THE APPENDICES

APPENDIX A:
KEYBOARD CHARTS

The following charts represent functions which can be executed directly from the keyboard in various programs.

Chart 1: Editor Control Keys

These functions are available within the Editor by pressing the Control Key plus the normal keyboard key.

Chart 2: Editor Graph Shift

These characters, and the SHIFTED versions in the third chart, are available by pressing the GRPH SHIFT key at the same time as normal typing keys. At the moment, these can be displayed in other modules but only printed in Editor Documents.

Chart 3: Editor Shifted Graph Shift

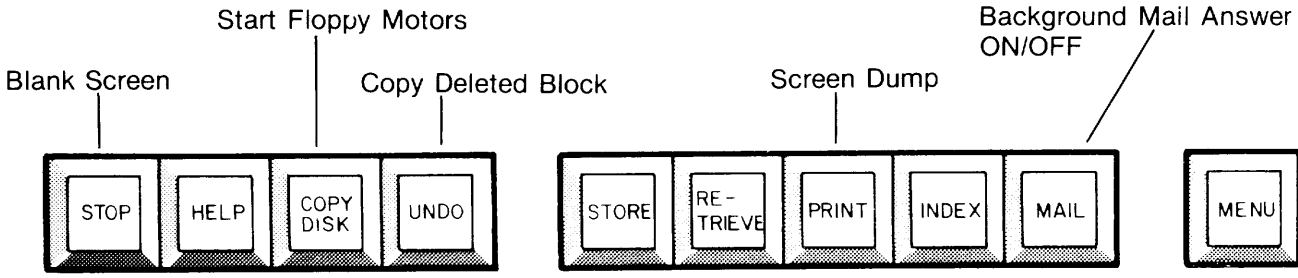
As Above.

Chart 4: Spreadsheet Control Key

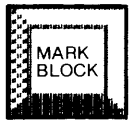
These functions are available by pressing the Control key plus the normal keyboard key.

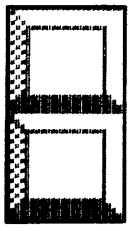
Chart 5: MAIL Person to Person

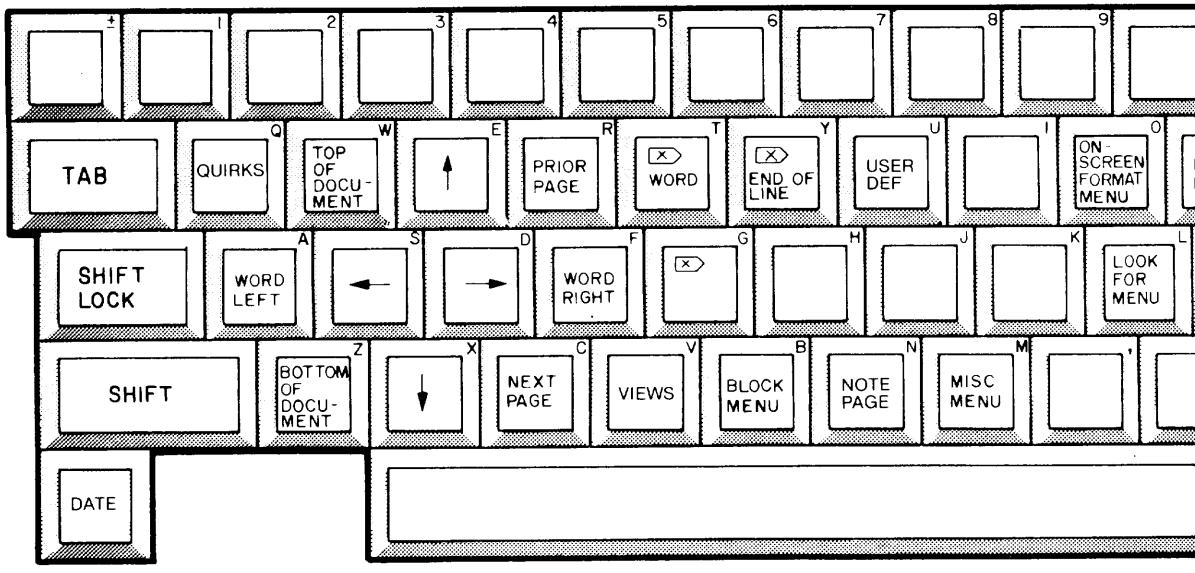
These functions are available in MAIL when connected <P>erson to Person via modem with another computer or electronic information service.



NOTE: CONTROL + SHIFT Margin Release Unmarks Block



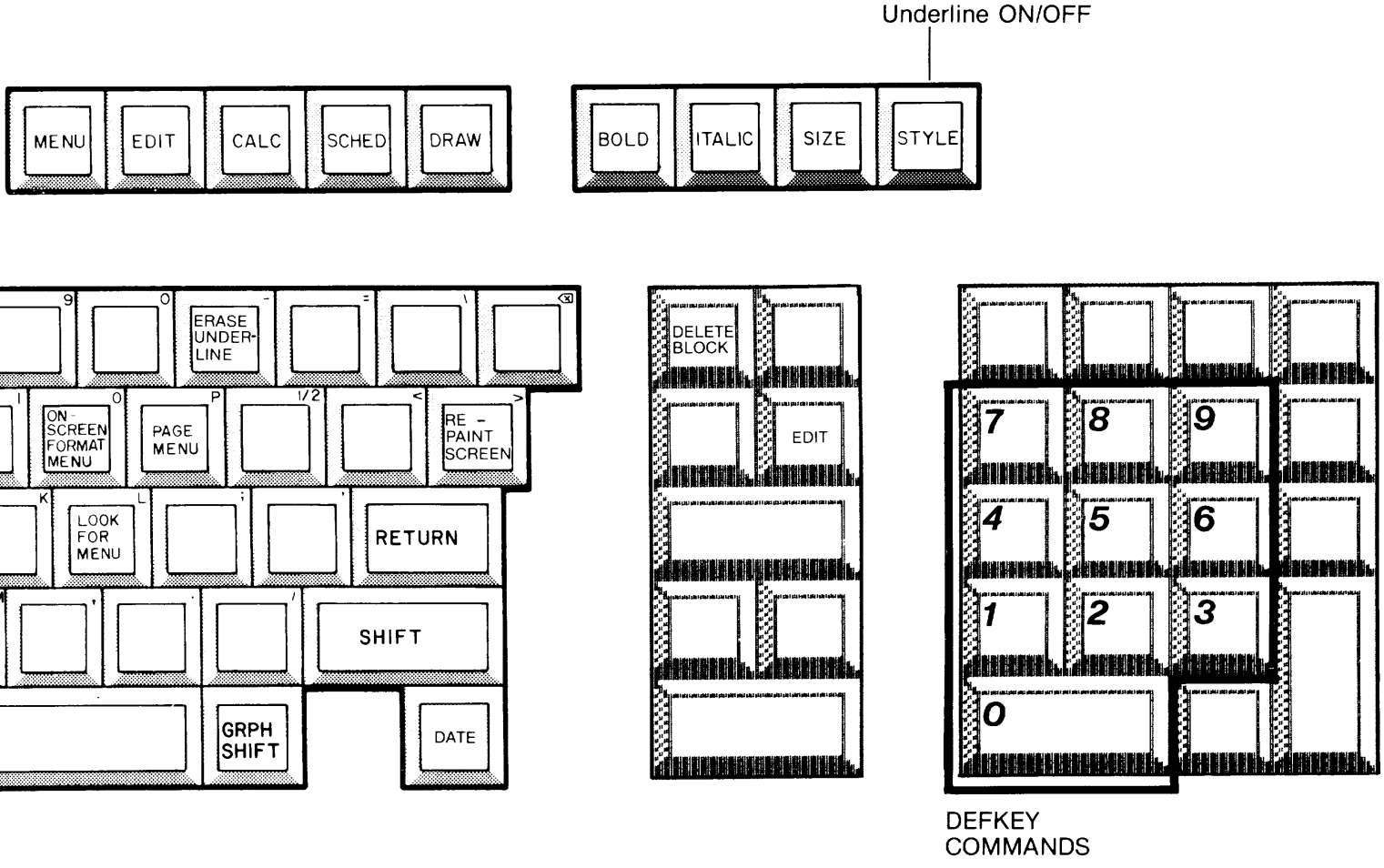




Non-Justifiable "Hard" Space

EDITOR Contr

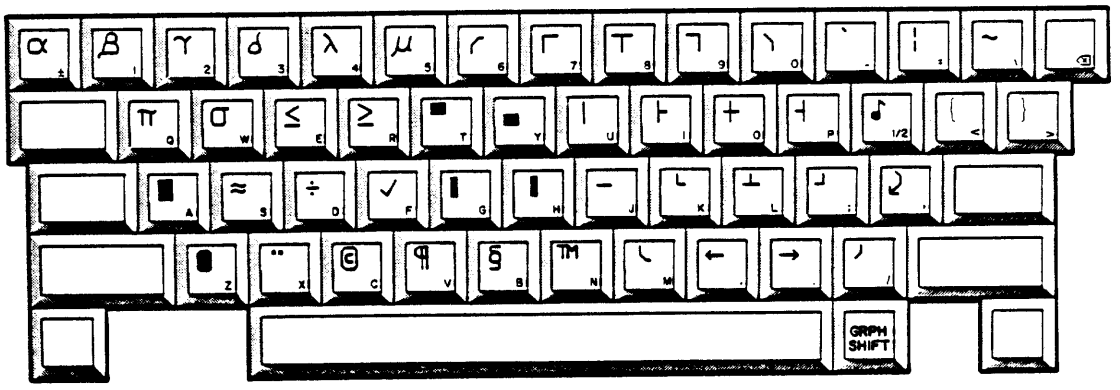
Mail Answer

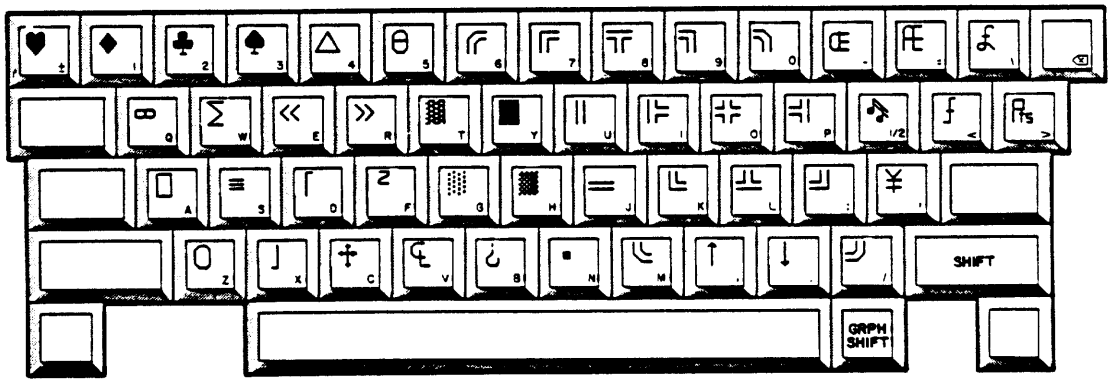


DEFKEY COMMANDS

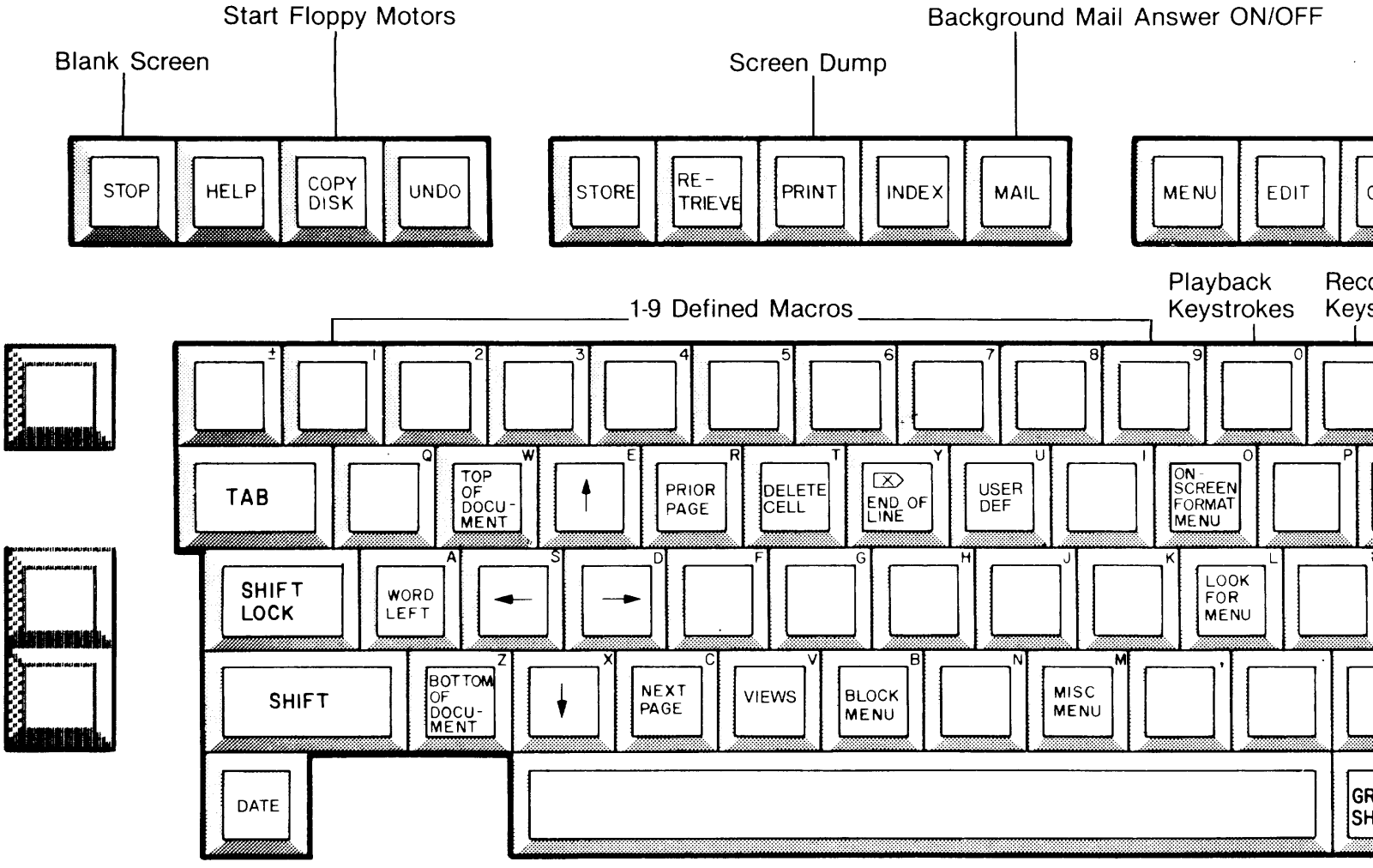
R Control Keyboard

GRPH SHIFT keyboard





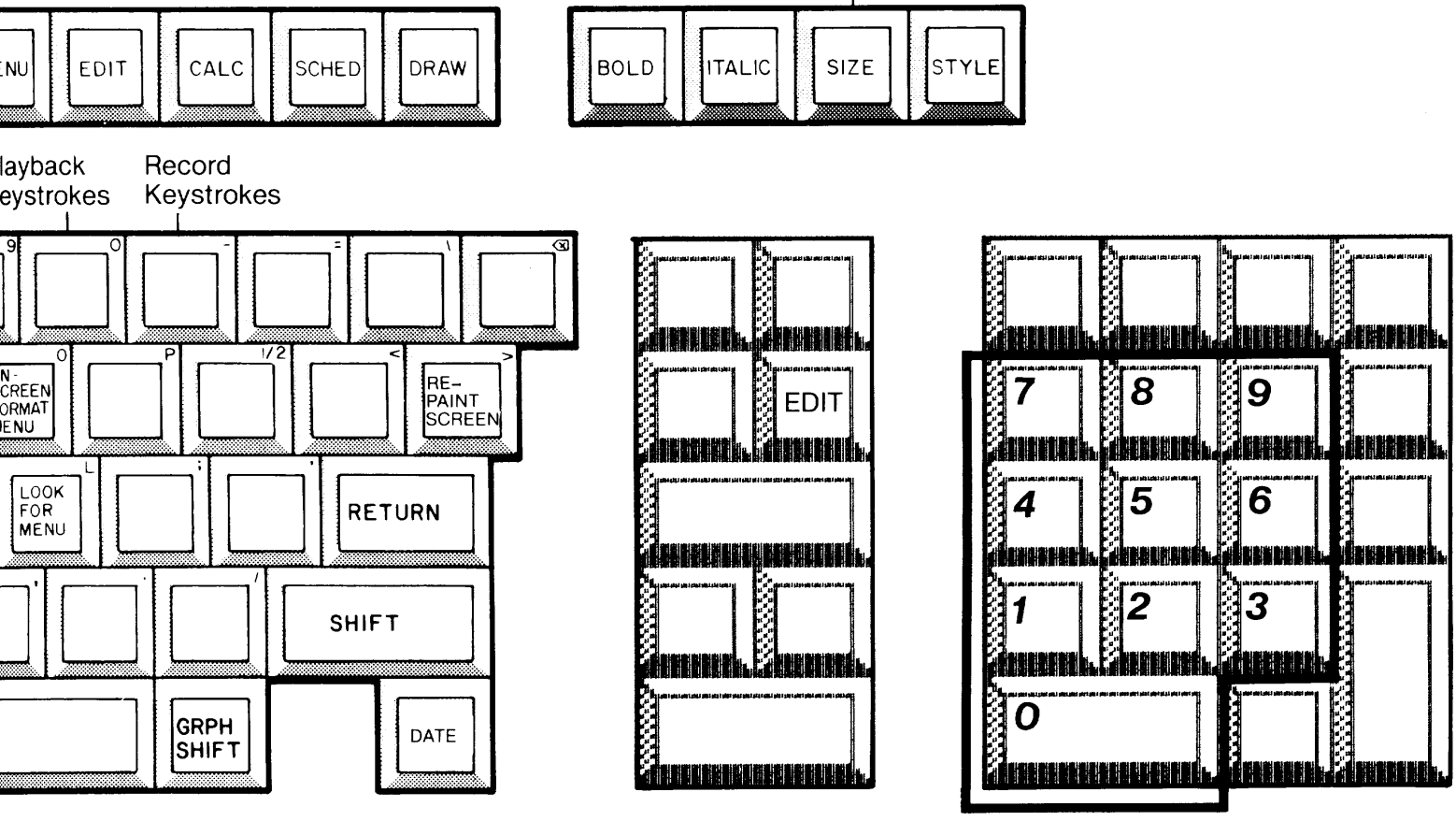
SHIFT GRPH SHIFT Keyboard



SPREADSHEET Cont

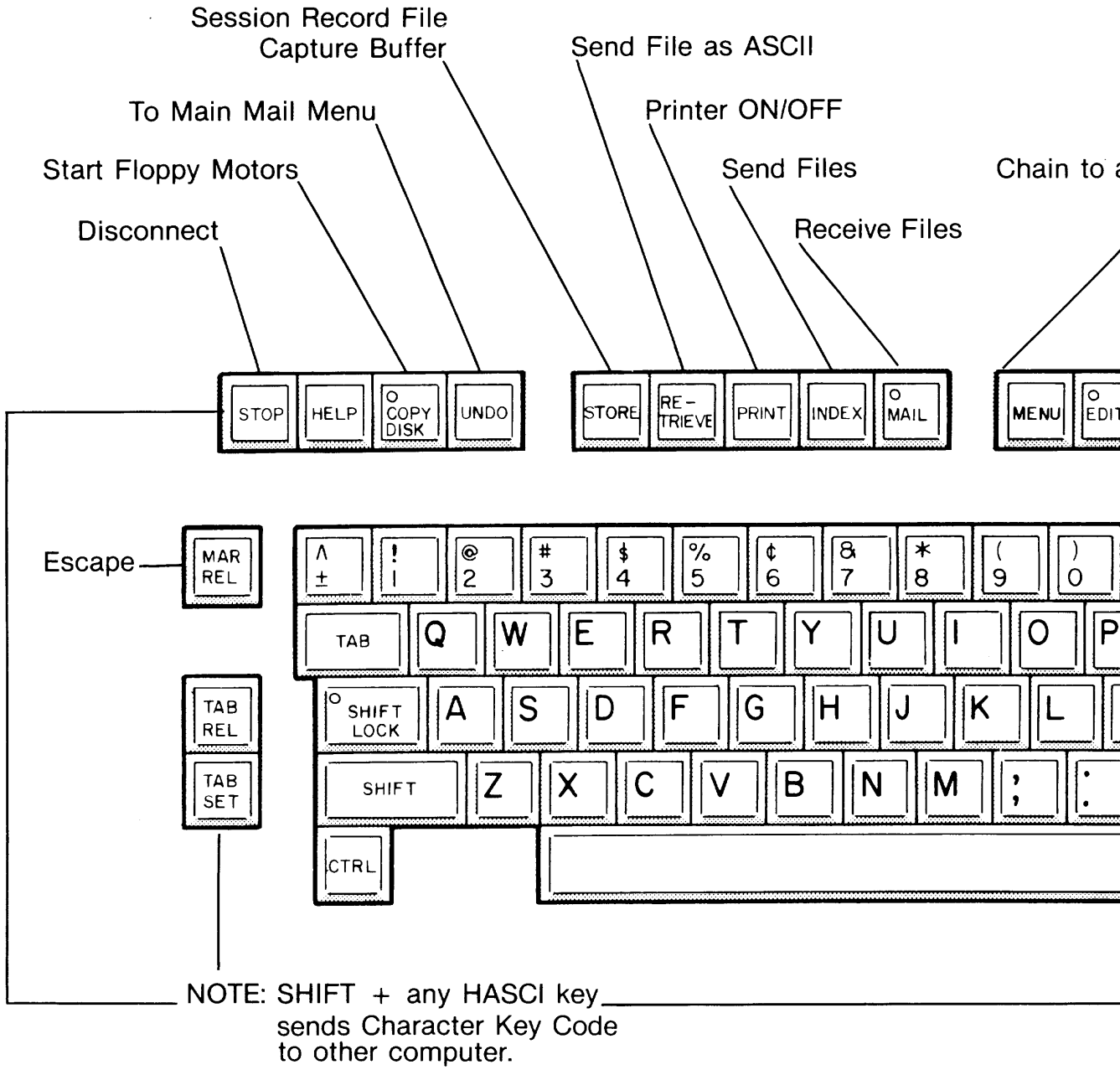
wer ON/OFF

80/128 Column Display



0-9 DEFKEY Commands

T Control Keyboard



MAIL (Person To P

CII

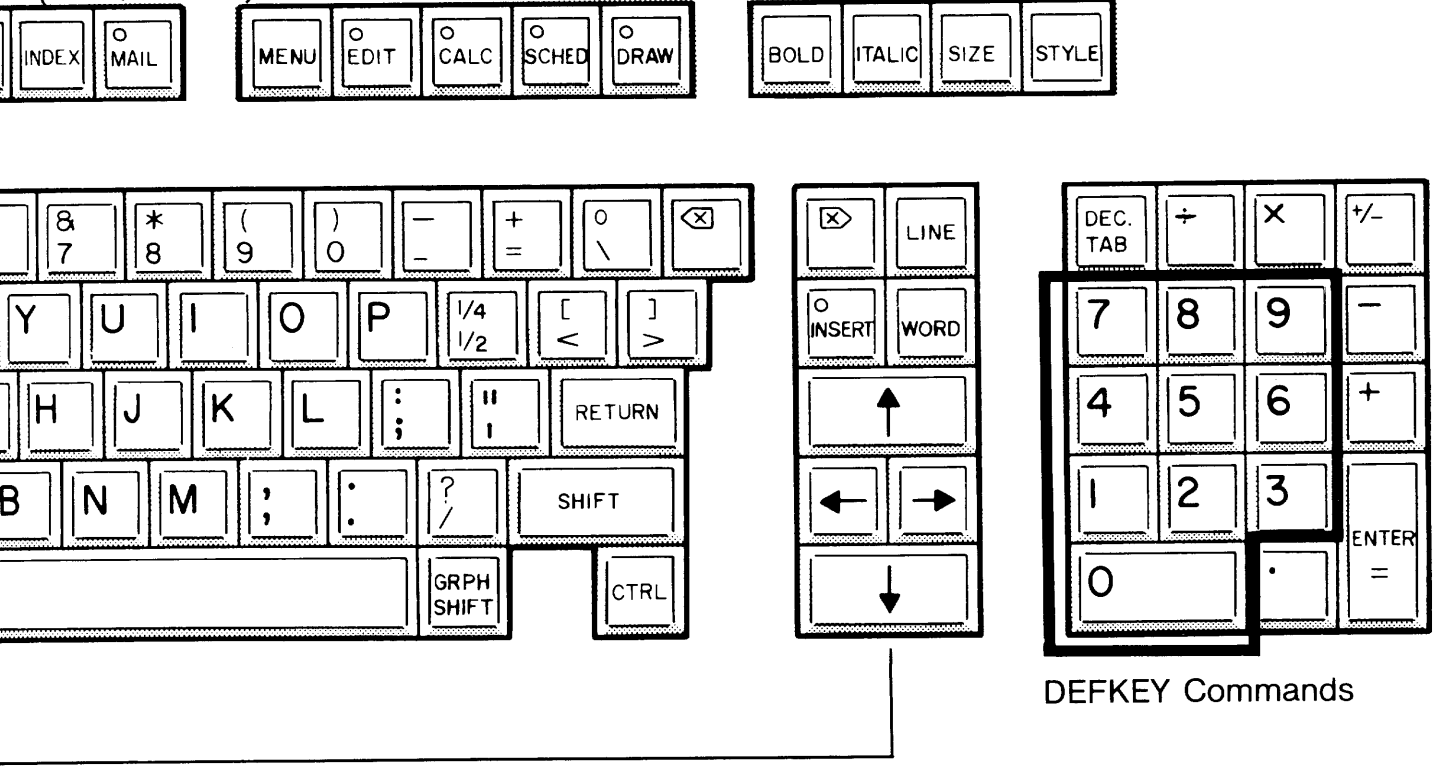
OFF

Files

Receive Files

Chain to any Module w/o Disconnecting

X-ON



DEFKEY Commands

Person To Person)Keyboard

APPENDIX B. USING A PRINTER

Certain basics apply to the setup and installation of all printers. If you understand these basics, your study of the printer manual can focus on a few specific items:

1. How to set it up
2. How to insert paper
3. How to find and set the option switches

HOW TO CHOOSE A PRINTER

A printer is used to make paper copies of documents that you produce on your computer.

The choice of which printer you buy should be guided by three basic questions:

1. What quality of printing do you need?
2. How fast is fast enough?
3. How much do you want to spend?

Epson printers offer *excellent* price/performance capabilities and can serve as the basis for your comparisons.

PRINT QUALITY

Our ship approached the glowing sphere at speeds only the travel-weary could appreciate: a dream, a star-like spec, and finally a blaze of light and blue against the void. The price forgotten; our new home lay before us.

Fig. 1 Letter-quality printer output
(Comrex CR II)

The system will copy the picture file into the document you made earlier and display it on the screen. The exact position of the picture is determined by the position of the cursor when you last left the editor.

Fig. 2 Near-letter-quality output
(Epson LQ-1500)

Our ship approached the glowing sphere at speeds only the travel-weary could appreciate: a dream, a star-like spec, and finally, a blaze of light and blue against the void. The price forgotten; our new home lay before us.

Fig. 3. Correspondence-quality output
(Epson FX-80)

Our ship approached the glowing sphere at speeds only the travel-weary could appreciate: a dream, a star-like spec, and finally, a blaze of light and blue against the void. The price forgotten; our new home lay before us.

Fig. 4 Draft-quality output
(Epson RX-80)

The above samples show the print quality you can expect from different types of printers. Some printers can generate more than one quality of output; for example, the Epson LQ-1500 can generate near letter-quality, correspondence-quality and draft-quality output. Similarly, the Epson FX-80 can generate correspondence quality and draft quality.

Don't be fooled into thinking that only a letter-quality printer can be used for "important" communications, manuscripts and the like. As more offices and individuals use near-letter-quality and correspondence-quality printers, their output becomes more and more "normal" for both business and personal uses. As long as you're not trying to fool someone into thinking the document was hand typed, dot matrix printers require careful consideration for *any* application.

Your computer dealer can be of great assistance in choosing a printer that fulfills your personal needs.

CONNECTING YOUR PRINTER

The printer interface on the back of the QX-10 is designed to hook up to any printer that has a Centronics parallel interface. This should pose no problem: 90 percent of all printers manufactured use this interface.

Attach one end to the computer and the other end to the printer. Both ends are the same, so you don't have to worry about getting it backward. Use a small Phillips-head screwdriver to connect the small grounding wire which is part of the cable. It won't hurt the printer or computer to leave it off, but it helps minimize radio interference.

CHOICE OF PAPER

It might SURPRISE you to find out that the paper itself can effect how well your printer performs. But think about it; your printer moves paper by mechanical means - pinch rollers or tractor pullers. Therefore, the paper undergoes mechanical push and pulls. Lightweight papers can stretch, shrink or tear when used. Also, as the paper absorbs moisture from the air, the paper changes shape. All of this can add up to difficulty in loading the paper and/or jamming of the paper during use.

You can minimize these problems by using *heavy* paper rather than *light*. Lightweight paper may be less expensive, but you can expect to suffer lost time while you fumble around because of mechanical problems.

For fan-fold paper, 20 lb. stock is best. Most stores carry 16 lb. or 18 lb. as standard but will get 20 lb. if you ask for it. Some fan-fold papers have what are called "micro-perferations". That is, the tear-offs have very fine holes, very closely spaced. These look less ragged at the edges.

If you're using single sheets of paper, you can use anything you like - even your office stationery. Again, you will find that heavier grades of paper are more satisfactory than thin stock. Lightweight onionskin papers might be impossible to use.

INSERTING THE PAPER

I couldn't begin to tell you how to load every printer on the market, but here's a tip: contrary to popular opinion (even among computer dealers), *most printers are easy to load*. To repeat myself, lousy paper quality is probably the main cause of difficulty in loading paper.

For example, I've had lots of people tell me that an Epson FX-80 is very difficult to load. This surprised the heck out of me because given paper of a decent quality, the paper just about *falls* in. *Most people work at it too hard!*

These few tips may help:

Tip 1: Use only paper of the highest quality.

Tip 2: Don't try to insert paper with torn, frayed or wrinkled edges.

Tip 3: If you're having trouble loading the paper, try doubling it over right at the perforation. You'll waste a sheet, but you will find it easier to load a double thickness.

Tip 4: Don't fight the machine. Virtually every printer on the market has an easy way of loading. Look for it!

HOW FAR TO INSERT THE PAPER

How far you insert the paper into a printer matters. It differs from printer to printer and for single sheets and fan-fold paper on the same printer. However, if you don't get it right you will have paper jam problems, and your top and bottom margins, as well as headers and footers will never end up where you expect them.

SINGLE SHEET FEED

When using single sheets of paper, the paper is *always* pulled through by mechanical pinch rollers. As a result, the paper must be inserted far enough to allow both the rollers to grab, and for the paper to clear mechanical obstructions. Usually, this means that the paper will have to be *inserted up to the tear bar.* Putting the paper in lower may cause it to tear or jam.

Experiment a bit. Insert the paper by hand, then roll it up with the knob on the platen. If it is too low, the paper will tend to catch or twist. When it is far enough, the paper will go through smoothly--untouched by human hands.

UNPRINTABLE LINES ON THE PAPER

Since the top of the paper is above the place where the printer prints, you *can not print* on the part of the paper between the top edge of the paper (where the tear-bar is located) and the print mechanism. Since this is different from printer to printer, the computer can't really know how

much paper is reserved: you have to tell it. You'll find this under *Printer Options* in the SETUP program of Valdocs.

When you declare a certain amount of space on each sheet to be "unprintable" there are two side effects that you might not realize. First, the "Top Margin" that you set in the Editor can *never* be less than the number of unprintable lines, and second, a "header" can never be printed in the "unprintable" area.

CONTINUOUS FORM PAPER

Continuous Form Paper (or fan-fold) makes it unnecessary to load each sheet individually. Also, since it's usually moved through the printer by a tractor mechanism which grabs the perforated holes along the edge, the printer can print *anywhere* on the sheet. The positioning of the paper by the "tractor" is far more accurate than by pinch rollers. This improves both text and graphics.

With continuous form paper you also have more latitude in where you position the top edge of the sheet.

If you want to be able to print anywhere on the paper (minimum Top Margin = ZERO, minimum Bottom Margin = ONE), set the number of unprintable lines to ZERO, and align the top edge of a sheet with the top of the print ribbon.

Since the top edge of the sheet is below the mechanicals of the system, you'll have to leave an extra sheet at the top of every document for the tractors to hold on to.

Some people object to that wasted sheet, and also prefer the convenience of beginning and ending every print session with the paper at the *tear bar*. After the last sheet of a document is printed you can zip it right off. That works, but just as with single sheets, you MUST tell the computer how many unprintable lines you have, and your freedom of choice in where to print is similarly restricted. You may have to forego headers.

This can be summarized as two rules:

Rule: If the top of the paper is not aligned with the top of the ribbon, you must tell the computer the number of unprintable lines in SETUP.

Rule: Neither headers nor text can be printed in the unprintable area on any page of a document.

PRINTING GRAPHICS CHARACTERS

The Valdocs word processor lets you insert graphics characters into your documents by pressing the GRPH SHIFT key (ALT key on the QX-16) at the same time as any of the typing keys. You may also use SHIFTED GRPH-SHIFT for even more character options. These graphic characters can also be entered in the Spreadsheet, but cannot yet be printed.

As an aid to use, the currently installed characters can be viewed at any time by pressing GRPH-SHIFT (Shifted or Unshifted) at the same time as HELP.

In order to print these characters, you ***must*** use either an Epson FX-80, FX-100, JX-80 or LQ-1500 (with type 1.8 ROM). Valdocs takes advantage of their ability to accept special user-defined character sets to print these graphics.

Using the MATRIX program, (supplied on your UTILITY disk) you can design your *own* character sets. These character sets are contained in three files on the Load disk: "HASCI.STL", "FX80.STL", and "LQ1500.STL". HASCI.STL is used by the screen, the other two are used by their respective printers.

These files are loaded into the computer and printer every time Valdocs is reloaded. Copies of the files are also located on the Utility Disk for convenience in designing your own fonts.

The FX80s and LQ1500s allow the user to choose between down-loadable fonts *or* a print buffer. When using these printers with Valdocs, you have no choice: You must set the switches to select down-loadable fonts. The print buffer option cannot be used *(Some rather bizarre "printer bugs" were reported by people who tried to override this. Because of hardware constraints, the two modes are mutually exclusive).*

APPLICATION NOTES ON GRAPHIC CHARACTERS

A new (Sept 85) option in SETUP allows the GRPH-SHIFT key to be used in one of two ways: as it is now (a toggle,) or as a SHIFT LOCK. When in Shift Lock, you don't have to hold down the GRPH-SHIFT key to use the fonts. Just press it once to LOCK it on, and then type. Press it again to toggle OFF.

This opens up a wide variety of applications. Foreign language character sets, special English fonts, Greek Alphabets and more could all be created and put to good use.

Screen and printer use different fonts because the devices are quite different physically. Therefore, because of these physical differences, a printout may not correspond *exactly* to what you see on the screen. For example, in the com-

pressed font, there are 128 characters across an 8 inch page. However, on the typical printer, there are 132 characters in the same space. Normal characters on the other hand correspond exactly. Simple math will confirm that 10 normal characters followed by 10 compressed characters will thus occupy a different length when printed than when displayed on-screen.

In general this effect can be ignored. However, if you are trying to align text in columns, and fonts of different sizes are mixed on the same line, noticeable placement errors can occur. Resolving this requires careful planning. For example, to make columns of different sized characters, set the size of the first column, enter your text, move out to the next column position, set a Tab, Set the size, enter you text, etc. etc. This insures that each vertical column will occupy the same *relative* width on the screen and the printer. Enter your text in REPLACE MODE and TAB from position to position to make sure the format stays consistent.

GRAPHIC SCREEN DUMPS

A screen dump is a printed version of *exactly* what you see on your video screen, dot for dot. To do a screen-dump, press CONTROL plus PRINT. (*Screen dumps were used extensively in preparing this manual).*

In Valdocs, screen dumps use the Epson standard, which is used by many non-Epson printers as well. Check your printer manual for specifics. Any printer with Epson FX-80 style bit-image printing should be able to handle a screen-dump. This capability is limited to dot-matrix printers.

JUSTIFIED PRINTING

Printing which is lined up on the right margin is said to be "justified". On-screen, Valdocs 2 actually inserts an equal number of graphic *dots* between words to achieve *micro-space-justification.* When printing on a fast printer like the LQ-1500 this technique costs you nothing in speed and produces remarkably attractive output. (This entire manual was printed using this technique.)

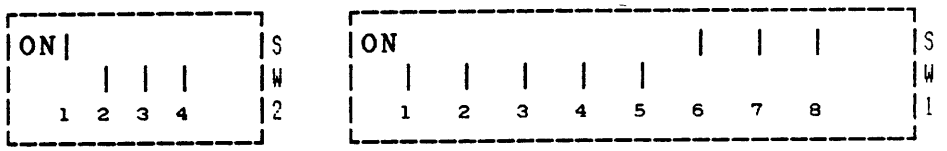
However, on simpler printers such as the FX, RX, LX etc. micro-spacing is *slow.* Every space between ever word is printed out as bit image graphics. This forces the printer to move its head back and forth - and seems to take forever.

Rather than throw out the baby with the bath water, we have now implemented a choice on the "Set Printing Default Values" menu which offers the choice of either "normal" or "micro-space justification.

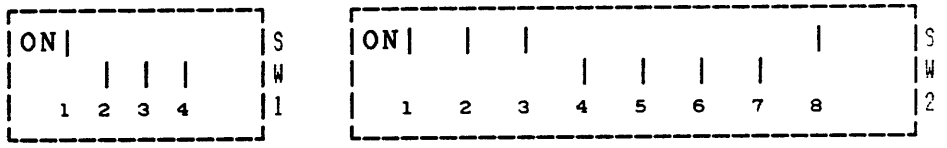
NOTE: On lines where different font sizes exist, only micro-spacing can be used. Therefore, when printing a justified line with mixed font sizes, that line will print micro-justified regardless of the setting.

SWITCH SETTINGS FOR FX-80, RX-80 OR LQ-1500 PRINTERS

FX-80 or LQ-1500 printers have switches located under the plastic covers which allow various printer options to be turned on and off. For the FX-80 and LQ-1500, the correct switch settings are as follows:



FX-80 Switch Settings
(switches under panel on right at rear of machine)



LQ-1500 Switch Settings
(switches on rear apron of parallel int. card)

SWITCH SETTING GUIDELINES FOR OTHER PRINTERS

It's not possible to cover every switch setting for every possible printer; however, some guidelines apply. Not all printers offer all of these settings. However, where these choices do exist, start with these settings.

Option Name	Set Switch to:
BUFFER	OFF (If you want to be able to pause printing with the STOP key or if interferes with downloaded graphic fonts.

	ON (Buffer may be used at will except as noted.)
SKIP OVER PERF	OFF
AUTO CR AFTER LF	OFF
LANGUAGE SETTING	AMERICAN
DEFAULT TYPESTYLES	10 character per horizontal inch 6 lines per vertical inch
FORM LENGTH	11"
PAPER OUT DETECTOR	OFF (otherwise single sheet printing can be VERY difficult!)
BUZZER/BELL	your choice
PRINT QUALITY	DRAFT mode
PRINTER SELECTED	Permenantly selected

PRINTER CHOICE AND THE SETUP PROGRAM

Every printer has its own *physical* and *electrical* characteristics that the computer doesn't know about. You have to tell the computer what's what with the SETUP program.

PRINTER TYPE: Choose a printer from the offered list. The "other" printer includes just about anything, but *only* text will be printed. Support for bold and underlining on most "other" printers will be provided in an update. Dot matrix printers from other manufacturers are often compatible with popular Epson models. If yours is one of those, one of the Epson printer types might be a better choice.

AUTO LF after CR: YES or NO

The most common answer here is NO. Linefeeds are usually generated elsewhere. However, if you printer seems to want to print your new novel on one line - reversing this setting to YES may cure it.

UNPRINTABLE LINES (0 to 7)

This was discussed in detail earlier in this chapter.

BUFFERED PRINTER No/Yes

This question is misinterpreted by nearly everyone. What it should have asked is this:

Do you want to limit the rate at which characters are sent to your printer so that when you press the STOP key, the printer won't just keep on going because the buffer is full?

THE ONLY EFFECT OF SAYING YES IS ACTIVATING THE *NEXT* QUESTION!

You don't have to tell Valdocs that your printer has a buffer so that you can use it - *you tell Valdocs your printer is buffered so that Valdocs can "turn it off" because you can't turn it off.*

Most people are better off answering NO, even if you have a buffer!

BUFFERED SPEED 0-254 Characters per second

The way we handle a buffer that can't be turned off is to send characters to it more slowly - so that the buffer never gets a *chance* to fill up. Thus, when you press STOP, the printer stops within a line or so.

If you're going to try this, start at about one half the rated speed of your printer. Then you'll need to do a bit of nip and tuck to get the best overall rate. In general, there is a noticable reduction of throughput when this function is used.

PAPER SUPPLY <C>ontinuous form <S>ingle Sheet

If you tell the system that the paper is continuous it tries to keep right on going. If you say single sheet, the system stops after every page and instructs you to put a new sheet in.

There is no reason to concern yourself with this choice from SETUP, because when you press PRINT, the *Printing Default Values* menu

allows you to change back and forth between continuous and single sheet without having to go into SETUP each time you change your paper supply.

CUT SHEET FEEDER <N>o <Y>es

A cut sheet feeder automatically inserts single sheets of paper into the printer one after the other as they are needed. According to our testing people, the cut sheet feeder selection now works with the Epson LQ-1500, The Comwriter II and Comwriter III.

We do not support the double bin feeder for the LQ-1500.

APPENDIX C:
CONVERTING VERSION 1 FILES

Many of the files that are generated or used by Valdocs+ are internally different from those of Version 1. Therefore, many documents and files must be *converted* before they can be used by Valdocs+.

The conversion process itself leaves the original file intact; therefore, you can maintain complete sets of Version 1 files as backups should you ever need them.

There is no direct means of converting Valdocs+ files and indexes *back* to Version 1. However, Valdocs+ Editor documents can be stored as ASCII, then retrieved into the Version 1 editor.

Because Version 1. and Valdocs+ files will be sitting side by side on your disk, you'll very possibly fill up your disks during an updating session. Valdocs+ checks for "disk full" conditions in order to prevent data loss. If too little space exists, you will be directed to delete or store the current image of the file, and then using COPYDISK, either *erase files* on the disk to make more room, or *copy* the files to another disk where more space exists.

However "disk full" situations are best handled by *planning*: its easier to move things around using COPYDISK and create the space needed for work *before starting* than to continually interrupt yourself.

The rule is *very* simple: when converting, allow yourself *plenty* of space.

INDEXER CONVERSION

Even copying your document files around as described above requires the use of the INDEXER, so it is wise to convert indexes first.

Valdocs+ index files are *much* more resistant to damage than were those of Version 1. I unhesitatingly recommend that all indexes be converted.

Indexer conversion is quite rapid, so the best technique is to gather up all the data disks which you would want to convert, and do them one after the other.

Indexer conversion is done by a program called IUTIL on the *Utility Disk.*

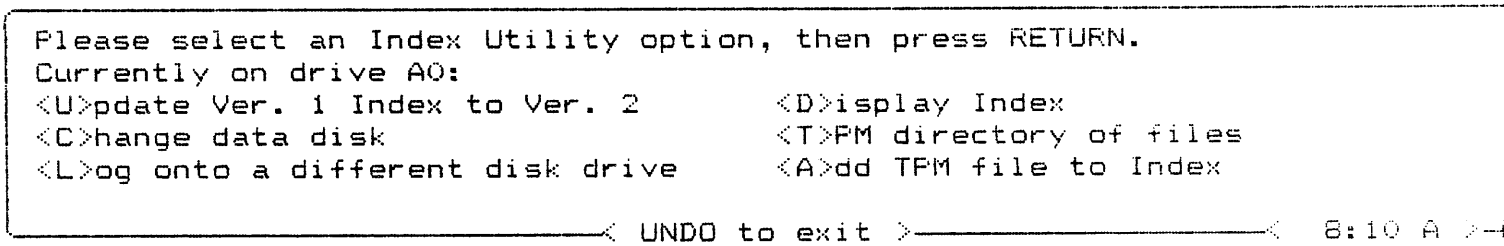
To perform the conversion:

1. Press **MENU**, and choose *<M>enu of Applications*.

2. Select **LEFT** drive, then when the system tells you, insert the ***Utility Disk*** in place of the ***Run Disk***.

3. A list of programs will appear. Select **IUTIL**. When the system asks if there are any additional "commands" needed, just press **RETURN**.

4. The **IUTIL** program will present the following menu:



5. Select *<C>hange Data Disk,* and, when the system says to do so, put the first disk you want to convert in the Right Drive.

6. Then choose *<U>pdate Ver. 1 Index to Ver. 2.* The updating will proceed quite rapidly.

7. Repeat steps 5 and 6 until all your disks have been converted.

If any disk does not contain Version 1 indexes, the IUTIL program will tell you so.

Tip: The Valdocs+ Indexer does not recognize Version 1 indexes. If you press INDEX on a disk where you are certain there are indexed files, and the system tells you that "There are no files indexed here at all", suspect that a version 1 index has not been converted.

EDITOR CONVERSION

EDITOR files are converted automatically whenever the Valdocs+ editor detects the presence of a Version 1 file. Therefore, it is not necessary to convert all your Version 1 files in one sitting!

Conversion is done by the VALUTIL program which is now found on the Run disk #1 right along with the editor. Therefore, no disk swapping will be necessary.

When the editor discovers a Version 1 file, it loads VALUTIL, which converts the file. Valutil then reloads the Editor, and the editor displays the file, allowing you to edit it.

The VALUTIL program has been *very substantially* improved since that of the Valdocs 2 release. Literally dozens of "impossible to convert" files have been run through it - we know of *none* that do not convert. Additionally, many of the "gotchas" and special cases which the earlier VALUTIL tripped over no longer represent obstacles. Margin Releases, underlining, margin settings, and other problems that made the conversion process risky business previously have now been handled. For example, without any adjustment, very little spurious wrapping of words will occur during conversion.

Two characteristics of Version 1 files cannot be converted:

a. Tabs

Tabs in Version 1 were *Regional* in nature. That is, If a tab was turned on at one point in a document, then you moved down the document and turned that Tab off, you would find that the Tab remained in effect between the ON and OFF points - but not above or below. In this, it acted much like Bold, Italics or other characteristics.

The Valdocs 2 and + editors treat Tabs *Globally*. That is, when a tab is turned on, it is on everywhere in the document. Likewise, when turned off - it is off for the entire document. Therefore, the Tabs in Version 1 simply have no equivalent in Valdocs+ - and thus cannot be converted.

We plan to re-introduce Regional Tabs in the Valdocs+ Editor during the next few months.

b. Linespacing

In Version 1, line spacing was done *strictly* on-screen. Meaning, there is nothing anywhere in Version 1 document to indicate that the linespacing is anything different than the default. Linespacing was achieved simply by adding extra carriage returns.

While Valdocs+ does not currently display linespacing on-screen (soon to return), linespacing is imbedded in the file, allowing different spacings at

different points in the document which do *not* get fouled up by later editing. Unfortunately, since there is no foolproof way for the conversion program to detect that linespacing even existed when converting, the formatting is lost in the recovery process.

Should you discover a file that will not correctly convert, *please* contact our Customer Services department for assistance. We would like to find out why, and fix it, just as much as you would like to have your files converted.

ASCII CONVERSION

While we're at it, I might mention ASCII conversion. In Valdocs 2, ASCII conversion was unreliable, slow, and caused enormous file growth. It was to be avoided!

The ASCII conversion routines of Valdocs+ have, like VALUTIL, been enormously improved. It is faster by a good margin, and generates not unreasonably large files. And it will retrieve and convert almost *anything*. In fact, just for laughs, try and retrieve a few *programs*. It will actually retrieve and convert them right up to the first end-of-file character.

Needless to say, we know of no ASCII text files that Valdocs+ will not convert, but there's a first time for everything. Once more, should *you* find a file that won't convert, please let us know the details.

FILE SIZES

Files converted either from ASCII or Valdocs grow substantially during the conversion process. First, a 6K header is added to each file - this is part of Valdocs' virtual file system and is irreducible.

Another source of file growth is imbedded characters. Turning a characteristic on and off again can add 20 bytes or so to the file.

However, a good deal of the excess space is a byproduct of the conversion process.

Files which have grown large during conversion (and this applies to files which may have grown during editing as well) can be shrunk in a number of ways.

1. Edit the file

If the file is edited after conversion, making a pass from

beginning to end, it will--in almost all cases--shrink dramatically during the edit. I had one 64K converted file shrink to 46K during the first edit and to 36 after the second.

2. Store the file as a block

Go to the beginning of the file, mark it as one end of the block, do Control Z to the other end of the file and mark it as a block. Then STORE the Block. the resultant file will be the original text, the header, the control characters and little else.

3. Store the file as a linear Valdocs document.

A linear Valdocs document is one which contains all the imbedded sequences of Valdocs+, but which has no header and is completely linear. The feature exists primarily to allow Valdocs files to be spell-checked, and returned to Valdocs with their sequences intact. However, they represent the minimum size attainable short of eliminating the control sequences.

The conversion process can be aborted by pressing the STOP key. The original file will be unharmed.

----------WARNING----------

To remind you of a basic Rule: Valdocs does all its work in temporary files, and leaves the originals untouched. Therefore, when a file is retrieved, and converted, it is the temporary file which is converted, not the original. If you discard the file before you STORE *it, it will be* GONE, *and the next time you retrieve it, you will have to convert it again.*

So after converting, before you do ANYTHING else, STORE IT.

If you store the converted copy to exactly the same name as the original file, the INDEXER discards the original.

(The Indexer always works this way when storing files.) Thus, if you want to keep *both* the original *and* the converted copy, store the converted copy to a different name. Changing *even a single letter of the name will cause the Indexer to keep both the new and the original files. So adding "Conv." to the original name is sufficient.*

MAIL (ADDRESSBOOK) CONVERSION

The addressbook of MAIL in Version 2 is vastly improved over Version 1. (In a test address book containing nearly 5000 names, access to any name requires only a few seconds!) Furthermore, the program code is very reliable. (The simple result of nearly two years of use in real-life Electronic Mail by Rising Star before release.)

The conversion is performed by the MBUILD program which is on the *Utility* disk. To convert:

1. With the addressbook you wish to convert in the right drive, Enter the MAIL program.

2. Choose *<M>iscellaneous*.

3. Choose *<A>ddress book conversion*.

4. You'll be instructed to place the system disk containing MBUILD (which is on the *Utility Disk*) in the left drive.

5. You'll be asked to *confirm* the conversion request.

6. After conversion, you'll be asked if you want to *discard* or *keep* the original Version 1 address book.

Conversion on floppies is not particularly fast--but the benefits are more than worth it!

(One word of caution on this: if you convert the same address book *twice*, MAIL will very happily add the same address cards *again*, giving you duplicate entries for every name. I know: I did it....)

APPENDIX D: MAIL USER OPTIONS

User-definable options allow you to choose how the MAIL program performs certain functions and allows you to tell the program about your specific setup. For example, MAIL needs to know both your *name*, and your *current area code:* there is no practical way that the program could figure it out for itself!

SETUP, a separate program, allows similar choices which effect the entire system.

ACCESS METHOD

1. From within the mail program, select *<M>iscellaneous*

2. Then select *<U>ser identification*

Certain information will be requested by the system, and choices of operating mode will be provided as follows:

OPTIONS

YOUR NAME	Identifies you to addressee when sending mail.
PHONE NUMBERS	Your numbers are sent along with files for future options.

CURRENT AREA CODE

The autodialer will not dial the first three digits on a card if they match these 3 digits. In the simplest setup, just put your area code here, and *remember to include* the area code on EVERY addresscard.

FORMAT FOR ALL CARDS: (AREA CODE) (NUMBER)

However, if you live in an area where you have to dial your area code in front of some numbers, which might be called "same area" rather than "local", you can be a bit more clever. Instead of your area code, define your own "local code", perhaps "111". Then put "111" in front of all "local" calls.

LOCAL:	(LOCAL CODE) (NUMBER)
ALL OTHERS:	(AREA CODE) (NUMBER)

If you need to dial a "1" in front of long distance, but NOT in front of "same area" calls, you'll have to include the 1 on the address card for the long distance numbers:

LONG DISTANCE: (AREA CODE) (1) (NUMBER)

In another variation, if you want to have a remote access number for access to MCI or sprint or some such attached to long distance calls, the above wouldn't work - the near area would be dialed that way too. The solution:

LOCAL: (LOCAL CODE) (NUMBER)
SAME AREA: (LOCAL CODE)(AREA CODE)(NUMBER)
LONG DISTANCE: (AREA CODE) (NUMBER)

The use of a local code allows you to use alternate dialing services for long distance as well. Put your primary dialing service for long distance on the long distance prefix line, and then for those that use the alternate, use:

ALTERNATE: (LOCAL CODE) (20 DIGITS)

LONG DISTANCE PREFIX/SUFFIX Computer will dial this in front of (or behind) any address card number which does not match the current area code. Useful for automatic credit card dialing, or dialing out through a Hotel Switchboard, etc. A ",", inserted before, after or within a number causes the system to pause for 1 Sec. before continuing. More than one "," may be used.

LOCAL DIALING Same as the above for calls within the current area code. This is generally most useful for getting out through switchboards that require a different prefix for local or long distance calls.

PULSE OR TONE DIALING Which does your system have?

INITIAL TOP WINDOW You can choose what to bring up as Mail's initial document window: Nothing (blank screen), Addressbook, User ID information, the Inbasket, or the Outbasket.

LOG ENTRIES SHOULD BE Do you want a *stack* with the most recent item at the top of the pile, or do you want a *list* with the most recent entries at the bottom? You choose.

AUTO LF WITH CR LF = line feed. CR = carriage return. These are just like the typewriter terms for moving the paper up a line and the carriage to the left margin. Do you want this to be automatic in answer mode for your modem? The answer will probably be yes, but if everything always seems to be double-spaced, try setting this to DISABLED.

ALTERNATE SEND MENU When you are connected *Person to Person* with another QX-10, an electronic Bulletin board, etc. and this choice is ENABLED, an *Alternate Send Menu,* allows you to place an item in the outbasket to send to *someone else,* later. This is a fairly unusual requirement, so the choice is made optional: why have the extra menu if you're never going to need it?

RETRY SENDING MESSAGE If you try to send a message and get a busy signal, or the call gets interrupted for some other reason, the computer will automatically redial the number up to 9 times. If you press the STOP key while dialing is going on, the retry will stop.

TRY SENDING EVERY You can set the system to retry every minute, every 10 hours or anything in between. You choose. If this is set to 00:00, the system won't retry at all.

APPENDIX E:
INSTALLING A RAMDISK

A ramdisk uses high-speed memory to simulate a disk drive for the system. Therefore, a ramdisk is *much* faster than *any* physical drive.

*S*emiDisk Systems Inc. makes two different add-on ramdisks for your QX-10. The two *SemiDisks*™ offer either 512K or 2 Megabytes of storage capacity. Due to hardware changes made by Epson, this accessory will not work with a QX-16.

A portion of the QX-16's internal memory is dedicated to use as a RAMDISK. In a floppy-only environment the system offers a disk of 110K. When a hard disk is in use, this automatically increases to 220K.

Valdocs makes heavy use of disks in order to allow the processing of editor and spreadsheet files which are larger than the available memory space. (Such files are called *virtual files.)* Additionally, Valdocs' modules make heavy use of *Overlay* files to permit the inclusion of features larger than would normally fit in the memory available.

But, as is reasonable to expect, there is a tradeoff: the files can be large (and secure on the disk), *but disk operations slow the system down.*

A great deal of effort has been expended in the design of Valdocs+ to minimize the effects of disk speed. However, if you've followed this so far, you might have guessed: using a ramdisk as the data and/or system disk for Valdocs provides *excellent* improvements on system speed.

However, there is no such thing as a free lunch: when using a ramdisk as data disk, if the power goes out..... bye bye data.

----------*WARNING!*----------

WHEN A RAMDISK IS USED AS THE DATA DISK, ALL PROTECTION AGAINST POWER FAILURE IS GONE. EVEN IF YOUR FILE IS "STORED", IF THE POWER FAILS OR THE MACHINE IS TURNED OFF, YOUR DATA IS GONE, FOREVER.

There are three precautions you can take, any of which will protect your valuable data, but all of which are recommended:

1. Backup your files *often* from "M" Drive over to a normal data disk.

2. Get an *Uninterruptable Power Source* (UPS) for your QX-10. A UPS continues to provide 110V AC to your QX-10, even if the power at the AC wall socket fails completely. Anyone doing professional work on *any* computer, even if not using a RAMDISK, is advised to procure a UPS. They are not cheap, but then, good insurance rarely is.

3. Get the *Battery Backup* option for your SemiDisk. This is like a small uninterruptable power source, dedicated solely to your RAMDISK.

USING VALDOCS WITH A RAMDISK

If a ramdisk is installed in the QX-10's option slots, TPM will *automatically* recognize it as M DRIVE. The Ramdisk in the QX-16 is also accessed as M Drive.

If power is not turned off between sessions, the data in the ramdisk remains intact even if the system is RESET. (Remember, if the power *is* turned off, the ramdisk data is gone unless you have a battery backup.)

There are three primary ways of using the ramdisk in your system. A discussion of each follows.

AUTO-LOAD OF OVERLAY FILES

In the *System Characteristics* section of the SETUP program (see Appendix I) you are given the option of having the overlay files for the Indexer, Editor and Spreadsheet placed on and used from the Memory Disk (Ramdisk), or the System Disk.

These can be turned on or off individually. The total space occupied by the *current* Indexer, Editor and Spreadsheet overlays is 160K. Be assured that this *will* grow as more and more features are added. Since available Ramdisk space varies, the choice of *which* of these, *if any* is used, is left up to you. For example, on the QX-16's 110K Ramdisk, you are already limited to loading two out of the three.

The program that loads overlays automatically checks for the existence of a Ramdisk and uses it if possible. It also keeps track of space on the Ramdisk: it loads as many of the overlays as it can until all are loaded or it runs out of space, whichever occurs first.

The choice of which overlay file to turn on first is easy for most people. The Indexer is used *everywhere* in the

system. It not only does the storing and retrieving of files, it includes the *Menu Handler, Print Formatter, File View Functions, ASCII Store Converters,* and quite a lot more. It is a reasonable first choice.

The second choice should be dictated by your personal needs. If your primary use is the editor, (which is true for 65% of you), then the Editor is a natural. The reverse would be true for people who use the Spreadsheet more often.

Using the Ramdisk as Data Disk

The second choice available to you is to simply Select Drive "M" as your Data Drive in the System Characteristics section of SETUP..

Valdocs virtual files for the Editor and Spreadsheet work *much* better in a Ramdisk. In fact, the Spreadsheet was *designed* for use with a Ramdisk. The improvements in moving and deleting Rows and columns is dramatic to say the least. The improvement in Recalc time is more variable, ranging from modest to spectacular.

One large spreadsheet of mine had nearly 2000 cells - but only about 30 of those were formulas. Recalc time on floppy was over 6 minutes. On ramdisk this dropped to 32 seconds! However, I also have a benchmark program which consists of 525 cells, each of which references only the cell immediately prior. Thus, I/O was not a factor in recalculation speed. Ramdisk based operation was only 5% faster than on a hard disk. Results with typical spreadsheets will lie somewhere between these two extremes.

Overall, once you've used a ramdisk for your Editor and Spreadsheet workfiles, you will *not* want to go back to anything else.

Tip: When using the editor on a Ramdisk, Go into the Control Q menu's <C>onfigure Editor option and set the delay to 1 second. Ramdisks are so fast that you will probably never see any effect of the disk activity. This permits the Editor's background file maintenance routines, which cause too much disk activity on slower storage devices, to do their stuff.

To repeat the earlier warning: when you're data files are on a ramdisk if the power goes out, your data goes *poof.* The rule that you MUST apply to any work done using a volatile memory system (Like a mist; capable of being blown away....) is this:

Backup your work early and often

There are two ways of doing this.

The first technique is perhaps the most straightforward, but also the most time-consuming. If a backup procedure is hard to do - you are *less likely to do it.*

1. Store the file in the index
2. Goto Copydisk
3. Do an Indexed Copy from M drive to whatever physical drive you'd like to store the file on.

This technique has the advantage of working for *every* module of Valdocs, and your files are always indexed.

The second way is to use the Non-Indexed file Store mechanism available in many of Valdocs' modules. (The most notable exception is the Spreadsheet - coming soon.)

In the editor, the procedure for using this backup technique is as follows:

1. Do Control Q.

2. Store as a non-indexed file.

3. You have options here. For most uses, the most appropriate would be normal VALDOCS. However, Linear Valdocs files take up less space on the backup disk - but take more time to store.

4. Enter a filename to STORE as. There are several workable approaches to choosing a name:

   a. Always store it to the same name, so that you always know what your "backup" file on the physical drive is called. *This also allows you create a defkey macro that will Store the file and then automatically re-retrieve it with a single keystroke!* (I make two such definitions so that I can alternate between them - that way I have both the current *and* the prior backups.)

   b. Store it to a different name each time. This way you keep a string of revisions which you can later cull through.

5. At some later point, as "housekeeping", log into the physical drive where you stored your backup files. Retrieve any that you want to keep via Control Q, and then press the **STORE** key to place them in your Index.

Any of these data backup techniques will work, but only if you DO IT.

The third method of using the Ramdisk is to combine the first two. Let the system place the overlay files on the ramdisk, *and* use the disk as your data drive.

Given the 160K occupied by the currently used Overlay files, even the 512K semidisk allows you 352K for data - nearly as much as a full floppy!

If you opt for the 2 megabyte Ramdisk, you will experience a degree of elbow room *and* speed that is quite addictive.

(Note: We are currently experimenting with using 2 Meg. ramdisks as both system and data drives. The information will be disseminated when we iron out the details.)

USING MORE THAN ONE SEMIDISK

Up to 4 SemiDisks can be placed in your QX-10 at one time. This would, in theory give a current capacity as high as *8 megabytes*.

The cost would be quite high, and the practicality perhaps not too realistic, but if you wanted to work on *really* large spreadsheets.....

(Remember that 4 out of your 5 disk slots would be occupied, and power consumption might be high.)

If you *do* plan to use more than one *SemiDisk* at the same time, there are some *addressing jumpers* in the upper right hand area of the board that must be set. These allow multiple cards to function together seamlessly as one disk.

There are a total of 4 jumpers: On a 512K Ramdisk, only the 2 on the right have any immediate effect. On the 2 Megabyte cards, the right pins are always off, and the sequential addressing is controlled by the jumpers on the left.

Number of Semidisks	Jumpers
First 512K Ramdisk	▮ ▮ ▮ ▮
Second 512K Ramdisk	▮ ▮ ▮ :
Third 512K Ramdisk	▮ ▮ : ▮

Fourth 512K Ramdisk	▮ ▮ : :
First 2 Meg Ramdisk	▮ ▮ : :
Second 2 Meg Ramdisk	▮ : : :
Third 2 Meg Ramdisk	: ▮ : :
Fourth 2 Meg Ramdisk	: : : :

Check the *Semidisk Systems* manuals for further details on the setup and operation of this marvelous accessory.

APPENDIX F:
INSTALLING A HARD DISK

The added storage capacity of a hard disk tremendously expands the power and capability of a computer. Once you've used one, you'll wonder how you got along without it. No more swapping system disks, no searching for that program you had *somewhere*, able to handle large address books with a single access, huge data capacity, etc. etc. etc. (And once you get several hundred document files on a hard disk, you'll wonder how *anyone* could survive without the Valdocs Indexer!)

1. Install the hard disk as described in the instructions that accompany it. Usually, there will be an interface card that plugs into one of the QX-10's option slots.

2. Using the procedures as described in the hard disk manual, you will first have to *format* the hard disk. (This isn't necessary if your hard disk was formatted by your dealer or if you've been using a hard disk with Version 1 of Valdocs.)

Usually when first formatting a hard disk, the format program lets you divide the disk up into two or more drives with different amounts of space on each. If your hard disk allows this, you might consider allocating 3 MB to the first drive, which will be your System Drive, and the remainder to the second drive which will be the Data Drive. This configuration allows *plenty* of space for all of Valdocs, all its utilities, BASIC, dictionaries, other applications, and an addressbook containing hundreds and hundreds of names. At the same time, it allows proportionatly more space for your document files.

However, if you are a programmer and have a lot of programming tools, or if you like to collect files from user groups or Electronic Bulletin Boards, you'd probably want to allow more space on the first drive.

The point is, give this some thought: the way you allocate your space now is rather difficult (or impossible) to change later.

3. If you plan to use *MSDOS*™ and/or Epson's *CP/M-B*™, you might also want to *partition* your hard disk. Partitioning allows each operating system to use only a certain portion of the hard disk. This way, MSDOS' files won't write over the top of Valdocs' files, which won't write over the top of CP/M's files, etc. etc. Both CP/M and MSDOS have separate utility programs available from Epson which perform the partitioning.

As before, you will have to decide how much space you want to allocate to each operating system *before* you partition it.

---------- *Note* ----------

IT'S NOT NECESSARY TO PUT AN OPERATING SYSTEM ON THE HARD DISK WHEN USING VALDOCS+

In earlier versions of Valdocs, it was necessary to have the *same* operating system on both the Valdocs *System Floppy* disk and the hard disk. This is no longer true. Valdocs+ gets the operating system off of the *Load Disk* when starting up and then does not look for the operating system again until the system is either turned off and on, or the reset button is pressed.

Therefore, if your Version 1 operating system is already on the hard disk, *there's no reason to change it.* This gives the advantage that you can go back and forth from using Version 1 to Valdocs+ software on the same hard disk should the need arise.

---

4. After the disk is formatted, turn the hard disk OFF.

5. Load Valdocs from floppy disks.

6. Turn the hard disk ON.

7. Press COPY DISK.

8. Select *<F>ile Copy, Erase, Rename* on the copydisk menu.

9. State "A" or Left as the drive to look at, then Select *<M>ore than one file.*

10. Press the ***RETRIEVE*** key (which selects *all* the files on the disk). Then Press the STORE key.

11. For the name of the destination drive, enter the letter "C", then press return.

12. Select *<C>opy over it* (this ensures that every file on the floppy is actually copied over to the hard disk automatically).

The system now copies all the files from the system disk which was in your left drive. The copy procedure takes several minutes.

13. When the copying is complete, you are returned to the top menu of *<F>ile Copy, Erase, Rename.*

14. Choose *<L>ook at another disk.*

15. Enter the letter "A" as the source drive.

16. Insert your *Utility Disk* in the left drive and then press RETURN.

17. Repeat 3-12 above for this disk.

18. Repeat 13 to 17 for the *Load Disk.*

19. Repeat 13 to 17 for your other Run disk, the Help disk, and copy any other files you think you might want. If you have an address book it is particularly handy to have it on the System Drive of a Hard Disk.

All of your Valdocs systems files are now on the hard disk.

20. Press *RESET.*

21. Make sure your *Load Disk* is in the left drive.

Valdocs will now load off of the hard disk.

22. Using COPYDISK's *Indexed Copy* choice, copy your document files on floppy from the *right* drive, onto Drive "B". You may copy as few or as many of your files as you like.

USING MAIL ON A HARD DISK

If you didn't copy an addressbook over to the hard disk in the preceeding steps, the first time you press MAIL when using Valdocs on the hard disk, it will NOT find an addressbook. (Even if you have a Version 1 addressbook on your hard disk, Valdocs+ MAIL uses different names for the files, to avoid confusion). Therefore, Mail will ask you (as usual) if you want to put the addressbook on the SYSTEM DISK, or the DATA DISK.

In general, you're better off with your addressbook on the SYSTEM DISK. Then, *no matter what data disk you log into, even a RAMDISK, the addressbook will be available to MAIL.* This is *very* handy. And the Addressbook in Valdocs+ allows you to *tag* cards so that one book can be split for your christmas cards, business contacts, etc.

Some people keep their addressbook on data disks because they want to maintain several separate lists. However, such applications are now much better handled by CARDFILE.

DRIVE NAMES ON THE HARD DISK

The first two drives of the hard disk will now have the drive names A and B.

The floppies will have the names C (left) and D (right).

Larger capacity hard disks will have more drives in them. Hard disk drives receive their letter names *before* the floppies. For example, if the hard disk has four units, these would be known as A, B, C and D. The floppies would then be E and F.

See Appendix G: for an explanation of disk drive naming conventions.

POWERING UP WITH A HARD DISK

When starting up the system follow this sequence:

1. Put the *Load Disk* in the left drive.
2. Turn the hard disk ON.
3. Turn any other peripherals (printer, modem, etc.) on.
4. Turn the QX-10 ON.

The system will then load from the hard disk.

POWERING DOWN WITH A HARD DISK

1. Turn the hard disk off first.
2. Turn off the QX-10.
3. Turn off the printer and any other peripherals.

It is often convenient to plug everything into a "power strip" so that everything can be turned on and off with a single switch. This is a safe way to handle the system, and can prevent annoying problems which result from forgetting to turn everything on at the beginning of a session. For example, your printer (FX80 or LQ1500) must be on when Valdocs is booted in order to load the graphic fonts. Similarly, an external modem must be on when Mail is loaded in order for it to be "initialized". (An option on Mail's Miscellaneous menu allows you to initialize the modem, but you may not discover the problem until your modem won't place a call!)

Rule: The Hard Disk goes ON first and OFF first.