Recording, playback and editing can be performed right on the External drive. However, for important recordings and on-air playback, we recommend using the Internal drive. Also note that External drives *cannot* be password protected.

When a new drive (or a new removable disk) is first used it must be *formatted*. When the External drive is first selected (as described above) the Shortcut Editor will recognize that the drive or disk is unformatted and offer an opportunity to format it, or abandon the operation and return to the internal drive. There is also a FORMAT EXTERNAL DRIVE command in the Directory Menu to allow reformat to be used to erase a drive. Note that disks that are write protected in software, such as the Tools disk that comes with some versions of Zip® drive cannot be formatted in the Shortcut.

When copies of files are made between directories on the *same* disk, the audio data is *not copied*, only the edit lists are. However, when a file is copied from one disk to another, all audio data is always copied for each file, even if two versions that are largely the same are transferred to the same directory. This means that two or more files that share audio will take more disk space when copied to another disk because the shared portions are recreated as separate data. For more information on Copying files, see page 56

If the External drive is a removable media drive, the Internal drive must be selected before a removable disk can be ejected.

Most removable media drives have an automatic spin down feature to save media and drive life. If Playback or Recording is attempted when a drive is spun down, there will be a delay while the disk spins up again. The EDIT OUT button will flash during this period. You can force a drive to spin up to prepare for playback by pressing DIR, then FILES. You can also press PLAY and PAUSE to spin up, then release PAUSE or press PLAY again to initiate playback on cue.

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CHAPTER III

RECORDING

This chapter presents the individual steps in making a recording. Related information will be found in chapters about the front panel controls, rear panel features, or general operations. First, prepare for recording by performing these operations:

1. Connect an audio signal to the Shortcut Editor at the rear panel.
2. If it is an analog signal, set the rear panel switch to the MIC or LINE position.
3. Select ANALOG or DIGITAL input using SOFT KEY 1 or item 1 in the SETUP MENU. If it is a digital input, further select DIGITAL (XLR) or DIGITAL (BNC)
4. Exit from the menus.
5. Apply audio to the Editor.
6. Press and hold PAUSE and press RECORD
7. If the input is analog, adjust the level controls for a suitable reading.
8. If the input is digital, note that a level indication is present.

Sample Rate

The Shortcut Editor can operate at sample rates of 44.1k or 48k samples/second. It is advisable (though not required) to select a single rate for the entire Editor when possible. Recordings made at different rates cannot be inter-cut, nor should they be transferred to a single DAT tape when completed. As a point of reference, the music industry usually works at 44.1 since this is compatible with Compact Disks. The video industry more often operates at 48k, since audio tracks on digital VTRs are recorded at this rate.

Sample rates are set on a per-Directory basis. Each Directory must be set to a *single* sample rate *before* any Files are recorded to it. Thereafter only recordings at this sample rate can be made in the Directory. Though different Directories may be set to different sample rates, material may only be copied between those set to the same rate.

The LCD display shows the time remaining on the hard disk. This is calculated using the sample rate for the selected Directory; changing to a Directory at another sample rate will provide a different value for the time remaining.

Record Mode (Basic)

The basic Record mode is used for new recordings. It always uses new space on the hard disk, and never overwrites existing audio. The maximum length of a recording is limited to the lesser of 2 hours 10 minutes or to the time remaining on the hard disk.

1. Press the RECORD key at any time to enter Record mode.

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2. Press STOP to exit. The File is automatically given a default title, which the user may overwrite with a new name. (The DIRECTORY PREFS item in the FILES MENU allows entry of a default title, and also whether a new title will be asked for at the completion of each recording.)
3. Press ENTER to accept the default File name.

If an edit session was in progress when recording began, the Editor will return to it on completion of the new recording.

Setting The Recording Threshold

It is often desirable to enter Record at the instant audio reaches a significant level. The Editor provides this capability by providing a "threshold setting" at which recording will begin. With a suitable setting, low level background noise will not trigger recording; but the downbeat of music or the first syllable of speech will place the Editor in Record mode. To set a Recording Threshold:

1. Enter the SETUP MENU.
2. Select item #3, THRESHOLD RECORD. If it is OFF, set it to ON.
3. Press ENTER to confirm the selection.
4. Select item #4, THRESHOLD LEVEL. Level selections are made by turning the SCRUB WHEEL; 6 dB steps are available, ranging from -6 dB to -60 dB referred to full scale. Generally levels in the range of -18 dB to -42 dB are most useful.
5. Press ENTER to confirm the selection.
6. Press EXIT to leave the SETUP MENU.

It is often desirable to force the Editor into the Record mode while it is in a "Record Ready" state, waiting for the preset threshold to occur. Simply press the REC key again to *immediately* enter the Record mode.

Record Pause

The PAUSE key has two particularly useful functions when recording:

1. To monitor the audio input, hold PAUSE *followed by* the REC key. Signal sources will now be reflected in the audio output and can be heard on the speakers. Levels may be adjusted and tapes cued for transfer. To actually begin recording, simply press PAUSE or REC; either key will release the Pause function.
2. While in Record mode, the PAUSE key will temporarily halt recording. A second press of PAUSE (or REC) will continue recording. Judicious use of the Record-Pause feature can prevent the recording of silence and extraneous material that will have to be removed in future editing sessions. Many elements of a project can be recorded in a single File, saving the effort of assembling them later on. You can press MARK during Pause to place a Location Mark at the pause point.

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Recording Multiple Takes

The Shortcut Editor offers several ways to speed up the process of recording a series of individual takes. This is helpful when each performance needs to be maintained as a separate take, yet the performance cannot wait for the operator to title each File. Two methods are available:

- When a prompt appears for a File title, ignore it. Just press REC again to immediately begin a new recording. Shortcut will auto-title the last cut, using a default name. This may be set by the DEFAULT TITLE item in the FILES MENU.
- The prompt for a new title can be turned off. In this case, the Editor is always ready to start a new recording on completion of the previous one. The last File recorded will always be titled with the default title. To turn off the title prompt, go to the File level (FILES key) and select ASK FOR NEW TITLE under the DIRECTORY PREFERENCES section. Also enter a name in the DEFAULT TITLE menu selection.
- By using PAUSE, you can interrupt the recording process and record multiple takes into a single file. You can press MARK while paused to allow easy identification of the start of a take. Any parts that need to be made into individual files can be Copied or Cut to Hot-Keys which creates a new file. You can extract "keeper" takes this way, or you can edit out bad takes to leave only the desired parts of the file you are editing.

Insert Recording

Insert Recording is really an editing function; it can only be performed in Edit mode. The Insert Record mode will record new audio starting at the Cursor position, without the risk of accidentally over-writing existing audio. A useful special feature of Insert Record is that recordings are placed in the "clipboard memory" as well as being recorded into the File. If the new inserted portion is needed at other locations as well, it is only necessary to use the Insert command to place it elsewhere. You can UNDO an Insert Record operation, but the recorded material will remain on the clipboard. This allows you to reposition it by moving the Edit marks and performing an INSERT operation. See the next section on Editing

A single track may be selected for an Insert Record operation by using the ARM keys. The keys for selected track(s) will be illuminated.

Insert Record may *only* be entered from the Stop mode. There are two forms of Insert recording: Basic Insert Recording, and Replacement Insert Recording

Basic Insert Recording

Unlike the video industry use of the term, Insert Recording inserts new audio and "pushes out" material following this point to make room; it therefore extends the File running time.

1. Place both the EDIT IN and EDIT OUT marks at the point where the recording is to be inserted. To extend a recording, place them both at the end of the File.
2. Press one of the ARM keys if it is desired to enable recording on only one track.
3. Hold the INSERT button and then press RECORD.
4. To exit, press STOP or PLAY.

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Replacement Insert Recording

In this operation, a *region* of audio is replaced with a new recording. First, the region to be replaced is highlighted by placing the EDIT IN mark at the beginning, and the EDIT OUT mark at the end of it. On entering the Insert Record mode, the highlighted audio is deleted, and the new material is inserted in that space. The ultimate length of the File will depend on whether the inserted segment is shorter or longer than the audio being replaced.

Insert Recording in this manner is how the Shortcut executes an erase-record or "punch-in" record. However, you don't have to take a running start, and there is no possibility of the new take running long and erasing good material after the edit. It is as though you cut out the bad take, and edited in a take from a different piece of tape. If you want to record over everything after a certain point, simply place the Edit Out mark at the end of the file.

1. Place the EDIT IN mark at the point to start the new material.
2. Place the EDIT OUT mark at the end of the region to be replaced.
3. Press one of the ARM keys if it is desired to record on only one track.
4. Hold the INSERT key and then press RECORD.
5. Record the new audio passage.
6. To exit, press STOP or PLAY.

Note that in all other record modes, Shortcut always records both channels.

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CHAPTER IV

EDITING

Editing is the process of identifying a passage of audio and then performing an operation such as Cut, Copy, Insert or Erase. In the Shortcut Editor, the present location in the audio waveform is shown by the vertical CURSOR bar. The CURSOR moves across the waveform in the play mode, showing the audio being heard. The CURSOR may also be positioned with the SCRUB WHEEL during editing operations.

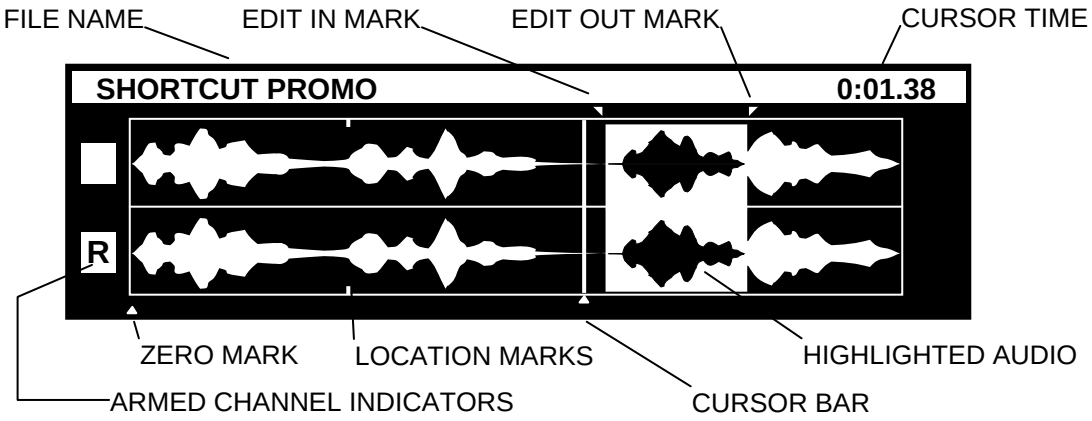
Marks called Edit In and Edit Out are placed on the audio waveform to identify a passage for an editing operation. These Edit Marks appear as triangular segments at the top of the waveform. The ARM buttons determine which track(s) edit operations will affect. Note that the Edit In and Edit Out marks are different from Locate Marks.

EDIT OPERATIONS

The Edit screen displays the File title, the time at the present CURSOR position, Edit Marks that may have been placed, and the audio waveform starting at the head of the File. The user may select a File for editing as follows:

1. Go to the DIRECTORY menu, highlight a directory selection, and press ENTER or FILES.
2. In the FILES display, highlight a File name.
3. Press ENTER or EDIT IN to load the File for editing.

The audio being played, together with the waveform display, provide the cues needed to find edit points. A variety of editing tools move the Cursor through the audio program and assist in actually performing the edits. When editing, the display has the following features:



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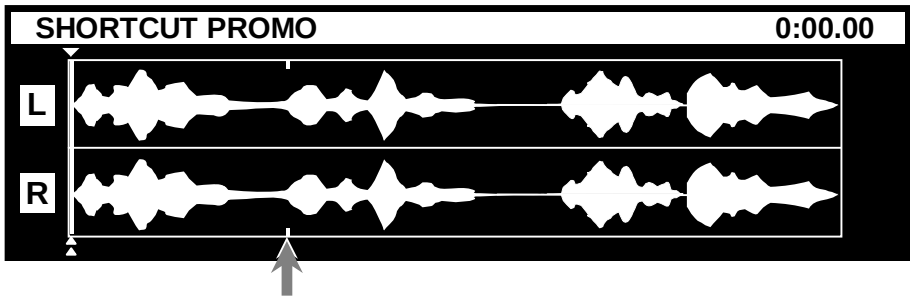
Location Marks

Points of interest may be noted with the MARK key at any time. These Location Marks are indicated by a small tick above and below each waveform display as shown in the figure below:



WAVEFORM DISPLAY SHOWING LOCATION MARKS ON BOTH TRACKS

Location Marks are not the same thing as the Edit Marks, and are used solely to mark a location so it can be quickly found in the future. Most Edit operations leave Location Marks to assist in finding past edit positions.

The ARM buttons determine on which track the Location Marks will be placed. In stereo operation, a pair of tick marks will appear above and below the two waveform displays.

Marks are always tied to the *audio* they are associated with, and not to a *time* reference. If a single track is edited, two marks beyond that edit may become displaced from each other; and in the case of deletion, a mark may disappear along with its audio. Deleting a segment of a File does not slip the marks with respect to audio.

The GO TO keys will quickly "tab" to the next Mark on any armed track. This feature can be used to advantage. When many Marks have been placed, "disarming" both tracks will limit the search to only five places: Start of File, the Zero Mark, Edit-In mark, Edit-Out mark, and End of File. By selectively arming tracks an entirely different set of Location Marks can be placed on each of the two tracks.

A Location Mark may be removed by locating to it (with the GO TO keys) and pressing MARK again. The Mark symbol will disappear. A *range* of marks may be removed by highlighting an area containing the marks, holding the UNDO key, and pressing MARK.

The Zero Mark

Zero Mark allows you to specify a point in the file you are editing that you can immediately re-locate to. You can set a starting point in a file without cutting all the material before that point. It does not affect the Time Display or the start point of playback in the Files Display.

The Zero Mark is distinguished as a small triangle at the bottom of the waveform display, just below where the triangle at the bottom of the Cursor is displayed. It is initially set to the beginning of the file. A single Zero Mark always exists in every file.

To set the Zero Mark, hold MARK and Press the “0” HOT KEY. You can do this while in any Edit playback mode. (Note that if done “on the fly” during playback or recording, a conventional Mark will be also be placed at the point where you initially press MARK.)

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To locate to the Zero Mark, press REW twice if the Cursor is later in the file than the Zero Mark, or FF twice if the Cursor is earlier in the file. (Subsequent REW-REW or FF-FF operations will locate directly to the end or beginning of the file.)

The Zero Mark is moved by using the same procedure to set it in a different place. To reset it to the beginning of the file, first locate to its current location or to the beginning of the file, then hold MARK and press the 0 KEY. Zero Mark leaves a conventional Mark wherever it has previously been set.

If audio containing the Zero Mark is copied or cut to a Hot-Key, the Zero Mark will appear in the resulting file at the same point in the audio program. If the Zero mark is Cut from a file it will be placed at the cut point. The Zero Mark will stay with the audio it is associated with even if audio earlier in the file is cut or inserted. The Zero Mark in a file being inserted is ignored to maintain the position of the Zero Mark in the file being edited. Note that if you place the Zero mark and then UNDO a previous edit, the Zero mark will revert to its position before the edit, but its new position will not be restored by Redo (pressing UNDO again.).

Placing Location Marks During Recording

Location marks are not just for use at the Edit level. One of their best uses is to mark good (or bad) areas of a recording *during the recording process*. A good example is call-in editing for radio, where a speaker may not immediately come to the point. By bracketing "keepers" with location marks, it isn't necessary to *ever* play the entire File again; just tab through the marks and immediately edit the good parts.

When placing a Zero Mark during recording, a conventional Mark will be placed at the point the MARK key is pressed (and held); the Zero Mark will be placed at the point where the 0 KEY is pressed.

Edit Marks

A single pair of Edit In/Edit Out marks exists in the File at all times. These marks may be moved about at will to define the beginning and end of a region of audio on which some operation will be performed. This may be a Cut, an Erasure, or something else. Whenever the Edit Marks surround a *region* of audio, it will appear highlighted. This is a visual indicator of the area, marked for a future editing action. Highlighted regions appear only on an armed track. Note that the two marks can be in the same spot, which shows as a triangular symbol at the top of the display. This is done to indicate the location for an Insert.

If many regions within a File are to be edited, it may be convenient to tag them in advance with Location Marks, and then return to perform editing operations at another time. Edit marks may be placed anywhere; they do not need to be placed on top of Location Marks. Thus, Location Marks can be used for a variety of reasons, and may be placed anywhere close to where a passage needs editing.

The GO TO keys and SCRUB WHEEL are used to locate where an Edit Mark is to be placed. It is also possible to simply play down to a desired edit point and place an Edit Mark.

When an entry point is located, press EDIT IN to mark the point; it will appear as a triangular mark at the top of the display.

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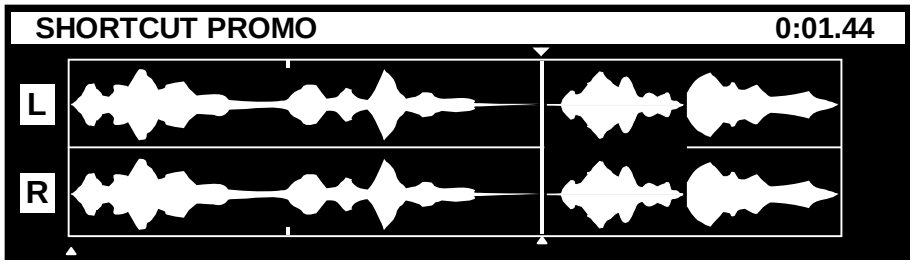
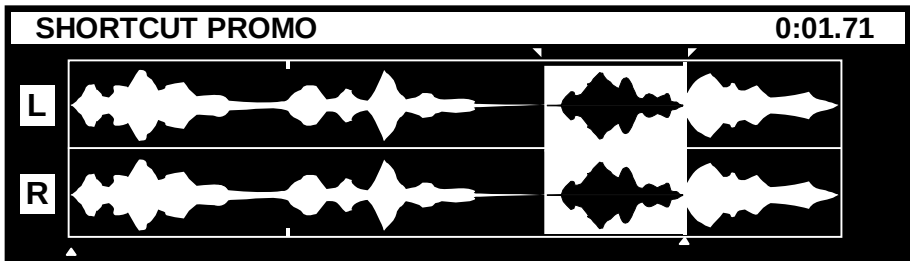


EDIT-IN MARK SET AT CURSOR POSITION

Locate the desired end point, and press EDIT OUT to finish defining the area between the edit marks. After EDIT OUT is pressed, the area between the Edit Marks will appear highlighted on armed tracks. The Edit Marks will be visible at the upper edges of the highlighted area.



WAVEFORM DISPLAY WITH BOTH EDIT MARKS SET

It is permissible to set the Edit Out mark first, and the Edit In mark next. However, the Edit In mark must always be placed *earlier in the File* than the Edit Out mark. If an Edit In mark is moved to a point later in time than the Edit Out mark position, it will push the Edit Out mark to the same position. The reverse is also true, if one should attempt to place an Edit Out mark earlier in time than an Edit In mark.

EDIT IN and EDIT OUT may be pressed during Record, Playback or at the Edit level. Subsequent presses of either key will override the previous edit point with the newly selected one.

Play a Selected Segment

Play Selected Audio plays only material between the Edit In and Edit Out Marks. It is accessed by holding the ALT key and pressing PLAY. The EDIT IN and EDIT OUT buttons light to indicate that you are playing the selection. If no selection exists (Edit In = Edit Out) nothing will play. If LOOP is on, the selection will play repeatedly with a momentary pause between plays. (For seamless looping, COPY to a HOT-KEY then play the HOT-KEY with LOOP on.)

Cut a Selected Segment

The Cut operation removes a portion of audio defined by the position of the edit marks. There are two reasons a Cut operation might be performed:

- A portion of audio is to be removed, for placement somewhere else.
- A portion of audio is unwanted, and is removed and never used again.

To Cut a highlighted segment, press the CUT key; the highlighted area will disappear, and the surrounding audio will join together, forming a seamless transition.

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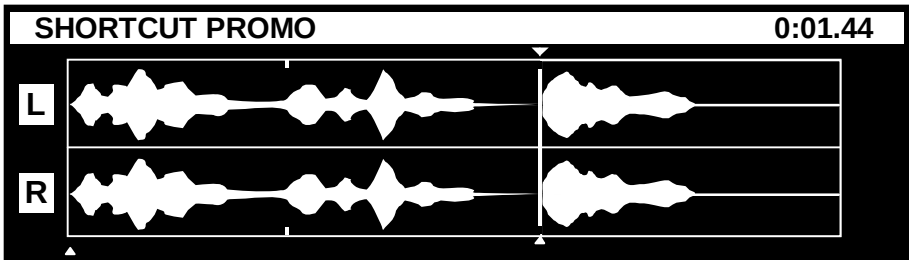

AUDIO WAVEFORM AFTER A "CUT" OPERATION

The removed piece is placed in a temporary or “clipboard” memory (actually a file called _CLIPBOARD), and may now be inserted at another location if desired. Remember that only one Cut command at a time can be stored in the clipboard memory. Before making a second Cut, insert the first piece at the desired location. When multiple clipboard memories are needed, use the Hot Keys.

Cut to Hot Key

A Highlighted Portion of a File May Be Cut, and Transferred to a Hot Key.

- Press CUT, and while holding it, press the desired HOT KEY.
- Use the keyboard to add a title if desired.

The Copy Command

The Copy operation is similar to the Cut operation, but *does not* remove the original piece of audio; the copy is stored in clipboard memory for later use.

Copy a Selected Segment of Audio

- Press COPY and the highlighted segment will be placed in clipboard memory.
- Insert it at another location (or in another file) using the INSERT command.

Copy a Selected Portion of a File to a Hot Key

- Press COPY, and while holding it, press the desired HOT KEY.
- Use the keyboard to title if desired.

Copy an Entire File From Disk to a Hot Key (Assign a Hot-Key)

- Go to the File Select display (FILES key).
- Select the desired File using the SCRUB WHEEL or ARROW KEYS.
- Hold COPY and press the desired HOT KEY.

Insert a Cut Or Copy Segment

The Insert operation transfers audio from the clipboard memory to a new location defined by the Edit In and Edit Out marks. There are two ways to use the Insert function: Insert at a Single Point and Insert Replace.

Insert at a Single Point

- Set the EDIT IN and EDIT OUT marks at the same location.

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- Press INSERT.

Because the Edit marks are at the same location, the Insert command will open up a space and insert the new audio between the marks. It *will not* overwrite existing audio. Material previously occupying this space will be shifted later in time, and the File will increase in length as a result. "Insert" is similar to the "paste" command used in word processors.

Insert Replace

- Set the EDIT IN and EDIT OUT marks to *surround* material to be replaced. A highlighted region will appear between the marks.
- Press INSERT.

The highlighted region will be deleted first*, and the material from clipboard memory will then be inserted in that region. Inserted material can of course be shorter, the same length or longer than the replaced region. In every case an Insert without gaps or overlaps will result, and the total File length may be shorter, the same, or longer.

Crossfade Edits

Crossfade allows smooth transitions of variable length to occur between edited audio segments. This can be useful for smoothing edits, or for creative effects. It is analogous to mixing between the output of two tape machines while recording on a third. Crossfade can be applied to either Cut or Insert operations.

The Crossfade Time is set in the Edit Menu, Item 6 CROSSFADE : 00.01 (OFF). When you select it and press ENTER (or press HOTKEY 6 to select it directly) the Crossfade Value / Enable screen is displayed.

```
CROSS FADE VALUE / ENABLE

DURATION:   00.00  SEC  (OFF)

SPACE BAR TOGGLES ON/OFF

SET OR ADJUST VALUE THEN PRESS 'ENTER'
```

This screen allows the adjustment of the Crossfade Duration with the SCRUB WHEEL or the ARROW KEYS. The SCRUB WHEEL adjusts by .05 second intervals until the value is over 1 second, causing it to adjust in .1 second intervals. The ARROW KEYS allow adjustment in .01 second increments. Pressing the SPACE BAR while in this screen turns Crossfade ON and OFF.

While in the Editor, Crossfade can be turned on and off by pressing ENTER. When Crossfade is on, the Crossfade Time is displayed in the top line of the display where the file name is normally shown.

When Crossfade is off, it can be used on an individual Cut or Insert operation by holding ALT while pressing CUT or INSERT. Insert Hotkey with Crossfade and Cut to Hotkey with Crossfade must be performed with Crossfade turned on in the normal way.

* The deleted material is not placed on the clipboard and may be permanently lost unless the operation is Undone or a copy exists in another file. See page 10 for information about recovering deleted material by renaming the Edit file before saving over the original File.

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Crossfades create new recorded material on the disk equal to their length. Crossfades can be undone with the UNDO key, however there is no way to undo them after that. **It is strongly recommended that you make copies of original files before editing them.** It takes almost no disk space, and you will have all the original material available if you need it.

Cut with Crossfade

Crossfades on Cuts are performed using the material before the Edit In point and after the Edit Out point. If there is not enough material on either side, the duration of the crossfade will be automatically limited. If there is no material on one side or the other, (i.e. a top or tail trim) no crossfade will be performed. In all cases, the material in the Clipboard (or Hotkey file) will be the same regardless of whether crossfade is used.

The first diagram below shows a file that has the Edit Marks set in preparation for a Cut. When a Cut is performed, the resulting file is represented by the second diagram. This is the final result of a simple Cut operation. When Cut with Crossfade is used this is only an intermediate step. The Crossfade process will result in the file represented by the third diagram.

During the Crossfade time, the two parts of the file are actually overlapped. This results in the total run time of the file being reduced by the crossfade time. Sometimes you may need to decrease the amount of material to be removed to compensate for this if you are editing to reach a specific run time.

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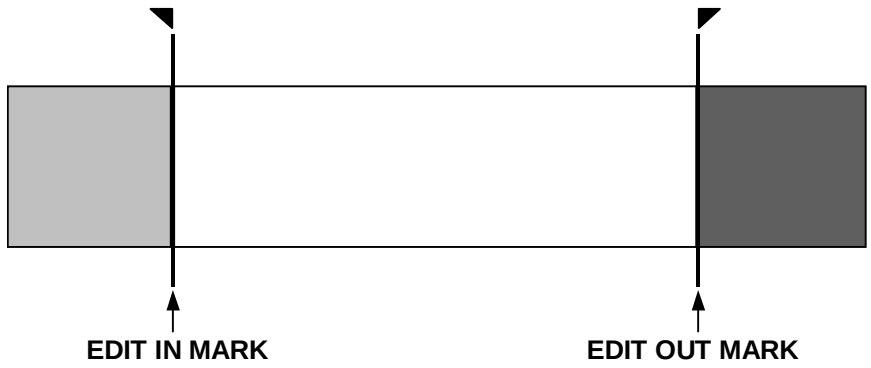

Diagram 1: Selection to be Cut is Marked

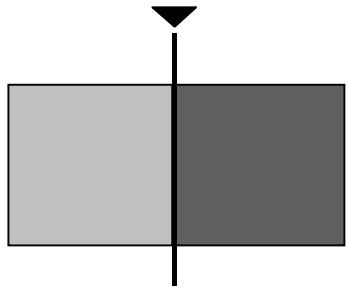

Diagram 2: Selected Audio is Removed and Remaining Audio is Spliced Together

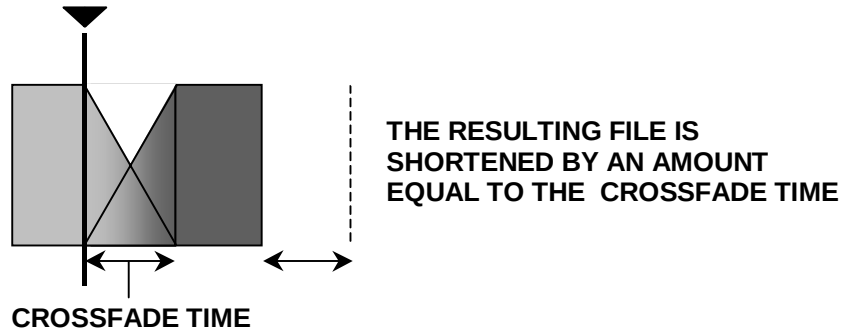

Diagram 3: Spliced Audio is Overlapped and Crossfaded Between the Two Parts

Performing a Crossfade Only Cut

Performing a Cut with Crossfade when the Edit In and Edit Out Marks are in the same place will generate an error message in the top line of the display,

" * NOTHING TO CUT * "

followed by

"APPLY CROSS FADE? (YES=ENTER, NO=EXIT)"

Pressing ENTER causes the material on either side of the Edit Marks to be crossfaded by the amount of time set for the Crossfade Time. This process is effectively illustrated by diagrams 2 and 3 above. The Run Time of the file is reduced by the Crossfade Duration.

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Insert with Crossfade

Crossfades on Inserts can actually create two crossfades. One is between existing material before the Edit In mark and the material at the head of the piece being inserted. The other is between the tail of the piece being inserted and the material after the Edit Out mark. If there is insufficient material in any of these regions the duration of the crossfade will be limited. If the Edit In mark is at the Beginning of the file, no crossfade will be performed at the head of the insert. If the Edit Out mark is at the end of the file no crossfade will be performed at the tail of the insert.

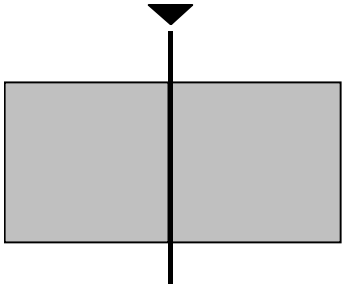

Diagram 4: Edit Marks Placed at the Insertion Point

Diagram 5: New Material Inserted in the File

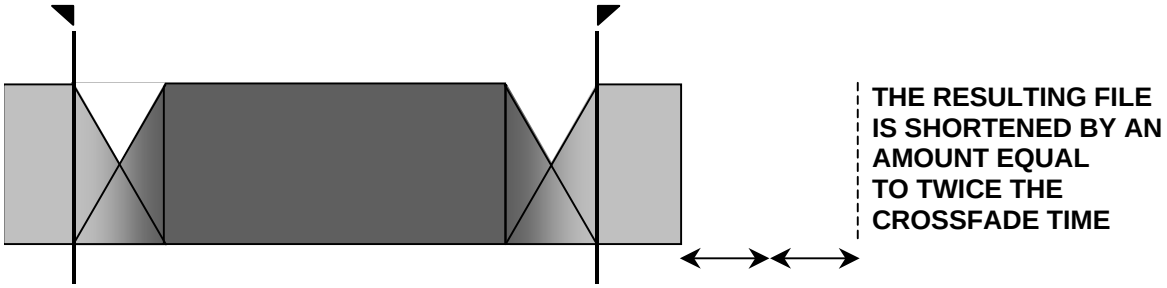

Diagram 6: Crossfades Performed At Head and Tail of Inserted Material

The Crossfade Duration applies to both crossfades performed. When appending material to the end of a file, only the head crossfade is performed, so each insertion can have its own Duration set. If you need independent control of the times of both ends of an insert (or one end crossfaded and the other not), first perform a normal Insert operation, then place both Edit Marks at the first splice and do a Crossfade Only Cut with the desired Crossfade duration. Next (if necessary), set the Crossfade duration for the second splice, set both Edit Marks there and do another Crossfade Only Cut.

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Gain Editing

Gain Edits are accessed by pressing SOFT KEY 2 while in the Editor. These include Set Gain Value, Adjust Level, Fade In, Fade Out, Relative Fade. The direct control for the Speaker On/Off is still here, moved to item 6. In this menu it is a single item that toggles the speakers on when they are off, and off when they are on.

GAIN EDIT MENU

1. ▸ ADJUST LEVEL
2. SET GAIN VALUE
3. FADE IN
4. FADE OUT
5. RELATIVE FADE
6. SPEAKER OFF

Pressing the numeric key associated with any of these items will perform the operation immediately or display the parameters for the operation. You can also use the SCRUB WHEEL or ARROW KEYS to select an item and press ENTER. Operations performed immediately are FADE IN, FADE OUT and SPEAKER OFF/SPEAKER ON.

Gain edits in Shortcut are completely non-destructive. Each ten millisecond block of audio has a Gain Value that can range from +6db to -90db. This Gain Value is applied to the audio during playback, but does not change the original audio data that was recorded. When a block is first recorded, its Gain Value is 0db. The level of the recorded audio has no effect on this, and the actual output level associated with any Gain Value is relative to the recorded level.

All Gain Edits are performed on the selected range of audio between the Edit In and Edit Out marks, on one or both tracks depending on the state of the ARM buttons. The charts below illustrate Gain Values in a single channel. These charts are for explanation only. The actual Shortcut display does not show gain values in this format, but gain edits will affect the size of the displayed waveforms.

There is still the option to adjust the gain both channels of the entire file. This is accessed in the Editor by pressing MENU, selecting item 3. OUTPUT LEVEL, adjusting the value with the SCRUB WHEEL or ARROW KEYS, and pressing ENTER. The entire file is affected regardless of the state of the ARM buttons or the EDIT IN and EDIT OUT marks.

The maximum and minimum Gain Values are enforced on each operation, so it is not possible to increase gain above +6db in any section through repeated operations or the combined effect of gain edits and the OUTPUT LEVEL parameter in the Edit Menu.

Note that increasing gain can cause distortion in audio that is already recorded near full scale; in this event simply UNDO the operation or reduce the gain of only the affected audio.

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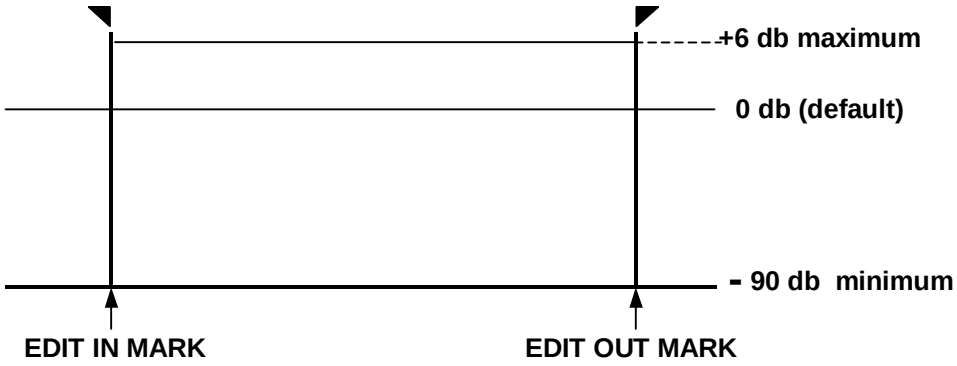
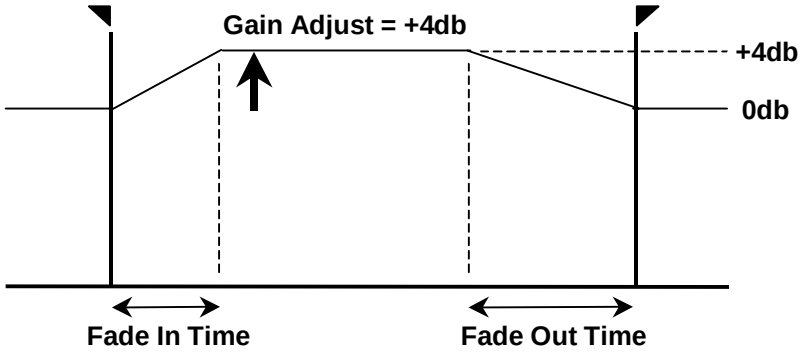


Adjust Level

Adjust Level allows the gain of a selected range of audio to be increased or decreased relative to its current Gain Value. This allows the relative levels of gain edits and fades performed on small regions to be maintained when they are subsequently adjusted as part of a larger region.

Adjust Level also has the ability to set an in and out fade time. These times occur within the time defined by the Edit In and Edit Out marks, so their total cannot exceed the length of the selected range. The graph below shows an Adjust Level operation that adds 4 db, with the Fade In time set about half the length of the Fade Out time.



The Adjust Level display has four lines:

```
ADJUST LEVEL

1.  ▸ ADJUST NOW
2.    ADJUST BY:          +00.0   DB
3.    FADE IN TIME:        00.00  SEC
4.    FADE OUT TIME:       00.00  SEC
```

The first item is ADJUST NOW. This executes the operation using the information entered on lines 2, 3 and 4. This information is remembered from the last operation, so if you are using the same values you can simply press ENTER. To change the values, press the number corresponding to the line number. For instance, pressing 2 selects the ADJUST BY value.

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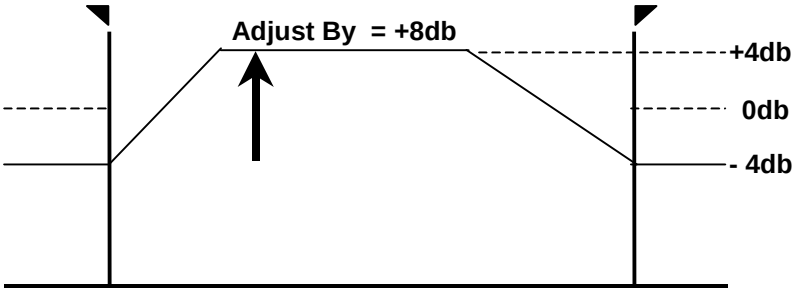
```
ADJUST LEVEL

1.    ADJUST NOW
2.  ▸ ADJUST BY:          +00.0   DB
3.    FADE IN TIME:         00.00  SEC
4.    FADE OUT TIME:        00.00  SEC
    SET OR ADJUST VALUE THEN PRESS 'ENTER'
```

Use the SCRUB WHEEL or the ARROW KEYS to adjust the value, or set it directly by entering it with the numeric keys. The Space Bar changes the sign of the Adjust By value. When you are finished, press ENTER, then either press one of the numeric keys 2,3 or 4 to select another value to adjust, or press 1 to execute the Adjust Level operation.

The FADE IN TIME and FADE OUT TIME can be any value up to the length of the selected region. Their combined total cannot exceed the length of the region, so if one is set to 1 second, the other can be up to 2 seconds if the range is 3 seconds long.

The graph below illustrates the result of adjusting the gain of a region that has already been reduced to –4 db. In cases like this, the Adjust By value can go above +6 db because the limit applies to the Gain Value that results from the operation



Set Gain Value

Set Gain Value sets the gain of all audio in the selected range to the specified Gain Value. This is a way to set a known value that discards any previous gain setting. It is unique in this regard as the other gain editing methods modify existing Gain Values. (This includes the OUTPUT LEVEL parameter in the Edit Menu.)

```
SET GAIN VALUE

GAIN VALUE:   +00.0  DB

SPACE BAR CHANGES SIGN

SET OR ADJUST VALUE THEN PRESS 'ENTER'
```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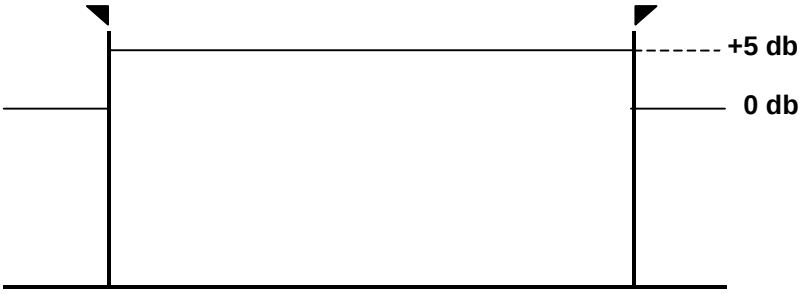
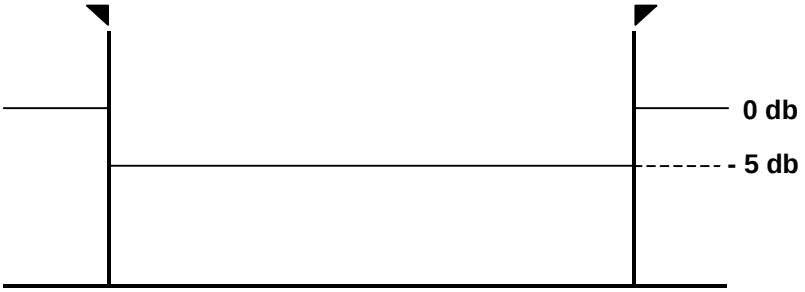
It is usually better to use ADJUST LEVEL for gain editing, however in cases where there are no existing gain edits and no fading in or out of the edit is necessary, it can be faster and easier. A common use is to allow an entire file to be adjusted in only one channel, for example to adjust the relative level of a caller on the Left track and a DJ on the right.



Set Gain Value: +05.0 DB



Set Gain Value: -05.0 DB

Performing a Set Gain with a Gain Value of 0db is equivalent to undoing all gain edits within the selected range.

When using Set Gain it is unnecessary to use UNDO to restore the previous value before trying another Gain value; just repeat the edit with the new value and the specified Gain will be placed on the selected range. You can also do this with Adjust Level, but the effect is additive, so if you Adjust Level with an Adjust By value of -1db, then perform the same edit again with the value -2db, the resulting Gain value in the range will be -3 db. Repeatedly performing Adjust Level in small amounts can allow you to fine tune the gain of the selected range without re-entering a Gain value.

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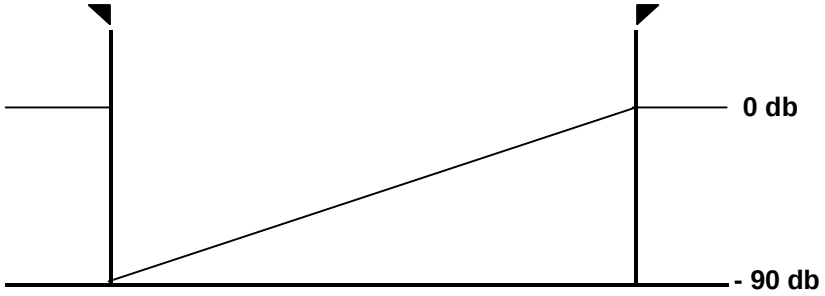
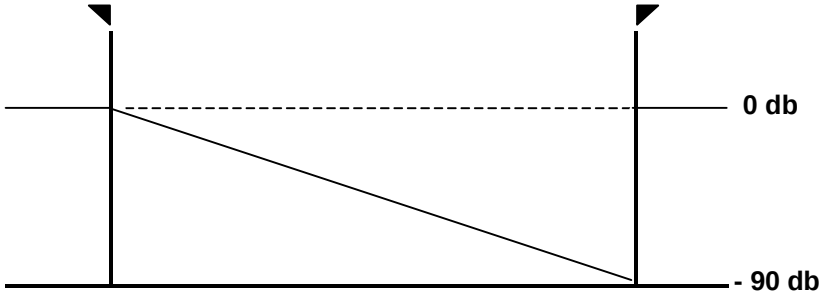
Fade In and Fade Out

The selected range can be faded in from silence or out to silence. The length of the fade equals the length of the range. These operations are performed immediately when selected from the Gain Edit menu as there are no values to set.



Fade In



Fade Out

Relative Fade

Relative Fade creates a linear fade over the duration of the selected range. This can be a fade to or from the selected Gain Value, and the Gain Adjust value can be either positive or negative. These two parameters interact to determine the direction (increasing or decreasing) of the fade.

The Gain Value is always selected, and can be adjusted with the Scrub Wheel or Arrow Keys, or entered directly using the numeric keys and the Space Bar to change sign.

```
RELATIVE FADE
GAIN VALUE: +00.0 DB
SPACE BAR CHANGES SIGN
SET OR ADJUST VALUE THEN PRESS 'ENTER'

▸ 'EDIT IN' SELECTS FADE TO GAIN VALUE
  'EDIT OUT' SELECTS FADE FROM VALUE
```

The EDIT IN and EDIT OUT keys are used to select whether the fade is going to be performed to the Gain Value or from the Gain Value. Pressing these keys switches the highlighted phrase indicating which method will be used. Pressing ENTER performs the Fade using the currently selected parameters. The diagrams on the following page illustrate four possibilities using combinations of positive and negative Gain Values with Fade From Value and Fade To Value.

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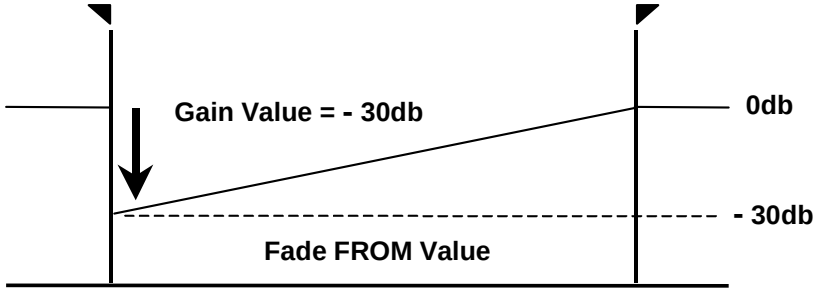
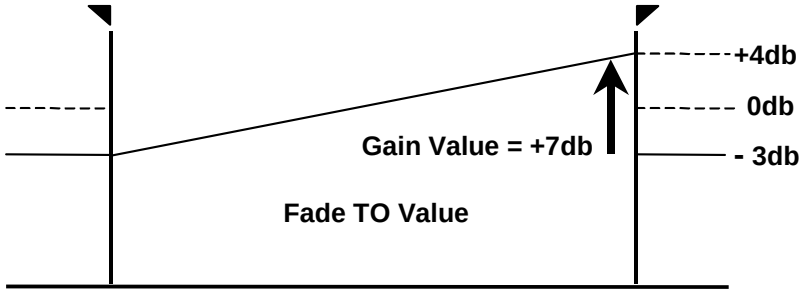
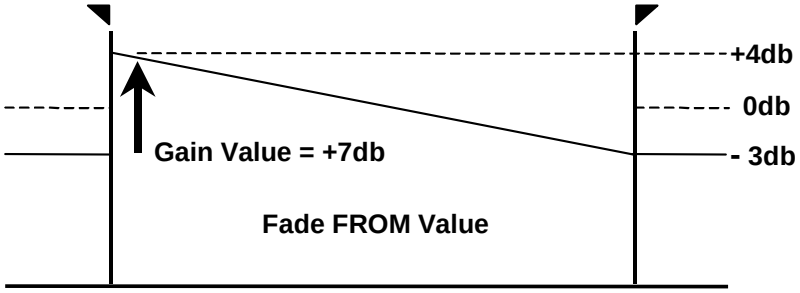


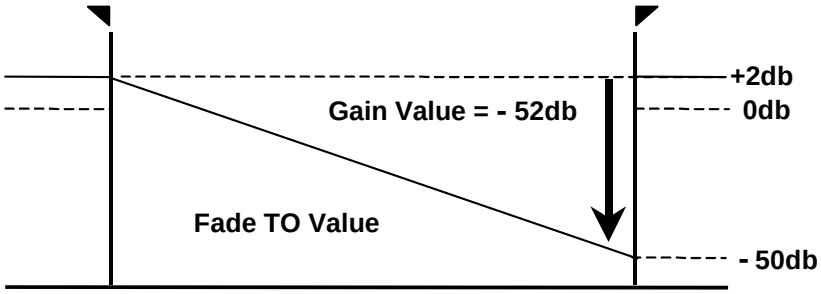
Fading From a Negative Gain Value – Existing Gain = 0db



Fading To a Positive Gain Value – Existing Gain = -3db



Fading From a Positive Gain Value – Existing Gain = -3db



Fading To a Negative Gain Value – Existing Gain = +2db

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Erase

The ERASE key can perform four different operations:

Erasing a Highlighted Segment Within a File While Editing

- Select a section of audio to be erased. ARM only one track if desired.
- Press ERASE. The segment will be replaced with silence, and the running time of the File will remain unchanged.

Note that Erasing is always non-destructive and can be undone immediately with a single press of UNDO or at any time by highlighting a segment containing erased audio and performing an Undo Erase by holding UNDO and pressing ERASE.

Erasing a Hot Key Assignment in the Files Display

- Hold ERASE and press the desired HOT KEY. This does not erase the file.

Erasing an Entire File in the Files Display

- Go to the File Select level (FILES key).
- Select a File name.
- Press ERASE to delete the File. A prompt will appear for confirmation of your intention to erase the File. ***Note that you cannot Undo a File Erase*.**

Erasing an Entire Directory in the Directory Display

- Go to the Directory level (DIR key).
- Select a Directory name.
- Press ERASE to delete all Files in the Directory. You will be prompted for a confirmation of the Erase command.

Remember: It is *not* possible to Undo a Directory Erase operation.

Saving an Edited File

Whenever changes have been made to a File but not yet saved, the SAVE key will illuminate. The SAVE key saves a File, but does not close it.

Saving With a New File Name (Save As)

Press ALT + SAVE to save edited work with a new File name. The Editor will prompt for the new name; type it in, followed by ENTER.

Exit

The EXIT key performs several functions:

1. EXIT will cancel (or abandon) some machine operations;
2. EXIT will abandon a File *without* saving it. A prompt "SAVE CHANGES?" will appear if a File has been altered but not saved. The operator may then:
   - Press SAVE to save and exit; or
   - Press ALT + SAVE to save with a *new* File name and exit, or
   - Press ENTER to exit *without* saving; or
   - Press UNDO to cancel the exit operation.

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Abandoning Edit Operations

Occasionally the user will no sooner have pressed some edit key than he will realize this was a mistake. Certain edit operations can be abandoned: CUT, COPY, INSERT and ERASE. When one of these keys is pressed, *and before it is released*, simultaneously press EXIT or STOP. This is equivalent to the edit key never having been pressed in the first place; it works because these keys act when *released*, not when *depressed*.

If any of these four edit keys has already been released, pressing EXIT or STOP will have no effect. In this case, use the UNDO key.

Bleep File Segment

Offensive words within a recording may be censored (bleeped out) by overwriting with a Bleep tone or silence.

To Bleep a File in Edit Mode

- Use the EDIT IN and EDIT OUT keys to highlight the offending segment;
- Press BLEEP. The Bleep tone (or silence) will be inserted in place of the highlighted audio.

A Bleep tone is always non-destructive and may be Undone at any time.

To Set the Bleep Output Level

The level of the Bleep signal can be set to 0 DB, -6 DB, -12 DB, -24 DB or SILENT. This is a Directory Preference setting, so each Directory can have it's own value.

- You must be in the Files Display of, or Editing a file within the desired Directory.
- Press MENU
- Select item 5 DIRECTORY PREFS and press ENTER
  or
  Press the 5 KEY.
- Select item 6 BLEEP LEVEL and press ENTER
  or
  Press the 6 KEY.
- Select the desired value using the ARROW KEYS or THE SCRUB WHEEL.
- Press ENTER to confirm the choice.
- Press STOP to return to the Files Display or the Editor.

The Bleep Level is not recorded in files, it is a setting that is used when the Bleep is produced. Therefore the level of all existing occurrences of Bleep in files in the current Directory will change to the new setting.

To Bleep a File in the Play or Record Mode

- Hold down the BLEEP key for the desired duration.

A 1,000 Hz tone or silence can be selected in the DIRECTORY PREFS menu. Further information on Bleep is presented in the Miscellaneous Operations chapter.

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Undo an Edit Operation

The Undo function will remove the last Edit operation. As such, it is valuable for fixing mistakes. Remember that *only the last* edit operation can be Undone. Operations that can be Undone include: CUT, INSERT, BLEEP, INSERT RECORD and certain ERASE functions.

If uncertain about what the last operation was that will be Undone, hold ALT + UNDO to display the last type of edit performed. (Erasures of audio within a File *can* be Undone; erasures of Files or Directories *cannot*.) Whenever a mistake has been made, press the UNDO key before moving ahead.

To Undo the Last Editing Operation

- Press the UNDO key.
- Press UNDO a second time to restore the operation.

UNDO is also used with the MARK, ERASE and BLEEP keys to remove marks, and regions of audio that have been Erased or replaced with a Bleep. To perform these functions:

- Use the EDIT IN and EDIT OUT keys to define the area containing Marks to be removed; while holding the UNDO key, press MARK.
- Select the area containing Erased regions of the File to be restored; while holding the UNDO key, press ERASE.
- Select the area containing Bleeped audio that is to be restored; while holding the UNDO key, press BLEEP.

To Undo the Last Transport Operation

This allows returning immediately to the Cursor position where the last transport command was issued. This can be used to repeatedly audition an edit, or recover from accidentally pressing FF or REW a second time and finding yourself at the beginning or end of the file.

- Press and hold the UNDO key.
- Press PLAY, REW OR FF.

Solo Buttons

The left or right SOLO keys select a single track of audio, instead of the normal case where both tracks are heard. It is often desirable to monitor only one channel while doing single-track editing. For example, it's hard to edit speech if the other track is playing music at the same time.

Pressing the LEFT SOLO key effectively mutes the right channel, and vice-versa. A SOLO button is illuminated when active; it is canceled by pressing the illuminated key again. The Solo keys work *only* at the Edit level, and their function is canceled when leaving it.

Single Track Editing

All editing operations can be performed on a single track. These include:

- Mark
- Cut
- Copy
- Insert
- Insert Record
- Erase
- Gain Adjust, Set and Fade
- Bleep

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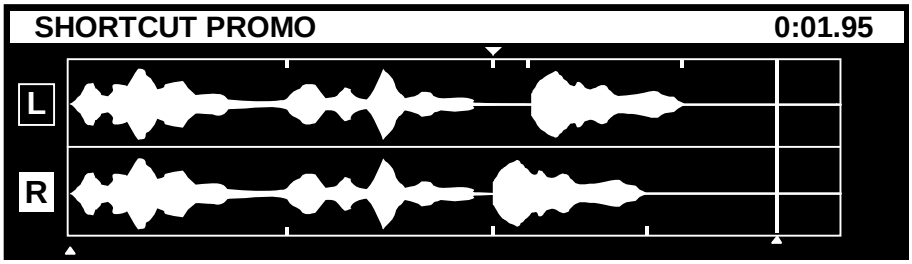
An individual track is selected with one of the ARM keys. In normal editing, both ARM keys illuminate when entering the Edit mode. A single track can be de-selected by pressing its ARM key; note that its LED is now OFF. The state of the ARM buttons is remembered when the file is saved. This can be used as a "safety" of sorts by turning off both ARM buttons when saving a finished file.

Editing operations are performed on a single track the same way as on a stereo pair. Note that Locate Marks and Edit Marks are normally placed on both tracks together; in the case of single-track operations, it is possible to perform edits that will move these marks apart from each other, or even erase the mark for one track while leaving the other in place.



TIME OFFSET BETWEEN LOCATE MARKS ON THE LEFT AND RIGHT TRACKS DUE TO SINGLE-TRACK EDITING.

Location Marks can be placed in a single track by placing them with only one track armed. When one track is armed, the Go To keys will only locate to Marks in the armed track. If neither track is armed, Go To will only locate to the beginning and end of the file, the Edit In and Edit Out Marks, and the Zero Mark.

When material is Cut or Copied from a single channel, it will appear as two channel in the resulting Hot Key or _CLIPBOARD file, with the audio only existing in the channel that was armed when the file was created. However, if it is inserted into a file with the opposite channel armed, the material will "cross over" to the other channel. This can be used to switch channels for a short segment, create a two channel mono file from a single channel mono file, or swap the channel of a stereo file. Remember that you must create the file with a single channel armed, and Insert the file with the opposite single channel armed.

If you Insert stereo material into a file with only one track armed, the left channel of the stereo material will be inserted into the left track if it is armed, or the right channel material will be inserted into the right track if it is armed.

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CHAPTER V

MISCELLANEOUS OPERATIONS

Many of the more specialized functions of Shortcut make it a valuable tool for the broadcast industry. This chapter presents a collection of unrelated features you will find valuable when using the machine.

DIRECTORY AND FILE ORGANIZATION

Directories

The storage space in the Shortcut editor is divided into ten regions called Directories, each containing up to 200 Files. Each Directory can be given a unique name, such as "SPORTS" as a convenient way to segregate recordings for different purposes. These directory divisions might be for different shows, or for different users within a facility.

Nine Directories can be protected with passwords to prevent unauthorized access. As a convenience, Shortcut contains one "Public Directory" that is never password protected. The Public Directory is a preferred place to store new recordings when it is not clear where they will eventually go.

Pressing the DIR key gives access to a listing of the ten Directories. Each is shown by name and by a number. A Directory may be selected by using the SCRUB WHEEL, ARROW keys or GO TO keys to scroll through the list of entries, followed by ENTER. Or, you may simply enter the directory number on the numeric keys for immediate access. Use the letter "P" for the Public Directory.

Entering the Record mode *before* a Directory has been opened will open the currently highlighted name in the Directory Listing, *unless* it is password protected. In that case, the Public Directory will be selected and opened.

DISPLAY SCREEN SHOWING DIRECTORY LISTING

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Files

The term "Files" refers to the individual recordings which always exist within a particular Directory. A File is always a 2-channel recording and may be up to 130 minutes long, or the time remaining on the hard disk.

After a Directory is selected, the top line of the display shows the Directory name, the sample rate selected for the Directory, and the remaining space on the hard disk. The display presents an alphabetized list of the Files present, including the running time of each File, and in brackets, the Hot Key to which a File may be assigned. For example: [3].

Use the SCRUB WHEEL, ARROW keys or GO TO keys to scroll through the list of entries.

- Press the ENTER key or EDIT IN to select a particular File for Editing.
- Press the PLAY, COPY or ERASE key to perform an action on a File, without loading it for Editing.

PUBLIC DIRECTORY	48K	TIME 2:45:16
A SHORTCUT PROMO EDITED	[1]	0:36
A SHORTCUT PROMO ORIGINAL		0:52
NEWS HOUR		1:00:03
CAR DOOR	[5]	0:04
CAR PEEL OUT	[7]	0:11
DOG GROWL	[3]	0:06

DISPLAY SCREEN SHOWING FILE LISTING WITHIN A SINGLE DIRECTORY

USING HOT KEYS

Hot Keys are so named because they perform an *immediate* or "hot" audio playback function programmed into them. The Shortcut Editor provides 10 Hot Keys. In their most basic form, an audio "sound bite" can be mapped to a Hot Key for instant playback at a later time. In addition, the Shortcut Editor provides a number of *new* Hot Key functions:

- A HOT KEY plays audio mapped to that key.
- A highlighted segment of audio can be Cut or Copied *from* a File being edited, *to* a specific HOT KEY. It is also saved to disk as a new File.
- Any File in the current Directory can be Copied (Assigned) to a HOT KEY.
- The audio under a HOT KEY may be Inserted into a File being edited.
- A set of 10 HOT KEY assignments is stored with *each* Shortcut directory.

Copy A Selected Segment To A Hot Key

A highlighted audio segment can be Copied to a hot key by holding down copy, and pressing the desired hot key. The audio segment is also saved as a new File. A default File name will be presented, with an option to rename it. Type in the new name, or accept the default by pressing ENTER.

When attempting to Copy or Cut to a Hot Key that already has a file assigned to it, you are warned. If you confirm that you wish to reassign the Hot Key, the name for the new file created by this operation defaults to the name of the file currently assigned to the Hot Key.

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Entering a new name causes the creation of a new file, which will not replace the existing file, only the Hot Key assignment.

If you do not enter a new name or edit the default name displayed, when you press ENTER you are asked if you want to replace the file associated with the Hot Key. Pressing ENTER again causes the new Hot Key file to overwrite the old one. This operation is like a file erasure and is not Undoable.

Cut A Selected Segment To A Hot Key

A highlighted audio segment can be Cut to a HOT KEY by holding down CUT, and pressing the desired HOT KEY. "Cut" differs from "Copy" in that the audio segment is actually removed from its original location. The cut segment is also saved as a new File; the display will offer a default name, with a rename option.

Assign a File To a Hot Key

A File from the current Directory can be Copied to a Hot Key.

- Go to the File select level (FILES key);
- Select the File using the SCRUB WHEEL;
- Hold the COPY key down;
- Press the desired HOT KEY.

If the Hot Key you choose is already assigned, the display reads:

PRESS ENTER TO REASSIGN, PRESS EXIT TO CANCEL.

Pressing ENTER reassigns the Hot Key to the new file.

Determining a Hot Key Assignment

To silently find which File is assigned to a Hot Key, hold ALT and press the HOT KEY.

Performing an Insert From a Hot Key

To Insert an audio segment into a File during editing:

- Set the Cursor to the desired location on the waveform.
- Press EDIT IN, then EDIT OUT to set an insertion point for the new segment.
- Hold down INSERT and press the desired audio HOT KEY. The selected segment is inserted into the File, and the File length is extended by the same amount.

If a region of audio was first highlighted within the File, inserting an audio segment will replace the audio within the highlighted region. If the inserted audio is of different length than the segment replaced, the playing time of the File will also change.

Playing Audio From A Hot Key

Hot Keys can be played while in the Files menu, or in the Editor.

- To play audio, press the HOT KEY. It will illuminate while playing.
- To Clear a Hot Key assignment, hold ERASE and press the HOT KEY. (This does not erase the file.)

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Using Hot Keys To Compare Audio Versions

Since Hot Keys are operational while editing audio, it is possible to compare the original version of a File with an edited one. To do this, assign the File to a HOT KEY before editing. As work progresses, the HOT KEY can be used to play the unedited version of the file.

Programming A Hot Key To Play Clipboard Contents

It is often important to know what audio is present in the Editor's "clipboard". The user may have forgotten what the last CUT or COPY operation was; or wish to compare the clipboard with other audio to help in decision making.

Shortcut solves these problems by allowing the changing contents of the clipboard to be assigned to a Hot Key. Pressing the Hot Key will then play the clipboard at any time, auditioning its audio as editing progresses.

To make this assignment, a File named _CLIPBOARD must first exist in the Files listing. To inspect for this, press the FILES key and see if it is there. (_CLIPBOARD is always at the bottom of the Files list.) If it is not present, create a _clipboard file by Editing any file and performing a COPY operation. Exit the Editor.

Assigning the _CLIPBOARD to a Hot Key is done as a normal Copy to Hot Key operation:

- Go to the File select level (FILES key)
- Select the _CLIPBOARD File.
- Hold COPY and press a HOT KEY.

The HOT KEY will now reflect the changing contents of the clipboard. As long as the _CLIPBOARD file is never erased and the Hot Key is not reassigned, the clipboard contents will be played by the assigned HOT KEY.

THE FIND COMMAND

The FIND command will locate a File *by title* within a specific Directory, without the need to scroll through a lengthy list. Alternately, the FIND command can position the Cursor at a specific *time point* within a File.

Finding A File By Title

- To find a File by title, go to the File display. (FILES key)
- Press the FIND key. (SPACE BAR)
- Enter the complete title, or a partial title followed by an asterisk "*".
- Press ENTER. The FILES listing will highlight the requested File title.

If the title cannot be found, the display will show file not found. Press EXIT to return to the File Select listing.

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Finding A Time Location

The FIND command can locate to a time position within a File, instead of a finding a File name. Further, one may use FIND to locate an absolute time point, measured from the beginning of the File; or the command can be used to skip forward or backward by a pre-determined time interval. To find a time location within a File, Shortcut must be in the Editor.

To Find an absolute position

- Press the FIND key. (SPACE BAR)
- Enter the absolute position in hours, minutes or seconds, calculator-style. New digits will appear in the right column, while previously entered digits move to the left.
- If a (+) or (-) sign appears in front of the time, press the ASTERISK (*) key to clear the sign. See the following section on setting "skip" intervals.
- Press ENTER. The Cursor will move to the new position, and the display will show the time.

Entering a position *beyond* the end of the File will locate to the *actual* end of the File. The BKSP and DEL keys will back out the last digit entered. The UNDO key will undo or redo the last change to an entry. ERASE will clear the entered value.

Setting skip intervals

The Shortcut editor allows the user to "skip" (or tab) forward or backward by some convenient interval of time. Relative offsets are useful as a pre-roll when auditioning edits, and also for rapidly moving through a File. This time offset is entered in the same way as an absolute time (see above section) but is preceeded with a (+) or (-) sign to denote the direction of the skip. The following steps show how the direction of skip is established. Also, the SCRUB WHEEL or SPACE BAR can be used to alternate between these signs.

To skip forward in time

- Press the FIND key.
- Enter the interval to skip.
- Press the RIGHT ARROW KEY to skip *forward*.
- Press ENTER.

To skip backward in time

- Press the FIND key.
- Enter the interval to skip
- Press the LEFT ARROW KEY to skip *backward*.
- Press ENTER.

To repeat a forward/backward skip

- Press the FIND key.
- Press the FF (fast forward) or REW (rewind) key.

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Bleep A File Segment

Offensive words in a recording may be censored by using the large blue Bleep button to overwrite them with a "Bleep tone" or silence. This selection is made in the DIRECTORY PREFERENCES menu. There is also a setting to select the Bleep Level. (See the section on BLEEP SOURCE on page 55.) Audio is non-destructively replaced with a Bleep tone while the button is depressed.

Insert Bleep in A File While Stopped

- At the Edit level, use the EDIT IN and EDIT OUT keys to highlight an offending segment of audio.
- While stopped, hold the INSERT key down and press BLEEP. The Bleep tone (or silence) will be inserted in place of the selected audio.

To Bleep A File In The Play Or Record Mode

- Hold down the BLEEP button for the desired duration.

In Play mode, the BLEEP button replaces the normal audio output of the File being played; it has no effect on the File itself.

In Record mode the BLEEP button appears to replace incoming audio with a tone. In fact, the original audio is recorded to disc along with special marks that denote the placement of the bleep tone. When the File is played back, the bleeped portions are automatically replaced by the tone. When the File is edited, the bleeped portions appear as areas of constant level with marks at either end.

While recording, it is sometimes desirable to monitor the input to the Editor instead of the output. This is because when the recorded audio is replaced by a Bleep tone, the original audio cannot be heard and it is not possible to tell when the Bleep button can be released.

To Bleep In The Idle Mode

- Press the BLEEP button. Although source audio does not pass through the Editor in this mode, it may be used to generate Bleep tones for external use.

Undo A Bleeped Region Of Audio

Any bleeped region can be restored to the original audio by selecting (highlighting) the region containing a bleep, holding UNDO and pressing BLEEP.

Passwords

The Files stored in each Shortcut Directory can be protected from use or erasure by requiring a password to gain access to a Directory. Directories 1 through 9 can be password protected, while the Public Directory is always accessible and never requires a password. If the user attempts to enter a password-protected directory, he will be prompted to enter a password.

The Shortcut Editor is shipped with the passwords feature *disabled*. This means that no password is needed to enter any Directory. A designated "System Supervisor" at your facility can enable passwords (or disable them) by invoking a SPECIAL menu. Access to the SPECIAL menu is described on a separate colored page that can be removed from the owner's manual to restrict access to the information. Other features controlled in this manner include formatting the hard disk. The System Supervisor may also have a master password.

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Once the passwords feature is enabled, a general user can set a new password for a Directory (except the Public Directory) *providing* he has knowledge of the existing password. Go to the CHANGE PASSWORDS selection of the DIRECTORY PREFS menu (in FILES mode) to specify a new password. Password protection can also be removed from a Directory by changing its password to a blank.

Reprogramming A Lost Password

To reprogram a lost Directory password, first disable "passwords" using the SPECIAL menu. Then program a new password. (When "passwords" is disabled, the display will not ask for the existing password.)

The Master password is always freely reprogrammable in the SPECIAL menu. Formatting the hard drive also removes all passwords.

Instructions for accessing the SPECIAL menu are included on a separate sheet in the manual to protect access to this operation. If you do not have this sheet, contact your system supervisor or facility manager.

Horizontal Waveform Magnification

While editing, the ZOOM IN key will magnify the waveform time display for more accurate editing. Conversely, ZOOM OUT expands the time scale. Four zoom levels provide a "screen time" display of 2, 5, 10 and 20 seconds. At the highest magnification, each pixel on the screen is 10 mSec wide. *At lower magnifications, the editing precision is also 10 mSec*; it just isn't shown on the screen with that degree of detail.

Vertical Waveform Magnification

Some waveforms do not fill the available vertical space of the display, and would be easier to edit if they were larger. Hold the ALT key and press ZOOM IN to enlarge the vertical size of the waveform. Conversely, ALT + ZOOM OUT will decrease the size of the display. These settings are specific to the particular File being edited, and *are not* stored as a global machine setup.

Display Blanking

The LCD display used in the Shortcut Editor is blanked after one hour of operation if no keys have been pressed. Turning the image off protects the display from having a fixed image burned into it. The Editor will *only* blank its display while idling; all active uses of the machine provide continuous display. To unblank the display, press any key. The REC (record) key is guaranteed to work *immediately*; a single press will unblank the display *and* simultaneously enter the Record mode.

Power Down

NEVER TURN OFF POWER TO THE EDITOR WHILE IT IS PERFORMING ANY OPERATION. DOING SO CAN RESULT IN LOSS OF SOME OR ALL OF THE MATERIAL RECORDED ON THE HARD DISK.

When in the Editor, all edits performed since the last Save operation WILL BE LOST if the power is turned off.

When finishing work, press the DIR key to close all active files, then turn power off.

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If you work in an area with frequent power failures, it is advisable to protect Files in the Shortcut Editor by powering it from an "Uninterruptable Power Source" or "UPS".

Recovering Hard Disk Space

The Shortcut Editor provides several ways to clear disk space for future use. All methods involve erasing selected audio Files that are no longer needed. Should more space be required than can be reclaimed without erasing valuable material, some Files must be transferred off to DAT tape or another medium for safekeeping.

The Files stored in Shortcut are located within 10 Directories. Select Directories one at a time, and review the Files located in each. Erase unwanted material one File at a time.

Should you decide that *all* material within a Directory can be discarded, go to the Directory level, reconfirm that the right Directory is still selected, and press ERASE. The Editor will warn you that continuing will permanently remove all Files in that Directory. Press ENTER to erase the entire Directory, or EXIT to cancel the operation. Erase other Directories as needed to free additional disk space.

Using Virtual Files To Save Disk Space

Shortcut employs advanced data management techniques to optimize the amount of audio that can be stored on a hard disk, while preventing disk fragmentation. When a copy of a File is made, the audio data is *not* re-written in its entirety to the new File; only portions that have been changed are stored. It is possible to produce dozens of edited versions of a File, each slightly different, without using an appreciable amount of disk space. Each references parts of the original recording.

For this reason, erasing these "copies" will not release much disk space. It is necessary to erase *all* the copies *and* the original recording to release the space. It is important to keep the copies in the same Directory, and preferably with related names, so they can be erased as a group. **It is inadvisable to Copy a File to another Directory *and* rename it**, because this will make it impossible to know what root File it is referenced to. Remember that since Files in different Directories *can* have the same names, identical copies of a File made to another Directory really *should* have the same names; this way, it is relatively easy to erase all of them when they are no longer needed.

Note that when files are copied between the Internal Drive and the External Drive, the audio data ***is*** reproduced in each one. If you want to transfer multiple copies of a file between disks, it will use less disk space if you copy only one of them to the opposite drive, then copy that file within that drive.

Formatting the Hard Drive

For security reasons, information on formatting the internal hard drive is contained on a separate colored sheet of paper inserted in this manual, so that it can be retained by the facility manager. If this paper is not in the manual, contact your facility manager.

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CHAPTER VI

Using Menus

The design of the Shortcut Editor places all of the commonly used functions on dedicated keys. Less-often used tasks are selected through menus; these define global aspects of the editor's behavior, and perform specialized operations.

Using Menus

Method 1

- Press the MENU key at any time to make a list appear.
- Rotate the SCRUB WHEEL to highlight the desired item.
- Press ENTER or MENU to select that item. The variable for that menu selection will blink, or a sub-menu will appear.
- Rotate the SCRUB WHEEL to select the desired item.
- Press ENTER to confirm the selection, or EXIT to restore the original setting.
- Press EXIT to back out to the main menu list.
- Press EXIT again to exit entirely from the menu operation, and return to your previous work screen.

The LEFT-and RIGHT ARROW KEYS (← →) or the GO TO keys can be used in place of the SCRUB WHEEL to make menu selections. The EDIT IN and EDIT OUT keys can be used in place of ENTER and EXIT, *unless* an audio waveform is on the display.

Method 2

All items within the menus are numbered. Press a numeric key to *directly* select the menu item. This leads to some shortcuts to finding menu choices. For example:

MENU, [2] = Show the Quick Reference list
MENU, [3] = Rename the Directory or File
MENU, [1] or MENU, MENU = Go to the Setup Menu

The STOP key has an extra function when working with menus. It means "Get me back to where I was – make all these menus go away." Use STOP if you are in any menu and wish to immediately abandon what you are doing.

This method is used exclusively by the special “quick menus” for Input Select (SOFT KEY1) and Speakers On/Off (SOFT KEY2). For example, SOFT KEY 1, [1] = ANALOG INPUT.

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Three primary menus are available, depending on the operating mode of the Editor:

- Directory Menus
- File Menus
- Editor Menus

DIRECTORY MENUS

The menu items in this section are available at the Directory level, and are accessed by the DIR button.

Quick Reference

Commonly used keyboard and button functions are displayed in the QUICK REF menu selection. Also, see the Menu Appendix for a complete listing.

Setup Menu

This selection includes machine features you may want quick access to, regardless of how you are using the Editor. Setup appears as the first selection in all master menus.

MENU FUNCTION	CHOICES		
AUDIO INPUT	ANALOG	DIGITAL (BNC)	DIGITAL (XLR)
SPEAKERS	ON	OFF	
THRESHOLD RECORD	ON	OFF	
THRESHOLD LEVEL	-6 dB	-60 dB	TEN STEPS
SET DIRECTORY SAMPLE RATES	48K	44.1K	ONE FOR EACH DIRECTORY
GPI ASSIGNMENTS	5 COMBINATIONS		SEE PAGE 15
SYNC SOURCE	INTERNAL	EXTERNAL	SEE PAGE 16
SYNC/DNET ECHO INPUT	BNC	XLR	SEE PAGE 17
DNET ECHO	ON	OFF	

A complete discussion of sample rates will be found in the chapter on Recording.

Erase Directory

This selection is used to erase the entire contents of a Directory. **It is a destructive function, and cannot be reversed with the UNDO key.**

At the Directory level, a specific Directory is first selected for erasure. When the ERASE DIRECTORY function is selected, the display shows:

ERASE ALL FILES IN THIS DIRECTORY?
PRESS 'ENTER' TO ERASE
PRESS 'EXIT' TO CANCEL

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Rename Directory

Each Directory in the Shortcut Editor can have a user-assigned name for convenience. Prior to the assignment of a custom name, the Editor names each Directory DIRECTORY 1 through DIRECTORY 9, plus PUBLIC DIRECTORY. A new name can be assigned through the RENAME DIRECTORY menu selection. When selected, the display shows:

ENTER NEW DIRECTORY NAME

_____

PRESS 'ENTER' TO CONTINUE

FILE MENUS

The menu items in this section are available at the Files level, accessed by the FILES key.

Setup Menu

This selection includes machine features you may want quick access to, regardless of how you are using the Editor. Setup appears as the first selection in all master menus.

Please refer to chart on page 52

Quick Reference

Special keyboard and button functions are displayed in the QUICK REF menu selection. See the Menu Appendix for a complete listing.

Rename File

The RENAME FILE menu selection is of particular value when a recording was made with a default title that is not helpful in locating the File. Also, when several versions of a single recording exist, it is a good idea to give them meaningful names. Select a File and then select RENAME. The display shows:

ENTER NEW FILE NAME
(EXISTING FILE NAME)
PRESS 'ENTER' TO CONTINUE

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Erase File

Files may be individually erased. First select an unwanted File, then select ERASE FILE. You can also select a File and press the ERASE key. **This function is destructive, and cannot be reversed with the UNDO key**. The display shows the name of the File to be erased, as well as:

ERASE THIS FILE?
PRESS 'ENTER' TO ERASE
PRESS EXIT TO CANCEL

Directory Preferences

The following five menu items are *sub-menus* appearing in the DIRECTORY PREFERENCES menu selection:

1. Default Title
2. Ask For New Title
3. Time Display
4. Default Bleep Source
5. Change Password
6. Bleep Level

Default Title

The Shortcut Editor will automatically assign a title to a new recording *if the user chooses not to do so*. This feature speeds up the recording and editing process, and it catalogs recordings in a meaningful way.

The Default Title option allows the operator to determine what these titles will be. If recordings are to be made of an interview with the President, a useful default title might be PRES. Default titles will then begin with PRES 0001.

The default title may also be left blank. In this case, the Editor will automatically assign titles consisting only of numbers, starting with 0001.

Titles can be up to 11 characters in length.

ENTER TITLE (EXCLUDING INDEX NUMBER)
F I L E _____
PRESS 'ENTER' TO CONTINUE

Ask For New Title

This selection determines whether the Editor will stop after a recording and ask the operator for a new title, or whether it should assign a default title. The difference has only to do with the speed at which a series of new recordings can be made. The choices are:

AFTER RECORDING
NEVER PROMPT

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Time Display

This selection determines whether the time display during playback is the *elapsed time* from the beginning of the File, or the *time remaining* from the current location to the end of the recording. Note that the time displayed in the editor is always elapsed time. The menu choices are:

ELAPSED
REMAINING

Bleep Source

The BLEEP KEY can provide two possible actions when pressed:

SILENCE
TONE

Bleep Level

The level of the Bleep when set to TONE is adjusted by this item. The available settings are:

0 DB
-6 DB
-12 DB
-18 DB
-24 DB

Change Password

Passwords may be used in a broadcast facility to protect valuable Files, and to provide exclusive use of certain recordings for the staff member who created them. This menu selection sets a password for access to the currently selected Directory. To change an existing password, the Editor requires that you first know the currently used password. To provide security, the actual characters entered are not shown on the display. The display shows:

ENTER CURRENT PASSWORD FOR DIRECTORY
_____
PRESS 'ENTER' TO CONTINUE

After entering the correct current password, the display shows:

ENTER NEW PASSWORD FOR DIRECTORY
_____
PRESS 'ENTER' TO CONTINUE

After entering a new password twice, the display will confirm your change with the message "PASSWORD CHANGED".

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Copy File or Directory

A File may be copied within a Directory, or from its original location to a new destination Directory on the Internal or External disk. The target Directory must be set to the same Sample Rate as the source directory or file Select a File or Directory, then select COPY FILE. You can also select a File and press the COPY key. The display shows:

SELECT DESTINATION DRIVE
(INTERNAL)
AND PRESS 'ENTER' TO CONTINUE

The center line showing the INTERNAL Drive in this example can be changed to EXTERNAL if an External Drive is connected. Press the ARROW KEYS or rotate the SCRUB WHEEL until the desired destination Drive appears then press ENTER to confirm the selection. The display then shows:

SELECT DESTINATION DIRECTORY
(PUBLIC DIRECTORY)
AND PRESS 'ENTER' TO CONTINUE

The center line showing the Public Directory in this example can be changed to indicate any other Directory. Rotate the SCRUB WHEEL until the desired destination Directory appears, then press ENTER to confirm the selection. A Directory may also be selected using the NUMERIC KEYS to enter the Directory number; a "0" (zero) or "P" may be used for the Public Directory.

If a single file is being copied, the display now prompts for a new name for the File; however, it is not necessary to change the existing name when copying to a different Directory.

ENTER DESTINATION FILE NAME
_____
PRESS 'ENTER' TO COPY

Upon pressing ENTER, the file will be copied, unless there is already a file with the specified name in the destination directory. If there is a duplicate, the display will prompt for another file name for the copy.

If a Directory is being copied, there is a choice of how to handle duplicate filenames should any be encountered during the copy operation. The display will show:

REPLACE FILES WITH THE SAME NAME?
PRESS ‘ERASE’ TO REPLACE FILES
PRESS 'ENTER' TO SKIP FILES

Pressing ERASE will result in files from the source directory overwriting files in the target directory. *The files that are overwritten will be permanently erased*. Pressing ENTER

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will cause the copy not to be performed if there is a file with the same name in the target directory.

Upon pressing ENTER or ERASE the Copy operation will begin immediately. Pressing EXIT will stop the operation in progress. As the Copy operation progresses, the name of the file being copied and status on whether the file is copying or being skipped is displayed. When the operation is finished, a report of the number of files copied and the number of files skipped is displayed.

Copy operations do not copy Hot-Key assignments.

Export Files to DigiCart/II Plus or Instant Replay

You can use Shortcut to create Zip® disks for playback in DigiCart/II Plus or Instant Replay 2.0 with an external Zip drive. *Always use Zip 100 disks for Digicart II Plus*, even if you have a Zip 250 drive.

Select a file (in the Files display) or directory (in the Directories display) in the Shortcut's Internal drive. Press MENU and select item 8 EXPORT FILE TO DIGICART DISK or EXPORT DIRECTORY TO DIGICART DISK.

The display asks for the directory and index number to put the exported file(s) in. The first of the four numbers represents the directory number, the last three digits are the index number. If you are Exporting a directory the index number you enter will be the first index number used. Other higher numbered indexes will be assigned to other files transferred from the directory. If you are creating a new disk these numbers don't matter too much, just use 0.000. Note that for use in an Instant Replay 2.0, the directory number *must* be 0. For more information on Index numbers, see the manuals for DigiCart/II Plus and Instant Replay 2.0.

Next you will be asked if you want to replace files in occupied index numbers in the DigiCart disk, or use the next unused index number. Pressing ERASE causes any file occupying the specified Index number to be overwritten. In the case of a directory transfer, it will overwrite any indexes it encounters from the specified index to the number of indexes it needs to accomodate all files in the directory. *Files that are overwritten are permanently erased* Pressing ENTER leaves existing files on the disk and places the Exported file(s) in the next available unused index number. If in doubt, use ENTER.

You will be prompted to insert a DigiCart disk into the External Drive. You are given the opportunity to first Format the disk you insert by pressing ERASE. This operation creates a DigiCart/II Plus format disk; the resulting disk will not be readable on the Shortcut.

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Import and Export of Foreign Files

Import and Export provide the ability to convert audio to and from the Shortcut format and a variety of other file formats, as well as reading and writing those files on a selection of disk media that use various data and file formats. The currently supported file types are:

.WAV at 44.1KHz or 48KHz sample rate, mono or stereo.
.BWF (Broadcast .WAV) at 44.1KHz or 48KHz sample rate, mono or stereo.
AIFF at 44.1KHz or 48KHz sample rate, mono or stereo.
SDII at 44.1KHz or 48KHz sample rate, mono or stereo. (on HFS format disks only)

The currently supported disk formats are MSDOS (IBM PC and compatibles) and HFS (Apple Macintosh®).

The currently supported disk types are Iomega Zip 100, Zip 250 and Jaz 1G and 2G.

Note that the Shortcut must be running Softcode to perform these functions. Import and Export to formats other than DigiCart/II are not supported by the internal (ROM based) code. For more information see the section on installing Softcode.

Importing Files

1. Place the disk containing the file to be imported in the external drive.
2. Select the Shortcut directory that will receive the files, either by using the Scrub Wheel or Arrow Keys to highlight it in the Directories display, or by entering the directory.
3. Press MENU and select Item 9. IMPORT FILES, then press ENTER
   or
   Press the MENU key and press the 9 KEY.
   or
   Press DIR, then MENU, then the 5 key to log onto the external disk, then press ENTER.
4. The display will show:

```
IMPORT 48K [ROOT DIRECTORY]
<IMPORT ENTIRE DIRECTORY>
[MUSIC]
[SOUND EFFECTS]
NEWSCAST.WAV                                3:30
PROMO.WAV                                    :15
PUBLIC  SERVICE ANNOUNCEMENT.WAV             :30
```

5. The top line shows the Sample rate of the Shortcut directory you selected in step 1, and the name of the directory on the external disk that is currently being displayed. This always starts out as ROOT DIRECTORY as shown. In the example above, lines 3 and 4 of the display are subdirectories on the external disk, shown as [MUSIC] and [SOUND EFFECTS]. Below them are three files that are in the Root Directory, each followed by their Run Time. The second line is a command line, <IMPORT ENTIRE DIRECTORY>. This allows all of the files in the current directory (but not the subdirectories) to be imported.

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6. By using the SCRUB WHEEL or the ARROW KEYS, lines 2 through 6 of the display can be selected. If there are more files or subdirectories than can be displayed on the screen, the screen scrolls down to display them. Files that are not valid sound files, or are of the wrong sample rate, are shown with dashes in their run time display.

IMPORT 48K [ROOT DIRECTORY]	
NEWSCAST.WAV	3:30
PROMO.WAV	:15
PUBLIC SERVICE ANNOUNCEMENT.WAV	:30
PUBLIC SERVICE ANNOUNCEMENT 44K.WAV	: --
WORD PROCESSOR FILE.DOC	: --
WWWV STATION ID.WAV	:05

7.
   - To Import all files, select <IMPORT ENTIRE DIRECTORY> and press ENTER.
   - To enter a Subdirectory, select the [SUBDIRECTORY] and press ENTER. The Name of the Subdirectory will be shown in the top line of the display, and the subdirectories and files it contains will be displayed in lines 3 to 7. To move back to the previous directory, press EXIT.
   - To Import a file, select it and press ENTER.

8. If you are Importing a single file, you are presented with a display that allows you to rename the imported file as it will appear in the Shortcut. You can accept the name as it is shown by pressing ENTER, or you can edit the name and then press ENTER.

```
IMPORT FILE

ENTER DESTINATION FILE NAME

NEW FILE NAME. WAV _____

PRESS 'ENTER' TO IMPORT
```

You cannot import a file with a duplicate name. If the file name is unique, the import process will begin immediately. If the filename you choose already exists in the selected Shortcut directory, the message

*** FILE ALREADY EXISTS ***

is displayed momentarily and the previous display reappears to allow you to enter a new name.

If a Directory Export is being performed, the display will show a screen asking how to handle files with duplicate names.

```
IMPORT FILES

REPLACE FILES WITH THE SAME NAME?

PRESS 'ERASE' TO REPLACE FILES

PRESS 'ENTER' TO SKIP FILES
```


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Replace means that Shortcut files on the internal disk in the selected Shortcut directory will be replaced by files being imported that have the same name. Skip means that the import process will not import any file that has the same name as one already in the selected Shortcut directory.

Note that the file's extension counts as part of the name in Shortcut, so a file name "NEWS" will not be replaced by a file named "NEWS.WAV", nor will "NEWS.WAV" be skipped if "NEWS" already exists in the current directory.

9. The Display will begin counting the percentage of the file that has been converted, and the number of files to be converted: The operation can be cancelled by pressing EXIT.

```
FILENAME.WAV                                  48%

                IMPORTING FILE  7  OF  9

                PRESS 'EXIT' TO CANCEL
```

10. When the process is complete, the display will show how many files were successfully imported, how many were skipped, and the total of files processed.

```
                    IMPORT FILES
            FILES IMPORTED:        7
            FILES SKIPPED:         2
            FILES IGNORED:         0
            FILES WITH ERRORS:     0
            TOTAL:                 9
        PRESS 'ENTER' TO CONTINUE
```

If Replace Files with Same Name was chosen, "Files Skipped" in the display above will be a count of "Files Replaced". Canceling an Import operation during a replace will not cause the original file in the Shortcut to be lost.

Files may be ignored for a number of reasons. They may be an incompatible format or sample rate, a non-audio file or the Shortcut disk may be too full to hold that large a file. If a file is ignored due to insufficient disk space, the process still continues in case a smaller file is encountered. Files not imported due to cancellation are also counted as ignored.

Errors are most likely caused by a corrupt file, or a bad disk or cartridge.

The Shortcut titles of the Imported files retain the file extension, such as .WAV or .AIF.

11. Upon pressing ENTER, the display reverts to the directory display of the chosen external directory, so that you can select other files or subdirectories to import. Press STOP or EXIT to return to normal operation.

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Exporting Files and Directories

Note that when files are exported, features that are specific to the Shortcut that affect the audio output are applied to the file, but they are no longer editable or undo-able in the exported file. Erased and Bleeped sections no longer contain their underlying audio and Gain edits become permanent. All Marks are removed.

1. First select the Shortcut file or directory that you wish to export. You must be in the Directory display to select and export a directory.
2. Place a disk in the external drive that is formatted for the system you wish to export to. Be sure that the disk has enough space to accommodate the material you are going to export.
3. Press MENU, select 8.EXPORT FILE TO EXTERNAL DISK (or 8. EXPORT DIRECTORY TO EXTERNAL DISK if exporting a directory) and press ENTER,
   or
   Press MENU, then HOTKEY 8.
4. The Choose Export Audio Format display will appear. Use the SCRUB WHEEL or the ARROW KEYS to view the available formats. When you see the one you want, press ENTER.

The available choices are:

- .WAV (STEREO) - WAVE
- .WAV (MONO) – WAVE
- .BWF (STEREO) - BROADCAST WAVE
- .BWF (MONO) – BROADCAST WAVE
- .AIFF (STEREO) - AUDIO INTERCHANGE
- .AIFF (MONO) – AUDIO INTERCHANGE

If you are exporting to an HFS format disk, there will also be the choices:

- .SDII (STEREO) – SOUND DESIGNER
- .SDII (MONO) – SOUND DESIGNER

5. Next you will see the Root Directory display of the External disk. The second line, <EXPORT TO THIS DIRECTORY>, is a command to begin the Export process to this directory. Lines 3 and 4 of the display are subdirectories on the external disk, shown in the example below as [MUSIC SUBDIRECTORY] and [SOUND EFFECTS].

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```
EXPORT   [ROOT DIRECTORY]
<EXPORT  TO  THIS  DIRECTORY>
[MUSIC  SUBDIRECTORY]
[SOUND EFFECTS]
NEWSCAST.WAV                                  3:30
PROMO.WAV                                      :15
PUBLIC  SERVICE ANNOUNCEMENT.WAV               :30
```

By using the SCRUB WHEEL or the ARROW KEYS, lines 2 through 6 of the display can be selected. If there are more files or subdirectories than can be displayed on the screen, the screen scrolls down to display them. Files that are not valid sound files, or are of the wrong sample rate, are shown with dashes in their run time display.

```
EXPORT  [ROOT DIRECTORY]
NEWSCAST.WAV                                  3:30
PROMO.WAV                                      :15
PUBLIC  SERVICE ANNOUNCEMENT.WAV               :30
PUBLIC  SERVICE ANNOUNCEMENT 44K.WAV           : --
WORD PROCESSOR FILE.DOC                        : --
WWWV STATION ID.WAV                            :05
```

6.
   - To Export to the displayed directory, select <EXPORT TO THIS DIRECTORY> or one of the files in the directory and press ENTER.
   - To enter a Subdirectory, select the [SUBDIRECTORY] and press ENTER. The Name of the Subdirectory will be shown in the top line of the display, and the subdirectories and files it contains will be displayed in lines 3 to 7. To move back to the previous directory, press EXIT.
7. If you are exporting a Directory, the display will show a screen asking how to handle files with duplicate names. Replace means that the files on the external disk will be replaced by files about to be exported. Skip means that the export process will not export any file that has the same name as one already on the external disk.

```
EXPORT FILES

REPLACE FILES WITH THE SAME NAME?

PRESS   'ERASE'  TO REPLACE FILES

PRESS 'ENTER' TO SKIP FILES
```

8. The Display will begin counting the percentage of the file that has been converted, and the number of files to be converted: The operation can be cancelled by pressing EXIT.

```
FILENAME.WAV                                  76%

EXPORTING FILE  1  OF  3

PRESS 'EXIT' TO CANCEL
```


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WARNING!
Canceling an Export operation during a Replace will cause the file on the external disk to be lost.

9. When the process is complete, the display will show how many files were successfully exported, how many were skipped, and the total of files processed.

```
EXPORT FILES
FILES EXPORTED:      7
FILES SKIPPED:       2
FILES IGNORED:       0
FILES WITH ERRORS:   0
TOTAL:               9
PRESS 'ENTER' TO CONTINUE
```

If Replace Files with Same Name was chosen, "Files Skipped" in the display above will be a count of "Files Replaced".

Files may be ignored because the External disk is too full or too small to hold that file. If a file is ignored due to insufficient disk space, the process still continues in case a smaller file is encountered. Files not exported due to cancellation are also counted as ignored. Errors are most likely caused by a bad disk or cartridge.

Exported files are given the same name as the Shortcut file with the addition of the file extension for the chosen format, for example .WAV or .AIF.

10. Upon pressing ENTER, the display reverts to the directory display of the chosen external directory, so that you can verify that the files are present. Press STOP or EXIT to return to normal operation.

D-NET File Transmission

D-NET transmission allows you to send files or entire directories to 360 Systems' DigiCart/II, DigiCart/II Plus or Instant Replay (Original or 2.0). Files recorded at the 48k sampling rate can optionally be Dolby® AC-2 encoded prior to transmission.

D-NET uses the digital audio outputs to transmit the file name and data. Both the AES/EBU XLR-3 and AES/SMPTE BNC outputs are active so either one or both can be used.

Transfers from a Shortcut take approximately real time to complete. Due to extensive differences between the Shortcut and DigiCart/II file formats used by D-NET, transmission times are longer than between DigiCart/IIs and Instant Replays. Also, as AC2 is not a native format in Shortcut, that conversion must be done during the transfer, so the time savings for AC2 does not apply. Some applications may be better performed using the Export function.

Shortcut does not receive D-NET transmissions. Shortcut can be set to Echo D-NET transmissions to allow two or more Shortcuts to be able to send transmissions to one or more Digicart/II or Instant Replay units, or to configure Shortcut as part of a Loop configuration network. The unit must be idle to echo transmissions.

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To turn on D-NET Echo, press MENU, select SETUP, then select item 9 D-NET ECHO and set it to ON. Select the Digital Audio Input to be used for D-NET by selecting item number 8 SYNC / D-NET ECHO INPUT and setting it to either XLR-3 OR BNC.

Press FILES if you will be transmitting a single file, or press DIR if you will be transmitting a Directory. Select the file or directory to be transferred. Press MENU and select menu item 7 DNET FILE or DNET DIRECTORY in the Files or Directories menu. (Alternately, press ZOOM OUT after selecting the file or directory.)

You will be prompted to supply these specifications:

1. A Destination Receiver Name
2. A Location Type (DIRECT ADDRESS or MAILBOX)
3. If Direct Address was selected, you will enter an ID number for the Drive, Directory and Index Number where you want to place the transmitted file in the Receiving unit.
4. If the file or directory you selected is recorded at the 48K sampling rate, you will be prompted to select Dolby® AC-2 encoding or Linear format.

The Receiver Name is used when more than one receiving unit is on line and you want the transmission to go to a particular unit. If no Receiver Name is necessary, press ENTER. To enter a Receiver Name use the ALPHANUMERIC KEYS and then ENTER.

Select a Location Type with the SCRUB WHEEL or ARROW KEYS and press ENTER. Direct Address allows the transmitting unit to specify where the transmitted material will be placed in the receiving unit. Mailbox is a designated area in a receiver where received files will be placed to avoid overwriting existing material on the receiver's disk.

If Direct Address was selected, you will be asked for the ID number for the location in the receiving unit to place the transmitted material. The ID number defaults to Drive 1, Directory 0 (suitable for transmission to an Instant Replay, which has only drive 1, directory 0). The cursor starts out on the first digit of the Index Number. To place the cursor on the Drive or Directory number, backspace or rotate the SCRUB WHEEL to the left. To enter the index number, use the NUMERIC KEYS.

When transmitting a directory to a Direct Address, the index number supplied represents the first index number to be used. Each file after the first will be placed on the next index number. These index numbers will be used regardless of whether they contain audio or not, so it is important to be aware of what a Directory Transfer will overwrite in the receiving unit. Count the files in the directory to be transferred. Don't forget to include the _CLIPBOARD file or delete it before transferring. Then check the receiving unit to see if any important files exist in the range of Index numbers from the specified Index number to that needed to accommodate the transferred directory.

If the file or directory you chose to transmit is 48k, you will be given the choice of File Format (Linear or AC-2). DigiCart/II and Instant Replay 2.0 recorders can receive any format from a Shortcut: 44.1 linear, 48k linear, or 48k AC-2. Original Instant Replay machines can only receive 48k AC-2 files; files in Linear formats will be skipped by the Instant Replay.

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Pressing EXIT at any point in the process returns you to the previous display. Pressing STOP ends the process.

Once you have entered the transmission specifications, you will see a summary display confirming those entries. Pressing ENTER initiates the transmission process. Once the process has begun you can terminate it before completion by pressing EXIT, then ENTER. Any files already transmitted will still exist in the Receiving unit. The file in progress will not be transferred.

Both the BNC and XLR-3 digital outputs are always active during D-NET transmission.

For more information about D-NET Receiver operation and the D-NET system in general, refer to the D-NET section of the manual for the receiving unit.

EDITOR MENUS

The menu items in this section are available *only* in the Edit Mode. It's always easy to see when the Edit mode is active; it is the only mode in which a waveform display is presented.

Quick Reference

Special keyboard and button functions are displayed in the QUICK REF menu selection. Also, see the Menu Appendix for a complete listing.

Setup Menu

This menu selection includes machine features you may want quick access to, regardless of how you are using the Editor. SETUP appears as the first selection in all master menus.

Please refer to chart on page 52

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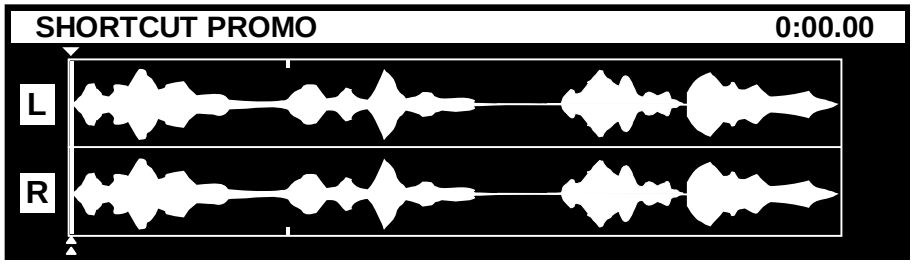
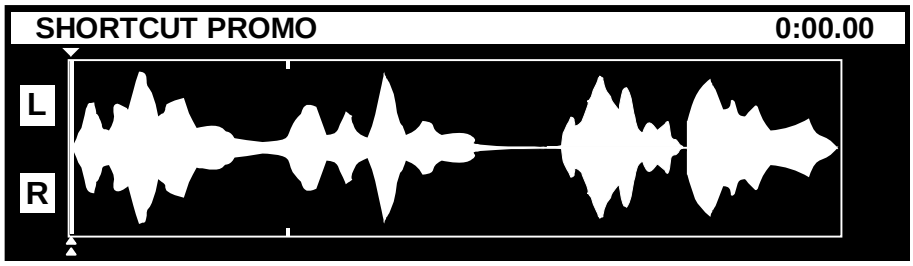
Display Waveforms

The Shortcut Editor can display audio waveforms in two styles. The first of these is a conventional dual waveform where the left channel appears on top, and the right channel appears on the bottom. The menu selection is called SPLIT; all of the diagrams shown so far depict this style of display.



SPLIT WAVEFORM DISPLAY

An alternative waveform combines the top of the left channel and the bottom of the right channel, forming a large composite waveform. The main advantage of this display is its size. The menu selection is called COMBINED.



COMBINED WAVEFORM DISPLAY

Output Level

The output level of each recording may be adjusted over a range of +6 dB to -60 dB. These changes are stored with the recording, and become a semi-permanent part of the File. The display shows a numeric value that may be adjusted in .5 dB steps by rotating The SCRUB WHEEL, or in .1 dB steps by using the LEFT and RIGHT ARROWS or the GO TO keys. Press ENTER to confirm.

When Files having different level adjustments are intercut, each retains its own level. Note that +6 dB is the maximum increase that can be obtained. For example, if you insert a file with a gain of +4 dB and then increase the gain of the overall file to +5, the +4 dB section will play back with +6 dB of added gain, not +9 dB.

Installing Softcode

Soft Code allows Shortcut's operating instructions to be revised or upgraded without changing memory chips. It also allows more features to be supported than the size of the internal program memory allows. New units ship with Softcode on the hard drive, and a Zip disk that contains that version of Softcode as a backup copy.

Note that the unit always maintains the capability to operate using the internal program memory chips. Some features may be unavailable, (at the time of this writing this only

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includes Import/Export Foreign Files), and upgrades and revisions made since the unit was shipped or the EPROMs were changed will no longer be in effect.

To determine the current version of code that Shortcut is running, and whether it is Softcode or ROM code, press Dir, key, then hold the ALT key and press V.

Soft Code will normally be retained through a Format Internal Hard Disk operation. Before the Format operation, the Soft Code file is loaded into memory, and is replaced on the hard drive when the Format is completed.

From time to time, 360 Systems may issue updates to the program on Zip disk. Also, in the event that the internal hard drive must be replaced, the Softcode will have to be replaced using the disk that you received with the unit or the latest update disk.

To install Softcode on the Shortcut:

1. Turn off power to the Shortcut. Connect a Zip drive (Zip 100 SCSI, Zip Plus 100 or Zip 250 SCSI) to Shortcut. (If you have used this Zip drive with your Shortcut in its current configuration, skip to the next step.) The Zip drive must be set to SCSI ID 6 using the switch on its rear panel. This must be set with the power to the Zip drive turned off. Termination should be On unless the Shortcut is a unit with a Version 1 main board*, then termination should be Off.
2. Turn on power to the Shortcut while holding its STOP key. Continue to hold the STOP key until the lamp test sequence is finished and the display shows the Special Startup Menu.
3. Press the 5 key or select the item 5. INSTALL SOFT CODE and press ENTER.
4. Insert the Soft Code disk into the Zip drive and press ENTER again. Any existing Softcode version will be replaced by the new version.
5. The display will confirm that the operation was successful by displaying:

INSTALLATION COMPLETE
TURN POWER OFF THEN ON TO USE SOFT CODE
OR PRESS 'ENTER' TO USE SOFT CODE LATER

6. Turn power off, wait 15 seconds and turn power back on. The version number of the newly installed Soft Code should be displayed during the power up sequence.

Soft Code is a small file that is kept on the hard drive (it only takes up about 2 seconds worth of audio recording space.) When Shortcut boots up, the setup file is checked to see if Soft Code is enabled. Then the Soft Code file is loaded into RAM memory, and the normal operation of the unit is transferred to that copy of the program.

If it is ever necessary to disable Soft Code operation, the Special Startup Menu has an item 4. DISABLE SOFT CODE that allows this. When Soft Code is disabled, this item becomes 4. ENABLE SOFT CODE. You must cycle the power after these operations for them to take effect.

* To check the hardware revision number, press the DIR key, then hold the ALT key and press V.

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CHAPTER VII

TECHNICAL SPECIFICATIONS

Audio Performance

Audio format	2-channel
Recording time @ 48 kHz	Approximately 4 hours at 44.1 kHz
Recording medium	3.5” internal hard disk
External media	100 or 250 MB Zip ® disk; and 2 GB Jaz® disks
Frequency response	20 Hz to 20 kHz ±0.2 dB
Sample Rates	48 kHz, 44.1 kHz
Word size and coding	16 bit linear
SNR, A-wtd, 20 kHz BW	> -90 dB
THD + N	<.004% @ 1 kHz,.full scale
CMRR	>-80 dbFS @ 60 Hz
Analog inputs	Balanced, input Z = 10K ohm; XLR-3 connectors
Maximum input level	+26 dBu (LINE); -19 dBu (MIC)
Analog outputs	Balanced, XLR-3 connectors
Maximum output level	+22 dBu
Digital I/O	1. AES/EBU (AES-3) or D-NET data @ 110-ohm on XLR-3 2. AES3-ID or D-NET data on 75-ohm BNC 3. IEC-958 Type II on BNC, input only

General Specifications

Record functions	Record, Insert Record, Record with Pause
Edit functions	Cut, Copy, Insert, Erase, Bleep, Undo
Edit resolution	10 mSec (± 5 mSec)
Maximum Files per Directory	200
Maximum Files for machine	2,000
Locate Marks	500 maximum per file
Hot-Keys	10, individually programmable in each of ten directories.
Display	High Resolution Bit-mapped backlit LCD
Audio Level Metering	Peak reading 2 channel LED bar graph display
Waveform display modes	Single or dual waveforms variable magnification of 2, 5, 10 or 20 seconds
Remote control	GPI inputs: Play, Record, Stop, FF, Rewind, Mute Speaker; all with tally
Audio level metering	Peak reading LED bar graph, 2-channel
Panel keys	Illuminated, silent action
Headphone outputs	Stereo 1/4” (6.35mm) jack. Level control included.
Monitor speakers	Two, 4” (100mm) speech range, with level control and GPI on/off.
Dimensions (HWD)	3.7" x 17.25" x 12.8" (94mm x 438mm x 325mm)
Weight	12.5 lb. (5.7 kg)
Power requirements	85 to 260 Volts, 50/60 Hz, 35 Watts
Country of manufacture	U.S.A.
Agency approvals	FCC, CE

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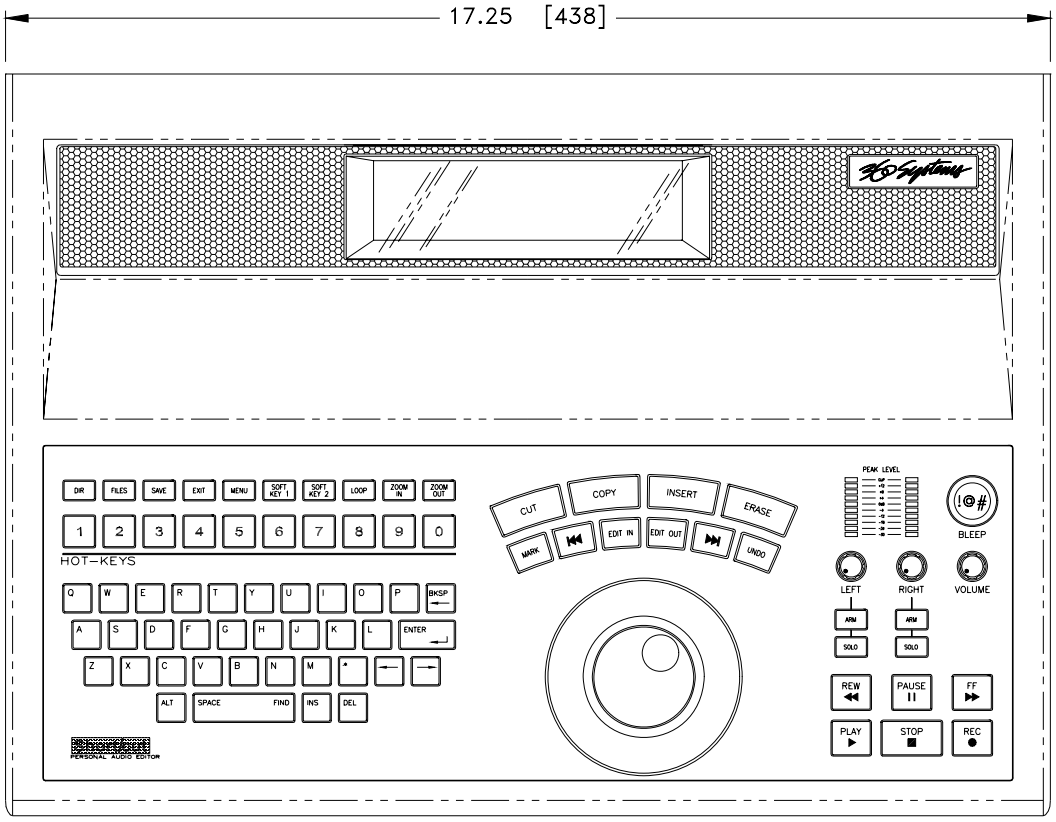
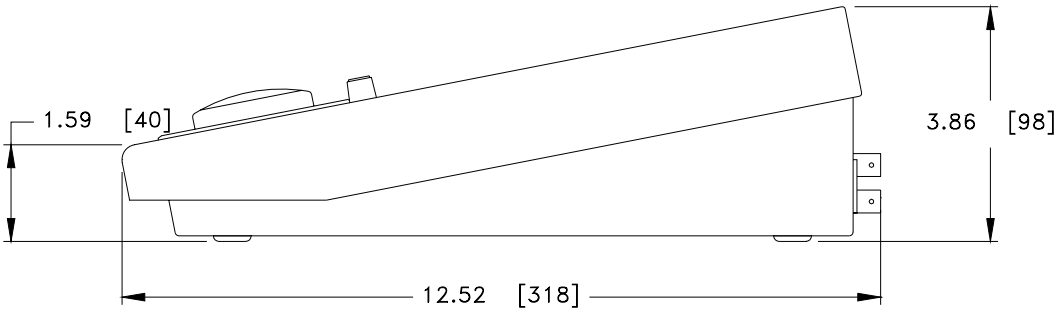
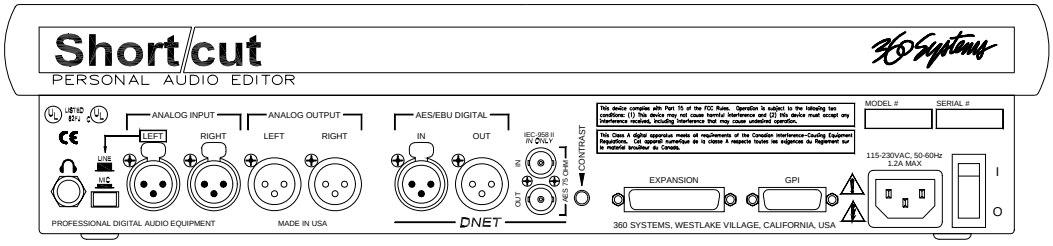

17.25 [438]
DIR
FILES
SAVE
EXIT
MENU
SOFT KEY 1
SOFT KEY 2
LOOP
ZOOM IN
ZOOM OUT
1 2 3 4 5 6 7 8 9 0
HOT-KEYS
CUT
COPY
INSERT
ERASE
MARK
EDIT IN
EDIT OUT
UNDO
PEAK LEVEL
BLEEP
LEFT
RIGHT
VOLUME
ARM
SOLO
REW
PAUSE
FF
PLAY
STOP
REC
PERSONAL AUDIO EDITOR


1.59 [40]
3.86 [98]
12.52 [318]


Short cut
PERSONAL AUDIO EDITOR
ANALOG INPUT
ANALOG OUTPUT
AES/EBU DIGITAL
LEFT
RIGHT
IN
OUT
MIC
PROFESSIONAL DIGITAL AUDIO EQUIPMENT
MADE IN USA
DNET
CONTRAST
EXPANSION
GPI
MODEL #
SERIAL #
115-230VAC, 50-60Hz
1.2A MAX
360 SYSTEMS, WESTLAKE VILLAGE, CALIFORNIA, USA

Menu Appendix

DIRECTORY LEVEL

Quick Reference to Machine Functions

KEY	ACTION
SCRUB WHEEL	*SELECT ITEM / DIRECTORY*
→	*SELECT NEXT ITEM*
>>|	*SELECT NEXT ITEM*
←	*SELECT PREVIOUS ITEM*
|<<	*SELECT PREVIOUS ITEM*
COPY	*COPY SELECTED DIRECTORY*
EDIT IN	*GO TO DIRECTORY*
EDIT OUT	*EXIT MENU*
ENTER	*GO TO DIRECTORY*
ERASE	*ERASE DIRECTORY*
EXIT	*EXIT MENU*
FILES	*SHOW FILES IN DIRECTORY*
HOT KEY 0	*GO TO PUBLIC DIRECTORY*
HOT KEY (1-9)	*GO TO DIRECTORY #1-9*
MENU	*ENTER MENU OR MENU ITEM*
P	*GO TO PUBLIC DIRECTORY*
SOFT KEY 1	*ANALOG/DIGITAL INPUT SELECT*
SOFT KEY 2	*SPEAKERS ON/OFF*
ALT + V	*SHOW VERSION NUMBER*
ZOOM OUT	*DNET DIRECTORY*

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FILES LEVEL

Quick Reference To Machine Functions

KEY	ACTION
SCRUB WHEEL	*SELECT ITEM / FILE*
→	*SELECT NEXT ITEM*
>>|	*SELECT NEXT ITEM*
←	*SELECT PREVIOUS ITEM*
|<<	*SELECT PREVIOUS ITEM*
BLEEP	*PLAY BLEEP FILE*
COPY	*COPY FILE*
COPY+HOT KEY	*COPY FILE TO HOT KEY*
DIR	*LEAVE THIS DIRECTORY AND SELECT A NEW ONE*
EDIT IN	*EDIT FILE*
EDIT OUT	*LEAVE THIS DIRECTORY AND SELECT A NEW ONE*
ENTER	*EDIT FILE*
ERASE	*ERASE FILE*
ERASE+HOT KEY	*CLEAR HOT KEY ASSIGNMENT*
EXIT	*LEAVE THIS DIRECTORY AND SELECT A NEW ONE*
FIND	*FIND A FILE*
HOT KEY (0-9)	*PLAY ASSIGNED FILE*
ALT+HOT KEY	*SHOW ASSIGNED FILE*
LOOP	*LOOP MODE ON/OFF*
MENU	*ENTER MENU OR MENU ITEM*
PAUSE	*PAUSE PLAYBACK / RECORD*
PAUSE+PLAY	*START PLAYBACK PAUSED*
PAUSE+REC	*START RECORDING PAUSED*
PLAY	*PLAY SELECTED FILE*
REC	*RECORD NEW FILE*
SOFT KEY 1	*DIGITAL/ANALOG INPUT SELECT*
SOFT KEY 2	*SPEAKER ON/OFF*
STOP	*STOP PLAYBACK / RECORD*
ALT + V	*SHOW VERSION NUMBER*
ZOOM OUT	*DNET FILE*

EDITOR

Quick Reference To Machine Functions

KEY	ACTION
SCRUB WHEEL	*SELECT ITEM / FILE*
→	*MOVE CURSOR +10 mSec*
←	*MOVE CURSOR -10 mSec*
>>|	*GO TO NEXT MARK*
|<<	*GO TO PRECEEDING MARK*
ARM	*OK TO EDIT/REC ON CHANNEL*
BLEEP	*PLAY BLEEP AUDIO*
COPY	*COPY TO CLIPBOARD*
COPY + HOT KEY	*COPY TO HOT KEY*
CUT	*CUT TO THE CLIPBOARD*
CUT + HOT KEY	*CUT TO HOT KEY*
DIR	*QUIT EDITING AND SELECT A NEW DIRECTORY*
EDIT IN	*SET EDIT START POINT*
EDIT OUT	*SET EDIT END POINT*
ERASE	*REPLACE WITH SILENCE*
ERASE+HOT KEY	*CLEAR HOT KEY ASSIGNMENT*
EXIT	*QUIT EDITING AND SHOW FILES IN DIRECTORY*
FF	*FAST FORWARD*
FF, FF	*GO TO END (OR TO ZERO MARK)*
FILES	*QUIT EDITING AND SHOW FILES IN DIRECTORY*
FIND	*FIND TIME POSITION*
HOT KEY (0-9)	*PLAY ASSIGNED FILE*
ALT + HOT KEY	*SHOW ASSIGNED FILE*
INSERT	*INSERT FROM CLIPBOARD*
INSERT + BLEEP	*BLEEP SELECTED AUDIO*
INSERT+HOT KEY	*INSERT ASSIGNED FILE*
INSERT+RECORD	*INSERT RECORD*
LOOP	*LOOP MODE ON/OFF*
MARK	*PLACE LOCATE MARK*
MARK + ZERO	*PLACE ZERO MARK*
MENU	*ENTER MENU OR MENU ITEM*

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PAUSE	*PAUSE PLAYBACK / RECORD*
PAUSE + PLAY	*START PLAYBACK PAUSED*
PAUSE + REC	*START RECORDING PAUSED*
PLAY + FF	*PLAY AT 2X SPEED*
PLAY	*PLAY FROM CURSOR*
ALT + PLAY	*PLAY FROM CURSOR*
PLAY + REW	*PLAY IN REVERSE*
REC	*RECORD NEW FILE*
REW	*REWIND*
REW, REW	*GO TO BEGINNING (OR TO ZERO MARK)*
SAVE	*SAVE EDIT CHANGES*
ALT + SAVE	*SAVE TO NEW FILE*
SOFT KEY 1	*DIGITAL/ANALOG INPUT SELECT*
SOFT KEY 2	*SPEAKERS ON/OFF*
SOLO LEFT	*OUTPUT LEFT CHANNEL ONLY*
SOLO RIGHT	*OUTPUT RIGHT CHANNEL ONLY*
STOP	*STOP PLAYBACK / RECORD*
UNDO	*UNDO LAST EDIT*
ALT + UNDO	*SHOW WHAT UNDO WILL DO*
UNDO + >>|	*UNDO PLAY, FF, REW OR GOTO MARK*
UNDO + |<<	*UNDO PLAY, FF, REW OR GOTO MARK*
UNDO + BLEEP	*REMOVE SELECTED BLEEPS*
UNDO + ERASE	*UN-ERASE SELECTED AUDIO*
UNDO + FF	*UNDO PLAY, FF, REW OR GOTO MARK*
UNDO + MARK	*REMOVE SELECTED MARKS*
UNDO + PLAY	*UNDO PLAY, FF, REW OR GOTO MARK*
UNDO + REW	*UNDO PLAY, FF, REW OR GOTO MARK*
ALT + V	*SHOW VERSION NUMBER*
ZOOM IN,	*ADJUST HORIZONTAL ZOOM*
ZOOM OUT	*ADJUST HORIZONTAL ZOOM*
ALT + ZOOM IN	*ADJUST VERTICAL ZOOM*
ALT + ZOOM OUT	*ADJUST VERTICAL ZOOM*

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Keyboard Functions Using ALT Key

Certain functions may be obtained by using the ALT key in combination with others. Most of these functions are also available through standard menus, but some users may find it faster to use the keyboard. Several functions are marked as being valid only in certain machine modes.

KEY STROKES	RESULTANT FUNCTION
ALT + ZOOM IN	*INCREASE WAVEFORM DISPLAY AMPLITUDE (Edit only)*
ALT + ZOOM OUT	*DECREASE WAVEFORM DISPLAY AMPLITUDE (Edit only)*
ALT + HOT KEY	*SHOW ASSIGNED FILE NAME (Files only)*
ALT + UNDO	*SHOW WHAT UNDO WILL DO (Editor only)*
ALT + SAVE	*SAVE AS (Edit only)*
ALT + V	*SHOW VERSION NUMBER*

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