

Harmonie

**GS/OS Printer Driver Software
for Apple II GS Personal Computers**

Installation & User's Guide

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Section 1

Introduction and Installation

Welcome to Harmonie, the printer driver software package that unleashes the power of the IIgs for top-quality text and graphics printing via GS/OS. With Harmonie, you are free to choose from the very best of the many high-quality (but low cost) laser, ink-jet, and 24-pin dot matrix printers.

Harmonie's printer driver software uses modern 'port driver' techniques to assure maximum data transfer rate, and you are given the option of using either the IIgs's system RAM or your printer's built-in memory to 'render' images and documents to be printed.

The printer drivers included with Harmonie support three high-performance printer classes: (1) Laser printers that emulate the widely-used Hewlett-Packard HP LaserJet standard, including the HP LaserJet IIP and LaserJet III; (2) Ink-jet printers that emulate HP 'desk jet' printers, including the HP DeskJet, DeskJet Plus, DeskJet 500, PaintJet, and PaintJet XL; and (3) 24-pin dot matrix printers that emulate Epson LQ printers, including models manufactured by Epson, NEC, Panasonic, and many others. There's also a driver for the Imagewriter II printer, which greatly increases printing speed and adds some extra Print Menu controls.

The driver and font list files included with Harmonie are easily installed in the System/Drivers folder of any GS/OS 5.0+ system disk, making them fully available to any GS/OS application that uses the GS/OS Print Manager. Informative 'point & click' menus provide logical options to cover almost any printing job.

What's on the Disk

There is a family of files on the Harmonie disk. There is a printer driver file and a font list for each printer that Harmonie supports, plus there is an Installer program and script files to make installation of the correct files for your printer a snap. Finally, there is a simple Applesoft BASIC program, Printer.Test, you can use to be sure that your printer is connected to your IIgs and can communicate with it.

Please Note: The Harmonie disk is not a stand-alone, bootable disk. You will need to use a GS/OS-based program launcher to run the Installer program. The Printer.Test program may be run via a GS/OS-based program launcher, or it may be run directly from Applesoft BASIC.

Installation

The easiest way to install the files that are pertinent to your printer is to run the Installer program on the Harmonie disk. To do this, run the GS/OS program launcher program you prefer (for instance, Salvation-Wings) and launch Installer. You'll see a screen similar to the one shown in Fig. 1, and all you need to do is select the installation script for the printer you wish and select the disk on which you want the Harmonie printer files installed.

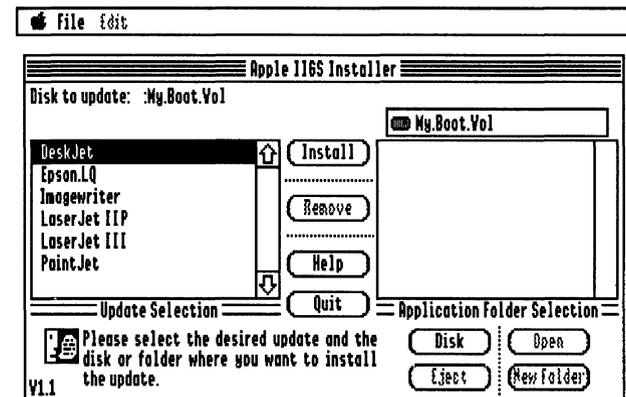


Fig. 1

The Installer will copy the correct Harmonie printer driver file and font list file to the System/Drivers folder of the disk that you've chosen.

That's all there is to it for a single printer. If you should happen to have more than one high-performance printer, you can just run the Installer to add more Harmonie files to your disk(s).

Please Note: You can use any good copy program to copy the appropriate Harmonie files, if you wish. Just be sure to copy both the printer driver file and the corresponding font list file to the System/Drivers file of your boot volume.

Checking the Printer

Special Note: You must consult the user's guides for the IIGs and your particular printer for necessary details in connecting your printer. Harmonie's Printer.Test program and this short section are not comprehensive.

Once the driver and font list files are installed, the next step is to be sure that your printer is communicating with your IIGs. If you have already used the printer with your computer, this procedure really isn't necessary, but if this is the first time for a new printer, it's worth the time to do it.

First, use the IIGs's Control Panel to set the slot you're using for your printer to the appropriate 'mode'. If you're using a printer with a serial interface, the slot should be set to allow serial data flow; the normal setup for this is to use either Slot 1 or Slot 2 and select Printer Port or Modem Port, respectively. If you're using a parallel interface card, on the other hand, the slot it's in must be set to Your Card.

Next, run the Printer.Test program that's on the Harmonie disk, respond to the simple prompts, and verify that your printer responds. If it does, you're all set; if it doesn't, though, you'll have to check over your printer hookup to find the problem.

Section 2

Getting Started

One sets a IIGs to recognize a Harmonie printer driver while running a 'typical' application by using the Control Panel New Desk Accessory (NDA) to select the printer from a scroll list, such as the one in Fig. 2.

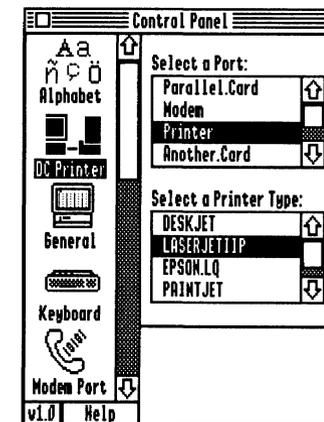


Fig. 2

Click with the mouse to highlight the printer you wish to have recognized in the lower scroll list and don't forget to select the appropriate printer port in the upper scroll list. Click the Close button in the upper left-hand corner to close the Control Panel NDA.

The Harmonie Menu Controls

It is customary for GS/OS application print jobs to use two dialogues to allow the user to set the many parameters that affect how a print job is carried out. The first dialogue is usually called Page Setup, though some applications call it Printer Setup. It's normally found under the File menu bar entry, just above the Print entry (which will be described next). Page Setup is used to set the page size for printing, aspect ratio, page orientation, and top margin.

Fig. 3 shows a typical Page Setup menu; this particular one is for the HP LaserJet IIP printer. Page Setup menus for other printers that Harmonie supports may look slightly different, but the description of the LaserJet IIP dialogue will still apply to a considerable degree.

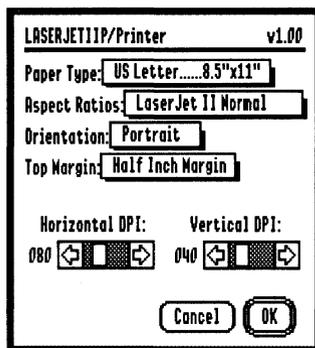


Fig. 3

Paper Type: This setting identifies the nominal page size that will be used by the printer. Click and hold on the 'default' entry to pop up the choices defined for your printer.

Aspect Ratios: Click and hold on this entry to pop up a selection of 'standard' aspect ratios (relation of picture width to height) for the image to be printed on the page. When one of the choices is made, the aspect ratio scroll bars' settings change to show the exact values for horizontal and vertical 'picture dots per inch.'

Please Note: Since Apple, Inc. manufactures both the IIGs and the Imagewriter printer, there is a convenient correlation between what one sees on a IIGs monitor and how the Imagewriter prints it out. In general, selecting the Imagewriter Normal aspect ratio setting will give a printed image that fills the page and is about the same aspect ratio as the image on the screen. For some printers this may be slightly off, but it gives a good starting point.

Keep in mind that the horizontal and vertical aspect ratio numbers mean how many pixels of the image on the screen will be printed in one inch on the paper. So, as the horizontal and vertical aspect ratio setting numbers get **smaller**, the image will be **bigger** on the page. Conversely, as these numbers get larger, the printed image becomes smaller.

Orientation: Click and hold to allow selection of Portrait orientation (image upright along the length of the page) or Landscape orientation (image upright across the page).

Top Margin: Click and hold to select either no margin or an automatic 1/2-inch top margin.

Please Note: Not all printers are able to print literally at the top of a page. The top margin that Harmonie provides is in addition to whatever physical top margin your printer provides.

Horizontal/Vertical DPI: Click/drag these two scroll buttons to set desired aspect ratio settings.

The second dialogue that GS/OS applications provide for printing is typified in Fig.4. A dialogue similar to this appears when one selects Print from the File menu bar entry.

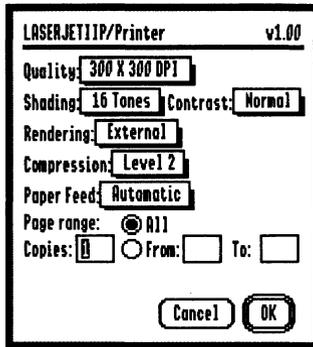


Fig. 4

Quality: Click and hold this item to select the printer resolution desired. In general, lower printer quality settings result in less detailed printing, though the print may be finished in less time. Conversely, higher printer resolution settings give more detail but result in longer times needed to get a final product.

Please Note: Many 24-pin dot matrix printers are capable of very high printer resolution--as high as 360 dots per inch. However, when the highest printer resolution is used, it's possible that the resulting image may be very dark, since the individual pins that dot matrix printers use to create dots are only about 1/100th of an inch in diameter, and the high printer resolution setting can cause them to be printed 'overlapped.'

Shading: Click and hold to select the number of discrete 'tones' the printer is to use to print an image. In general, 2 tones is satisfactory for text-oriented printing, and 16 tones is best for graphic printing.

Contrast: Click and hold to select the desired degree of 'darkness' for the print. How effective this control is depends on the capability of your printer.

Rendering: Click and hold to select the location where the image to be printed will be 'assembled.' Internal means that the image will be assembled in your IIGs's memory; External means that the image data will be sent to your printer and assembled there.

The Internal setting is usually the one to select if you're printing a pure graphic image, such as one created with a paint program. Internal rendering is usually slower than External rendering.

Internal rendering is also the setting to select for images that have text that is to be printed with IIGs-specific fonts-- that is, the ones that are selected from the Fonts folder on a IIGs volume.

External rendering is usually faster than Internal rendering, and it is the selection to make when one wishes to use the fonts that are built in to a printer. Please note that these fonts are not the fonts that are in a Fonts folder on a IIGs volume.

Compression: Click and hold to select the the degree to which image data are compacted before they are sent to the printer. In general, the higher the level of compression selected, the more compact the data 'packet' will be and the faster the printer will be able to receive and use it. However, not all printer models can handle the highest compression settings; if a printed image seems to be incomplete or have 'garbage' in it, try reducing the level of compression.

Paper Feed: Click and hold to select automatic or manual paper feed.

Page Range and Copies: Click the appropriate radio button to indicate if all or only part of a multi-page document is to be printed. Enter the number of copies desired and a specific range of pages to be printed, as appropriate.

Section 3

General Notes, Comments, and Tips

Please keep in mind that printing an image is a rather complex process, one that is further complicated by the higher performance printers becoming more readily available and affordable. It's not just the printer that controls the printing process, or any other single element. Your IIgs, printer, and the specific application you are using all work intimately whenever you print a document. The Harmonie drivers play a role in translating print 'commands' so they can be interpreted by various printers, but Harmonie's drivers don't act alone.

The point to this 'disclaimer' is that it's in your interest to try different control settings to find what works best for the specific document you're printing from the application you're using at the time. You may find, for instance, that External rendering is best for most all your word processing jobs, but your desktop publishing program gives you more satisfactory results via Internal rendering.

Another example is selecting a 'Condensed' aspect ratio setting for printing of text in a desktop publishing application. Some programs of this type make special provisions for allowing text to be printed in a compressed fashion without affecting graphics, while others may not.

Harmonie uses a special font reduction technique to print text selected from a Font folder on a GS/OS volume in the smoothest way it can. If you select a certain font, say Wombat.12, and you also have the Wombat.24 or Wombat.48 font in the folder, Harmonie will select the larger font and reduce the characters that are called for. This can yield excellent results under most conditions... with print quality nearly that of printer-resident fonts. There are hundreds of fonts available in the public domain, so if you have favorite fonts, it can be to your advantage to get double- and quadruple-sized fonts of the same family.

The Harmonie font list files included on this disk for the printers supported cover only the fonts that are permanently resident in these printers. This means that fonts that are available via font cartridges, "soft" fonts, and some fonts "workalike" printers are not covered. With time, Vitesse, Inc. will be expanding the list of fonts and font cartridges it can address, and additional font list files for the currently-supported printers and other printers will be added. Be sure that you fill out and send in your Harmonie warranty registration card so we can let you know when more printers and fonts are Harmonie-compatible.

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