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Typefaces and fonts

A *font* is a set of characters and symbols created with a distinct design. The distinct design is called a *typeface*. The typefaces you select add personality to a document. Well-chosen typefaces make a document easier to read.

The printer has numerous resident fonts in PCL 6 and PostScript 3 emulations. See **Resident fonts** for a listing of all resident fonts.

Weight and style

Typefaces are often available in different weights and styles. These variations modify the original typeface so you can, for example, emphasize important words in text or highlight book titles. The different weights and styles are designed to complement the original typeface.

Weight refers to the thickness of the lines that form the characters. Thicker lines result in darker characters. Some words commonly used to describe the weight of a typeface are bold, medium, light, black, and heavy.

Style refers to other typeface modifications, such as tilt or character width. Italic and oblique are styles where the characters are tilted. Narrow, condensed, and extended are three common styles that modify the character widths.



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Some fonts combine several weight and style modifications; for example, Helvetica Narrow Bold Italic. A group of several weight and style variations of a single typeface is called a *typeface family*. Most typeface families have four variations: regular, italic, bold, and bold italic. Some families have more variations, as the following illustration for the Helvetica typeface family shows:

Helvetica	ABCDEFGHIJKLMNOPQRSTUVWXYZ
<i>Helvetica-Italic</i>	<i>ABCDEFGHIJKLMNOPQRSTUVWXYZ</i>
Helvetica-Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
<i>Helvetica-BoldItalic</i>	<i>ABCDEFGHIJKLMNOPQRSTUVWXYZ</i>
Helvetica-Narrow	ABCDEFGHIJKLMNOPQRSTUVWXYZ
<i>Helvetica-Narrow Italic</i>	<i>ABCDEFGHIJKLMNOPQRSTUVWXYZ</i>
Helvetica-Narrow Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
<i>Helvetica-Narrow-BoldItalic</i>	<i>ABCDEFGHIJKLMNOPQRSTUVWXYZ</i>

Pitch and point size

The size of a font is specified as either a pitch or point size, depending on whether the font is fixed space or proportional.

In *fixed space* fonts, each character has the same width. *Pitch* is used to specify the size of fixed space fonts. It is a measure of the number of characters that will print in one horizontal



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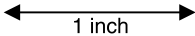
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inch of type. For example, all 10-pitch fonts print 10 characters per inch (cpi) and all 12-pitch fonts print 12 cpi:

Courier 10 Pitch 1234567890
Courier-Bold 10 Pitch 1234567890

Courier 12 Pitch 123456789012
Courier-Bold 12 Pitch 123456789012



In *proportional* (or *typographic*) fonts, every character can have a different width. Since proportional fonts have characters with different widths, the font size is specified in point size, not pitch. *Point size* refers to the height of the characters in the font. A *point* is defined as 1/72 inch. The characters in a font printed at 24 point will be twice as large as the characters in the same font printed at 12 point.



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The following illustration shows samples of a font printed in different point sizes:

48 point 36 point

24 point 18 point 12 point 10 point

The point size of a font is defined as the distance from the top of the tallest character in the font to the bottom of the lowest character in the font. Due to the definition of point size, different fonts printed at the same point size may appear quite different in size. This is because there are other font parameters that affect how the font looks. However, the point size of a font is an excellent specification of the relative size of a font. The following examples illustrate two very different proportional fonts at 14 point:

ITC Avant Garde
 abcdefgh ABCDEFGH
ITC Zapf Chancery
abcdefghijklmnopqrstuvwxyz



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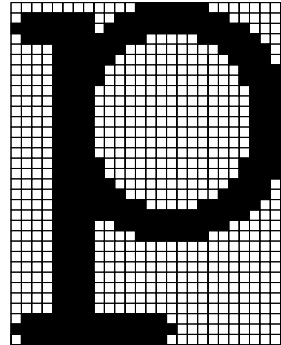
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Bitmapped and scalable fonts

The printer uses both bitmapped and scalable fonts.

Bitmapped fonts are stored in printer memory as predefined patterns of bits that represent a typeface at a specific size, style, and resolution. The following illustration shows an example of a character from a bitmapped font.

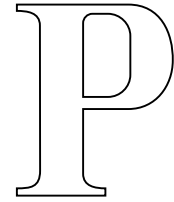


Bitmapped fonts are available in different type styles and point sizes as downloadable fonts. Contact the place where you bought your printer for more information about downloadable fonts.



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Scalable fonts (also called *outline* fonts) are stored as computer programs that define the outlines of the characters in the font. Each time you print characters from a scalable font, the printer creates a bitmap of the characters at the point size you choose and saves it temporarily in printer memory.



These temporary bitmapped fonts are deleted when you turn off or reset the printer. Scalable fonts provide the flexibility of printing in many different point sizes.

Your printer uses different scalable font formats for downloading fonts to the printer. PCL 6 emulation uses *Intellifont* and *TrueType* scalable fonts. PostScript 3 emulation uses *Type 1* and *TrueType* scalable fonts. There are thousands of different scalable fonts available in these different font formats from numerous font suppliers.



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If you plan to use many downloadable bitmapped or scalable fonts or if you plan to use many different sizes of scalable fonts, you may need to purchase additional memory for your printer.

Resident fonts

Your printer is equipped with resident fonts stored permanently in printer memory. Different fonts are available in PCL 6 and PostScript 3 emulations. Some of the most popular typefaces, like Courier and Times New Roman, are available for all printer languages.

The following table lists all the fonts resident in your printer. See [Printing a font sample list](#) for instructions on how to print samples of the fonts. You can select the resident fonts from your software application, or from the operator panel if you are using PCL 6 emulation.

Resident scalable fonts	
PCL 6 emulation	PostScript 3 emulation
Albertus Medium	AlbertusMT
	AlbertusMT-Italic
	AlbertusMT-Light
Albertus Extra Bold	

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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
Antique Olive	AntiqueOlive-Roman
Antique Olive Italic	AntiqueOlive-Italic
Antique Olive Bold	AntiqueOlive-Bold
	AntiqueOlive-Compact
Arial	ArialMT
Arial Italic	Arial-ItalicMT
Arial Bold	Arial-BoldMT
Arial Bold Italic	Arial-BoldItalicMT
ITC Avant Garde Book	AvantGarde-Book
ITC Avant Garde Book Oblique	AvantGarde-BookOblique
ITC Avant Garde Demi	AvantGarde-Demi
ITC Avant Garde Demi Oblique	AvantGarde-DemiOblique
ITC Bookman Light	Bookman-Light
ITC Bookman Light Italic	Bookman-LightItalic



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
ITC Bookman Demi	Bookman-Demi
ITC Bookman Demi Italic	Bookman-Demitalic
Clarendon Condensed Bold	
Coronet	Coronet-Regular
CourierPS	Courier
CourierPS Oblique	Courier-Oblique
CourierPS Bold	Courier-Bold
CourierPS Bold Italic	Courier-BoldOblique
CG Omega	
CG Omega Bold	
CG Omega Italic	
CG Omega Bold Italic	
Garamond Antiqua	Garamond-Antiqua
Garamond Halbfett	Garamond-Halbfett



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
Garamond Kursiv	Garamond-Kursiv
Garamond Kursiv Halbfett	Garamond-KursivHalbfett
Helvetica Light	Helvetica-Light
Helvetica Light Oblique	Helvetica-LightOblique
Helvetica Black	Helvetica-Black
Helvetica Black Oblique	Helvetica-BlackOblique
Helvetica	Helvetica
Helvetica Italic	Helvetica-Oblique
Helvetica Bold	Helvetica-Bold
Helvetica Bold Italic	Helvetica-BoldOblique
Helvetica Narrow	Helvetica-Narrow
Helvetica Narrow Italic	Helvetica-Narrow-Oblique
Helvetica Narrow Bold	Helvetica-Narrow-Bold
Helvetica Narrow Bold Italic	Helvetica-Narrow-BoldOblique



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
CG Times	Intl-CG-Times
CG Times Italic	Intl-CG-Times-Italic
CG Times Bold	Intl-CG-Times-Bold
CG Times Bold Italic	Intl-CG-Times-BoldItalic
Univers Medium	Intl-Univers-Medium
Univers Medium Italic	Intl-Univers-MediumItalic
Univers Bold	Intl-Univers-Bold
Univers Bold Italic	Intl-Univers-BoldItalic
Courier	Intl-Courier
Courier Italic	Intl-Courier-Oblique
Courier Bold	Intl-Courier-Bold
Courier Bold Italic	Intl-Courier-BoldOblique
Letter Gothic	LetterGothic
Letter Gothic Italic	LetterGothic-Slanted



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
Letter Gothic Bold	LetterGothic-Bold
	LetterGothic-BoldSlanted
Marigold	Marigold
Century Schoolbook Roman	NewCenturySchlbk-Roman
Century Schoolbook Italic	NewCenturySchlbk-Italic
Century Schoolbook Bold	NewCenturySchlbk-Bold
Century Schoolbook Bold Italic	NewCenturySchlbk-BoldItalic
	Optima
	Optima-Bold
	Optima-BoldItalic
	Optima-Italic
Palatino Roman	Palatino-Roman
Palatino Italic	Palatino-Italic
Palatino Bold	Palatino-Bold



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
Palatino Bold Italic	Palatino-BoldItalic
SymbolPS	Symbol
Symbol	
Times Roman	Times-Roman
Times Italic	Times-Italic
Times Bold	Times-Bold
Times Bold Italic	Times-BoldItalic
Times New Roman	TimesNewRomanPSMT
Times New Roman Italic	TimesNewRomanPS-ItalicMT
Times New Roman Bold	TimesNewRomanPS-BoldMT
Times New Roman Bold Italic	TimesNewRomanPS-BoldItalicMT
	Univers
	Univers-Oblique
	Univers-Bold



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	Univers-BoldOblique
Univers Condensed Medium	Univers-Condensed
Univers Condensed Medium Italic	Univers-CondensedOblique
Univers Condensed Bold	Univers-CondensedBold
Univers Condensed Bold Italic	Univers-CondensedBoldOblique
Wingdings	Wingdings-Regular
ITC Zapf Chancery Medium Italic	ZapfChancery-MediumItalic
ITC Zapf Dingbats	ZapfDingbats
	Univers-Extended
	Univers-ExtendedObl
	Univers-BoldExt
	Univers-BoldExtObl
	Univers-Light
	Univers-LightOblique



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	Clarendon
	Clarendon-Light
	Clarendon-Bold
	Helvetica-Condensed
	Helvetica-Condensed-Bold
	Helvetica-Condensed-BoldObl
	Helvetica-Condensed-Oblique
	StempelGaramond-Bold
	StempelGaramond-BoldItalic
	StempelGaramond-Italic
	StempelGaramond-Roman
	Apple-Chancery
	Chicago
	Geneva



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	Monaco
	NewYork
	Oxford
	Taffy
	MonaLisa-Recut
	Candid
	Bodoni
	Bodoni-Italic
	Bodoni-Bold
	Bodoni-BoldItalic
	Bodoni-Poster
	Bodoni-PosterCompressed
	CooperBlack
	CooperBlack-Italic



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	Copperplate-ThirtyTwoBC
	Copperplate-ThirtyThreeBC
	Eurostile
	Eurostile-Bold
	Eurostile-ExtendedTwo
	Eurostile-BoldExtendedTwo
	GillSans
	GillSans-Italic
	GillSans-Bold
	GillSans-BoldItalic
	GillSans-Condensed
	GillSans-BoldCondensed
	GillSans-Light
	GillSans-LightItalic



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	GillSans-ExtraBold
	Goudy
	Goudy-Italic
	Goudy-Bold
	Goudy-BoldItalic
	Goudy-ExtraBold
	HoeflerText-Regular
	HoeflerText-Italic
	HoeflerText-Black
	HoeflerText-BlackItalic
	HoeflerText-Ornaments
	JoannaMT
	JoannaMT-Italic
	JoannaMT-Bold



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Resident scalable fonts (continued)	
PCL 6 emulation	PostScript 3 emulation
	JoannaMT-BoldItalic
	LubalinGraph-Book
	LubalinGraph-BookOblique
	LubalinGraph-Demi
	LubalinGraph-DemiOblique
Line Printer 16	
POSTNET Barcode	

Symbol sets

A *symbol set* is the collection of alphabetic and numeric characters, punctuation, and special characters available in the font you select. Symbol sets support the requirements for different languages or specific applications, such as math symbols used for scientific text.

In PCL 6 emulation, a symbol set also defines which character will print for each key on the keyboard (or more specifically, for each *code point*). Some applications require different



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characters at some code points. To support multiple applications and languages, your printer has 83 symbol sets for the resident PCL 6 emulation fonts.

Symbol sets for PCL 6 emulation

Not all font names support all of the symbol sets listed. Refer to the *Technical Reference* to determine which symbols sets are supported by each font name.

ABICOMP Brazil/Portugal	ISO 21: German	PC-853 Latin 3 (Turkish)
ABICOMP International	ISO 25: French	PC-855 Cyrillic
DeskTop	ISO 57: Chinese	PC-857 Latin 5 (Turkish)
Legal	ISO 60: Norwegian version 1	PC-858 Multilingual Euro
MC Text	ISO 61: Norwegian version 2	PC-860 Portugal
Microsoft Publishing	ISO 69: French	PC-861 Iceland
Russian-GOST	ISO 84: Portuguese	PC-863 Canadian French
Ukrainian	ISO 85: Spanish	PC-865 Nordic
PCL ITC Zapf Dingbats	ISO 8859-1 Latin 1 (ECMA-94)	PC-866 Cyrillic
PS ITC Zapf Dingbats	ISO 8859-2 Latin 2	PC-869 Greece



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PS Math	ISO 8859-5 Latin/Cyrillic	PC-911 Katakana
PS Text	ISO 8859-7 Latin/Greek	PC-1004 OS/2
Pi Font	ISO 8859-9 Latin 5	Math-8
Symbol	ISO 8859-10 Latin 6	Greek-8
Wingdings	ISO 8859-15 Latin 9	Turkish-8
POSTNET Barcode	PC-8 Bulgarian	Roman-8
ISO : German	PC-8 Danish/Norwegian (437N)	Roman-9
ISO : Spanish	PC-8 Greek Alternate (437G)	Roman Extension
ISO 2: IRV (Int'l Ref Version)	PC-8 Turkish (437T)	Ventura ITC Zapf Dingbats
ISO 4: United Kingdom	PC-8 Latin/Greek	Ventura International
ISO 6: ASCII	PC-8 PC Nova	Ventura Math
ISO 10: Swedish	PC-8 Polish Mazovia	Ventura US
ISO 11: Swedish for Names	PC-8 Code Page 437	Windows 3.0 Latin 1
ISO 14: JIS ASCII	PC-775 Baltic (PC-8 Latin 6)	Windows 98 Cyrillic
ISO 15: Italian	PC-850 Multilingual	Windows 98 Greek
ISO 16: Portuguese	PC-851 Greece	Windows 98 Latin 1



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ISO 17: Spanish

PC-852 Latin 2

Windows 98 Latin 2

Windows 98 Latin 5

Windows 98 Latin 6 (Baltic)

Downloadable fonts

You can download scalable fonts in PostScript 3 emulation and either scalable or bitmapped fonts in PCL 6 emulation. Fonts can be downloaded to printer memory or to a flash memory option or hard disk option. Fonts downloaded to flash memory or hard disk remain in memory even after the printer language changes, the printer resets, or the printer is turned off.

MarkVision includes a remote management function that lets you manipulate the font files you have downloaded to flash memory or hard disk. See the drivers CD for more information about MarkVision.

Printing a font sample list

To print samples of all the fonts currently available for your printer:

- 1 Make sure the printer power is on and the **Ready** status message is displayed.
- 2 Press **Menu** to enter the menus.



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- 3 Continue to press and release **Menu** until you see Utilities Menu, and then press **Select**.
- 4 Press **Menu** until Print Fonts displays, and then press **Select**.
- 5 Press **Menu** until either PCL Fonts or PS Fonts appears on the second line of the display.
 - Select PCL Fonts to print a listing of the fonts available to the PCL emulator.
 - Select PS Fonts to print a listing of the fonts available to the PostScript 3 emulator. This choice only displays when the PostScript printer language is available in the printer.
- 6 Press **Select**.

The message **Printing Font List** appears and remains on the operator panel until the page prints. The printer returns to the Ready state after the font sample list prints. ▲

