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Apple IIGS System Software 4.0: GS/OS General Information

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The heart of Apple IIGS System Software 4.0 is GS/OS, the first 16-bit, native-mode operating system written in 65816 code.

GS/OS significantly speeds up boot time, disk access time, and program launch time, and increases the performance of disk-intensive applications. GS/OS is file system independent. Applications that make GS/OS calls will be able to read and write many different and seemingly incompatible file systems.

An added benefit is the ability to access file systems that support very large files and storage media (up to 4 gigabytes). GS/OS is compatible with Apple IIGS ProDOS 16, and will run applications that follow ProDOS 16 design guidelines.

Apple IIGS System Software 4.0 contains two disks:

SYSTEM.DISK
SYSTEM.TOOLS

There are also two new manuals:

Apple IIGS System Disk User's Guide
Apple IIGS System Tools

The user's guide explains the Finder. The System Tools manual explains the programs on the SYSTEM.TOOLS disk.

System Requirements:

A 512K Apple IIGS System with ROM revision #01 is required to run System Software 4.0. On system-boot, the first revision of the Apple IIGS ROM displayed "Apple IIGS" at the top of the screen with nothing at the bottom. The rev 01 ROM displays "Apple IIGS" at the top with copyright and "ROM rev" at the bottom.

The INSTALLER

The Installer is a new program for installing files on your startup (boot) disk. The Installer is located on the SYSTEM.TOOLS disk along with the other utility programs.

The Installer allows users to update System Files without having to drag files to the correct location in the System Folder. The SYSTEM.DISK contains a minimum set of files the "standard user" will need to be able to operate. If you want support for the following products and programs, you MUST run the Installer:

- Apple 5.25" Disk Drives
- UniDisk 3.5" Disk Drives
- SCSI Hard Drives
- AppleCD SC (High Sierra)
- ImageWriter LQ
- LaserWriter
- AppleTalk ImageWriter or AppleTalk ImageWriter LQ
- Apple MIDI Interface
- Epson Printer
- Chooser II
- Namer II
- Advanced Disk Utility

The Installer program runs like the Font/DA mover on the Macintosh. If you do not run the Installer to add support for connected device, it will not be accessed while running GS/OS -- for example, if an Apple 5.25" disk drive is connected, it will not show up in the finder or while running applications until the Driver file is installed.

NOTE: When using the Installer, make sure you do not remove any files from the Apple IIGS SYSTEM.DISK or SYSTEM.TOOLS disks. Both disks are needed to update other disks. The tool files are located only on the SYSTEM.DISK and AppleTalk Utilities are located only on the SYSTEM.TOOLS disk.

File System Translators

GS/OS uses a generic file interface that communicates with applications. This operating system uses a File System Translator (FST) that acts as an

intermediary between GS/OS and the specific file system and device. ProDOS and ISO/High Sierra FSTs are included with GS/OS.

This organization will allow GS/OS to read many different kinds of disks (only two are supported at this time). Some file systems may have calls that are not supported by GS/OS; for example a hard drive with tape backup may have a command to backup the volume to tape. Moreover, some FSTs can not support all of the GS/OS calls. The High Sierra FSTs do not permit write calls because CD-ROM is a read-only medium.

Advanced Disk Utility

The Advanced Disk Utility lets you divide hard disks into multiple volumes, called partitions. You can use the Advanced Disk Utility to initialize, erase, and zero hard disks, partitions of hard disks, 3.5" disks, 5.25" disks, and RAM disks. All of the functions, except partitioning and zeroing a disk, can be done at the Finder level.

Partitioning

The Advanced Disk Utility partition option has more options than the partition program supplied with the SCSI card. To support SCSI devices you must have the SCSI ROM revision installed, ROM part # 341-0437-A.

The new features are:

- Initialize partitions on the same hard drive with different file systems
- Up to 7 partitions per hard drive, but total of 7 partitions can be accessed for each SCSI card, regardless of the slot the SCSI card is in.
- Uses the full 80MB on an 80MB hard drive (3 partitions).

Zeroing

Zeroing a volume wipes out everything on the volume. Unlike erasing, zeroing removes not only the volume directory, but also all the files, the file system, and even tracks and sectors. After zeroing, a volume must be initialized again before it can receive data. Zeroing writes over all the data, so no one can reconstruct the information that was contained on the drive.

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