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Apple IIGS (1MB, ROM 03): Specifications (Discontinued 12/92)

Revised: 9/13/93
Security: Everyone

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TOPIC -----

This article describes the Apple IIGS personal computer model with 1MB of RAM and ROM version 03.

DISCUSSION -----

OVERVIEW

The Apple IIGS combines the best of the previous Apple II computers: built-in accessory ports for easy addition of peripherals, as well as versatile expansion slots for system customization. The Apple IIGS also provides an easy-to-use interface similar to that of the Macintosh personal computer. It also offers powerful features such as high-resolution color graphics, 15-voice sound capability, and the advanced 65C816 microprocessor.

The Apple IIGS features GS/OS, an operating system developed exclusively to take advantage of the computer's hardware features. GS/OS offers high-performance capabilities such as rapid disk access and program launching, while increasing the system's ease of use.

SYSTEM SOFTWARE

The Apple IIGS Personal computer features Version 5.0.4 of Apple IIGS System Software, including the following:

- GS/OS Operating System. Exclusively created for the Apple IIGS personal computer, GS/OS dramatically increases the speed of both disk access and program launching. It also includes File System Translators (FSTs) that allow applications to directly access files created using other file systems, such as the ISO/High Sierra file system used by CD-ROM devices.

- Finder. The Apple IIGS Finder has been revised extensively to take full advantage of the GS/OS operation system. In addition to providing support for disk partitions and other new features, the Apple IIGS Finder is easier to use, faster, and more informative than the earlier version. The Finder also supports the AppleShare File Server, allowing you to share program files and data with other AppleShare users.
- Advanced Disk Utility. With its graphics-based interface, the Advanced Disk Utility makes it easy to initialize, name, erase, and partition hard disks, as well as to work with both 5.25- and 3.5-inch floppy disks.
- Installer. This program allows you to update your startup disks with the latest system software. It also lets you add special system files to customize startup disks for use with your particular system configuration.

TECHNICAL SPECIFICATIONS

Central Processing Unit (CPU)

Microprocessor: 65C816
Clock speed: 2.8 or 1.02 megahertz; user- or software selectable
Address bus: 24 bits
Data bus: 8 bits
Address range: 16,777,216 bytes
16-bit registers: accumulator, two index registers, direct register, stack pointer, and program counter
8-bit registers; data bank, status
Addressable memory: up to 8MB of ROM

Memory

1MB RAM, expandable to 8MB
256K ROM, expandable to 1MB (ROM revision 03)

Text Display Modes

40 columns by 24 lines
80 columns by 24 lines

Graphics Display Modes

Super-high-resolution:

- 320 dots horizontally by 200 dots vertically, in up to 16 colors per screen, from a palette of 4,069 colors
- 640 dots horizontally by 200 dots vertically, in 4 or more colors per line and 128 colors per screen from a palette of 4,096 colors.

Double-high-resolution (560 dots horizontally by 192 dots vertically; 16 colors)

Double-low-resolution (80 dots horizontally by 48 dots vertically; 6 colors)

High-resolution (280 dots horizontally by 192 dots vertically; 6 colors)

Low-resolution (40 dots horizontally by 48 dots vertically; 16 colors)

Sound Capability

An Ensoniq 32-oscillator digital synthesizer chip with dedicated 64K RAM:

- produces up to 15 voices simultaneously.
- uses external speaker or headphones via audio output jack (volume is set through the Control Panel).

Character Sets

32 letters (uppercase and lowercase), 32 special characters, 32 MouseText characters, and 12 unique characters for each of these international character sets: U.S., U.K., French, Danish, Spanish, Italian, German, and Swedish.

Keyboard

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- Standard typewriter-style
 - 80 keys, plus 14 key numeric keypad
 - Two Apple Desktop Bus (ADB) connectors (one for attaching the keyboard to the computer; one for daisy-chaining additional input devices)
 - Keyboard layouts, selectable through the Control Panel:
 - QWERTY (Sholes)
 - Dvorak
 - Nine international (all those listed under Character Sets, plus French Canadian)

Interfaces

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- One multipurpose RAM/ROM memory expansion slot
 - Seven general-purpose input/output slots for peripherals control cards, all fully buffered, with interrupt and DMA priority
 - Serial ports: two 8-pin minicircular connectors (either can be used to connect AppleTalk devices); utilize SCC communications chip
 - Disk drive port: one 19-pin D-style connector (allows daisy-chain connection of up to four Apple 3.5, Apple 5.25, or UniDisk disk drives)
 - Video output
 - Analog RGB, via 15-pin D-style connector
 - Composite color, via RCA phone connector
 - Apple Desktop Bus port; one 4-pin mini-circular connector on back of computer
 - Game I/O: 9-pin D-style connector for joysticks, graphics tablet, and similar devices
 - Audio
 - RCA mini headphone/speaker output jack with programmable volume control
 - Input/Output connector on main logic board

Operating Systems Supported

- GS/OS
- ProDOS 16 and ProDOS 8
- Pascal
- DOS 3.3
- CP/M (with appropriate co-processor card)

Other Features

- Real-time clock (set through Control Panel)
- Battery backup for Control Panel settings

Electrical Requirements

- Line voltage: 107 to 132 volts AC; 50 to 60 hertz
- Power consumption:
Typical: 11 watts
Maximum: 60 watts
- Supply voltages:
+5 volts ($\pm 3\%$)
+12 volts ($\pm 6\%$)
-5 volts ($\pm 10\%$)
-12 volts ($\pm 10\%$)
- Maximum supply currents:
+5 volts: 2.5 amps
+12 volts: 1.5 amps
-5 volts: 250 milliamps
+12 volts: 250 milliamps

Environmental Requirements

- Operating temperature: 32 to 113 degrees F (0 to 45 degrees C)
- Maximum temperature on power supply case: 130 degrees F (55 degrees C)
- Relative humidity: 5% to 85%

Safety and EMI Qualifications

- FCC Part 15 Class B Computing Devices
- CSA 22.2, NO. 154-1979
- UL 114 - Office Appliances and Business Equipment

Dimensions and Weight (main unit only)

- Height: 4.6 in. (11.7 cm)
- Width: 11.2 in (28.4 cm)
- Depth: 13.7 in. (34.8 cm)
- Weight: 8.72 lb. (3.96 kg)

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