

ABC Sales

P.O. Box 33948
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October 30, 1981

Dear Lazy Writer Owner,

We've finally updated our Reference Card, which contains all the editing and printer commands in Lazy Writer and want you to have a free copy. We also have an index for the manual now, and know many early buyers got manuals that did not contain an index, so we've enclosed one of these too.

In case you may want extra Reference Cards, you can get one extra for \$3.00 and any beyond one for an additional \$.50 each. If you would like a Reference Card that's laminated, send us \$5.00 with your request and \$2.00 for any extra copies you want laminated.

We are working on another newsletter, but have had a lot of unexpected work come up that put us behind schedule. So, we want to share the major news with you now, but let you know the next edition of the Lazy Writer Newsletter is in the works and will be on its way to you soon.

PROPORTIONAL SPACING

We will very soon have Proportional Spacing extensions available for the following printers:

- * Qume
- * Centronics 737 & 739 - including better support for double-wide, underlining, etc.
- * Radio Shack Daisy Wheel
- * Diablo and Spinwriter

We'll have more information on these extensions in the next newsletter. The Qume package will be available first, and will include proportional even spacing (this letter is printed with it) that allows justification and use of text commands.

CENTRONICS 737 & 739

We have finally gotten a Centronics 739 printer. After endlessly waiting to borrow one, we finally bought one. We find it a capable printer that has a few annoying characteristics. It is not as easy to use with Lazy Writer as the MX-80, but we've discovered how to get just about all its features working with Lazy Writer. If you have a 737 or 739 printer, send for our new information sheet. Just send us a stamped self-addressed envelope or \$2.00. We'll send you the info. We'd also like to thank the people who sent us information on how to use the 739 with Lazy Writer, especially George Ferber in Fairmount Illinois. Thanks also to Sherman Wantz.

GRAPHTRAX-80

We've added the Graphtrax 80 option to our MX-80 and have found it lots of fun to use. The basic capabilities it adds are italic type and use of the LW bold face command, plus underlining with the Radio Shack cable. We'll have more on this in the next newsletter and will be adding a page (and hopefully fixing the typos) on our ever popular MX-80 Information Sheet.

DICTIONARY EXTENSION

We'd also like to let our users know that Microproof, a dictionary program produced by Cornucopia Software, is now available as an extension to Lazy Writer. We've found this an easy-to-use, and extremely capable program that fixes all your nasty typos painlessly. We'll be selling it directly, or you can order it from Soft Sector Marketing and a number of other dealers.

NEW VERSION OF LAZY WRITER

Before the first of the year, we'll have a new version out, 1.9 for Mod I, 3.3 for Mod III. New features will be the Directory (DIR/CMD) will read double density DOSPLUS and NEWDOS 80 extended directories, plus you'll have "kill" and "verify" from the Directory. If you don't want to wait for the update, you can send us your disk and \$5.00 and we'll put the new Directory on your present version.

If you have Model III Lazy Writer and have anything other than 3.2, you're entitled to a free update. Just send us your disk and we'll put the latest version on it. Or you can wait for the next regular update. Some people received a Mod III update "3.2" that didn't work properly with DOSPLUS. The next update will fix this, or you can send for the fix now. There was also a problem with the RS232 driver on some of these. Somehow, we managed to pick up an error on our Master disk that caused the malfunction with RS232. If you need this driver now, send us your disk and we'll fix it.

There was also a problem with a small number of Model I disks that apparently were sold. These disks "auto" into the Lazy Writer program. If you have one of these, please return it to us and we'll send you the correct version. Any Model I owner who has anything other than 1.8b or 1.8c can also send back their disk for a free update (or wait for the next regular update).

BUG REPORT

Some problems remain in the current release of Lazy Writer that we hope to clear up in 1.9.

- We've found that an embedded printer command at the end of a line used with the ">title" command will hang the system. If you place a space after your embedded command, the system will not hang.
- We've encountered some problems with some DOS's because of Lazy Writer's one byte write. On Model I's, a sequential file from BABASIC. The file will look OK on the screen or when viewed with a "ZAP" program, but DOSPLUS and possibly other DOS's won't handle it. TRSDOS and NEWDOS 2.1 have no problem with the same file. We're changing the one byte write in the next version to reduce these problems, even though the problem,

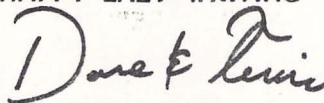
technically, is with the DOS, not with Lazy Writer.

- In Model III RS232 Communications, after using the up arrow to take data into memory, you can't get back to Edit normally. You have to go to the Printer Menu, then to DOS (SHIFT + *), then reload Lazy Writer; your text will still be there. Most bugs are the result of some convoluted cause and effect buried deep in the guts of the program - this was just a plain old error. Sorry.
- The "block delete" feature will sometimes hang the system. This is one of the convoluted ones. Solution is to press reset and reload Lazy Writer, then press the up arrow to recover the text. Another way to get the effect of a "block delete" is to put a seldom used character at the end of the area that you want to delete, then use "d" then "/" to search for that character - getting rid of everything between the cursor position to (and including) the searched for character.
- We've also found that if you use the "o" Printer Menu command with a file that contains any ">f" form feed commands, you'll get endless form feeds from your printer.
- Remark statements (non-printing comments) cannot contain semi-colons, colons, commas, or slash marks because Lazy Writer thinks they are new printer commands - don't use dates like 10/30/81 in non-printing remarks (10.30.81 is ok).
- Always leave a carriage return at the end of your file or you may find your printer printed garbage at the end of your text.
- The Reverse Indent command sometimes fails if it follows the execution of a header/footer.

A number of these bugs were explained on more detail in our last newsletter; most or all will be fixed in the next release of Lazy Writer.

That's about it for now. We appreciate all the people who've written to us with kind words. We're still trying to personally answer all mail, but sometimes we're slow when the work load is heavy. We are changing our procedures to improve our response time and make it more uniform. We've had many contacts from all over the world regarding foreign rights to Lazy Writer and this has been fascinating, but time consuming. Meanwhile, to the best people in the world - our users!

HAPPY LAZY WRITING



David and Theresa Welsh

Dear Lazy Writer User,

Here is the latest version of Lazy Writer, along with a completely new manual. Almost all the commands you're used to using still work the same way, with a few exceptions.

- * INSTEAD OF "SHIFT" "P" TO GET TO THE PRINTER MENU, YOU NOW USE "CLEAR" "p". IN EDIT, "SHIFT" "P" NOW MOVES THE CURSOR BACK ONE PARAGRAPH.
- * THE TAB FUNCTION WILL NOW ONLY WORK AT THE END OF FILE. THE RIGHT ARROW CAN NOW BE USED ON TEXT ENTRY TO MOVE THE CURSOR TO THE RIGHT IF YOU'RE NOT AT THE END OF FILE. PREVIOUSLY, HITTING THE RIGHT ARROW IN TEXT ENTRY WOULD TAB THE CURSOR.
- * WHEN YOU OVERTYPE A CARRIAGE RETURN IN TEXT ENTRY, THE LINE BELOW WILL MOVE UP ON THE SCREEN TO BETTER REFLECT WHAT'S HAPPENING..
- * In COMMUNICATIONS, PRESSING "CLEAR" AND "ENTER" NOW CLEARS THE SCREEN. PREVIOUSLY, "CLEAR" CLEARED THE SCREEN.

The following are other new features in Lazy Writer version 1.8. We've provided manual page numbers for the features mentioned. Also notice the manual now has a table of contents for easy reference.

TEXT ENTRY

- * MANDATORY SPACE - Now you can type two or more words and have them treated as one word. (page 2-4)
- * REPEATING KEYS - All keys now repeat when held down. (page 2-4)
- * "CLEAR" KEY FUNCTIONS - The "CLEAR" key now acts as a control key from Text Entry to let you do some editing from Text Entry. (page 2-5) "CLEAR" and a number key will activate the x-keys.
- * NON-STANDARD CHARACTERS - This lets you print characters that are not on your keyboard, but that your printer may be able to print. (page 2-6)

EDITING

- * MOVE TO END OF LINE - THIS FEATURE IS NOT IN THE MANUAL; IT WAS ADDED AT THE LAST MINUTE. Pressing "@" in Edit will move the cursor to the end of a video line. For example, if you have set a video width of 80 and you press "@", the cursor will move to the end of that 80 character line. This move is useful for counting lines of text when used in conjunction with the x-keys. If you define an x-key as "@" "N", then you can use the "n" key in Text Entry to count a certain number of text lines. For example, if you have text you plan to print out at 72 characters per line, and you want to know where the page breaks will come with 54 lines per page, define the x-key as above, place the cursor at the beginning of text, set the video width at 73, then press "n". Respond to the prompt with "54", then hit "ENTER". The cursor will move down 54 text lines. Pressing "x" or the digit you defined as the x-key will repeat this action, enabling you to see where your page breaks will fall. Remember this will only work if you have uniform line lengths that match the video width. Pressing capital "@" moves the cursor to the end of the preceding text line.
- * DELETING HYPHENS - The manual explains how to delete hyphens from your entire file. (page 3-8) You can also delete hyphens from just a paragraph by pressing "d" and then "-". The cursor should be in the paragraph where the delete is to take place. You also need to have a carriage return at the end of the paragraph, or you'll have a crash. This feature was added at the last minute and is not in the manual.
- * INSERT - The "insert" routine has been improved. Now when you do a character insert, you get a flashing cursor and the cursor does not take up

THE MICROLINE 83 PRINTER

This printer, made in Japan by Okidata, is an example of the new breed of dot matrix printers available today. It produces crisp, readable type and offers a choice of four print sizes from five characters per inch to sixteen characters per inch. It also offers graphics. The Microline 83 is a **very fast printer** - it goes in both directions at a clip of 120 characters per second for normal size type.

Our biggest concern in trying out the Microline 83 was how it would work with Lazy Writer. After much poring through the manual and trying various things, we finally determined that the Microline 83 works just fine with Lazy Writer. It allows you to get automatic double-wide, bold face, and underlining within your text. It wasn't easy for us to figure out how to accomplish this, so we assume our users will have even more difficulty without instructions. At present, the printer comes with a small manual marked "preliminary". It contains the information you need, but this information is hard to locate and not explained.

The printer comes with both parallel and serial capability, but Lazy Writer comes set up with the parallel driver, so there is no need to load a different driver. You will only need to go to the printer menu and press "ENTER" to begin printing your text. You will not need a software form feed.

Should you be bitten by the "I need a new printer" bug and run out and buy a Microline 83, here's how to get the special features going with Lazy Writer. Remember that Lazy Writer uses the same internal routines to get underlining, bold face, and double-wide. All of these features work with the editing command "u". Only one of them can be active at a time; only one can be made automatically. See page 3-9 of your Lazy Writer manual. The PRINTGEN extension allows you to set either underlining or double-wide as the default value, whichever is best for you and your printer.

The **bold face** feature of Lazy Writer produces a nice dark type on this printer that really pops off the page. However, unlike a printer that can receive a code for double-striking an entire document, using bold face on your whole text to improve the type quality would not be practical. This would mean underlining your whole text, giving up underlining and double-wide capabilities, and greatly reducing the speed of the printer for this text.

If you want **double-wide** as the **default condition** and also want to be able to do bold face and underlining, load the PRINTGEN extension and :

```
*set underlining to two-pass
*set "on" for auto double-wide; when you do this, the
```


THE MICROLINE 32 PRINTER

This printer, made in Japan by Oki, is an example of the new class of dot matrix printers available today. It is compact, reliable, and prints a choice of four pitch and a choice of 12 or 16 characters per inch. It is a very fast printer. The Microline 32 is a dot matrix printer with a built-in printer as a standard feature and a choice of 12 or 16 characters per inch.

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underlining option will change on the screen to read
"by code"; ignore this
*-enter "31" as the "start" code and "30" as the "stop"
code
*-set "<d> down linefeed" to "on"

*-The Microline 83 does underlining by two-pass. In
order to get two-pass underlining, the printer must do
a carriage return without a line feed. This printer
comes set up to do line feeds after carriage returns,
so to get underlining, you have to shut off the line
feeds. Do this by turning dip switch #6 to "off".

The above method will enable you to use all the features of Lazy
Writer, but it will also mean your BASIC listings will not print
correctly. You have shut off automatic line feeds, so you won't
get them when listing BASIC programs. There are two solutions:
change the dip switch each time you go from Lazy Writer to BASIC,
or write a program to create line feeds and use it with all BASIC
listings.

If you load PRINTGEN and set the double-wide option to "off"
and if you give it the right start and stop double-wide codes,
you can still get double-wide by using ">D" and ">D off". Set
the "underlining" option to two-pass, and the "down linefeed" to
"on". Change dip switch #6 to "off". This means you will get
automatic underlining, rather than automatic double-wide. Words
you underline with "u" will be underlined until you give a
command for bold face or double-wide. Get double-wide with ">D"
and bold with ">b3". To switch from double-wide back to
underlining, use ">D off"; to switch from bold face back to
underlining, use "bold off". You can go from double-wide to bold
face with ">D off/b3".

Setting PRINTGEN to "backspace" will let you underline
empty spaces, but not words. You won't be able to get bold face
either, but you won't have to change the dip switch. Leave the
"down linefeed" at "off"; you're compatible with BASIC.

The Microline 83 doesn't actually use an "end" code. When the
printer gets to the end of the material to be double-wide, it
reverts back to "normal" type. The "30" code is for return to
"normal". However, if you are using double-wide within a
compressed mode of type, the printer will go back to "normal"
instead of back to compressed; in fact, it will print the whole
line normal. In this case, you would need to embed a printer
command within your text right after the double-wide characters
that would give the code ">29" to continue the compressed mode.

You should be aware that the Microline 83 sends broken
lines for underlining - this is a function of the printer, not of
Lazy Writer.

LAZY WRITER WORD PROCESSING SYSTEM

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by David Welsh

LOADING LAZY WRITER

MODEL IV "4 plus 3"

Your Model IV Lazy Writer disk is on a mini version of the MULTIDOS Disk Operating System, so all you have to do is put the disk in drive #0 and press RESET. When you see the large LAZY WRITER banner and DOS READY, press "L" (the "L" key) then <ENTER>. That will load the initial screen for Lazy Writer. Follow the prompts on the screen from here. Although MULTIDOS is a Model III DOS and works in standard format, when you load Lazy Writer, you will have 80 x 24 characters on the screen.

Although you are getting MULTIDOS with your Model IV Lazy Writer, you are receiving a stripped version of the full operating system known as MULTIDOS. This "MINI MULTI" lets you make backups, format data disks, see directories, and do a number of other frequently-used functions. However, it does not have all the features of the full MULTIDOS.

You should make a backup of your Lazy Writer original disk immediately. Type:

BACKUP <ENTER>

and answer the prompts. You can make as many backups as you want. You'll also want to format a data disk. Type:

FORMAT <ENTER>

and answer the prompts. If you have a two-drive system, the disk you create can go in your #1 drive and hold your text files.

The Model "4 plus 3" disk contains all the Lazy Writer program files, plus a program called FAST/CMD. This program turns on the high speed clock in the Model IV, which makes programs run faster. The clock regulates the speed of the microprocessor. FAST changes the speed from 2 megahertz to 4 megahertz, the same speed you get with TRSDOS 6. The high speed clock has been incorporated into the Model IV Lazy Writer, but we've included FAST so you can use it with other programs, if you want. From DOS READY, type FAST "ENTER". The high speed clock is now on. It stays on as long as the computer is on; to turn it off, RESET the computer. Some functions, such as loading from cassette, may not work properly with the high speed clock on.

USING OTHER DISK OPERATING SYSTEMS

MULTIDOS files are compatible with most other Model III operating

systems, except for TRSDOS. If you have another Model III DOS you want to use, you can use the MULTIDOS COPY command to move the files from the enclosed MULTIDOS disk to the DOS of your choice. You will have to copy each file individually. The correct syntax is:

```
COPY L/CMD :0 :1
```

Do this with each file on your Lazy Writer disk. MULTIDOS lets you put more than one command on a line (separated by commas) so you can speed up the copying by using multiple COPY commands on one line. You can use a single drive system too if the destination disk is a system disk.

If you are using NEWDOS 80, you'll need a new Directory program called NEWDIR80/CMD, which is on your disk. Copy it over to DIR/CMD so that it replaces DIR/CMD. If you are using DOSPLUS, do the same with a file called DIRPLUS/CMD.

If you are new to Lazy Writer, we suggest you use the mini MULTIDOS provided, especially at first. It is the simplest way to begin using Lazy Writer and you'll find it does all you need. However, if you've been using Lazy Writer previously with TRSDOS and have text files you want to use, you'll find the mini MULTIDOS cannot read your data disks. In this case, you may want to move the Lazy Writer programs over to TRSDOS. Once this is done, you'll be able to load your old text files. If you do not want to continue using TRSDOS, but you DO want to access your old files, consider buying the full MULTIDOS; it contains a utility program that will read and copy TRSDOS files.

Here's how to get the Lazy Writer programs onto Model III TRSDOS:

First, using the mini MULTIDOS, format a single density 35 track data disk. Type FORMAT and answer the prompts. MULTIDOS will ask you the number of tracks (35) and density (s). Do not format the disk with TRSDOS - TRSDOS does not give you the option of formatting single density.

Next, with the MULTIDOS disk in drive #0 and the newly formatted disk in drive #1, COPY all files from #0 to #1. Use this command (or multiple commands on one line):

```
COPY L/CMD:0 :1
```

Do this with all files on the system disk.

Now, remove the MULTIDOS disk from drive #0 and insert a disk containing TRSDOS. The disk you use should contain only TRSDOS so there is enough room to receive the Lazy Writer files. Press reset and wait for the TRSDOS initial screen.

With the single density data disk still in drive #1 and the TRSDOS disk in drive #0, from TRSDOS READY type:

```
CONVERT
```

You are going to convert the files from drive #1 onto drive #0.

TRSDOS thinks the disk in drive #1 is a Model I disk. It will pull the files off it and put them onto your system disk.

You now have Lazy Writer on TRSDOS. Put away the data disk and check your directory (type DIR from DOS READY) to see if all the files are there. There is one more thing you must do. There is a file called TRSDIR/CMD on your disk. This is a replacement for DIR/CMD and you will need it to use Lazy Writer's Directory feature. Copy it to DIR/CMD like this:

COPY TRSDIR/CMD TO DIR/CMD

If all program files converted successfully and you've fixed the Directory, you're ready to use Lazy Writer.

The following library commands are included with MINI MULTI:

AUTO	BOOT	CLEAR	CLOCK
CLS	CONFIG	DATE	DIR
FORMS	KILL	LIBRARY	LIST
PRINT	SKIP	TIME	VERIFY

To use any of them, type the command name along with any parameters. These functions work pretty much the same as they do with TRSDOS, but three of them, AUTO, DIR, and FORMS, are a bit different.

The command AUTO causes automatic execution of other DOS commands. You can "AUTO" into Lazy Writer, for instance. This would mean every time you hit RESET, Lazy Writer is loaded automatically. The following is an AUTO command to load Lazy Writer:

AUTO L <ENTER> <ENTER>

MULTIDOS also provides for multiple AUTO commands. To make more than one command, either press down arrow to make a line feed between commands or enter commands with commas between them. Here's an example of a multiple command:

AUTO,DIR,FREE

You may enter a maximum of 32 characters into an AUTO command. To disable the AUTO command, hold down the ENTER key and when you see DOS READY, simply type:

AUTO <ENTER>

To find out what's in an AUTO command, type:

AUTO ?

To execute an AUTO command, with re-booting, type:

AUTO %<ENTER>

All DOS's have DIR (Directory), but MINI MULTI gives you a bonus: your directory is displayed in alphabetical order. Besides the Directory, you will see displayed the drive number, diskette title, diskette date, number of tracks, number of free granules, K byte granule equivalent, plus the names of all non-system files. To see the Directory on drive #1, type:

DIR :1

There are five options you can use with DIR. They are: A (level of password protection), I (display invisible files), K (display "killed" files if

not overwritten), P (direct output to printer), S (display system files).

To make full use of DIR, you need the following syntax:

DIR[[:]d[(opt[,opt...])]<ENTER>

MINI MULTI also has a FORMS command that lets you set print-out parameters, but you will not need to use this with Lazy Writer. FORMS provides for these parameters: I(initialize line counter), W (width), P (page length), T (text in print lines), S (blank spaces between printed text), L (linefeed after carriage return), C (direct printer output to RS232C on Mod III), nn (nulls after line feed). Here's a sample command:

FORMS (I,W=80,T=60,P=66)

This command has been left on the DOS, even though you don't need it with Lazy Writer. It might prove useful with other programs.

Also on the MINI MULTI disk is the JKL and HJK functions. When you press the JKL keys simultaneously, the contents of the screen will go to the printer. When you press HJK simultaneously, the same thing happens only any graphics you have will also be sent, whereas with JKL these graphics are converted to periods. These commands work from DOS only; you do not need them when you're using Lazy Writer; use the Lazy Writer menu to print your text. Use JKL to print DOS commands or information displayed on the screen (Directory, list of library commands, etc) by DOS.

MULTIDOS was written by Vernon Hester and is currently one of the lowest priced DOS on the market for the TRS-80, even though it offers outstanding power and ease of use. The full MULTIDOS comes with SUPER BASIC and BBASIC, which incorporates BOSS, Vernon Hester's debugging aid. It also includes a Spooler, a utility for killing or copying files which you select from a directory on the screen, and a Help file for all Library commands. The full system has 40 Library commands.

IF YOU LIKE THIS MINI DOS, YOU'LL LOVE THE REST OF IT!

ORDER A COMPLETE MULTIDOS, WITH MANUAL.

AVAILABLE FROM ALPHABIT COMMUNICATIONS, INC.

13349 MICHIGAN AVE., DEARBORN, MI 48126

OR CALL (313) 581-2896.

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TRSDOS 6 VERSION OF LAZY WRITER FOR TRS-80 MODEL 4

The TRSDOS 6 version of Lazy Writer is on an LDOS formatted data disk. It may be on a "floppie" disk, with the "Four Plus Three" version on the other side. Just use the COPY command for TRSDOS 6 to move the files onto a system disk. In order to get all the Lazy Writer files onto your system disk, you will have to purge some of the DOS files. Check your DOS manual for information on which files you don't need. Put a disk containing only the stripped TRSDOS 6 in your #0 drive and a disk containing the Lazy Writer files into your #1 drive. Now COPY the following files from the #1 to the #0 drive.

L/CMD	UTILITY/CLW	DIR/CMD	PRINTGEN/CLW
EDIT/CMD	P1/CMD	PARDRV/CMD	SYSDRV/CMD
LPNT/CMD	FT	HELP	PLUS/CLW
KEY/CLW	CHAIN	TEST1	TEST2
		TEST3	X1 X2

You may also use Lazy Writer on DOSPLUS version A.4, using the same COPY command to move the files from the #1 drive to the #0 drive. The file P1/CMD, which is the same as PARDRV/CMD, is the printer driver file. It works with a parallel printer. If you are using a serial printer, refer to the TRSDOS 6 manual for information on using a serial driver. The file SYSDRV/CLW is a driver that works through the DOS. When using the SYSDRV/CMD, you should be able to use the spooler and other DOS functions. However, you will also have to insure that the DOS FORMS command is set to "off" so it doesn't interfere with Lazy Writer's paging. In this case, any filters installed on the DOS can interfere with Lazy Writer.

THIS VERSION OF LAZY WRITER HAS BEEN TESTED ON TRSDOS 6 AND DOSPLUS A.4.

CAPS - The Model IV keyboard has a CAPS key that is not on the Model III keyboard. With TRSDOS 6 or DOSPLUS A.4, you can use this CAPS key, but it will not have the same effect as using the Lazy Writer CAPS method (hitting SHIFT + CLEAR). Using CAPS will change command keys into upper case, as well as characters you type. Pressing "I" for open insert will get you the same effect as "i", and so on.

REVERSE CASE COMMANDS - Note that with DOSPLUS, some of the commands are reversed. Loading and listing, for instance, are reversed. You load with "L" and list with "I". Also note that "c" for case change and "C" for autocap are now reversed. See the chart for the correct commands.

The changes made were needed because the Model IV Lazy Writer uses the DOS for all functions and DOSPLUS returns a different case from TRSDOS 6 when you press CLEAR and a letter. DOSPLUS requires CLEAR + SHIFT + a letter. To reduce the problems this causes, the Model IV versions are case independent, where possible. Where there's only one function on a key ("d" for delete, for example), you can use either upper or lower case to get that function. But where there's two functions ("c" and "C", for instance), you must use the correct one.

Some functions have been dropped. There is no longer any need for the "+" command, which marked upper case characters on a lower case Model I machine. Since Model IVs can display both upper and

lower case, there is no need for this feature. Unfortunately, using the DOS for the keyboard scan functions meant we could not retain the speeded cursor by pressing SHIFT and an arrow key. You can't toggle on and off the repeating keys anymore either, but you can set them from the DOS SET command. There are some advantages though in going through the DOS for the keyboard. Anything the operating system can do, you can do through Lazy Writer. For instance, you can use the spooler, the key stroke multiply, and also the keyboard type-ahead DOS features. You cannot lose any keystrokes with Lazy Writer, but sometimes the screen display may fall behind. When deleting near the top of the screen, the delete routine may get a few characters behind; if you accidentally delete a few too many characters, back up the arrow key to recover them.

STOP PRINTING - When you're printing text, if you want to stop the printing before the page is finished, hit ENTER briefly. Do not hold it down, as you do with the Model III version; that would not stop it. Or, a more effective method is to hit BREAK.

SPECIAL CHARACTERS - The Lazy Writer manual provides a chart for producing special characters not on the keyboard. This chart will not be completely accurate for TRSDOS 6 and DOSPLUS; consult your DOS manual for the correct keys to get these characters.

DEFINABLE KEYBOARD - There are also two new files on your disk that are not on the Model III version. These are PLUS/CLW and KEY/CLW. PLUS is a program you load from DOS that redefines the keyboard. KEY is an object code file that can be loaded in as a text file; it contains two alphabets that you can overtype and change or use as is. The first alphabet represents the keyboard as it is; the second alphabet is the keyboard with the high bit set (plus 128). This second alphabet represents control keys, such as "d" for delete, etc. In the future, we will provide more information and a utility program for making this easier to use.

PLUS corrects the DOSPLUS keyboard so it works like TRSDOS. To use it, from DOS READY type:

L e PLUS

Do this each time you load Lazy Writer. If you want to set up your own keyboard, load PLUS into Lazy Writer as if it were a text file. Make any changes you want by overtyping the characters. Then go to DOS READY and type:

L e KEY

This will record your changes in Lazy Writer. This is non-permanent and must be done each time you load Lazy Writer. If you want a permanent change, you can load L/CMD into Lazy Writer, look for the place that has a complete upper and lower case alphabet and overtype what you want, then save it back as L/CMD. This permanently alters Lazy Writer and should be tried only on a backup copy. Many people have adapted the Dvorak keyboard, which has a different (and better) keyboard layout. We do not have a Dvorak keyboard layout prepared yet, but DOSPLUS provides one that you can use with Lazy Writer. However, using the DOSPLUS Dvorak keyboard would also change all command keys too. They could be fixed by loading L/CMD into Lazy Writer and altering it as explained above, but this is quite tricky and should be tried only on a backup by someone familiar with programming.

KEYBOARD DIFFERENCE BETWEEN VERSIONS OF LAZY WRITER

FUNCTION	MOD III(64x16)	MOD 4+3	TRSDOS 6	DOSPLUS 4
CAPS, text only	SHIFT+CLEAR	SHIFT+CLEAR CAPS key	SHIFT+CLEAR	- not available -
CAPS, text+ commands	--- not available ---		CAPS key SHIFT+0	CAPS key
FROM TEXT ENTRY:				
load file	CLEAR+l	CLEAR+l	CLEAR+l	CLEAR+L
list file	CLEAR+L	CLEAR+L	CLEAR+L	CLEAR+l
execute x-key	CLEAR+x	CLEAR+x	CLEAR+x	CLEAR+X
case change	CLEAR+c	CLEAR+c	CLEAR+c	CLEAR+C
open insert	not available	CLEAR+SHIFT+I	CLEAR+SHIFT+I	CLEAR+i
character insert	CLEAR+i	CLEAR+i	CLEAR+i	CLEAR+I
load Directory	CLEAR+BREAK	CLEAR+BREAK F1	F1	F1
load Formatter	CLEAR+ENTER	CLEAR+ENTER F2	CLEAR+ENTER F2	F2
go to Printer Menu	CLEAR+P	CLEAR+P F3	CLEAR+P F3	CLEAR+P F3
toggle re - peating keys	CLEAR+r	CLEAR+r	not used	not used
see underlining, line feeds	CLEAR+;	CLEAR+;	CONTROL+;	- not available-
mandatory sp.	SHIFT+SPACE BAR	SHIFT+SPACE BAR CONTROL+z	CONTROL+z	CONTROL+z
FROM EDIT:				
move backward by word	SHIFT+SPACE BAR SHIFT+w	SHIFT+SPACE BAR SHIFT+w/CONTROL+z	SHIFT+w CONTROL+z	SHIFT+w CONTROL+z
mark caps	+	not used	not used	not used
load Electric Webster	from DIR	from DIR CLEAR+m	from DIR CLEAR+m	from DIR CLEAR+m
increase cursor speed	SHIFT+arrow	SHIFT+arrow	not used	not used
end X-key definition	SHIFT+ENTER	SHIFT+ENTER	SHIFT+ENTER	CONTROL+2

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execute x-key	CLEAR+x	CLEAR+x	CLEAR+x	CLEAR+X
case change	CLEAR+c	CLEAR+c	CLEAR+c	CLEAR+C
open insert	not available	CLEAR+SHIFT+I	CLEAR+SHIFT+I	CLEAR+i
character insert	CLEAR+i	CLEAR+i	CLEAR+i	CLEAR+I
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toggle re - peating keys	CLEAR+r	CLEAR+r	not used	not used
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NEW FEATURES IN LAZY WRITER VERSION 3.4

Here's a guide to what's new in version 3.4 (this version number applies to both Model I and Model III).

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ENTER, BREAK, and "i" are now the only way to exit a "delete". Previously, hitting any key that didn't accomplish something in "delete" would complete the delete. Pressing "i" completes a delete and leaves you in "insert". This is handy if you want to insert new material after deleting old material.

INSERT

You can now backspace in "insert" beyond the current line. You can even backspace further than the material you just inserted, which has the effect of deleting the previous material. You can even go into "insert" and immediately backspace, thus deleting the previous material, then insert the new material. When you delete material that already existed, the deleted material can be recovered by pressing BREAK. However, if you backspace further than the text you just inserted, any characters you type will permanently replace what was there.

In previous versions of Lazy Writer, when you inserted tabbed material, you needed one down line feed to get the tabbed material to insert in the correct positions. You can now insert tabbed material in the correct positions, without needing the down line feed. Keep in mind that tabs are created by inserting spaces between tabbed items; inserting material into a line with tabbed material moves the tabbed items over. If you need to add something to a line with tabbed items, try using "overtyping" instead of "insert".

"Insert" has been changed internally so it is no longer necessary to have twice the memory available as the amount of the insert. Previously, you could lose all your insert if you didn't have enough memory.

BLOCK MOVE

There have been periodic reports that the Block Move feature sometimes fails. In previous versions of Lazy Writer, you needed at least one carriage return in your text for block moves to work properly. This appears to be the cause of the reported failures. Version 3.4 no longer requires this carriage return.

SAVING & LOADING

Saving and loading are faster. The new version does not print text to screen while loading, which makes the load about five times faster. If you want text to print to screen while loading, you can turn this on with CHANGELW (now part of UTILITY/CLW). The increased speed during saving will be immediately obvious. After a save, the screen will return to wherever it was before the save, rather than to the top of text.

All text is now saved in standard (instead of reversed) case. If your old text loads with case reversed, just press "#" to fix it and save it to disk. If you want to stick to the old way, you can customize your disk for reverse case by running CHANGELW.

You can now load a file from "insert". Place the cursor where you want the file inserted. Press "i" for "insert", then press CLEAR + "L" to load the file. You'll get the "loading" prompt. Type in the name of the file

you want inserted; press ENTER. The file will load and be inserted at the cursor position. Press ENTER to complete the "insert".

When you press L or S to load or save a file, if you hit down arrow by mistake in entering the name, it will no longer produce a down line feed as before. Hitting the down arrow will have no effect.

FIND

You can now "Find" backward. Define the Find word by pressing SHIFT CLEAR F. Enter the word or phrase you want to find. The search will begin backward. To continue to Find backward, press CLEAR "f". Once a word is defined, you can go forward by pressing "f" and backward by pressing CLEAR plus "f". This is handy if you've gone by an occurrence of a Find word and want to go back to the last instance. Remember, if you want a case independent Find, use SHIFT @ as the first character in the Find definition. The case independent feature will work forward or backward.

You can also use a "wild card" in your Find now. Enter the characters after the prompt "Find?", but for the "wild card" characters, press CLEAR + @. For example, if you want to find all three letter words beginning with "y" and ending with "u", enter "Y@U".

PRINTER MENU

In changing parameters on the Printer Menu, if numbers are needed, you will not be able to enter any character that is not a digit. This means you will not be able to enter inappropriate characters.

UNDERLINING

You can now underline as you type instead of having to do it later. Press CLEAR and "u" together and that "turns on" underlining and all characters typed thereafter will be underlined. A small "u" will display at the bottom of the screen when underlining is "on". End underlining by pressing CLEAR plus "u" again. In Text Entry you will not normally see the underlining when you are typing characters, only when you are typing a space. CLEAR "u" also works in Edit; when you press CLEAR "u" in Edit, most forward cursor movements create underlining. For example, press CLEAR "u" and press the space bar to move the cursor by word. All words the cursor moves through are now underlined. It will also work in "insert". To shut off this process, press CLEAR "u" again. Backspacing will not cause underlining.

The old method of pressing "u" to move the cursor through words still works the same. The value of the CLEAR "u" option is that it can be combined in an X-key. For example, you could have an X-key with "f" followed by CLEAR "u" followed by a space or "w" for move by word then another CLEAR "u" then you could define a word with Find and use the X-key to search our occurrences of the word and underline it.

UTILITY

In order to save space on the disk, a number of small extension programs have been combined into one file called UTILITY/CLW. Load this from the Directory and you'll get a Utilities Menu that loads the specific program you want. Programs now loaded from UTILITES are: STRIP, SIZE, RESCUE, and CHANGELW. PRINTGEN can be loaded from UTILITY or from the Directory, as before.

ADDITIONAL NEW FEATURES:

LOAD TEXT FROM DOS

You can now load in text files, extension files, and X-key files right from DOS. See the sheet of instructions on loading version 3.4.

INDEX MAKER

As of version 3.4, you can generate an index for your text files by using FORMATTER. See the pages of instruction enclosed, which you should place in your manual at the back of chapter five.

THANKS TO ALL

There's lots of small fixes in this version besides the ones mentioned here. Thanks to everyone who made useful suggestions for this update; we welcome ideas and comments from users.

TECHNICAL NOTES

by
David Welsh

Lazy Writer's basic system definition has not changed since version 1.8/3.1. That is, the program occupies the same place in memory, uses the same text buffer locations, the same text buffer pointers, and the same jump vectors. Some jump vectors were added with 1.9/3.3 and so some extension programs issued recently may not work on earlier versions, but all extensions should work on 3.4. Do not intermix Edit or L/CMDs of different versions. Do not rename any of the programs in the system.

The extra material at the end of L/CMD, which many of you will realize is ASCII and not program, is nevertheless necessary to the correct operation of Lazy Witer - do not delete it! To those of you who have written claiming to have altered the Lazy Writer serial number, so far you've only found the easy ones.

I have finally begun to pull together a programmer's notebook on Lazy Writer for those who want to write their own extensions. The bare facts are in the manual, and if you are watching with a monitor program, you will see that communications with the core program L/CMD is by way of jump vectors in the 5200H region. Much can be learned by tracking these. I would like to be more help to programmers who write extensions, but our resources are limited and usually overcommitted.

The version number "3.4" is being used for both the Model I and the Model III; there is now little difference between the Model I and the Model III versions and it is less confusing to have only one number to deal with. Future version number changes will be by letter for small changes, ie, 3.4a, 3.4b etc., and by number for a change adding new features, ie 3.5, 3.5 etc. This should help "patcher's" deal with different versions. A version change means work has been done on Edit/CMD and L/CMD, although it may include work on other programs too, such as FT or DIR and the utilities.

CHANGES IN VERSION 3.4a

As of 11/10/83, all Lazy Writers sold are version 3.4a. This is a small revision from version 3.4 and mainly fixes minor problems found in 3.4. Here are the changes made:

UTILITIES: Two extra items have been added to the UTILITES menu, 1) Figure Checksum and 2) Electric Webster.

The "Checksum" program is almost the same as the CHECK program on the master disk. It computes a value of all the bytes in a file. Simply select this item from the UTILITY menu. You'll get a prompt asking for a file name - enter a file name. You will get back a number. If you hit ENTER, the prompt asking for a file name will return. You can now enter another file name or swap disks and enter the name of a file on the new disk. You will get another number. Using this utility, you can compare one file to another. If you do not get the same number for two files, they are not the same file.

If you select "Electric Webster" from the menu, this program will load and run. Of course, you must have purchased the Electric Webster program and have it on a disk in one of your drives.

There was a bug in UTILITIES that caused problems if you pressed any key but one that loaded a program; this is fixed.

L/CMD: The keyboard scan has been changed to produce better key rollover. This means if you are holding down one key, then press another, you'll get the same initial delay on the second key that you got on the first. The initial delay is there so keys will not repeat when you press them to type normally. But if you hold the key down because you want the key to repeat, it'll repeat fast. This is nothing to be concerned with - it just makes using the program smoother.

An obscure problem was also corrected in L/CMD. The problem occurred if you tried to load a file you created with an old version of Lazy Writer which used a logical record size of one byte. These files would not load properly if you were using MULTIDOS.

An equally obscure problem that occurred in defining x-keys was fixed. The problem occurred under certain conditions if you edited an x-key definition; the prompt would start to disappear.

LPNT/CMD: A change was made in the mini-menu (the one you get after you've printed a page). To continue printing, you can hit either "c" as before, or "ENTER". However, do not hold down the "ENTER" key as this will stop printing, not start it.

Another problem affecting page numbering has been fixed. If you had defined a header and set page numbering using "n", then later, in the middle of your text somewhere, you defined a Footer, the page numbering would reset to the original number used in the header. This problem will no longer occur.

A small change was made in the Formatted Save function allowing you to exit the prompt by hitting "BREAK".

FT (Formatter): Changes were made to the Formatter to reflect the changes in LPNT/CMD. A change was made in the Index Maker, so that hitting "BREAK" returns you to the main menu.

LOADING LAZY WRITER

MODELS I / III / IV

VERSION 3.4

Once you have have Lazy Writer installed on your system disk, boot the disk and when you see DOS READY, type

L<ENTER>

This will load the program and display the copyright notice. This screen tells you to press ENTER for Text Entry or BREAK for Edit.

As of version 3.4. there are some new ways to load text. Instead of just typing "L" and loading the main program, you can load text right along with the program. Let's say you have a file called THERESA. If you want to load it from DOS, type

L THERESA<ENTER>

Be sure you leave a space between "L" and "THERESA". You can even load more than one file by this method. If you want to load the file THERESA and want another file called FAIRE/NL right after it, type

L THERESA FAIRE/NL<ENTER>

both files will load, one after the other, and you'll find them on the screen, with the file FAIRE/NL at the end of the file THERESA. In effect, they've been appended together in memory. Obviously, the files cannot be larger than will fit into memory.

Besides loading text files, you can load extensions too. Let's say you want to load LAZYMERGE from DOS. Type

L E LAZYMERGE<ENTER> or L LETTER E LAZYMERGE <ENTER>

The "L" loads Lazy Writer; the "E" loads an "extension" and "LAZYMERGE" is the file name of the extension being loaded. "LETTER" is a text file. These commands will leave the LAZYMERGE Menu on the screen.

In addition to loading text files and extension programs, you can also load and execute X-keys from DOS. For example, suppose you have your letterhead stored on the #3 X-key in a file called X2. You want to load Lazy Writer and the X-key at once and execute X-key #3. Type

L X X2 3

This will load Lazy Writer and load the x-key file, which contains all your x-key commands. The "3" will cause the #3 X-key to execute; in this case, it will put your letterhead on the screen. If you omit the specific number (in this case 3), the X2 file will load and begin executing any command stored on the 0 key. If you have not saved any command on the zero key, there is a default command on that key (it loads a file called X1). Remove it by defining a command on the zero key, then entering nothing as the command.

These files can be entered in combination, but be sure to enter the text file name first and extensions or X-keys next. These are additional ways to load text and program files added with version 3.4. They do not replace any other methods described in this manual. All descriptions in the manual are accurate and can still be used.

INDEX MAKER

As of version 3.4, an Index Maker has been added to the FORMATTER. The new item on the FORMATTER menu says:

(i)ndex file creation

Do not use this item until you have marked the words you want to be in the index from Edit. You can use the FORMATTER as described in the previous pages of the manual and just ignore the Index feature, if you have not prepared your text for indexing.

Use the Index feature when you are creating a document that people will be referring to more than once. The Index Maker will pull key words out of your document and create a file containing the key word and the page it appears on. This can be used to generate a standard index, as you see at the back of the Lazy Writer Manual, or could create a Table of Contents to use in the front of your document. The Index Maker will not always produce an index in finished form, but it is a tool to help you do an index in a lot less time.

First, load into Edit the document for which you want an index. The next step is to mark the words in your text that you want to be in the index. Do this by underlining the desired items. In case you already have words underlined in the file which you don't want in the index, do a global removal of underlining by pressing "d" then capital "U". Now, scroll through the file and find the words you want to be in your index. Underline them. The simplest way is probably by placing the cursor on the first character of the word and pressing "u" to move the cursor through the word. You can check which words are actually underlined by pressing ";" in Edit. This will put the underlining on the screen.

If you want more than one word as an index item, be sure you continuously underline the entire word or phrase. For example, if you want to index "graphic blocks", the underlining should be continuous through both words. If there's a break in the underlining between "graphic" and "blocks", these will be indexed as two words.

You could use an X-key to do your underlining for you. Compose the command to "turn on" underlining with CLEAR + "u", space bar or "w" for "move cursor by word", and "turn off" underlining with CLEAR + "u" again. By combining this with the Find feature, you can search for all instances of a word and automatically underline all of them.

You may want to save the text file with the underlining to a new file name, in case you think you might want to redo the index later. Once you have all words you want in the index underlined, you can run the FORMATTER. To get to the FORMATTER, press CLEAR ENTER. When you get the menu on the screen, select the "Index File Creation" item. You will get another prompt:

Enter Width of Index (6-127)

This lets you control the appearance of your final index. You can have it match your normal margins or print it narrower. For example, if the index is to accompany a document printed at a text width of 50 characters

INDEX MAKER

and you want the index to have the same margins, enter 50 in answer to this prompt. An index file with a width of 50 will look like this:

```
insert.....10
TRS-80.....13
graphic blocks.....14
```

The number of dots between the key words and the page number is controlled by the width you select.

Next you will get a prompt to save the newly created index. You will see

Enter File Name

Make up a file name different from your main file. The file you are creating here will contain your index. If your main document is called SALES, you could call the index file SALES/DEX. Or you could simply call it INDEX. Whatever you call it, it is a regular Lazy writer file and you can load it into Lazy Writer to view it. Index files are printed to disk in standard case. Print it normally.

The index you generate will contain the words and the page they appear on. They will simply be in the order they appeared in your document. For a finished index, you may want to sort them alphabetically and combine identical items. You can use Find to search for identical items and block move them to one location, then combine the page numbers into one item. To sort alphabetically, you could use any BASIC sort program. You could also do it yourself via block moves. Once sorted, you can append the index to the document file and it will print as the last part of your document. If you want it on a page by itself, just leave a form feed (>f) above the index.

To append files, just load the document file, put the cursor at the end of that file, then load the INDEX file. Now save them out by the file name for the document. This way the document and index will print together.

If you will be printing chained files, you can index them together by marking each file for indexing, saving each file to a new name, then leaving a chain list (as described in section 9.4 of this manual) on the screen and running the Formatter. Select the Index feature. The indexer will load in each file and the index will be prepared from the marked items in all files on the chain list.

There is one potential problem you may encounter if you are using a dot matrix printer. If you have words in the middle of paragraphs underlined so they can be printed double-wide, these words (because they're marked with underlining) will show up in your index. You could remove the underlining, but this could throw off the page breaks, since double wide words take up twice as much space as normal words and this affects line breaks which affects page breaks. If you do leave the double-wide words there, be sure you embed a ">D off" right after it to insure that the Formatter doesn't read all the words you underlined for the Index Maker as double-wide. It might be best to let the double-wide words appear in the index, then delete them if you don't want them there.

NEW FEATURES IN LAZY WRITER VERSION 3.4

Here's a guide to what's new in version 3.4 (this version number applies to both Model I and Model III).

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ENTER, BREAK, and "i" are now the only way to exit a "delete". Previously, hitting any key that didn't accomplish something in "delete" would complete the delete. Pressing "i" completes a delete and leaves you in "insert". This is handy if you want to insert new material after deleting old material.

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you want inserted; press ENTER. The file will load and be inserted at the cursor position. Press ENTER to complete the "insert".

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You can now load in text files, extension files, and X-key files right from DOS. See the sheet of instructions on loading version 3.4.

INDEX MAKER

As of version 3.4, you can generate an index for your text files by using FORMATTER. See the pages of instruction enclosed, which you should place in your manual at the back of chapter five.

THANKS TO ALL

There's lots of small fixes in this version besides the ones mentioned here. Thanks to everyone who made useful suggestions for this update; we welcome ideas and comments from users.

TECHNICAL NOTES

by
David Welsh

Lazy Writer's basic system definition has not changed since version 1.8/3.1. That is, the program occupies the same place in memory, uses the same text buffer locations, the same text buffer pointers, and the same jump vectors. Some jump vectors were added with 1.9/3.3 and so some extension programs issued recently may not work on earlier versions, but all extensions should work on 3.4. Do not intermix Edit or L/CMDs of different versions. Do not rename any of the programs in the system.

The extra material at the end of L/CMD, which many of you will realize is ASCII and not program, is nevertheless necessary to the correct operation of Lazy Witer - do not delete it! To those of you who have written claiming to have altered the Lazy Writer serial number, so far you've only found the easy ones.

I have finally begun to pull together a programmer's notebook on Lazy Writer for those who want to write their own extensions. The bare facts are in the manual, and if you are watching with a monitor program, you will see that communications with the core program L/CMD is by way of jump vectors in the 5200H region. Much can be learned by tracking these. I would like to be more help to programmers who write extensions, but our resources are limited and usually overcommitted.

The version number "3.4" is being used for both the Model I and the Model III; there is now little difference between the Model I and the Model III versions and it is less confusing to have only one number to deal with. Future version number changes will be by letter for small changes, ie, 3.4a, 3.4b etc., and by number for a change adding new features, ie 3.5, 3.5 etc. This should help "patcher's" deal with different versions. A version change means work has been done on Edit/CMD and L/CMD, although it may include work on other programs too, such as FT or DIR and the utilities.

Lazy Writer Word Processing System

copyright 1981
by David Welsh

Lazy Writer Users Manual
copyright 1981
by Theresa Welsh

LOADING LAZY WRITER

Follow any instructions provided by your dealer; your copy of Lazy Writer may be on a "system house diskette". Insert the Lazy Writer disk into your disk drive, and when you see "DOS ready", press the "L" key. This is the file name for Lazy Writer ("L" for "Lazy"). There are a number of separate programs on your Lazy Writer disk; see the "File Management" section of the manual for more information.

BE SURE TO MAKE A BACK-UP COPY OF THE MASTER DISK BEFORE USING IT.

The initial screen has copyright information in a box. When the initial screen comes on, you can either press "ENTER" (to go to Text Entry) or "BREAK" (to go to Edit). Pressing either of these loads the rest of the program, and you'll be ready to enter or edit text. If you leave the program by going to DOS without rebooting, and you don't load BASIC or any program that would disturb your text in memory, you can press "L" to get Lazy Writer back and you'll come back to your text, not to the initial screen. The cursor will be at the top of file. The "BREAK" key toggles you back and forth from Text Entry to Edit.

Lazy Writer 1.8 requires a Disk Operating System (DOS). If you are a new computer owner, you should become familiar with your DOS before running Lazy Writer. The system house diskette that Lazy Writer is normally distributed on will contain a copy of TRSDOS 2.3 after you have followed the instructions provided. Lazy Writer was developed using NEWDOS 2.1 and TRSDOS 2.3. It has also been tested on NEWDOS 80, LDOS, VTOS, and ULTRADOS for minimum compatibility. We haven't tested it with all the special features of all the DOS's mentioned.

In order to print your text with Lazy Writer, you'll need to use the correct print driver. See the section, "PRINTER DRIVERS".

HOW THIS MANUAL IS ORGANIZED

This manual has ten sections, each dealing with a different aspect of Lazy Writer. The main table of contents makes a good overview of the features available to you. In front of each section in the manual, you'll find a table of contents for that particular section. This is to assist you further in finding the information you want. Each section has its own numbering.

The sections are as follows:

- ONE: GETTING STARTED
- TWO: TEXT ENTRY
- THREE: EDITING
- FOUR: FILE MANAGEMENT
- FIVE: LAZY WRITER EXTENSIONS
- SIX: PRINTER DRIVERS
- SEVEN: PRINTING YOUR TEXT
- EIGHT: HEADERS AND FOOTERS
- NINE: COMMUNICATIONS
- TEN: PROGRAMMER'S NOTES

Sections are arranged in logical order for learning Lazy Writer features, but once you're using Lazy Writer, you'll need to skip around. Refer to the main table of contents in front of the manual to locate the information you want.

INTRODUCTION TO LAZY WRITER

LAZY WRITING

Lazy Writer provides a way to make all your writing chores easier. It means you can write words and save them on disk for future use, change or correct what you've written, and print what you've written on paper in your choice of formats. With an ordinary typewriter, the words you type are put permanently on paper, including all your errors. Making a mistake means getting out the liquid paper, erasers, or correction tape; changes mean retyping the entire document. If you've always hated the frustration of time wasted typing and the poor appearance of your efforts, Lazy Writer can set you free.

Lazy Writer is a word processor for the Radio Shack TRS-80 computer. It requires a disk drive and at least 32K of memory. The program itself is stored on disk and loaded into the computer memory each time you use it. Once the program is loaded, you can begin typing and the words will appear on the computer video display. There are two basic modes of operation to Lazy Writer: Text Entry and Editing. You can either enter all your text and then go back over it (by "scrolling" what you've written down the screen from beginning to end) and edit the mistakes, or you can go into the Edit mode any time you wish and make changes and corrections as you type.

Of course, there is much more to word processing than simply entering text and correcting mistakes. With Lazy Writer, you can do things that you could not do with an ordinary typewriter. Lazy Writer will automatically center titles for you, it will search out all occurrences of a word and delete it or change it, it will justify your copy, it will move whole blocks of text from one part of a document to another. With Lazy Writer, you not only can write better looking letters, but you can also create forms and flyers or produce copy in any size column width for use in a newsletter or brochure. Your capabilities suddenly soar when you use a word processor.

But even these new capabilities do not tell the whole story. Because you're using a computer, your word processor can take advantage of the power of your computer. For instance, you can receive material from other computers over your phone lines using a device called a modem. You can edit this material and incorporate it into something you are writing. If you are writing for a publication that has a computer, you can send your written material over the phone lines direct to the publication. (If they have a modem that will work with your modem.) For the professional writer, professor, consultant, or anyone who does a lot of writing, a word processor may become a necessity. Every business, large or small, has a certain amount of correspondence to take care of. It is an undeniable advantage to have all of your letters

INTRODUCTION TO LAZY WRITER

going out without errors. Already, most larger publications and many businesses use word processors rather than old fashioned typewriters.

This manual explains all the features of Lazy Writer. Some are easier to understand than others, but it is not necessary that you understand or use all the features of this program in order to put it to good use. If your needs are simple, you will find the program simple. Typing in material, correcting typos, making a few changes - all this is pretty easy. If your needs are more complex, you will have to spend more time learning how to get the results you want. Using only Lazy Writer, you could write, edit, and format a newsletter. Your newsletter could include bold face headlines, remarks next to a column of type, different size columns, and even graphics. To do all this, you will need to read the manual carefully and have to experiment with the many features.

You may find there are some editing commands you use all the time and others you don't use. This is normal, with a program this complex. In designing the program, we've tried to accommodate all styles of writing and editing. Some of the features may not be for you. If you use only half the commands available in Lazy Writer, you will get your money's worth. Some were meant for advanced word processing users. To put it another way, you don't have to have a Ph.D. in math to use an electronic calculator, but the person with more knowledge will be able to get more use out of the calculator.

Word processing is a new skill; it is different from typing on paper. To get started, you will have to learn which keys to press to make things happen to your text. Most will be easy to learn since the letter you press stands for the function, such as pressing the "s" key to "save" your text. Some of the keys were chosen for convenience on the keyboard. For example, you use the "z" key for scrolling the text because it is near the arrows, which are used for cursor moves. After you have become familiar with the basic moves in Lazy Writer, you can start learning how to make word processing work for you.

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SECTION ONE:
GETTING STARTED

SAMPLE PARAGRAPH

SIMPLE EDITING

GETTING STARTED

LAZY WRITER HAS TWO MODES OF OPERATION:

TEXT ENTRY AND EDITING



Entering material is easy with Lazy Writer. When you see the blank screen with the cursor in the upper left and "Text Entry" at the bottom, begin typing. It is important to understand that Text Entry is primarily for entering text. While you can backspace through the text and over-type, you cannot do many editing functions from Text Entry. To make major alterations to your text, you need to go to the Edit mode; you can do this by hitting the "BREAK" key. The "BREAK" key toggles you back and forth from Text Entry to Edit. You must also remember that, once in Edit, you cannot enter text except in "insert". If you want to put a new paragraph into the middle of the text, you would do this in "insert" from Edit. Text Entry is for creating new text at the end of the document. If you are not at the end of the document in Text Entry, you will always be over-writing text.

From Edit, you can enter many different levels of operation. You can insert, delete, move material, find phrases, save and load to disk, and make your printer run. In Text Entry, the computer prints on the screen the characters you enter from the keyboard. In Edit, these characters have different meanings. For example, pressing "d" in Edit puts you in "delete". In Text Entry, pressing "d" prints a "d" on the screen. The computer needs to know the difference between entering text and control functions and that is why Lazy Writer employs these two modes.

Some word processors use a control key for all editing functions. This can mean pressing several keys at once. Lazy Writer uses the "CLEAR" key as a limited control key for some editing functions. It enables you to load, save, or print text that you will not be reworking and gives you quick access to some other editing functions. But generally, you will want to go to Edit to make changes.

In order to see how easy it is to use Lazy Writer, try typing in the following short paragraph. After you've typed

GETTING STARTED

it in, we'll show you how to make some simple changes in this text. If you make a mistake entering a word, backspace over the word with the left arrow and retype the material from that point.

An old fashioned sidewalk sale with free balloons and big bargains will kick off The Southwest Detroit Village Arts & Crafts Fair June 28 and 29 on W. Vernor Hwy. The sidewalk sale will start on Thursday and continue through the Fair, which begins Saturday. During the two days of the fair, W. Vernor will be closed to automobile traffic from Springwells to Central. The closed area will be filled with artists selling original goods ranging from oil paintings to belt buckles.

First, press the "BREAK" key to get into Edit. Now, try pressing the semi-colon key (";"). You will note that all capitals now appear as "#" (unless you have the lower case conversion) and down line feeds show as arrows. This way, you can check if you failed to capitalize anything.

Next, try pressing the up arrow and watch the cursor move up through the text. Try the down arrow and left and right arrows too and see how easy it is to place the cursor wherever you want it. Now suppose you've made an error in this text and the dates for the art fair are actually June 27 and 28. Move the cursor to the "8" in 28. Press "o" and note the prompt on the bottom of the screen. Most of the editing features you'll use have this type of prompt, to let you know you're now in a special level of operation. You are now ready to "overtyping". Press "7" and see that the "8" has been changed to "7". The "overtyping" prompt is still on the screen, so you're still in this special level of operation. You get out of "overtyping" by pressing "ENTER", but before you do that, you can move the cursor to the "9" (move the cursor with the right arrow) and overtype the "9" with an "8". Then, when you're through with these corrections, press "ENTER". Now the prompt is gone - you're out of "overtyping".

GETTING STARTED

Ok, you've corrected that, but suppose you've also found out that the balloons will not be free. You want to delete the word "free". No sweat - simply move the cursor to the "f" in "free". Press the "d" key and note the prompt at the bottom of the screen. You are now set to delete the offending word. Simply press "d" again. You'll notice that the "f" has gone. Press the "d" key again and see "r" vanish. Hold down the "d" key and watch what happens. After a short pause, the cursor starts swallowing letters. This is because most keys in Lazy Writer will repeat their function if held down. Now let up on the "d" key and press the left arrow. Watch the letters you deleted reappear. When you've finished playing, and have "free" deleted, press "ENTER" to make your delete permanent....or press "BREAK" to restore your text and start again.

In looking over your paragraph, let's say you realize you forgot to say that the original goods being sold will all be hand-made. Move the cursor to the "g" in "goods". Now press "i" and note the prompt telling you you're "inserting". Now type in "hand-made" and one space with the space bar. Then press "ENTER". Note the word "hand-made" is now in your text.

Now your text reads as you want it, but let's suppose you're writing it for a newsletter that will appear in 32 character columns. You wonder how it will look on paper. Press "v" and note the prompt "Video Width" on the bottom of the screen. Type in "33" and press "ENTER". You now see your paragraph in a 32 character column. (To make the text appear normal again, press "v" again and type in 64 - the width of your screen)

You can save this paragraph on disk by pressing "s" and answering the prompt with a file name (such as "art") and pressing "ENTER". Your disk drive should come on, saving the file.

If you don't want to save the paragraph or saved it and now want to type in your own material, you can remove it from the screen by pressing "SHIFT" up arrow, then pressing "CLEAR" and holding it down while pressing "e". The "SHIFT" up arrow moves the cursor to the top of the text and "clear" and "e" delete all material after the cursor. This is a method of deleting that is handy when you have finished with text and want to type in something new.

This is your first lesson in using Lazy Writer. The rest of this manual will provide the information you need to know to do more complex things. Be sure to plan enough time to try out all of the features that interest you before counting yourself an expert. The more you experiment with Lazy Writer, the easier it will become to use.

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TEXT ENTRY

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TEXT ENTRY

Text Entry, as you might guess, is for entering text. If you type a letter incorrectly and want to fix it right away, you can back space and type over the mistake, then return to the end of text by pressing "ENTER". You can also press "BREAK" at any time to get into Edit, then backspace with the left arrow to the mistake and use the editing functions to make the correction. Press "ENTER" twice to get back to the end of file. Hitting "BREAK" will take you right back to Text Entry.

When the cursor is at the end of text, pressing "ENTER" will make a down line feed/carriage return. This is the normal way to start a new paragraph. If you wish to leave additional lines between paragraphs, press "ENTER" again. Each time you press "ENTER", the cursor will go down a line. If you've left lines without text in entering your material, you cannot move the cursor into these areas. Lazy Writer sees only the down line feed/carriage return. The cursor will only move through characters you've entered and line feeds/carriage returns are treated as characters. If you want to get rid of extra line feeds or add more line feeds, you can do this from Edit. Line feeds/carriage returns are inserted and deleted just like other characters.

You do not need to create lines for material you plan to insert later. Lazy Writer has unlimited insert capability (at least to the limits of your computer's memory) and you can later insert as much text or space as you want. This means you do not have to decide on exact format for your text while entering it. You can come back and add titles, printer commands, space between paragraphs, or whatever.

What appears to be empty space on the screen may not really be empty space. Since Lazy Writer treats line feeds and carriage returns as characters, if you type over a line feed, you will replace the line feed with the character you've typed. The line below will move up on the screen to reflect this.

Some editing functions such as "delete" and "insert" are available from Text Entry by holding down the "CLEAR" key and holding down the appropriate key for these functions. When you complete these subfunctions, you'll be returned to Text Entry. See the section on "CLEAR" key functions below. Once your text is all entered, it is best to switch to Edit to scroll back through it and look for errors.

TEXT ENTRY

SCREEN DISPLAY IN TEXT ENTRY

** ** *

The cursor will flash in Text Entry, except at the end of file. The flashing cursor is a small square, which alternates on the screen with the character it's on. The appearance of the cursor changes with function. Moving the cursor with arrows causes an arrow to alternate with the normal cursor.

At the bottom of the screen, where you see the words "TEXT ENTRY", you'll see two sets of numbers. The first number tells you the number of characters (or bytes) from the beginning of file to the present cursor position. The second number is the number of characters (bytes) still available in memory.

Once you start entering text, you'll also see "< cursor" with a number in front of it. This is the present cursor position, counting from the left edge of the screen.

There are a number of prompts that appear in special cases in Text Entry. If you press "SHIFT" "CLEAR" to type in all capitals, you get a prompt "*CAPS*". If you press "SHIFT" "BREAK" to use the multi-function command in Text Entry, you'll see the prompt "X KEYS". And if you should exceed your computer's memory in entering text, you'll get an "Out of Memory" prompt.

** ** *

1. CURSOR MOVES

ture attraction is
ere will be a n mbe
currently availabl



You can backspace through what you've written with the left arrow; holding down the left arrow will cause the cursor to move continuously through the text. Notice that backspacing doesn't destroy text. However, once you have backspaced, any typing will replace the text that's there as you type. In Text Entry, over-typing destroys the old text. To get the cursor back to the end of your text, press "ENTER" or press "right arrow" to move the cursor through the text. (When it's at the end of file, "right arrow" is a tab key.) You can go up through text by pressing "CLEAR", then "up arrow" (pressing "up arrow" by itself puts you in Edit), or down through text with the down arrow. If you are going to be doing a lot of scrolling through text, you might want to go into Edit first (by pressing "BREAK"). Be especially cautious in using the "CLEAR" "up arrow" to go back in text; remember, in Text Entry entering characters always replaces characters that are already there. See the section in Edit on "SCROLLING".

TEXT ENTRY

2. INDENTING PARAGRAPHS To indent for the start of a paragraph, place the cursor at the beginning of the line, then press the right arrow. The right arrow tabs over 6 spaces.

3. DOWN LINE FEEDS Keep typing when you get to the end of the line on the screen; words automatically move down to the next line. If you should wish to go down a line before you've filled a line, press "ENTER"; the cursor will move down a line. "ENTER" is the normal way to make a carriage return (ASCII 13). Pressing "ENTER" and then the right arrow is the normal way to start a new paragraph. If you should backspace, then overwrite a carriage return, that carriage return will be replaced with whatever character you typed over it and the screen will be reprinted. If you backspace to an empty space and press the down arrow, you'll get a line feed (ASCII 10); the line feed replaces the space. If you hit the down arrow while the cursor is on a character, that character will be replaced with the down line feed. Lazy Writer treats down line feeds and carriage returns the same and both are treated as characters. In Edit, pressing ";" reveals both down line feeds and carriage returns by displaying them as arrows.

4. CENTERING If you want your final printed copy to have centered titles or blocks of text, you can put the commands for this on the screen while you are typing the text, or edit them in later. These are printer commands and the results will not show on the screen, only in the final printed copy. To center a title, enter ">t" above the title; to center a block of text, enter ">c" followed by the column width desired (ie, ">c 70") above the text to be centered.

The ">t" title command has to be terminated or the computer will try to center each line of text individually. That would result in a ragged right and a ragged left margin. Fine for poetry but not for most text. It works ok with any kind of text where you have a carriage return at the end of each line, such as a Table of Contents, or tabbed columns, but for continuous text, terminate "title". Any other hard margin command (such as the ">c" center text command) will terminate the title centering or it can be terminated with ">x". Normally, you would use the format:

```
> title  
YOUR TITLE HERE  
> center 62
```

It is ok to write out the word "title" (or any other printer command) as we did here - or simply use "t". You can, if you wish, center titles on the screen manually with the space bar, but on your printed version, the computer will obey the printer command given by the ">t" command; the manual centering on the screen is just to make the title look better on the screen. If you don't use the ">t" command, then the computer will use however many spaces you put on the screen, but don't forget that the screen width is only 64 characters and

TEXT ENTRY

the printer width can be set to anything up to 255.

It is not necessary to use any printer commands when you type in text unless you choose to. The Printer Menu supplies default values that will give you a good-looking document even if you don't bother with printer commands. Any instructions to the printer you may want later can be inserted in Edit. For more information on printer commands, see the section, "PRINTING YOUR TEXT".

5. ALL CAPITALS To enter your material as all capital letters, press the "SHIFT" and "CLEAR" keys. You will see a prompt at the bottom of the screen telling you you're typing in caps. To return to lower case, press "SHIFT" and "CLEAR" again and subsequent text will be lower case. This "cap lock" feature only affects letters, not numbers or punctuation. Of course, the "SHIFT" key followed by pressing a letter also produces a capital, as on any typewriter.

6. REPEATING KEYS Any key will repeat as long as it is pressed down. This would enable you to make a row of asterisks, a row of z's or whatever. You can disable the repeating key feature from Edit by pressing "CLEAR" and "r" key. You can reactivate the feature the same way.

7. TABS To type in tabbed columns, tabs have to be set in Edit, but to enter material once the tabs have been set, press the right arrow to move from one tab to the next. When the cursor is beyond the last tab position and the tab key (right arrow) is pressed, the cursor will go to the first tab on the next line. This is handy when entering long columns in tabular form. See "SET TABS" in the "EDITING" section.

8. MANDATORY SPACE The final appearance of your text is sometimes very important and one of the ways you can control how the printed copy of your document looks is with mandatory spaces. This feature lets you enter blank spaces that are treated as characters. For example, if you are typing a name, like "Dr. John Smith", you may not want the name to break between two lines. You can put mandatory spaces between "Dr." and "John" and between "John" and "Smith" and the name will be treated as one word.

To place a mandatory space in your text, place the cursor where you want the mandatory space, then press "SHIFT", and the space bar. This procedure leaves a graphic block on the screen below the text line. This is so you can see where you've left mandatory spaces when you scroll through your text. You can remove these in Edit by placing the cursor on the mandatory space, then hitting "o" for "overtyping" and overtyping a plain space with the space bar. You can also overtype a mandatory space in an ordinary space. You can insert and delete mandatory spaces the same as any other character.

Another use of this feature is in numbered lists. You may be typing a report and want to list six ways to interface a

TEXT ENTRY

whozit with a whatzit. Type "1.", then put in a mandatory space ("SHIFT" "space bar"), then type your material; do the same for the other five points. If you are justifying the final copy, typing a normal space may result in the space between "1." and the material following being spread out. With the mandatory space, this doesn't happen and your points will line up. This is especially effective when used with the "reverse indent" printer text command. We have used this technique in preparing this manual. Look, for instance, at the section in "EDITING" on Block Moves. The summary at the bottom lists four points. We created this appearance by using mandatory spaces between "1." and "Mark" and so on. We then used a printer command for a reverse indent of 3, and made the numbers bold face.

If you want to leave two or more spaces after a key word, these spaces will not be broken by the justification. Lazy Writer treats more than two spaces together as characters. So, you need to use the Mandatory Space only if it is one space (not two or more) that you want unbroken.

9. MULTI-FUNCTION COMMAND This is a user definable command that enables you to custom program the number keys. You must enter the command sequence in Edit, but can carry out the sequence in Text Entry by pressing "SHIFT" "BREAK", which gives you a prompt, "X-KEYS". Pressing "SHIFT" "BREAK" again will restore the numbers to normal function. A more convenient way of using the "X-KEYS" is to press "CLEAR" and a number key which will activate the multi-function command previously programmed on that key. Or you can use "CLEAR" and "x" to execute the last used command. See "MULTI-FUNCTION COMMAND" in the "EDITING" section.

10. CLEAR KEY FUNCTIONS The "CLEAR" key acts as a control key from Text Entry and lets you use some of the Edit functions. The following keys, when held down along with the "CLEAR" key, will work from Text Entry:

- * "l" - load a file
- * "s" - save a file
- * "P" - go to Printer Menu
- * "h" - displays "help" file
- * "BREAK" - go to Directory extension
- * ";" - display all underlining as broken lines, all capitalized letters as "#", and all line feeds as down arrows
- * "i" - insert
- * "d" - delete
- * "e" - deletes all text below cursor
- * press any number - activates x-key command stored on that number
- * "x" - executes last used multi-function command
- * "u" - underlines
- * "c" - changes the case of whatever letter the cursor is on
- * "v" - sets video width

TEXT ENTRY

* "up arrow" - scrolls up

You'll find more information on each of these functions in the appropriate manual section dealing with each of them. Using any of them in Text Entry is supplemental; you can carry out all of them from Edit.

11. NON-STANDARD CHARACTERS You can print characters that are not on your keyboard by pressing the "CLEAR" key, then pressing another key. The following chart illustrates the extra characters. You will have to try them on your printer to see if you can get these characters; availability differs from one printer to another.

ASCII	SYMBOL	KEY
92	®	/
91	[(
93])
94	©	.

FROM TEXT ENTRY OR INSERT IN CAPS

124	Œ	/
123	\$	(
125	†)
126	™	.

WITH SHIFT KEY BUT NOT IN CAPS

124	Œ	?
126	™	>

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EDITING

Editing is a different mode from Text Entry. Changes or additions anywhere but at the end of file are done from Edit. Go back to Text Entry only when you want to add to the end of file.

SCREEN DISPLAY IN EDIT

** **

In Edit, you have the same flashing cursor as in Text Entry. But when you scroll up and down with the arrows, you'll see an arrow on the screen. When you move through text by pressing the space bar to move a word at a time, or the period key to move a sentence at a time, or the "p" key to move a paragraph at a time, you'll get a bigger cursor briefly when you make the jump. This is to help you find the cursor after a move. In "insert", you'll have a bigger cursor. When you press "ENTER" twice to get to the end of file, you'll see a bigger cursor at the bottom of your text.

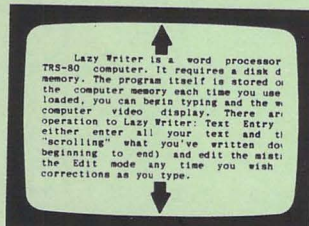
At the bottom of the screen after the word "EDIT", you'll see "<cursor" with a number in front of it. This is the cursor position. The number in front of "<LINE LENGTH" is the length of the line (in characters) containing the cursor.

** **

1. ENTER EDIT by pressing "BREAK"; EXIT EDIT by pressing "BREAK".

2. SCROLLING When you have a lot of text typed in, you will want to move the text up and down the screen ("scroll"). The following keys will scroll the text for you:

2.1 UP The up arrow, used for cursor moves, scrolls up one line at a time when the cursor is at the top of the screen, or hold down the up arrow key for continuous scroll.



2.2 DOWN The down arrow moves the cursor down the screen and, when it gets to the bottom, scrolls the text down one line each time you press it; or you can hold down the down arrow key for continuous scroll.

2.3 ADVANCE SCREEN Pressing the "a" key will print the next "screen" (display the text just below the text now on the screen).

EDITING

2.4 BEGINNING OF TEXT To get back to the beginning of the text from any part of the text, press the "SHIFT" key, then up arrow.

2.5 END OF TEXT Pressing "ENTER" twice will move you to the bottom or end of the text and display half a screen of text. If you have less than one screen of text typed in and press "ENTER", the cursor will move to the end of your text.

2.6 ADVANCE CURSOR ONE SCREEN, UP OR DOWN When the cursor is at the bottom of the screen, pressing "z" will scroll the text down one screen, advancing the cursor to the bottom of the screen. When the cursor is at the top of the screen, pressing "Z" (capital "Z") moves the text up one screen in the same way but in the other direction.

2.7 ADDITIONAL LINE OF TEXT, UP OR DOWN If you want to leave the cursor at the same spot in the text, but want to see additional text at the top or bottom of the screen, you can do this with the "q" key. Pressing "q" adds one line of text to the bottom of the screen. Pressing "Q" (capital "Q") adds a line at the top of the text. When you use the "q" key, the cursor and the text move together. You cannot move the cursor off the screen with this command.

3. CURSOR MOVES Before you can use most of the Edit functions, you must know how to move the cursor to the part of the text you want to edit. The following are the ways to move the cursor:

Edit and go
the spot you
hould note
eleting.

← ← ←
↑
↓
→ → →
t, press "d"
cter and ev
described i
ch backward
but you

3.1 BY WORD Simply press the space bar or "w" key to move the cursor one word at a time. When used at the bottom of the screen, this command will scroll the text.

3.2 BY SENTENCE Press the period to move the cursor one sentence at a time. Used at the bottom of the screen, this command will scroll the text.

3.3 BY PARAGRAPH Press "p" to move the cursor one paragraph at a time. Used at the bottom of the screen, this command will scroll the text.

3.4 UP By pressing the up arrow, you can move the cursor up a line at a time; when the cursor gets to the top of the screen, it will scroll the text.

EDITING

3.5 DOWN Down arrow will move the cursor down through the text and, when the cursor comes to the last line, cause the screen to scroll.

3.6 RIGHT Right arrow moves the cursor through the text as well. Pressing it once moves the cursor one character; holding it down makes it move continuously. Pressing the "SHIFT" key at the same time will speed the movement.

3.7 LEFT You can also go backwards by pressing left arrow (back spacing). Pressing the "SHIFT" key at the same time will put the cursor into "high gear" for faster movement.

3.8 MOVING BACKWARD BY WORD, SENTENCE, OR PARAGRAPH To go back through the text, you can use the space bar (or "w"), the period, or the "P" key as described in points 3.1, 3.2, and 3.3, but press the "SHIFT" key first.

3.9 SEARCH MOVE Another way to move the cursor is with "/". If you press this key, then the key for any character, the cursor will jump to the next occurrence of that character. For example, if you press "/", then "!", the cursor will go to the next "!" that occurs in text.

3.10 SEARCH BACKWARD You can make the cursor go backward in text by pressing "?" instead of "/", then the character. (Note that "?" is the same key as "/", but requires using "SHIFT" first)

4. SET TABS To set tabs, press "t", then move the cursor to where you want the tab set by pressing the space bar or the right arrow. Press "t" again to set the tabs, then press "ENTER". When entering tabs, you can backspace only to the last tab setting. The bottom of the screen will display the current cursor position, which is your tab settings; this is helpful in duplicating those settings later. When entering text, pressing the right arrow will move you to the next tab you've set. To clear all tabs, press "t", then the "CLEAR" key then "ENTER". This terminates all tab settings except the "paragraph indent" tab.

5. OVERTYPING You will often make an error in typing that consists of hitting the wrong key. For example, typing "test" instead of "text". In these cases, the easiest way to correct is with the "overtyping" feature of Lazy Writer. To overtype an error, move the cursor to the character that is wrong. Press "o" and see the prompt at the bottom of the screen. This is to remind you that you are in "overtyping". Now just hit the correct key and this letter will replace the one that was there. You can move the cursor through the text while in "overtyping" and not destroy text; use the arrows to move the cursor. This will enable you to correct a number of errors of this type at one time while in "overtyping". Now hit "ENTER" and you'll be back in Edit. You can use this to change more

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than one letter, but you can't type beyond the end of the line unless you hit the space bar or arrow. You can't restore the old text; "overtyping" is permanent and is best for just a few letters. If you have a lot of material to change, it is better to insert the new material, then delete the old.

INSERTING

=====

6.1 SIMPLE INSERT With Lazy Writer, "inserts" are made from any point in the text by pressing "I" or "i", then entering the new material. This is different from the method used in other word processors like Electric Pencil, where you create space for the inserted material. To make an "insert", move the cursor to the place you want the "insert" to begin. The material will be inserted to the left of the cursor. Now press "i". You'll see a prompt at the bottom of the screen and note that you are presented with a larger cursor showing where your insert will begin. The text will move to the right as you type in new characters. Press "ENTER" to make the "insert" permanent. To abort the "insert", hit the "BREAK" key. To insert more than a few words, you may prefer using the "open insert". See below.

6.2 OPEN INSERT When you use "I" (capital), the screen will clear below where you will start inserting and one line of the text that follows your "insert" will be printed at the bottom of the screen. When using "i", the text will move as you type. The latter is good if you are inserting a few letters, but response is slower because the program is doing more work. For long inserts and fast typing, you will probably prefer using "I" (capital "I").

**** NOTE:** With either method of inserting, you can insert a letter, word, sentence, or as much as you like. You can insert all upper case letters, if you like, by pressing the keys for caps ("SHIFT" and "CLEAR"). In "insert", ALL keys will repeat as long as you keep the key pressed. For instance, you can make a line of periods, if you want. You can also insert down line feeds (ASCII 13 carriage return) by using the down arrow and can make paragraph indents with the right arrow. When you finish any "insert", press "ENTER" to make it permanent or press "BREAK" to abort the "insert" and restore your text to how it was.

6.3 INSERTING EMPTY LINES Lazy Writer treats line feeds just like characters. If you want to put two empty lines between each paragraph, for instance, do this by inserting down line feeds. (ASCII 13) Press "i" for "insert", then hit the down arrow. This will create an empty line.

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6.4 RESTORING AN INSERT If you've inserted some material then change your mind, you can restore your text to the way it was by pressing "BREAK". This only works before you've pressed "ENTER". After you've "ENTERed" your material, your only recourse in getting rid of it is to delete it.

6.5 INSERTING ABOVE TEXT You may also want to insert something above your text. Place the cursor at the first character in your file. Now press "i" (or "I") for "insert", type in the new material, then hit the down arrow. This will create a line feed between the new paragraph and the old.

If you want to add new text at the end of file, do this in Text Entry, not in "insert".

THE STEPS FOR INSERTING NEW WORDS INTO YOUR TEXT ARE:

1. ORIGINAL SENTENCE

Live entertainment will
start Saturday morning
← with Blue Grass music...

1. Place the cursor on the character where you want the "insert" to begin. The cursor will move to the right and the inserted characters will replace the cursor on the screen. In the example provided, the cursor is on "w" (in "with"). The "insert" will go in front of this word.

2. AFTER INSERT

Live entertainment will
start Saturday morning at
10AM with Blue Grass
music...

2. Press "i" for a simple insert. You will see a large blinking cursor.

3. Type your new words. The cursor will move to the right, moving the old text with it as you type.

4. Press "ENTER". Your "insert" is complete and you're back in Edit.

OR

USE "OPEN INSERT"

1. Place the cursor on the character where you want the "insert" to begin, as described above.
2. Press "I" (capital "I"). The screen will clear below the text, leaving only one line of text on the bottom of the screen.

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3. Type in your new material. Type as much as you like; when you get to the bottom of the screen, the text will scroll to allow you to continue entering new material.
4. Press "ENTER" to make your "insert" permanent.

DELETING

=====

7. DELETE Deleting material is one of the most common uses of a word processor, so Lazy Writer gives you a number of ways to do it.

1. ORIGINAL SENTENCE

Live entertainment will
start Saturday morning
with Blue Grass music...

2. AFTER DELETE

Live entertainment will
start Saturday morning
with music...

7.1 SIMPLE DELETE

The simplest way to delete is to move the cursor to the character you wish to delete (or the first character you wish to delete) and press "d". You'll see a prompt at the bottom of the screen that says "DELETING". Then press "d" again and that character will be gone. Keep pressing "d" to eliminate subsequent characters or hold "d" down. To make the cursor move faster in deleting characters, press the right arrow and hold it down until you get to the end of the material you wish to delete.

7.2 DELETE BY WORD, SENTENCE, PARAGRAPH

You can also press "w" or the space bar and delete the whole word at once, or press the period key to delete to the next period (the whole sentence), or press "p" to delete the entire paragraph at once. Holding down any of these keys will repeat the function.

7.3 DELETING SPACES OR CARRIAGE RETURNS Deleting spaces or carriage returns is the same as deleting any other character. When a carriage return is deleted, the text moves up as you expect.

EDITING

- 7.4 DELETING A VIDEO LINE** If you press the down arrow in "delete", you will delete a video line of text. This is handy in deleting empty lines or short lines such as printer commands.
- 7.5 RESTORING DELETED MATERIAL** If you delete too far and want to restore part of what you deleted, you can backspace to restore one character at a time. If you backspace further than the original delete, you will start duplicating the previous material (you may find some occasion when this is handy - like duplicating a row of asterisks). If you want to restore your entire delete, press the "BREAK" key right after making the deletion. Once you have pressed "ENTER", your delete is permanent.
- 7.6 DELETING AT BOTTOM OF FILE** To delete material at the bottom of the file, put the cursor where you want to end the document, then press "CLEAR" and the "e" key at the same time Or "SHIFT", down arrow, "e". Both methods will work in Text Entry. From Edit, you can also use "SHIFT" "!". If you are at the top of file and use these methods, you can delete your entire file. You can now leave Edit and go back to Text Entry and type new material at the bottom of your file. These methods are also good when you're through with a file, have saved it, and want to start typing a new document. CAUTION: there is no recovery from this method of deleting, except with the extension program "RESCUE".
- 7.7 SEARCH DELETE** Another way to delete is in tandem with the "/" character search feature. First, press "d", then press "/" and the key for any character and everything up to that character will be deleted. As described in the section on cursor moves, you can search backward through the text, pressing "?" Instead of "/", but you can't delete going backwards.
- 7.8 BLOCK DELETE** Another way to delete that is useful with large blocks of material is to mark the material to be deleted with parentheses. How to mark these parentheses is described in the section on Block Moves - these are not the same parentheses as you use in entering text. Then, with the cursor anywhere outside the parentheses, you can press "d", then press the "b" key, then "ENTER" and the material will be deleted. If you have a large block of text at the bottom of your file that you want deleted, it's easier to use "CLEAR", "e", as described in 7.2. For material you want deleted at the top of text, use the block delete.

EDITING

7.9 SPECIAL CHARACTER DELETE There are special delete commands for deleting underlining, "soft" hyphens, and block move markers.

- * **UNDERLINING** is removed by pressing "d" (for "delete") and "u". This deletes all contiguous underlining from the cursor position. You can also delete underlining one character at a time or do a global delete of underlining by pressing "d", then "U" (capital "U"). See the section on "UNDERLINING".
- * **"SOFT" HYPHENS** are removed by pressing "d" (for "delete") and then "=". This deletes all hyphens from your text. It does not delete "hard" hyphens, those used in normal text. See the section on "COLUMN DISPLAY" for more information.
- * **BLOCK MOVE MARKERS** are removed by the normal delete or you can press "d" (for "delete") and "(" to remove the first pair of block move markers encountered. See the section on "BLOCK MOVES" for more information.



Writer®

**ESAFB
ESCB**

EDITING

1. ORIGINAL SENTENCE

Live entertainment will
start Saturday morning

...

2. UNDERLINING - SCREEN DISPLAY

Live entertainment will
start _____

...

3. RESULTS FROM PRINTER

Live entertainment will
start Saturday morning

...

8.1 UNDERLINING To underline what you have written, move the cursor to where you want to begin underlining. Press "u" to activate underlining; you will see broken lines on the screen replacing the words. This is to show you where you've underlined, since both the words and the underlining cannot be on the screen at once. To make the words appear again instead of the broken lines, press ";". Pressing this again will again display where you have underlined, as well as capitals and line feeds - this will give you a better idea of what your text will look like once it's printed, and help you catch errors before your text goes to the printer. If you move the cursor once you're through underlining, you'll notice that the screen also shows down line feeds (with down arrows), and, with upper case only machines, capitals (with "#"). The ";" key works as an "off" - "on" push button and is next to the "ENTER" key for handy use, so you can press it at any time to display capitals, down line feeds, and underlining - or to turn off the display. When you underline empty spaces (such as the spaces before and after a word to be underlined), the markers will show at all times.

8.2 UNDERLINING BLANK SPACES If you want to underline blank spaces to create a form (For example, "Name _____"), you do this from Edit by going into "insert" and pressing "CLEAR" and "u" key. You can hold it down to make it move faster. From Text Entry, you can make underlined spaces by pressing the "CLEAR" key and "u". Underlined blank spaces will be displayed at all times, not just when you press ";".

8.3 DELETING UNDERLINING Once you have marked something for underlining, you may change your mind and want to remove it. To do this, place the cursor on the beginning of the unwanted underlining. To remove underlining, one character at a time, press the "U" (capital "U") key for each character you want

EDITING

underlining removed for. To delete one instance of underlining (for example, one underlined word), press "d" for delete. Now press the "u" (small "u") key and all contiguous underlining will be removed. You can also do a global removal of underlining. Press "d" for delete, then "U" (capital "U") and all underlining in your file will be gone. This will also remove certain special characters in Scripsit files that are not compatible with Lazy Writer.

8.4 BOLD FACE is a variation of underlining. The same procedure that produces underlining can produce bold face, when used in connection with a printer command. Bold face can only be produced on a printer that can backspace (by overstriking characters) or that can do a carriage return without a line feed. To make bold face, use the "u" key and underline the words you want in bold face. Then, preceding the material you want in bold face, insert the command ">b" followed by a number representing the number of extra strikes you want (for example, ">b3" will give you three strikes, ">b8" will give you eight strikes, etc). The more strikes, the darker the words will appear (and, of course, the longer it will take to print them). Lazy Writer will recognize all underlined characters that follow the ">b" command as characters to be printed bold face. You must terminate the ">b" command or the computer will print all underlined words or characters as bold face for the rest of your text. Terminate the ">b" command with ">b 0" or with ">bold off" (or abbreviate to ">b o" or ">b.o" - note the space left between "b" and "o" and do not confuse the "o" letter with the "0" zero).

8.5 DOUBLE WIDE The printer text command ">D" (capital "D") converts underlined characters to double-wide characters; this is for use with dot matrix printers that make double-wide characters. You need to enter the right codes for double-wide with your printer via the "PRINTGEN/CMD" extension to get double-wide when you underline. See the sections on "EXTENSIONS", and "PRINTER DRIVERS" for more information.

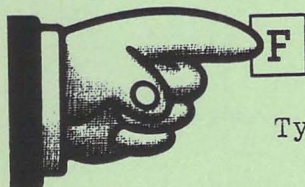
8.6 GRAPHICS MODE The printer command ">g" will send all underlined material to the printer with the high bit set (the normal ASCII code plus 128). The effect of this is to produce graphics and special characters on some printers. We have not tested this with any printer and have no idea what it will do on any particular printer. The real purpose of the command is to enable underlining to be transferred to a formatted file. A formatted "Save" (see "PRINTING YOUR TEXT") normally would print underlining or boldface to the disk in the same manner as to paper. That means that the "bold 6" command, for example, would result in six characters for each original character and all the back space characters needed to make the command function. The ">g" command prevents this, making it easier to do some

EDITING

fancy formatting tricks with the formatted "Save".

**** NOTE:** You can get both bold face and underlining in the same paragraph by embedding the command for bold face in the text. See the "PRINTING YOUR TEXT" section ("EMBEDDED COMMANDS") for information on how to do this.

9.1 FIND To find a word or phrase in your text, press "F" (capital "F"). At the bottom of the screen you'll see:



"Find What?"

Type in the word you want it to find, then press "ENTER", and the screen will display the paragraph that has the first occurrence of the word (searching from the cursor position), which will be marked with a larger cursor. To find additional occurrences of the word, press "f" (small f).

9.2 CASE INDEPENDENT FIND In finding a word, the word you type in must match exactly the one you are looking for. For example, if the word in text is all capitals, to find it you must normally type in the word in all capitals too; but if "@" (capital - press "SHIFT" first) is the first character you type after the prompt "Find What?", then Lazy Writer will find the word regardless of case. This also means you cannot use a capital "@" as the first character in your search phrase, as Lazy Writer will respond to it as the symbol to ignore case in its search.

10. FIND AND REPLACE A variation of finding is find and replace. With this feature, you can search for a word or phrase or any group of characters that occur in your text. As with finding, press "F" (capital "F") and type in the word to be found next to the prompt at the bottom of the screen, but put "<" after the word you want to find, then the word to replace it. (For example: art<paintings.) Now press "ENTER". The cursor will jump to the first occurrence of that word and another prompt will appear on the bottom of the screen asking you if you want to replace the word. If you do want to replace it, press "r" and the word will be replaced.

To go to the next occurrence of the word, press "f" (small "f" this time). When Lazy Writer has found the last occurrence of the word, it will display "none found". If you are sure you want to change all instances of the word, change the first instance with the small "r"; then press "R" (capital "R") and all subsequent occurrences of the word will be replaced with the new word. You can also delete the found word by replacing it with nothing (typing in the word to be found, then "<", but no replacement word).

There are a number of conditions you should be aware of

EDITING

in finding and replacing. You can type in a whole phrase or group of words to be replaced, but you are limited to 255 characters total. You should also be aware that the computer will find your word embedded in other words. For example, let's say you want to replace the word "entertain" with "perform". If you simply use the "R" (capital R) to replace all instances, you may find the computer has changed "entertainment" to "performment". This is why we have the feature of letting you see each occurrence of the word, then exercising the option of changing it if you wish.

You can get around the above-mentioned problem to some extent by putting spaces in front of and/or after the word when you type it in after the prompt. The computer will recognize the spaces as characters and only find the word in text when it has the same spaces as you typed in. However, be aware that if you use spaces in giving the word to be found, then delete that word, Lazy Writer will also delete the spaces. So, in giving a replacement word, you must also give replacement spaces. For example, if you have the phrase "and big bargains" and you want to change it to "and huge bargains", if you type in:

```
Find What? big <huge
```

the result will be "andhugebargains", because you left spaces in typing in "big", but did not leave spaces in typing in "huge". The way to get the result you want is the following:

```
Find What? big < huge
```

In the above version, spaces were left before and after both "big" and "huge"; Lazy Writer searched for the word "big" with the spaces before and after, deleted "big" and the spaces, then inserted "huge" with spaces before and after. You could also have simply entered both words with no spaces, and if the word "big" was not embedded in another word (like "ambiguous"), you would also get a correct replacement.

You must also use caution in using the symbol "<" in your words to be found. If you type in "A<B", Lazy Writer will find "A" and replace it with "B". If you simply want to search for "<B", it will find this ok. If you want to replace "<B" with "<C", you can enter it like this: "<B<<C". In this example, the first "<" is treated as a character; the next "<" tells the computer to replace, and the third "<" is again treated like any character and will be inserted (along with "C") in the new location.

Should you press "F" and get the prompt, then decide you want to still find the old word (or simply want to see what the old word was), you can press the right arrow and it will reveal the last word you typed in; you can then hit "ENTER" or the "BREAK" key and the cursor will go to the next occurrence of this word. After pressing "F", pressing the "BREAK" key will take you to the next occurrence of your last find word, whether you reveal it with the right arrow or not.

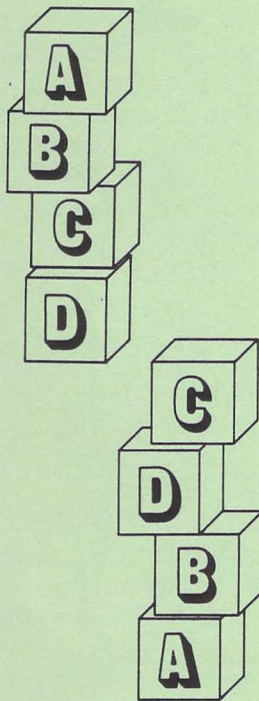
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If you press "F" by mistake and see the prompt, you can exit "Find" by pressing the "BREAK" key.

THE BASIC STEPS IN FIND AND REPLACE ARE:

1. Press "F" (capital "F").
2. See the prompt "Find What?" on the bottom of the screen. Type in the word or phrase you want to find, then "<", then the replacement word or phrase. (art<paintings)
3. press "ENTER"
4. The cursor will go to the first occurrence of that word or phrase. You'll see a prompt "Replace?" on the bottom of the screen. If you want to replace this occurrence, press "r"; if not, press "f" to go on to the next occurrence. When every instance of the word has been found, Lazy Writer displays "none found".

11.1 BLOCK MOVES Sometimes you may wish to move a whole block of text from one part of your document to another. Lazy Writer utilizes the Find function in making block moves.



First, mark the text to be moved with parentheses. (This must be done from Edit) Place the cursor on the first letter you want inside the parentheses, then hit the beginning parentheses key. To place the end parenthesis, move the cursor to the space after the last character you want inside the parentheses, then hit the close parentheses key. You cannot place these parentheses while in "insert"; these "marker" parentheses are actually underlined parentheses, so the computer can distinguish them from the ones you use in text.

Now move the cursor to where you wish to move the material and press "b". You'll now see the "Find What?" prompt on the bottom of the screen. To simply move the block, press "ENTER". This will move it to the new position and delete it from the old position. If you want the text in both places, press "B" (capital B, instead of lower case "b") and the text will be moved, but will also remain where it was. With the capital "B", you can move your block to as many places as you want - just move the cursor to each place you want that block of text to appear and press "B". If you move the material with a small "b", you can only move it once.

It is handy to use the "REMEMBER CURSOR" feature when making block moves. Lazy Writer will remember the present cursor position when you press "M" (capital "M"). Then when you scroll to the material to be moved and mark it for the move, you can return instantly to the previous location by pressing "m" (small "m").

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11.2 DELETING BLOCK MOVE MARKERS If you use the copy feature (capital "B"), the block move markers will still remain on your original block. You can delete the markers in the usual way with "d" or you can delete them without moving the cursor to the markers with a special "block move marker delete" feature. Do this by pressing "d", then "(", then "ENTER". The cursor must be above the location of the block move markers and only the first set of markers encountered will be deleted.

11.3 NAMED BLOCKS You can also mark more than one block at a time and name your blocks, a Lazy Writer exclusive feature. Put parentheses around each block you wish to move and, to keep them straight, you can "name" each one with any character, word, symbol, or number, which you insert in front of the block to be moved. Whatever name you use, the name must be unique and not used elsewhere in your text. You cannot give two blocks the same name if you are duplicating the block, as Lazy Writer will keep finding the same block. If you move a block and delete its name, then you can reuse the name. You can if you wish use a word or a word with a symbol for standard blocks you're using a lot (for example, "\$disclaimer"). Using a symbol with the word will probably insure the same thing wasn't used elsewhere in text. Lazy Writer locates the named block by searching for the name, then looking for the next marked block. So, your name wouldn't have to be directly in front of your block if you prefer to put it higher in text. You could also have Lazy Writer search for a word or symbol that you've used in text just previous to your block.

You can mark and name as many blocks as you want. Then, when you press "b" (or capital "B") and see the "Find What?" prompt, you can write in the name of the block you want moved. If you don't write in a name, it will move the first marked block found, named or unnamed. In looking for the first block, Lazy Writer starts looking from the beginning of your text, not from the cursor position. If you use the capital "B", your named block will now be in both new and old locations. If you use the small "b", your block will only be in the new location, but the name you gave it will remain in the old location. However, you can cause it to be deleted while you're moving the material by typing in the block name followed by "<" - this way it will be replaced with nothing, as described in the section on Find. When you use the replace feature during a block move, Lazy Writer does not ask you if it's ok; it does the replace and block move all at once.

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THE GENERAL SEQUENCE TO REMEMBER IN BLOCK MOVES IS:

1. Mark the block you want moved with parentheses. If you are going to name it, put the name in front of the block.
2. Move the cursor to the new location for the block.
3. Press either "b" or "B" and see the prompt "Find What?" (Small b for move to new location, capital B for move, but leave in old location as well).
4. If you haven't named the block, just press "ENTER"; if you have named the block, type in the name of the block you want moved and "<" to delete the name, then press "ENTER".

12. CASE CHANGE Lazy Writer automatically checks if you have the lower case conversion on your computer. However, if you have a conversion with an off-on switch, you must turn on the lower case feature before loading Lazy Writer. Lazy Writer recognized the "Pencil" type conversion and the Radio Shack conversion, but if you have some other kind, try pressing "+" from Edit; this may cause display of lower case. If your computer does not have lower case, but your printer does, Lazy Writer has a number of features to make your writing easier. With either type of machine, you can change from lower to upper case by moving the cursor to the letter to be capitalized, then press "c". If the letter the cursor is on is already capitalized, it will change it to lower case. Using the "c" makes instantaneous change and there is no need to press "ENTER". When changing case on more than one word, you can hold down the "c" key for faster action. Keep holding it down right over punctuation - these are unaffected by the "c"; pressing "c" only changes letters.

Many other word processors require you to have lower case on the screen in order to get lower case on the printer. Lazy Writer will print lower case on the printer with either type of machine if your printer allows it. You can print upper case only to the printer, if you want, or if your printer requires it. (See "PRINTING YOUR TEXT" section.)

In order to make a Lazy Writer file compatible with other word processors, you can entirely reverse the case of your file by pressing "#". This will change all upper case characters to lower case and all lower case characters to upper case. This will enable you, for example, to use your Electric Pencil files with Lazy Writer. If you should press "#" by mistake and reverse everything, simply press it again to reverse back.

If you have the lower case conversion, there may be situations where you want an all upper case display. To simulate an upper case only machine, press "+". This key acts as a toggle back and forth from lower to upper case display. If you have an uppercase only machine, pressing the "+" will produce "garbage" on the screen. Pressing it again will restore normal operation.

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13. SPECIAL DISPLAY If your computer displays only upper case, you can see which letters are capitalized by pressing ";". All capitals will be marked with "#". Press ";" again to change back to letters. The ";" key also displays down line feeds (with down arrow) and underlining (with broken lines).

14. AUTOCAP Regardless of cursor position, pressing "C" (capital "C") will cause the first letter in each sentence and all free-standing occurrences of "I" to be capitalized. Autocap ignores printer commands, so will not alter these. This feature works throughout the text and is fairly intelligent, but you may not get exactly the expected result with special material such as tabular columns.

15.1 COLUMN DISPLAY To display text in specified column widths, press "v"; see the prompt "Video Width" on the bottom of the screen and type in a number between 2 and 256 (representing the number of characters across the screen). Press "ENTER" to put the text into that width. Your words will be in a column, exactly as your printer will print them, except they will not be justified on the screen. This way you can see which words will be in each line in your printed version. In order to duplicate the screen display when you print your material, you must use the proper print commands. See the section on Printing Your Text. Lines longer than 64 will "wrap around", as this is the maximum the screen can print across. To remove the column lines, press "v" again and type in 64 - the screen will return to normal. Video width does not take into account reverse indents and printer commands embedded in text.

There is another situation you should be aware of. The video width you view on the screen always contains an empty space at the end of each line. However, when you send the copy to your printer, the printer disregards that empty space. Consequently, if you want a column width of 33 characters to print out, you must give a video width of 34 to view the results on the screen.

15.2 HYPHENS You don't normally need to hyphenate when using a word processor. Your text will look fine without hyphenating, but you may want to use hyphens when printing in a small column. To determine where to hyphenate, you'll need to set the video width correctly (to one more character than you'll have in the printed version). The numbers on the bottom of the screen will tell you how many characters are in the line containing the cursor - this will help you determine if you want to hyphenate. Pressing the "=" key in Edit will move the cursor to the last opportunity to hyphenate in a line. Pressing "-" will insert a hyphen and a space. The hyphenated material will split between the two lines. Remember that your column width in the printed version will change if you have indents or other margin commands that alter

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text width. You would need to view the text in the correct width before placing any hyphens.

THE FOLLOWING STEPS WILL INSERT A HYPHEN IN A LINE:

1. Set the video width to one character more than the width you want in the printed copy.
2. Place the cursor on the line below the short line.
3. Press the "=" key ("SHIFT" first); the cursor will go to the last place you could hyphenate.
4. Move the cursor to any point before the character it designated as the last one. You will need your own knowledge of where to break a word, or you can decide not to hyphenate.
5. If you decide to hyphenate, press "-" (the unshifted key "=") and the hyphen will appear at the cursor position and the text will be adjusted.

Hyphens are useful only when you've designated a certain column width. You may later want to print the material in a different width and will need to remove the hyphens. You can do this by pressing the "d" key, then the "=" key. This deletes all hyphens from your text. Keep in mind that this method removes "soft" hyphens only (those you added by the method described above) and will not remove hyphens in normal words (like "well-meaning"). Only hyphens that are ASCII 29 will be removed. You can also remove hyphens by use of the utility program "STRIP/CMD", which also removes underlining and mandatory spaces.

16. MULTI-FUNCTION COMMAND Lazy Writer also gives you 10 user-definable multi-function commands. This means you can define a series of changes to text, then, with one key-stroke, accomplish these changes. To use this feature, press "X" (Capital "X") and see the prompt at the bottom of the screen:

Which Command Key (1-0) ?

The 1-0 corresponds to the digits represented at the top of your keyboard. If you have a machine with a keypad, you can use your keypad in entering these numbers. Now press the number key that you want to use for your custom command. You'll see another prompt that says :

Command Key Set-Up

Now type in the desired sequence of commands. For example, to put title centering commands throughout the text, you could use this series: "i" ; ">t"; "ENTER"; "SHIFT" "ENTER". In entering your sequence, hitting "ENTER" prints a down arrow. If you make a mistake in entering the series, press "SHIFT", then backspace and retype over the error. You should not enter spaces in between command keys as spaces are treated as

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characters. So this particular sequence would look like this:

i>t↓

The "SHIFT" "ENTER" is how you terminate the command series and get back to Edit. To execute this series, move the cursor to where you want to place the title center command and press the number key you are using for that command. The title center command will appear in that spot. You can move the cursor to other places you want to put a title center command and press the number key or x to put this command there. The small "x" will cause the last used custom command to execute. For example if you defined "2" to insert the title command and have been using that key, then "x" will give you the same result. Each time you hit x, a ">t" will appear there.

You can enter in as many as 10 custom commands by assigning them each a different number. You will have to remember or write down which commands do what. In all ten commands, you cannot exceed 200 characters total.

The "CLEAR" key commands can be used in "X-keys" in the same way they are normally used. The "CLEAR" character will be stored first then the "CLEAR" and the key affected by the "CLEAR" key.

USE IN TEXT ENTRY

Pressing "SHIFT" "BREAK" will activate the command keys in Text Entry. You'll see the prompt "X-Keys" at the bottom of the screen. Pressing "CLEAR" and a number key will execute that series in Text Entry. Pressing "CLEAR" and a number will execute the "X-Key" stored at that number. Usually, the "CLEAR" plus number key is the handier method. Remember that the effect of an "X Key" is dependent on what mode the program is in when the key is executed. For example, a key programmed as "iHi there" will insert the words "Hi there" when used from "Edit" but will write "iHi there" if activated from "Text Entry".

16.1 SERIES OF STEPS You can also give a series of different steps to be accomplished in one command if you separate the steps with an "e". For example: "i"; ">C80"; "down arrow"; "e"; "i"; ">C60"; "down arrow"; "SHIFT" "ENTER". This is two separate sets of instructions separated by the "e". (** NOTE ** - the "e" command only works in Edit.) In this case, you have to press "x" to get both sets of instructions to execute, rather than pressing the command number. The first time you press "x", the first set of instructions will be carried out (centering text at 80 characters wide); the next time you hit the "x" key, the second set of instructions will be carried out (centering text at 60 characters wide). If you should get into a perpetual execution, press "e" or "BREAK" to stop the execution of the command.

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16.2 NUMBER OF EXECUTIONS If you use "N" (capital "N") as the last command in an x-key series, then type "n" to execute, the prompt "number?" will appear. Enter the number of times you want the command to execute; it will then execute that number of times. Each time the command is pressed it will repeat the same number of times until the "n" command is used again and changed. For example, if you want to scroll down three screens each time the "1" key is pressed in Edit, define the command key "1" as "zN", then press "n" and enter the number three. The "z" command will be executed three times. Each time "1" is pressed, "z" will be executed three more times. This key only works in Edit.

16.3 EXITING X-KEY PROMPTS If you press something by mistake and get the "Which Command Key?" prompt, you can exit the prompt by pressing "BREAK". If you get the prompt "Command Key Set-Up" but want to exit, press "SHIFT", then down arrow.

16.4 SAVING AND LOADING X-KEY COMMANDS You can save your x key commands on disk by pressing the "%" in Edit and can load them from disk using "&".

17. REMEMBER CURSOR You can mark any cursor position with this feature. Pressing "M" (capital "M") marks the cursor position. Then you can scroll anywhere in your text and, when you want to get back to the marked spot, press "m" (small "m") and Lazy Writer will return you to that spot.

18. HELP FILE If you're having problems remembering some of these editing features, you can always press "h" and you will see the "help" file appear on the screen. This file contains some information about using Lazy Writer. You can also add your own information and this will be saved into the "help" file. Do this by loading the "help" file into memory, move the cursor to the end of the text, then go into "Text Entry" and type in whatever you want. Save this file under the file name "help". Now, when you press "h", the "help" file will come on the screen with your material added. This is for your convenience and is an alternative to searching for your manual. You get out of the "help" file and back into Edit by pressing the "BREAK" key.

SOS

SECTION FOUR:
FILE MANAGEMENT

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FILE MANAGEMENT

1. **TO SAVE TEXT** press the "s" key while in Edit or "CLEAR" and "s" while in Text Entry. You'll see a prompt on the screen :

```
SAVING TO DISK
CURRENT FILE:ART2:0
FILE NAME PLEASE >
```

In this example, the current file name is "ART2". If you want to save your text to this file just press the "CLEAR" key. If you want to start a new file, type in the name of your new file next to the "FILE NAME PLEASE" prompt. If you make a mistake entering the name, backspace and retype. Now press "ENTER". This will start your disk drive and save to your new name.

If you want to create a new version of an old file, you simply need to give the new version a different file name and save it under the new name. Enter the new file name next to the prompt "File Name Please". If you press the right arrow, the old file name will appear one character at a time in this space. You can then edit this name to one slightly different (example: "ART1" becomes "ART2"). You can change the first few letters of an existing file name and then press "CLEAR". The file name will then be the old one altered by what you typed to make a new file name. For example the old name was SEXY/LW; you type "r" then hit the "CLEAR" key. The file is saved as "REXY/LW"

If you try to save a file to a disk that doesn't have enough room, you'll get an error message. If this happens to you, get a new formatted disk to save your file on, or kill some files on your current disk. The latter choice means going out to DOS, but you can kill a file from DOS then return to Lazy Writer without losing text.

The "save" command saves all the text in the computer regardless of cursor position.

2. **TO LOAD A FILE** from disk, press the "l" (load) key while in Edit or "CLEAR" and "l" while in Text Entry. You'll see a prompt on the screen:

```
LOADING FROM DISK
CURRENT FILE
FILE NAME PLEASE>
```

In this case, there is no current file in memory, so type in the name of the file you wish to load. The file will now load into memory and will begin appearing on the screen. If you've loaded or saved a file previously, that name will be listed after "current file". If you see the correct name there, you can press the "CLEAR" key to load your text. The right and left arrow will move the cursor for editing the file name.

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If there is a file in memory, and the cursor is at the top of file, the file in memory will be overwritten. There is no need to delete files in memory before loading a new file.

Lazy Writer itself has only one error message dealing with disk operations (all other error messages are from your DOS). If you try to load a file that is longer than you have room for in your computer's memory, you'll get a "File Out of Memory" error message. This would only happen if you are loading a file created with another program or created on a machine with more memory than the machine you are trying to load it into. The file will load to the limit of your present memory, but the remainder of it will not load.

There is a rather complex way of dealing with this problem, involving breaking the file into two or more files. Load as much of the file as you can and delete some of the last part. Save the part now in memory with a new file name. Put the cursor at the top of text and list (press capital "L") the old oversize file to the part that wouldn't load. Just before you get to that part, hit the "l" key to load instead of list and this part of the old file will now load normally into memory. You now have two smaller files instead of one big one. You can kill the big file from your disk. The thing to remember is that whatever comes after you hit "l" will load into memory. After a load, the program returns to Edit and shows the top of the text.

3. APPENDING FILES To stick two documents together, load one and move the cursor to the end of that document, then load the other file and you can save them together. If you want only part of one file added to another file, load the first file, move the cursor to the bottom of the material you want, then load the second file. The second file will be appended at the place you left the cursor and will load over the material below the cursor, in effect, deleting it. Any material above the cursor position from the first file that you may not want, delete in the normal way. Remember the program will return to Edit and the top of the text, so you may not see the material that just loaded, but it's there, starting where the cursor was. You can use the "M" key to "remember" the cursor position before the "load" the return to it after the "load" by pressing "m". (See the "remember Cursor" feature in the section, "EDITING")

4. TO LIST A FILE from disk (without it going into memory), press "L"(capital "L"). Your file will begin appearing on screen and you'll see the prompt "hit any key" to make it continue. This works much like a DOS list, except that it stops after each screen full until you tell it to continue. This gives you time to read the screen, if you want. If you want to stop listing, press "BREAK". You can also switch from listing to loading by hitting the "l" key while you are listing.

Listing is a way of verifying that your file was properly saved on disk. You can also use the list feature to

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look at a file you are not currently working on. You can be editing one file, but decide you want to view some material from another file. Simply press "L" and enter the name of the file you want to see. It will begin listing, but since it is not going into memory but is being read directly from the disk, it does not destroy the file in memory. When you are through listing, your original file will still be there.

A file being listed on the screen will not be nicely formatted like one that has loaded into memory; words will be broken and there may be brief pauses as the computer searches the disk for the next batch of text. Also, you cannot change the listed text or edit it in any way - listing just allows you to see it, a screen full at a time. Obviously, you must have the disk with the file you want to see in your disk drive in order to list it.

5. MULTI-FUNCTION KEYS ("X-keys") can be saved on disk by pressing "%" while in Edit. You will get the usual prompt for "saving". Type in the file name and proceed as with any other save. Whatever "X keys" are in memory will be saved for future recall.

Multi-Function keys can be loaded into memory from disk by pressing "&" while in Edit. You will get the usual prompt for "loading". Type in the file name as you would for other files, but be certain what you're loading really is an "X-key" file because a file longer than 201 bytes will not fit in the "X-key" buffer and will crash the program. The "0" key is set up by the program to load a file called X1. Pressing "0" in Edit will cause the prompt for loading to appear and the file name "X1" to be written. Pressing "ENTER" will load the X1 file. The X1 file could include an "X-key" that loads another "X-key" file or that loads your work file into memory.

6. DIRECTORY You can see your directory from Lazy Writer by use of an extension module called "DIR/CMD". You use this by holding down the "CLEAR" key and pressing "BREAK". This extension displays a directory of all files currently on the disk you have in your zero drive; it also tells you how many free grans you have. While using this extension, you can save, load, and list as well as perform several other functions. You exit by pressing "BREAK". See the section on the "DIR/CMD" extension for more information.

7. GETTING TO DOS From Edit, you can get to DOS by pressing "*". You can then carry out any normal DOS command, including Directory, kill, etc. If you don't load BASIC or make use of memory space above DOS (7000 hex), your text will still be there. Type "l" (file name for Lazy Writer) and reload Lazy Writer; if you get the initial screen (with the copyright notice) instead of your text, you have probably destroyed the flag byte that tells Lazy Writer it's OK to reuse the old text pointers. A reboot has this effect. Pressing the up arrow may recover it; but if nothing happens when you press the up arrow, your text is probably no longer in memory or the

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pointers are gone. Your only hope is to load Lazy Writer and use the "RESCUE/CMD" extension. If you use the area of memory where the text buffer resides or power is lost or there is a crash so bad the computer plays games in the memory, nothing can help you. Such things do happen; that's why we suggest frequent "saves" and regular backups.

8. TECHNICAL INFORMATION Lazy Writer will load or save any file that can normally be loaded by DOS, including BASIC programs saved either compressed or as ASCII, Editor/Assembler(EDTASM) files, object code files, data files, etc. Lazy Writer does not distinguish the type of file you've loaded. If you inadvertently load an object code file, it will look like nonsense on the screen, as Lazy Writer tries to print every byte as ASCII, including information the disk system uses. You will not see hex numbers contained in object codes, but only translations into ASCII characters. And because Lazy Writer normally discards the high bit of every byte when printing to screen (it uses it for underlining), you will not see any graphic characters.

It is possible to edit prompts in object code programs that are in ASCII if their length is not altered and if you use care not to overwrite characters that are used for file management by DOS that appear within words. If those conditions are met, you can save the program back and the program will execute with the new prompts.

Compressed BASIC will load into Lazy Writer with the same difficulties as object code files, but again you can't change the length. BASIC saved as ASCII can be loaded into Lazy Writer and edited freely as any text. Program listings will display as lower case. Press "+" to make the display simulate an upper case only machine, as described under "CASE CHANGE". It's best to set the video width at 255 when editing BASIC so programs will appear as they would in BASIC. The Find and Replace and Block Move features of Lazy Writer are very helpful in editing BASIC programs, but remember your lines have to be less than 248 characters in order for BASIC to accept them and line numbers will be loaded into BASIC consecutively regardless of where they are in Lazy Writer. You need to know that the down arrow in Text Entry produces an ASCII code of 10, "ENTER" produces a 13, and in "insert" the down arrow produces a 13. Lazy Writer treats these all the same, while BASIC treats them differently.

Editor/Assembler files will load into Lazy Writer and line numbers will appear normally, but at present, Lazy Writer does not recognize Editor/Assembler tab characters; it prints them as spaces. In general, this will not affect its ability to edit files. If you press the ";" key, you'll see that Lazy Writer thinks the line numbers are all underlined. Therefore, to create a valid Editor/Assembler line number, write a normal number, then underline it. You will also discover that part of the beginning of text is underlined (high bit set); these must remain underlined if Editor/Assembler is to accept the file. Edited

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Editor/Assembler files should be saved with the same file name. After re-loading into Editor/Assembler, do a renumber which will take care of any non-consecutive line number.

Any underlining other than a line number and block move markers (which are underlined "(" ")") will cause Editor/Assembler to reject the file with the message "bad parameters". If it does this, reload the file into Lazy Writer and look for the problem.

Should you wish to load an Electric Pencil file into Lazy Writer, you'll note that case is reversed. Use the "#" key in Edit to reverse the case. The Electric Pencil terminator byte should not be deleted if you want to load the file back into Pencil. It should be if you want to print the file with Lazy Writer.

Scipsit files should load into Lazy Writer but we haven't made extensive tests. Pressing "d" then "U" (capital "U") should get rid of Scipsit's special carriage returns.

Files created by BASIC and saved as random files can be loaded into Lazy Writer and theoretically edited, but there are problems. Usually these files have no carriage returns, so Lazy Writer responds slowly when scrolling. The problem is worse with longer files.

9. FILES ON YOUR LAZY WRITER DISK You will find the following files on your Lazy Writer disk:

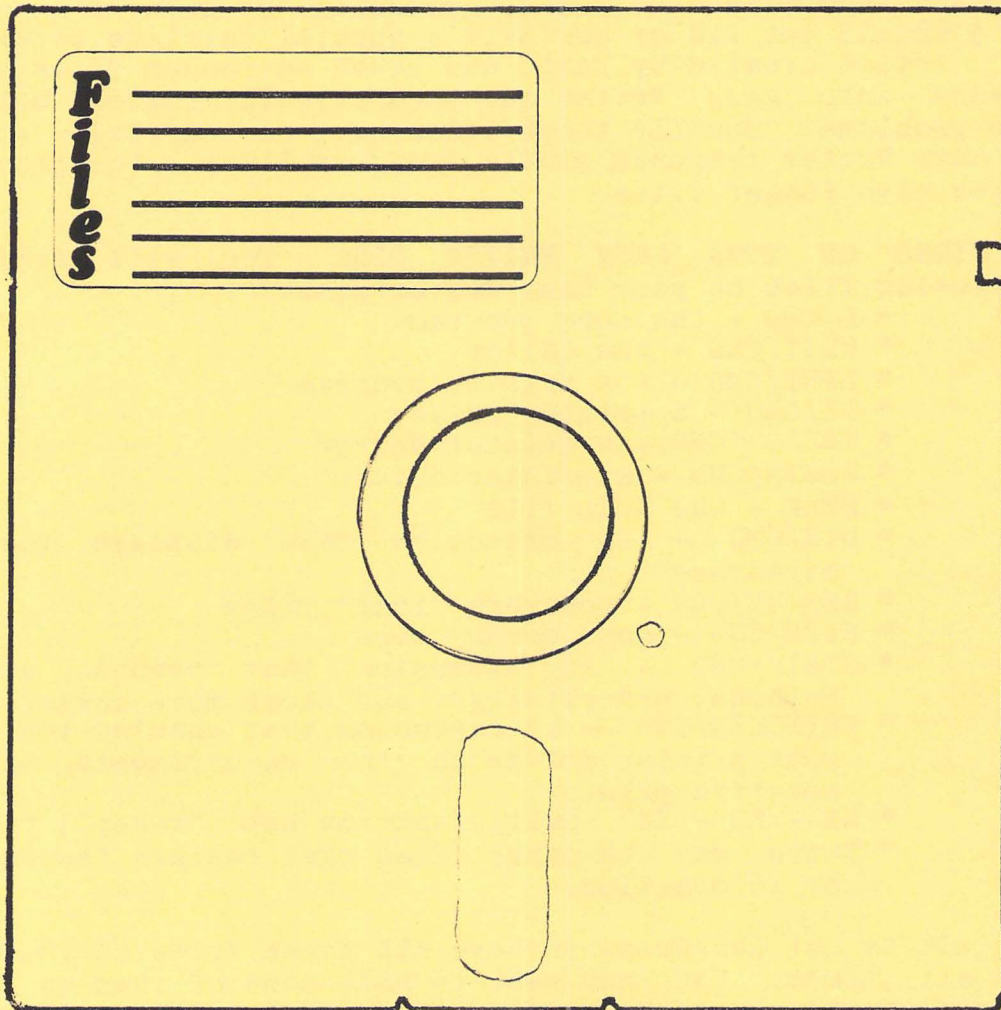
- * L/CMD - the core program
- * EDIT/CMD - the editor
- * LPNT/CMD - the printer program
- * P1/CMD - a printer driver
- * TRS300/CMD - a printer driver
- * RS232/CMD - a printer driver
- * HELP - the help file
- * DIR/CMD - an extension that displays the disk directory
- * RESCUE/CMD - recovers "lost" files
- * SIZE/CMD - sets memory size
- * STRIP/CMD - an extension that removes all soft hyphens, underlining, and block move markers
- * PRINTGEN/CMD - an extension that enables you to set your printer driver to the requirements of your specific printer
- * X1 - X2 - X3 multi-function key ("x-key") files.
- * There may be other files that contain instructions or information.

It is not necessary to have all these files on your disk at all times. You may want to kill some of them on some of your disks to create more room. To do any editing of files, you must have "L/CMD" and "EDIT/CMD" on your disk. To save and load files, you must have a DOS system disk. "LPNT/CMD" and "P1/CMD" must be on your disk to go to a printer and, to get back to Edit after you've printed your material, you need a DOS and "EDIT/CMD". If you plan to use the "HELP" file, be sure it's on the disk. You don't need a DOS to use "DIR/CMD",

FILE MANAGEMENT

but you do need one to load a file or return to "EDIT/CMD". You only need "RESCUE", "SIZE", "STRIP", and "PRINTGEN/CMD" if you plan to use them. "PRINTGEN/CMD", for example can stay tucked away on your master disk until you buy a new printer.

Before you do anything with Lazy Writer, make some backup copies as your working disks. Save the master copy for making new backups.



SECTION FIVE:
LAZY WRITER EXTENSIONS

DIRECTORY AND FILE HANDLER (DIR/CMD).....	1
RESCUE/CMD.....	3
SIZE/CMD.....	3
STRIP/CMD.....	3
PRINTGEN/CMD.....	4

LAZY WRITER EXTENSIONS

Extensions are programs that work with the Lazy Writer core program and are loaded through the extension "DIR/CMD" (see below). They will not run correctly from DOS.

DIRECTORY AND FILE HANDLER (DIR/CMD)

DIR/CMD is a special function program that loads into the area normally occupied by EDIT/CMD. To load this extension, hold down the "CLEAR" key and press "BREAK" while in Edit. You'll get a file directory at the top of the screen and a disk operations menu on the bottom of the screen. Note that the top of the screen shows "DISK NAME"; this will be the name of your DOS on a system file, but on a data disk, it be the name given the disk when it was formatted. There's also a date and the number of free grans. The file names are arranged in four columns and will include the Lazy Writer program files. but not "SYSTEM" files or "INVISIBLE" files.

To see the directories of other drives (up to four), press "0", "1", "2", or "3". To get back to Edit, press "BREAK".

THE MENU AT THE BOTTOM ALLOWS YOU TO DO THE FOLLOWING THINGS:

1. **LOAD** a file from disk to memory. Pressing "1" displays the current file name after the prompt "FILE NAME PLEASE>". Load the current file name by pressing "CLEAR", or enter the name of the file you want loaded. This "load", works the same as it does from EDIT. If the load is successful, you will be returned to EDIT. If not you will get the error message and the "hit any key" message. After hitting the key, you will be back in "DIR/CMD" for another try.
2. **LIST** a file from disk. This also works the same as from Edit. Press "L" (capital "L") to get the prompt, then use "CLEAR" to list the current file, or enter the name of the file you want listed. You can stop a list at any time with the "BREAK" key. Pressing "1" will put you into a "load" from that point on.
3. **SAVE** a file from memory to disk. This is the same as from Edit. Hit the "s" key and get the prompt "FILE NAME PLEASE>". Save the current file by pressing "CLEAR", or enter the name of the file you want saved.

LAZY WRITER EXTENSIONS

4. EXECUTE EXTENSION Pressing "e" will enable you to load any machine language program into Lazy Writer. This includes - but is not limited to - RESCUE/CMD, SIZE/CMD, AND STRIP/CMD. Just enter the name of the extension you want to use and it will load into Lazy Writer. Once executed, the extension returns you to Edit. (Programs not written by us may not work if they load into the area of L/CMD or they may load into the text buffer area.) You may write your own machine language extensions to work with this command (see programmer's notes).

5. COMPILE DIRECTORY LIST This feature enables you to make a catalogue of disk directories from your collection of disks. Press "c" and you'll see a new prompt at the bottom of the screen, "STARTING with DISK NO.?" . Answer with a starting number and "ENTER". A "0" will shut this feature off. Now the line at the top of the screen will say "CATALOGUING DISK NO." and the number. Pressing a number key from "0-3" will load the directory for that drive number both to the screen and into the memory. Each time you press the drive number a new directory will be loaded into memory. (Of course you must keep changing disks or it will be more copies the same directory.) The directory for the drive you've indicated will be loaded into memory at the cursor position. If you're adding this information at the bottom of a file, be sure you've left the cursor at the bottom of your file. This feature will overwrite previous text, so be careful! When you go back to Lazy Writer, your directories will look like this:

Disk no. >	40	NEWDOS	04/09/81	15 Grans Free
P1/CMD		COMM		L/CMD
DIR/CMD				
LPNT/CMD		EXTEN		EDIT/CMD
INTRO				
VFU/CMD		REV		RESCUE/CMD

The "disk no." starts with what you told it and counts up for each disk catalogued.

LAZY WRITER EXTENSIONS

RESCUE

"RESCUE/CMD" is a program you can try if you think you've lost your text. Lazy writer protects you as much as possible and will normally let you re-enter the program with text intact, but if you have managed to delete all your work by pressing "CLEAR" and "e" or "SHIFT" "!" unintentionally, (and in so doing reset the end of text pointer), "RESCUE/CMD" will save you. Load this extension and you'll get a question on the screen asking you how many bytes were in the lost file. Type in a number and press "ENTER". Lazy Writer will retrieve the number of bytes you've specified. If your guess is too low, just run this extension again and use a higher number. If your number is too high, you will get your file plus what ever else might be in memory. You can delete the extra by using "SHIFT" "!" or "CLEAR" and "e" to set the end of file pointer.

=====

SIZE

"SIZE/CMD" simply sets memory size to whatever you want. It sets the same memory location used by DOS to indicate high memory, 4049h, and does not check for actual end of memory so don't set it for more memory than you have. It won't let you set memory below the start of the text buffer.

=====

STRIP

"STRIP/CMD" gives you some options for one shot removal of different kinds of non-standard characters from the file. Just make your choice from the menu. Some of the options are also found in Edit, but we felt "STRIP/CMD" would be useful for those who need to have a standard ASCII file for use with other programs.

=====

LAZY WRITER EXTENSIONS

PRINTGEN/CMD

"PRINTGEN/CMD" is an extension that enables you to customize your copy of Lazy Writer to suit your particular printer. Run "PRINTGEN/CMD" from the "DIR" extension (it won't work from DOS.) Be sure you've made a back-up copy of Lazy Writer and run "PRINTGEN/CMD" with the back-up. You'll be changing code on the disk, so you don't want to use it on your master disk of Lazy Writer. "PRINTGENCMD" actually alters the file called "P1/CMD", which is the printer driver you'll be using.

"PRINTGEN/CMD" presents you with a simple menu for you to act on. The menu looks like this:

```
<d> - down line feed.....on
<s> - software formfeed.....off
<n> - nulls or delay after cr..... 20
<b> - baud rate: TRS232 only.....600 baud
<h> - handshake.....off
<u> - underline method.....by code
<w> - double-wide letter.....off
<1> - starting code..... 30
<2> - ending code for dw or under..... 31
```

"Down line feed" is for printers that require a line feed after a carriage return. Press "d" to turn this "on" or "off". If your printer automatically provides a line feed then set this to "off". Lazy Writer needs proper setting of this feature to give you accurate software form feed counts and paging.

By pressing "s" ("software formfeed"), you can make the software formfeed the default condition on the main Printer menu. This is also a toggle.

Some printers need null characters sent to them after carriage returns. You can activate sending nulls by pressing "n" and giving a new number. Try a number between two and twenty for TRS232 boxes, a larger number (under 255) for RS232 boards.

The "baud rate" item refers only to printers working from a TRS232 box. RS232 board drivers are set by the sense switches in the expansion interface. Press the "b" key and keep pressing it. Each time you press the key, the number will change on this item, showing you the available baud rates. Choose the one best suited to your printer. Of course you're printer must be set to the same baud rate.

If you want handshaking to be the normal condition, press "h". You'll get a display "ETX ACK" - this is a protocol used by many serial printers. This applies only to the RS232 board.

LAZY WRITER EXTENSIONS

If your printer can't underline by the normal backspace method, you may be able to get underlining by one of two other methods: "by code" or "two pass". Press "u", to change to one of these methods. If you're going to use "by code" for underlining, then you won't be able to also get automatic double-wide. Enter the codes for turning on underlining "by code" in the last two options on the menu, "starting code" and "ending code". If you are using the double-wide feature, the codes to turn these on or off must be entered there.

If you're using a dot matrix printer that can make double-wide letters, pressing "w" to turn on this feature will give you automatic double-wide as the default condition. Every character you underline will come out double-wide. You won't have to readjust page width and you can justify the output too. Enter the codes for double-wide in the last two options on the menu, below. If your printer underlines by start and stop code and does double-wide the same way, use the underline feature for double-wide and do underlining with imbedded printer commands.

If you choose double-wide, the underlining prompt will automatically show the alternate underline method. Setting the underlining first to "backspace" or "two pass", then hitting "w" for double-wide will select the underline method for use when the "double-wide off" command is used in text.

***** Note:** Boldface and double-wide shut off all underlining when in use, including empty spaces. Any underline method should otherwise produce underlined empty spaces on any printer that has the character.

The bottom two items, "starting code" and "ending code", are for use with automatic double-wide or alternate underlining. Enter the codes for your printer that will create double-wide or alternate underlining.



SECTION SIX:
PRINTER DRIVERS

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2. RS232/CMD.....	1
3. PARDRV/CMD.....	1
4. YOUR OWN DRIVER.....	2

ASSEMBLER LISTING OF THE PARALLEL DRIVER

PRINTER DRIVERS

THERE ARE THREE PRINT DRIVERS ON YOUR LAZY WRITER DISK:

1. **TRS232/CMD** - a driver that works with Small System Software's TRS232 device and a serial printer. If you are using this device, you must copy this file to the file name P1/CMD. This driver comes set up to issue a down linefeed after every carriage return and assumes your printer likes 300 baud operation and does not require a software formfeed. This type of driver does not handshake and so you can not use a baud rate faster than your printer can print, unless you can send the printer enough null characters to make up the difference. The driver as you receive it sends two nulls after each carriage return. With the "PRINTGEN/CMD" extension you can change the number of nulls, baud rate, down linefeed status, and default condition of the software formfeed switch, as well as the method of underlining and boldface. Drivers of this type use software timing and will not work without modification if a clock speedup mod is active.

2. **RS232/CMD** If you are going to run your serial printer from the RS232 board, copy this file to P1/CMD. This driver reads the sense switches on your RS232 board to set up baud rate, parity etc. See the manual supplied with your RS232 board for details. This driver assumes your printer requires a down linefeed after carriage returns and requires a delay after each carriage return and cannot use handshaking. It sets no software formfeed as the default condition. Any of those conditions can be changed by running PRINTGEN/CMD. The handshake method which can be activated by the "PRINTGEN/CMD" extension is the one in which the driver sends a "EXT" control code when it has completed a line and waits for a "ACK" control code back from the printer when the printer is ready for more.

3. **PARDRV/CMD** This driver and "P1/CMD" are the same when you receive your copy of Lazy Writer. There is no need to copy "PARDRV/CMD" to "P1/CMD" unless you have been using a serial driver and now wish to restore the parallel driver. The "PARDRV/CMD" and "P1/CMD" both contain a driver that works with parallel printers by way of the expansion interface. It is assumed that the printer does not require a down linefeed after a carriage return and that the software formfeed default condition should be off. There is no need to set handshaking or baud rate for this kind of printer since all that is done by the hardware. This driver assumes your printer can use the backspace method of underlining.

*** NOTE *** "PRINTGEN/CMD" ONLY WORKS ON THE P1/CMD, WHEREVER THAT MAY BE. IT WILL NOT CHANGE ANY OF THE OTHER DRIVER FILES.

PRINTER DRIVERS

So remember to first copy the driver you are going to be using, then run extension PRINTGEN/CMD from Lazy Writer to make the changes needed to run your printer correctly.

YOUR OWN DRIVER If you are a skilled assembly language programmer, you can write your own driver for Lazy Writer. The printer device control block needs to be loaded by the routine with the address at which Lazy Writer will find the driver and a number of status bytes need to be set. Included in this manual is an assembler listing of the parallel driver which should tell you what's needed from your own driver. From version 1.8 on, these addresses should be firm. There is a small area in low memory that Lazy Writer drivers load into. If your driver will not fit here, then put it in high memory and protect high memory by running SIZE/CMD. If you are not planning a long file that will reach that area of memory, then there is no need to protect high memory because Lazy Writer builds its text buffer upward in memory.

Another way of doing business is to kill "P1/CMD" completely. If you do this, you can load in your driver first, then load Lazy Writer as usual. When you go to the printer program, there will be a "FILE NOT FOUND" error generated by DOS. Hit a key to continue. The printer program "LPNT/CMD" should be active and it should recognize your driver.

4026		00010	ORG	4026H	;PRINTER TYPE ADDRESS
4026 D67C		00050	DEFW	START	;DRIVER ADDRESS
5233		00070	ORG	5233H	;PLACE NUMBER OF NULLS
5233 00		00072	DEFB	0	;PRINTER TYPE- SET HIGH
		00074	; BIT FOR SOFTWARE FORMFEED - ZERO BIT FOR LINEFEEDS		
5234 02		00090	NULLS	DEFB	2
5235 DE00		00110	DEFW	ODEH	;2 FOR 300 BAUD - TRS232
5237 00		00150	HAND	DEFB	0
		00152	; HANDSHAKE NON-ZERO		
5238 80		00170	DEFB	128	;UNDERLINE FLAG
		00172	,BIT 7 ON - UNDERLINE BY CODE - BIT 0 = DOUBLE WIDE - BIT		
		00174	; BIT 1 = TWO PASS UNDERLINING		
5239 1E		00190	DEFB	30	;START UNDERLINE CHAR
523A 1F		00210	DEFB	31	;END UNDERLINE CHAR
523B C07C		00230	DEFW	TB1	;PRINTER MESS. POINTER
7CC0		00250	ORG	7CC0H	;ROUTINE BEGINS
7CC0 70		00270	TB1	DEFM	'PARALLEL DRIVER READY';PRINTER MESS
7CD5 00		00290	DEFB	0	
7CD6 F5		00310	START	PUSH	AF
7CD7 E5		00330		PUSH	HL
7CD8 3A4038		00350	PRINT	LD	A,(14400)
7CDB FE04		00370		CP	4
7CDD 2807		00390		JR	Z,CONT
7CDF 3AE837		00410		LD	A,(37E8H)
7CE2 CB7F		00430		BIT	7,A
7CE4 20F2		00450		JR	NZ,PRINT
7CE6 79		00470	CONT	LD	A C
7CE7 32E837		00490		LD	(37E8H),A
7CEA E1		00510	EXT	POP	HL
7CEB F1		00530		POP	AF
7CEC C9		00550	GOX	RET	
7CEC		00570		END	GOX
00000	TOTAL ERRORS				;DUMMY RETURN

SECTION SEVEN:
PRINTING YOUR TEXT

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EXAMPLES

PRINTING YOUR TEXT

The end result of word processing is some kind of printed copy. The computer is a convenient way to get your document exactly the way you want it in content and form. You fix the content through the various editing commands, but you set the form through printer commands. There are two kinds of printer commands: those in text and those on the menu. Mainly, these do the same things, but provide two different ways to do it.

To print your text, you need to get to the printer program, which is a separate file in Lazy Writer (this saves memory space). You must have your Lazy Writer disk in your disk drive each time you print text. The printer program within Lazy Writer is loaded each time you press "CLEAR" and "p" in Text Entry or Edit. Any commands you have in your text (such as "center") will supercede the "default" values listed on the Printer Menu. Once your printer is running, you will see the numbers listed change to the ones being executed per your instructions.

THE FOLLOWING IS A SUMMARY OF THE STEPS THAT WILL GET YOUR TEXT FROM DISPLAY SCREEN TO PAPER:

1. In Edit, press "CLEAR" and "p" to get to the Printer Menu from your text.
2. Check the values shown on the top of the menu and make any changes you may want by pressing the key indicated; this will either be an "on-off" switch or you'll type in a new value and hit "ENTER".
3. Make sure your printer is turned on.
4. Check the instruction on the bottom of the menu. If you want the entire document printed, press "ENTER"; otherwise you can print to or from where you left the cursor in your text.
5. If you have the "stop at page end" item "on" (this is the default value), your printer will stop when it has completed one page and your screen will display a mini-menu of options. If you want to continue printing, press the "c" key, then "ENTER". Do this until your whole document is printed. You can disable the "stop at end of page" any time you have the main menu on the screen by pressing "s", which works as an "off-on" switch for this feature.
6. When your text is all printed (as many copies as you specified via the main menu), Lazy Writer will return to Edit.

PRINTING YOUR TEXT

* PRINTER MENU *

1. **PRINTER MENU** If typing in a simple letter or document, especially one you may not use again, you can set all printer commands from the menu. It is best to use either all text commands or all menu commands to better keep track of what you are doing. The value of text commands is apparent if you have saved a letter or document you will be using often. With text commands, every time you print this document, you will get the same results. Menu commands have to be set each time you print your document. One advantage to menu commands is that you can stop the printer in the middle of printing something and change a menu command; you can't change text commands while the printer is going and text commands will always override menu commands.

You will notice that some of the menu items duplicate commands you can put in text. This gives you another way to get the results you want and, in some cases, a more convenient way. For example, you may decide you want a double-spaced version of your document so you can proof read it, but you'll later want it printed single spaced. Use the "down line feed" menu item (write in "2" for double spacing); this is more convenient than inserting a ">d2" printer command that you later have to remember to remove.

PRINTER MENU

TYPE TO CHANGE:		TRS-232 DRIVER	
<l>eft marg.	6	<r>ight marg.	78
<w>idth of text	72	<n>o. of lines	54
<p>age width	84	<d>own linefeeds	1
<P>AGE LINES (CAP. P)	66	<j>ustification	on
<u>ppercase	off	<s>top at page end	on
<o>utput print cmds	off	Page no.	1
<c>opies	1	<↓> = software form feed	off

.....

<ENTER> = Print Text
a = <a>ll text
t = <t>o the cursor
f = <f>rom the cursor
e = <e>dit - Return to "edit"
m = <m>ore Commands

The top items work by pressing the letter keys indicated. To set right margin, for example, press "r". When you press the key for the item you want to change, type in the new value; this will replace the old one on the screen.

PRINTING YOUR TEXT

1.1 MENU MARGIN COMMANDS You should study the effects of setting margin commands from the menu. If you reset "l" (left margin), this will change the width. Resetting "r" (right margin) also changes width, and resetting "w" (width) only changes the right margin. You can experiment with these by typing in different values; you'll see the other items change on the screen, showing you the effect. Some work as "off" - "on" and these will display whether they are "off" or "on". To get justified text, for example, press "j" and see the words "on" displayed. To turn off this feature, press "j" again and see "off" displayed.

1.2 SOFTWARE FORMFEED A form feed is the action of the printer in going from the end of one page to the beginning of the next page. Many printers, like the Qume, produce form feeds automatically when Lazy Writer sends a form feed code to the printer. Other printers require form feeds to be done in software. To accommodate this type of printer, Lazy Writer has a software form feed feature, activated from the main printer menu. The item "PAGE LINES" is for use with the software form feed. To produce software form feeds, press the down arrow (this works as an off-on switch). Then enter after "P" (PAGE LINES) the number of lines from the top of one page to the top of the next page (default value is 66). Pressing the up arrow will reset the value to 66 or whatever value you have used and reset "top of form". All other printer commands will work normally with the software form feed.

1.3 PRINTING PRINTER COMMANDS Lazy Writer offers you the unique ability to print your printer commands. Use the "o" command from the printer menu. This is a good teaching device and will give you a paper copy that includes your commands, which can be helpful if you are doing something complicated. See the example we've included of the "Children's Art" flyer. Notice that using "o" executes then prints the commands; that is why some appear as upper case. This feature will not print header material.

1.4 PAGE WIDTH Page width refers to the actual width of the paper you're printing on or the space available on the paper, from where the print head begins printing. Margin commands are figured from page width, so if you do not enter the correct page width, your title and centering commands will be off. Be sure you haven't used a "center" command that is wider than your page width. If your page is going to be put in a binder and you want extra space on the left for the binder holes, you can use the "absolute margin" ("a") text command to create the offset. See the section on "Text Commands".

On the printer menu, the page width is set to a default value that is about the standard typing paper width. The number system used here is the same as standard typewriters

PRINTING YOUR TEXT

use and is based on number of characters. Most printers, like most typewriters, have numbers printed in front of the carriage that show width. The numbers run from left to right, low to high. (Remember the old rule in typing classes to set margins at 15 and 85?). Normal type on standard paper makes ten characters per inch. Character size can vary a bit from one printer to another, and so can spacing between characters. You may have to experiment a bit to get a good average "page width" for your printer.

AUTOMATIC DOUBLE-WIDE

Dot matrix printers are often capable of making both compressed and double wide characters. You will have to vary "page width" to accommodate the special abilities of this kind of printer. Double wide requires that page width be cut in half; compressed means increasing the effective page width. When using these special kinds of print in part of your text, don't forget to change page width again when going back to regular size type. The codes needed to produce the special print can be given as a decimal number after the text command symbol ">". Give the new page width first, then the code number. For example, a command for a double-wide headline on the Epson MX-80 looks like this: ">p40/title 35/14". If you're using the automatic double-wide feature with underlining, you don't need to reset page width. See the command ">D" in section 4.2, the instructions for the "PRINT/GEN" extension, and the section "control Code to Printer" for more information on making double-wide and compressed characters.

2. MENU BOTTOM The items on the bottom of the screen give you a variety of options. If you want to print your whole document, press "ENTER". You can, however, print to wherever you placed the cursor, or from the cursor to the end of your document (see the section below). You can return to Edit if you decided not to print your material, or you can view more printer commands on an auxiliary menu.

When you are actually printing, the bottom part of the menu vanishes from the screen and is replaced with your text, which scrolls down the screen as it is printed. You will see your document on the screen in the same format as it will appear on paper (keeping in mind the difference in width between the screen and the paper and the fact that the screen will show "wrapped around" copy).

IF YOU WANT TO STOP THE PRINTER WHILE IT IS GOING, PRESS "ENTER". The printer will finish the current line, then stop. Hitting "BREAK" will stop the printer immediately.

PRINTING FROM CURSOR

2.1 WITHIN A PAGE If you have stopped printing in the middle of your text and want to finish from where you left

PRINTING YOUR TEXT

off, you can choose the option on the printer menu "Printing from the cursor". Lazy writer "reads" through your entire file before printing from anywhere but the beginning in order to pick up all printer commands contained before the cursor. When you stop the printer while it is printing (by pressing "ENTER"), it completes the line it is printing before stopping. Now, to begin at the next line, place the cursor in the line following the last one printed. Your printer will begin printing again at the beginning of the line containing the cursor. Follow these steps when you want to resume printing in the middle of a page.

2.2 TOP OF PAGE Even word processors do not guarantee a perfect copy the first time, so you may have the experience of printing a document, then finding you forgot to turn off an indent on page six. You now want to reprint from page six on. Place the cursor on the first character that appears on the start of page six, exclusive of header material. Now choose the "from the cursor" option on the printer menu. Any header you may have will print first (remember, Lazy Writer has scanned the previous text for printer commands), then the first line will begin from the cursor position. Use this method when you want to print from the beginning of a page.

3. AUXILIARY MENU You get to the auxiliary menu by pressing "m" ("more printer commands") from the main menu.

TYPE TO CHANGE: TRS-232 DRIVER
S = <S>ave formatted (CAP. S)
M = <M>argin - (CAP. M)
* = Exit to DOS
° = RS232 Communications (CAP. @)
m = main menu
<CLEAR> - DIR/CMD

.....

 <ENTER> = Print Text
 a = <a>ll text
 t = <t>o the cursor
 f = <f>rom the cursor
 e = <e>dit - Return to "edit"
 m = <m>ore Commands

Any of the features on the auxiliary menu will also work from the main menu, but when you have the auxiliary menu on the screen, the main menu items will not work. Pressing "m" will

PRINTING YOUR TEXT

toggle you back and forth from the main menu to the auxiliary menu.

3.1 MARGIN The "M" (capital "M") margin command works just like the margin text command - it changes the left margin only; the width stays the same.

3.2 FORMATTED SAVE The "S" (capital "S") command works only from the printer menu, not from Edit, and is different from the regular "save" from Edit. See the section on "FORMATTED SAVES" for more information on this feature.

3.3 EXIT TO DOS Press "*" to exit to DOS. If you do this, you'll have to reload Lazy Writer again. This feature works the same from the Printer Menu as it does from Edit.

3.4 COMMUNICATIONS Lazy Writer provides a communications feature for use with a modem. Press "@" (capital) and wait for the prompt on the bottom of the screen to tell you you're in "RS232 Communications". See the section on Communications for more information.

* TEXT COMMANDS *

4. TEXT COMMANDS Text commands offer more flexibility than menu commands, and there are more of them. The basic way you put a command in text is by using ">" followed by a character, sometimes followed by a number. When entering commands in text, you can put two commands on one line by using "/" or ":" or ";" between commands. (If you do this, you only need to use the ">" the first time; for example, ">form feed/center 62") Printer commands normally begin with a new paragraph or down line feed. In Text Entry, you can press "ENTER" to produce the needed down line feed. In "insert", use the down arrow. If you simply insert a printer command where you currently have a down line feed, remember that this will, in effect, remove that down line feed. Insert another one, or get in the habit of always starting with a down line feed when inserting a printer command.

4.1 EMBEDDED COMMANDS In most cases, you'll use printer commands between paragraphs, at the beginning of a line, but you can put printer commands right in the middle of text. You might want to do this to get bold face and underlining, for instance, in the same paragraph. Or you might want to change the margin in the middle of a paragraph. Another use is in making superscripts and subscripts. If you're going to hyphenate in a section using superscripts or subscripts, place the number in text, then do the hyphenization, then go back and put in the embedded printer command.

To put the command into text, put an asterisk ("*") before and after the command. A command for bold face

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would look like this: `"*>b4*"`. Remember that using these will throw off your "video width" display and any hyphenization you may want; so if you're using the "video width" feature, do your hyphenization first, then insert any printer commands.

4.2 COMMANDS AVAILABLE All commands must be preceded by ">", which must be on the first space on its own line (unless used in text, as described above). Enter this symbol, then the command you want executed.

Margin commands can be "hard" or "soft". "Hard" margin commands are those that set the outer margin, like the "center" command. "Soft" margin commands are those that work from a "hard" margin, like "indent". You cannot use "indent" without having first set an outer margin for it to indent from. If you want to begin your text with an indent, you can use something like this `>center 70/indent 10"`.

PRINTER COMMANDS YOU CAN USE IN TEXT:

`"'"` - Place the `"'"` before non-printing comments. Lazy Writer will recognize everything after this symbol as non-printing until it comes to a line feed. This command can only be used after another printer command (for example, `>a10/'food vendor list"`).

-----MAKING MARGINS-----

`"p"` - (page width) - This works just like the menu item, but allows you to enter a page width in text. If your printer can vary the size or spacing of characters, this command can be used to give the correct page width in characters for the new spacing. It can be useful in double-wide letters. EXAMPLE: `>p84"`

`"P"` - (page length) - Followed by a number, CAPITAL "P" computes the number of lines from the top of one page to the top of the next. This is used only with the software form feed; if your printer does not require software form feeds, you won't use this command. EXAMPLE: `>P69"`

`"w"` - (width) - Followed by a number, this determines the number of characters between the left and right margins; used by itself, it alters the width of the text and affects the right margin, but not the left. EXAMPLE: `>w50"`

`"a"` - (absolute margin) - Followed by a number, this moves the text to the right the number of characters you indicate. Used with the "p" (page width) command, it offsets all the text; title commands will still center titles over the text and all indents will work normally, but the

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effect is that the effective paper available has been reduced by the number you've given. This is useful when your material is going in a binder and you need more margin on the left. Normally, use this command at the beginning of your text. Used inside a header/footer, it offsets the entire block of text, not just the header/footer material. See the section on Headers/Footers. EXAMPLE: ">a7"

"l" - (left) - Followed by a number, this sets the left margin from the page edge; it also recomputes the width of your text so the right margin will stay the same. EXAMPLE: ">left 8"

"r" - (right)- Followed by a number, this sets your right margin; this command will recompute the width of your text, keeping the left margin the same. EXAMPLE: ">r 70"

"m" - (margin) - Followed by a number, this moves your whole block of text to the right; it will move your text the number of spaces you tell it and leave the width the same. Right and left margin both change by the same amount. EXAMPLE: ">m10"

"c" - (center) - The "c" followed by a number will center your text, producing a width that is the number of spaces you tell it. The center command will work only when you've told Lazy Writer the correct width of the paper you're using. This command overrides other margin commands and is what you'll normally use when exact margins (or off-center margins) are not needed. You can use "center 0" to terminate "soft" commands like "indent" and "reverse indent" and restore the previous "hard" margin value. EXAMPLE: ">center 65"

"t" - (title) - This centers a title. Like the "center" command, it only works when you've supplied the right information on page width. If you've spaced over on the screen when typing your title, these leading spaces will be ignored. This command centers each line until you terminate it. If the line you're centering is longer than your text width, it will break the line and center it as more than one line. You can put a number after "title" to represent the text width if you want. Title commands must be terminated with the "X" command or some other margin command. "Center 0" will restore the previous margin command. Indent commands or reverse indent commands will not terminate "title". You can also terminate "title" with "title off". EXAMPLE: "title 70"

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"i" - (indent) - Followed by a number, "i" will indent the left margin the number of spaces you tell it, counting from the edge of the text; it recomputes the width, so your right margin will stay the same. The "i" command computes from the last regular margin command. You can have one block of text indented 10, then indent the next one 15 and both will be computed from the last regular margin, so that the second block (">i15") will be indented 5 more spaces than the first (">i10"). (The second "indent" is not computed from the first "indent") You will have to restore the original margin by putting the command back in text after the block you want indented or you can use ">indent 0" or "indent off".
EXAMPLE: ">i30"

"R" - (Reverse indent) - The capital "R" command produces a reverse indent, also known as a "hanging indent". This means that the second line of each paragraph and all subsequent lines will be indented the number of characters you tell it. For example, ">R3" would indent the second line three characters from the beginning of the first line. The "R" command must be terminated with a hard margin command or "R off". See the "EXAMPLES" at the back of this section for some sample uses of reverse indents. EXAMPLE: ">R3"

"X" - or "x" - This terminates the title command and restores previous margin values to the paragraphs after it. It also terminates header/footers. EXAMPLE: ">x"

-----SPECIAL APPEARANCE-----

"d" - (down line feed) - The "d" produces a down line feed; d2 makes a double space, d3 a triple space, etc. This command is handy if, for instance, you want one paragraph of your text double spaced and the rest single spaced. If you want your entire document double spaced, you can do this from the printer menu. If you have double spaced a part of your document, then want to return to single spacing, you must terminate the ">d2" with ">d1". You can try "d 0"; this will give different effects with different printers. EXAMPLE: ">d2"

"D" - (Double-wide) - The capital "D" will make all underlined characters double-wide. This will only work on a printer capable of making double-wide letters. EXAMPLE: ">D"

"N" - (Number of lines) - This works like the menu item. Used in text, it enables you to set the number of lines per page you want in your printed document.

"f" - (form feed) - Using "f" produces a form feed (ASCII 12) - the printer goes to the next page. If you are using

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the software formfeed, this command activates it.
EXAMPLE: ">formfeed"

- "j" - (justify) - This switches from ragged right to justify; terminate justification with ">j 0" or ">justify off". Note that on the printer menu justify is the default value; that is, if you provide no instructions to the contrary, your copy will be justified. If you do not want justified copy, you can "turn off" this feature from the printer menu or you can use a ">justify off" command at the beginning of your text. EXAMPLE: ">j"
- "\$" - Putting "\$" in front of a number sends an ASCII character (printable character) to your printer. This is useful with printers that have command sequences that use ASCII. For example, ">\$p" will send the letter "p" to the printer; ">14/\$" will send code 14 to the printer.
- "e" - (escape) - The "e" command sends a decimal 27 escape code to the printer. (Note that ">e/\$d" and ">e/67" do the same thing) You will normally need another number after "e". EXAMPLE: ">e/14"
- "u" - (upper) - This will print all upper case, regardless of the case of the text. Terminate this command with ">u 0" or ">upper off". EXAMPLE: ">u"
- "b" - (bold) - This command produces a bold face type; follow it with a number for the number of strikes you want it to make - For example, ">b3" will cause your printer to triple strike that character. Use this command in connection with the Edit command for underlining - use the "u" key in text to mark the words you want in bold face, then insert the "b" command and your printer will print bold face all the "underlined" characters or words it finds after this marker. (See the Editing section for instructions on underlining.) See the instructions for the "PRINT/GEN" extension to see how to set up your Lazy Writer print driver for bold face, underlining, or double-wide letters with your printer. Terminate "bold face" with "bold 0" or "bold off" to go back to underlining.
- "G" - (Graphic) - Using this command will cause all subsequent underlined characters to be set out with the high bit set (ASCII + 128). This may produce graphics on some printers. Its real use, however, is to preserve underlined text in formatted saves. EXAMPLE: ">G"
- "s" - (stop) - This will stop the printer; this is handy if you have material at the end of a file that you don't want to print. EXAMPLE: ">stop"

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- "-" - Use this command to set an acceptable underflow for pagination. For example, if you will accept three lines less than the given number of lines per page, use ">-3"; this feature helps eliminate "widowed lines", one or two lines on a page by themselves. You can use this once, at the top of your text. (NOTE: this feature is not fully implemented in version 1.8)
- "*" - The asterisk is used to indicate you want to chain one file to another in printing. Use "*" followed by the name of the next file you want "chained" to the first (for example ">*vendor"). The name of the file must be entered as lower case. It will load and print the second file from the cursor position in the first file, normally the end of file. See more on this under the heading "CHAINING".
- "" - The quote mark followed by a character (such as "@") which is then followed by a number representing the decimal code for a special ASCII character will equate your character with the special one. This would let you use such special characters as a registration mark, which may be on your printer, but is not on the keyboard. EXAMPLE: ">"@93"

-----HEADER/FOOTER-----

- "h" - (header) or "H" - This introduces a header. See the section on how to create headers/footers.
- "F" - (Footer) or "z" - This introduces a footer. See the section on how to create headers/footers. Also, don't confuse this with "f" (small "F"), which makes a form feed.
- "n" - (number) - Used within a header/footer, this initializes page numbering.
- "O" - (Odd) - Used within a header/footer, this tells the printer to print the header/footer on odd pages only.
- "E" - (Even) - Used within a header/footer, this tells the printer to print the header/footer on even pages only.

**** NOTE:** The only text commands that must be upper case are "P" (Page length), "R" (Reverse indent), "D" (Double-wide), "F" (Footer), "N" (Number of lines), and "E" (Even). These commands have different meanings as lower case. Also listed as upper case commands are "O" (odd) and "X", the terminator for "title" and header/footers. All other commands, which are normally lower case, will also work in upper case. See the section on "ERROR MESSAGES".

Any of these commands can be written out or just the first letter used. For example, you can enter a left margin

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command as ">left 10" (instead of ">l 10") or a stop command as ">stop" (instead of ">s"). It's also ok to leave spaces after ">" or after the first word and the number - "indent 10" or "indent10".

You can see from the above list that Lazy Writer provides many margin commands. These are not as confusing as they might first appear, since you will normally use "center", "title", and, sometimes, "indent" to get the most common effects. Remember too that Lazy Writer supplies default values, so if you don't give any margin commands, your manuscript will still look good, if you are using standard size paper. Other margin commands are provided to give you complete control over the appearance of your manuscript. See our sample, "Children's Art" announcement, which we have included in versions with the printer commands and without. We've used a variety of printer commands to produce this to exact specifications. You will have to experiment with these commands to see the many effects you can produce.

CONTROL CODES

5.1 CONTROL CODE TO PRINTER A number by itself or "#" followed by a number acts like CHR\$ in BASIC and will be treated as decimal code; for escape code 27, you can simply type "e". You can also use "\$" followed by an actual letter. For example, to make emphasized printing on the Epson MX-80 printer, the following text commands will work: ">e/69", ">e/\$E", ">27/69".

5.2 SUPERSCRIPTS AND SUBSCRIPTS Use the a control code to produce superscripts and subscripts, with printers capable of making them. You must use an embedded printer command right before entering the number for the superscript or subscript. Use the control code that will roll the printer a half line before printing the number, then after the number, use the code to roll the printer back. For example, on a Qume printer, ">e/\$D" will produce the half roll back needed - then print the number - then use ">e/\$U" to roll the platen back. The "e" is the escape code, which could also be written "27", the "D" is a command the Qume understands as a half line feed roll back. To use as an embedded command, the first command would look like: "*>e/\$D*". Once you know the commands for your printer you could also set up an X-key command to instantly insert the printer command for making superscripts and subscripts.

ERROR MESSAGES

6. ERROR MESSAGES If Lazy Writer doesn't recognize a text command, it will print "ERROR" in the margin and will print the command it doesn't recognize. Then the printer will stop.

PRINTING YOUR TEXT

6.1 WRONG CASE A common error is entering the command in the wrong case. As of version 1.8, Lazy Writer will recognize upper and lower case on commands that are not separate commands in each case. For example, if you start a footer with ">f", Lazy Writer will read this as a form feed. But if you enter a "center" command in caps, Lazy Writer will execute it correctly since capital "c" is not being used for anything else. It is best to enter commands correctly since the upper case versions of some of the present commands may be used for something else in future releases of Lazy Writer.

6.2 NUMBER OUT OF RANGE You will also get an error message and the printer will stop if you give a width after "title" or "center" that is bigger than your page width or if you use too big a number after these commands (for example, if you entered "title 1000"). If you use a right margin command that would give a width of zero or larger than page width, you'll also get an error message. If a page width is redefined and other commands are not, you may be out of range, but not get an error message. In this case, "title" will be ignored.

6.3 HEADER/FOOTER NOT TERMINATED Another error message occurs when you fail to terminate a header or footer. Lazy Writer will print a message on the screen when you go to print your text. However, don't depend on this; terminate headers and footers properly.

FILE HANDLING FROM THE PRINTER PROGRAM

7.1 FORMATTED SAVES It is possible to save your formatted copy to disk so it will be stored in the exact format as the printer would print it. From the Printer menu, press capital "S" and see the prompt "File Name Please". Give it a new file name, so you can save this version and retain your unformatted version as well. Then hit "ENTER". You will get the Printer Menu back. Proceed just as if you were printing to paper; press "ENTER" to print the whole file to disk. CAUTION: you have an open disk file at this point. You will see your text go by on the bottom of the screen, just as when you print, only the text is going onto disk, not to the printer. This can be useful if you want to print copy without using Lazy Writer. If the DOS you are using has a "print" command, you can use this to print the formatted file without the Lazy Writer program. The justified copy can help you create nice-looking files for listing or to use in a BASIC program. You can load formatted text back into Lazy Writer and do special editing, such as overwriting margin spaces, or putting headlines over narrow columns. Don't forget, the formatted file will have a carriage return at the end of every line. You should view the copy with a larger than normal video width to

PRINTING YOUR TEXT

see how it will look on paper. To preserve the underlining and bold face in your text, use the ">G" text command. If you do load a formatted file back into Lazy Writer, you will have to reverse the case before doing any editing, then reverse it back to save it with the edited changes.

Formatted saves are useful for "spooling", that is, sending material direct from disk to the printer, so your computer can be doing something else.

7.2 LOADING FILES FROM THE PRINTER MENU If you want to load a file without going back to Edit, you can do this by pressing "CLEAR" and "BREAK", which loads the "DIR" extension program. "DIR" works the same from the Printer program as it does from Edit. You can load a new file over the old one in memory. The file will load from the cursor position, so if the cursor is at the top of file, loading a new file will wipe out the old one. If you have a header in memory before the cursor, it will print with the new file. You could also put the cursor at the bottom of file, load a new file, and print both together.

7.3 CHAINING It is possible to load and print more than one file automatically. To do this, place the disk (or disks) with the files you want printed in your drives. At the end of each file, put ">*" and the name of the next file. Then make a carriage return. When the printer finishes the first file, it will load the second file, print that, and so on. Printing will start from the cursor position.

You can make the same heading print at the top of each page by entering a header, then placing the cursor at the end of it, then loading the first file in the chain. This is useful if you have a book manuscript, for instance, that consists of chapter length files. You can print the whole thing, with page numbering continuing from one file to another.

The subsequent file will begin printing on the line just below the last file printed. If you want each file to start on its own sheet of paper, be sure you've put a "form feed" command at the bottom of each file before the chain command.

USING THE REVERSE INDENT

RESUME

NAME: John Q. Artist
ADDRESS: 1234 Creative Dr.
Detroit, MI 48209

EDUCATION: attended¹ Cass Technical High School, Detroit; B.A.
degree, Wayne State University; private lessons from
Jerome Szabo
SPECIAL SKILLS: proficient in oriental watercolor, sumie (black and
white renderings), and miniature watercolor
INTERESTS: sex, chasing women, booze, going to the track,
smoking weed and organizing protest marches.

>page width 76/absolute margin 10/title 70/bold3
USING THE REVERSE INDENT

RESUME

>left 10

NAME: John Q. Artist
ADDRESS: 1234 Creative Dr.
Detroit, MI 48209

>center 70/R18/b2

EDUCATION: attended*> escape/\$D*1*>escape/\$U* Cass Technical
High School, Detroit; B.A. degree, Wayne State
University; private lessons from Jerome Szabo

>F

1. Sometimes.

>X

SPECIAL SKILLS: proficient in oriental watercolor, sumie (black and
white renderings), and miniature watercolor

INTERESTS: sex, chasing women, booze, going to the track,
smoking weed and organizing protest marches.

ANDASTE 8-4-3
ANDERSON, ARTHUR M. 5-2-2, 5-7-1,
6-1-1, 6-2-1, 6-7-1, 7-1-3, 7-5-2
ANDERSON, JOHN 8-3-3, 8-5-2, 8-5-3
ANDREAS, CAPTAIN 8-3-2
ANDREWS, A.L. 2-2-1
ANDREWS, MATHEWS 4-2-2, 4-4-1,
5-1-2, 5-1-3, 5-5-4, 5-6-2, 7-7-2,
10-9-4
ANGELINE 6-6-2, 8-4-4, 8-5-3,
8-10-2
ANGERS 10-1-4, 10-3-3
ANGLO 7-6-2
ANGOULEME 10-5-1
ANGUS, R. BRUCE 7-8-2, 8-1-2,
10-10-4
ANN ARBOR NO. 4 4-8-3

1. Sometimes.

This flyer was produced using Lazy Writer.

CHILDREN'S ART ! ! !

PRESENTING: A great opportunity to display or sell your art work work with
NO FEE.

DISPLAY HEADQUARTERS: Neighborhood City Hall, 7760 W. Vernor
All Art **MUST** be delivered by June 23th and picked up by July 2nd.
(We cannot be responsible for any art left past that date.)

*** Certificates will be awarded ***

RULES:

- * THEME WILL BE "MY NEIGHBORHOOD"
- * ALL WORK MUST BE ORIGINAL
- * ALL ARTISTS MUST BE 18 YEARS OF AGE OR YOUNGER
- * SIZE IS LIMITED TO 11X14 (PLUS FRAME IF DESIRED)
- * FEE: NONE

Fill in the form below or write on 3x5 card and attach to the BACK OF
YOUR ART. If you wish to sell your work place ONLY the price tag on
the front.

NAME _____ ADDRESS _____

SCHOOL _____

IS YOUR WORK FOR SALE? _____ PRICE IF FOR SALE _____

This version includes all the printer commands.

> bold 4/page width 84/ title 80

CHILDREN'S ART ! ! !

>left 3 / right 80

PRESENTING: A great opportunity to display or sell your art work work with
>bold 0/title
NO FEE.

>center 70

DISPLAY HEADQUARTERS: Neighborhood City Hall, 7760 W. Vernor

>bold 15

All Art **MUST** be delivered by June 23th and picked up by July 2nd.
(We cannot be responsible for any art left past that date.)

>bold 0

>t

*** Certificates will be awarded ***

>x

> INDENT 12 / DOWN LINEFEED 2 / UPPERCASE

RULES:

- * THEME WILL BE "MY NEIGHBORHOOD"
- * ALL WORK MUST BE ORIGINAL
- * ALL ARTISTS MUST BE 18 YEARS OF AGE OR YOUNGER
- * SIZE IS LIMITED TO 11X14 (PLUS FRAME IF DESIRED)
- * FEE: NONE

>down line feed 1 / uppercase

> center 70

Fill in the form below or write on 3x5 card and attach to the BACK OF
YOUR ART. If you wish to sell your work place ONLY the price tag on
the front.

NAME _____ ADDRESS _____

SCHOOL _____

IS YOUR WORK FOR SALE? _____ PRICE IF FOR SALE _____

PRINTER COMMAND EXAMPLE - SCREEN DISPLAY

> bold 4/page width 84/ title 80

CHILDREN'S ART ! ! !

>left 3 / right 80
PRESENTING: A great opportunity to display or sell your art
work work with

>bold 0/title
NO FEE.

>center 70
DISPLAY HEADQUARTERS: Neighborhood City Hall, 7760 W. Vernor
>bold 15
All Art MUST be delivered by June 23th and picked up by July
2nd.

(We cannot be responsible for any art left past that date.)

>bold 0

>t
*** Certificates will be awarded ***
>x

> indent 12 / down linefeed 2 / uppercase
RULES:
* theme will be "my neighborhood"
* all work must be original
* all artists must be 18 years of age or younger
* size is limited to 11x14 (plus frame if desired)
* fee: none
>down line feed 1 / uppercase

> center 70
Fill in the form below or write on 3x5 card and attach to the
BACK OF YOUR ART. If you wish to sell your work place ONLY the
price tag on the front.

- - - - -
- -

NAME _____ ADDRESS _____

—

SCHOOL _____

—

IS YOUR WORK FOR SALE? _____ PRICE IF FOR SALE _____

SECTION EIGHT:
HEADERS AND FOOTERS

PAGE NUMBERING.....	1
EXAMPLES.....	2
ODD-EVEN.....	5

HEADERS/FOOTERS

Headers and Footers are text that print at the top or bottom of every page automatically from instructions you provide. The most common kind of header/footer is page numbering. Other kinds of header/footer are report titles, chapter headings, author's name and address, or an advertiser's message.

Headers and Footers each work the same, but a header prints at the top of the page and a footer prints at the bottom. Any example given as a header will work as a footer and vice-versa. The only difference is that the words printed in a header are figured into the number of lines on the page (the "n" - "number of lines" item on the main Printer Menu) and those in a footer are not.

Headers/footer are really printer commands and can be combined with other printer commands. You'll understand this better by studying the examples below.

PAGE NUMBERING

If you simply want to print page numbering on the top of each page, you would do so with the following header:

>h2/n2	this begins a header on page 2
page #	and begins numbering with page 2;
	numbers will appear at the
>X	left of the page

In the above example, "page" is a word you want printed and the "#" is the symbol that tells Lazy Writer to print a page number in a header/footer. The effect is that "page 2" will be printed at the top of the second page and numbering will continue from there. Since you have provided no margin command, printing will begin right where you've written "page #", that is, flush left.

"Page #" can be used in either a header or a footer, but if you're using both, then the numbering should be defined in the header. Use the ">n" to define numbering and use the "#" symbol to show where the number is to be printed.

There are three things to keep in mind with simple page numbering: what page you want numbering to begin on, what number you want to begin with, and where you want the page number to appear.

All headers begin with ">h" (or "H"); if there is no number after "h", the header will begin with current page. This value will usually be "one" since that is the default value when ever the printer program is loaded.

If you want to begin on a page other than the first, put the page number you want the header to begin with after "h" (for example, ">h5"- header begins on page five).

The "n" command is to indicate what number you want printed, beginning with the page you gave after "h". For

HEADERS/FOOTERS

example "h2/n1" would mean begin printing the header on the second page printed and start numbering with "page one". In this case, if you don't include "n1" you would get a page number "2".

Headers/Footers are terminated with ">X" (or "x"). In the examples shown here, we've left an empty line between the last command in the header/Footer and the ">X" terminator. The effect of this is to leave a line between the header and the page text below. You will get as many lines between header and text as you leave in this part of the header/Footer. It is important to terminate each header/Footer properly, or Lazy Writer will think the text below is still part of the header/Footer.

You will often want text, as well as a page number, printed at the top of each page. You will also want to use printer commands within the header to control the appearance.

EXAMPLES

The following are some examples of headers with text and printer commands.

```
>h2/n2
>title
page #
```

```
>X
```

This is just like the previous example, except that we've added a "title" command to center the page number on each page.

```
>h/n2/t62
page #
BUDGET REPORT
```

```
>X
```

Here we've added text to the basic header. The words "BUDGET REPORT" will be centered under the page number on each page.

```
>h/n2
#
ABOUT OUR EXHIBITORS
```

```
>X
```

The effect of this header is to print a page number (without the word "page") at the left side of each page, with the words "ABOUT OUR EXHIBITORS" below. The header begins on the first page and page numbering begins with "2".

HEADERS/FOOTERS

```
>h2/n6
>title/bold 4
page #
HISTORY OF VERNOR-SPRINGWELLS:
A COMMUNITY OF THE OLD INDUSTRIAL AGE
>bold off
```

>X

In the above header, we've added a "bold" command to make the page number and the text bold face. It's ok to use a long title like this one. There is no limit on how much you can put in a header, except the length of the page.

```
>Footer
>bold 3/d2/u/center70/indent 10

#
for all your art supply needs, call mad michael
the discounter for starving artists
remember our toll free number ** 1-800-222-3456 **
>bold off
>X
```

The above Footer will print at the bottom of every page of Mad Michael's catalogue. The text will be bold face, double-spaced, and all upper case.

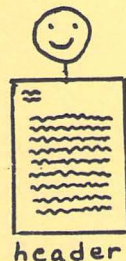
*** NOTE: The lines of type used by a Footer are not included in the page lines count, so a long Footer like this might mean reducing the number of lines per page from the main Printer Menu. Also note the position of the extra linefeed/carriage returns in the Footer above. In a Footer they should be at the top of the Footer to separate the Footer from text.

You can, if you wish, use both a header and a Footer in the same document. You might want the report name printed at the top and the page numbering printed at the bottom. Page numbering is defined in the header. You would do that like this:

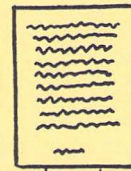
```
>header/number 23
>title
ARTIST LIST

>x
>Footer
>title
page #

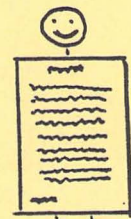
>X
```



header



footer



header+footer

If you want a header to stop printing at some point in your text, you can use the command ">header off". New headers and Footers can be created after form feeds. You may want the

HEADERS/FOOTERS

same Footer, but new key words printed ("Chapter Two" instead of "Chapter One", for example). Define a new Footer after the ">form feed", with the new words; you can continue the numbering by not defining a new "n" value.

```
>form feed
>h/t70
```

CHAPTER TWO

```
>X
```

OR

```
>formfeed/header/t70
```

CHAPTER TWO

```
>X
```

NOTE * : If you want to start on the page immediately after the form feed, the header must be right after the formfeed with no lines in between the header and the formfeed.

When printing most documents, we position the printer exactly where we want the text to start and print, but headers and Footers can be used to position text on the page more precisely. For example if your page length is 66 lines, and your title should start four lines from the top and you want a footer one line after the text. You could do it with this:

```
>h/title 70
```

```
The Sex Life of a Comupter
or
Interface and the Single Chip
```

```
>X
>Footer
```

```
Page #
>X
```

Now you set your printer up starting at the top of the paper. If you want four empty lines at the bottom of the page, subtract four from 66. Also subtract the lines the Footer will use, or two from 62 leaving 60. Sixty is the number to use for the menu item "number of text lines" to get the results you're after.

HEADERS/FOOTERS

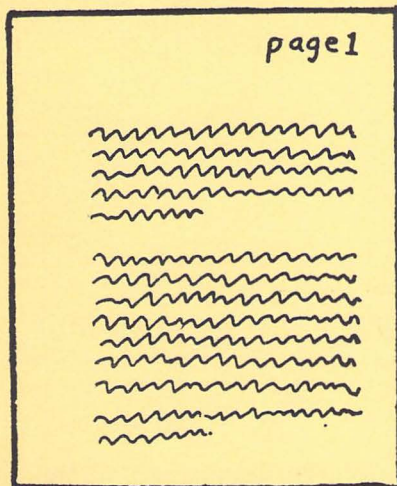
ODD-EVEN

Lazy Writer also has a provision for printing a header/footer on odd only or even only pages. Why would you want to do this? Look at the pages of this book. When you have printing on both sides of paper that will go in a binder, you need an offset on the left side on odd pages (starting with page one) and on the right side (beginning with page two) on even pages. You need this offset on the entire page, not just the text of the header/footer. The "a" command (absolute margin) will provide an offset on the left side of the page (needed on odd pages), but not on the right. You can get the offset on the right by use of regular margin commands. But the important point is that when you use the "a" command within a header/footer, this will offset the entire text on that page. On the even pages, where you want the page number to appear at the left side, give no margin instructions; on the odd pages, where you want the page number to appear on the right side, use a margin command to put it there.

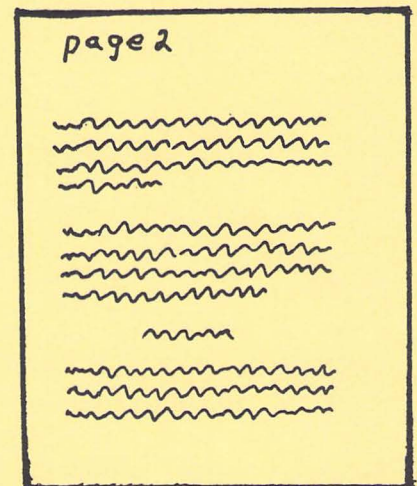
The following header will make odd-even page numbering. The illustration shows the result.

```
>header  
>Odd / absolute margin 10 / margin 70  
page #  
  
>Even / absolute margin 0/ margin 6  
page #  
  
>X
```

ODD PAGE



EVEN PAGE



SECTION NINE:
COMMUNICATIONS

RECEIVING.....	2
SENDING.....	2

COMMUNICATIONS

Communications are carried out from the printer program. With the printer menu displayed on the screen, press "SHIFT" "@" and see the prompt on the bottom of the screen. It will say "RS232 Communications". In order to communicate with other computers, you must have an RS232 board connected to a modem, which in turn is connected to a telephone. Computer communications go over regular phone lines, using the modem (modulator - demodulator), with the help of the RS232 board. The RS232 board translates the signals from the computer to the modem, which translates them into sound or into sound signals that can travel over phone lines.

Communications are not done entirely from software, but have hardware requirements too. Check your RS232 board and locate the switches on it. Consult your RS232 manual and set the switches in the proper positions. Make sure your modem is properly connected to your phone lines. There are a number of types of modems, so you'll need to consult your own manual for the proper hook-up.

Once you're ready to operate your equipment and have Lazy Writer set to communicate, call the phone number for another computer (usually with your modem turned off). The other computer should answer with a tone. Now turn on your modem and set the modem to "originate" and "full duplex". Your modem should respond to the other computer with a tone. To communicate with most big computers, you'll need a password to get any further. You may see a prompt on your screen (sent by the other computer) that says "sign in, please". For small computers, you'll be ready to send data without a sign-in.

You should understand a few things about modems if you're going to be calling up other computers. Modems can "answer" and "originate", but to talk to one another, they must each be set to a different mode. One must be "answer", the other "originate". You'll also see a switch for "full duplex" and "half duplex". "Full duplex" means the signals you're sending are going to the other computer, then coming back to you, like an echo. In "half duplex", your own modem is echoing back the signal from your keyboard, instead of the other computer. "Half duplex" is used for testing your equipment and with some computers (check your modem manual and find out the requirements of the other computer).

Once you're "on-line" with the other computer, you may find you need some control codes to operate the other computer from your keyboard. These are ASCII control codes from A to Z and the other computer may prompt you about these codes. (For example, "press control A to make the screen stop scrolling"). You must hit the keys for "control" as well as the letter key. With Lazy Writer, the "SHIFT" key and the

COMMUNICATIONS

"down arrow" are for this kind of control key. Press "SHIFT" then "down arrow", hold down both of these at the same time, then the letter key.

When you're on-line with another computer, you'll see numbers to the right of the words "RS232 Communications", with a cursor cycling through the numbers. These numbers are control codes being sent by the system you're communicating with. The block cursor show which one is currently being sent.

RECEIVING

. Now, if you want to put the data coming over your phone line into memory, press the "up arrow". You'll see a number on the bottom of the screen that's constantly increasing. This is telling you how many characters you're putting into memory. You can put this into an existing file by setting the cursor in your old file to the point where you want to add this new material. If the cursor is at the end of file, the new material will be added onto the end; if there is no document in file and you left the cursor at the top of the screen, you will have a new file. Press the up arrow again to stop the data going into memory. The only limitation on how much data you can receive into memory is the size of your memory.

SENDING

There are three ways to "send" material in your computer's memory to another computer. All are carried out from Lazy Writer Communications.

1. **UNFORMATTED DUMP** To do an unformatted dump, press "SHIFT", right arrow. Everything in memory will now go over the phone. This method does no handshaking; it's ok for sending to a dumb terminal (like Lazy Writer itself) which takes whatever comes over the phone.
2. **FORMATTED, WITH HANDSHAKING** Press the right arrow. This will get you the printer Menu back. Proceed as though you were printing to paper. Turn off the "stop at end of page" menu item. The handshake method is similar to EXT/ACK except it doesn't send a EXT character and will except any control code back except a carriage return or line feed. Some system send a bell character which it will except.
3. **FORMATTED, NO HANDSHAKING** Sign on with the new computer, then leave the Communications program (by pressing "SHIFT" , "@"), then print over the phone, as you would to paper, using your RS232 driver. Set the "n" menu item to zero.

COMMUNICATIONS

4. **FORMATTED, NO HANDSHAKING** Do a "Save Formatted" to disk from the printer menu before signing on. Load this file back into Lazy Writer and reverse case. Proceed as in method no. 1.

When you're through sending, you'll be back in Communications (blank screen), except for the third method of sending. You'll probably want to sign-off, then get back to Edit. Press "SHIFT" "@" to get back to the printer menu, then you can get back to Edit the normal way from there.

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PROGRAMMER'S NOTES

by David Welsh

Lazy Writer was written by a lazy writer for writers who find writing interesting or necessary but who hate typing and especially for those who hate retyping.

Lazy Writer started as a little word processor to help document other programs I had planned to write. The first 1000 bytes turned out well and mistakenly I thought I could knock out a nice little word processor in a few weeks. A few months later we had a pretty good word processor that just needed a little polishing here and there. About a year and a half after that, we had something that I thought we could go to market with. If I had to do it again, I would have waited a couple of more months. (It might have cut down on free updates.)

Someday, I'm going to write those other programs that Lazy Writer was going to help me document.

Living with Lazy Writer has been a little like getting a monkey for a pet and then finding the thing has grown up to be King Kong.

The main reason that Lazy Writer has grown in capability is that people are constantly confronting me with different kinds of text. In early 1979, my wife Theresa, who wrote this manual, got involved in organizing a neighborhood art fair and ended up as chairman of the event. This produced a pressing need for letters, flyers, forms, agendas, lists, news releases, radio/TV announcements and a 14 page booklet on the neighborhood. Lazy Writer was our only hope! Theresa has selected some of her art fair material to use as examples in this manual.

This manual itself was prepared using Lazy Writer, a TRS-80, and Qume Sprint 5 printer. At present, Theresa and I each have our own system and she wrote most of this manual on a TRS-80 that lacks a lower case mod and has only one disk drive. You might notice that we have hyphenated the "GETTING STARTED" section, but not the rest...so you can see the difference.

As I write, Lazy Writer has been on the market for about six months, and we've gotten lots of reaction - and help - from users. There have been eight revisions to the program...some more extensive than others...but all aimed at correcting problems and increasing utility. The version we have now is a major upgrade from the original. There will continue to be revisions to make the program more useful and helpful. Registered Owners are special people and we plan to

PROGRAMMER'S NOTES

keep them informed of what we are doing. Upgrades to the programs that are described in this manual will be provided at reasonable cost to cover our shipping and handling. Special printer programs that support specific printers with proportional spacing and bi-directional printing are in the works and those will cost something, but they will be worth it. There are also many extensions planned for special purpose applications. You will be seeing announcements of these in our newsletter. Extensions will also cost something, but we plan to keep them reasonable, and you only need buy the ones that extend Lazy Writer in the direction you want it to go.

For people who want to write their own extensions to Lazy Writer, we are going to make it easy. When I get time, we are going to compile a memory map of all pointers in Lazy Writer so you can use some of the core routines in your own programs which you can load through DIR/CMD. To get things rolling, the pointers to the Lazy Writer buffer are:

```
START OF BUFFER = 40A4H
END OF CURRENT TEXT= 40F9H
CURRENT POSITION= 40A2H
```

To load a program into the overlay region that EDIT/CMD occupies, have it ORGed above 64D0H and POP HL twice coming into the program. A RET will reload EDIT/CMD or LPNT/CMD as the case may be. If anybody comes up with anything good, we'd like to see it. We can't, and I repeat CAN NOT debug anyone else's code.

Each copy of Lazy Writer sold has its own serial number. You see your serial number on the initial screen, but it is also buried in the program. This is one of our attempts to cut down on software piracy. We plan to support our registered owners, but can't do this if the program is ripped off to the extent that we can't make any money. Updates and newsletters cost us money, but we are providing continuing service because we believe in our product and in our users. Your satisfaction with Lazy Writer is our best advertising. Don't hurt yourself by giving the program to your friends. You paid for it; let them buy their own copy.

There will be future updates of Lazy Writer to add enhancements and improvements. To send you an update, we must have your registration card. We will be informing you via our newsletter of any updates and the procedure for getting the update. There will be a small charge for shipping and handling. Our definition of an update is changes to the code of the main program which correct problems or extend or enhance what's there already. If there is a future Lazy Writer II, this would not be an update, but we will give a price break or trade in allowance to current Lazy Writer users.

PROGRAMMER'S NOTES

Lazy Writer has been out in the field long enough that we know it's fairly bug-free, but nothing as complex as this program is ever perfect. If you find what you regard as a bug, let us know about it. A good "bug report" should include the exact conditions under which the problem occurred. Bugs can be the result of hardware problems as well as faulty software. If you have a system that reboots all the time or issues constant "disk errors", Lazy Writer will not repair your computer. Some "bugs" are also the result of misunderstanding how the program works. We've tried to improve the explanations in this manual to reduce "user error", but even the manual can't help you if you don't read it. Theresa studied every letter we've gotten from users in rewriting the manual. If there are still areas of misunderstanding, let us know. We'll try to make it clearer in the next manual revision.

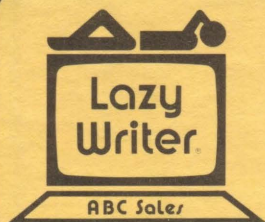
If you should encounter some problem in the editor, try doing a "top of text" cursor move. This resets most parameters and may cure your problem. Going out to DOS and reloading Lazy Writer resets all pointers except those to the text. So if you encounter a problem, try reloading Lazy Writer. If that fixes the problem, write us a letter and let us know what happened. Every version of Lazy Writer is tested by us and by others, but with over 200 commands that can be used in many combinations, there is no way to test everything after every change in the code.

A word about the multi-function command. This command is a powerful tool and some people will try all kinds of things with it and other people will never use it. For those who are adventurous, let me add a bit more information.

What the command keys do is to store key strokes in a buffer for future use. When you activate the x-key, the key strokes you stored are typed. What the program does when you hit a number key depends on what the program is doing at the time. The x-keys are powerful, but they can get you in trouble too. They must be planned with great care. Command keys can be written that will load and print out a whole sequence of actions including loading a file from disk, going to the printer program, setting printer menu items, printing the file, loading another file from disk, printing that file, loading a third file, etc. That's fun and may be useful, but if you want to stay in control, start small. Begin with x-key commands of just a few strokes. One I find useful is "i" for "insert", "down arrow", "right arrow". That combination will divide the text into paragraphs when used in Edit. Remember that when you use the "i" key in an x-key command, that the effect is the same as typing "i" from the keyboard. If you are in Edit, you will go into "insert" and the rest of the key strokes will have the effect that they would have in "insert" until the x-key types "ENTER". If the x-key terminates before

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NOTE: YOUR BEST PROTECTION AGAINST LOSS OF TEXT IS TO DO FREQUENT SAVES AND BACKUPS.



LAZY WRITER REFERENCE CARD

This reference card gives you a quick look at LAZY WRITER commands; a thorough understanding requires reading the manual.

NOTE: all CLEAR key commands work by pressing CLEAR first, then, with CLEAR depressed, press the other key.

TEXT ENTRY

EDITING FUNCTIONS AVAILABLE FROM TEXT ENTRY

CLEAR + :

↑ - scrolls up

;- display all underlining as broken lines, all capitalized letters as "#", and all line feeds as down arrows

c - changes the case of whatever letter the cursor is on

d - delete

e - deletes all text below cursor

h - displays "help" file

i - insert

l - load a file

p - go to Printer Menu

s - save a file

u - underlines

v - sets video width

any number - activates X-Key command stored on that number

x - executes last used X-key

BREAK - go to Directory extension

OTHER FUNCTIONS AVAILABLE FROM TEXT ENTRY

CLEAR + various keys - print non-standard characters not found on your keyboard (see chart in manual for details)

SHIFT + SPACE BAR - place a mandatory space

ENTER - ends paragraph (carriage return)

ENTER - moves cursor to end of text

↓ - overwrites with carriage return (ASCII 10)

↑ - puts you in Edit

→ - at end of text, moves cursor to next tab setting

→ - moves cursor a character at a time if not at the end of text

← - backspace through text

SHIFT + CLEAR - type in all capitals

EDITING COMMANDS

SCROLLING

↑ - enter Edit, scroll up, move cursor up

↓ - scroll down, move cursor down

a - prints next screen

q - adds line at bottom

Q - adds line at top

z - scrolls down one page

Z - scrolls up one page

SHIFT + ↑ - moves cursor to beginning of text

ENTER + ENTER (pressed twice) - moves cursor to end of text

CURSOR MOVES

← - moves cursor to the left

→ - moves cursor to the right

SHIFT + → or ← - speeds cursor movement

/ + any character - moves cursor forward to that character

? + any character - moves cursor backward to that character

space bar or w - moves cursor one word

. - moves cursor one sentence

p - moves cursor one paragraph

@ - moves cursor one video line

SHIFT + @ - moves cursor back one video line

SHIFT + space bar or w - moves cursor backward one word

SHIFT + . - moves cursor backward one sentence

SHIFT + P - moves cursor backward one paragraph

TABS

t - tabset prompt

→ and ← - move cursor to desired tabset position

t + t - sets tab at cursor position

ENTER - enters tabset positions into memory

t + CLEAR - clears tabs and sets paragraph indent to 6

ENTER + → - indent command for a new paragraph

BREAK - exits tabset prompt

OVERTYPING

NOTE: you cannot overwrite a carriage return

o - overtyping prompt

ALL ARROWS - move cursor

ENTER or BREAK - exit overtyping

INSERTING

i - simple insert

I - open insert

I or i + ↓ - inserting empty lines (adds a carriage return)

← - backspace

→ - move to next tab (works only after starting new line)

i + CLEAR + u - underlining blank spaces

SHIFT + → - inserts ASCII 9

↑ - inserts square bracket

BREAK - cancels insert

ENTER - completes insert

DELETING

d + :

d - deletes character cursor is on

SPACE BAR or w - deletes word

. - deletes sentence

p - deletes paragraph

/ + any character - deletes all material to this character

b - deletes marked block of text

(- removes block move markers

= - deletes all hyphens

u - deletes all contiguous underlining

U - global delete of underlining

- - deletes hyphen in paragraph containing cursor

↓ - deletes a video line of text

ENTER - completes above types of delete

BREAK - cancels delete (works only if pressed before you have pressed ENTER)

← - recovers delete one character at a time (if used before you have pressed ENTER)

CLEAR + e (or SHIFT + !) - deletes text at bottom of file

UNDERLINING

;- reveals capitals, line feeds, underlining

d + u - deletes all contiguous underlining

d + U - global delete of underlining

u - underlines (or makes bold face or double-wide) from cursor position

FIND AND REPLACE

F - define find word or phrase

f - go to next occurrence of find word

r - replace found word

R - replace all instances of found word

F + @ - case independent find

< - replace symbol (example, replace "dog" with "cat": dog<cat)

BLOCK MOVES

() - marking text for a block move

b + ENTER - move block

B + ENTER - copy block

d + (+ ENTER - delete block move markers beyond cursor position

b or B + word or symbol + ENTER - move or copy named block

CASE

- convert case, entire file
 c - change case
 C - autocap
 ; - reveals capitals, as well as underlining, and line feeds
 SHIFT + CLEAR - shift-lock for capitals (Text Entry, insert, overtyping)

VIDEO WIDTH

resets to 64 after disk operation

v - video width prompt
 number + ENTER - sets video width

HYPHENS

Set video width to the same width plus one you'll use to print text.
 = - with cursor in line below the short line, cursor moves to last place you can hyphenate
 - - inserts hyphen at cursor position
 d + = - deletes all soft hyphens
 d + - - deletes soft hyphens from paragraph containing cursor

X-KEYS

Multi-Function Command

Define X-Key

X - define X-Key command
 SHIFT + → - backspace through definition
 SHIFT + ← - move cursor through definition
 ANY SERIES OF KEYSTROKES - makes command
 SHIFT + ENTER - completes X-Key command

Store X-Key

% - save X-Key command on disk
 & - load X-Key command from disk

Execute X-Key

x or NUMBER KEY - execute X-key command
 SHIFT + BREAK - execute X-Keys in Text Entry
 BREAK - exit prompt "Which Command Key?"
 SHIFT + ↓ - exit prompt "Command Key Set-up?" (doesn't change command previously stored)

REMEMBER CURSOR

M - marks cursor position
 m - returns cursor to marked spot

HELP

h - list help file

REPEATING KEYS

almost all keys repeat when held down
 CLEAR + r - disables and enables repeating keys

FILE MANAGEMENT

* - go to DOS
 l - load from disk
 s - save to disk
 L - list from disk
 CLEAR + BREAK - go to Directory

BREAK KEY FUNCTIONS

BREAK - enter Edit, exit Edit. Also, abort the following functions: insert, delete, overtype, tab set, X-Key prompt "which command key?", load, and save. From the Directory extension, pressing BREAK returns you to your text.

PRINTER COMMANDS

MENU COMMANDS

Getting to Printer Menu - "CLEAR" and "P"

Main Menu

Press a letter key — Enter a number

LEFT MARGIN - press l
 RIGHT MARGIN - press r
 WIDTH OF TEXT - press w
 PAGE WIDTH - press p
 PAGE LINES (works with software formfeed) - press P
 NUMBER OF LINES - press n
 DOWN LINE FEEDS - press d
 COPIES - press c and enter the number of copies you want

Toggle Between "OFF" and "ON"

UPPER CASE - press u
 OUTPUT PRINTER COMMANDS - press o
 JUSTIFY TEXT - press j
 STOP AT PAGE END - press s
 SOFTWARE FORM FEED - press ↓

Auxiliary Menu

Press m from main menu to see Auxiliary Menu. The following functions work from either menu:

FORMATTED SAVE - press S
 MARGIN - press M
 EXIT TO DOS - *
 GO TO RS232 COMMUNICATIONS - press capital @

Not On Menu

CLEAR + ↓ - sends form feed to printer
 ↑ - sets software form feed to top of page

PRINTER COMMANDS IN TEXT

Margin Commands

NON-PRINTING COMMENTS can be used after →
 follow these commands with a number, in characters:

PAGE WIDTH - >p
 TEXT WIDTH - >w
 ABSOLUTE MARGIN - >a
 LEFT MARGIN - >l
 RIGHT MARGIN - >r
 MARGIN - >m
 CENTER A BLOCK OF TEXT - >c
 CENTER A TITLE OR INDIVIDUAL LINES OF TEXT - >t
 INDENT - >i
 REVERSE INDENT - >R
 do not follow with a number:
 TERMINATE A TITLE COMMAND - >X

Appearance of Text

PAGE LENGTH (used with software form feed) - >P
 DOWN LINE FEEDS - >d (followed by a number)
 DOUBLE-WIDE - >D (see manual)
 NUMBER OF LINES ON A PAGE - >N (followed by a number)
 FORM FEED - >f
 JUSTIFY - >j
 ESCAPE CODE - >e (usually followed by "/" and a decimal number)
 UPPER CASE - >u
 BOLD FACE - >b (followed by the number of stikes you want)
 PRODUCE GRAPHICS - >G (see manual)
 STOP THE PRINTER - >s
 SET UNDERFLOW FOR PAGINATION - >-
 CHAIN FILES TOGETHER FOR PRINTING - >* (followed by the name of the next file) You must end the file name with a carriage return and printing begins from cursor position. (see manual)
 EQUATE A KEYBOARD CHARACTER WITH ANOTHER ONE NOT ON THE KEYBOARD - >" (followed by the character from the keyboard)
 EMBEDDED COMMAND - command with asterisk (*) immediately before and after command
 CONTROL CODES - > followed by decimal number
 SEND A CHARACTER - >\$ followed by character you want sent
 NOTE: "off" may follow justify, Reverse indent, bold face, Double-wide, upper case, Graphics, header or Footer. Example: ">justify off"

Header/Footer Commands

You may write any text between ">h" or ">F" and the ">X" terminator
 INTRODUCE A HEADER - >h (may be followed by a number)
 INTRODUCE A FOOTER - >F (may be followed by a number)
 INITIALIZE PAGE NUMBERING - >n (followed by a number if you want page numbering to begin with a number other than one)
 PRINT ON ODD PAGES ONLY - >O
 PRINT ON EVEN PAGES ONLY - >E
 TERMINATE HEADER/FOOTER - >X