

## Chapter 3 **Sound Input**

The Macintosh LC computer supports sound input as well as sound output. The sound input software, called the Sound Input Manager, consists of a high-level user dialog-based interface and low-level routines that allow applications to gain access to the sound input hardware. This chapter provides a brief description of the application-programmer interface for the Sound Input Manager. For more detailed information, refer to the Sound Manager chapter of *Inside Macintosh*, Volume VI.

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## High-level user interface

This section provides preliminary information on the high-level user interface for the sound input capabilities of the Macintosh LC computer. There may be refinements to this information in the future.

The user interface consists of a cdev that gives users access to hardware controls such as the volume control. This cdev, an extension of the current Sound cdev, is modified to support the Sound Input Manager. The following cdev enhancements are included:

- The user can specify the default sound input hardware (microphone) for all further recording.
- The user can easily add alert sounds to or remove alert sounds from the system.
- Cut, copy, and paste of sounds (SysBeeps) to the Clipboard are supported.

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## Default sound input hardware

The Sound Input Manager allows you to create drivers for your own sound input hardware. All sound input drivers installed in the system are shown in the cdev's microphone list, and the user is allowed to pick one, thus establishing a "default" driver for all further recording, but in no way precluding developers from accessing more than one input device at a time. You determine the list of drivers by getting an icon from each driver registered to the Sound Input Manager. The list does not appear if less than two drivers are registered.

- ◆ *Note:* It may be necessary for developers of third-party products to allow users to configure their hardware. For example, developers could provide an "Options" button that would put up a dialog box that would allow settings to be changed. This feature, however, is not implemented in the current version of the Sound cdev and may not appear in the final version.

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## **Adding and deleting alert sounds**

Two buttons have been added below the list of alert sounds to allow users to easily add sounds to or remove sounds from this list. The buttons do not appear if no sound input drivers are installed.

The Add button records a new alert sound and stores it in the list. When activated, this button allows the user to bring up a standard sound input dialog box and allows recording and playback of a sound using the currently selected input hardware. After recording a sound, the user can click the Save button and select a name for the sound from the dialog box that appears. This name is then stored in the list of alert sounds.

The Remove button removes the currently selected sound from the list. When this button is activated, a dialog box asking for confirmation of the removed sound appears .

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## **Cut, Copy, and Paste**

Standard Macintosh editing tools are used with the Sound cdev to allow SysBeeps to be added to and removed from the system file. Cut removes the sound from the list of alert sounds and copies it to the Clipboard as a 'snd ' resource. Copy just copies the sound to the Clipboard. Paste copies a sound from the Clipboard to the system file and adds the name of the sound to the list of alert sounds. The Undo function is not implemented.

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## **Sound input routines**

The Sound Input Manager is a set of software routines that allow you to implement functions in your application programs to give users access to the Macintosh LC's sound input features. The audio data can be played back through the Sound Manager, or applications can use the data for other purposes. The sound input system is designed to allow stereo and multitrack recording hardware to operate under the current application-programmer interface.

These sound input routines are divided into four groups: high-level routines that provide a consistent dialog-based user interface, low-level routines that use parameter blocks and provide more programming control of the device, utility routines, and driver registration utility routines. The routines in each of these groups are described in detail in the Sound Manager chapter of *Inside Macintosh*, Volume VI.