



# Tech Info Library

## Apple Scanners: General Description (3/95)

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TOPIC -----

Apple Computer offers three types of scanners to use with your Macintosh computer. These are:

- Apple Scanner
- Apple OneScanner
- Apple Color OneScanner

There is also a variety of software packages and options that you can use with these scanners. This article describes these scanners and the available software.

DISCUSSION -----

The Scanners/Software  
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The Apple Scanner  
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The Apple Scanner is a single pass black and white scanner with up to four-bit gray scale (16 levels of gray) capability. (The number of passes is only important when discussing color scanners). It uses a program called AppleScan to capture the images. AppleScan 1.0, when used with Scanner driver 1.0 or 2.0, only works with System 6. To get this scanner to work with System 7, you need AppleScan 1.0.2 and Scanner version 2.0 or 3.0.

The OneScanner  
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This scanner is an eight-bit gray scale (256 levels of gray) scanner. Apple bundles software from Light Source, Inc., called Ofoto 1.1, which is standalone gray scale scanner software.

Gray scale images won't print properly with older LaserWriter drivers, so confirm LaserWriter driver 6.0.1 or later is installed in the system folder. Ofoto also requires system software version 6.0.7 or later and 32-bit QuickDraw, which is built into System 7. It is fully compatible with System 7 or later. Ofoto is not available as a separate product from Apple. There are two Ofoto upgrade kits available from Light Source, Inc. - one version works only with the

Apple Scanner; the other version works with all scanners.

Ofoto 1.1 incorporates support for QuickTime image compression abilities. This lets you compress and decompress still image files and save them as much smaller files. The QuickTime system software extension is included with the new software. Other enhancements include the addition of an auto "sharpen" command, a simplified calibration process, and improved access to the "image-type" control.

Support for QuickTime compression/decompression abilities significantly reduces the file sizes of scanned images as much as 10 times. QuickTime provides various compression choices, including the Joint Photographic Experts Group (JPEG) industry standard method of image compression. QuickTime also makes the opening and decompression of compressed files saved in the standard PICT format automatic to all Macintosh applications. The other enhancements refine the user interface of the scanning software and improve the quality of scanned images.

HyperScan is a HyperCard stack that is bundled with the Apple Scanners specifically for users who create HyperCard stacks. It provides 1-bit (black and white) images for on-screen use. Note that HyperScan is only for use with Apple Scanners, and does not support third party scanners.

#### Color OneScanner

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The color OneScanner is a single pass 24-bit color (16 million colors) scanner that includes Ofoto 2.0 and HyperScan 2.0. Ofoto 2.0 supports all Macintosh computers with a 68020 or higher CPU. If you own a Macintosh Classic, SE, Plus, or PowerBook 100 computer, you need a special version of Ofoto. Please call Light Source at 1-415-461-3030 for your copy.

#### Installation

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Some of the files on the Ofoto 2.0 disks are compressed and must be expanded before you can use them. Files whose names end in .cmp cannot be drag-installed. You must use the Installer to install Ofoto 2.0 on your hard disk.

To use Ofoto 2.0 with the Apple Color OneScanner, you should have at least 10 MB of hard disk space available before installation.

Be sure to turn off any virus-checking programs and start with extensions off before attempting to install the software.

#### Reinstallation

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Before reinstalling Ofoto 2.0, you should throw away the existing Ofoto Folder, located in the Preferences folder (in the System Folder).

Throwing away this Folder also throws away all custom calibrations and templates and files you have created.

#### System Memory

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Ofoto 2.0 software requires a system with a minimum of 4 MB of Random Access

Memory (RAM). If you plan to use QuickTime to compress files, you need a system with a minimum of 6 MB of RAM available.

#### System Version

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If you are using System 7.0.1, you must have System 7 Tune-Up 1.1.1 installed as well. From the Finder choose "About This Macintosh" from the Apple Menu. If you see a bullet (•) character following the system software version number, Tune-Up 1.1.1 has been installed. If you are using System 7.0 or later, you should be using Scanner driver version 2.0 or later for the grayscale scanners and version 3.0 for the color scanner.

#### Ofoto 2.0 Application Memory

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The minimum memory partition size for Ofoto 2.0 is 1536K. Increasing the memory partition size (in the Get Info window) improves performance, especially in processing color images. While Apple has no specific recommendation, you may want to experiment with other settings, for example, 4096K (4 MB).

#### To Start

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Turn on the scanner and wait until it is fully powered on, then start up the computer. When the computer is ready, double click on the appropriate software icon. If the scanner is properly connected the software launches. If you get "Scanner is not responding" check the scanner's green ready light (on), SCSI cabling/ID/termination, and ensure the proper scanner driver is in the Extensions folder of your System folder. If there are other SCSI devices on the bus, remove them and connect the scanner with a terminator and see if you can scan. If everything seems OK, try reinstalling the Scanner (Ofoto) software. If you still have no luck, try a clean system install, and again reinstall the Scanner software.

#### Scanned Images

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You should be aware of the file size of scanned images. Can your computer work with it? Do you have enough RAM? Is your CPU powerful enough to modify it? Can your printer print it? Here is an example of scan sizes. You may note that none of these sizes are scanned at 300 dpi. (In PhotoShop V2.5 an 8.5 X 11 300 dpi color scan takes 24.6 megabytes of memory).

All Pre scans (8.5" x 14") - 3.1 MB

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Apple Color Printer color final scans (scan dpi of 135):

SOURCE	SCAN SIZE
8" x 10"	8.6 MB
4" x 6"	2.6 MB
3" x 5"	1.7 MB

LaserWriter 11g gray scale final scans (scan dpi of 150):

SOURCE	SCAN SIZE	
	BEST	FASTER
8" x 10"	10.6 MB	3.6 MB
4" x 6"	3.2 MB	1.1 MB
3" x 5"	2.0 MB	700K

Linotronic 300 gray scale final scans (scan dpi of 200):

SOURCE	SCAN SIZE	
	BEST	FASTER
8" x 10"	18.8 MB	6.3 MB
4" x 6"	5.7 MB	1.9 MB
3" x 5"	3.6 MB	1.2 MB

Scanned File Format

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TIFF

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Tagged Image File Format (TIFF) images are bit-mapped and support 24-bit color. The information stored is application dependent.

PICT

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PICTure (PICT) format originally used to transfer object oriented graphics. The original PICT only allowed eight colors, thus the making of PICT2. Because of its versatility PICT2 replaced PICT as the standard Macintosh QuickDraw format and uses the PICT name. PICT2 supports 24-bit color.

EPS

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Encapsulated PostScript (EPS) files created on the Macintosh are a combination of PostScript code and PICT files. The PICT portion displays on your screen; the PostScript code "displays" the image on a PostScript printer. EPS images created on MS-DOS or other computer platforms do not always contain a screen image in the EPS file. Most MS-DOS programs use TIFF files instead of PICT files to display images on the screen.

Compression Formats

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GIF

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Graphics Interchange Format (GIF) images are created by CompuServe for compression of graphic files and ease of download from electronic info boards. GIF only supports 256 colors (8 bit).

JPEG

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Joint Photographic Experts Group (JPEG) images are also created by CompuServe but the compression saves 24 bits and requires QuickTime to function.

#### Editing a Scanned Image

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Once you have scanned an image into a disk file, you can use a graphic art package, such as the following, to modify the image or even to save it to a different format (such as EPS to TIFF).

Adobe PhotoShop - Used for a variety of tasks, including photo editing and manipulating high-resolution scanned images such as those used for magazine or video production.

Fractal Design Painter - Can make a scanned photo look like a watercolor or oil painting. It can even give an image the "look" of a particular artist, such as Van Gogh.

Digital Darkroom - Use for photo retouch of scanned photos.

SuperPaint - Lets you add additional graphics to a scanned image (such as adding text and positional arrows to a computer hardware image).

#### Article Change History:

17 Mar 1995 - Corrected product name.

#### Support Information Services

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