

**XXXXXXXX graphics &
character generator**

LAZYFONT BASIC VERSION

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LAZYFONT instruction manual copyright 1983
by AlphaBit Communications, Inc

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SYSTEM REQUIREMENTS:

To use LAZYFONT, you need:

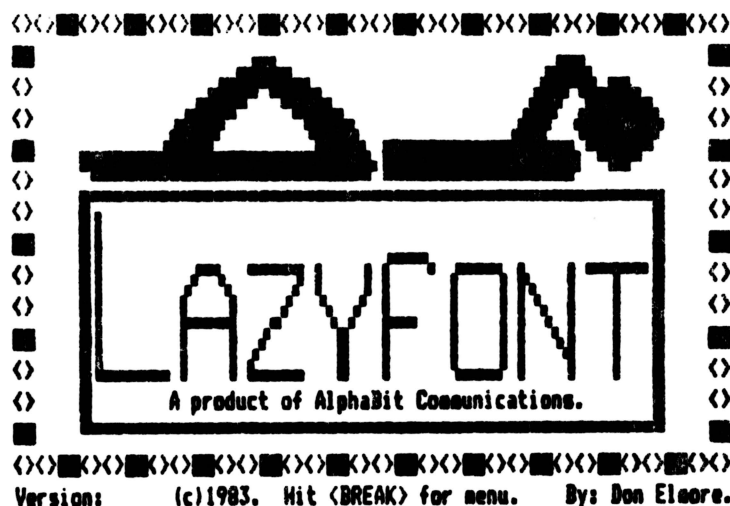
- * TRS-80 Model I or III computer
- * an Epson MX-80 or MX-100 printer with Graftrax or Graftrax Plus
- * at least 32K of memory
- * at least one disk drive

For best use of this program, the following extras are highly recommended:

- * two or more disk drives
- * double density
- * 48K of memory

If your DOS lets you set the stepping rate of your disk drives, set a high stepping rate for faster operation. LAZYFONT will also print faster if you have double density rather than single density in your computer. (If you have a Model III, you have double density)

If you have only one disk drive, you will be limited in how many fonts you can use in one document. You'll be limited to the fonts that will fit on your system disk. If you have even one extra disk drive, you will be able to use an unlimited number of fonts by swapping data disks during printing.



USING LAZYFONT

LAZYFONT creates and prints custom type fonts on a dot matrix printer with dot addressable graphics. The disk you have purchased is already on a mini DOS (MULTIDOS) and is ready to boot up and use. Just put the disk in your #0 drive and hit RESET. This program is designed to be used with BASIC programs. These instructions do not constitute a course in BASIC; it is assumed the user has some familiarity with the BASIC language.

YOUR WORKING DISK

Although LazyFont is already on a DOS, it contains a number of files. If you have Model I, all program files end in "1"; Model III files end in "3". For example, LFSA481/CMD is a Model I file. Here are the files on the disk:

LAZYFONT/CMD	GEAPTOLF/CMD	EXAMPLE/BAS	GRAPHIC
LFSA323/CMD	LFSA483/CMD	LFSA323P/CMD	LFSA483P/CMD
LFSA481/CMD	LFSA321/CMD	LFSA321P/CMD	LFSA481P/CMD
FU2	FUTURA	ARROWS	OE
MB	SE	STAMP	MC
GR			

The files LFSA323/CMD, LFSA483/CMD, LFSA321/CMD, LFSA481/CMD, LFSA323P/CMD, LFSA483P/CMD, LFSA321P/CMD and LFSA481P/CMD are versions of the program that prints the fonts. The LFSA32 is for 32K computers and LFSA48 is for 48K computers; the files that end in "1" are for the Model I and the files that end in "3" are for the Model III. The "P" in the filename denotes that it is for use with the Prowriter printer, the files without the "P" are for use with the Epson. Pick the one that fits the model and memory of your computer and the printer you're using. If your computer says "64K", use the "48K" program. You will probably want to rename this file to something easier to remember, like DOFONT. The mini DOS that LazyFont comes on does not have a RENAME command. However, you can copy the appropriate file to a new name, then kill the old file, like this:

```
COPY LFSA483/CMD TO DOFONT/CMD  <ENTER>
KILL LFSA483/CMD  <ENTER>
```

The file LAZYFONT is the program that lets you draw characters. The file GEAPTOLF is a program that converts GEAP fonts to LazyFont format. The file EXAMPLE/BAS is a BASIC program that will help you write your own. You can load it into BASIC and RUN it. The other files on this disk are fonts.

If you run out of space on your system disk, you can kill off some files you don't normally use. You can also put the font files (FUTURA and GRAPHIC), and the EXAMPLE file on a data disk. If you are still tight for space, you could put LAZYFONT/CMD on a data disk too.

USING LAZYFONT

GETTING STARTED

On your disk is a program called EXAMPLE/BAS. This program illustrates what LazyFont can do, using simple BASIC commands. Here's a listing of the program:

```
*****
2 REM **SAMPLE PROGRAM FOR LAZYFONT**
3 REM *****
5 LPRINT "<FUTURA>"
10 LPRINT CHR$(14);:LPRINT "WELCOME"
12 REM ** FOR PROWRITER - LPRINT CHR$(14);
   :LPRINT "WELCOME";CHR$(15) **
20 LPRINT: LPRINT: LPRINT
30 LPRINT TAB(6) "TO LAZYFONT"
40 LPRINT "<FU2>":LPRINT:LPRINT:LPRINT
50 LPRINT "the program that": LPRINT: LPRINT
60 LPRINT "lets you be creative": LPRINT: LPRINT: LPRINT: LPRINT
70 LPRINT "<-OFF->you can even print in <SE>GREEK <GR> LIKE
   THIS":LPRINT:LPRINT:LPRINT
110 LPRINT "<-OFF-> "CHR$(14)"ENJOY LAZYFONT !":LPRINT
112 REM ** FOR PROWRITER - CHR$(15) AFTER !" IN LINE 110
115 LPRINT "<DE> TRY OLD ENGLISH <-OFF-> OR SOME
   <-ON->GRAPHICS:":LPRINT:LPRINT:LPRINT
120 LPRINT"<GRAPHIC>"CHR$(198)" "CHR$(198)" "CHR$(198)"
130 LPRINT: LPRINT: LPRINT:LPRINT:LPRINT
140 LPRINT "TTTTTTTTTTTTTT"
150 LPRINT:LPRINT:LPRINT
```

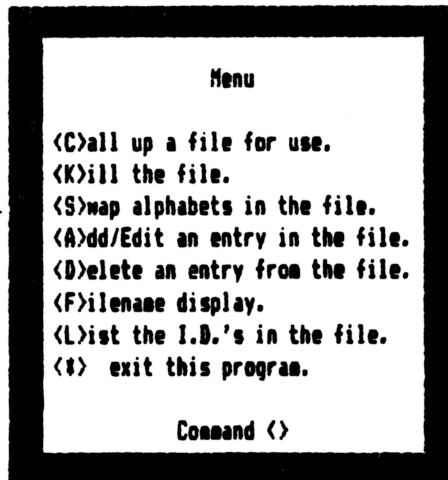
This program works with an Epson printer. The "14" in lines 10 and 110 turns on double-wide, which cancels itself at the end of the line. For the Prowriter, double-wide must be terminated by a code "15" at the end of the material to be printed double-wide. If you don't do this, you'll get double-double wide!

Run this program if you want; this will show you what LazyFont can do. The program uses font files that are on your master disk. The fonts used are: FUTURA, FU2, SE, GR, DE, and GRAPHIC. Notice that all commands and text work from LPRINT statements. In line 120, the "CHR\$(198)" is fetching a character (stored as an "F") from the "alternate character set" in the GRAPHIC font. The information that follows will explain how characters are stored. See the SECTION "Printing with LazyFont" for a further discussion of the syntax needed for LazyFont commands.

DRAWING YOUR CHARACTERS

To draw characters, use the program, LAZYFONT/CMD. Load this program from DOS. When you load the program, you'll get an initial screen with a large LAZYFONT logo. Hit the "BREAK" key to get to the menu.

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All menu items appear in upper case, but just press the appropriate key to choose an item. You do not have to press "SHIFT" first.

CREATING A FILE

The first thing you need to do is press "C" to "<C>all up a file for use". You are going to create your first font file, and the first step is to give it a name. You may choose any name as long as it doesn't exceed eight characters; you may also use an extender of up to three characters, as with other files. So, for example, you could call your first file JOHN/LF, or SYMBOLS/FNT. Pressing "C" will put this prompt on the screen:

Filename < >

Once you've typed a file name, press "ENTER". If you don't specify a drive number (such as JOHN/LF:1), the file will be created on the #0 drive, or the first drive that is not write-protected. If you have room on your system disk, it's ok to have the file there. Your files will take up only as much disk space as is needed to store the number of items in that file. If you have a small file of only five characters, it will use less disk space than a long file of 100 characters. If you create a font of huge characters, it will use more disk space than a font of small characters.

Once you have created a file, you can recall it for further use (either to create more characters for that file, to edit old characters, or to view characters on the screen) by pressing "C" from the menu. Once you've entered a filename, you can call up characters from that file, using "A".

CREATING CHARACTERS

You have created a file, but there is nothing in it at present. It's time to put something in it. You can put up to 235 separate characters into that file. If you want to create an alphabet

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font, put it all in one file for ease of use.

The next step is to choose the "<A>dd an entry to the file" item on the menu. Press "A". You'll see a new prompt in the lower left hand corner of your screen. It says:

I.D. # < >

Once you've entered an I.D. designation, press "ENTER". The menu will vanish and you'll be ready to draw your first character.

HOW TO DESIGNATE CHARACTERS BY I.D.

Each character you create is assigned a different ID number. These designations are stored as ASCII numbers, but may be entered as a number or as characters A through Z, upper case and lower case. You can also use all other keyboard symbols, such as <#> and <%>. The alphabet in ASCII goes from 65 to 122, so the character "z" can be stored as "122" or as "z". To put it another way, "z" and "122" are the same thing. If you've designated your "z" as I.D. #<A>, when you type a "z" in text, your character will be printed. It is simplest to just store your characters as "A" through "Z" and use numbers only after you've used up all the characters.

If you are drawing numbers for a font (0 through 9), they can be saved as 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9. SINGLE DIGIT NUMBERS used as I.D. #'s are characters, not ASCII decimal. A "1" can be saved as "1" or as "49". They are the same thing.

In creating symbols, you can save them as any character you can get from the keyboard, or any ASCII number. The GRAPHIC font file contains symbols; some are saved by designations that seem logical, but others are saved as arbitrary I.D. # numbers.

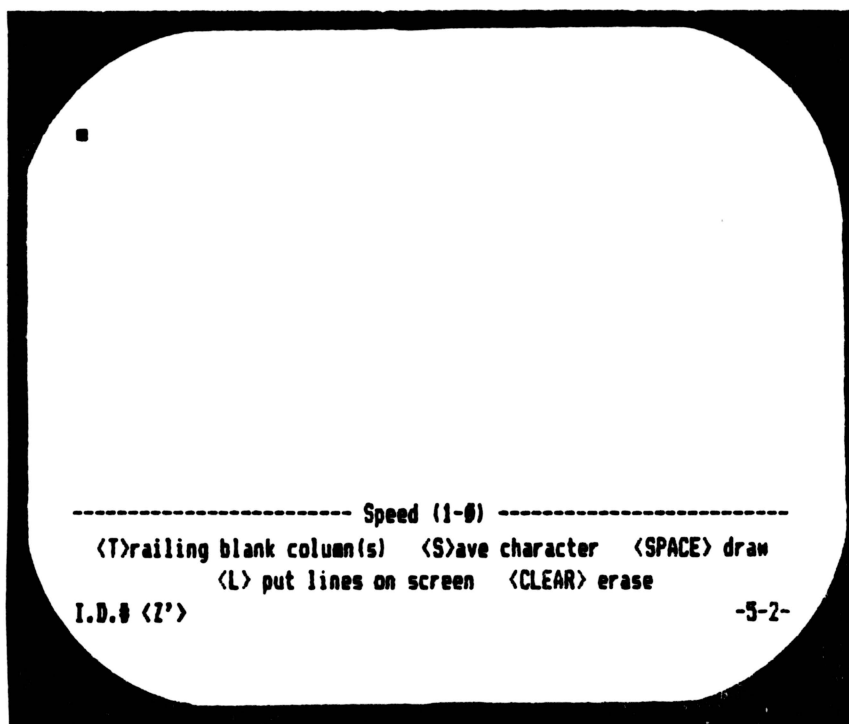
There is one exceptions to being able to store your font character by a either a number or character designation. If you create a plus sign, save it as "43", its ASCII number. If you try to save it as "+", you'll get back your last used character. The "+" is used as a command by LAZYFONT, so you cannot use it to designate a character.

The highest I.D. # you can use is 255. Some numbers are unavailable for storing items because they are used by the printer; if you try to use one of these you will get a message telling you to choose another I.D. #. The program will also tell you if you try to store something with a designation that's already been used. If you store a new character over an old one, it wipes out the old one, so LAZYFONT warns you first.

See the ASCII chart we've provided, which gives you more information about how to store your characters.

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If you want to begin by drawing an "A", enter "A" as the I.D. #. When you do this, the menu will go away and you'll be presented with a new screen. It looks like this:



MOVING THE CURSOR TO DRAW

The screen is blank, except for the prompts on the bottom of the screen and a cursor. Move the cursor with the arrow keys. You can begin drawing anywhere on the screen. To draw, press the space bar. The cursor will draw only as long as the space bar is held down. But if you subsequently press the "H" key, then the program will "hold" the space bar down for you so you can draw without holding it down yourself. To stop drawing, press the space bar again.

Notice that the cursor moves quite slowly. You can speed it up by pressing a number key, from 1-0. These numbers go from slowest (1) to fastest (0); you may use any number in between. If you press "0", an "L" will be displayed for the number; this stands for "lightning" and it makes the cursor move at lightning speed. This is best for drawing a line from edge to edge, but is too fast for delicate drawing. The current speed number is shown in the lower right hand corner. It is the first of the two numbers there. (The second number is the number of "trailing blanks" selected.)

If you want to draw a diagonal line, press right or left arrow alternately with the up and down arrow or hold them down together. This will look somewhat more ragged on the screen than it will when it prints. Each dot on the screen translates into a

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much smaller dot when it prints.

Notice you can move the cursor even when it gets to the top or bottom or sides of the screen and your picture will move. It is not vanishing off the edge of the screen - it is just giving you more room to draw. It will scroll sideways only if your picture is not as wide as the screen; if you draw a horizontal line from screen's edge to screen's edge, the picture will not scroll horizontally. However, vertically, the largest size you can draw will be longer than the screen, so scroll back and forth to see it all. It is not necessary to move the cursor to the edge of the screen to scroll; you can press "SHIFT" and an arrow and the whole screen will move up (if you pressed up arrow), down (if you pressed down arrow), left (if you've pressed left arrow), or right (if you pressed right arrow).

The characters you create will print in the same proportions they have on the screen. There will be very little distortion. When your character looks good on the screen, it will look good printed.

You can get back to the menu anytime by hitting "BREAK". If you hit "BREAK" by mistake before you've finished drawing, select "A" from the menu and enter "+" as the I.D. #. This will return your character to the screen.

ERASING

To erase what you've drawn, press the "CLEAR" key and move the cursor back over what you've drawn. The cursor will erase only as long as the "CLEAR" key is held down. But if you subsequently press the "H" key, the program will "hold" the "CLEAR" key down for you, so you can erase without holding it down yourself. To stop erasing, press the "CLEAR" key again.

You can also delete an entire vertical or horizontal row of your drawing. To do this, press "CLEAR" and "H"; this will put the prompt "erasing" on the bottom of the screen. Then press two arrow keys at once. If you've pressed up and down arrow, a vertical row (or column) will be deleted. If you've pressed right and left arrow, a horizontal row will be deleted. This "row delete" will repeat if you hold down the arrow keys; you can rapidly remove the entire top, bottom, or either side of a picture this way.

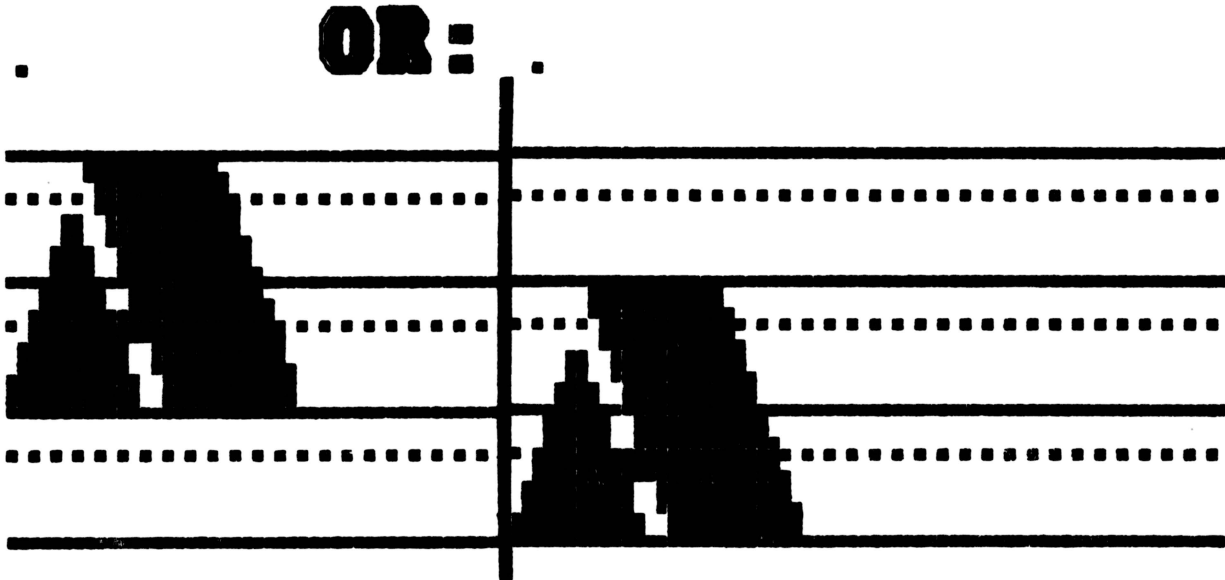
You can also delete this way by holding down the arrow keys together with the "CLEAR" key, or hold down the arrow keys, then tap the "CLEAR" key to delete a row at a time.

POSITIONING THE CHARACTER VERTICALLY

Where you leave the character on the screen when you save it is important. Before saving your character, press the "L" (Lines)

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key to put lines on the screen. To help you see where your character will sit when it prints, the prompts on the bottom of the screen will go away and you'll get a whole screen of lines. The lines will represent four Epson print lines. To sit on the same line as the Epson fonts, position your character on one of the solid lines. It should sit just above the line. From the solid line to the broken lines is the space below the Epson print line, where extenders go. For example, the tail of the "g" sits below the line and would fit into the space between the solid and the broken line. Here's how to position the FUTURA "A":



There is a fifth position, above the screen, out of sight. Your character can be scrolled up there, but will not save in that position. If you try to save it that way, then recall it, you will find it is back down, so the whole character is visible on the screen. If you need to move the character to get it on a line, MOVE IT DOWN, NOT UP. The FUTURA font is a two line font, so there are two possible positions for it. If you have a four line font, it cannot be moved up and down like this. Four lines is the maximum character size.

For an apostrophe, or character that sits above the line, move it to a position above your regular characters. Be sure your entire font is positioned on the same line, or when you go to print, the characters will not line up with each other. You should also move the character to the extreme left of the screen (press "SHIFT" left arrow), then set trailing spaces after it, as explained below.

SETTING TRAILING SPACES

To put spaces between characters when you print, use the item "<T>railing blank columns" to choose how many spaces you want. You may choose from one to nine. If you don't select any number, the program will automatically put two spaces between your characters. The screen consists of 64 columns or spaces (each

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dot is one column or one space). If you have a character that uses all 64 spaces, you cannot leave any space between them - your character has used all available space. This would only be the case with huge characters; normally, there will be room for trailing spaces. The sample font provided has four spaces after each character. Some fonts look good with no spaces, but most need at least two spaces. Once you've entered the number of trailing spaces, the number will appear in the lower right hand corner as the second of the two numbers (the first is cursor speed). Now you can save your character. If you forget to set the trailing spaces, or use too many or too few, you can always go back to the character and add or remove space and save it again. These spaces are saved along with the character, so changing the spaces means you have edited the character.

SAVING YOUR CHARACTER

Once your picture or character is complete, the next step is to save it. Press "S" to save. Your character will be saved to disk in the file you specified. The menu will return to the screen.

****If Disk Space is Full**** If you have no space on your disk, you'll get a message telling you disk space is full and the menu will return to the screen. In this case, put a different disk in one of your drives and select menu item "C" to open a different file on that drive. Then select menu item "A" and hit the "+" key; this will return your character to the screen and let you save it on another disk.

****Saving to a Different Disk**** If you've recalled a character from one disk and want to save it to a file on another disk, put the new disk in a drive before you answer any prompts. Press "S". Enter a filename, even if it is the same filename used on the old disk, and a drive #. For example, SYMBOLS/FNT:2. Enter the I.D. # or press "ENTER" to retain the old I.D. #.

RECALLING A FILE

Before you can recall a character, you must recall or "open" the correct file first. To get a character back on the screen, be sure you use the correct file name and have that file on a disk currently in one of your drives. If you specify a file name from the menu and the computer cannot find such a file on any of the disks in your drives, it will create a new file by that name. You will see a prompt on the screen, telling you a new file is being created.

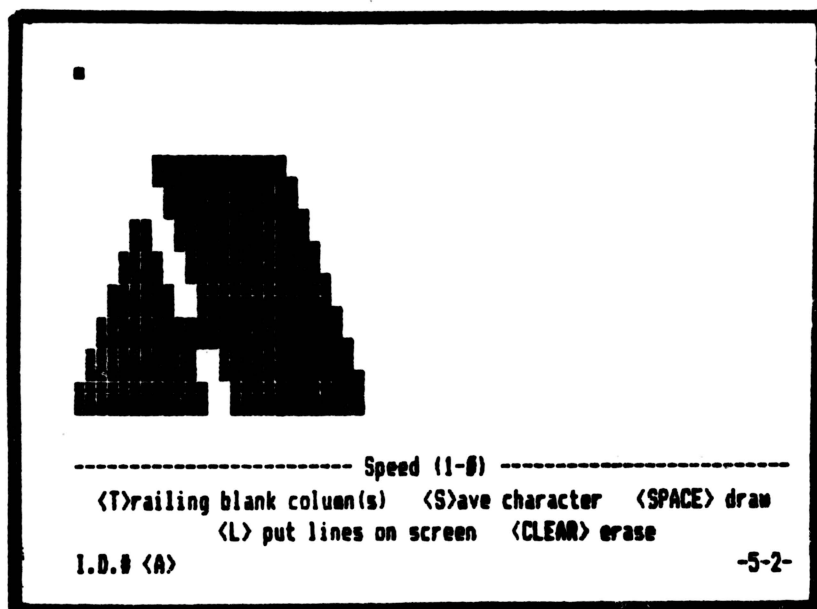
NOTE: If you have a file by the same name on your system disk and on your data disk, LAZYFONT will get the file from your system disk, unless you specify ":1".

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RECALLING A CHARACTER

From the menu, you can get a saved character back by specifying its I.D. #. For instance, if you just drew a "X" and saved it as "X", you can recall it by pressing "A" and entering I.D. <X>. The "X" that you drew will return to the screen. If you have an entry under "Z", enter that as the I.D. # and any entry in "Z" will appear on the screen, and so on.

To get back to the Menu, press "BREAK". If you want to see what a character looks like, call up the FUTURA file and enter any letter of the alphabet as the ID #. The character specified will appear on the screen.



If you recall a character and decide you want to change it, you can redraw it and either save it over the old version or save it to a new file or I.D. #. After editing a character, pressing "S" will give you these prompts:

<ENTER> or New Filename < >

This gives you a chance to save this character to a different file or even to a different disk. But if you do not want to put the character in a different file, just hit "ENTER".

If you want to save it to a different disk, put the new disk in one of your drives and enter a filename.

Next you'll get the prompt:

<ENTER> or New I.D. # < >

This lets you select the same I.D. # or choose a different one.

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If you want the same I.D. #, just press "ENTER". If you want to go back to the previous prompt (Filename), press "BREAK".

If you indicated your character should go in I.D. <E>, you would next get this prompt:

I.D. "E" is already in FUTURA:1 file

Do you want to replace it with the character just drawn? Y/N

If you just want to save the new character over the old character, enter "Y". If you want to keep the old version, but save the new version as a different I.D. #, press "No". You'll now be given a chance to enter a new I.D. # for your new character.

For ease of use, it is best to save an "A" as I.D. #A, since this lets you later type "A" and have an "A" print, but any character can be saved as any I.D. #. If you saved a "B" as I.D. <A>, then when you typed an "A" and printed it, it would print a "B". LAZYFONT doesn't "know" what an "A" looks like; it can only retrieve the contents of a particular I.D. #. It is up to you to store your characters in some coherent fashion. When you are doing non-alphabet characters (like our logo, or a border, or whatever), you'll have to keep a list of what was saved under what I.D. #.

EDITING A CHARACTER

You can load any character into LAZYFONT and make changes to it, then save it back to disk, either over the old character or as a new character. Sometimes it is easier to create a new character by editing an old one than by starting with a blank screen. Editing an old character helps you get the size of the new one about the same as the old one. For instance, an "I" can be turned into a "J", a comma can be moved up on the screen and become an apostrophe, etc.

IF YOU LOAD A CHARACTER AND CHANGE ITS VERTICAL OR HORIZONTAL POSITIONING ON THE SCREEN, YOU HAVE EDITED THAT CHARACTER; SAVE IT WITH ITS NEW POSITIONING.

LISTING A FILE

You can also use the menu item "(L)ist a file" to show you what I.D. #'s have been used. This puts on the screen all I.D. #'s that are in use. The first alphabet and an alternate alphabet will be shown. Designations that cannot be used because they are printer control codes are shown as white blocks.

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Here's a sample of what a file looks like listed to the screen:

```
ID's in "FUTURA:1":  
  
■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■  
■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■  
!"@ &'() ,-. /0123456789:; = ? ABCDEFGHIJKLMNOPQRSTUVWXYZ  
'abcdefghijklmnopqrstuvwxyz ■  
  
Alternate sets:  
  
AB  
■  
  
Hit <BREAK> for menu.
```

If you have characters in the first alphabet and the alternate alphabet (see below), you can press "S" to swap them, then list the file again. You'll see they've been reversed. If you're going to swap two large character sets, it will take a bit of time. The drives will come on and run while the swap is made. If you want to test this, use the GRAPHIC file, which has items in both character sets.

ALTERNATE CHARACTER SET

The menu item "(S)wap alphabets in the file" lets you store two complete alphabets in one file and use both of them when you print. Press "S" and all characters currently in that file will be shifted 128 places further into the file. Then you can begin with "A" again in storing your second, or ALTERNATE, alphabet. See the ASCII Chart in the Appendix, which shows the decimal numbers for both character sets.

You can store items directly in the alternate character set by saving them with an apostrophe after the letter. For example, I.D. <A'> would be stored in the alternate set. You can view them on the screen by the same method - the character plus an apostrophe. When you want to print them, add 128 to the normal ASCII number. To print an "A" in the alternate set, you need 193 instead of 65. You can put the 193 into a BASIC statement like this: "CHR\$(193)".

MANAGING YOUR FILES

LAZYFONT files take up only as much disk space as needed to store the items in that file. You will have both very long font files

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and short font files. As with storing any kind of file on disk, you can run out of disk space. If you make extensive use of LAZYFONT, you will have to devise ways of keeping track of your files. Generally, it is best to store your fonts on a data disk and periodically check how much room is left on that disk. If you are going to begin creating a large file (one containing two alphabets or one containing huge characters), you may want to format a fresh data disk to hold the new file. If you do find you are low on disk space and want to add to a file, you can use your DOS COPY command to copy the file onto a disk with more space, then add to it. If you create a great many font files, you may want some way to distinguish them from other files. You could do that with an extender, such as STENCIL/FNT. Then you would know any file ending in "/FNT" is a font file.

It is not necessary to have all fonts you want to use in one document on a disk in one of your drives. When LAZYFONT prints, if it encounters a command for a font file it does not find, it will prompt you to insert the disk containing that font file.

PRINTING WITH LAZYFONT

To print your fonts with LazyFont, you must first load the program that prints the fonts, then go into BASIC and write a simple program. To load the program, from "DOS Ready" type the name of the program. If you renamed it, as we suggested, to DOFONT, type:

```
DOFONT <ENTER> or LFSA483/CMD
```

The disk drive will come on and load in the program, but you will not see anything on the screen. You will only see "DOS Ready" once it is loaded. To get into BASIC, from "DOS Ready" simply type:

```
BASIC <ENTER>
```

BASIC will load into the computer. You'll see a copyright notice for the BASIC and the symbol: ">". You are now ready to give commands. If you want to see what a sample program looks like, load in our EXAMPLE file. Type:

```
>LOAD "EXAMPLE/BAS"
```

Once the program is loaded, to see what it looks like type:

```
>LIST
```

The program will appear on the screen. Notice that it consists mainly of "LPRINT" statements. It is not a complex program, and writing programs like this does not require much expertise in programming. If you haven't tried this program yet, try it now. Type:

```
>RUN
```

The example program will print a message on paper using the fonts found on your disk.

WRITING YOUR OWN PROGRAM

Let's start from scratch with a new program. If you still have the example program in memory, type:

```
>NEW
```

You're ready to compose your own program. Let's say you want to print the headline "MEMO FROM XYZ CORP". You want it in the FUTURA font found on your disk. The first thing you need to do is "open" the FUTURA file. Begin like this:

```
>10 LPRINT "<<FUTURA>"
```

The font name is always preceded by "<" and the font name is always enclosed in ">". You use the LPRINT statement before the font name, as shown here.

PRINTING WITH LAZYFONT

Now you need to indicate what you want printed. This is done with another LPRINT statement, like this:

```
>10 LPRINT "&<FUTURA>"
>20 LPRINT "MEMO FROM XYZ CORP"
```

The next consideration is that FUTURA is a two line font, so you need at least one line beneath the words to be printed to allow for both lines it will use in printing. This can be accomplished with another LPRINT statement, like this:

```
>10 LPRINT "&<FUTURA>"
>20 LPRINT "MEMO FROM XYZ CORP"
>30 LPRINT
```

MEMO FROM XYZ CORP

That is your whole program. All you need to do now is type RUN to make the program print MEMO FROM XYZ CORP. If you know BASIC, you know this program could be put all on one line, or printed from the immediate mode. The program could look like this:

```
>10 LPRINT "&<FUTURA>";:LPRINT "MEMO FROM XYZ CORP";:LPRINT
```

LLISTING YOUR PROGRAM

If you want a paper copy of your program, you must turn off the font in use or the program listing will print in the font. LLIST like this:

```
>LPRINT "&<-OFF->"
press <ENTER>
>LLIST "MEMO/BAS"
press <ENTER>
```

Even if you do this, when the program prints to the part that opens a font file, it will print a message on the screen that the file is not on-line (if it's not), or begin printing in the font. Just hit BREAK to continue printing.

An even better way is to kill the LazyFont program, then LLIST your BASIC program. You can do this by hitting RESET, then going back into BASIC and loading back your program.

USING YOUR PRINTER'S SPECIAL MODES

Dot matrix printers let you print in various sizes and can do emphasized and/or double-striking when they print. They do this with codes, which tell them which mode to use. LazyFont can make use of these modes when you put the proper codes into your

PRINTING WITH LAZYFONT

program. Let's say you want the word "MEMO" to print double-wide and the words "FROM XYZ CORP" in regular type, emphasized. Here's how to do it with an Epson printer:

```
>10 LPRINT "&<FUTURA>"
>20 LPRINT CHR$(14);: LPRINT "MEMO"
>30 LPRINT:LPRINT:LPRINT
>40 LPRINT CHR$(27);: CHR$(69);:LPRINT "FROM XYZ CORP"
>50 LPRINT:LPRINT
```

MEMO

FROM XYZ CORP

The Epson printer cancels the double-wide when it hits a line feed, so by the time it gets to "FROM XYZ CORP.", it is back to regular size. The "27" and "69" are the decimal codes that turn on emphasized type. Be sure you use the correct syntax, ";;", between items so a line feed will not be sent which would cancel the function.

CHANGING FROM ONE FONT TO ANOTHER

You can use as many fonts as you want in one program; just put in the command to open the desired font file. You can also switch from a font to regular type by turning off the font. Here's a program that uses FUTURA and FU2, plus regular type:

```
>10 LPRINT "&<FUTURA>"
>20 LPRINT "MEMO"
>30 LPRINT: LPRINT: LPRINT
>40 LPRINT "&<-OFF->"
>50 LPRINT "*****" *****
>60 LPRINT: LPRINT: LPRINT
>70 LPRINT "&<FU2>"
>80 LPRINT "FROM XYZ CORP"
>90 LPRINT: LPRINT
```

MEMO

FROM XYZ CORP

In this example, the word "MEMO" will print in FUTURA. The asterisks will print in the regular printer font, and "FROM XYZ CORP" will print in FU2. As you can see, a font can be turned off, so it figures that it can also be turned back on. Here's how:

```
>10 LPRINT "&<FU2>"
>20 LPRINT "MEMO"
>30 LPRINT "&<-OFF->"
>40 LPRINT: LPRINT: LPRINT
>50 LPRINT "FROM XYZ CORP"
```

MEMO

FROM XYZ CORP

RE: ANNUAL REPORT

PRINTING WITH LAZYFONT

```
>60 LPRINT "&<-ON->"
>70 LPRINT "RE: ANNUAL MEETING"
>80 LPRINT: LPRINT: LPRINT
```

OVERLAPPING FONTS

LazyFont will mix fonts on one line, if you use the right syntax. Here's what will work:

```
>10 LPRINT "&<SE> HELLO &<MC>FROM XYZ CORP"
```

HELLO FROM XYZ CORP

This will simply begin the second font where the first one ended, on the same line. This works best when the fonts are of the same size. If one is a three line font and the other a one line font, you may want to use two "LPRINT"'s to send two line feeds, then tab the second font to begin printing next to the base of the first font. For example, try this:

```
10 LPRINT "&<ARROWS>HELLO"
20 LPRINT "&<SE>FROM XYZ CORP"
```

Here's what this looks like:

HELLO FROM XYZ CORP

You can see that one line printed on top of another. This is rarely what you intend, so here's how to avoid it:

```
10 LPRINT "&<ARROWS>HELLO"
20 LPRINT
30 LPRINT TAB(15)"&<SE> FROM XYZ CORP"
```

HELLO FROM XYZ CORP

Here, the LPRINT in line 20 moves the words down and the TAB function moves them over for a readable line.

SPACING OF CHARACTERS AND LINE MANAGEMENT

You can control the placement on the page with tabs or spaces within quote marks. If you can control placement precisely enough, you can join characters together to make larger graphics. This is how the large "LF" cover art was created. You can also create headlines and graphics, then "cut and paste" them into other documents, then run the whole thing through a copier.

In getting the results you want, remember that the fonts are not the same size as regular characters. You must manage the vertical spacing by including enough LPRINT statements between printed lines. If you have more material on a line than will fit, the right end will simply be chopped off. You will have to move some of it down to the next line.

PRINTING WITH LAZYFONT

When you are defining characters via the LAZYFONT program, you can define the size of a space (decimal 32). When you use the TAB function in BASIC, it will send spaces the size you have saved as "32". If you do not save anything in "32", you will get normal size spaces that go with the normal size font for your printer.

USE WITH OTHER BASIC PROGRAMS

The examples given here are simple programs; LazyFont can also be incorporated into larger programs. For example, you could use it with an invoice program to print messages or totals in eye-catching fonts. What is needed is to open and close the font files within a larger program, plus planning for the spacing based on larger characters. In addition, since LazyFont takes over the Printer Control Block of the DOS, any program using the Printer Control Block could be used with LazyFont. One method of printing with LazyFont within another program is to first go into BASIC and open the font file, then load a machine language program and print in the font specified. Utilities that occupy high memory may not be compatible, since LazyFont resides in high memory. LazyFont has been tested only with BASIC, but could theoretically be used with programs in other languages as well. LazyFont takes up 11,450 bytes, so a very long program may not load and allocation of string space might have to be adjusted to reflect the space used by LazyFont. If you're using a BASIC that does not recognize TOPMEM, you should set memory to 54085 (D345H). The address for TOPMEM is 4049H for Model I and 4411H for Model III.

USE WITH LAZY WRITER WORD PROCESSOR

LazyFont was originally created for use with the Lazy Writer word processor. It's great advantage when combined with a word processor is that it takes up very little memory space; the fonts come directly from disk and do not go into memory at all. This means you can have a lengthy document and still print with as many fonts as you want. You also use the word processing margin commands to set margins for your document, and you might find this easier than setting them from BASIC. If you plan to use Lazy Font with large amounts of text, consider getting Lazy Writer. You will need a new version of the printer driver (the LFSA files) but you'll find the command structure very similar and all your fonts will work with it. See the order form in the back of this manual for ordering information.

USING GEAP/DOTWRITER FONTS

Some of the fonts on your disk were originally designed for use with GEAP/Dotwriter. The program on your disk called GEAPTOLF works from DOS and will "convert" fonts from the Dotwriter format to LazyFont format. See instructions for its use in the Appendix.

a p p e n d i x




```

10 REM
11 REM
12 REM      HERE'S HOW TO USE LAZY FONT WITH
13 REM      STRINGS
14 REM
15 REM
16 REM
20 CLEAR 500
30 CLS
31 REM
32 REM  GET FONTS AND TEST STRING
33 REM
40 INPUT "NAME OF FIRST FONT";A$
45 REM  MAKE IT A LAZYFONT FILE NAME
50 A$="&<"+A$+">"
60 INPUT"FIRST WORD";B$
70 INPUT"NAME OF SECOND FONT";C$
80 REM  MAKE IT A LAZYFONT FILE NAME
85 REM
90 C$="&<"+C$+">"
100 INPUT "SECOND WORD";D$
110 REM
120 REM  PUT EVERYTHING IN ONE STRING
130 F$=A$+B$+C$+D$;PRINT F$
140 REM
150 REM  SEND IT TO THE PRINTER
160 LPRINT F$;
170 LPRINT
180 LPRINT
190 LPRINT
200 END

```

EXAMPLE/BAS FILE

WELCOME TO LAZYFONT

the program that
lets you be creative

you can even print in GREEK LIKE THIS

ENJOY LAZYFONT !

TRY OLD ENGLISH OR SOME GRAPHICS:



USING LAZYFONT

THE MENU

- C - This creates or recalls a file. You will get the prompt "Filename < >"; enter the name of the file you're creating or recalling.
- K - The next item, "<K>ill the file", lets you kill the file currently in use. Press "K". You'll get a message "Are you sure you want to kill this file? <Y/N>". If you are sure, press "Y"; to back out, press "N". Once you kill a file, it will be gone from that disk. Do this only if you have the font backed up somewhere else or if you really don't want that file any more. Killing a file will create more room on your disk. You can also kill font files from DOS, using the KILL command.
- S - The next item is "<S>wap alphabets in the file". This item is here because a file is large enough to contain two complete alphabets. After you have entered one alphabet, you can hit the "S" key and all your entries will be shifted by 128 in the file. Since "A" starts at 65, it will now be saved as 65 + 128, or 193. The advantage to this is that you can now put another complete alphabet in the same file. To get back your first file, press "S" again.
- A - "<A>dd/Edit an entry" lets you add new items or recall items stored in a file. When you press "A", you will get a prompt to enter the I.D. # for the item you want to enter. You also press "A" to recall an item you have stored. Entering its I.D. # will recall it to the screen. You can return the last character displayed to the screen by choosing "A" and entering "+".
- D - The next item, "<D>elete an entry from the file", will kill one item from a specified file. For example, if you have a file called GEORGE and you want to kill the item in "Q", indicate you want to delete item "Q" from file GEORGE.
- F - The item "<F>ilename display" is to let you know which file is current. If you forget the name of the file you're working on, press "F" and the name will be displayed. You can switch to another file anytime by using the "A" item and entering the name of the file you want to see. You may want to view or edit items from several files. Use "F" if you forget which you currently are using.
- L - <L>ist a file will put on the screen all ID #'s that contain a character. This is helpful if you can't remember how many characters you have in a file or which I.D. #'s are already used. The white blocks on the screen are printer control numbers, which can't be used to store items.
- * - To get to DOS, press "*" (SHIFT and the asterisk key).

LAZYFONT Printer Commands

COMMAND	WHAT IT DOES
<filename>	opens specified file
<-OFF->	turns off lazy font printing; returns to normal Epson type
<-ON->	turns on lazy font printing using last font specified
>&<filename>	opens specified lazy font file used as L W printer command
>&&<filename>&	opens specified lazy font file used as L W embedded command

SAMPLES OF THE FONTS ON THE MASTER DISK

GR:

ABXΔEΘΓΗΘΚΛΜΝΟΠΡΕΤΤΥΣΔΨΖ

αβχδεθγηι. φκλμνοπϕρστνζωξ ψ

0123456789

MC:

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

1234567890ABCDEFGHI

FU2:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789!@#%&*~

ARROWS:

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

0123456789

DE:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

MB:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789!"'()#*:-

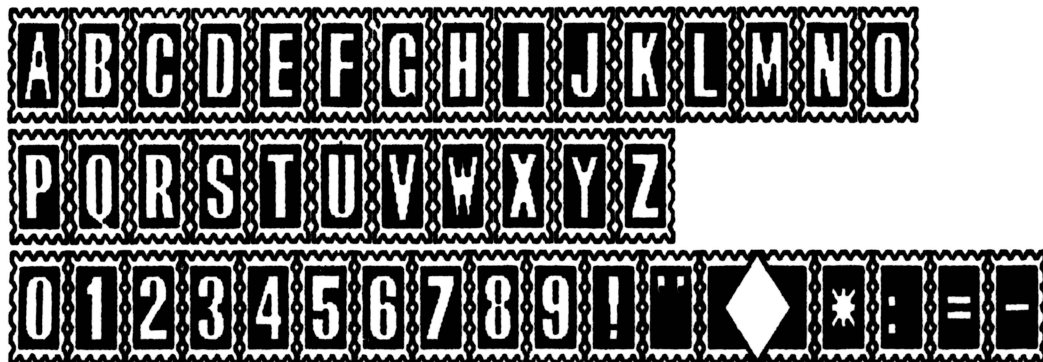
SE:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

STAMP:



FUTURA:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789!"'()#*:-

USING LAZYFONT

DRAWING COMMANDS

KEYS	RESULTS
space bar	draw while bar held down
space bar (while drawing)	end drawing
space bar + H	continuous draw
CLEAR	erase while key held down
CLEAR (while erasing)	end erasing
CLEAR + H	continuous erase
CLEAR + H, then rt+left arrow	erase a horizontal line
CLEAR + H, then up+dn arrow	erase a vertical line
CLEAR + rt+left arrow	erase a horizontal line
CLEAR + up+dn arrow	erase a vertical line
L	toggles lines off & on
number keys	set cursor speed
SHIFT + up arrow	move picture up on screen
SHIFT + dn arrow	move picture down on screen
SHIFT + rt arrow	move picture to the right
SHIFT + left arrow	move picture to the left
T + number	set space to left
(used from Menu)	
+	returns last used character to screen

Using GEAP/DotWriter Fonts

An alternative to making up all your own fonts is purchasing fonts on disk. A program called GEAP (Graphics Editor and Programmer, written by Bill Mason), also uses custom type fonts and the people selling GEAP have made up six disks of fonts. Each disk contains 10 or 12 fonts. You may purchase these fonts and use them with LAZYFONT. However, you will have to "convert" them to LAZYFONT format. This is a simple procedure that you need only do once.

Make backup copies of the GEAP/DotWriter font disks and use the backups for your conversion. To convert the fonts, use the program GEAPTOLF/CMD, found on your master disk. Put a system disk containing the program GEAPTOLF/CMD in drive #0. Type

```
GEAPTOLF
```

from DOS Ready. You will get a prompt:

```
GEAP to Lazyfont file conversion utility Hit <BREAK> to exit.  
GEAP filename < >
```

Just enter the filename of the GEAP font you wish to convert. Then you'll get another prompt:

```
Lazyfont filename < >
```

Enter the name you want to use for the "converted" font. You can save it to the same filename if you save it to a different drive. You will first get a message:

```
The Lazyfont file spcified already exists;  
do you want to overwrite it Y/N ?
```

Press "Y" to save the converted file over the old file. Or, you may save it as a different filename. If you're converting the font called BALL, you could do it like this:

```
GEAP filename <BALL:0>  
Lazyfont filename <BALL:1>
```

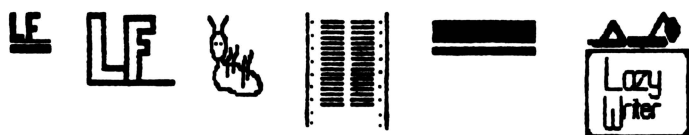
This saves the converted file onto your data disk in the #1 drive. If you do not have enough room on the #1 disk for this file, you will get a prompt telling you that disk space is full. You'll have to make room on the disk by killing some files or get a fresh formatted disk, then do the "convert" again. If you have converted over the old file, you'll have to go back to your original GEAP disk and convert from that or a backup of that. Once you have the files converted, they are ready to use with LAZYFONT. You may load the characters into the program to view, or print out your text using them.

GRAPHIC

contains some graphics we've used in these instructions, in our newsletter, and just for fun. We're passing them on to you.

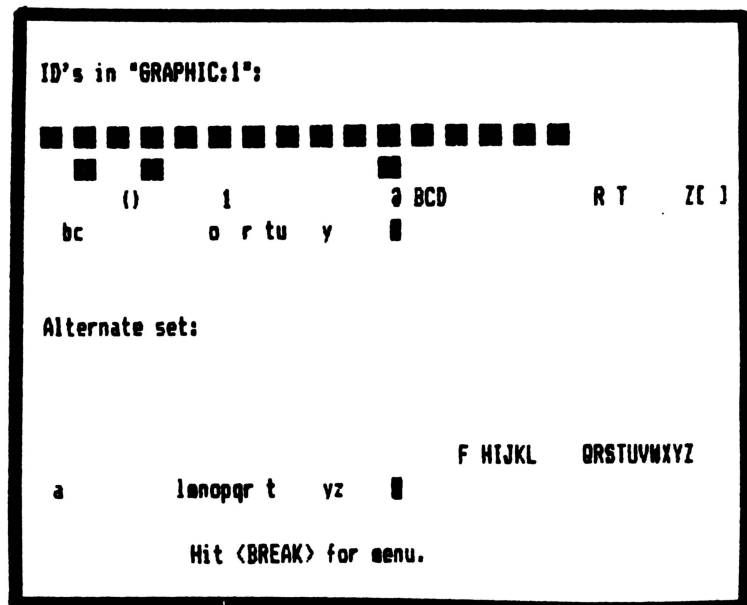
Here's some of the characters in the main set:

B C D R T Z



These are in the alternate set:

F l a z y



ASCII CHART

The ASCII Code stands for "American Standard Code for Information Interchange".

ALT SET====DEC==ASCII	ALT SET====DEC==ASCII	ALT SET====DEC==ASCII
=====		
128 0 NULL	171 43 + plus	214 86 V
129 1 SOH	172 44 , comma	215 87 W
130 2 STX	173 45 - minus	216 88 X
131 3 ETX	174 46 . period	217 89 Y
132 4 EOT	175 47 / slash	218 90 Z
133 5 ENQ	176 48 0 zero	219 91 [open brkt
134 6 ACK	177 49 1 one	220 92 \ left slash
135 7 BEL	178 50 2 two	221 93] close brkt
136 8 BS	179 51 3 three	222 94 ^ circumflex
137 9 HT	180 52 4 four	223 95 _ underline
138 10 LF	181 53 5 five	224 96 ` grave
139 11 VT	182 54 6 six	225 97 a
140 12 FF	183 55 7 seven	226 98 b
141 13 CR	184 56 8 eight	227 99 c
142 14 SO	185 57 9 nine	228 100 d
143 15 SI	186 58 : colon	229 101 e
144 16 DLE	187 59 ; semicolon	230 102 f
145 17 DC1	188 60 < less than	231 103 g
146 18 DC2	189 61 = equals	232 104 h
147 19 DC3	190 62 > gr than	233 105 i
148 20 DC4	191 63 ? question	234 106 j
149 21 NAK	192 64 @ at sign	235 107 k
150 22 SYN	193 65 A	236 108 l
151 23 ETB	194 66 B	237 109 m
152 24 CAN	195 67 C	238 110 n
153 25 EN	196 68 D	239 111 o
154 26 SUB	197 69 E	240 112 p
155 27 ESC	198 70 F	242 113 q
156 28 FS	199 71 G	243 114 r
157 29 GS	200 72 H	244 115 s
158 30 RS	201 73 I	245 116 t
159 31 US	202 74 J	246 117 u
160 32 SP space	203 75 K	247 118 v
161 33 ! exclan	204 76 L	248 119 w
162 34 " quotes	205 77 M	249 120 x
163 35 # number	206 78 N	250 121 y
164 36 \$ dollar	207 79 O	251 122 z
165 37 % percent	208 80 P	252 123 { op brace
166 38 & ampersand	209 81 Q	253 124 vert rule
167 39 ' acute	210 82 R	254 125 } cl brace
168 40 (op paren	211 83 S	256 126 ^ overscore
169 41) cl paren	212 84 T	257 127 DEL
170 42 * asterisk	213 85 U	

The chart on this page shows the standard ASCII code with their decimal equivalent. The idea behind ASCII was standardization, so a character typed on one keyboard would produce the same result as the same character typed on another keyboard. However, many manufacturers have departed from the standard. For example, the number above 127 are used for many different applications.

For purposes of storing LAZYFONT characters ASCII and decimal are the same. Capital "A" can be stored and recalled by "A" or "65"; small "a" can be stored and recalled by "a" or "97", etc. However, some ASCII codes are for functions, rather than characters, such as decimal 27, which is used for "escape". Decimal 12 is a form feed, decimal 13 is carriage return, and so on. These numbers, which tell the printer to perform some function, cannot be used for storing characters. If you try to use them, you will get an error message telling you to use another I.D. #.

There is one character you may have trouble printing - the ampersand (&). This will not print if it is followed by a "<". If used between words of text (as in JOHNSON & JOHNSON), it will print.

You may view a character in the alternate set by using a " ' " after the character when you enter it as an I.D. #. For example, I.D. <R'> gets you the capital "R" in the SECOND character set.

Another way to print from the SECOND alphabet is to swap alphabets from the LAZYFONT menu; this means the two alphabets will change places, and you can view your "R" by entering I.D. <R>. Printing with that file will give you the alphabet currently in the FIRST alphabet.

Remember, you can use the List feature from the LAZYFONT menu to see what characters you have in a file. Both character sets will shown.

registration

Please fill out the following information and return it to AlphaBit Communications, Inc. This puts you on the list as a LAZYFONT owner, so you can be notified of future products and upgrades for LAZYFONT. These products will be available from AlphaBit or from your dealer.

NAME_____

ADDRESS_____

WHERE PURCHASED_____

SUGGESTIONS_____

Also send font disk (circle) # 1 2 7 8 9 11 13 14 at \$17.95.
3 4 5 6 10 12 at \$24.95.

_____LFI at \$24.95

_____Electronic Symbol Font at \$49.95.

Total \$_____

My check is enclosed. My MC/Visa # is_____

exp_____

FONT # 1 Collection: Simple Letter Quality

STR/PR

Small TypeRiter

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/

STR/PRI

Small TypeRiter Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/*

TR/PRI

TypeRiter Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/*

PL/PRI

Plain Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/*

PP/PR

Plain Print

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/

PP/PRI

Plain Print Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=0+<? 1234567890:-0@;.,/*

CLAR/PR

Clarity

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=<.>? 1234567890:-@;.../

CLAR/PRI

Clarity Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=<.>? 1234567890:-@;.../*

PLKEY3/PR

Model III Keyboard

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=<.>? 1234567890:-@;.../
\\^_`{|}~

PLKEY1/PR

Model I Keyboard

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+=<.>? 1234567890:-@;.../
+<->_`{|}~

RUS/PR

Russian (Cyrillic) РУССКО

KEY : A B C D E F G H I J K L M N O P Q R S T

RUS/PR: А В Х Д Е Ф Г Ю И Ж К Л М Н О П Ц Р С Т

KEY : U V W X Y Z a b c d e f g h i j k l m n

RUS/PR: У В Ш Щ Я Э а б х д е ф г ю и ж к л н

KEY : o p q r s t u v w x y z ! " # \$ % & ' .

RUS/PR: о п ц р с т у в ш щ я э . " № % & ' .

KEY : () * = & + < > ? 1 2 3 4 5 6 7 8 9 0

RUS/PR: () э = б ч я ѝ ? 1 2 3 4 5 6 7 8 9 0

KEY : ; : - + @ ; , . /

RUS/PR: ; - б ч , . /

LTGREEK2/PR

Light Greek 2-line Λιγντ Γρεεκ

KEY : A B C D E F G H I J K

LTGREEK: A B X Δ E Φ Γ H I Θ K

KEY : L M N O P Q R S T U V

LTGREEK: Λ M N O Π P Σ T Υ Β

KEY : W X Y Z a b c d e f g

LTGREEK: Ψ Ξ Ω Ζ α β χ δ ε φ γ

KEY : h i j k l m n o p q r

LTGREEK: η ι θ κ λ μ ν ο π ς ρ

KEY : s t u v w x y z ! " #

LTGREEK: σ τ υ β ψ ξ ω ζ ! " #

KEY : \$ % @ ' () * = +

LTGREEK: \$ % & ' () * = £ +

KEY : < > ? 1 2 3 4 5 6 7

LTGREEK: ← → ? 1 2 3 4 5 6 7

KEY : 8 9 0 : - 0 ½ ; . . /

LTGREEK: 8 9 0 : - 0 † ; . . /

BOGREEK2/PR**Bold Greek 2-line Βολδ Γρεεκ**

KEY	:	A	B	C	D	E	F	G	H	I	J	K
BOGREEK:		A	B	X	Δ	E	Φ	Γ	H	I	Θ	K
KEY	:	L	M	N	O	P	Q	R	S	T	U	V
BOGREEK:		Λ	M	N	O	Π		P	Σ	T	Υ	B
KEY	:	W	X	Y	Z	a	b	c	d	e	f	g
BOGREEK:		Ψ	Ξ	Ω	Z	α	β	χ	δ	ε	φ	γ
KEY	:	h	i	j	k	l	m	n	o	p	q	r
BOGREEK:		η	ι	θ	κ	λ	μ	ν	ο	π	ς	ρ
KEY	:	s	t	u	v	w	x	y	z	!	"	#
BOGREEK:		σ	τ	υ	β	ψ	ξ	ω	ζ	!	"	#
KEY	:	\$	%	@	'	()	*	=		+	
BOGREEK:		\$	%	δ	'	()	*	=	£	+	
KEY	:	<	>	?		1	2	3	4	5	6	7
BOGREEK:		←	→	?		1	2	3	4	5	6	7
KEY	:	8	9	0	:	-	0	½	:	.	.	/
BOGREEK:		8	9	0	:	-	π	†	:	.	.	/

FONT # 6 Collection: Computer Style/Special/Language

SCOMP/PR

SCREENED CS
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
nopqrstuvwxyz
z! " \$ % & ' [] * = + < > ?
1234567890:-@;.,/

CS3/PR

Large Computer Style

ABCDEFGHIJKLMN O P Q R S T U V W X Y
Z 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! " \$ % & ' [] * = + < > ? 1234567890:-@;.,/

CS2/PR

Computer Style

ABCDEFGHIJKLMN O P Q R S T U V W X Y
Z 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! " \$ % & ' [] * = + < > ? 1234567890:-@;.,/

CS1/PR

SMALL COMPUTER STYLE

ABCDEFGHIJKLMN O P Q R S T U V W X Y
ZABCDEFGHIJKLMN O P Q R S T U V W X Y
z! " \$ % & ' () * = + < > ? 1234567890:-@;.,/

LCD/PR

LCD

ABCDEFGHIJKLMN O P Q R S T U V W X Y
ZABCDEFGHIJKLMN O P Q R S T U V W X Y
z! " % ' () * = + < > ? 1234567890:- ;.,/

LED/PR

LED LETTERSET

ABCDEF GHIJKLMNOPQRSTUVWXYZ
 LABCDEF GHIJKLMNOPQRSTUVWXYZ
 7_! " \$ % & ' () * + - , . : ;
 @ [\] ^ _ { | } ~ ` ' " , . : ;

SPC/PR

Special Character Letterset

```

KEY      : A B C D E F G H I J K L M N O P Q R S T
SPC/PR: → ← ⤵ ⤴ ⤶ ⤷ ⤸ ⤹ ⤺ ⤻ ⤼ ⤽ ⤾ ⤿ ⥀ ⥁ ⥂ ⥃ ⥄ ⥅ ⥆ ⥇ ⥈ ⥉ ⥊ ⥋ ⥌ ⥍ ⥎ ⥏ ⥐ ⥑ ⥒ ⥓ ⥔ ⥕ ⥖ ⥗ ⥘ ⥙ ⥚ ⥛ ⥜ ⥝ ⥞ ⥟ ⥠ ⥡ ⥢ ⥣ ⥤ ⥥ ⥦ ⥧ ⥨ ⥩ ⥪ ⥫ ⥬ ⥭ ⥮ ⥯ ⥰ ⥱ ⥲ ⥳ ⥴ ⥵ ⥶ ⥷ ⥸ ⥹ ⥺ ⥻ ⥼ ⥽ ⥾ ⥿ ⦀ ⦁ ⦂ ⦃ ⦄ ⦅ ⦆ ⦇ ⦈ ⦉ ⦊ ⦋ ⦌ ⦍ ⦎ ⦏ ⦐ ⦑ ⦒ ⦓ ⦔ ⦕ ⦖ ⦗ ⦘ ⦙ ⦚ ⦛ ⦜ ⦝ ⦞ ⦟ ⦠ ⦡ ⦢ ⦣ ⦤ ⦥ ⦦ ⦧ ⦨ ⦩ ⦪ ⦫ ⦬ ⦭ ⦮ ⦯ ⦰ ⦱ ⦲ ⦳ ⦴ ⦵ ⦶ ⦷ ⦸ ⦹ ⦺ ⦻ ⦼ ⦽ ⦾ ⦿ ⧀ ⧁ ⧂ ⧃ ⧄ ⧅ ⧆ ⧇ ⧈ ⧉ ⧊ ⧋ ⧌ ⧍ ⧎ ⧏ ⧐ ⧑ ⧒ ⧓ ⧔ ⧕ ⧖ ⧗ ⧘ ⧙ ⧚ ⧛ ⧜ ⧝ ⧞ ⧟ ⧠ ⧡ ⧢ ⧣ ⧤ ⧥ ⧦ ⧧ ⧨ ⧩ ⧪ ⧫ ⧬ ⧭ ⧮ ⧯ ⧰ ⧱ ⧲ ⧳ ⧴ ⧵ ⧶ ⧷ ⧸ ⧹ ⧺ ⧻ ⧼ ⧽ ⧾ ⧿ ⨀ ⨁ ⨂ ⨃ ⨄ ⨅ ⨆ ⨇ ⨈ ⨉ ⨊ ⨋ ⨌ ⨍ ⨎ ⨏ ⨐ ⨑ ⨒ ⨓ ⨔ ⨕ ⨖ ⨗ ⨘ ⨙ ⨚ ⨛ ⨜ ⨝ ⨞ ⨟ ⨠ ⨡ ⨢ ⨣ ⨤ ⨥ ⨦ ⨧ ⨨ ⨩ ⨪ ⨫ ⨬ ⨭ ⨮ ⨯ ⨰ ⨱ ⨲ ⨳ ⨴ ⨵ ⨶ ⨷ ⨸ ⨹ ⨺ ⨻ ⨼ ⨽ ⨾ ⨿ ⩀ ⩁ ⩂ ⩃ ⩄ ⩅ ⩆ ⩇ ⩈ ⩉ ⩊ ⩋ ⩌ ⩍ ⩎ ⩏ ⩐ ⩑ ⩒ ⩓ ⩔ ⩕ ⩖ ⩗ ⩘ ⩙ ⩚ ⩛ ⩜ ⩝ ⩞ ⩟ ⩠ ⩡ ⩢ ⩣ ⩤ ⩥ ⩦ ⩧ ⩨ ⩩ ⩪ ⩫ ⩬ ⩭ ⩮ ⩯ ⩰ ⩱ ⩲ ⩳ ⩴ ⩵ ⩶ ⩷ ⩸ ⩹ ⩺ ⩻ ⩼ ⩽ ⩾ ⩿ ⪀ ⪁ ⪂ ⪃ ⪄ ⪅ ⪆ ⪇ ⪈ ⪉ ⪊ ⪋ ⪌ ⪍ ⪎ ⪏ ⪐ ⪑ ⪒ ⪓ ⪔ ⪕ ⪖ ⪗ ⪘ ⪙ ⪚ ⪛ ⪜ ⪝ ⪞ ⪟ ⪠ ⪡ ⪢ ⪣ ⪤ ⪥ ⪦ ⪧ ⪨ ⪩ ⪪ ⪫ ⪬ ⪭ ⪮ ⪯ ⪰ ⪱ ⪲ ⪳ ⪴ ⪵ ⪶ ⪷ ⪸ ⪹ ⪺ ⪻ ⪼ ⪽ ⪾ ⪿ ⫀ ⫁ ⫂ ⫃ ⫄ ⫅ ⫆ ⫇ ⫈ ⫉ ⫊ ⫋ ⫌ ⫍ ⫎ ⫏ ⫐ ⫑ ⫒ ⫓ ⫔ ⫕ ⫖ ⫗ ⫘ ⫙ ⫚ ⫛ ⫝̸ ⫝ ⫞ ⫟ ⫠ ⫡ ⫢ ⫣ ⫤ ⫥ ⫦ ⫧ ⫨ ⫩ ⫪ ⫫ ⫬ ⫭ ⫮ ⫯ ⫰ ⫱ ⫲ ⫳ ⫴ ⫵ ⫶ ⫷ ⫸ ⫹ ⫺ ⫻ ⫼ ⫽ ⫾ ⫿ ⬀ ⬁ ⬂ ⬃ ⬄ ⬅ ⬆ ⬇ ⬈ ⬉ ⬊ ⬋ ⬌ ⬍ ⬎ ⬏ ⬐ ⬑ ⬒ ⬓ ⬔ ⬕ ⬖ ⬗ ⬘ ⬙ ⬚ ⬛ ⬜ ⬝ ⬞ ⬟ ⬠ ⬡ ⬢ ⬣ ⬤ ⬥ ⬦ ⬧ ⬨ ⬩ ⬪ ⬫ ⬬ ⬭ ⬮ ⬯ ⬰ ⬱ ⬲ ⬳ ⬴ ⬵ ⬶ ⬷ ⬸ ⬹ ⬺ ⬻ ⬼ ⬽ ⬾ ⬿ ⭀ ⭁ ⭂ ⭃ ⭄ ⭅ ⭆ ⭇ ⭈ ⭉ ⭊ ⭋ ⭌ ⭍ ⭎ ⭏ ⭐ ⭑ ⭒ ⭓ ⭔ ⭕ ⭖ ⭗ ⭘ ⭙ ⭚ ⭛ ⭜ ⭝ ⭞ ⭟ ⭠ ⭡ ⭢ ⭣ ⭤ ⭥ ⭦ ⭧ ⭨ ⭩ ⭪ ⭫ ⭬ ⭭ ⭮ ⭯ ⭰ ⭱ ⭲ ⭳ ⭴ ⭵ ⭶ ⭷ ⭸ ⭹ ⭺ ⭻ ⭼ ⭽ ⭾ ⭿ ⮀ ⮁ ⮂ ⮃ ⮄ ⮅ ⮆ ⮇ ⮈ ⮉ ⮊ ⮋ ⮌ ⮍ ⮎ ⮏ ⮐ ⮑ ⮒ ⮓ ⮔ ⮕ ⮖ ⮗ ⮘ ⮙ ⮚ ⮛ ⮜ ⮝ ⮞ ⮟ ⮠ ⮡ ⮢ ⮣ ⮤ ⮥ ⮦ ⮧ ⮨ ⮩ ⮪ ⮫ ⮬ ⮭ ⮮ ⮯ ⮰ ⮱ ⮲ ⮳ ⮴ ⮵ ⮶ ⮷ ⮸ ⮹ ⮺ ⮻ ⮼ ⮽ ⮾ ⮿ ⯀ ⯁ ⯂ ⯃ ⯄ ⯅ ⯆ ⯇ ⯈ ⯉ ⯊ ⯋ ⯌ ⯍ ⯎ ⯏ ⯐ ⯑ ⯒ ⯓ ⯔ ⯕ ⯖ ⯗ ⯘ ⯙ ⯚ ⯛ ⯜ ⯝ ⯞ ⯟ ⯠ ⯡ ⯢ ⯣ ⯤ ⯥ ⯦ ⯧ ⯨ ⯩ ⯪ ⯫ ⯬ ⯭ ⯮ ⯯ ⯰ ⯱ ⯲ ⯳ ⯴ ⯵ ⯶ ⯷ ⯸ ⯹ ⯺ ⯻ ⯼ ⯽ ⯾ ⯿ Ⰰ Ⰱ Ⰲ Ⰳ Ⰴ Ⰵ Ⰶ Ⰷ Ⰸ Ⰹ Ⰺ Ⰻ Ⰼ Ⰽ Ⰾ Ⰿ Ⱀ Ⱁ Ⱂ Ⱃ Ⱄ Ⱅ Ⱆ Ⱇ Ⱈ Ⱉ Ⱊ Ⱋ Ⱌ Ⱍ Ⱎ Ⱏ Ⱐ Ⱑ Ⱒ Ⱓ Ⱔ Ⱕ Ⱖ Ⱗ Ⱘ Ⱙ Ⱚ Ⱛ Ⱜ Ⱝ Ⱞ Ⱟ ⰰ ⰱ ⰲ ⰳ ⰴ ⰵ ⰶ ⰷ ⰸ ⰹ ⰺ ⰻ ⰼ ⰽ ⰾ ⰿ ⱀ ⱁ ⱂ ⱃ ⱄ ⱅ ⱆ ⱇ ⱈ ⱉ ⱊ ⱋ ⱌ ⱍ ⱎ ⱏ ⱐ ⱑ ⱒ ⱓ ⱔ ⱕ ⱖ ⱗ ⱘ ⱙ ⱚ ⱛ ⱜ ⱝ ⱞ ⱟ Ⱡ ⱡ Ɫ Ᵽ Ɽ ⱥ ⱦ Ⱨ ⱨ Ⱪ ⱪ Ⱬ ⱬ Ɑ Ɱ Ɐ Ɒ ⱱ Ⱳ ⱳ ⱴ Ⱶ ⱶ ⱷ ⱸ ⱹ ⱺ ⱻ ⱼ ⱽ Ȿ Ɀ Ⲁ ⲁ Ⲃ ⲃ Ⲅ ⲅ Ⲇ ⲇ Ⲉ ⲉ Ⲋ ⲋ Ⲍ ⲍ Ⲏ ⲏ Ⲑ ⲑ Ⲓ ⲓ Ⲕ ⲕ Ⲗ ⲗ Ⲙ ⲙ Ⲛ ⲛ Ⲝ ⲝ Ⲟ ⲟ Ⲡ ⲡ Ⲣ ⲣ Ⲥ ⲥ Ⲧ ⲧ Ⲩ ⲩ Ⲫ ⲫ Ⲭ ⲭ Ⲯ ⲯ Ⲱ ⲱ Ⲳ ⲳ Ⲵ ⲵ Ⲷ ⲷ Ⲹ ⲹ Ⲻ ⲻ Ⲽ ⲽ Ⲿ ⲿ Ⳁ ⳁ Ⳃ ⳃ Ⳅ ⳅ Ⳇ ⳇ Ⳉ ⳉ Ⳋ ⳋ Ⳍ ⳍ Ⳏ ⳏ Ⳑ ⳑ Ⳓ ⳓ Ⳕ ⳕ Ⳗ ⳗ Ⳙ ⳙ Ⳛ ⳛ Ⳝ ⳝ Ⳟ ⳟ Ⳡ ⳡ Ⳣ ⳣ ⳤ ⳥ ⳦ ⳧ ⳨ ⳩ ⳪ Ⳬ ⳬ Ⳮ ⳮ ⳯ ⳰ ⳱ Ⳳ ⳳ ⳴ ⳵ ⳶ ⳷ ⳸ ⳹ ⳺ ⳻ ⳼ ⳽ ⳾ ⳿ ⴀ ⴁ ⴂ ⴃ ⴄ ⴅ ⴆ ⴇ ⴈ ⴉ ⴊ ⴋ ⴌ ⴍ ⴎ ⴏ ⴐ ⴑ ⴒ ⴓ ⴔ ⴕ ⴖ ⴗ ⴘ ⴙ ⴚ ⴛ ⴜ ⴝ ⴞ ⴟ ⴠ ⴡ ⴢ ⴣ ⴤ ⴥ ⴦ ⴧ ⴨ ⴩ ⴪ ⴫ ⴬ ⴭ ⴮ ⴯ ⴰ ⴱ ⴲ ⴳ ⴴ ⴵ ⴶ ⴷ ⴸ ⴹ ⴺ ⴻ ⴼ ⴽ ⴾ ⴿ ⵀ ⵁ ⵂ ⵃ ⵄ ⵅ ⵆ ⵇ ⵈ ⵉ ⵊ ⵋ ⵌ ⵍ ⵎ ⵏ ⵐ ⵑ ⵒ ⵓ ⵔ ⵕ ⵖ ⵗ ⵘ ⵙ ⵚ ⵛ ⵜ ⵝ ⵞ ⵟ ⵠ ⵡ ⵢ ⵣ ⵤ ⵥ ⵦ ⵧ ⵨ ⵩ ⵪ ⵫ ⵬ ⵭ ⵮ ⵯ ⵰ ⵱ ⵲ ⵳ ⵴ ⵵ ⵶ ⵷ ⵸ ⵹ ⵺ ⵻ ⵼ ⵽ ⵾ ⵿ ⶀ ⶁ ⶂ ⶃ ⶄ ⶅ ⶆ ⶇ ⶈ ⶉ ⶊ ⶋ ⶌ ⶍ ⶎ ⶏ ⶐ ⶑ ⶒ ⶓ ⶔ ⶕ ⶖ ⶗ ⶘ ⶙ ⶚ ⶛ ⶜ ⶝ ⶞ ⶟ ⶠ ⶡ ⶢ ⶣ ⶤ ⶥ ⶦ ⶧ ⶨ ⶩ ⶪ ⶫ ⶬ ⶭ ⶮ ⶯ ⶰ ⶱ ⶲ ⶳ ⶴ ⶵ ⶶ ⶷ ⶸ ⶹ ⶺ ⶻ ⶼ ⶽ ⶾ ⶿ ⷀ ⷁ ⷂ ⷃ ⷄ ⷅ ⷆ ⷇ ⷈ ⷉ ⷊ ⷋ ⷌ ⷍ ⷎ ⷏ ⷐ ⷑ ⷒ ⷓ ⷔ ⷕ ⷖ ⷗ ⷘ ⷙ ⷚ ⷛ ⷜ ⷝ ⷞ ⷟ ⷠ ⷡ ⷢ ⷣ ⷤ ⷥ ⷦ ⷧ ⷨ ⷩ ⷪ ⷫ ⷬ ⷭ ⷮ ⷯ ⷰ ⷱ ⷲ ⷳ ⷴ ⷵ ⷶ ⷷ ⷸ ⷹ ⷺ ⷻ ⷼ ⷽ ⷾ ⷿ ⸀ ⸁ ⸂ ⸃ ⸄ ⸅ ⸆ ⸇ ⸈ ⸉ ⸊ ⸋ ⸌ ⸍ ⸎ ⸏ ⸐ ⸑ ⸒ ⸓ ⸔ ⸕ ⸖ ⸗ ⸘ ⸙ ⸚ ⸛ ⸜ ⸝ ⸞ ⸟ ⸠ ⸡ ⸢ ⸣ ⸤ ⸥ ⸦ ⸧ ⸨ ⸩ ⸪ ⸫ ⸬ ⸭ ⸮ ⸯ ⸰ ⸱ ⸲ ⸳ ⸴ ⸵ ⸶ ⸷ ⸸ ⸹ ⸺ ⸻ ⸼ ⸽ ⸾ ⸿ ⹀ ⹁ ⹂ ⹃ ⹄ ⹅ ⹆ ⹇ ⹈ ⹉ ⹊ ⹋ ⹌ ⹍ ⹎ ⹏ ⹐ ⹑ ⹒ ⹓ ⹔ ⹕ ⹖ ⹗ ⹘ ⹙ ⹚ ⹛ ⹜ ⹝ ⹞ ⹟ ⹠ ⹡ ⹢ ⹣ ⹤ ⹥ ⹦ ⹧ ⹨ ⹩ ⹪ ⹫ ⹬ ⹭ ⹮ ⹯ ⹰ ⹱ ⹲ ⹳ ⹴ ⹵ ⹶ ⹷ ⹸ ⹹ ⹺ ⹻ ⹼ ⹽
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FPL/PR

Foreign Character Letterset

KEY : A B C D E F G H I J K L M N O P Q R S T
FPL/PR: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

KEY : U V W X Y Z a b c d e f g h i j k l m n
FPL/PR: 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

KEY : o p q r s t u v w x y z ! " # \$ % & '
FPL/PR: 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

KEY : () * = & + < > ? 1 2 3 4 5 6 7 8 9 0
FPL/PR: 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 10

FONT # 5 Collection: Roman

LOMB3/PR

LOMBARDIAN CHRS

ABCDEF GHIJKLMNOPQRSTUVWXYZ
ZABCDEF GHIJKLMNOPQRSTUVWXYZ
Z!'"#\$%&'()*+=£+<>? 1234567890:-+;.,/

SPQR/PR

INCISED TRAJAN

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ZABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!'"#\$%&'()*@=++<>? 1234567890:-+;.,/

ROMUNC/PR

ROMAN UNCIAL

ABCDEFGHIJKLMNopqrstuvwxyz
zABCDEFGHIJKLMNopqrstuvwxyz
Z!'"#\$%&'()*+=£+<>? 1234567890:-+;.,/

ROMAN/PR

Roman

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
Z!'"f#\$%&'()*+=£+<>? 1234567890:-+;.,/

CELT3/PR

celtic 3-line

abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
Z!"#\$%&'()*=£†‡? 1234567890:-*;,./

CELT32/PR

Celtic3 with small l/c

abcdefghijklmnopqrstuvwxyz
Zabcdefghijklmnopqrstuvwxyz
Z!"#\$%&'()*=£†‡? 1234567890:-*;,./

CELT2/PR

celtic 2-line

abcdefghijklmnopqrstuvwxyz
Zabcdefghijklmnopqrstuvwxyz
Z!"#\$%&'()*=£†‡? 1234567890:-*;,./

GBB/PR

Great Big Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!`£\$%&'()*+=+<>? 1234567890:-=.../

MB3/PR

OUTLINE BIG BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ZABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!`#\$%&'()*+=+<>? 1234567890:-0.../

BO/PRI

Enhanced Bold Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!`#\$%&'()+=+<>? 1234567890:-0.../*

MB/PRI

Medium Bold Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!`#\$%&'()+=+<>? 1234567890:-0.../*

SB0/PR

Small Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-<? 1234567890:-@;.,/ °

MODUNC3/PR

MODERN UNCIAL 3-LINE

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-<? 1234567890:-@;.,/

MODUNC3N/PR

MODERN UNCIAL3 with LARGE NUMERALS

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-<? 1234567890:-@;.,/

MODUNC2/PR

MODERN UNCIAL 2-LINE

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-<? 1234567890:-@;.,/

FONT # 3 Collection: Gothic/Script

GOTHIC/PR

Gothic Black Letter

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!'"£\$%&'()*+=+!#? 1234567890:-@;.,/

SGBL/PR

Spire Gothic Black Letter

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*+=£+!#? 1234567890:-@;.,/

PRET2/PR

Pretorian Letterset

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!'"+"\$%&'()*=£+<>? 1234567890:-@;.,/

CM/PR/

Chancery Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*=£+<>? 1234567890:-@;.,/

BOLDSC/PR

Bold Script 3-Line

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*=£+<>? 1234567890:-@;.,/

BSC2/PR

Bold Script 2-Line

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

HWT/PR

Hand Writing

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

FSC/PR

Formal Script

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

ELEGANT/PR

Elegant

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

FONT # 2 Collection: Formal Letter Quality

CLAR2/PR

Clarity 2-line

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-@;.,/

CLAR2/PRI

Clarity 2-line Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-@;.,/*

SPL/PRI

Small Plain Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-@;.,/*

SA/PR

Small Artistic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-@;.,/

SA/PRI

Small Artistic Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-@;.,/*

LQ/PR

Letter Quality

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-./ 1234567890:-@;:_/

LQ/PRI

Letter Quality Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()+,-./ 1234567890:-@;:_/*

LETQUAL/PR

Enhanced Letter Quality

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-./ 1234567890:-@;:_/

LETQUAL/PRI *Enhanced Letter Quality Italic*

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()+,-./ 1234567890:-@;:_/*

FONT # 7 Collection: Small Title, Modern

CLIMB/PR

CLIMB 3-LINE

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!'#\$%&'()*+,-./

WALKSTK/PR

WALKING STICK

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!'#\$%&'()*+,-./

STOP2/PR

STOP 2-LINE

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!'#\$%&'()*+,-./

LOGO/PR

LOGO LETTERSET

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!'#\$%&'()*+,-./

ELASTIC2/PR

elastic 2-Line

abcdefghijklmnopqrstuvwxy
Zabcdefghijklmnopqrstuvwxy
z!"#\$%&'()*+,-./

SPLASH2/PR

Splash 2-Line

ABCDEFGHIJKLMNopqrstuVwXy
ZabcdefghijklmnopqrstuVwXy
z!"#\$%&'()*+,-./

LTHELLEN/PR

LIGHT HELLENK

AB<DEFGHIJKLMNopqrstuVwXy
ZAB<DEFGHIJKLMNopqrstuVwXy
Z!"#\$%&'()*+,-./

BOHELLEN/PR

BOLD HELLENK

AB<DEFGHIJKLMNopqrstuVwXy
ZAB<DEFGHIJKLMNopqrstuVwXy
Z!"#\$%&'()*+,-./

FONT # 8 Collection: Small Title, Traditional

MES/PR

Mesquite

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-0 ;,./

LMES/PR

Large Mesquite

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-0 ;,./

SMES/PR

Screened Mesquite

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-0 ;,./

SSE/PR

Screened Small Enhanced

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+<? 1234567890:-0 ;,./

SE/PRI

Small Enhanced Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-./ 1234567890:-;*

FF/PRI

FLAT FACE ITALIC

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!"#\$%&'()*+,-./ 1234567890:-;*

SF/PR

Small Fancy

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!"#\$%&'()*+,-./ 1234567890:-;*

SF/PRI

SMALL FANCY ITALIC

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
Z!"#\$%&'()*+,-./ 1234567890:-;*

FONT # 9 Collection: Headline, Traditional

BALL/PR

BALLOON
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
Z!"\$%&' ? 1234567890:;..

BALL/PRI

BALLOON ITALIC
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
Z!"\$%&' ? 1234567890:;..

FANCY/PR

FANCY
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
Z!"\$%&'<> ? 1234567890:-0:..

FANCY/PRI

FANCY ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
YZABCDEFGHIJKLMNPOQRSTUVWXYZ
WXYZ!"#\$%&'<>? 1234567890:-@;.,/

BW/PR

BROADWAY

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ZABCDEFGHIJKLMNPOQRSTUVWXYZ
Z!"#\$%&'<>= ? 1234567890:-@;.,/

PB/PR

Playbill

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'()*+,-./

ANT/PR

ANTIQUE

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Z!'\"#\$%&'()*+=£+<>?
1234567890:-_.,;/

MOON/PR

MOON LITE

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Z!'\"#\$%&'()*+=£+<>?
1234567890:-_.,;/

NOST2/PR

Engraved Nostalgia

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'[]*+=£+«»? 1234567890:-¢;.,/

BONOST2/PR

Bold Nostalgia

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'[]*+=£+«»? 1234567890:-¢;.,/

NOST3/PR

Nostalgia 3-Line

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!"#\$%&'[]*+=£+«»? 1234567890:-¢;.,/

STENCIL/PR

STENCIL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ZABCDEFGHIJKLMNOPQRSTUVWXYZ
z!"#\$%&'[]*+=£+«»? 1234567890:-¢;.,/

FONT # 11 Collection: Headline, Modern

SHADED/PR

SHADED

ABCDEFGHIJKLMN OPQRSTUVWXYZ
ZABCDEFGHIJKLMN OPQRSTUVWXYZ
Z!"#\$%&'()* 1234567890:;.,

SHADED/PRI

SHADED ITALIC

ABCDEFGHIJKLMN OPQRSTUVWXYZ
ZABCDEFGHIJKLMN OPQRSTUVWXYZ
Z!"#\$%&'()* 1234567890:;.,

SHADOW/PR

SHADOW

ABCDEFGHIJKLMN OPQRSTUVWXYZ
ZABCDEFGHIJKLMN OPQRSTUVWXYZ
Z!"#\$%&'()* 1234567890:- :..

BULL/PR

Bulletin

ABCDEFGHIJKLMN OPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
Z!"#\$%&'()*+= \$+&? 1234567890:- @:./

PIPE/PR

Pipe Line

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

SGOTHIC/PR

Screened Gothic
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 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 ! ' # \$ % & ' 1 . 0 * = + - & ; , /

FONT # 12 Collection: Headline, Banner

DOTBAN/PR

BANNER LETTERSET
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 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 ! " # \$ % & ' (* + , - . /
1 2 3 4 5 6 7 8 9 0 : ; , . /

REVBAN/PR

REVERSED BANNER
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 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 ! " # \$ % & ' (* + , - . /
1 2 3 4 5 6 7 8 9 0 : ; , . /

WRAITH/PR

Wraith

ABCDEFGHIJKLM

NOPQRSTUVWXYZ

Zabcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

z!'"#\$%&'()*+=&+<>?

1234567890:-_.../

HUGE/PR

HUGE

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Z!'"#\$%&'()*+= + ?
1234567890:-_.,/

Remember and ever
as years ago, our
fellow bright
forth on the crea-
tion, conceived in
Liberty and dedi-
cated to the pro-
tection that all
men are created

equal. Today...
and that years-
ment of the pro-
ple, by the people
for the people,
shall not perish
from the earth.
A. Lincoln 1863
Gettysburg, Pa

SHEER/PR

SHEER

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Z!'"#\$%&'()*+= + <> ?
1234567890:-_.,/

PUMP/PR

Pump 3-Line

ABCDEFGHIJKLMN OPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*+=£+<>? 1234567890:-¢,.,/

FONT # 14 Collection: Headline, Contemporary

Hline/PR

Head Line
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
nopqrstuvwxyz
z!'"#\$%&'()*+=£+<>?
1234567890:-_.,/

THOR/PR

Thor 3-Line

ABCDEFGHIJKLMN O PQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*+=£+<>? 1234567890:-_.,/

FULLMOON/PR

Full Moon

ABCDEFGHIJKLM NOPQRSTUVWXYZ
Zabcdefghijklmnopqrstuvwxyz
z!'"#\$%&'()*+=£+<>?
1234567890:-_.,/

ELECTRONIC SYMBOLS FONT

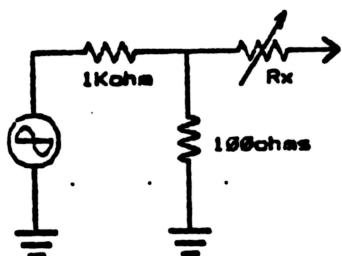
The remarkable drawings shown below were made with LazyFont. Anyone who knows something about electronics might recognize them as electronic circuits. The drawings were created by two instructors at the National Institute of Technology who have our LazyFont program and who use it to prepare schematic diagrams integrated with text. They began by making up a set of electronic symbols with LazyFont, then by joining the symbols together, create the drawings you see here. Using this system, any circuit design can be printed. What is needed to print results like this is the symbol font on disk, plus a text file which positions the symbols so they print as the desired circuits. They are shown here half size.

The two instructors, Lou Vierling and Drew Hoelscher, have made using this font easy by providing a disk full of text files for common circuits. They've also put together a manual which illustrates all the circuits and shows how to use the

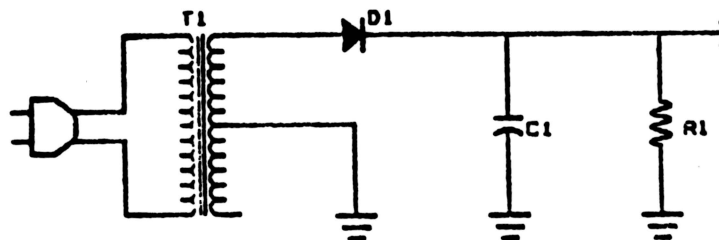
symbols effectively. Both of these men have been honored as Instructor of the Year at their school, and have many years experience in electronics. We are pleased to offer the results of their efforts to our users for \$49.95. This includes a disk with the font along with text files for making common circuits, plus the illustrated instruction manual. To use this font, you need Lazy Writer and LazyFont for the Epson, plus an Epson printer. The circuit files print with the Prowriter, but the proportions are different and some of the larger schematics do not fit on normal sized paper. They can be printed with one of the smaller typesizes (elite or compressed), but the text labels print in the wrong place. The determined user can overcome these problems.

This material could be of invaluable help to anyone who needs to print out electronic schematics, either for technical manuals or as training materials.

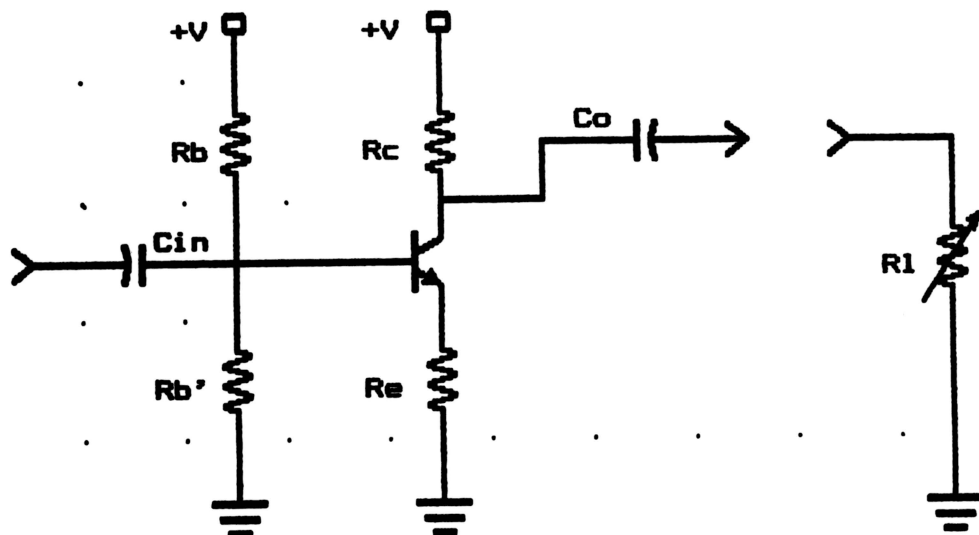
This is SOURCE1/CKT



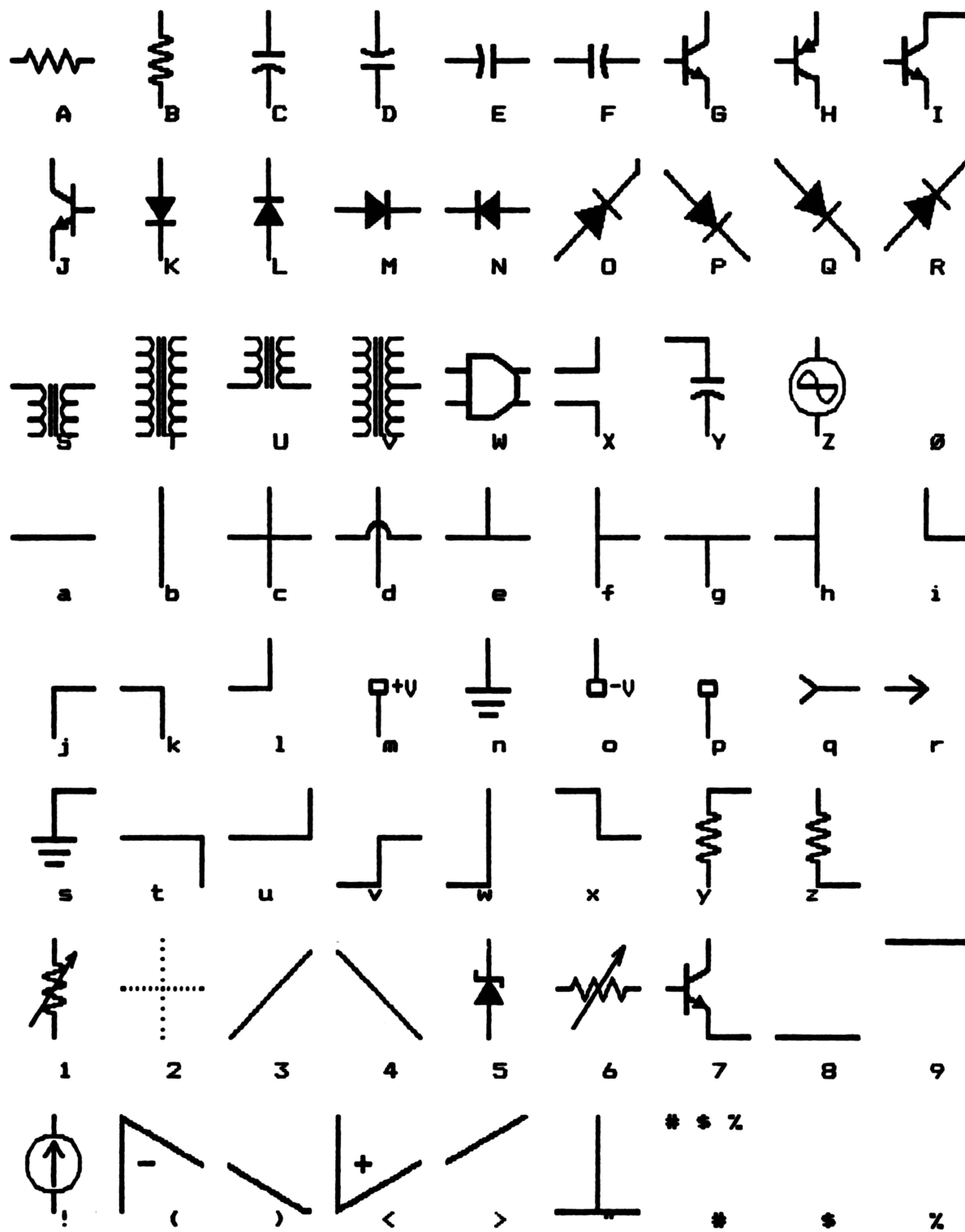
This is PS1/CKT:1



This is HBIASRL/CKT



Here are some examples of the new Electronic Symbol Set
DLSES:



FONT DISK #LF1:

Here is the key sequence used to get the following print-outs. In some of the fonts, not all characters are used and we've omitted the unused ones. You can list the fonts to see which characters have been used in a specific font.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890:-

!"#\$%&'()*+=

,./<>?;+@'

BLOCKGR2:

This font is to be used with ASCII numbers for block graphics or for LazyDraw files. It represents ASCII numbers 129 to 191. When used with LazyDraw files, Use " 0 " for the offset. If you have files saved for use with the Epson with an offset of 32, load them back into LazyDraw and save them out with no offset. Then load the resulting file into Lazy Writer and print with the block graphic font. A sample text file is on your disk as GRPH/DR. Load this into Lazy Writer and print it out with this font. Use the normal LazyFont command at the top of the LazyDraw file. This character set is standard TRS-80 block graphics.

'~!@#%&'()*+,-./:;<=>?@ABCD

GREEK:

ΑΒΓΔΣΕΖΘΙΚΛΜΝΞΟΠΡΤΥΦΧΨΩ

SQUARES2:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

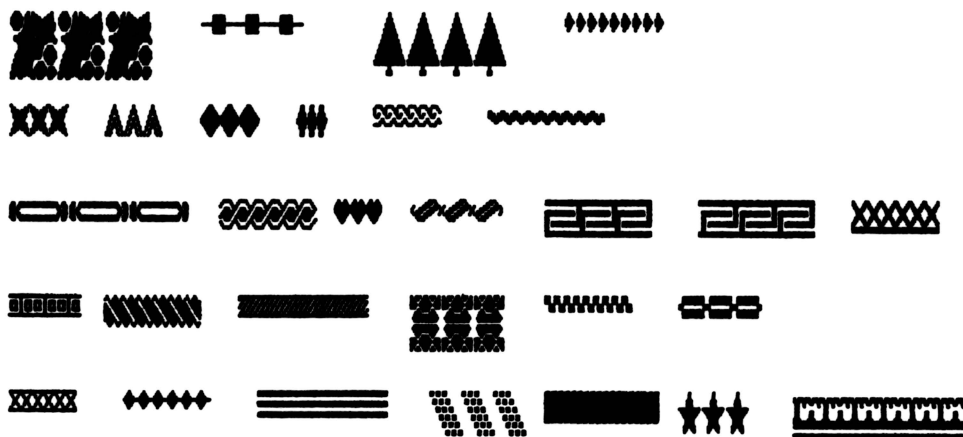
abcdefghijklmnopqrstuvwxyz

1234567890:-

!"#\$%&'()*+=

,./<>?;+@'

BORDERS:



KEYS:

AAA

ABCDEFGHIJKLMNOPQRSTUVWXYZ

alternate set: C D b c e s
arrows = ASCII 91, 92, 93, 94

CTRL CAPS BREAK CLEAR ENTER SHIFT

123456789000=

0000200000=

0000000000

0000

KEYS2:

f1 f2 f3

ABCDEFGHIJKLMNOPQRSTUVWXYZ

alternate set: CD bces
arows = ASCII 91, 92, 93, 94

CTRL CAPS BREAK CLEAR ENTER SHIFT

↑ ↓ ← →

123456789000=

123456789000=

0000000000+@

COMP:

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

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

1 2 3 4 5 6 7 8 9 0 :-

! " " \$ % ' [] * =

, . / < > ? ; +

PLAIN:

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

1 2 3 4 5 6 7 8 9 0 :-

! " " \$ % & () * = , . / ? ;

ORDER FORM

NAME _____ DATE _____

ADDRESS _____

_____ SERIAL NUMBER _____

Telephone Number () _____

Font Disks (circle appropriate number)

1 2 7 8 9 11 13 14 \$17.95

3 4 5 6 10 12 \$24.95

____ LF1 \$24.95 ____ Electronic Symbol Set \$49.95

* Please allow up to two weeks for delivery on font disks 1 - 14.

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