



A Note for LAZYFONT Users

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LAZYFONT instruction manual copyright 1983
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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
- * Lazy Writer Word Processing software

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.

While the program WILL work with only 32K, you'll be limited to short text files. The LAZYFONT driver uses about 6K of memory more than the normal Lazy Writer driver, so space available for text is reduced.



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LAZYFONT is a special program to use with Lazy Writer and the Epson MX-80 or MX-100 with Graftrax or Graftrax Plus. It lets you create custom characters, then print them using your printer's ability to do bit plot graphics. The disk you have purchased is a Model I single density formatted data disk. It contains the files needed for use with either a TRS-80 Model I or Model III computer.

MAKING YOUR WORKING DISK

Before you can use LAZYFONT, you need to make up a working disk containing the files needed. You will need the following files, found on the master disk:

LAZYFONT/CMD LF1P1/CMD or LF3P1/CMD GEAPTOLF/CMD
EXAMPLE

The file LAZYFONT is the program that lets you draw characters. The files LFP1/CMD and LF3P1/CMD replace the old "P1/CMD" on your working disk. These are new printer drivers, that let you print with LAZYFONT. LF1P1/CMD is for the Model I and LF3P1/CMD is for the Model III. The file EXAMPLE is a text file containing samples for you to print, and will be referred to later in these instructions. The file FUTURA is a font file, along with the other fonts on the disk. The file GRAPHIC is font file, but contains graphic characters. The file called GEAPTOLF/CMD is a utility program that converts GEAP/DotWriter fonts to the LAZYFONT format. You will only need this program if you purchase any GEAP/DotWriter fonts.

To make up your Model I working disk, copy LAZYFONT/CMD, EXAMPLE, FUTURA, and GRAPHIC to a system disk containing Lazy Writer. Then copy the file LF1P1/CMD to P1/CMD. The correct syntax for TRSDOS (and most other DOS's) is:

```
COPY LF1P1/CMD TO P1/CMD
```

For the other files, simply copy them from the #1 drive to the #0 drive. The TRSDOS syntax is:

```
COPY LAZYFONT/CMD:1 :0
```

For Model III users, you'll need to "convert" the files from Model I format before using. This is a simple process. Put the LAZYFONT disk in the #1 drive and a TRSDOS system disk containing Lazy Writer in the #0 drive. Type CONVERT :1 :0. This will pull the files off the #1 drive and put them on the #0 drive.

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. However, you must have the new driver copied over

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to P1/CMD in order to print with this program.

For making up working disks with other DOS's, consult the extra instruction sheet, which is enclosed.

GETTING STARTED

To begin using LAZYFONT, load Lazy Writer in the normal way and load in the text file called EXAMPLE. The sample MEMO you have at the end of these instructions is the first page of what this file looks like printed out. It makes use of the two font files on your master disk, and which you should have now on your working disk. These font files are called FUTURA and GRAPHIC. All the alphabet characters are stored in the FUTURA file and the border and the Lazy Writer logo are stored in the GRAPHIC file.

When you have the MEMO text in memory, scroll through it and notice the LAZYFONT commands. Notice that the words following FROM, TO, and SUBJECT are separated by a line on the screen. That's because FROM, TO, and SUBJECT are going to print from a two line font, so the words after them are entered one line down so they'll look better when they print.

Go to the Printer Menu. (Press "CLEAR" and "P") You'll notice that the upper right hand corner says "Lazyfont driver ready". If it doesn't say this, you have not correctly copied the driver (the file LFP1/CMD) to your working disk. Press "ENTER" to print the text.

As soon as the Lazyfont driver encounters the command for a font, it goes to the disk drive to find that font. The disk drive will come on and the words to be printed in the font will appear, a character at a time, on the bottom of the screen. The font characters for one printed line of text will be retrieved from disk into memory and will appear on the screen. Once this line is on the screen, printing will begin. When that line is printed, the next line will appear on the screen as it is pulled from the disk, a character at a time; then this line will be printed, etc. The process of loading the characters from disk into memory takes more time for a large font than for a small one.

Notice the lazy fonts print a line at a time, not a character at a time. If you are printing from a font that is two lines high, as you are with this example, the top part of the characters prints, then the print head returns to the beginning of the line and prints the bottom half.

When your printer gets to the part where it prints the Lazy Writer logo, notice that it prints a line of the logo along with a line of normal text. You can intermix graphics from a font file with normal text, but you must manage the placement of

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everything. In this case, the graphic is four lines high, and it is printing next to normal text. Here, we indented the text, so it would not print over the logo. Sometimes you might want text to print over a font or overlap it for effect. By planning the spacing, you can do this.

The fonts you'll make or buy will be different sizes from regular Epson fonts, so you'll need to provide the proper page widths and line spacing. See the section "PRINTING WITH LAZYFONT" for more help on this, as well as how to set up your text files.

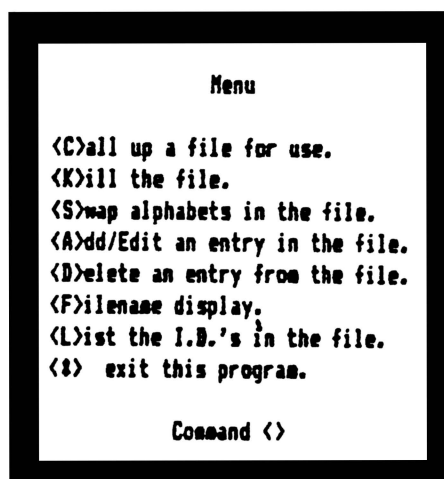
Once it's printed, you'll have proof of what LAZYFONT can do for you. You can use fonts we've supplied to print your own stuff, or start by creating your own characters.

DRAWING YOUR CHARACTERS

To draw characters, use the program, LAZYFONT/CMD. Load this program either from DOS or, you may load it from the Lazy Writer Directory, as an extension. If you use it as an extension, you may rename the program to LAZYFONT/CLW. The "/CLW" tells Lazy Writer it is an extension program; you'll only have to type LAZYFONT in answer to the prompt, and the program will load. If you do use the program as an extension, do not leave unsaved text in memory, since drawing characters will use the same memory that is storing your text, so your text will be trashed when you return to it.

TO REPEAT, ANY TEXT LEFT IN MEMORY WHEN YOU GO OUT TO DRAW CHARACTERS WILL BE TRASHED WHEN YOU RETURN. SAVE YOUR TEXT FIRST!

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 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. #<z>, 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.

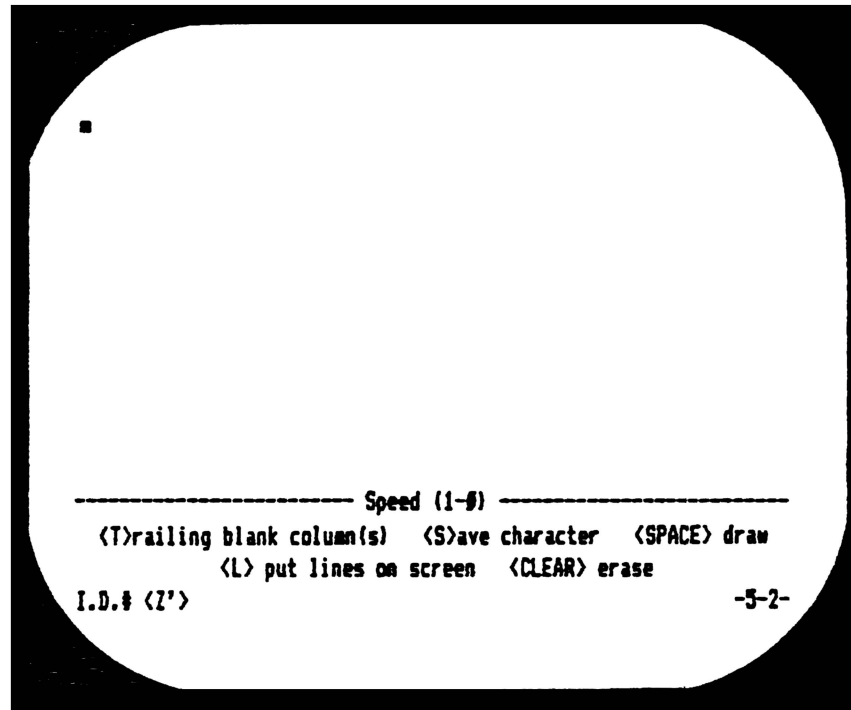
There is one exception to being able to store your font character by either a number or character designation. If you create a plus sign, save it as "43", its ASCII number. If you try to save it as "+", you'll get back your last used character. The "+" is used as a command by LAZYFONT, so you cannot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

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it will when it prints. Each dot on the screen translates into a 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.

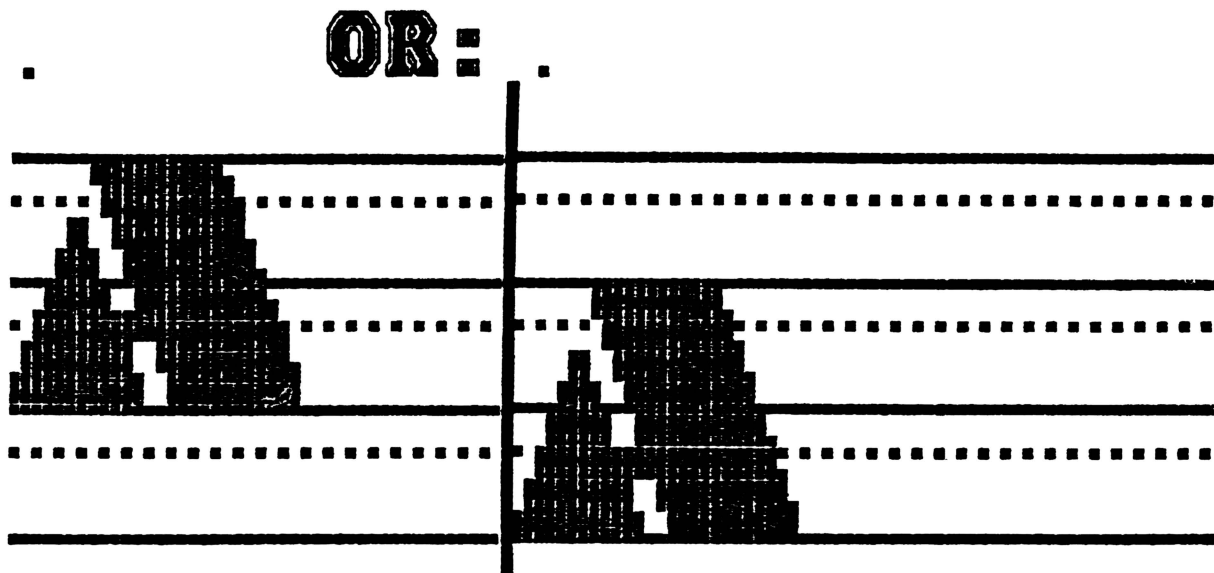
You can also delete this way by holding down the arrow keys together with the "CLEAR" key, or hold down the arrow keys, then tap the "CLEAR" key to delete a row at a time.

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>ailing 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

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characters. The screen consists of 64 columns or spaces (each 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.

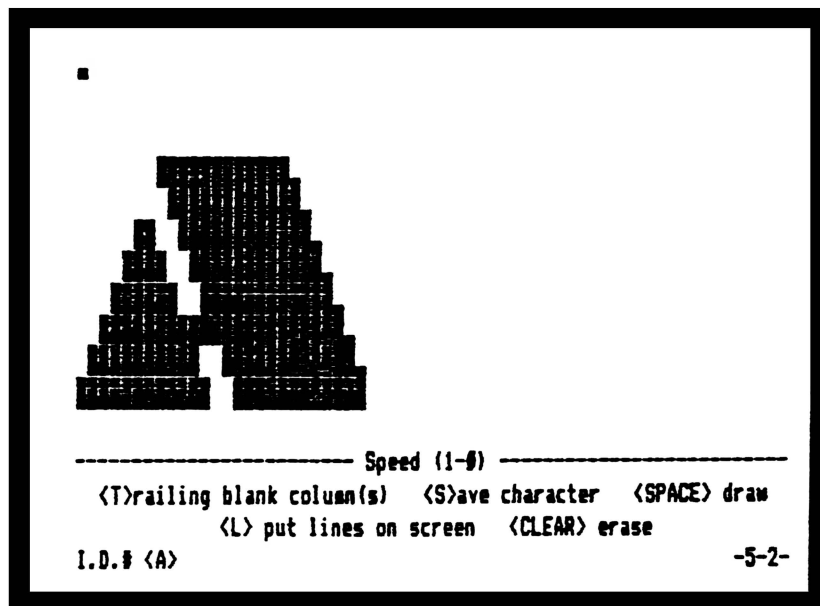
NOTE: If you have a file by the same name on your system disk and on your data disk, LAZYFONT will get the file from your system disk, unless you specify ":1".

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characters. The screen consists of 64 columns or spaces (each
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. # < >

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

You can print the characters in both alphabets by using the Lazy Writer ">g" command, then underlining text on the screen that you want printed in the second font. Underlining after a ">g" command causes Lazy Writer to add 128 to the character typed.

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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 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 text 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.

Using LAZYFONT will mean you need a bit more memory free to print your text. When text prints, the characters are pulled from disk a line at a time. You need 8200 bytes free in memory to hold the fonts in temporary storage until they are printed. If you do not have this space free, LAZYFONT will create a "workfile" on your system disk to hold the fonts. If you do not have room on your system disk, it will create the "workfile" on your data disk. If the fonts are coming from a "workfile", printing will be slower. It is best to keep your text to about 16,000 bytes for optimal use with LAZYFONT. This is for a 48K computer - if you have only 32K, you will almost always be printing with a "workfile". You may want to keep your text files short and chain them when printing, rather than having a long file that means creation of a "workfile". You will know if this "workfile" was created by looking at a Directory of your disk (do this from DOS or from the Lazy Writer Directory); if there is a file called WRKFIL/DON, you have a "workfile". This file is for temporary storage only, and no harm will come if you kill it from your disk.

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.

When you go to the Printer Menu with LAZYFONT, your text is moved higher into memory to make room for the LAZYFONT driver. This means you now have less space for text when you return to Edit; it also means you cannot reboot and recover your text. If a reboot occurs, use RESCUE to get it back. Enter a number into RESCUE that's about 3000 bytes longer than your text, because you'll also get back the LAZYFONT driver at the beginning of your text. Just delete the driver (which will look like non-sense), and your original text will remain.

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

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).

USING LAZYFONT

PRINTING WITH LAZYFONT

Once you have the fonts you want on disk, you're ready to begin designing your document. If you want to print the whole thing in one font, it's simple. You need a command to tell LAZYFONT which font to use. Here's how you do that:

`&<FUTURA>` OR `&<futura>`

This command, at the top of your text, gets the file FUTURA and prints your entire document in this font. That's easy enough, but there are a few things to remember, even with using only one font. Instead of the normal sized characters, you're going to suddenly have much bigger ones. If you use the usual printer commands, such as ">p85/c75", you'll find your large characters printing off the right edge of the paper. You'll also find them overlapping one another vertically. Use commands that take into account the size of the characters you're using. Try this: ">p50/c35/d3". This will work fine with the FUTURA font. If you get the page width too large, some characters will be dropped at the end of each line. For example, if you use ">c60" and only 58 characters can fit on a line, two characters will be dropped. This is easily fixed by using a smaller text width. Keep experimenting until you find the commands that work for your font.

THE PRINTER DRIVER

When you press "CLEAR" "P" to go to the Printer Menu, it will take a bit longer than with the regular Lazy Writer parallel driver. When the menu comes on the screen, it should say "Lazyfont Driver Ready" in the upper right corner. You must have the LAZYFONT driver copied to P1/CMD in order to print your fonts.

The fonts you want to use should be on either your system disk, or on a data disk in the #1, #2, or #3 drives. DO NOT WRITE PROTECT YOUR FONT DISK. If printing begins and you do not have the fonts needed on one of your disks, LAZYFONT will prompt you to insert the proper disk.

Another way to print when your fonts are on several disks is with a ">s" command. If you have fonts on numbered disks, you can use stop commands in text along with a non-printing remark, to remind you to change font disks. Here's how such a command might look:

`>stop/'insert #2 font disk`

The printer will stop and the remark "insert #2 font disk" will appear on the screen. Insert the font disk and press "c" to continue printing.

USING LAZYFONT

If you are not using any lazy fonts, the LAZYFONT driver will print normally. However, it is best to use the regular Lazy Writer driver if you are not using any lazy fonts because you will have more memory available for text. When the LAZYFONT driver is loaded, it takes more room than the regular Lazy Writer driver, so you would get an error message if you have too much text in memory to allow the LAZYFONT driver to load.

NOTE: If you've been printing with LAZYFONT and you try to load in a file longer than you could print, you'll get a FILE OUT OF MEMORY message as the file loads in. Just reset the computer (go out to DOS and come back), and you'll have the full memory free again to load text. However, you won't be able to print such a file with LAZYFONT - you'll have to break up the file into two or more files.

CHANGING TO NORMAL EPSON FONTS

Any character you type, but which is not present in the lazy font, will print in the normal Epson type. If you have only upper case stored in a font file, then only upper case characters will print in that font; all lower case characters you type will simply print normally. The same is true of punctuation or anything you enter from the keyboard that is not in the lazy font - it will print in the normal Epson font.

If you want to switch back to normal Epson type, you can turn off the lazy font with this command:

&<-OFF-> OR &<-off->

When LAZYFONT encounters this, it will begin printing in normal Epson type. To switch back to the lazy font, use this command:

&<-ON-> OR &<-on->

These commands are like an on/off switch in software. When LAZYFONT encounters "ON", it resumes printing in the last font file specified. For example, if you began your document with FUTURA, then used "&<-OFF->" to go back to Epson type, and then used "&<-ON->", printing would resume in FUTURA. With these commands, you can switch from a Lazy font to an Epson font throughout your text.

USING LAZYFONT COMMANDS AS LAZY WRITER PRINTER COMMANDS

The command to turn on a font can be used by itself, or it can be used as a Lazy Writer printer command. If it is used by itself, then Lazy Writer will see the line it is on as a valid line and leave a line in text where you have the command. If you use the LAZYFONT command as a Lazy Writer printer command, it will not see that line as a valid line, but will just execute the command, as it does with any printer command.

USING LAZYFONT

To use a LAZYFONT command as a Lazy Writer printer command, do this:

```
>$&<GRAPHIC>
```

Notice the use of "\$" before "&"; this lets Lazy Writer know the following characters are a printer command. The command shown goes on a line by itself, and gets the file "GRAPHIC". You may also use this as an embedded command by putting an asterisk before and after the command.

You may switch to a lazy font in the middle of a word, by using the font command as an embedded command. For example, if you want only the first character of each paragraph to print in a lazy font, do it like this:

```
&<-ON->L *$&<-OFF->*AZYFONT IS A GREAT PROGRAM!  
OR  
&<FUTURA>L *$&<-OFF->*AZYFONT IS A GREAT PROGRAM!
```

What this does is print "Lazyfont is a great program", with only the "L" in a lazy font. Here's the result:

```
┌AZYFONT IS A GREAT PROGRAM !
```

You can see there's no problem switching from the FUTURA font to a normal font, but the appearance is strange because the normal text begins printing AT THE TOP of the large "L" and we're used to seeing text begin AT THE BOTTOM of a large character. Naturally, there's a way around this. Just put the large "L" on a line above the normal sized text. The command looks like this:

```
&<-ON->L  
*$&<-OFF->*AZYFONT IS A GREAT PROGRAM !
```

Here, we've put the "L" on the line above the rest of the sentence; we've also indented three spaces on the second line to accommodate the width of the "L". Here's how it looks:

```
┌AZYFONT IS A GREAT PROGRAM !
```

On the other hand, you may want the text to begin at the top of the large L, but want normal text to resume a line down, indented so it won't print over the "L". You can use an ">indent" command, then use ">indent off" as an embedded command to bring the text back to normal. Here's the effect:

```
┌azyfont is a great program; it will  
└enhance all your documents by  
personalizing them. You will be pleased  
with this program, which turns your  
computer and MX-80 into a creative tool.
```

USING LAZYFONT

To get this result, use the video width command (press "v" from Edit) in Lazy Writer to see your text in the width you're printing with. Then put the command for ">indent" on the line below the "L". Put the embedded command to turn off the indent (">indent off") in the second line, so the third line will print with a normal margin. The text to print this example is in the EXAMPLE file. Load EXAMPLE into Lazy Writer and see what these commands look like. By varying them, you can get various effects.

If you find your characters not lining up right, there are two ways to attack this problem. One is adjusting the normal text up or down, as we've done above. Another way is to load the character back into the LAZYFONT program and move it up or down on the screen. It's location on the screen when you saved it will determine where it prints on the paper. See the section POSITIONING THE CHARACTER VERTICALLY.

In using LAZYFONT commands as embedded commands, there is one situation you should be aware of. If you have an extender on your LAZYFONT file name (for example, STENCIL/FNT), Lazy Writer sees the characters after the "/" as a new command. It will find and print the font ok, but if you have two fonts with identical names except for the extender, it will find only one. you can get around this by using a "%" in place of the "/" (STENCIL%FNT).

MULTIPLE FONTS ON ONE LINE

You may mix fonts on one line by embedding the commands to turn on the second font. You do not need to turn off the first font before turning on the second font. Here's an example of commands for printing two fonts called SHADOW/FNT and STENCIL/FNT on the same line:

```
*>$&<SHADOW/FNT>* LAZYFONT *>$&<STENCIL/FNT>* IS A LOT OF FUN.
```

Here's the result:

LAZYFONT IS A LOT OF FUN.

USING LAZY FONTS IN HEADERS/FOOTERS

You can have your header or Footer material print in a lazy font, if you wish. This makes dramatic headings at the top of your page, or a bold message (or page numbering) at the bottom. Use the command to get the font file before writing the header/Footer. Then use an ON command at the beginning and an OFF command at the end of the header/Footer. Be sure to leave enough down line feeds after the header/Footer material to allow for the larger size of the type you're using. You will also have to vary the ">page" command somewhat if you want the header/Footer material to center over the text. The EXAMPLE file contains some text set up with a header and a Footer to print in

USING LAZYFONT

the FUTURA font. A copy of the result is in the Appendix. Load this into Lazy Writer so you can see what the commands look like.

USING DOUBLE-WIDE FONTS

If you've been using Lazy Writer, then you know you can customize your printer driver via PRINTGEN to get automatic double-wide. Or, you can use the codes ">14" to turn on double-wide and ">20" to turn off double wide. Using the same methods, you can make your lazy fonts double-wide too! Notice in the sample MEMO, the word "MEMO" is printed double-wide. If you load that file into Lazy Writer, you'll see this was done by putting the codes into text. If you have PRINTGEN set correctly (with "14" for code #1 and "20" for code #3), you could just underline the word "MEMO" and get double-wide. You can get bold face and underlining on regular Epson text with the LAZYFONT driver by the backspace method. See the Appendix page YOUR EPSON PRINTER for more information.

USING THE OTHER EPSON MODES WITH LAZY FONTS

You can use any of the Epson modes with Lazy fonts. However, most fonts will not look good printed compressed; they will be distorted, since compressed works by eliminating every other dot. Emphasized and double-striking will also work with lazy fonts; using them will give your fonts the look of typesetting.

USING LAZY WRITER PRINTER COMMANDS WITH LAZY FONTS

Use any Lazy Writer printer command, including >center, >title, >indent, or any other command you want. The catch is that these commands are centering and indenting characters that are of various widths, not the regular Epson widths. Your lazy fonts WILL respond to Lazy Writer commands, but it is up to you to manage these commands so that you get the result you want.

Remember that with the lazy fonts, the spaces between characters is usually not the same size as the characters. This is especially true if you're using a large 64 dot wide graphic, such as our lazy font logo. If you type a row of these with one space in between each, then print them, you'll see the space between is smaller than the character. So, if you use a command like ">indent 8", when you print, you'll get an indent the size of eight SPACES, not the size of eight 64 dot wide characters.

The first and most important thing to consider is page width. If you are using a large font, reduce the "page width". Then use margin commands that create a text width smaller than the page width. For example, you might use ">page50/center40". If you simply use a smaller page width, but do not supply margin commands, Lazy Writer will try to print your text at the default width, which may be too wide for your page width. Then, you'd

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get an error message. SO, BE SURE TO SUPPLY A TEXT WIDTH, ALONG WITH A PAGE WIDTH.

VERTICAL SPACING

Remember the line spacing too. If the character is four lines high, leave at least four down line feeds at the end of each line to accomodate it, or use ">d4" in text. For a two line font, use >d2 or >d3. Otherwise, your characters will print on top of each other.

HORIZONTAL SPACING

Since many of the fonts you use with LAZYFONT are bigger or smaller than normal, you may want to change the space between words to something compatible with your font. You can do this from the LAZYFONT program by calling up the font you want, then for the "A" item, select "32" or just hit the space bar. The ASCII code for a space (what you get when you hit the space bar) is 32. Now move the cursor to the right to define the size space you want. You may also define a space and save it as any character. Once you've done this, you'll get the size space you selected between words or anytime you hit the space bar. The size of the space will affect the "page width" you need to get a good result.

JOINING CHARACTERS

You can join together many lazy font characters so they print as one picture. This is how the cover art "L F" was created. The text file for the "L F" is on your disk in the EXAMPLE file; the characters are stored in the GRAPHIC font. Load EXAMPLE into Lazy Writer and print out the part that makes the "L F". You may load each character into LAZYFONT to see what they look like. Joining characters in something this complex is not simple. You might try joining characters to make something less complex than this for starters.

If you do create characters you want joined, be sure you leave @ trailing spaces. A simple example of characters joined together is a border. For example, the border you see on the sample MEMO is saved as I.D. <T> in the GRAPHIC file. When you leave a line of T's on the screen and print them, you get a border. Try creating your own designs and save them with no trailing spaces so they'll print as a continuous border. You could also alternate two or three designs to make a fancy border.

LIMITATIONS IN USING LAZYFONT

The LAZYFONT driver uses up more space than the regular Lazy Writer driver. In using LAZYFONT, you lose some space in memory. You have exactly 27279 bytes of memory available with the Model I and 27199 with the Model III, compared to about 33000 with the regular Lazy Writer parallel driver on a 48K machine. This will

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not cause a problem until you go to print. Then, even though your text loaded into Edit ok, more memory space is now needed to accommodate the LAZYFONT driver. If there is not enough room for your text and the driver, you will get an error message.

Your fonts will not right justify or print proportionally. Using a font in the same line with a regular Epson font will throw off the justification for that line, unless you compensate by sending enough code 8's (backspace) to move the print head back the number of extra spaces used by the font. For example, if the font was about three characters wide, embed a command to backspace three times in that line. It would look like this: *>8/8/8*.

You cannot do a "print from" from the Printer Menu if a LAZYFONT command was used above the cursor (the point you're "printing from"). If the entire text is printed in a lazy font and the command to get the font is at the beginning of the text, you'll have to print from the beginning, or temporarily put a command to open the font file in the text where you want printing to begin.

PRINTING GEAP/DOTWRITER FONTS

The lovely fonts available for use with the GEAP/DOTWRITER programs will work with LAZYFONT, once converted via the GEAPTOLF/CMD program. Instructions for using this conversion program are in the Appendix, along with samples of all the fonts. However, you may encounter some problems when you print them. Some are meant to be used with proportional spacing, and the spacing you'll get may look strange. Some have no space between characters and print bunched together, while others have too much space. You can fix these problems by loading each character into the LAZYFONT program and adding or subtracting space. You can move characters up or down on the screen too, if they aren't positioned right. Remember, you can change anything you don't like about these fonts by using the drawing commands.

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