Arts & Letters®

INSTALLATION GUIDE AND BOSS FONTS USER'S MANUAL

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Chapter 1: Introduction

Welcome to the family of *Arts & Letters* graphic arts products. This *Arts & Letters* package includes:

- *Arts & Letters* DRAW, a complete graphic arts program that is the easiest way to get started in computer graphics

- *Arts & Letters* Font Manager, a font-management program that allows you to preview, install, and un-install fonts, as well as to print complete font libraries

- *Arts & Letters* BOSS Fonts PostScript and TrueType fonts.

Installing Arts & Letters

To install the *Arts & Letters* products you want, you must know the designation of the CD-ROM drive in your computer (D, E, F, etc.).

1. Turn off any screen savers or icon programs.

2. From the Windows Program Manager, select File, then Run..., or from the Windows 95 Task Bar, click on Start, then Run....

3. In the Run dialog box, type D:\install.exe (if D is the designation of your CD-ROM drive) and click on OK.

4. The Product Choices dialog box will appear. Select Arts & Letters Font Manager and click on OK.

From this point the Arts & Letters Install program will lead you through the installation procedure. Click on OK to accept the default settings that appear in subsequent dialog boxes or enter your own choices.

For example, the Install To Directory dialog box tells you where the product will be installed on your hard drive. You can change this information if you wish to install the product in a different directory, but normally you will just click on OK.

To start *Arts & Letters* DRAW or the Clip-Art Viewer, click on the program's icon created in the *Arts & Letters* program group in the Windows Program Manager or the Windows 95 Task Bar.

Note: The act of installing Font Manager does not install any fonts. Font Manager provides a simple means of managing all your fonts (not just BOSS Fonts), but you must start Font Manager and command it to group and install your fonts.

If You Get Stuck...

If you have questions about using *Arts & Letters* products, please review your documentation and check the On-Line Help to find an answer. If you cannot find the answer, call Computer Support Corporation at (972) 661-8960, Monday through Friday, from 8:30 a.m. to 6:30 p.m. CST, fax to (972) 661-5429 or send e-mail to **support@arts-letters.com**. If possible, be at your computer when you call.

Chapter 2: Font Manager

Font Manager is a program that allows you to manage your fonts better than you can with only Adobe Type Manager™ or Windows Control panel.

Many applications allow you to choose different typefaces with which to print documents (e.g., Windows Write, Word, PageMaker, *Arts & Letters* EXPRESS). Where do these fonts come from? Some, which ship with Windows and are called TrueType®, are in the Windows/System directory. Others, which can be added by the user, are known as Type 1, or PostScript, fonts. These fonts reside in the PSfonts directory, and in a subdirectory of PSfonts, PFM.

Both types of fonts reside on your hard drive, but they are not necessarily available for use. They must be "installed," a process which lists them in your WIN.INI file, the file that Windows uses to configure its appearance and capabilities.

A partial listing of the TrueType fonts in your WIN.INI might look like this:

```
Arial (TrueType)=ARIAL.FOT

Arial Bold (TrueType)=ARIALBD.FOT

Arial Bold Italic (TrueType)=ARIALBI.FOT

Arial Italic (TrueType)=ARIALI.FOT

Times New Roman (TrueType)=TIMES.FOT

Times New Roman Bold (TrueType)=TIMESBD.FOT

Times New Roman Bold Italic (TrueType)=TIMESBI.FOT

Times New Roman Italic (TrueType)=TIMESI.FOT

Wingdings (TrueType)=WINGDING.FOT
```

A partial listing of the Postscript fonts in your WIN.INI might look like this:

```
[PostScript,LPT1]

ATM=placeholder

softfonts=91

softfont1=c:\psfonts\pfm\bym_____.pfm,c:\psfonts\bym_____.pfb

softfont2=c:\psfonts\pfm\byw_____.pfm,c:\psfonts\byw_____.pfb

softfont3=c:\psfonts\pfm\bywi____.pfm,c:\psfonts\bywi____.pfb

softfont4=c:\psfonts\pfm\byb_____.pfm,c:\psfonts\byb_____.pfb

softfont5=c:\psfonts\pfm\bybi____.pfm,c:\psfonts\bybi____.pfb

softfont6=c:\psfonts\pfm\byi_____.pfm,c:\psfonts\byi_____.pfb
```

Fortunately, you needn't worry about making these entries directly into the WIN.INI. Windows Control panel installs TrueType fonts for you, Adobe Type Manager (ATM) installs Postscript fonts, and each will create the correct entries in your WIN.INI.

Unfortunately, both Control panel and ATM have some limitations. For one thing, neither of them allow you to see what a typeface looks like before you install it. After a font is installed,

Control panel will show you a handful of characters, but ATM has no viewer at all. Just as importantly, each handles only one type of font, and most desktop computers have both.

This is where *Arts & Letters* Font Manager shines. Using Font Manager you can view or preview all of your TrueType and Postscript Type 1 fonts in any size all the way up to 99 points. You can even preview uninstalled fonts directly from the font files on your disk or CD-ROM. You can also print some of the very best font specimen sheets in the industry. Make a catalog of all your fonts or print out a grid which shows every character in your font — a useful chart for selecting the right key combinations to use for printing dingbat or wingding-type fonts). Plus, you can install and uninstall fonts on-the-fly, from any directory you choose. You can even install fonts directly from your CD-ROM, saving precious hard disk space.

Tips

The Font Manager is very easy to use. But with all the various peripheral products on the market, achieving compatibility is not quite so easy. Here is a list of the most likely problems you might encounter and solutions to them.

CD-ROMS: Because CD-ROMS are slow compared to hard disks, printing font specimen sheets directly from a CD can take quite awhile. If you have room on your hard disk, you might consider moving your font files to a temporary directory on your hard disk, printing them, then deleting those font files.

Windows Print Manager and Other Print Spooling Software: Before printing font specimen sheets, turn off the Windows Print Manager. It only slows down printing and, because of the massive amount of font data, consumes gigantic amounts of disk space. The print manager can be turned off by using the Windows Control panel. Double-click on "printers." When you see the available printers screen, look down at the bottom of the form and uncheck the box that says "Use Print Manager?" This advice applies to any print spooling software.

Windows '95, for example, uses print spooling by default. To change this so you can print directly to your printer, click on the **Start** button, then **Settings**, then **Printers**. Position your mouse pointer over your printer driver icon and right-click on it. From the menu that appears, select **Properties**. Click on the **Details** tab and then click on the **Spool Settings** button at the bottom of the driver screen. Change the setting so you can print directly to the printer. (*Do not* spool the output).

The Font Manager temporarily installs fonts which need to be printed, prints them, then uninstalls them. Print spoolers run slower than Font Manager; therefore, by the time the spooler starts printing the page, the fonts for that page may have already been uninstalled. If so, you will end up with pages of font specimens that all look alike.

Printer Drivers: If your printer driver has the option, select to print **TrueType as graphics**. This will let you print many more fonts on a page. Also, fonts printed using this option print much better and are cut off more cleanly at margin boundaries. If your driver has the option to print either Raster or Vector graphics, select **Raster** graphics for the best possible reproductions of your fonts.

Shareware Fonts: If you are using Windows 3.x or Windows for Workgroups, there is a documented Windows problem with certain shareware fonts which will crash the TrueType rasterizer engine and, under certain circumstances, will require you to restart Windows. This is not a Font Manager problem! This problem is fully documented in Microsoft's PSS ID number Q83448 errata sheet entitled "Error Message: Invalid TrueType Font Detected." The only solution for this behavior is to use good quality fonts. During our tests, it appears this problem has been corrected in both Windows '95 and Windows NT.

Another problem, though not as severe as the one above, is that some fonts will print small squares instead of characters or not all characters will print in all point sizes. Again, this is a Microsoft TrueType problem and is described in their publication PSS ID number Q94715 entitled "Cannot Print Ornate, Complex TrueType Fonts." In any event, Font Manager is doing its job by printing specimen sheets which reveal these types of problems.

Video Cards: If you are using a video accelerator board and experience problems running Font Manager or if Font Manager won't run at all, then the source of the trouble may be your video driver. Try another driver: a more recent release from the manufacturer or any of Microsoft's drivers, which work amazingly well (and come free with every copy of Windows). There is an interaction between the memory address of video drivers and printer drivers; therefore, if you experience trouble, you'll need to adjust either one or both of your drivers.

Other publications you might want to look at include PSS ID number Q115596 entitled "Problems with TrueType Fonts and Diamond Video Drivers" and PSS ID number Q85286 entitled "Checklist for Troubleshooting TrueType Font Problems." Each of these papers should be available from Microsoft at no charge.

About Font Management: The Font Manager goes to extremes to help insure you are protected in the event of font management problems. First, copies of your WIN.INI and ATM.INI files are made and stored in the Font Manager directory the very first time Font Manager is run. This means that if the worst were to happen, you could restore everything to the way it was before ever using Font Manager.

The next thing Font Manager does is it makes an image of your installed fonts. If you later want to revert to the fonts that were installed before you changed them, you could go to the Setup Section and click on the **Restore Fonts** button. (See "Restore Original Fonts," below.)

Viewing Installed Fonts

The first time Font Manager is run, one of your fonts will be displayed at 48 points. Your screen is sectioned off into panels.

At the top of the screen you'll see an **Information** panel and a **Setup** panel. The Information panel tells you about the font being displayed: the font's full name, whether it is proportional or

fixed space, TrueType or Postscript, installed or not, and the full pathname (location) of the font file. The Setup panel will be discussed in detail later.

The largest panel is the **ViewPort**. The ViewPort panel shows a sample of the selected font. You can scroll through the sample if necessary.

To the right of the ViewPort is the **Font Selection** panel. To select an installed font just click on the first drop-down list box and pick one of the font names. TrueType and Postscript fonts are easily identified by their respective icons. A sample of the font you selected is immediately displayed in the ViewPort.

At the bottom of the screen there are four panels. The **Specimen** panel lets you select what will be displayed in the ViewPort. You can select between viewing the complete character set or a specimen line which can be customized in Setup (explained later). The **Justify** panel lets you select between Left, Right or Center Justified viewing. The **Font Size** panel lets you select the size of the sample you are viewing. The Control panel's buttons include an **Exit** button used to end the Font Manager program, an **About** button used to learn about getting technical support, and a **Font Directory** button used to select a directory containing font files (explained in "Viewing Uninstalled Font Files" later).

To turn the size adjustment knob, click on it and hold down the mouse button as you move your hand in a circle. While holding down the mouse button, you can get finer control by moving your hand in larger circles: the larger the imaginary circle is, the finer the point size adjustment. Another way to turn the knob is to click on a point on the knob, which will then jump to a point size.

Font Manager Setup

Click on the Font Manager Setup button at the top-right of the screen. The Setup panel reveals several optional settings which you can change as you see fit. Your changes are always saved so everything will be the way you set it the next time you run Font Manager.

Show Balloon Help lets you turn on/off the cartoon-balloon-style Help which pops up whenever the mouse is idle over a control (including this one). You can also set the seconds to delay before help is displayed.

The **Specimen Line** can be changed to view or print whatever text you want. You'll notice the default example makes use of a special code that Font Manager can handle. To include the font's name in your text, use the code "<F>" (without the quote marks). The letter *F* can be either upper or lower case, it doesn't matter.

Printed Specimen Sheet Style includes 1-column or 2-column (the number of fonts per sheet depends on the size of the font samples and the paper orientation), and the character map, which prints a sample of every character in the font (maximum of 3 fonts per page). To include the date, time, or page numbers at the bottom of each sheet, simply check the options you want.

Font Size (Points) is used to set the size of the printed font samples. The **Byline** size is used to set the size of the descriptive information which is printed just below each font sample.

Page Settings let you set the starting page number. The starting page number is just a number — it is not the starting physical page number. Printing always begins with the first font in your print list. There are several reasons why you might want to begin printing with a page number other than "1"; for example, having to stop printing for some reason. In such a case, you can select just the fonts you want to begin printing with and set the starting page number as the number following the last printed page you have already printed.

Margins can be set to move the image around the page as you feel appropriate. The default settings offset the page so there is a wide margin on the left — perfect for 3-hole punching.

Page Header and Footer lets you set whatever text you want to appear at the top and bottom of every printed page. If you do not want to print a header or footer then just leave it blank.

Restore Original Fonts button is used in case something goes wrong or you've changed your mind after installing or uninstalling fonts and want to restore all of your fonts as they were before you used Font Manager. This will work so long as you haven't physically moved your font files to another location since the first time you ran Font Manager. If you have moved your fonts, erase the files with ".fsb" extensions in your Font Manager directory and run Font Manager again — a new image of your installed fonts will be made automatically.

To Exit the Setup panel either click on the **OK** button or simply press the **Escape** key.

Viewing Un-Installed Font Files

Click on the **ABC Fonts Directory** button located in the Control panel at the bottom-right of your screen. Select the drive and directory containing font files you want to work with. The second drop-down list box in the Font Selection panel will now contain the font files from your selected directory. Simply click on any of the font file names to see what the font looks like.

Note: If you are using removable media such as floppy diskettes or CD-ROMS, you can change media even if the Select Directory dialog box is showing. After changing media, always double-click on the root directory so the files from the new media can be properly displayed.

Printing Font Specimens

The last drop-down list box in the Font Selection panel contains a list of fonts to print. To add the displayed font (in the ViewPort) to this list simply click on the **Add To Print List** button. To add all of the fonts in either the Installed or Un-Installed list boxes, first click on the list box you want so it is highlighted then click on the **All To Print List** button. If you want to print fonts from multiple directories, first select the directory you want using the ABC Fonts Directory button then repeat the steps above. Click on the **Clear** button to empty your pending fonts to print.

The **Print** button lets you select the printer and paper orientation then begins printing your specimen sheets. Click on the Cancel button to stop printing before the job is finished. Before

printing, you should check the settings in the Setup panel to make sure you have selected the correct sheet style, etc.

Installing Fonts

Select the font file you want to install by clicking on it (using the drop-down list box in the Font Selection panel). The font being displayed in the ViewPort will be instantly installed, ready for use in your applications as soon as you click on the **Install This Font** button. To install all font files click on the **Install All Fonts** button. Font Manager is designed so you can even install fonts while another application (such as a word processor) is running — and the other open application will know your available fonts have changed. This convenient feature works with most other applications, but some applications (those that do not follow proper Windows standards) may not know about font changes if they are already running. For these few applications, you will need to restart them after you have made changes to your installed font list.

When you select to install a font file which is located on a CD-ROM or floppy diskette, you will see a Font Install Advisory panel. In this panel you have the option of copying the font file to the hard disk before installation or to install the font from the removable media. Installing a font from removable media saves disk space, but the media must be available whenever that font is used. Using a font from the hard disk is much more convenient, but you will use up some of your hard disk space. The choice is yours.

Un-Installing Fonts

Select the installed font you want to uninstall by clicking on it (using the drop-down list box in the Font Selection panel). The font is immediately uninstalled. The font file is not deleted from your disk, since you might want to re-use the font in the future. If you are using 16-bit Windows (such as Windows 3.11 or Windows for Workgroups), the TrueType font file (file extension ".TTF") is not deleted but the resource file which Windows creates for that font (file extension ".FOT") is deleted. If you later reinstall this font, a new resource file will be created for you automatically. Windows '95 and Windows NT only need the TrueType file.

Chapter 3: A Brief Look at Type

Movable Type

Movable type, developed by Johannes Gutenberg in the 15th century, has been called one of the great inventions of mankind: because of it, printed knowledge became accessible to more than just the learned few. It could be said without exaggeration that movable type is responsible for the so-called Information Age, our own age.

Not surprisingly, early type was based exclusively on handwritten characters; it mimicked the strokes of a master scribe's pen.

Black Letters

Type evolved quickly, but many typefaces still show vestiges of their handwritten origins. The most obvious vestige is the serif, which appears in more than half the typefaces in existence today. The serif replicates the mark a pen might make as it lifted from paper at the end of a stroke. In addition, many of these serif typefaces have thick and thin strokes, such as would be produced by a pen.

A a B b C c 1 2 3

Type Design

Typefaces have been classified many different ways, but there are two traditional categories: serif and sans serif. As mentioned above, serif characters have horizontal strokes at the tops and bottoms of their verticals, and they often display thick and thin strokes.

B B 1 1

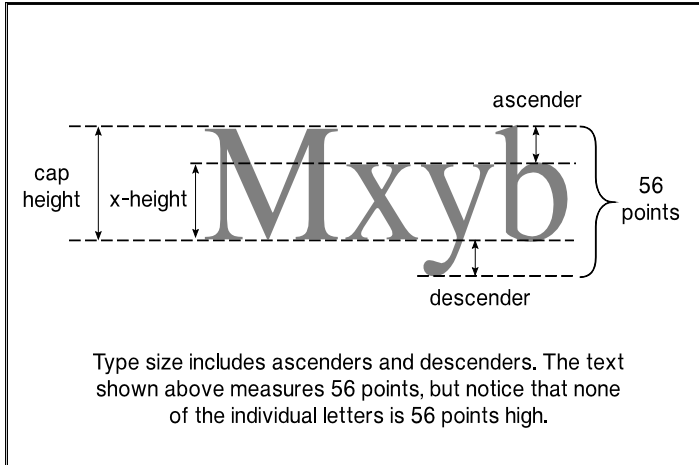Serif   Sans Serif   Serif   Sans Serif

Sans serif characters have no serifs; it is that simple.

Of the two, sans serif typefaces are the more recent design, but serif typefaces are still being created, and they do outnumber the sans serifs.

Measurement

Type is traditionally measured in points and picas, a system similar to inches and feet: 12 points equal one pica. The increments of pica measurement are very small (6 picas or 72 points equal one inch) and are thus very appropriate for measuring type.

The point size of a given font is measured from the top of the font's ascenders to the bottom of its descenders. A font's cap height is the measure of the height of an uppercase (capital) letter; its x-height is the measure of a lowercase (small) letter.
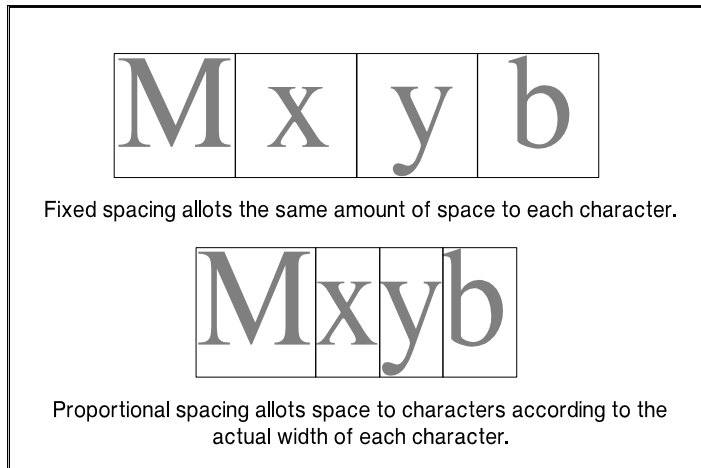
Type size includes ascenders and descenders. The text shown above measures 56 points, but notice that none of the individual letters is 56 points high.

The traditional measurement between lines of type, called leading (and pronounced *ledding*), is measured in points from baseline to baseline. (Some typesetting systems, such as Adobe PageMaker, allow you to choose from "Baseline," "Top of Caps," and "Proportional.") The baseline of a line of type runs parallel to the bottom of a font's x-height.
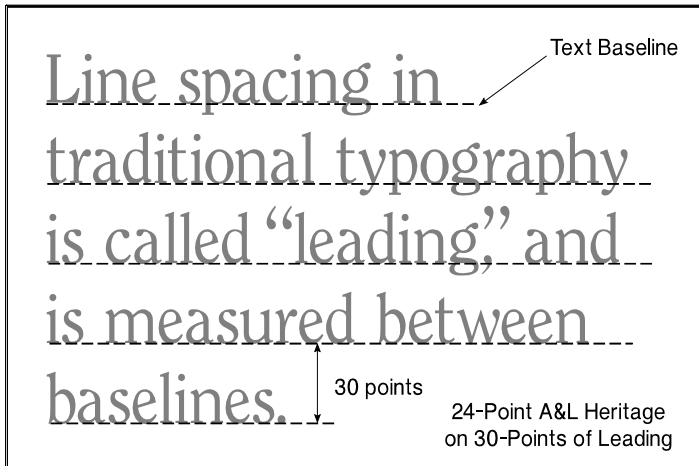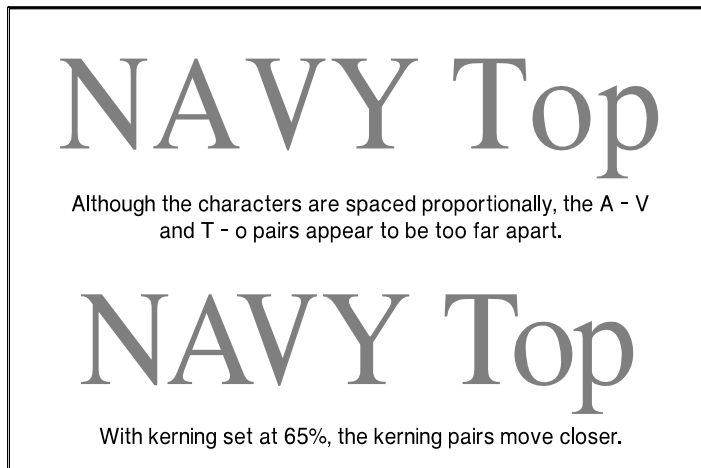

Fixed and Proportional Spacing

The spacing between characters in a font can be either fixed or proportional. Fixed spacing places every character in an invisible "cell" that is equal to the width of a capital "M" in that font. Typewriters and word processors generally use fixed spacing. Proportional spacing assigns each character a cell based upon the actual width of the character.

Fixed spacing allots the same amount of space to each character.

Proportional spacing allots space to characters according to the actual width of each character.

Kerning

Kerning is a process that moves optically distant letter pairs closer together than their cells would normally allow. A proportional font need not be kerned to be readable; script fonts, for example, may not be kerned. But kerning is a mark of typographic quality, and a well-made font will have kerning information built into it, so that all its optically-distant letter pairs are affected. The fonts in the *Arts & Letters* BOSS Fonts package have been kerned, most with over 100 kerning pairs, and some with more than 400. *Arts & Letters* allows you further control of kerning pairs; you can specify from 0% (no kerning) to 100% (full kerning).

Although the characters are spaced proportionally, the A – V and T – o pairs appear to be too far apart.

With kerning set at 65%, the kerning pairs move closer.

Raster Typefaces

Raster typefaces are composed of bitmapped images of individual characters at different sizes. Each font file contains a pixel-by-pixel representation of each character. Because a separate file of images is required for each size, raster typefaces are available to the user in graduated steps: 8 point, 10 point, 12 point, 14 point, 18 point, 24 point, etc. There are no steps between the sizes. Users can rescale the resultant images, but because the letterforms are bitmaps, jagged edges will become apparent.

Because of the fixed size and scaling limitations, raster typefaces are not widely used.

Vector Typefaces

Vector typefaces are composed of either Bezier curve or quadratic curve descriptions of the outlines of font characters. Because of this, there is only one file for each font; the print controller generates the correct image for whatever size the user specifies. Some vector fonts

(such as those on the *Arts & Letters* BOSS Fonts CD-ROM) are designed with "hinting," an automatic process whereby letterforms are subtly and automatically altered to produce an optimum appearance, no matter what size they are printed, whether 6 points or 600. Vector typefaces come in basically two varieties: PostScript Type 1 (which utilize cubic Bezier curves) and TrueType (which utilize quadratic curves).

PostScript, a page-description language developed by Adobe, is the graphics industry standard for imaging text, graphics, and images. Because they are versatile and predictable, PostScript type fonts are also a standard in the graphic industry. Their font description files (.PFB and .PFM) are roughly half the size of TrueType files, which confers some storage advantage, but the Adobe Type Manager (ATM), a font handling program, is required in order to install and utilize PostScript fonts.

TrueType fonts were originally developed by Apple to compete with PostScript fonts. TrueType font files (.FOT and .FON) are roughly twice the size of PostScript font files, which could cause storage concerns. (The larger size is partly due to the fact that the quadratic curves of TrueType are each described by three points, as opposed to the two points used in Bezier curves.) On the other hand, because TrueType is supported by Microsoft Windows, no additional font handling program, such as ATM, is required by the user. The "Fonts" dialog box, in the Windows Control panel, is all that is needed to install and use TrueType fonts.

The fonts on the *Arts & Letters* Boss FONTS CD are provided in both PostScript and TrueType format, in order to give users with the greatest flexibility.

Books About Typography

Typography is an art, and as such, it is quite beyond the scope of this booklet. There are a great many books about the subject of typography, and we have listed a few here.

The History and Technique of Lettering, by Alexander Nesbitt (New York: Dover Publications, 1957).

The Alphabet and Elements of Lettering, by Frederic W. Goudy (New York: Dover Publications, 1963).

Better Type, by Betty Binns (New York: Watson-Guptill, 1989).

First Principles of Typography, by Stanley Morrison (Cambridge: University Press, 1951).

Typography, A Manual of Design, by Emil Ruder (Niederteufen, Switzerland: Arthur Niggli, Ltd., 1977).

Designing with Type; A Basic Course in Typography, by James Craig and Susan E. Meyer (New York: Watson-Guptill Publications, 1980).

Manuale Typographicum, by Herman Zapf (Frankfurt, New York: Z-Presse, 1968).

American Typography Today, by Rob Carter (New York: Van Nostrand Reinhold, 1989).

Homage to the Alphabet; A Typeface Sourcebook (Rockport, Massachusetts: Rockport Publishers, 1991).