Preface

About These Developer Notes

These developer notes provide guidelines for developers of hardware and software for the Macintosh Portable computer. It is assumed that the hardware and/or software developer is already familiar with both the functionality and the programming requirements of Macintosh® computers. If you are unfamiliar with the Macintosh, or would simply like more technical information on the hardware, you may want to obtain copies of related technical manuals. For information on how to obtain these manuals, see the paragraph titled "Supplemental reference documents."

These developer notes do not constitute a manual and are not complete in their present form. While every attempt has been made to verify the accuracy of the information presented, it is subject to change without notice. The primary reason for releasing product information is to provide the development community with essential product specifications, theory, and application information for the purpose of stimulating work on compatible third-party products. ▪

Supplemental reference documents

To supplement the information in this document, hardware/software developers might wish to obtain related documentation, such as the *Guide to Macintosh Family Hardware, Designing Cards and Drivers for the Macintosh Family,* and *Inside Macintosh*, Volumes I through V. Copies of these technical manuals are available through the Apple Programmers and Developers Association (APDA™). APDA is an excellent source of technical information for anyone interested in developing Apple-compatible products. For information about APDA, please contact

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Terminology: Sleep State, Idling State, and the Operating State

The Macintosh Portable ROM software supports the ability to put the computer into the sleep state (clock to DC, all RAM and registers retained) and to bring it back to the operating state. These functions are implemented in the power manager firmware and the power manager processor. The OS requests the sleep state through a time-out scheme or direct user action. Return to the operating state (waking) is due to an event such as a keystroke or wake-up timer going off.

The criterion for the idle state is 15 seconds without user activity of any kind (including communication through the serial port; for example, modem use). In idle, the 68000 processor inserts 64 wait states into RAM and other accesses to lower the processor effective frequency to near 1 MHz, even though its clocking continues at 16 MHz. Interrupts still get processed at 16 MHz, full speed, in the interrupt handler.

For a detailed discussion of these states, see Chapter 6, “The Power Manager.”