

HEWLETT-PACKARD

DA

**LaserJet Printer
Family**

Using Your HP Letter Gothic Family Soft Font



5.25 INCH (MSDOS)
Double-Sided Format

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Using Your HP Letter Gothic Family Soft Font

(5 1/4" Double-Sided MS-DOS Disc Format)





TABLE OF CONTENTS

Introduction	1
Font Samples.	2
Setting the Vertical Motion Index.	3
Using the HP Letter Gothic Soft Font Table	4
Using PC Line and Linedraw Characters with the Presentations Fonts.	15
Creating Composite Math Characters	19
Using the Roman-8 and Math-8 Symbol Sets.	21
Using the USASCII Keystroke Equivalency Table	24

TABLES

Table A HP Letter Gothic Soft Font Table	5
Table B Roman-8 Symbol Set Table	22
Table C Math-8 Symbol Set Table	23
Table D USASCII Keystroke Equivalency Table	25
Table E Letter Gothic Soft Font Memory Requirements.	29



INTRODUCTION

Your HP 33412DA package contains the following items:

- 5 Font Discs (5 1/4" Double-Sided MS-DOS Format)
- "Downloading Your Hewlett-Packard Soft Fonts" Instructions
- A Software License Agreement

This booklet contains all of the information needed to download and select the HP 33412DA fonts. The following HP Letter Gothic Soft Font Table identifies the file names, disc volume locations, and font selection escape sequences for each font. Print samples of the fonts are included prior to the table for easy reference.

Also included here are special instructions for using the HP Letter Gothic soft fonts. These instructions provide information on spacing (setting the Vertical Motion Index), merging PC Line or Linedraw characters with Presentations fonts, and creating composite math characters.

The "Downloading Your Hewlett-Packard Soft Fonts" instruction booklet provided with your fonts explains how to download and print your soft fonts. Refer to the instruction booklet for "how-to" information.

For more information on other font-related subjects, refer to the reference manual supplied with your printer.

FONT SAMPLES

The HP 33412DA Letter Gothic soft font package contains the following Letter Gothic fonts in the Roman-8, USASCII, Roman Extension and Legal symbol sets:

Letter Gothic, 9.5 pt.

Letter Gothic, 12 pt.

Letter Gothic, 12 pt. **Bold.**

Letter Gothic, 12 pt. Italic

Letter Gothic, 14 pt.

Additionally, the USASCII and Legal symbol sets include the following Presentations fonts:

PRESENTATIONS, 14 PT.

PRESENTATIONS, 16 PT.

PRESENTATIONS, 18 PT.

PRESENTATIONS, 24 PT.

PRESENTATIONS, 30 PT.

Linedraw symbol set characters are available in 9.5, 12, 14, 16 and 18-point Upright Medium fonts.

PC Line symbol set characters are available in 9.5, 12, and 14-point Upright Medium and 12, 14, 16, and 18-point Upright Bold fonts.

Math-8 symbol set characters are available in Letter Gothic 9.5-point and 12-point Medium fonts, and the Math-7 and PiFont symbol sets are available in the Letter Gothic 12-point Upright Medium font.



SETTING THE VERTICAL MOTION INDEX

All of the HP Letter Gothic soft fonts include a Vertical Motion Index (VMI) setting listed in the following table. This setting provides the best possible spacing quality for each printed font. To set the VMI find the setting associated with the font you wish to use in the HP Letter Gothic Soft Font Table. Send the following escape sequence to the printer AFTER you have downloaded and selected the font for printing:

$\text{E}_c\&l\#C$

= The VMI setting associated with the font you wish to print.

The # sign in this escape sequence specifies the number of 1/48 inch increments used to space one line vertically. For example, a VMI setting of 9.6 would set the line spacing to 9.6/48 inch (9.6/48 inch = 5 lines per inch). We recommend setting the VMI for all fonts for maximum print quality. Either double spacing or the VMI setting must be used for fonts over 14-point size to prevent characters from printing over one another. Refer to your software or printer reference manual for instructions on double spacing.

USING THE HP LETTER GOTHIC SOFT FONT TABLE

The following table identifies all of the information necessary to download HP Letter Gothic soft fonts. This table includes a description of each font, file names for downloading, the disc number where each file is located, and the escape sequence and suggested VMI setting for each font. All of the HP Letter Gothic soft fonts are referenced by symbol set in these tables. For print samples and additional font information, refer to the "Font Samples" section included earlier in this booklet. **Remember to use double spacing or to set the listed VMI for all HP Letter Gothic Family soft fonts over 14-point size.** In the table, all of the escape sequences shown are shortened to include only the information necessary to select the fonts.

NOTE: To connect underlining on all 24-point Presentations fonts, you must set the Horizontal Motion Index (HMI) by entering the `Esc&Q20.83H` escape sequence. Enter this information after the VMI setting is selected.

Table A
HP LETTER GOTHIC SOFT FONTS

ROMAN-8 SYMBOL SET			
Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
LETTER GOTHIC			
9.5 pt Upright Med, 16.66-pitch	LG095R16.R8P	1	$\text{E}_C(8\text{U}\text{E}_C(\text{sp}16.66\text{h}9.5\text{vsb}6\text{T}$ VMI Setting = 7.68
(Landscape)	LG095R16.R8L	3	
12 pt Upright Med, 12-pitch	LG120R12.R8P	1	$\text{E}_C(8\text{U}\text{E}_C(\text{sp}12\text{h}12\text{vsb}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120R12.R8L	3	
12 pt Upright Bold, 12-pitch	LG120B12.R8P	1	$\text{E}_C(8\text{U}\text{E}_C(\text{sp}12\text{h}12\text{vs}3\text{b}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120B12.R8L	3	
12 pt Italic Med, 12-pitch	LG120I12.R8P	1	$\text{E}_C(8\text{U}\text{E}_C(\text{sp}12\text{h}12\text{v}1\text{sb}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120I12.R8L	3	
14 pt Upright Med, 10-pitch	LG140R10.R8P	2	$\text{E}_C(8\text{U}\text{E}_C(\text{sp}10\text{h}14\text{vsb}6\text{T}$ VMI Setting = 11.2
(Landscape)	LG140R10.R8L	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_C\text{L}10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_C\&\#C$ escape sequence.

USASCII SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
LETTER GOTHIC			
9.5 pt Upright Med, 16.66-pitch	LG095R16.USB	1	$\text{E}_C(\text{0U}\text{E}_C(\text{sp16.66h9.5vsb6T}$ VMI Setting = 7.68
(Landscape)	LG095R16.USL	3	
12 pt Upright Med, 12-pitch	LG120R12.USB	1	$\text{E}_C(\text{0U}\text{E}_C(\text{sp12h12vsb6T}$ VMI Setting = 9.6
(Landscape)	LG120R12.USL	3	
12 pt Upright Bold, 12-pitch	LG120B12.USB	1	$\text{E}_C(\text{0U}\text{E}_C(\text{sp12h12vs3b6T}$ VMI Setting = 9.6
(Landscape)	LG120B12.USL	3	
12 pt Italic Med, 12-pitch	LG120I12.USB	1	$\text{E}_C(\text{0U}\text{E}_C(\text{sp12h12v1sb6T}$ VMI Setting = 9.6
(Landscape)	LG120I12.USL	3	
14 pt Upright Med, 10-pitch	LG140R10.USB	2	$\text{E}_C(\text{0U}\text{E}_C(\text{sp10h14vsb6T}$ VMI Setting = 11.2
(Landscape)	LG140R10.USL	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_C\text{010}$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_C\&\text{0}\#\text{C}$ escape sequence.

USASCII SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
PRESENTATIONS			
14 pt Upright Bold, 10-pitch	PS140B10.USB	2	$\text{E}_c(\text{O}U\text{E}_c(\text{sp}10\text{h}14\text{vs}3\text{b}11\text{T}$ VMI Setting = 11.2
(Landscape)	PS140B10.USL	4	
16 pt Upright Bold, 8.1-pitch	PS160B08.USB	2	$\text{E}_c(\text{O}U\text{E}_c(\text{sp}8.1\text{h}16\text{vs}3\text{b}11\text{T}$ VMI Setting = 12.8
(Landscape)	PS160B08.USL	4	
18 pt Upright Bold, 6.5-pitch	PS180B06.USB	2	$\text{E}_c(\text{O}U\text{E}_c(\text{sp}6.5\text{h}18\text{vs}3\text{b}11\text{T}$ VMI Setting = 14.4
(Landscape)	PS180B06.USL	4	
24 pt Upright Bold, 5.7-pitch	PS240B05.USB	5	$\text{E}_c(\text{O}U\text{E}_c(\text{sp}5.7\text{h}24\text{vs}3\text{b}11\text{T}$ VMI Setting = 19.2
(Landscape)	PS240B05.USL	5	
30 pt Upright Bold, 4.6-pitch	PS300B04.USB	5	$\text{E}_c(\text{O}U\text{E}_c(\text{sp}4.6\text{h}30\text{vs}3\text{b}11\text{T}$ VMI Setting = 24
(Landscape)	PS300B04.USL	5	



* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_c\text{O}10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_c\&\text{O}\#\text{C}$ escape sequence.

ROMAN EXTENSION SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
LETTER GOTHIC			
9.5 pt Upright Med, 16.66-pitch	LG095R16.RXP	1	$\text{E}_C(\text{0E}_C(\text{sp16.66h9.5vsb6T}$ VMI Setting = 7.68
(Landscape)	LG095R16.RXL	3	
12 pt Upright Med, 12-pitch	LG120R12.RXP	1	$\text{E}_C(\text{0E}_C(\text{sp12h12vsb6T}$ VMI Setting = 9.6
(Landscape)	LG120R12.RXL	3	
12 pt Upright Bold, 12-pitch	LG120B12.RXP	1	$\text{E}_C(\text{0E}_C(\text{sp12h12vs3b6T}$ VMI Setting = 9.6
(Landscape)	LG120B12.RXL	3	
12 pt Italic Med, 12-pitch	LG120I12.RXP	1	$\text{E}_C(\text{0E}_C(\text{sp12h12v1sb6T}$ VMI Setting = 9.6
(Landscape)	LG120I12.RXL	3	
14 pt Upright Med, 10-pitch	LG140R10.RXP	2	$\text{E}_C(\text{0E}_C(\text{s0p10h14v0s0b6T}$ VMI Setting = 11.2
(Landscape)	LG140R10.RXL	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_C\text{010}$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_C\&\#C$ escape sequence.

LEGAL SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
LETTER GOTHIC			
9.5 pt Upright Med, 16.66-pitch	LG095R16.LGP	1	$E_C(1U^{E_C}(sp16.66h9.5vsb6T$ VMI Setting = 7.68
(Landscape)	LG095R16.LGL	3	
12 pt Upright Med, 12-pitch	LG120R12.LGP	1	$E_C(1U^{E_C}(sp12h12vsb6T$ VMI Setting = 9.6
(Landscape)	LG120R12.LGL	3	
12 pt Upright Bold, 12-pitch	LG120B12.LGP	1	$E_C(1U^{E_C}(sp12h12vs3b6T$ VMI Setting = 9.6
(Landscape)	LG120B12.LGL	3	
12 pt Italic Med, 12-pitch	LG120I12.LGP	1	$E_C(1U^{E_C}(sp12h12v1sb6T$ VMI Setting = 9.6
(Landscape)	LG120I12.LGL	3	
14 pt Upright Med, 10-pitch	LG140R10.LGP	2	$E_C(1U^{E_C}(sp10h14vsb6T$ VMI Setting = 11.2
(Landscape)	LG140R10.LGL	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($E_C\text{Q}10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $E_C\&\text{Q}\#C$ escape sequence.

LEGAL SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
PRESENTATIONS			
14 pt Upright Bold, 10-pitch	PS140B10.LGP	2	$\text{E}_c(1\text{U}\text{E}_c(\text{sp}10\text{h}14\text{vs}3\text{b}11\text{T}$ VMI Setting = 11.2
(Landscape)	PS140B10.LGL	4	
16 pt Upright Bold, 8.1-pitch	PS160B08.LGP	2	$\text{E}_c(1\text{U}\text{E}_c(\text{sp}8.1\text{h}16\text{vs}3\text{b}11\text{T}$ VMI Setting = 12.8
(Landscape)	PS160B08.LGL	4	
18 pt Upright Bold, 6.5-pitch	PS180B06.LGP	2	$\text{E}_c(1\text{U}\text{E}_c(\text{sp}6.5\text{h}18\text{vs}3\text{b}11\text{T}$ VMI Setting = 14.4
(Landscape)	PS180B06.LGL	4	
24 pt Upright Bold, 5.7-pitch	PS240B05.LGP	5	$\text{E}_c(1\text{U}\text{E}_c(\text{sp}5.7\text{h}24\text{vs}3\text{b}11\text{T}$ VMI Setting = 19.2
(Landscape)	PS240B05.LGL	5	
30 pt Upright Bold, 4.6	PS300B04.LGP	5	$\text{E}_c(1\text{U}\text{E}_c(\text{sp}4.6\text{h}30\text{vs}3\text{b}11\text{T}$ VMI Setting = 24
(Landscape)	PS300B04.LGL	5	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_c\text{Q}10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_c\&\text{Q}\#\text{C}$ escape sequence.

PC LINE SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
9.5 pt Upright Med, 16.66-pitch	LP095R16.PLP	1	$E_C(4Q^E_C(sp16.66h9.5vsb0T$ VMI Setting = 7.68
(Landscape)	LP095R16.PLL	3	
12 pt Upright Med, 12-pitch	LP120R12.PLP	1	$E_C(4Q^E_C(sp12h12vsb0T$ VMI Setting = 9.6
(Landscape)	LP120R12.SFL	3	
12 pt Upright Bold, 12-pitch	LP120B12.PLP	1	$E_C(4Q^E_C(sp12h12vs3b0T$ VMI Setting = 9.6
(Landscape)	LP120B12.PLL	3	
14 pt Upright Med, 10-pitch	LP140R10.PLP	2	$E_C(4Q^E_C(sp10h14vsb0T$ VMI Setting = 11.2
(Landscape)	LP140R10.PLL	4	
14 pt Upright Bold, 10-pitch	LP140B10.PLP	2	$E_C(4Q^E_C(sp10h14vs3b0T$ VMI Setting = 11.2
(Landscape)	LP140B10.PLL	4	
16 pt Upright Bold, 8.1-pitch	LP160B08.PLP	2	$E_C(4Q^E_C(sp8.1h16vs3b0T$ VMI Setting = 12.8
(Landscape)	LP160B08.PLL	4	
18 pt Upright Bold, 6.5-pitch	LP180B06.PLP	2	$E_C(4Q^E_C(sp6.5h18vs3b0T$ VMI Setting = 14.4
(Landscape)	LP180B06.PLL	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($E_C\ell 10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $E_C\&\ell\#C$ escape sequence.

LINEDRAW SYMBOL SET

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
LINEDRAW			
9.5 pt Upright Med, 16.66-pitch	LP095R16.L7P	1	$\text{E}_C(\text{0B}\text{E}_C(\text{sp16.66h9.5vsb0T}$ VMI Setting = 7.68
(Landscape)	LP095R16.L7L	3	
12 pt Upright Med, 12-pitch	LP120R12.L7P	1	$\text{E}_C(\text{0B}\text{E}_C(\text{sp12h12vsb0T}$ VMI Setting = 9.6
(Landscape)	LP120R12.L7L	3	
14 pt Upright Med, 10-pitch	LP140R10.L7P	2	$\text{E}_C(\text{0B}\text{E}_C(\text{sp10h14vsb0T}$ VMI Setting = 11.2
(Landscape)	LP140R10.L7L	4	
16 pt Upright Med, 8.1-pitch	LP160R08.L7P	2	$\text{E}_C(\text{0B}\text{E}_C(\text{sp8.1h16vsb0T}$ VMI Setting = 12.8
(Landscape)	LP160R08.L7L	4	
18 pt Upright Med, 6.5-pitch	LP180R06.L7P	2	$\text{E}_C(\text{0B}\text{E}_C(\text{sp6.5h18vsb0T}$ VMI Setting = 14.4
(Landscape)	LP180R06.L7L	4	

* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_C\text{010}$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_C\&\text{0}\#\text{C}$ escape sequence.

MATH-8, MATH-7 AND PI SYMBOL SETS

Font	File Name *	Disc #	Escape Sequence ** and VMI Setting
MATH-8 - LETTER GOTHIC			
9.5 pt Upright Med, 16.66-pitch	LG095R16.M8P	1	$\text{E}_C(8\text{M}\text{E}_C(\text{sp}16.66\text{h}9.5\text{vsb}6\text{T}$ VMI Setting = 7.68
(Landscape)	LG095R16.M8L	3	
12 pt Upright Med, 12-pitch	LG120R12.M8P	1	$\text{E}_C(8\text{M}\text{E}_C(\text{sp}12\text{h}12\text{vsb}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120R12.M8P	3	
MATH-7 - LETTER GOTHIC			
12 pt Upright Med, 12-pitch	LG120R12.M7P	1	$\text{E}_C(\emptyset\text{A}\text{E}_C(\text{sp}12\text{h}12\text{vsb}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120R12.M7L	3	
PIFONT - LETTER GOTHIC			
12 pt Upright Med, 12-pitch	LG120R12.PIP	1	$\text{E}_C(15\text{U}\text{E}_C(\text{sp}12\text{h}12\text{vsb}6\text{T}$ VMI Setting = 9.6
(Landscape)	LG120R12.PIL	3	



* The landscape font file names are shaded.

** To print a landscape font, the printer must be in landscape orientation ($\text{E}_C\&10$). Set the VMI **AFTER** downloading and selecting the font for printing by entering the $\text{E}_C\&\#C$ escape sequence.

USING PC LINE AND LINE DRAW CHARACTERS WITH THE PRESENTATIONS FONTS

The PC Line and Linedraw fonts make it possible to draw a variety of vertical and horizontal lines by converting USASCII keystrokes into various line characters (use Table D on page 25 for keystroke and decimal equivalencies). The PC Line font corresponds to IBM-8 line drawing characters, and the Linedraw font corresponds to the line drawing characters used with Hewlett-Packard terminals and computers.

Some of the more common uses for these line drawing characters are creating simple lined forms such as boxes, borders and charts. The following examples merge Presentations text with PC Line and Linedraw characters.

Before you start, read the following information carefully:

- The PC Line and Linedraw fonts will connect vertical symbols using the VMI settings listed in the HP Letter Gothic Soft Font Table. We recommend setting the VMI for all line drawing fonts for optimum printing results. However, it is possible to print using the 12 and 14-point line drawing fonts without setting the listed VMI. The VMI must be set for fonts over 14 point size since some line characters will not join properly using the printer's default line spacing setting (default = 6 lines per inch). See page 3 for instructions on setting the VMI.
- The PC Line and Linedraw fonts can be merged with all fonts except the 24 and 30-point fonts. We recommend using fonts with the same point size when merging text fonts with line fonts for ease in printing.

- When using PC Line and Linedraw fonts merged with a text font we recommend setting up primary and secondary fonts and then using Shift-In and Shift-Out commands to switch between the fonts.

Use the following examples for instructions on merging PC Line or Linedraw characters with text.

EXAMPLE (for the HP Vectra or IBM PC):

This example assumes that your printer buffer is clear. If fonts have already been downloaded, you will need to modify these instructions by assigning font ID numbers that have not already been assigned.

1. Using the HP Vectra, IBM PC or PC-compatible computer, reset the printer by sending an E_cE command.
2. Download the Presentations 14 pt. Bold font to your printer (file PS140B10.USB), assigning it font ID #1. (See the "Downloading Your Hewlett-Packard Soft Fonts" booklet for downloading instructions.)
3. Download the PC Line 14 pt. Bold font (file LP140B10.PL), assigning it font ID # 2.

Once these fonts are downloaded, you are ready to assign them primary and secondary status and use Shift-In and Shift-Out commands to switch between them. **NOTE:** Some software packages do not allow you to use the Shift-In/Out commands shown in this example. If your package does not allow this, you must enter the associated escape sequence every time you wish to switch fonts, or use the method specified by your software.

4. To select font #1 and assign it primary status when printing, send the following escape sequence:

$\text{E}_c(1\text{X}$

5. To select font #2 and assign it secondary status when printing, send the following escape sequence:

$\text{E}_c)2X$

6. Enter the following information. (To Shift-In - s_1 - and use the Presentations characters, press the control key and hold it down while pressing the letter "O." To Shift-Out - s_o - and use the PC Line characters, press the control key and hold it down while pressing the letter "N." The VMI is set using the $\text{E}_c\&\text{ll}11.2C$ escape sequence.)

$\text{E}_c(1X$
 $\text{E}_c)2X$
 $\text{E}_c\&\text{ll}11.2C$

```

s_oIMMMMMMQMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM;
:s_1 ID # s_o3s_1 FONT s_o:
GDDDDDDDEDDDDDDDDDDDDDDDDDDDDDDDDDD6
:s_1 1 s_o3s_1 Presentations, 14 pt. s_o:
:s_1 2 s_o3s_1 PC Line, 14 pt s_o:
:s_1 3 s_o3s_1 Linedraw, 14 pt. s_o:
HMMMMMOMMMMMMMMMMMMMMMMMMMMMMMMMMMMM<s_1

```

7. Print ... and you get this:

ID #	FONT
1	PRESENTATIONS, 14 PT.
2	PC LINE, 14 PT.
3	LINEDRAW, 14 PT.

After printing the previous example, try the following example merging the downloaded Presentations font and Linedraw characters:

1. Download the 14 pt. Upright Linedraw font (file LP140R10.L7P), assign it font ID # 3.
2. To select font #3 and assign it secondary status when printing, send the following escape sequence:

$\text{E}_c)3X$

3. Enter the following information using the Shift-In and Shift-Out commands explained above:

$\text{E}_c(1X$
 $\text{E}_c)3X$
 $\text{E}_c\&Q11.2C$

```

s_oQ;::::::::::::::::::;W
:                               :
:  s_iSOFT FONTS  s_o:
:                               :
A;::::::::::::::::::;S^i
```

4. Print ... and you get this:



CREATING COMPOSITE MATH CHARACTERS

The Math-8, Math-7, and PiFont symbol sets included with the HP 33412DA Letter Gothic Family soft fonts make it possible to assemble a variety of composite math characters. The following examples show you how to create math symbols and how to merge math symbols with text using the Math-7 symbol set.

Before you get started, read the following information carefully:

- Refer to "Using the Roman-8 and Math-8 Symbol Sets" in the next section for instructions on printing Math-8 characters.
- Refer to the USASCII keystroke equivalency table on page 25 for converting keystrokes into composite characters. This table also lists the decimal equivalents for the Math-7 and PiFont symbol sets.
- To print composite math symbols, the font with the associated symbol set must be downloaded to the printer. When merging composite math symbols with text, you must use a text font with a matching point size to print correctly.

EXAMPLES:

If fonts are already downloaded in your printer, you may need to modify these instructions by assigning different ID numbers when downloading the fonts. In the following example, composite characters are created from the Math-7 symbol set.

1. Download the Letter Gothic 12 pt. Medium font using the Math-7 symbol set (file LG120R12.M7P), assigning it font ID #1. (See the "Downloading Your Hewlett-Packard Soft Fonts" booklet for downloading instructions.)

- To select font ID #1 when printing, send the following escape sequence:

$\text{\textasciix{1X}}$

- Enter the following information:

$\text{\textasciix{1X}}$

"	"	"
=	"	"
	=	"
		=

- Print ... and you get this:

"	"	"
=	"	"
	=	"
		=

After printing the example above, try the following example merging the downloaded Math-7 font with the Letter Gothic 12 point Italic font.

- Download the Letter Gothic 12 pt. Italic font (file LG120I12.USB), assigning it font ID #2.
- To select font #2 when printing, send the following escape sequence:

$\text{\textasciix{2X}}$

- Enter the following information.

$\text{\textasciix{1X}}$

" $\text{\textasciix{2Xa}}$ dx = ax. $\text{\textasciix{1X}}$
=

4. Print . . . and you get this:

$$\int a dx = ax.$$

USING THE ROMAN-8 AND MATH-8 SYMBOL SETS

Refer to the following Roman-8 and Math-8 tables to identify the characters associated with each symbol set. To use these symbol sets, you must first download the associated font to the printer.

Depending on kind of computer or software package you are using, there may be several different ways of printing Roman-8 and Math-8 characters. Some systems and software packages do not allow you to print characters from these tables (from 8-bit symbol sets). Refer to your computer or software manuals for information on printing these characters with your equipment.

Using Decimal Equivalents to Print Characters

Use the following instructions to print a Roman-8 or Math-8 character using the decimal method:

1. Locate the character you wish to print in the table.
2. Find the associated decimal number located under the character.
3. Enter this number in your program or software file designed for this purpose. When you send the print command, the associated character will print.

Table B
ROMAN-8 SYMBOL SET

NUL 0	DLE 16	SP 32	0 48	@ 64	P 80	` 96	p 112				- 160	â 176	À 192	Á 208	à 224	á 240
SOH 1	DC1 17	!	1 49	A 65	Q 81	a 97	q 113				À 161	ê 177	î 193	Ë 209	ë 225	é 241
STX 2	DC2 16	"	2 50	B 66	R 82	b 98	r 114				À 162	ô 178	ø 194	ã 210	ä 226	å 242
ETX 3	DC3 19	#	3 51	C 67	S 83	c 99	s 115				È 163	° 179	û 195	Æ 211	Ð 227	
EOT 4	DC4 20	\$	4 52	D 68	T 84	d 100	t 116				É 164	Ç 180	á 196	â 212	ã 228	ä 244
ENQ 5	NAK 21	%	5 53	E 69	U 85	e 101	u 117				Ë 165	ç 181	é 197	í 213	ï 229	
ACK 6	SYN 22	&	6 54	F 70	V 86	f 102	v 118				Ï 166	Ñ 182	ó 198	ø 214	ì 230	- 246
BEL 7	ETB 23	'	7 55	G 71	W 87	g 103	w 119				Ï 167	ñ 183	ú 199	æ 215	ó 231	¼ 247
BS 8	CAN 24	(	8 56	H 72	X 88	h 104	x 120				ï 168	à 184	Ä 200	ò 216	½ 232	248
HT 9	EM 25	)	9 57	I 73	Y 89	i 105	y 121				ÿ 169	è 185	ì 201	õ 217	¾ 233	249
LF 10	SUB 26	*	10 58	J 74	Z 90	j 106	z 122				^ 170	ð 186	ö 202	ö 218	¾ 234	250
VT 11	ECS 27	+	11 59	K 75	[91	k 107	{ 123				~ 171	£ 187	ù 203	Û 219	¾ 235	251
FF 12	FS 28	,	12 60	L 76	\ 92	l 108	| 124				~ 172	¥ 188	ä 204	É 220	¾ 236	252
CR 13	GS 29	-	13 61	M 77	] 93	m 109	} 125				Û 173	š 189	ë 205	ï 221	Û 237	¾ 253
SO 14	RS 30	.	14 62	N 78	^ 94	n 110	~ 126				Û 174	f 190	ö 206	ß 222	ÿ 238	¾ 254
SH 15	US 31	/	15 63	O 79	_ 95	o 111	~ 127				£ 175	¢ 191	ü 207	ò 223	ÿ 239	

USASCII
Characters

RomanExt
Characters

Table C*
MATH-8 SYMBOL SET

NUL 0	DLE 16	SP 32	0 48	∴ 64	∏ 80	∴ 96	π 112				— 160	⊖ 176	⊖ 192	⊖ 208	⌈ 224	⌋ 240
SOH 1	DC1 17	✓ 33	1 49	A 65	P 81	α 97	ρ 113				↑ 161	∇ 177	⊙ 193	→ 209	⌈ 225	⌋ 241
STX 2	DC2 18	" 34	2 50	B 66	Σ 82	β 98	σ 114				→ 162	∃ 178	⊗ 194	⊥ 210	⌈ 226	⌋ 242
ETX 3	DC3 19	° 35	3 51	Γ 67	Τ 83	γ 99	τ 115				↓ 163	⊤ 179	⊖ 195		⌈ 227	⌋ 243
EOT 4	DC4 20	∞ 36	4 52	Δ 68	Τ 84	δ 100	υ 116				← 164	⊥ 180	∅ 196		⌈ 228	⌋ 244
ENO 5	NAK 21	÷ 37	5 53	E 69	Φ 85	ε 101	φ 117				↑ 165	∪ 181	∧ 197	∫ 213	⌈ 229	⌋ 245
ACK 6	SYN 22	α 38	6 54	Z 70	X 86	ζ 102	χ 118				⇒ 166	∩ 182	∨ 198	§ 214	φ 230	⌋ 246
BEL 7	ETB 23	' 39	7 55	H 71	Ψ 87	η 103	ψ 119				↓ 167	∈ 183	∇ 199	∠ 215	⌈ 231	⌋ 247
BS 8	CAN 24	(40	8 56	θ 72	Ω 88	θ 104	ω 120				← 168	∋ 184	— 200	∅ 216	⌈ 232	⌋ 248
HT 9	EM 25	) 41	9 57	I 73	∇ 89	ι 105	θ 121				↑ 169	∉ 185	∘ 201	⊗ 217	⌈ 233	⌋ 249
LF 10	SUB 26	× 42	e 58	K 74	∂ 90	κ 106	φ 122				↔ 170	⊂ 186	· 202	⊃ 218	⌈ 234	⌋ 250
VT 11	ECS 27	+ 43	ε 59	Λ 75	ς 91	λ 107	ω 123				↑ 171	⊃ 187	· 203	⌋ 219	⌈ 235	⌋ 251
FF 12	FS 28	, 44	< 60	M 76	≤ 92	μ 108	≈ 124				↔ 172	∄ 188	• 204	⊙ 220	236	252
CR 13	GS 29	— 45	= 61	N 77	≠ 93	ν 109	≡ 125				= 173	∅ 189	⊙ 205	∩ 221	237	253
SO 14	RS 30	· 46	> 62	E 78	≥ 94	ξ 110	≠ 126				= 174	⊂ 190	↑ 206	⊗ 222	238	254
SI 15	US 31	/ 47	≈ 63	0 79	— 95	0 111	⊗ 127				— 175	⊃ 191	‡ 207	3 223	239	

* Composite math characters are highlighted in this table. Use combinations of these characters to create math symbols.

USING THE KEYSTROKE EQUIVALENCY TABLE

The table on the following pages shows the USASCII keystroke equivalents for the Roman Extension, Legal, PC Line, Linedraw, Math-7, and PiFont symbol sets. The decimal numbers associated with each character are also listed here. To use this table, you must download the font you wish to use for printing. Once the correct symbol set and font are selected, typing the corresponding USASCII keystroke or entering the associated decimal number in your programming command will print the character you have selected. USASCII keystrokes and composite math characters are highlighted in this table.

Table D
USASCII KEYSTROKE EQUIVALENCY TABLE

USASCII Keystroke	!	"	#	\$	%	&	'	()	*	+	,
USASCII Presentations	!	"	#	\$	%	&	'	()	*	+	,
RomanExt	À	Á	Ä	É	Ê	Ë	Ï	Ï	Ï	Ï	Ï	Ï
Legal	!	"	#	\$	%	&	'	()	*	+	,
Legal Presentations	!	"	#	\$	%	&	'	()	*	+	,
PC Line												
LineDraw	! |	! |	! |	! |	! |	! |	! |	! |	! |	! |	! |	! |
Math 7	/	/	S	V	±	α	∫	÷	≈	∏	∏	ψ
PiFont			“	”	”	”	”	”	”	”	”	”
Decimal	32	33	34	35	36	37	38	39	40	41	42	43
												44

USASCII Keystroke	-	.	/	0	1	2	3	4	5	6	7	8	9
USASCII Presentations	-	.	/	0	1	2	3	4	5	6	7	8	9
RomanExt	0	0	£	-	-	°	°	°	°	°	°	°	°
Legal	-	.	/	0	1	2	3	4	5	6	7	8	9
Legal Presentations	-	.	/	0	1	2	3	4	5	6	7	8	9
PC Line													
LineDraw	|	|	|	|	|	|	|	|	|	|	|	|	|
Math 7	≡	Φ	Ξ	0	1	2	3	4	5	6	7	8	9
PiFont	⊙	⊙											
Decimal	45	46	47	48	49	50	51	52	53	54	55	56	57

USASCII Keystroke	:	;	<	=	>	?	ø	A	B	C	D	E	F
USASCII Presentations	:	;	<	=	>	?	ø	A	B	C	D	E	F
RomanExt	π	£	¥	§	f	¢	â	ê	ô	û	á	é	ó
Legal	:	;	-	=	¢	?	ø	A	B	C	D	E	F
Legal Presentations	:	;	=	¢	?	ø	A	B	C	D	E	F	F
PC Line	||	||	||	||	J	J	L	L	T	T	-	-	+
LineDraw	|	-	H	[	†	‡	L	†	‡	‡	‡	|	L
Math 7	Ω	Λ	∞	J	†	Σ	¶	α	β	ψ	φ	ε	θ
PiFont	∇	<	◀	§	▶	¶	::	Δ					F
Decimal	58	59	60	61	62	63	64	65	66	67	68	69	70

USASCII Keystroke	G	H	I	J	K	L	M	N	O	P	Q	R	S
USASCII Presentations	G	H	I	J	K	L	M	N	O	P	Q	R	S
RomanExt	ú	à	è	ò	ù	ä	ë	ö	ü	À	Ï	Ø	Æ
Legal	G	H	I	J	K	L	M	N	O	P	Q	R	S
Legal Presentations	G	H	I	J	K	L	M	N	O	P	Q	R	S
PC Line	||	||	||	||	||	||	=	||	||	||	||	||	||
LineDraw	J	∩	∩	∩	∩	∩	†	†	†	†	†	†	J
Math 7	λ	η	ι	θ	κ	ω	μ	ν	ρ	π	γ	θ	σ
PiFont	ħ			ℓ				ø	ρ	β	β	β	Σ
Decimal	71	72	73	74	75	76	77	78	79	80	81	82	83

USASCII Keystroke	T	U	V	W	X	Y	Z	[\]	^	_	'
USASCII Presentations	T	U	V	W	X	Y	Z	[\]	^	_	'
RomanExt	â	í	ø	æ	Ä	ï	ö	Ü	É	ï	ß	Ó	Á
Legal	T	U	V	W	X	Y	Z	[⊗]	⊙	_	°
Legal Presentations	T	U	V	W	X	Y	Z	[⊗]	⊙	_	°
PC Line	£	F	¶	†	‡	J	Γ	■	■	■	■	■	■
LineDraw	⌈	⌋	⌌	⌍	⌎	⌏	⌐	⌑	⌒	⌓	⌔	⌕	⌖
Math 7	τ	ξ	Δ	δ	X	υ	ζ	↑	→	T	+	↓	¶
PiFont								||	||	||			Γ
Decimal	84	85	86	87	88	89	90	91	92	93	94	95	96

USASCII Keystroke	a	b	c	d	e	f	g	h	i	j	k	l	m
USASCII Presentations	A	B	C	D	E	F	G	H	I	J	K	L	M
RomanExt	Ā	ā	Ĉ	ĉ	Ī	ī	Ō	ō	Ŏ	ö	š	š	Ú
Legal	a	b	c	d	e	f	g	h	i	j	k	l	m
Legal Presentations	A	B	C	D	E	F	G	H	I	J	K	L	M
PC Line													
LineDraw	⌌	⌍	⌎	⌏	⌐	⌑	⌒	⌓	⌔	⌕	⌖	⌗	⌘
Math 7	α	β	ψ	φ	ε	δ	λ	η	ι	θ	κ	ω	μ
PiFont	⌌	⌍	⌎	⌏	⌐	⌑	⌒	⌓	⌔	⌕	⌖	⌗	⌘
Decimal	97	98	99	100	101	102	103	104	105	106	107	108	109

USASCII Keystroke	n	o	p	q	r	s	t	u	v	w	x	y	z
USASCII Presentations	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
RomanExt	Ÿ	ÿ	þ						-	½	¾	À	á
Legal	n	o	p	q	r	s	t	u	v	w	x	y	z
Legal Presentations	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
PC Line													.
LineDraw	†	‡	§	¶	·	¸	¹	º	»	¼	½	¾	¸
Math 7	ν	ρ	π	γ	θ	σ	τ	ξ	Δ	δ	X	υ	ζ
PiFont													
Decimal	110	111	112	113	114	115	116	117	118	119	120	121	122

USASCII Keystroke	{	|	}	~	±								
USASCII Presentations	{	|	}	~	±								
RomanExt	«	»	±										
Legal	§	¶	·	¸									
Legal Presentations	§	¶	·	¸									
PC Line													
LineDraw	‡	§	¶	·	¸	¹	º	»	¼	½	¾	¸	
Math 7	†	‡	§	¶	·	¸	¹	º	»	¼	½	¾	¸
PiFont													
Decimal	123	124	125	126	127								

Table E
LETTER GOTHIC FAMILY SOFT FONT
MEMORY REQUIREMENTS

The following table includes memory requirements for all of the Letter Gothic soft font files (all of the files are referenced by symbol set). Refer to your printer Operator's Manual for the total amount of memory available with your printer. When using soft fonts, keep in mind that each downloaded font occupies a portion of memory (RAM) that cannot be used for anything else until the font is deleted. Once the available memory space is used, your printer will not accept more data and will flash an error message. Any downloaded fonts already in memory will not be affected. The memory requirements listed here represent the highest limit for all portrait and landscape fonts. The numbers listed represent bytes.

File Name	Memory Requirement (Bytes)
Roman-8 Symbol Set	
LG095R16.R8P/R8L	15620
LG120R12.R8P/R8L	25220
LG120B12.R8P/R8L	25410
LG120I12.R8P/R8L	26760
LG140R10.R8P/R8L	31240

File Name	Memory Requirement (Bytes)
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USASCII Symbol Set

LG095R16.USP/USL	7300
LG120R12.USP/USL	12420
LG120B12.USP/USL	12610
LG120I12.USP/USL	13510
LG140R10.USP/USL	15560
PS140B10.USP/USL	15430
PS160B08.USP/USL	21960
PS180B06.USP/USL	29570
PS240B05.USP/USL	38600
PS300B04.USP/USL	55170

Roman-Ext Symbol Set

LG095R16.RXP/RXL	8450
LG120R12.RXP/RXL	13000
LG120B12.RXP/RXL	13060
LG120I12.RXP/RXL	13640
LG140R10.RXP/RXL	15810

Legal Symbol Set

LG095R16.LGP/LGL	7490
LG120R12.LGP/LGL	12550
LG120B12.LGP/LGL	12740
LG120I12.LGP/LGL	13640
LG140R10.LGP/LGL	15680
PS140B10.LGP/LGL	15620
PS160B08.LGP/LGL	22340
PS180B06.LGP/LGL	29830
PS240B05.LGP/LGL	39110
PS300B04.LGP/LGL	56070

File Name	Memory Requirement (Bytes)
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PC Line Symbol Set

LP095R16.PLP/PLL	6660
LP120R12.PLP/PLL	9160
LP120B12.PLP/PLL	9220
LP140R10.PLP/PLL	10500
LP140B10.PLP/PLL	11270
LP160B08.PLP/PLL	14210
LP180B06.PLP/PLL	18820

Linedraw Symbol Set

LP095R16.L7P/L7L	12230
LP120R12.L7P/L7L	17280
LP140R10.L7P/L7L	20100
LP160R08.L7P/L7L	25670
LP180R06.L7P/L7L	32200

Math-8, Math-7, PiFont Symbol Sets

LG095R16.M8P/M8L	15810
LG120R12.M8P/M8L	24710
LG120R12.M7P/M7L	12480
LG120R12.PIP/PIL	10760



