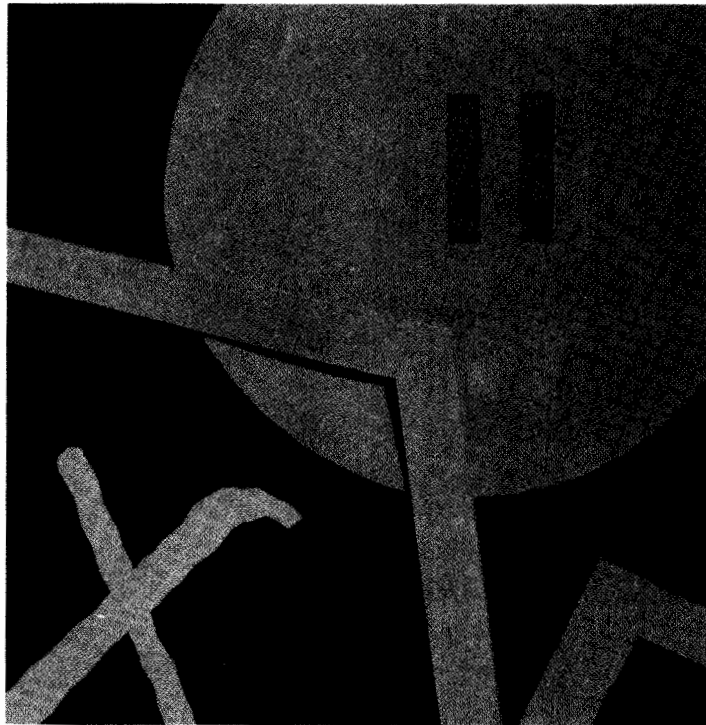


# Using the Hewlett-Packard TextEquations For+ Cartridge



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**HP C2053A #C07**

**Using the Hewlett-Packard  
TextEquations Font Cartridge**

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## Printing History

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This manual was created on a Hewlett-Packard Vectra Personal Computer using WordPerfect 5.0 and Ventura Publisher. The camera-ready text was generated on a Hewlett-Packard LaserJet series II printer.

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# About the TextEquations Font Cartridge

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This manual describes the contents and how to effectively use the Hewlett-Packard **HP TextEquations** font cartridge.

The **HP TextEquations** font cartridge offers the following special features:

- Two typefaces (Prestige Elite and CG Times).
- One text-oriented symbol set (Roman-8).
- Three math-oriented symbol sets (Math-8, Math-7 and Pi Font).
- Compatibility with all LaserJet printers except the LaserJet (2686A), LaserJet PLUS, and LaserJet 500 PLUS printers.

The **HP TextEquations** font cartridge provides the Prestige Elite and CG Times typefaces whose characteristics combine to create a variety of fixed pitch and proportionally spaced portrait\* fonts in medium, bold, and italic styles. The **HP TextEquations Font Cartridge Contents** section of this manual provides a brief description of each typeface provided in the **HP TextEquations** font cartridge. Samples of each available font are also provided.

With the **HP TextEquations** font cartridge installed, you can print with any of the fonts shown and described on the following pages. The **HP TextEquations** fonts can be used in addition to, or in combination with your printer's internal fonts or any other Hewlett-Packard fonts.

\*If your printer has the automatic font rotation feature, you can print the portrait fonts on the **HP TextEquations** font cartridge, in landscape orientation.

For example, the LaserJet IID and LaserJet 2000 printers can take any one of the portrait fonts on your **HP TextEquations** font cartridge and rotate them 90 degrees to landscape orientation.

# TextEquations Font Cartridge

## Contents

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The **HP TextEquations** font cartridge offers the Prestige Elite and CG Times typefaces. The following section provides a brief description of each typeface. A sample of each available font is also provided.

### Prestige Elite

Prestige Elite is an easy to read, fixed pitch typeface which is ideally suited for a multitude of word processing applications. Although originally designed as a typewriter typeface, Prestige Elite has migrated to a variety of applications. It has become particularly popular when used in legal documents and business correspondence.

The **HP TextEquations** font cartridge offers Prestige Elite in the Roman-8, Math-8, Math-7 and Pi Font symbol sets to enhance its usability for various technical applications.

Figure 1 shows the Prestige Elite fonts available in the **HP TextEquations** font cartridge.

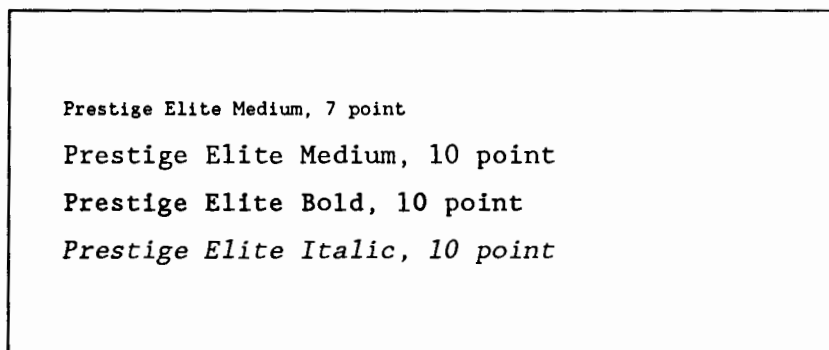


Figure 1. Prestige Elite Font Samples



## CG Times

CG Times is a variation of one of the world's most popular typeface designs. It is particularly effective when used for lengthy text in letters, reports, brochures, newsletters, proposals, and manuals.

CG Times is classified as a serif typeface. Its strong legibility makes it an ideal typeface when used alone, or in combination with other typeface fonts.

The **HP TextEquations** font cartridge offers CG Times in the Roman-8, Math-8, Math-7 and Pi Font symbol sets.

Figure 2 shows the CG Times fonts available in the **HP TextEquations** font cartridge.

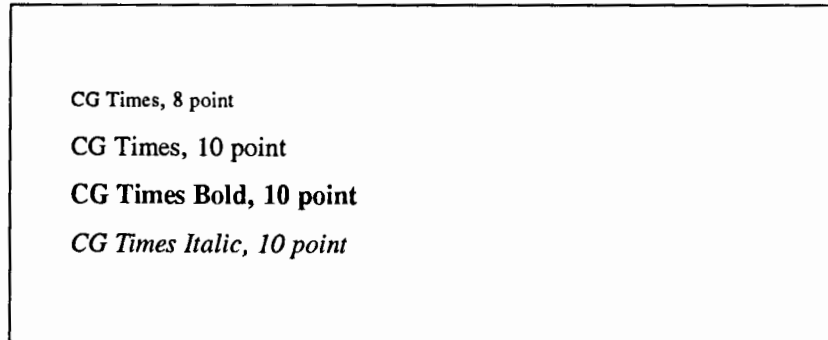


Figure 2. CG Times Font Samples

# Inserting the TextEquations Font Cartridge

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To insert the **HP TextEquations** font cartridge into the printer, complete the following steps:

---

## Caution

If the font cartridge is inserted or removed while the printer is on-line, you will receive an **FE CARTRIDGE** error message. Turn the printer **OFF** and back **ON** if you receive the **FE CARTRIDGE** error message.

- 
1. Press the [**On-Line**] key to place the printer in the off-line state (light off).

---

## Note

If you are inserting the **HP TextEquations** font cartridge into the LaserJet 2000 printer, the term “off-line”, as used in the following instructions, indicates that the printer should be powered off.

- 
2. Insert the **HP TextEquations** font cartridge, label side up, into an available cartridge slot on your printer.

Press the cartridge in firmly until it snaps into place. Make sure that the cartridge is solidly seated in the cartridge slot.

3. Press the [**On-Line**] key to return the printer to the on-line state (light on).

To remove the **HP TextEquations** font cartridge, press the [**On Line**] key to place the printer in the off-line state (light off). Grasp the edges of the cartridge and pull it out. Press the [**On Line**] key to return the printer to the on-line state (light on).



# Printer Drivers

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Most software applications send printer commands by using software drivers that are included with their programs. If you are using this type of software application, you generally do not see the printer commands displayed on the screen. This is because the software automatically sends the commands to the printer for you.

Printer drivers are programs that your software developers create to send job and page set-up commands (descriptions of fonts) to the printer. Drivers work automatically so you do not have to enter the commands yourself.

If your software package does not have a specific printer driver for the **HP TextEquations** font cartridge, contact your software vendor and ask about printer driver availability.

## Software User Hints

When you are creating composite math characters, we recommend that you set up tabs to align your characters. Composite math characters are made by typing in individual elements of a larger character. By setting up tabs, you will ensure proper alignment of your equations.

Refer to the symbol set charts or keyboard layouts (pg. 10,11,12) included with this manual to find math symbol locations. Check your software manual for more information about setting up tab stops and accessing extended characters.

The following example is generalized for most word processing software packages. The Math-8 symbol set is used. The [Alt] key is used to access the extended characters.

- Open a new document.
- Set small tab stops (for example 3 spaces).

Remember that after you type in a math element, you may have to change fonts to type in text. In this example, we change from the 10 point CG Times Math-8 font to the 10 point CG Times Italic Roman-8 font.

- The word CHANGE means “change font.” Type in the following:

Math-8 Font	Italic Font
[Tab] [Alt] 229 [Enter]	
[Tab] [Alt] 245 CHANGE	$a dx = ax + c$ [Enter] CHANGE
[Tab] [Alt] 231 [Enter]	

- Print the document.

Your printed output should look like this.

$$\int a dx = ax + c$$

Sometimes you may have to adjust your line spacing (vertical spacing) to make the composite characters connect properly. Refer to your software manual for information on adjusting line spacing.

# Keyboard Layouts

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Figures 3, 4 and 5 (on Pages 10,11,12) depict three keyboard layouts. These layouts are designed for US English keyboards only. Using these layouts, you can quickly identify the location of the Math-8, Math-7, and Pi Font symbols. These keyboard layouts are provided as a quick reference.

The keyboard-side (front) of the layouts shows which Math-8, Math-7, or PI Font symbol is assigned to each key. See the examples below. Additional instructions for the Math-8 symbol set are located on the following page.

## **Example - Using the Keyboard Layout (Keyboard-side)**

In this example you will access the  $\Sigma$  symbol from the Math-8 symbol set and print it through your software.

1. Using your application software, open a new document and select the 10 point Prestige Elite Math-8 font.
2. Locate the Math-8 keyboard layout.
3. Find the  $\Sigma$  symbol (under the upper-case “R”).
4. Type an “R”.

The actual math symbol may not appear on your document screen, but it will appear correctly when you print your document.

5. Print the document.

## Accessing Symbols Using the Alt Key

Some of the Math-8 symbols are not accessible through standard keyboards. Most software applications allow you to access these symbols by holding down the [Alt] key and typing in a three-digit\* decimal code using your numeric keypad.

The decimal number of these symbols is displayed on the upper-side of the Math-8 keyboard layout.

The symbol that appears on your software document screen is generally different from the symbol that prints on your document.

### Example - Using the Keyboard (Upper-side)

To access the “empty set”  $\emptyset$  symbol from the Math-8 symbol set follow these steps:

1. Using your application software, open a new document and select the 10 point Prestige Elite Math-8 font.
2. Locate the Math-8 keyboard layout.
3. Find the  $\emptyset$  symbol (number 216).
4. Hold down the [Alt] key and type in 2 1 6 using your numeric keypad.\*
5. Release the [Alt] key.
6. Print the document.

\* Refer to your software manual for information about accessing extended or special characters. MS Windows software applications require a leading zero, therefore four digits are required.

## Keyboards other than US English

If you are using a computer with anything other than a US English keyboard, you will not be able to use the keyboard layouts located in Figures 3, 4 and 5. Different keyboards, designed for use with languages other than US English, map their keys to different ASCII locations.

For most software, we recommend that you use the [Alt] key to access all of the Math-7, Math-8 or Pi Font symbols, by typing in the three-digit\* decimal value on your numeric keypad.

### Example - Using the Symbol Set Charts

To access the  $\pi$  symbol from the Math-8 symbol set using a non-US English keyboard, follow these steps:

1. Using your application software, open a new document and select the 10 point Prestige Elite Math-8 font.
2. Locate the Math-8 symbol set table in the Reference section of this manual.
3. From the symbol set table, locate the  $\pi$  symbol (number 112).
4. Hold down the [Alt] key and type in 112 using your numeric keypad\*
5. Release the [Alt] key.
6. Print the document.

\*Refer to your software manual for information about accessing extended or special characters. MS Windows software applications require a leading zero, therefore four digits are required.

Figure 3. Math-7 Keystroke Equivalency



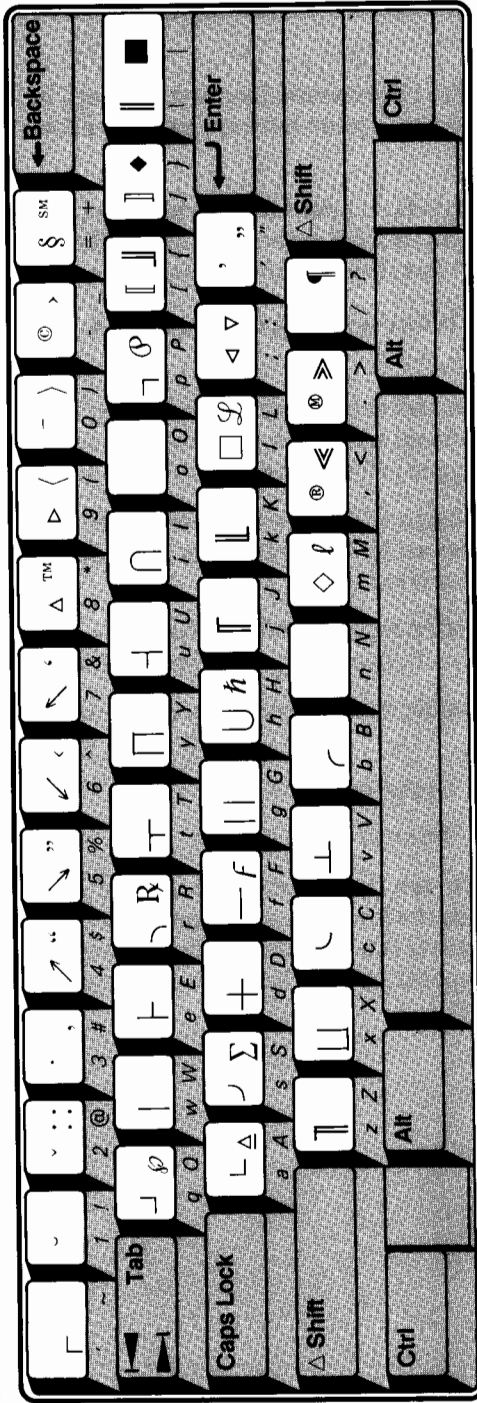
Symbol/Character	/   § ∇ ± α ∫ ÷ ≈ Π Γ Ψ ≡ Φ Ε 0 1 2 3 4 5 6 7 8 9 Ω Λ ∞ J † Σ
ASCII Keystroke	! " # \$ % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
Symbol/Character	¶ α β ψ φ ε δ λ η ι θ κ ω μ ν ρ π γ θ σ τ ξ Δ δ χ υ ζ † → T ← †
ASCII Keystroke	@ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ _
Symbol/Character	¶ α β ψ φ ε δ λ η ι θ κ ω μ ν ρ π γ θ σ τ ξ Δ δ χ υ ζ † → T ← †
ASCII Keystroke	` a b c d e f g h i j k l m n o p q r s t u v w x y z (   ) ~

Copy, fold and place this chart near your computer keyboard for quick reference.





Figure 5. Pi Font Keystroke Equivalency



Symbol/Character

ASCII Keystroke

Symbol/Character

ASCII Keystroke

Symbol/Character

ASCII Keystroke

” , “ ” ‘ ’ ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 ; < = > ?

! " # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 ; < = > ?

:: Δ F ħ ℓ ℓ ø ρ R Σ [ ] [ ] < >

@ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_

Γ L r , + + + - || U ∩ || □ ◊ 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0

, a b c d e f g h i j k l m n o p q r s t u v w x y z ( | ) ~

Copy, fold and place this chart near your computer keyboard for quick reference.

# Printer Commands

---

Access to the fonts on the **HP TextEquations** font cartridge can be gained by issuing printer commands, if your software package allows you to embed these commands.

Table 1, on page 25, shows the typeface, orientation, symbol set, spacing, pitch, point size, style, weight, and full printer command for each of the fonts available on the **HP TextEquations** font cartridge.

Read the following instructions before selecting fonts using the printer commands:

- Use of the full printer command ensures correct font selection for any application. If additional information on printer commands is required consult your printer manuals.
- Printer commands always begin with the escape sequence  $\text{ESC}$ . The escape character is followed by a unique series of letters and numbers that tell the printer what to do.
- The escape character  $\text{ESC}$  is often represented by either **1B** (hexadecimal) or **027** (decimal), depending upon your software.

Before using printer commands, take a moment to compare these characters:

Lower-case l - <i>l</i>	Upper-case O - <b>O</b>
Number one - 1	Number zero - <b>0</b>

Don't let the differences between these characters confuse you. Many printer commands use the lower-case l (*l*) and the number one (1), or the upper-case O (**O**) and the number zero (**0**). These characters may not appear on your screen as shown below.

- Use the prefix `^c&l00` to specify portrait orientation when issuing the full printer command.
- Use the prefix `^c&l10` to specify landscape orientation when issuing the full printer command.

Figure 6 shows the difference between portrait and landscape orientation.

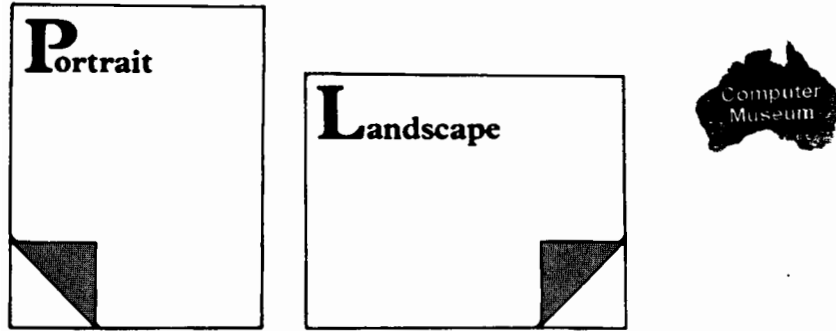


Figure 6. Portrait and Landscape Orientation.

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#### Note

If your printer has the automatic font rotation feature, you can print the portrait fonts on the **HP TextEquations** font cartridge in landscape orientation.

For example, the LaserJet IID and LaserJet 2000 printers can take any one of the portrait fonts on your **HP TextEquations** font cartridge and rotate it 90 degrees to landscape orientation.

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# Using Printer Commands to Select Fonts

---

If your software application does not have a driver which supports the **HP TextEquations** font cartridge, you can access the fonts by issuing full printer commands, if your software allows you to embed these commands.

---

## Note

For additional information regarding the availability of a driver which supports the **HP TextEquations** font cartridge, contact your software vendor.

---

The information in the following sections will assist you in selecting fonts from the **HP TextEquations** font cartridge.

## Font Selection

You can select any one of the fonts, which are available in the **HP TextEquations** font cartridge, by embedding the full printer command into your text or program.

Table 1 on page 25 shows the typeface, orientation, symbol set, spacing, pitch, point size, style, weight, and full printer command for each of the fonts available on the **HP TextEquations** font cartridge.

### Example - Font Selection

The procedures outlined in the following example are designed to assist you in creating a sample document. The following example is designed to show you how to complete the following objectives:

- Select a font for normal text entry
- Change fonts to specify bold print
- Return to the original font selection required for normal text entry to achieve the objectives described above, complete the following procedures:

1. To select the Prestige Elite (typeface), portrait (orientation), Roman-8 (symbol set), fixed spacing, 12 pitch, 10 point, upright, medium font, enter the following printer command:

`^c&l00^c(8U^c(s0p12h10v0s0b8T`

2. Type in the following text:

**This is a sample**

When printed, this text (This is a sample) will appear in Prestige Elite, 10 point, medium.

3. Select the Prestige Elite (typeface), portrait (orientation), Roman-8 (symbol set), fixed spacing, 12 pitch, 10 point, upright, bold font, by entering the following printer command:

`^c&l00^c(8U^c(s0p12h10v0s3b8T`

4. Type in the following text:

**TextEquations**

When printed, this text (TextEquations) will appear in Prestige Elite, 10 point, bold.

5. To return to Prestige Elite, 10 point, medium and complete the sample document, re-enter the following printer command:

`^c&l00^c(8U^c(s0p12h10v0s0b8T`

6. Type in the following text:

**font.**

When printed, this text (font.) will appear in Prestige Elite, 10 point, medium.

7. Print your sample document.

If you have entered the appropriate printer commands, your sample document will appear as it is shown in Figure 7.

This is a sample TextEquations font.

Figure 7. Example - Font Selection Sample.

# Printing Composite Characters with Printer Commands

---

If your software package does not have a driver which supports the **HP TextEquations** font cartridge, you can print composite characters by issuing printer commands. Your software package must have the ability to accept embedded printer commands (check your software manual).

This section describes composite characters, spacing requirements for proportional fonts, changing horizontal and vertical spacing and lists the printer commands to create an equation.

---

## NOTE

For additional information regarding the availability of a driver for the **HP TextEquations** font cartridge, contact your software vendor.

---

## Composite Math Characters

Composite math characters are made by combining individual elements of a larger character. These elements (or symbols) are shown with the light-colored shade in the Math-8, Math-7 and Pi Font symbol sets on pages 27-29.

You can make a variety of composite math characters, by combining these individual elements. This sample shows that the sigma symbol is made of seven elements. Adjustments to horizontal and vertical spacing are required to create composite math characters.

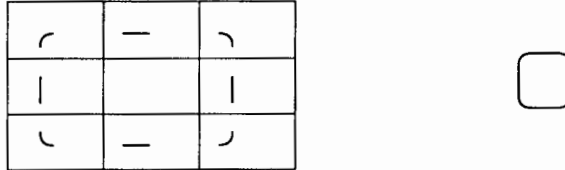
∟	—	⋤
	∟	
∟	—	⋤

$\Sigma$

## Composite Line Draw Characters

Composite line draw characters can be made by combining individual elements from the Pi Font Symbol Set. These elements (or symbols) are shown with the dark-colored shade in the Pi Font symbol set on page 29.

This sample shows a rounded corners box made of eight elements. Adjustments to horizontal and vertical spacing are required to create composite characters.



## Horizontal and Vertical Spacing Requirements

Before creating composite math characters, you may have to adjust the horizontal and vertical spacing using printer commands. Changing spacing is necessary to ensure that the elements will align properly to create a composite math character.

Horizontal Motion Index (HMI) sets to the amount of horizontal space used by characters or symbols. When fixed pitch fonts are selected, all printable characters including the space and backspace characters are affected by HMI. When proportional fonts are selected, the HMI affects only the space character. The printer command for HMI is `ESC & k # H` where # represents a horizontal spacing value in 1/120th inch increments. Adjustments to the HMI will remain in effect until a new font selection printer command is entered.

Vertical Motion Index (VMI) sets the amount of vertical space between lines (rows). The printer command for VMI is `ESC & l # C` where # represents a vertical spacing value in 1/48th inch increments between lines. Adjustments to the VMI remain in effect until a new VMI is set or until the printer is reset (`ESC E`). The factory default VMI is 8, which corresponds to 6 lines per inch.



The following table provides the recommended VMI and HMI settings for the creation of composite math characters using the Prestige Elite and CG Times fonts.

Typeface	Point Size	VMI	HMI (Lines)	HMI (Math)
CG Times*	8	5.28	N/A	9.6
CG Times	10	6.56	16.4	12
Prestige Elite*	7	6	N/A	N/A
Prestige Elite*	10	8	N/A	N/A

\*CG Times has no 8 point line symbols. Prestige Elite fonts are fixed-pitch, therefore no changes to HMI settings are required.

## Spacing Requirements For Proportional Fonts

When using proportional math fonts (CG Times) to create composite characters, you must adjust the horizontal spacing (HMI) so that the individual elements will properly align.

Enter the HMI command `&k9.6H` for the 8 point font or enter `&k12H` for the 10 point fonts. This adjustment to the HMI setting will remain active until you change fonts or until another HMI command is entered.

---

### NOTE

Due to the complexity of merging text with composite math characters, it is strongly recommended that you use a software package designed for proportional fonts.

---

# Sample Equation Using Printer Commands

A brief explanation of the individual printer commands is provided. For detailed programming information refer to the technical reference manual that is available for your printer.

## NOTE

The printer commands in this sample are listed on individual lines for viewing convenience. No carriage return/line feeds are to be entered. Your software must have the ability to suppress or inhibit carriage return/line feeds.

The space character is represented by the pound sign #.

$$\pi(n) = \sum_{k=2}^n \left[ \frac{\phi(k)}{k-1} \right]$$

## Command

## Explanation

<code>^cE</code>	Reset printer
<code>^c&amp;Q5e6.56C</code>	Select top margin and set VMI
<code>^c(8M^c(s1p10v0s0b5T</code>	Font change to CG Times, Math-8
	PRINTING TEXT TO THE SPACE CHARACTER AFTER THE EQUAL SIGN.
<code>p (</code>	Print equation characters
<code>^c(8U^c(s1p10v1s0b5T</code>	Font change to CG Times Italic, Roman-8
<code>n</code>	Print equation characters
<code>^c(8M^c(s1p10v0s0b5T</code>	Font change to CG Times, Math-8
<code>) # = #</code>	Print equation characters and spaces
<code>^c&amp;k12H</code>	Select math HMI for composite character
	PRINTING TEXT TO THE MID LEFT BRACKET STARTING WITH A SPACE CHARACTER.
<code># 249 # 246</code>	Print equation decimal numbers and spaces
<code>^c&amp;f0S</code>	Select push position, saves cursor position
<code>^c&amp;a-4c-1R</code>	Select horizontal and vertical cursor cell move

Continued on next page

**Command****Explanation (cont'd)**

PRINTING TEXT TO THE TOP LEFT BRACKET STARTING WITH A COMPOSITE CHARACTER,  
PUSH AND POP CURSOR POSITION USED FOR SETTING SUPERSCRIPIT "n".

232	Print equation decimal numbers
$\text{E}_c\&f\theta S$	Select push position, saves cursor position
$\text{E}_c\&a-1R$	Select vertical cursor cell move
$\text{E}_c(8U^{\text{E}_c}(s1p8v1s\theta b5T$	Font change to CG Times Italic, Roman-8
n	Print equation character
$\text{E}_c\&f1S$	Select pop position - places cursor at the last push position command
$\text{E}_c(8M^{\text{E}_c}(s1p1\theta v\theta s\theta b5T$	Font change to CG Times, Math-8
$\text{E}_c\&k12H$	Select math HMI for composite characters
176 248 246	Print equation decimal characters
$\text{E}_c\&f\theta S$	Select push position, saves cursor position
$\text{E}_c\&a-4c+2R$	Select horizontal and vertical cursor cell move

PRINTING TEXT TO THE VARIABLES STARTING WITH THE SUBSCRIPT k CHARACTER,  
PUSH AND POP CURSOR POSITION USED FOR SETTING SUBSCRIPT k=2.

$\text{E}_c\&f\theta S$	Select push position
$\text{E}_c\&a+1R$	Select vertical cursor cell move
$\text{E}_c(8U^{\text{E}_c}(s1p8v1s\theta b5T$	Font change to CG Times Italic, Roman-8
# k	Print equation characters and spaces
$\text{E}_c(8U^{\text{E}_c}(s1p8v\theta s\theta b5T$	Font change to CG Times, Roman-8
= 2	Print equation characters
$\text{E}_c\&f1S$	Select pop position
$\text{E}_c(8M^{\text{E}_c}(s1p1\theta v\theta s\theta b5T$	Font change to CG Times, Math-8
$\text{E}_c\&k12H$	Select math HMI for composite character
234 95 250 225	Print equation decimal numbers
$\text{E}_c(8U^{\text{E}_c}(s1p1\theta v1s\theta b5T$	Font change to CG Times Italic, Roman-8
# # k	Print spaces and equation character
$\text{E}_c(8M^{\text{E}_c}(s1p1\theta v\theta s\theta b5T$	Font change to CG Times, Math-8
-1	Print equation characters
$\text{E}_c\&f1S$	Select pop position, cursor position at top left bracket

PRINTING TEXT TO THE SPACE CHARACTER AFTER VARIABLES PHI TIMES k  
STARTING WITH A SPACE CHARACTER.

# # u (	Print spaces and equation characters
$\text{E}_c(8U^{\text{E}_c}(s1p1\theta v1s\theta b5T$	Font change to CG Times Italic, Roman-8
k	Print equation character
$\text{E}_c(8M^{\text{E}_c}(s1p1\theta v\theta s\theta b5T$	Font change to CG Times, Math-8
)	Print equation character
$\text{E}_c\&f1S$	Select pop position, cursor position at mid left bracket

PRINTING HORIZONTAL BAR AND RIGHT BRACKET.

# 236 236 236 #	Print equation decimal numbers and spaces
$\text{E}_c\&k12H$	Select math HMI for composite character
246	Print equation decimal number
$\text{E}_c\&a-1c-1R$	Select horizontal and vertical cursor cell move
246	Print equation decimal number
$\text{E}_c\&a-1c+2R$	Select horizontal and vertical cursor cell move
241	Print equation decimal number

# In Case of Difficulty

---

This section provides information pertaining to some of the common problems you may encounter while using the **HP TextEquations** font cartridge with the LaserJet printer, and their possible causes and solutions.

## Helpful Hints

- Is the **HP TextEquations** font cartridge firmly seated in the slot? Take the printer off-line. Push the font cartridge in until it snaps into place. Be sure that the cartridge is firmly seated. Return the printer on-line. Perform a print fonts test to verify that the printer recognizes the **HP TextEquations** font cartridge (refer to the Printer's User Manual).
- Is the font that you are trying to select available? When attempting to select a font from the **HP TextEquations** font cartridge, make sure that the **HP TextEquations** font cartridge is properly inserted.
- Are you entering the correct font selection command? Double check by comparing the command you entered to the one listed in Table 1 - Prestige Elite and CG Times Font Characteristics located in the Reference section of this manual.

Before using printer commands, take a moment to compare these characters:

Lower-case l - ℓ

Upper-case O - O

Number one - 1

Number zero - 0

- Are you familiar with the way that your software allows you to define and change fonts? If you are having difficulty, check your software manual to find out what method is used to select fonts.

## FE Error

If the font cartridge is inserted or removed while the printer is on-line, you will receive an **FE CARTRIDGE** error message. If the **FE CARTRIDGE** error message is displayed on your printer's control panel, turn the printer OFF and back ON.

## Calling for Help

If you are having trouble accessing fonts from the cartridge and you are in need of assistance, you can call the authorized HP dealer where you purchased your **HP TextEquations** font cartridge.

Hewlett-Packard also offers support through the Personal Peripheral Assist Line. A customer assistance operator can offer advice to help solve your technical problems. The Assist Line number is:

**(208) 323-2551**

The Personal Peripheral Assist Line is open from 7:00 a.m. to 6:00 p.m. (Mountain Standard Time), except for Wednesday, when it is open from 7:00 a.m. to 4:00 p.m.

# Reference Information

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The information presented in this section is of special interest to those users who require additional information regarding font characteristics, printer commands, any one of the four symbol sets offered in the **HP TextEquations** font cartridge, or the ASCII keystroke equivalency tables.

## Font Characteristics Table

Table 1 shows the typeface, orientation, symbol set, pitch (spacing), point size, style, weight, and full printer command for each of the fonts available in the **HP TextEquations** font cartridge.

## Symbol Set Tables

The Roman-8, Math-8, Math-7 and Pi Font symbol sets are supported by the **HP TextEquations** font cartridge. Symbol set tables 3 through 6 represent all of the characters available on the **HP TextEquations** font cartridge. Depending upon the kind of hardware and software package you are using, there may be several ways to print characters that are not found on your keyboard. Refer to your appropriate computer or software manuals for additional information on printing these special characters.



Table 1. Prestige Elite and CG Times Font Characteristics

Typeface	Orient	Sym Set	Spacing	Pt	Style	Weight	Printer Command
Prestige Elite	Portrait	Roman-8	16.66	7	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s0p16.66h7v0s0b8T$
Prestige Elite	Portrait	Math-8	16.66	7	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{M}^{\text{E}}_c(s0p16.66h7v0s0b8T$
Prestige Elite	Portrait	Roman-8	12	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s0p12h10v0s0b8T$
Prestige Elite	Portrait	Math-8	12	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{M}^{\text{E}}_c(s0p12h10v0s0b8T$
Prestige Elite	Portrait	Math-7	12	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(0\text{A}^{\text{E}}_c(s0p12h10v0s0b8T$
Prestige Elite	Portrait	Pi Font	12	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(15\text{U}^{\text{E}}_c(s0p12h10v0s0b8T$
Prestige Elite	Portrait	Roman-8	12	10	Upright	Bold	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s0p12h10v0s3b8T$
Prestige Elite	Portrait	Roman-8	12	10	Italic	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s0p12h10v1s0b8T$
CG Times	Portrait	Roman-8	Prop.	8	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s1p8v0s0b5T$
CG Times	Portrait	Math-8	Prop.	8	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{M}^{\text{E}}_c(s1p8v0s0b5T$
CG Times	Portrait	Roman-8	Prop.	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s1p10v0s0b5T$
CG Times	Portrait	Math-8	Prop.	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{M}^{\text{E}}_c(s1p10v0s0b5T$
CG Times	Portrait	Math-7	Prop.	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(0\text{A}^{\text{E}}_c(s1p10v0s0b5T$
CG Times	Portrait	Pi Font	Prop.	10	Upright	Medium	$\text{E}_c\&00\text{O}^{\text{E}}_c(15\text{U}^{\text{E}}_c(s1p10v0s0b5T$
CG Times	Portrait	Roman-8	Prop.	10	Upright	Bold	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s1p10v0s3b5T$
CG Times	Portrait	Roman-8	Prop.	10	Upright	Italic	$\text{E}_c\&00\text{O}^{\text{E}}_c(8\text{U}^{\text{E}}_c(s1p10v1s0b5T$

Table 2. Roman-8 Symbol Set

NUL 0	DLE 16	SP 32	0 48	@ 64	P 80	' 96	p 112				160	176	192	208	224	240
SOH 1	DC1 17	!	1 49	A 65	Q 81	a 97	q 113				À 161	Ý 177	ê 193	ï 209	Ã 225	þ 241
STX 2	DC2 18	"	2 50	B 66	R 82	b 98	r 114				Â 162	ý 178	ô 194	ø 210	ã 226	· 242
ETX 3	DC3 19	#	3 51	C 67	S 83	c 99	s 115				È 163	° 179	û 195	Æ 211	Ð 227	μ 243
EOT 4	DC4 20	\$	4 52	D 68	T 84	d 100	t 116				Ê 164	Ç 180	á 196	â 212	ð 228	¶ 244
ENO 5	NAK 21	%	5 53	E 69	U 85	e 101	u 117				Ë 165	ç 181	é 197	í 213	Í 229	¼ 245
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				İ 167	ñ 183	ú 199	æ 215	Ó 231	½ 247
BS 8	CAN 24	(	8 56	H 72	X 88	h 104	x 120				˘ 168	ı 184	à 200	Ä 216	Ò 232	¾ 248
HT 9	EM 25	)	9 57	I 73	Y 89	i 105	y 121				˙ 169	ı̇ 185	è 201	ì 217	Õ 233	¸ 249
LF 10	SUB 26	*	: 58	J 74	Z 90	j 106	z 122				ˆ 170	ı̂ 186	ò 202	Ö 218	õ 234	¸ 250
VT 11	ESC 27	+	; 59	K 75	[ 91	k 107	{ 123				˚ 171	£ 187	ù 203	Û 219	Š 235	« 251
FF 12	FS 28	,	< 60	L 76	\ 92	l 108	 124				˜ 172	¥ 188	ä 204	É 220	š 236	■ 252
CR 13	GS 29	-	= 61	M 77	] 93	m 109	} 125				Û 173	§ 189	ë 205	ï 221	Ú 237	» 253
SO 14	RS 30	.	> 62	N 78	^ 94	n 110	~ 126				Û 174	ƒ 190	ö 206	ß 222	ÿ 238	± 254
SI 15	US 31	/	? 63	O 79	_ 95	o 111	⌘ 127				£ 175	ç 191	ü 207	Ô 223	ÿ 239	255



Table 3. Math-8 Symbol Set

NUL 0	DLE 16	SP 32	0 48	∴ 64	Π 80	∴ 96	π 112				— 160	⊕ 176	Å 192	Γ 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	⊗ 184	⊢ 210	⌈ 226	⌋ 242	
ETX 3	DC3 19	° 35	3 51	Γ 67	T 83	γ 99	τ 115			↓ 163	⊤ 179	⊖ 195	⊥ 211	{ 227	}	
EOT 4	DC4 20	∞ 36	4 52	Δ 68	T 84	δ 100	υ 116			← 164	⊥ 180	⊖ 196	∋ 212	⌊ 228	⌋ 244	
ENQ 5	NAK 21	÷ 37	5 53	E 69	Φ 85	ε 101	φ 117			↑ 165	U 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	J 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	ESC 27	+ 43	ε 59	Λ 75	ς 91	λ 107	ϖ 123			⋈ 171	⊃ 187	⋅ 203	∩ 219	/ 235	\	
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	≡ 78	≥ 94	ξ 110	≠ 126			≠ 174	⊆ 190	† 206	⊗ 222	* 238	± 254	
SI 15	US 31	/ 47	≈ 63	0 79	— 95	o 111	⊞ 127			↑ 175	⊃ 191	‡ 207	3 223	≡ 239		





# Hewlett-Packard Custom Font Services

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Hewlett-Packard Custom Font Cartridges and Soft Fonts are now available.

Design your own custom font cartridge or soft font package to fit your particular needs. Choose from the following font options:

- Any font from an existing Hewlett-Packard standard font cartridge product.
- Any font from the Hewlett-Packard AC-AG, DA, DC or EA Soft Font Collection.
- Arabic, Hebrew, and Cyrillic typefaces.
- Bar codes including 3 of 9, Codabar, UPC, and others.
- Custom symbol set mappings.
- Signatures.
- Soft font site licensing.

For information on these services, contact: Hewlett-Packard Boise Division Product Specials 11311 Chinden Blvd. Boise, Idaho 83714 (208) 323-3684.

## **Ordering Fonts**

Hewlett-Packard offers a growing library of font products.

Check with your authorized HP dealer to see which new font products are available.

To locate the dealer nearest you, call:

**USA - 1-800-752-0900**

**Canada - 1-800-387-3867**

**Other countries:** contact an authorized HP dealer or local HP sales office.

If your dealer is temporarily out of stock, call HP DIRECT:

**USA - 1-800-538-8787**

**Canada**

**Toronto - 416-671-8383**

**Ontario/Quebec - 1-800-387-3417**

**Other Provinces - 1-800-387-3154**

For additional product information in the USA call:

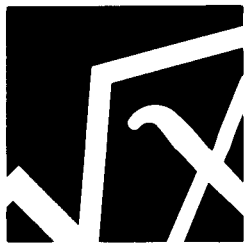
**CIC (Customer Information Center) 1-800-752-0900**

Blank









TextEquations



Typeface	Point Size	Pitch	Portrait*	Symbol Set
Prestige Elite	7	16.66	•	Roman-8, Math-8
Prestige Elite	10	12	•	Roman-8, Math-8, Math-7, Pi Font
Prestige Elite bold	10	12	•	Roman-8
Prestige Elite <i>italic</i>	10	12	•	Roman-8
CG Times	8	Proportional	•	Roman-8, Math-8
CG Times	10	Proportional	•	Roman-8, Math-8, Math-7, Pi Font
CG Times bold	10	Proportional	•	Roman-8
CG Times <i>italic</i>	10	Proportional	•	Roman-8

\*Landscape orientation available in HP LaserJet printer models that can automatically rotate fonts.

Supports the HP LaserJet printer family, excluding the HP LaserJet 2686A, LaserJet PLUS and LaserJet 500 PLUS printers.

CG Times is a product of Agfa Corporation, AGFA Compugraphic Division.

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