

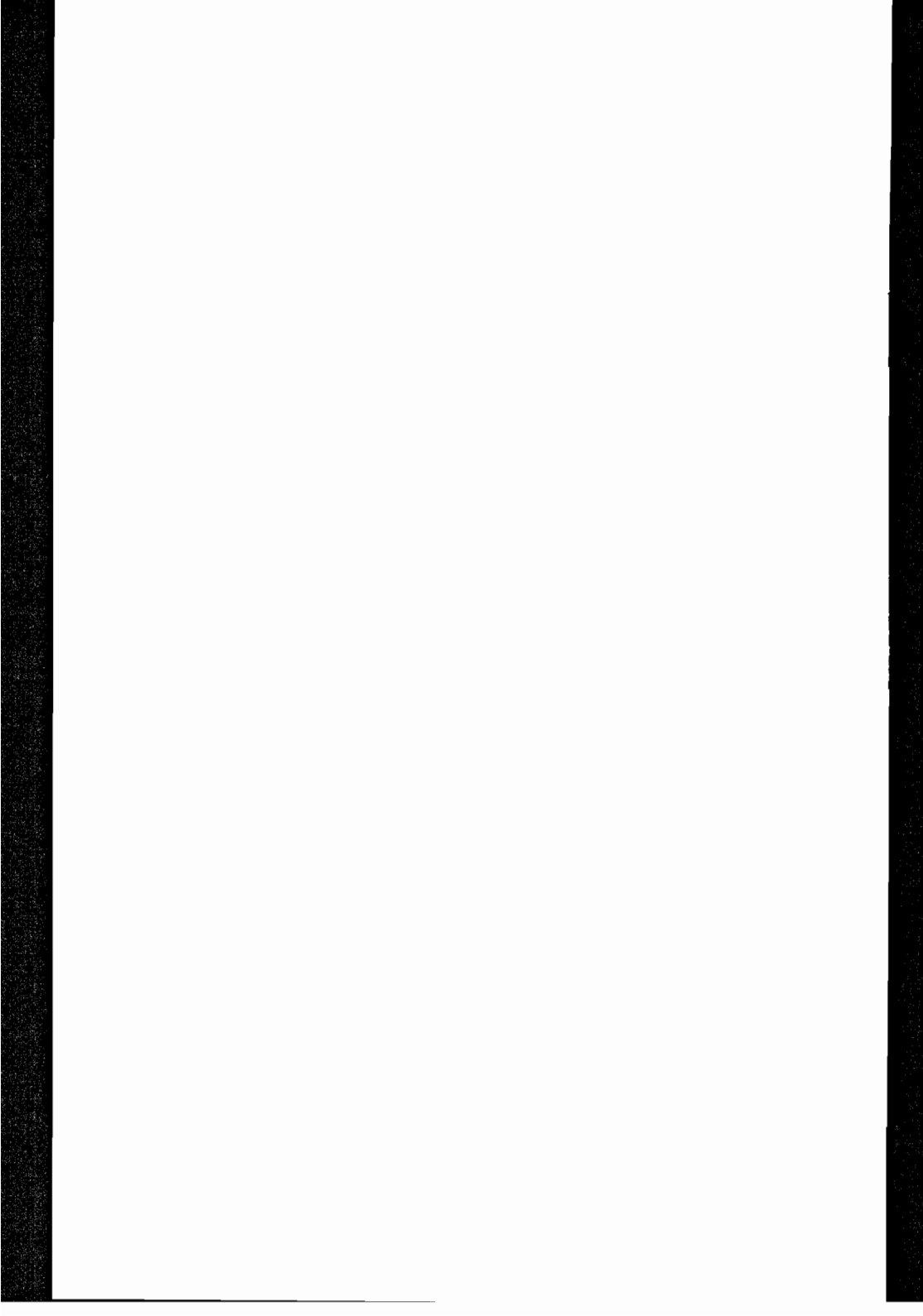
HEWLETT-PACKARD



**LaserJet Printer
Family**

Downloading Your Soft Fonts





DOWNLOADING YOUR HEWLETT-PACKARD SOFT FONTS



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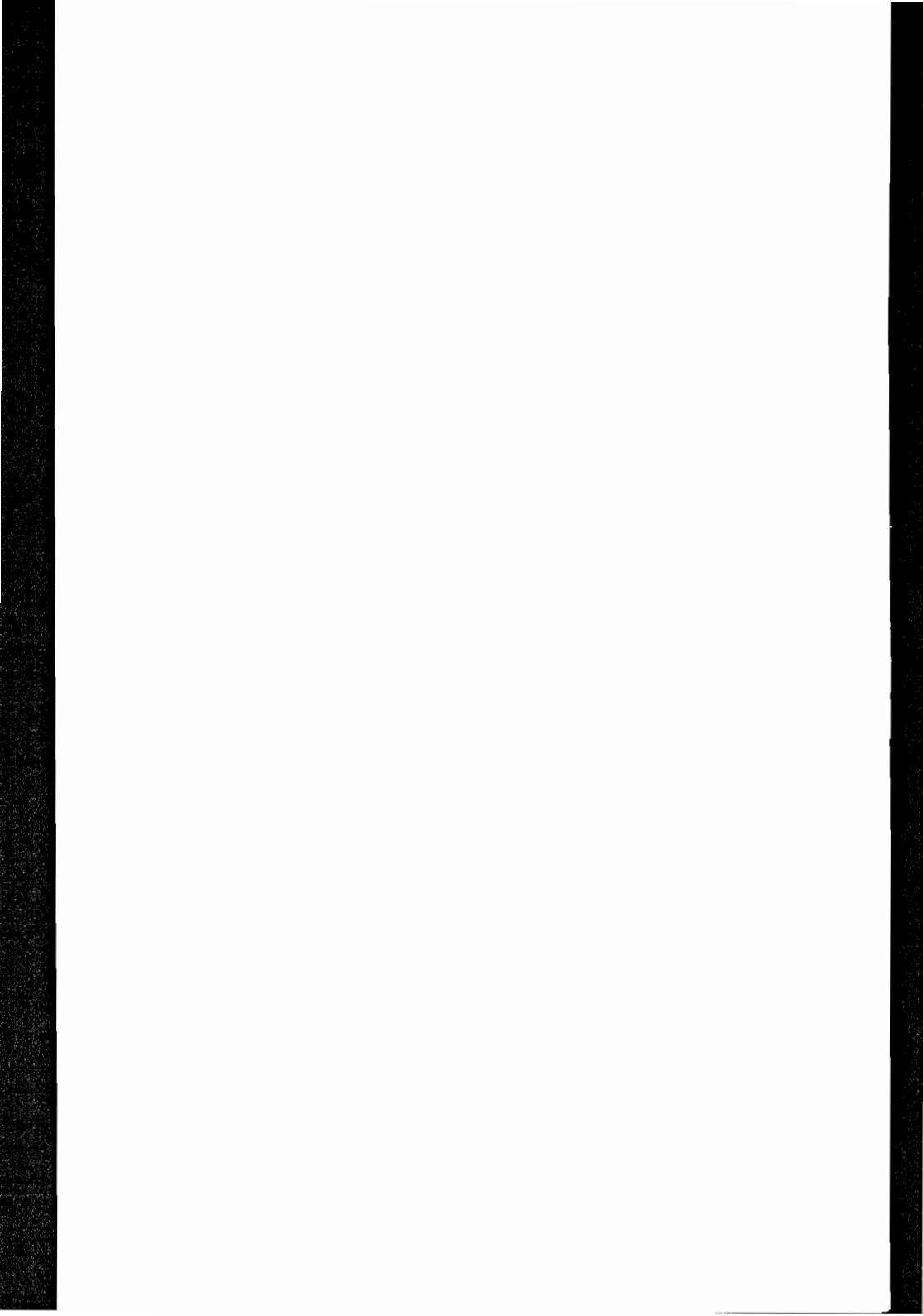
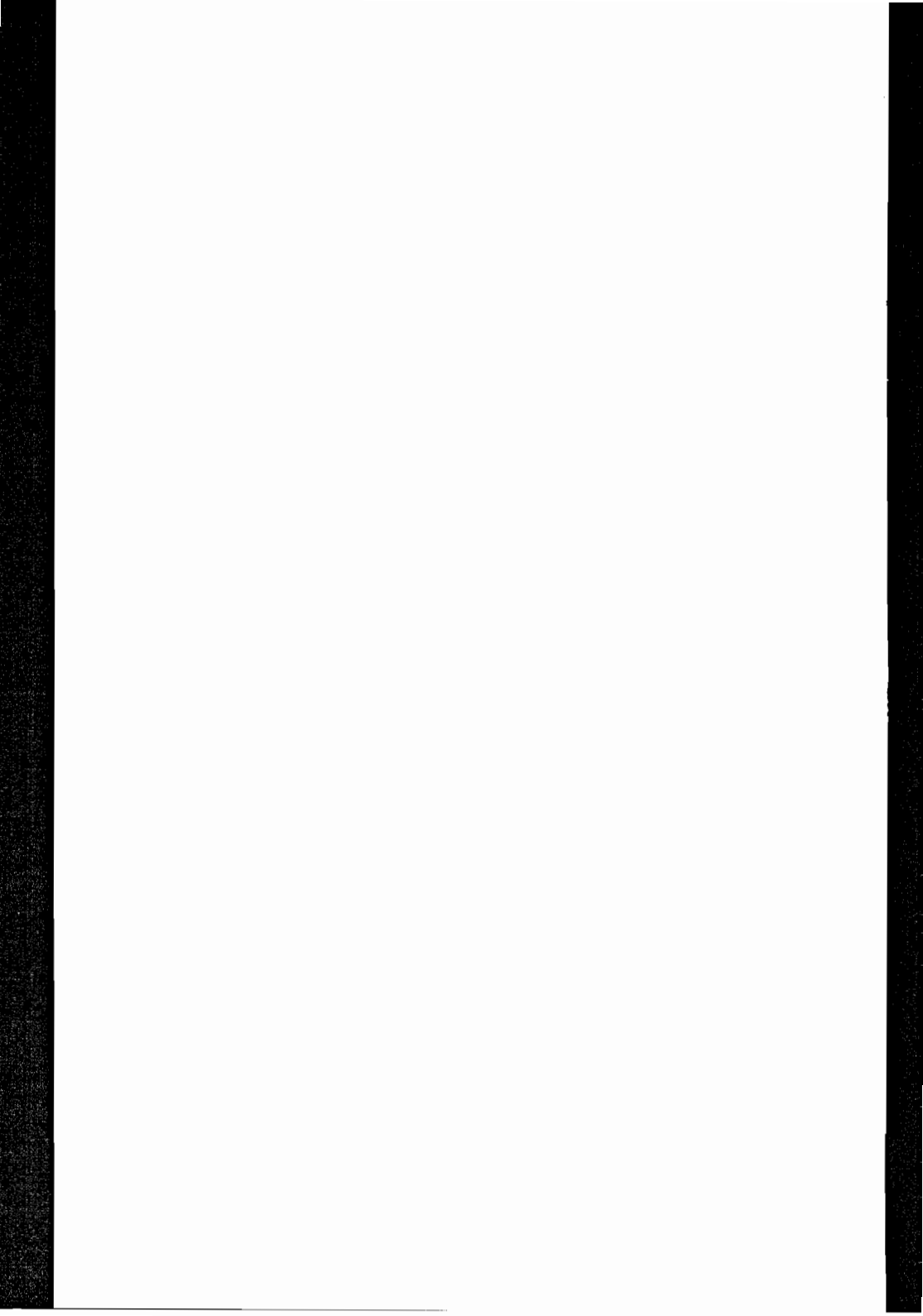


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INTRODUCTION

Hewlett-Packard soft fonts (disc-based fonts) are designed for the **LaserJet Family of Printers*** and allow you the flexibility of printing your reports and documents using many different fonts. Soft fonts are stored in your printer's memory, are easily selectable, and give you the advantage of mixing several fonts per page. Using soft fonts, it is easy to enhance your text with regular, bold, and italic print in several typefaces and point sizes.

To print with soft fonts, they must be downloaded to the printer. "Downloading" refers to the process of copying a font from disc storage to the printer. If you have Hewlett-Packard's PCLPak (or a similar utility program) or a software package that manages fonts, your software may take care of downloading. If you don't have this type of software, you can download using the utilities program included with your soft fonts.

This document describes several methods for downloading your soft fonts. You may select the downloading method most convenient for you. The "Printing with Downloaded Fonts" section describes different ways that you can print with your soft fonts. A "Font Management" section is also included which points out ways to use your printer more productively since a limited number of fonts can be stored in the printer and since many printers are shared by several users.

A separate soft font booklet is provided with your soft fonts which lists the font file names, disc location, and escape sequence associated with each font. Print samples of the fonts are also included there, as well as any special printing instructions.

* Soft fonts cannot be used with the standard LaserJet printer.

Important

As with any software product, we suggest you make a back-up copy of your soft fonts as soon as you receive them in case something should happen to your font discs. Be sure to read the Software License Agreement that is supplied with your soft fonts regarding copy restrictions.

DOWNLOADING HEWLETT-PACKARD FONTS

The following instructions explain downloading fonts using two methods. Using either PCLPak or the downloading program supplied with your fonts, downloading is accomplished in a few simple steps. Use the following instructions to download fonts using PCLPak. For instructions on downloading using the utilities program included with your soft fonts, refer to page 7.

USING PCLPAK TO DOWNLOAD FONTS

To use these instructions, first determine whether you want to download fonts directly to the printer (see page 3) or copy them to a "set-up" file which can be sent to the printer and automatically downloaded (see page 5). Since set-up files require a lot of disc space, we suggest using them for downloading only in situations where the same set of fonts are commonly used. Before beginning, be sure that PCLPak is installed on your hard disc, or your PCLPak floppy disc is installed in an available disc drive.

To Download Fonts Directly to the Printer:

1. Start PCLPak and type 2 to select LaserJet⁺ from the Printer Selection menu.
2. Type F from the Main menu. This produces the Fonts menu.
3. Type D to download soft fonts to the printer from the Fonts menu. This produces the Download Font menu:
4. Check the CURRENT SETTINGS in the right half of the display:

orientation: (landscape, portrait or portrait assumed)

filename: ("not specified" or file name)

id: (0 - 32767)

selection: (primary, secondary or "not selected")

temp/perm: (permanent or temporary)



Note any information that you will need to change. Verify that the orientation shown is correct for the font you wish to download. If necessary, you may want to return to the Page Setup menu and change orientation before proceeding. The correct orientation must be set for the font you wish to use for printing. (PCLPak will allow you to download a font with a different orientation at this point, but will assign it a "not selected" status.)

5. Type F (for Filename) to enter the file name for the font you wish to download and this prompt will appear on your screen:

> Name of the font file to download:

6. Enter the file name of the font you want to download. Be sure to let PCLPak know where to look for the file you want to download by including the letter of the drive and a colon before entering the file name. For instance, if a disc with the file name LG120R12.USB is installed in drive B, you would enter B:LG120R12.USB after the prompt to download the font.

Press RETURN and the CURRENT SETTINGS field is updated.

THE FOLLOWING STEPS ARE OPTIONAL. IF THE INFORMATION INCLUDED IN THESE STEPS IS NOT SPECIFIED, PCLPAK WILL USE THE DEFAULT SETTINGS.

7. Type I (for Id) to change the font ID number, and this prompt will appear on your screen:

> Id number:

Specifying a font ID number is optional. PCLPak will assign default ID numbers as you download each font, beginning with zero (0).

8. Type S (for Select) to assign a font **primary**, **secondary**, or **not selected** status. When you type S, the CURRENT SETTINGS field changes to the next choice. Type S until the selection you want appears in the CURRENT SETTINGS field.
9. Type T to specify either **Permanent** or **Temporary** status in the printer's memory. When you type T, the CURRENT SETTINGS field **Temp/perm** setting toggles between Temporary and Permanent. **Permanent** is the default setting in PCLPak. Any fonts downloaded without changing this setting will stay in the printer until deleted or until the printer is turned off or loses power. (Permanent fonts must be reselected as primary or secondary if the printer is RESET or the orientation is changed.) Fonts specified as **Temporary** will be deleted any time the printer is RESET.
10. Type G (for Go) after you are finished specifying all of the settings just described. The Go command causes the actual downloading to take place. (This process takes a few minutes.)

Once downloading is completed, you may want to do a Print Screen in order to have a copy of the "Current Settings" field showing the information on your downloaded fonts. Exit PCLPak by typing "Q" twice and then "Y." Refer to the "Printing with Downloaded Fonts" instructions on page 10 to print the fonts you have downloaded.

To Copy Fonts to Disc Storage for Downloading:

Using this downloading method, you will create a "set-up" file which contains a group of fonts that can easily be copied to the printer from your disc storage. This file can be used repeatedly to download the same fonts. Keep in mind that set-up files for downloading generally require a large amount of disc space and should be used only as memory space allows.

1. Start PCLPak and type 2 to select LaserJet⁺ from the Printer Selection menu.
2. Type M (for Managefiles) from the Main menu. This produces the Manage Files menu.
3. Type D (for Destination) and this prompt will appear on your screen:

 > Enter new destination (prn:, lpt1:, . . .):
4. Type the name of the file where you wish to store your fonts. Be sure to include the letter of the drive and a colon prior to the file name to let PCLPak know where to store the file. For example, to store a file called "FONTS" in drive A, you would type A:FONTS.
5. Type Q to return to the Main menu.
6. Type F (for Fonts) and then D (for Download).
7. Follow steps 4-10 in the downloading instructions presented above to download all of the fonts you want to store in the file on your disc. (When determining the fonts to be kept in your file, keep your printer's memory requirements in mind. Refer to your soft font booklet for the memory requirements for each font file.)

All of the font files you selected have now been copied to your file and disc for storage.

To Download Your Set-Up File:

Downloading can now be accomplished using the MS-DOS copy command. For example, a file named FONTS could be sent to the printer for downloading like this:

```
COPY/B A:FONTS LPT1:
```

(When using the copy command, first determine what code to use for your printer device. In addition to **LPT1:**, other common printer designators are **PRN:** and **COM1:**)

PCLPak can also be used to send your file to the printer. Use the following instructions to download all of the fonts in your file to the printer:

1. Start PCLPak and type 2 to select **LaserJet+** from the Printer Selection menu.
2. Type M from the Main menu to enter the Managefile menu.
3. Type D (for Destination) and this prompt will appear on your screen:

```
> Enter new destination (prn:, lpt1:, ...):
```

4. Enter the designator code for your printer device. The default is **LPT1:**, a common printer designator used for HP printers. Other common printer designators are **PRN:** and **COM1:**.
5. Type C (for Copyfile) and enter the name of your set-up file after the prompt. Press the RETURN key and the fonts in your file will be downloaded to the printer. (This may take several minutes.)

Once downloading is accomplished, refer to the "Printing Downloaded Fonts" instructions on page 10 to print the fonts you have downloaded.

USING THE UTILITIES PROGRAM TO DOWNLOAD FONTS

Using the utilities program supplied with your fonts, downloading is an easy process. Follow the instructions below to copy the program files to your MS-DOS disc and to download fonts to your printer.

Copying the Program Files

Before downloading fonts, you must copy the three downloading program files to your MS-DOS disc by performing the following steps. [You need only do this procedure once. After that, the downloading program will be available when you start (boot-up) your computer.]

- a. Insert font file disc #1, which contains the downloading program files, into an available disc drive.
- b. From the MS-DOS operating system, copy the three program files to your MS-DOS disc by typing the following three lines (NOTE: In the COPY statements below, the files are copied from the **A:** disc drive to the **B:** disc drive. Substitute the drive loaded with the program files for **A:** and the MS-DOS disc for **B:**):

COPY A:DOWNLOAD.BAT B: and press RETURN

COPY A:IDFONT.EXE B: and press RETURN

COPY A:PERMTEMP.EXE B: and press RETURN

Following each line, the system will notify you that the file has been copied successfully. If you have any problems copying the files, check to make sure that you are specifying the correct disc drives as the source and destination. Make sure that you have the correct flexible disc loaded into your source disc drive (the **DOWNLOAD.BAT**, **IDFONT.EXE**, and **PERMTEMP.EXE** program file are loaded on font disc #1). For more information on the COPY command, see the COPY command discussion in MS-DOS or your MS-DOS User's Manual.

NOTE

If you wish to write your own downloading program use the two uncompiled BASIC programs included on font disc #1. The file names of these BASIC programs are: IDFONT.BAS and PERMTEMP.BAS. The MS-DOS file that calls up the compiled version of these BASIC programs is named DOWNLOAD.BAT. If you wish to see the contents of these programs, simply enter MS-DOS and type **TYPE FILENAME**. For example, to display the PERMTEMP.BAS file, type **TYPE PERMTEMP.BAS** from the MS-DOS prompt and press RETURN.

If you have BASIC loaded on your computer, you may print a copy of the BASIC programs by typing **LLIST FILENAME**. For example, to print a listing of the IDFONT.BAS program, type **LLIST IDFONT.BAS** from BASIC (remember to specify the disc drive where font disc #1 is loaded, such as **LLIST B:IDFONT.BAS**).

Downloading Fonts

Once you have copied the program files to your MS-DOS disc, you may download any of the fonts to the printer by performing the following steps:

- a. Switch the printer power on and ensure it is on-line.
- b. Decide which font you wish to download (your font instruction booklet lists available fonts). Find the font file name and disc number where the font is located. Load the font disc into the disc drive you will be using.
- c. Using the file name listed for the font you wish to download, type the following (be sure to include the disc drive designation A:, B:, or C: before the file name for the disc drive that contains the font disc):

DOWNLOAD fontname

For example, if you wish to download a font with file name **LG120R12.USP** from the **B:** disc drive to the printer, you would type **DOWNLOAD B:LG120R12.USP** from the MS-DOS prompt and press RETURN.

- d. After a few seconds, the program will request a FONT ID number. This is a number that you choose to assign to the font you are downloading. Enter a FONT ID number and press RETURN. The FONT ID number used must be a whole number between 0 and 32767 (no decimal points). This number is associated with the downloaded font and is called up when you are ready to print. Be sure to use a different number for each font that you download.

The font will begin downloading and the printer READY light will flash to let you know that data is being transferred to the printer.

- e. When the font has been downloaded, the program will ask whether you want the font to be "Temporary" or "Permanent". Specify P for permanent or T for temporary and press the RETURN key. ("Temporary" fonts are erased from printer memory when the printer is reset or turned off. "Permanent" fonts are not affected by a printer reset but are deleted when the printer is turned off or loses power.)
- f. The program will now ask whether or not you want a print sample of the downloaded font. Answer Y (for yes) or N (for no) and press RETURN.
- g. If you answered "YES", the program will ask whether the font's orientation is portrait or landscape. Type either P (Portrait) or L (Landscape) and press RETURN. (NOTE: The portrait/landscape versions of the font correspond to either "P" or "L" as the last letter of each font file name.)

Once you specify P or L and press RETURN, a print sample will begin printing.

The desired font is now downloaded and the FONT ID number you specified is associated with the font. When the MS-DOS prompt reappears on your display screen, you may download

another font by repeating the procedure from step b. Printing with downloaded fonts is discussed in the next section.

PRINTING WITH DOWNLOADED FONTS

Once you have downloaded several fonts to the printer you can use the $\text{E}_c(\#X)$ escape sequence to select fonts for printing. In this escape sequence, substitute the font ID number of the downloaded font you wish to print for the # sign. For example, if you have downloaded a font with an ID number of 18, you would send the $\text{E}_c(18X)$ escape sequence to print with the font.

Another way to select a downloaded font is to send the entire font selection escape sequence to the printer. The font selection escape sequence for each font is listed in the soft font booklet included with your fonts.

NOTE

The printer must be in landscape orientation in order to print using a landscape font. The same holds true for portrait fonts/portrait orientation. The escape sequence $\text{E}_c\&000$ selects portrait orientation and $\text{E}_c\&010$ selects landscape orientation. The printer automatically returns to portrait orientation after it is powered-off or RESET. Both portrait and landscape orientation cannot be printed on the same page.

Example:

This example goes through the process of downloading using two sample fonts. To use this example, the program files for downloading fonts (DOWNLOAD.BAT, IDFONT.EXE and PERMTEMP.EXE) must be copied to the MS-DOS disc (in this example, disc A: is used for this purpose). If these files have not been copied to your disc, refer to the "Copying the Program Files" discussion on page 7 for instructions.

Several different printing methods are explained here. The two portrait fonts used are the 12-point Letter Gothic Bold font and the 12-point Letter Gothic Italic font from the HP Letter Gothic Family Soft Font product. **Because your soft font product may not contain the two files used here, you may need to substitute two other files when performing this example. Use the booklet included with your fonts to choose two other file names.** The whole process of downloading and printing with two fonts is described below:

- a. With the printer powered-up and on-line, load the disc containing the two fonts to be downloaded (in this example, LG120B12.USP and LG120I12.USP) into drive **B**.
- b. Download the bold font by entering MS-DOS and typing **DOWNLOAD B:LG120B12.USP** from the A> prompt. (**B**: must be specified before the filename because, in this example, the font file is loaded in the **B**: drive.)
- c. When the program requests a FONT ID number, enter a FONT ID number of 1 and press RETURN.
- d. The program will ask whether you want the font to be Permanent or Temporary. Type **P** (for Permanent) and press RETURN.
- e. When prompted for the portrait/landscape version, enter the letter **P** (for Portrait) and press RETURN. Once you have entered **P** and pressed RETURN, the font will be downloaded to the printer.



- f. Download the italic font by typing **DOWNLOAD**
B:LG120I12.USB from the **A>** prompt.
- g. When the program requests a font ID number, type **2** and press **RETURN**.
- h. When prompted for the portrait/landscape version, enter **P** (for Portrait) and press **RETURN**. The downloading process will now begin for the second font.
- i. When prompted for permanent/temporary, type **P** and press **RETURN**.
- j. After both fonts are downloaded, select the bold font by sending the $E_c(1X$ escape sequence to the printer. (To do so, use the method specified by your software for sending escape sequences.) Once this escape sequence is sent to the printer, the bold font will be used for printing.

To print in the italic font, send the $E_c(2X$ escape sequence to the printer. For example, to print this sentence in the bold font, with the word "OVER" italicized, type the following:

$E_c(1X$ The red fox jumped $E_c(2X$ OVER $E_c(1X$ the gray dog.

Print . . . and you get this:

The red fox jumped *OVER* the gray dog.

To print this sentence using Shift-In and Shift-Out commands, enter the following information (to Shift-In - S_i - and use the bold font, press the CTRL key and hold it down while pressing the letter "O." To Shift-Out - S_o - and use the italic font, press the CTRL key and hold it down while pressing the letter "N."):

$E_c(1X$ (Sets the bold font as primary)

$E_c)2X$ (Sets the italic font as secondary)

S_i The red fox jumped S_o OVER S_i the gray dog.

The same sentence could be printed using BASIC programming language by entering the following:

```
10 LPRINT CHR$(27);"(1X";"The red fox jumped";  
20 LPRINT CHR$(27);"(2X";" OVER";  
30 LPRINT CHR$(27);"(1X";" the gray dog."
```

If you wish to use the font selection escape sequence instead of the $E_c(\#X$ escape sequence, type the same sentence in as follows:

```
 $E_c(\theta U E_c(sp12h12vs3b6T$  The red fox jumped  
 $E_c(s1SOVER E_c(s\theta s3B$  the gray dog.
```

Or, in BASIC:

```
10 LPRINT CHR$(27);"(\theta U";  
20 LPRINT CHR$(27);"(sp12h12vs3b6T";"The red fox  
jumped";  
30 LPRINT CHR$(27);"(s1S";" OVER";  
40 LPRINT CHR$(27);"(s\theta s3B";" the gray dog."
```

NOTE: The escape sequences shown here are shortened to include only the characteristics necessary to select the bold font and switch between the italic and bold font.



FONT MANAGEMENT

Keep the following considerations in mind when using downloaded fonts to get the most efficient use from your printer. This information is especially helpful in situations where printers are shared by several users.

- The printer has a limited amount of memory in which to store downloaded fonts. (Check your printer's reference manual for the total amount of memory available for both downloading fonts and printing graphics.) Download only the fonts you need to the printer and wait until you need other fonts before downloading them. This step saves you unnecessary downloading time and helps prevent exceeding the printer's memory capacity. **Remember that each downloaded font occupies a portion of memory (RAM) that cannot be used for anything else until the font is deleted.** Therefore, in situations where graphics printing is limited by lack of RAM space, deleting one or more of the downloaded fonts will allow more memory for graphics. (The escape sequence used to delete downloaded fonts is `Esc*#d2F` -- where the # symbol represents the font ID of the font to be deleted.)
- If more than one person is using the printer, it may be necessary to make an agreement as to which fonts to download and what font ID numbers to assign. If all the users agree about the fonts and their font ID numbers, problems such as downloading duplicate fonts and deleting other people's fonts can be avoided.
- **Everyone using the printer should be aware that turning the printer off will delete all of the downloaded fonts.**
- If you use a hard disc drive with your computer system, we suggest that you copy the font files from the flexible discs to your hard disc. Doing so will make the font downloading process easier. To copy the files to hard disc, use the COPY

command in MS-DOS, or (if you are using an HP 150) the COPY/B portion of the COPY/BACKUP utility. If you do not use hard disc drive with your computer system, you will need to load the flexible disc containing the desired font every time you wish to download the font to the printer.

FONT FILE NAME CODING

Font files are named using a specific file naming convention as follows:

TTpppSpp.SSP

"TT" is a two-letter mnemonic for the typeface family, such as "HV" for Helv, "TR" for Tms Rmn and "LG" for Letter Gothic.

"ppp" is the point size of the font; for example, "120" = 12-point, "095" = 9.5-point, "080" is 8-point, etc.

"S" is the style/weight of the font; "R" is regular, "B" is bold, and "I" is italic.

"pp" is an abbreviated form of pitch; "16" is 16.66-pitch, "12" is 12-pitch, "10" is 10-pitch. "PN" is used for medium width proportional fonts. **NOTE:** With some proportional fonts the designator may be specified "PC" for compressed or condensed width, and "PX" for expanded or extended width.

"SS" is the symbol set abbreviation, such as "US" for USASCII, "R8" for Roman-8, "RX" for Roman Extension, etc.

"P" represents the page orientation setting. A file name ending with "P" designates Portrait orientation and a file name ending with "L" designates landscape orientation.

PRINTING WITH CARTRIDGE FONTS

Font ID numbers can be assigned to cartridge fonts so that you can select both your soft fonts and cartridge fonts using the $\text{E}_c(\#X$ escape sequence. To assign a font ID number to a cartridge font, first you select the font as primary using the font selection escape sequence. Next, you send an escape sequence to specify the font ID number, and then an escape sequence to assign that ID number. For example, to assign a font ID number of 2 to a cartridge font with a font selection escape sequence of $\text{E}_c8U\text{E}_c(s1p10vsb5T$ you would send the following:

$\text{E}_c8U\text{E}_c(s1p10vsb5T$ -- Specifies the cartridge font as primary.

E_c*c2D -- Specifies a font ID number of 2.

$\text{E}_c*c6f5F$ -- Assigns the font permanent status.

To specify a temporary status, send

E_c*c6F instead.

To print with the cartridge font just specified as font 2, send the following escape sequence:

$\text{E}_c(2X$ -- Designates font with ID number 2 as primary font.

NOTE: To change orientation, enter $\text{E}_c(\&l00$ for Portrait orientation, or $\text{E}_c(\&l10$ for Landscape orientation prior to entering the font ID escape sequence.

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