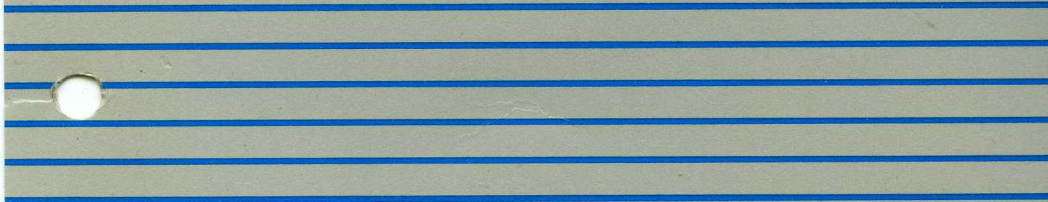


**KAYPRO**

**KAYLINK**

USERS' MANUAL



USERS' MANUAL  
FOR

**KAYLINK**

THE FSUCC HASP STATION EMULATOR (HASTE™)  
VERSION 1.3

REVISION F

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## **Important Notice**

The program KAYLINK is a version of the HASTE™ HASP Station Emulator. The two versions do not differ in any functional respect and are considered the same program for purposes of copyright. KAYLINK differs from HASTE™ only in cosmetic ways; the word HASTE has been changed to the word KAYLINK, for example. Similarly, this manual does not differ from the HASTE™ manual in any functional respect.

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## 1.0 Overview of KAYLINK

A **protocol** is simply a set of specifications about the ways a computer can communicate with another computer. One such protocol called HASP is common on work stations which communicate with IBM equipment.

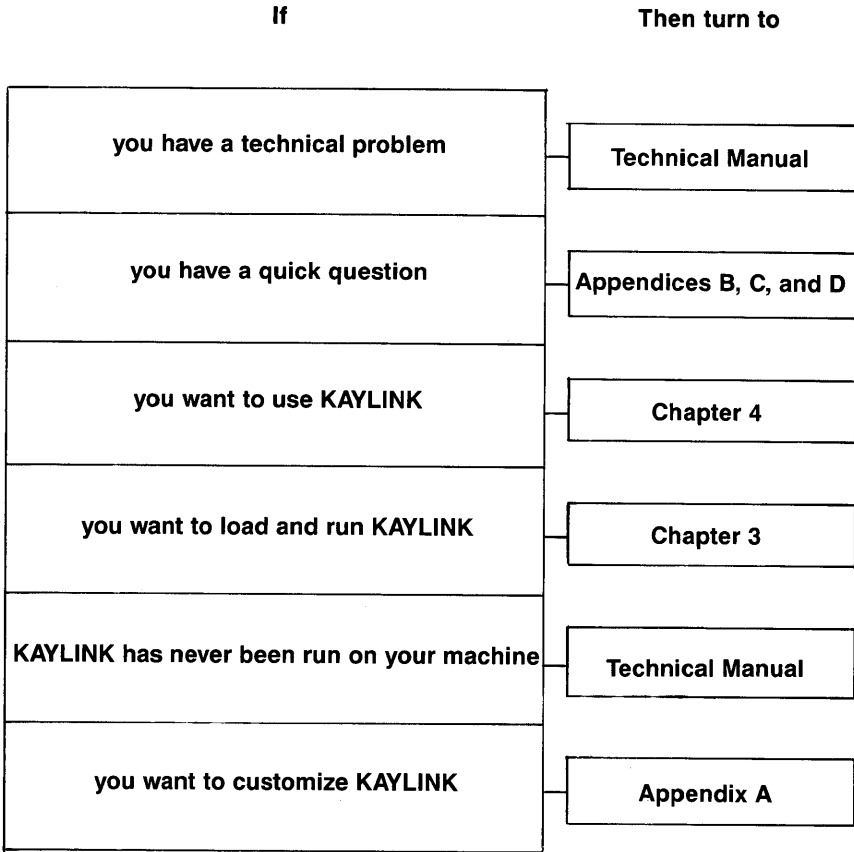
KAYLINK is a microcomputer program which emulates a work station using the IBM HASP bisynchronous protocol. KAYLINK is driven by menus rather than by typed commands, which makes it usable by inexperienced people as well as useful to everyone. KAYLINK provides a large selection of functions to send and to receive data as well as a single-screen text editor and several functions for disk management.

KAYLINK is most useful when acting as a remote job-entry and printing station in communication with a large computer. KAYLINK allows disk data to be sent over the communications link in many ways, for example, as card reader data. A special feature allows more than one disk file to be sent as part of the same job stream thus allowing job control statements, source program, and data to be stored on different files and then sent as a single job. Short jobs or data streams may be created with the screen-oriented text editor and sent to the host with no disk accesses at all. Similarly, printer, punch, and console data may be received and directed to the printer/plotter, console/plotter, and disk files in virtually any combination.

In addition, KAYLINK provides support for a physical card reader. To send a deck of cards to the host, the user simply loads the cards into the hopper and presses the START button on the card reader. No special setup or other commands are necessary--KAYLINK will automatically sense the presence of the cards and will send them at the first opportunity.

KAYLINK is also capable of acting as a host rather than as a remote site, which makes it possible for a microcomputer running KAYLINK to communicate with another microcomputer running KAYLINK, as well as with an actual remote HASP station. Unless the program is told to behave as a host as explained in Section 3.2, it automatically decides whether to behave as a host or as a remote depending on what information it receives from the communications link.

In summary, KAYLINK is an extremely powerful and useful program. It provides many features absent from ordinary HASP stations for a fraction of the cost.



**Figure 2.1 How to Use the Manual**

## 2.0 How to Use this Manual

This manual describes the use of the FSUCC HASP Station Emulator. It is written with the simplicity required by inexperienced users as well as with the information required by everyone. Read from start to finish, it presents a coherent explanation of the operation of the program. Because the manual is organized around basic sections of the program, it is also useful for reference.

If you are a new user, feel free to try out some of the features of the program while you are reading the manual. Menus and responses in KAYLINK have a dynamic quality which should be seen to be understood. The demonstration copy of KAYLINK (**KAYLINKD** on your distribution disk) will pretend that it is talking to a mainframe; this will let you experiment a bit without worrying too much about making mistakes. Keeping the computer from communicating reduces the chances of doing something wrong while learning.

Chapter 4 describes the Main Menu, which is the heart of the program. Chapters 5 through 9 describe the various options available from the Main Menu. Chapter 10 gives some examples of the use of the program in certain circumstances. The Technical Manual contains most of the highly technical information about the program, including installation of the program for your machine.

If you have just gotten the program and it hasn't been installed for your machine, you are looking at the wrong manual. Turn to the Technical Manual, which immediately follows this manual in the binder. If you bought KAYLINK from your hardware dealer, it should already be installed for your machine; you should not have to read the Technical Manual.

If you have just walked up to the machine and don't know how to run the program, turn to Chapter 3.

If the program has been loaded and run, but you don't know how to use it, turn to Chapter 4.

If you need an answer to a quick question, look at appendices B, C, and D.

If you have a technical problem, look in the Technical Manual for the answer.

If you want to customize KAYLINK to improve the way it works for you, see Appendix A of this manual.

## 2.1 Conventions

Names of keys on the keyboard are shown as single capital letters if they are single capital letters. If they are numbers, they are shown as the number within double quotation marks. Other keys are shown as the names which usually appear on the keys. For example, RETURN means the carriage return key, and ESC means the escape key.

There is a special key called the **control key**, shown in this manual as CTRL. The CTRL key is like another kind of SHIFT key. The SHIFT key, of course, is the key you hold down before you press a letter to make that letter capital. In the same way, you hold down the CTRL key and press a letter to send a special character called a control character. When CTRL-Q, for example, appears in this manual or on the screen, it means, "holding down the CTRL key and then pressing the Q key."

In this manual, the HELP key refers to the key you may press to see a "help screen" explaining your choices of action at any point in the program. The prompt messages that KAYLINK shows will show the name of the key your terminal uses for the HELP key. This may actually be "HELP" if your terminal has such a key, as the Xerox 820 does, or it may be another key assigned to this function. For example, the Lear-Siegler ADM-3A might use the BREAK key, while the Heath/Zenith H19 or Z19 might use the BLUE function key.

Most of the manual is in the type style of this paragraph. However, another type style, **which looks like this**, is used for menus, typed commands, file names, and other special purposes.

Capitalized words in the middle of a sentence or phrase other than titles are usually names of some sort or have some special meaning, such as Main Menu.

Although KAYLINK can operate as a host as well as a remote, most of this manual describes the use of KAYLINK as a remote. Each chapter describes use as a remote first and then may explain any differences.

Many of the menus and messages change from time to time as the program runs. Since it is impossible to show this in the manual, and since there are too many combinations to include in any size manual, menus are listed as they might appear during a typical session with KAYLINK.

## 2.2 Terms Used in this Manual

The term “console” is frequently used and may be unfamiliar to some users. CP/M defines the console as the keyboard and screen hooked up to your computer. HASP uses the term “console data” to describe data coming from or going to the console. KAYLINK allows you to direct console data to devices other than the console (Chapter 6) and to send other types of data as console data (Chapter 7), so “console data” does not always describe data from the physical console. Both meanings are used and are best determined from context. For more information about both senses of the word and their relation to logical devices and physical devices, please turn to Section 6.1.

HASP Station Console and HASP Console both refer to the use of KAYLINK to talk directly over the communications link using the keyboard and the screen.

“Text Screen” refers to a collection of text the size of the single-screen Text Editor.

“Data Stream” refers to data sent or received over the communications link associated with one of the HASP station devices (console, printer, card punch, or card reader).

“End-of-File” refers to a special indicator signifying the completion of a job or data stream.

## 3.0 Getting Started—Loading and Running the Program

### 3.1 Making a Backup

The first and most important thing to do is to **make a backup** of the program in case something happens to the original. (The licensing agreement allows you to make up to five backup copies.) If you don't know how to make a backup, try the method shown below. You will need a formatted disk with the CP/M operating system on which to put a copy of KAYLINK. This disk **must** contain the CP/M **PIP** utility. If you don't have such a disk, please consult CP/M documentation.

- 1) Turn on the system.
- 2) Place one of your disks containing the file **PIP.COM** in drive **A:**. This disk **must** have an operating system on it.
- 3) Place the KAYLINK distribution disk in drive **B:**.
- 4) Boot the system.
- 5) Type **PIP A: =B:KAYLINK.COM[V]** on the console and press the RETURN key.
- 6) When the copy is complete, remove the distribution disk and store it in a safe place.
- 7) Use the disk in drive **A:** as your KAYLINK disk.

### 3.2 Loading and running the program

If you are running a “demonstration” version of KAYLINK, or if you want to try out some of the features of the program without communicating with another system, omit steps 5 and 6.

- 1) If you haven't already made a backup, **do so now**. See Section 3.1.
- 2) Place your KAYLINK disk (**not the distribution disk**) in drive **A:**.
- 3) Boot the system.
- 4) Type **KAYLINK** on the console. If you want KAYLINK to behave as a host, type **KAYLINK HOST** instead. (For more information about

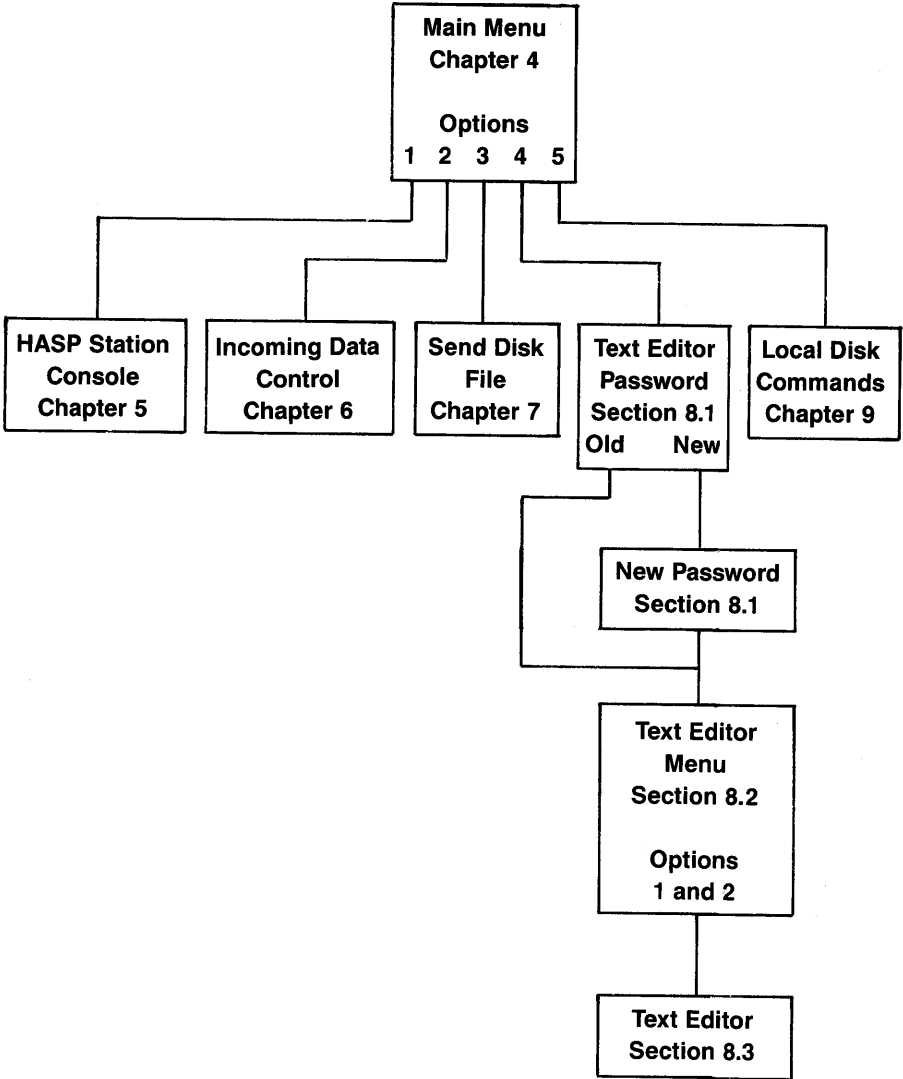
the command line, see Appendix A of this manual or the Command Line Installation section of the Technical Manual.)

- 5) Dial the other site on the telephone connected to the synchronous modem.
- 6) If your phone has a switch which you must flip to communicate over the line, do so when you hear the ring or when the phone is answered.

When KAYLINK first loads, it will behave as a HASP console (see Chapter 5). In this mode, all lines typed will be sent over the communications link as console data. The Status Window at the top of the screen will give pertinent information about the status of the program, including whether communications are active or inactive. Communications will be inactive until KAYLINK is able to elicit some response from the other end of the line. If communications remain inactive for a long time, it is reasonable to assume that something is wrong. Try dialing again or check your communications link.

When communications have been established, go ahead and use the program. You might want to press the ESC key immediately to go to the Main Menu.





**Figure 4.1 The Menus in KAYLINK**

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## 4.0 Menu Structure—the Main Menu

KAYLINK is organized around menus rather than around typed commands. This has the advantage that you don't have to remember arbitrary strings of letters to use the program. It also has the advantage that most of the information you need to operate the program is available directly on the menus.

### 4.1 How to Use a Menu

A **menu** in general is simply a list of available options which occupies the screen. Each option is given a number, letter, or other name which must be entered to use the option. Because the menu is on the screen whenever you can use the option, you don't need to remember the code for every option.

Menus in KAYLINK provide a **single-digit number** for each available option. To select a particular option, just press the key corresponding to the number. Pressing the RETURN key after pressing the number key is not necessary because the option will be performed immediately.

Pressing the HELP key while reading any menu will give a page of help which explains the options and provides other important information. Pressing the ESC key while reading any menu will perform a function which varies from menu to menu and is always explained on the menu itself. Generally, you can think of the ESC key as “backing you up” one menu or function.

Pressing the ESC key while at the Main Menu will do nothing. Pressing the ESC key a sufficient number of times from elsewhere in the program will **always** take you to the Main Menu.

All console data that comes in while KAYLINK is displaying a menu or Help Screen is saved. This means that you should not have to worry that you will miss any incoming console data from the host site while you are using the menus or reading a Help Screen. See section 5.1 for a more complete explanation of this.

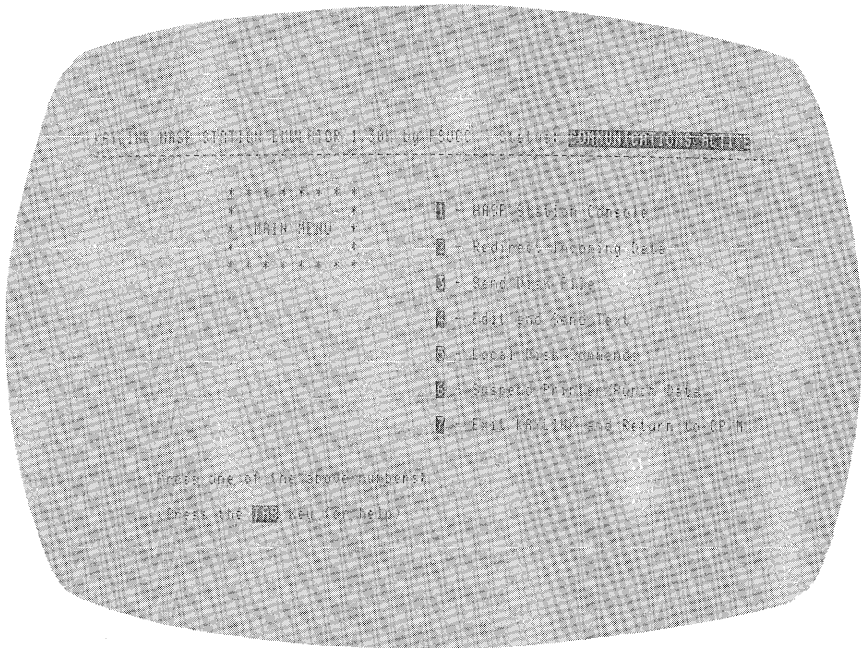
### 4.2 Explanation of the Main Menu

The Main Menu is the center of operations for the program. It represents the most general structure of the program and controls all of the options available to the user.

To get to the Main Menu from anywhere else in the program, press the ESC key repeatedly until you get there. While you are using KAYLINK as

a HASP console, a single press of the ESC key will get you to the Main Menu.

Here is a picture of the Main Menu during a typical session with KAYLINK;



**Figure 4.2 The Main Menu**

At the top of the menu is a single line containing the Status Window. This is explained in Section 4.4.

Below the Status Window lies the actual menu. As you can see, there are seven options, each with its own number. To select any of these options, simply press the key corresponding to its number.

Pressing the “1” key will allow you to use KAYLINK as a HASP console. This is necessary to do any interactive console communication with the computer at the other end of the line. Chapter 5 describes the use of this option.

Pressing the “2” key will allow you to change the destination of incoming data. This option is useful to save incoming punch data as a disk file or to do other things of this nature. Chapter 6 explains this fully.

Pressing the “3” key will allow you to send disk data in a variety of ways.

In essence this is a complementary function to option “2” for outgoing data instead of incoming data. This option is described in Chapter 7.

Pressing the “4” key will allow you to create short streams of data and send them, much in the same way as you might send disk data using option “3.” The single-screen-oriented Text Editor allows you to correct your work before sending it. This option is explained in Chapter 8.

Pressing the “5” key will allow you to perform local disk management functions, such as erasing and listing disk files. Chapter 9 describes this option.

Pressing the “6” key will allow you to suspend all printer and punch data operations **including** data going to a file. This means that all incoming printer and punch data will be held until you decide to start receiving it again. Also, any operation using the printer, such as printing a local file, will pause as well.

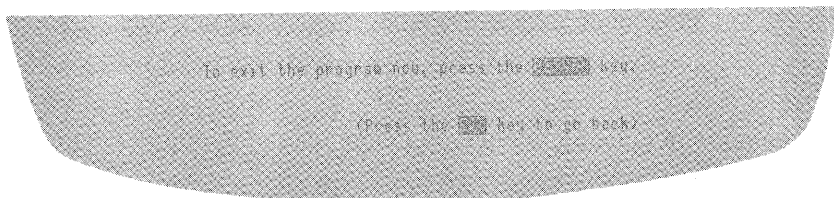
Selecting option “6” will cause the Status Window to display **PRN/PUN DATA SUSPENDED** (unless there is a more important message to be displayed—see Section 4.4). Also, this option on the menu will change to say **6 - Resume Printer/Punch Data**. When this option is selected later, printer and punch data will, of course, resume. The Status Window will stop saying **PRN/PUN DATA SUSPENDED**, and the menu option will return to its original state.

This type of menu option is called a “toggle” because successive presses cause an alternation between two states.

Option “6” may be used to delay any printer operations until the incoming data destinations have been changed. Also, any printer error, such as running out of paper, will suspend printing. In this case, option “6” should be selected after the error is fixed to resume printing.

When KAYLINK is acting as a host rather than as a remote, this function will suspend card **reader** data rather than card **punch** data.

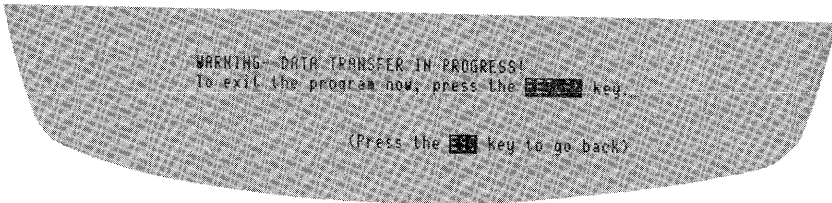
Pressing the “7” key will cause KAYLINK to exit to the operating system. **Before doing this, however, KAYLINK will ask for confirmation as follows:**



**Figure 4.3 The Exit KAYLINK Confirmation**

If you press the RETURN key, KAYLINK will send a signoff card if applicable (see Appendix A of this manual or Section 3.1 in the KAYLINK Technical Manual), close all open files, and exit to the operating system. If you press the ESC key, you will be returned to the Main Menu.

If you try to exit while KAYLINK is in the middle of doing something such as sending a file, this message will appear instead of the previous one:



**Figure 4.4 Another Exit KAYLINK Confirmation**

This is simply a reminder that an operation which may be important to you is still in progress. If you press the RETURN key at this point, KAYLINK will abort the transfer and then exit as above.

#### **4.3 The HELP Feature and the Help Screens**

Pressing the HELP key just about any time while running the program will give you help. The help will be in the form of a single screen full of text called the Help Screen. Pressing the ESC key from a Help Screen will return you to the place you were before you pressed HELP. If, for example, you pressed the HELP key at the Main Menu, read the Help Screen, and then pressed the ESC key, you would be returned to the Main Menu.

HELP is available at virtually every screen and prompt in KAYLINK including the HASP Station Console, the Text Editor, all menus, and all requests for file names. Just about the only places where the HELP key does not work are self-explanatory error messages and the Help Screens themselves.

#### **4.4 The Status Window**

The Status Window gives information about the current operation of the program which may change from time to time as the conditions change. It always appears at the top of the screen.

The Status Window always gives the “most important” status message or error message. If, for example, the printer runs out of paper while prin-

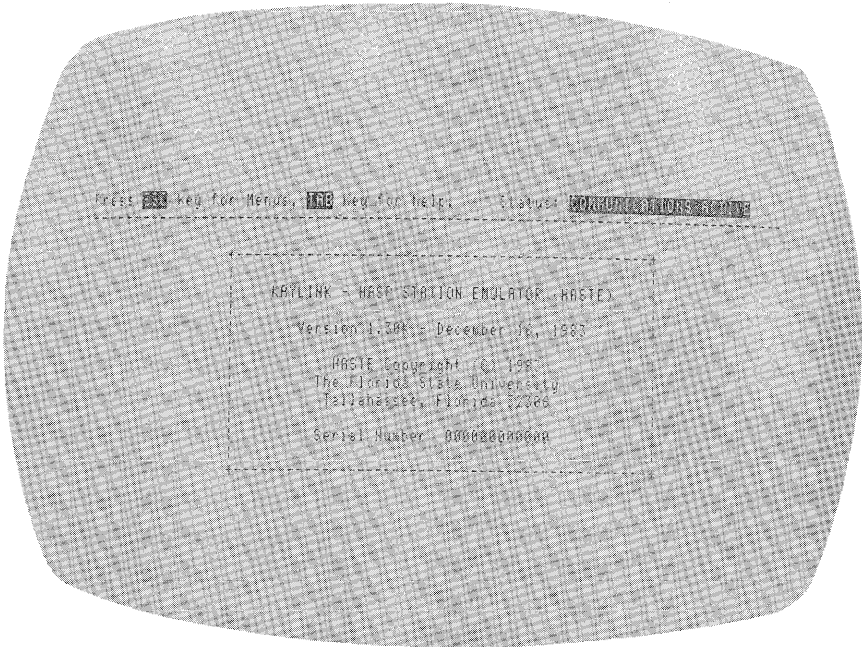
ting, the Status Window will say **\*\*\* PRINTER PROBLEM \*\*\***. If, while the printer is still out of paper, a more important error occurs, say a disk error, the message for that error will appear instead of the printer error. If there is no more important status condition, a **COMMUNICATIONS ACTIVE** message will appear.

A list of all the possible status conditions and their explanations in order of importance is given in Appendix C.

## 5.0 Using KAYLINK as a HASP Console—the HASP Station Console Option

Pressing the “1” key at the Main Menu will allow you to use KAYLINK as a HASP console. At the top of the screen will be the familiar Status Window to keep you up-to-date on the status of the program. The rest of the screen will be restored to contain all the console data that was there when you last left the HASP Station Console. No menu of any sort will appear, but a single press of the ESC key will take you to the Main Menu.

When you enter the HASP Station Console for the first time (i.e. when you first load and run KAYLINK), a message like this will appear:



**Figure 5.1 The Link Mode Message**

Since there is no console data to be restored to the screen, the program title block appears instead. It will scroll off the screen as you use the HASP Station Console. (The actual date, version number, and serial number of your copy may, of course, differ from what is shown here. See Appendix G of this manual for a revision history of the program.)

## 5.1 Link Mode

When you are using KAYLINK as a HASP console, it is useful to say that the program is in Link Mode. Because everything you type will be sent as console data, and because everything received as console data will be shown on the screen, KAYLINK is “linked” with the computer or remote station with which it is communicating.

Link Mode is used to communicate directly with the computer at the other end. Many host computers require console commands to identify the user, set up operational parameters and so on, even before anything such as receiving and sending files can be done. **For this reason, Link Mode is the default mode of KAYLINK.** That is, when you load and run the program, it will come up in Link Mode, and no menu will appear. If you want to use the menus immediately, just press the ESC key.

KAYLINK gives you certain editing features when you are entering a line. Pressing the DELETE or BACKSPACE key will erase the last character that was typed. Pressing CTRL-Y (that is, holding the CTRL key down and then pressing the Y key) will delete the entire line and will allow you to start over. When the RETURN key is pressed, the entire line will be sent over the communications link.

Because host computers very often require password information, and because a person using KAYLINK will not always be alone, a feature for hiding characters is provided. Pressing CTRL-Q while typing a line will cause all subsequent characters typed in that line to appear as “X” characters. Pressing CTRL-Q again will cause further characters to appear normally. Once characters are hidden, they stay hidden. Nothing in KAYLINK can cause those characters to reappear.

When you press the HELP key to refer to the Link Mode help screen, or when you press the ESC key to go to the Main Menu, of course the Console screen is no longer there. If console messages come down, KAYLINK stores them and changes the Status Window to say **CONSOLE MESSAGES WAITING**. When you later come back to Link Mode, KAYLINK will display those messages.



If KAYLINK receives 10 lines of console messages before you get back to Link Mode, it will send a message to the computer at the other end of the line that means “my console is not available right now.” The other computer should hold any further console data until KAYLINK tells it the console is available again. Unfortunately, some host sites ignore that message and send console data anyway. If KAYLINK receives more than a screenful of console messages before you return to Link Mode, the Status Window will say **LOSING CONSOLE MESSAGES!**. This means that old messages you have not seen are being erased to make room for new ones. When you go back to Link Mode, you will be able to see the most recent messages.

For information about certain technical aspects of Link Mode, consult Section 2.1 of the Technical Manual.

## 5.2 Redirected Data and Link Mode

One of the most useful features of KAYLINK is the ability to send incoming data intended for one device to another. For instance, you can cause data which would normally go to the printer to go to the console instead. Then when you go to Link Mode, you will see not only the incoming console data on the screen, but the incoming printer data as well.

Whenever printer or punch data (or, when KAYLINK is acting as a host, card reader data) is being sent to the console, that data is suspended any time console data is suspended. For example, if printer data is going to the console and to the printer, the printer will stop when you leave Link Mode and resume when you return to Link Mode.

Normally, when you are using the HASP Station Console, data redirected to the Console is displayed as it is received. However, when you start to type a line, KAYLINK will wait for you to finish (or erase) that line before any more redirected data appears on the screen. Console data will continue to appear as it is received; it will be placed above your line on the screen, and the line you are typing will remain unchanged. The status line will show **HOLDING REDIRECTED DATA** to remind you that redirected data is being held up.

When you return to Link Mode, **only console data is restored to the screen**. This means, for example, that if you were looking at printer data on the console, pressed the HELP key, and then returned to Link Mode by pressing the ESC key, the printer data would not be restored to the screen. Instead you would see the last twenty or so lines of console data.

When you are in Link Mode and want to change the destination of any type of data, simply press the ESC key to get to the Main Menu, and then select option “2.” Chapter 6 explains this fully.

## 6.0 Changing the Configuration—the Redirect Incoming Data Option

Unlike most HASP stations, which are very restricted in their ways of receiving data, KAYLINK allows you great control over incoming data. This chapter describes the features which give you that control. Uses of these features include saving incoming print files on disk to be printed later, plotting incoming punch files on a console/plotter or printer/plotter, and saving or printing received console data for keeping records.

### 6.1 Logical and Physical Devices

One of the best features of KAYLINK is that incoming data intended for a certain device may be “redirected” to other devices. A place where data is intended to go is called a “logical device,” while an actual device where you may send data is called a “physical device.” The logical devices in KAYLINK correspond to the types of data streams defined by the HASP protocol. Physical devices represent what is actually connected to your system.

KAYLINK defines three physical devices that can be destinations for incoming data: the console, the printer, and the disk. Through the use of transparent data (explained in Section 7.3), some printers and consoles with graphics capabilities can be used as plotters. Access of the disk is done through files, and, although more than one file may be accessed at one time, the disk is still considered a single physical device for our purposes.

When KAYLINK is acting as a remote, three logical incoming data devices are defined: the console, the printer, and the punch. When KAYLINK is acting as a host, two logical incoming data devices are defined: the console and the card reader.

When KAYLINK is first loaded and run, it is configured as a print station and comes up in Link Mode. In this configuration, printer and punch data coming from the communications link will be sent to the physical printer. This was chosen as the default configuration because print stations seem to be the most popular use for HASP work stations.

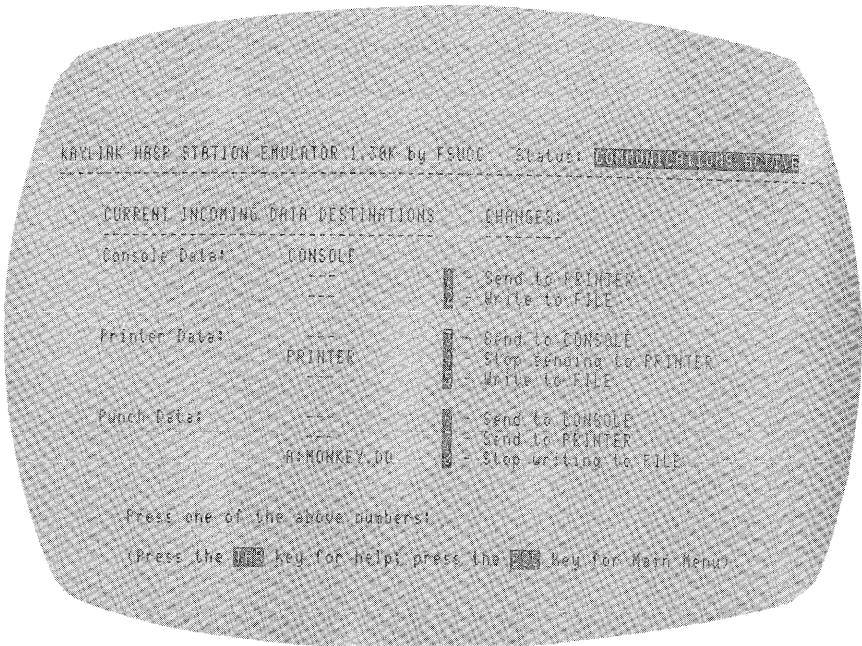
Incoming data intended for a certain logical device may actually go to any combination of physical devices. Thus, data intended for the logical printer may go to the physical printer, to a disk file, to the console, or to any combination of the three devices. When KAYLINK is told that data for a logical device is to go nowhere at all, the remainder of any file being received for that device is lost, and subsequent files are not accepted but rather are held by the computer at the other end. When a file is waiting at the other end to come down, the message **xxx DATA DEST REQUIRED!** will appear,

where **xxx** will be **PRN**, **PUN**, or **RDR**, depending on whether it is printer data, punch data, or card reader data. This is an indication that you must assign some destination to the specified type of data before you can receive it.

Data intended for the console will **always** go to the console when **KAYLINK** is acting as a **HASP** console. The reason for this is that console data is usually so important that you must see it to communicate properly with the computer at the other end. Console data, for example, may contain error messages which would go completely unnoticed if console data were not always shown on the screen. Aside from this one restriction, console data may be redirected as any other type of data.

## 6.2 The Incoming Data Control Menu

Pressing the “2” key while reading the Main Menu will take you to the Incoming Data Control Menu. During a typical session, this menu might look like the picture on the next page.



**Figure 6.1 The Incoming Data Control Menu**

As you can see, the main body of the menu is divided into three columns. The first column lists all three logical devices which are defined by **KAYLINK** when it is acting as a remote. The second column shows to what physical

devices the data for a particular logical device is going. The third column tells you what you can do to change the destination shown in the second column.

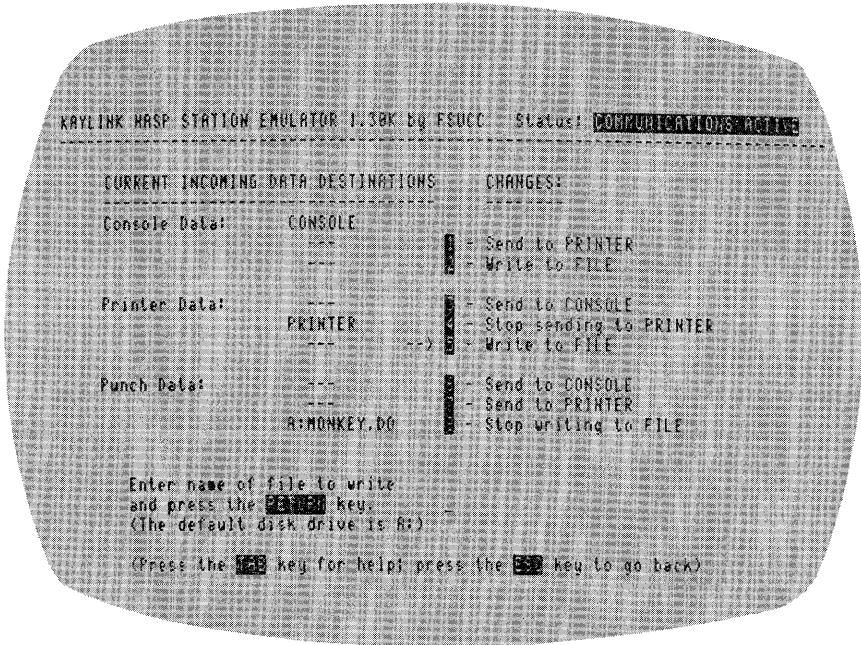
All of the options on this menu operate as “toggles” similar to option “6” on the Main Menu. Pressing the number key indicated by an option will do exactly what that option says at the time. If you press the “1” key, for example, console data will start going to the printer, the word **PRINTER** will replace the three hyphens, and the option will change to **1 - Stop sending to PRINTER**. All subsequent data intended for the console will then go to the printer as well as to the console. If you press the “1” key once more, console data will not go to the printer anymore, and the option will return to its original state.

If you send data to the console, it actually goes to the console **only** when you are using the HASP Station Console (Chapter 5), even if it is told to go to another destination as well. For example, if printer data were sent to the printer **and** to the console, it would neither be printed nor shown on the screen until you go to the HASP Station Console.

Notice that on the Incoming Data Control Menu physical device names are written all in capitals, while logical device names merely have the first letter capitalized. This helps to distinguish between physical and logical devices even when they have the same name. **PRINTER**, for example, indicates the physical printer connected to your system while **Printer Data** indicates the incoming data stream corresponding to the logical printer.

The use of the word **FILE** at first may be somewhat misleading. There is only one console and only one printer, but you may have up to three disk files being written at once. When incoming data is being written to a file, that file's name is shown as the destination in the second column of the menu. In Figure 6.1 for example, punch data is being written to the file **MONKEY.DO** on drive **A:**.

When you select one of the **Write to FILE** options, KAYLINK will ask you for a file name. Say you wanted to write printer data to a file, and you pressed the “5” key to do so. The menu would then look like this:



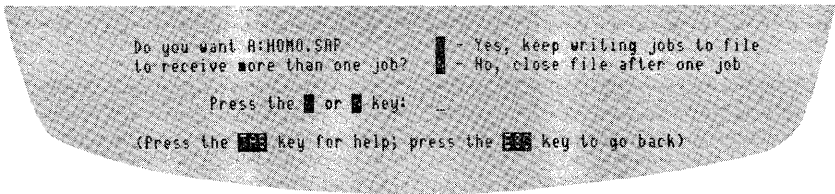
**Figure 6.2 The File Name Prompt**

The selected option is shown on the menu by an arrow, and the file name prompt near the bottom identifies the current default disk drive (in this case drive **A:**). KAYLINK now expects you to type a standard CP/M file name and press the RETURN key.

The file name must be of the form **d:filename.sec**, where **d:** is the name of the disk drive to use (usually **A:** or **B:**), **filename** is the primary name of up to 8 characters, and **sec** is the secondary name of up to three characters. The **d:** part may be omitted if the current default drive is to be used. The **.sec** part may also be omitted, in which case a blank secondary file name will be assumed. For more information about file names, please see Section 9.2.

For example, say you wanted to save printer data on the file **HOMO.SAP** on drive **A:**, the default drive. You would type **HOMO.SAP** and press the RETURN key. If file **HOMO.SAP** already existed on drive **A:**, it would be deleted before any writing of printer data took place.

After you have entered the file name, KAYLINK will ask you this question:



**Figure 6.3 The More than One Job Question**

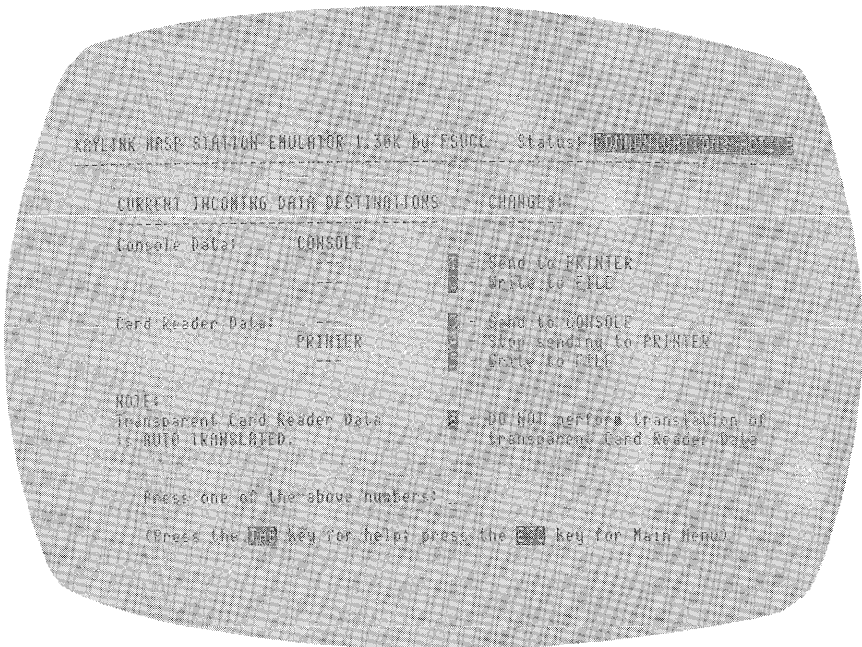
If you press the N key, the file will be closed automatically after an “End-of-File” (indicating the end of one complete data stream) has been received. **HOMO.SAP** will then no longer be a destination for incoming printer data.

If you press the Y key, any number of jobs can be received and written to the file. In this case, **you must remember not to remove your disk** until after you stop writing printer data to **HOMO.SAP** (by pressing the “5” key again on the Incoming Data Control Menu), or you exit KAYLINK by selecting option “7” on the Main Menu. Otherwise, the last part of your data will not be written to the file.

After you answer the question, **A:HOMO.SAP** will be shown as a destination for printer data and option “5” will toggle to “**Stop Writing to FILE**”. If you press the “5” key in this state, **HOMO.SAP** will be closed **immediately** whether or not any data has been written to it, and option “5” will return to its original state.

If you select option “2” to write console data to a file, the “More Than One Job” question does not arise. This is because no “End-of-File” occurs in the console data stream. You must remember to close the file yourself (or exit the program) before removing your disk.

When KAYLINK is acting as a host rather than as a remote, this menu will be displayed during a typical session:



**Figure 6.4 The Incoming Data Control Menu for Hosts**

Note that only two logical devices are defined. Also note the section which describes translation of transparent data.

Normally, transparent data is translated only if the other station indicates that it should be (this is referred to on the menu as AUTO TRANSLATED). Option “6” allows you to change this if any need arises. If you select option “6,” KAYLINK will NOT translate any incoming transparent Card Reader Data as text, even if the other station indicates that it should be done. Like the other options on this menu, option “6” is a toggle. This means that the second time you select the option, it will turn translation back to “AUTO.”

For more information about data translation, see Section 7.3 and Appendix B.

As always, if you press the HELP key you will get help.

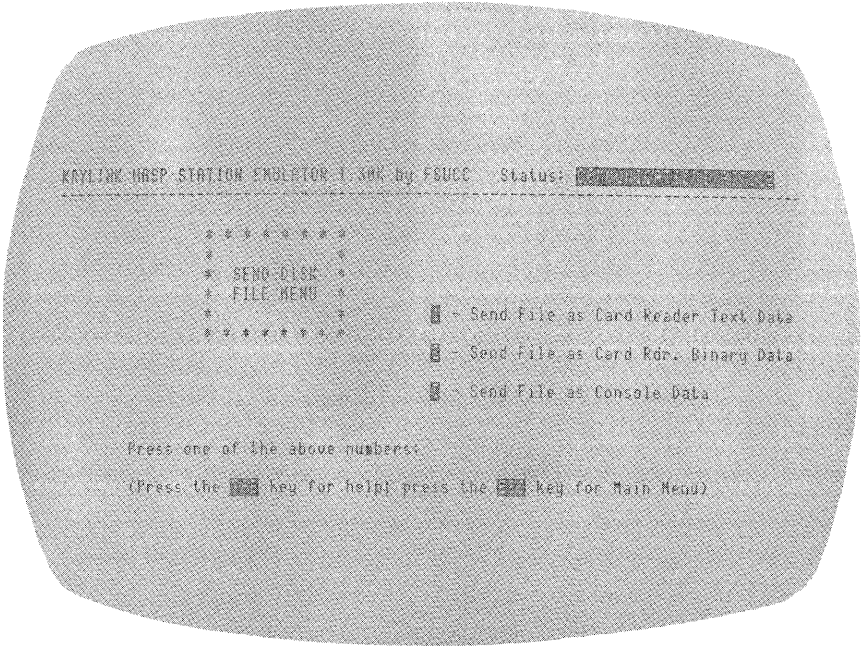
# 7.0 Sending Data—the Send Disk File Option

Chapter 6 described how to receive data in various ways. This chapter describes just the opposite: how to send data in various ways. Section 7.1 deals with the Send Disk File Menu and how to send standard CP/M sequential files. Section 7.2 tells you how to use an actual card reader to send a card deck to a host site. To find out how to create and send data using KAYLINK's built-in text editor, please see Chapter 8.

## 7.1 The Send Disk File Menu and Different Ways to Send Data

Just as for incoming data, there are physical and logical devices for outgoing data, too. This section is concerned with just one kind of physical device: disk files, from which data may be sent in several ways. When KAYLINK is acting as a remote, the logical devices are the console and the card reader. When KAYLINK is acting as a host, the logical devices are the console, the card punch, and the printer.

Pressing the "3" key while reading the Main Menu will select the Send Disk File option. When KAYLINK is acting as a remote, this displays the following menu:



**Figure 7.1 The Send Disk File Menu**

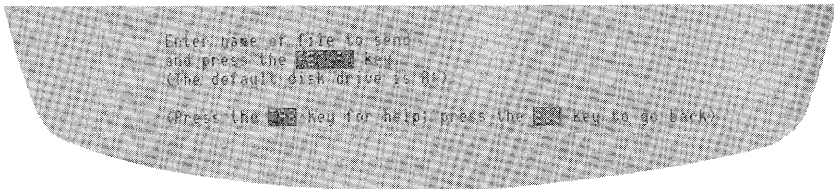


Options “1” and “2” both send the data on your disk file as card reader data. The computer on the other end will think that the data is coming from a card reader, and will treat it accordingly. Usually this option is used in batch situations to send jobs to the host.

The only difference between options “1” and “2” is that option “1” should be used when you want to send text files, such as job decks and FORTRAN programs, and option “2” should be used when you want to send binary files, such as .COM files and plot files. For more information about the differences between these two types of files, turn to Section 7.3.

If you select option “3” on the Send Disk File Menu, the file will be sent exactly as if you had typed it on the keyboard of the HASP console. This is useful for sending long sequences of commands which are kept on disk and in certain interactive situations to upload text data.

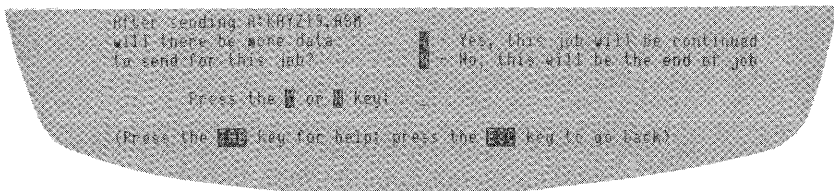
When you select any of the options on the Send Disk File Menu, this message will appear near the bottom of the screen:



**Figure 7.2 Another File Name Prompt**

The **d:** in the prompt will actually be the current default disk drive. At this point you must enter the name of the disk file containing the data you want to send. (For more information on file names, see Section 9.2.)

If you selected option “1” or “2” to send the file as card reader data, then after you enter the filename and press the RETURN key, this message will appear (unless your copy of KAYLINK has been customized not to ask this question):



**Figure 7.3 The More Data Question**

If you press the Y key at this point, the data will only be considered **part** of a job or data stream. When KAYLINK finishes sending the file you specified, the message **READY TO SEND MORE DATA** will appear in the Status Window indicating that more data is expected. This feature allows you, for example, to keep control cards, a source program, and data for the program on separate files and then send them together as a single job stream.

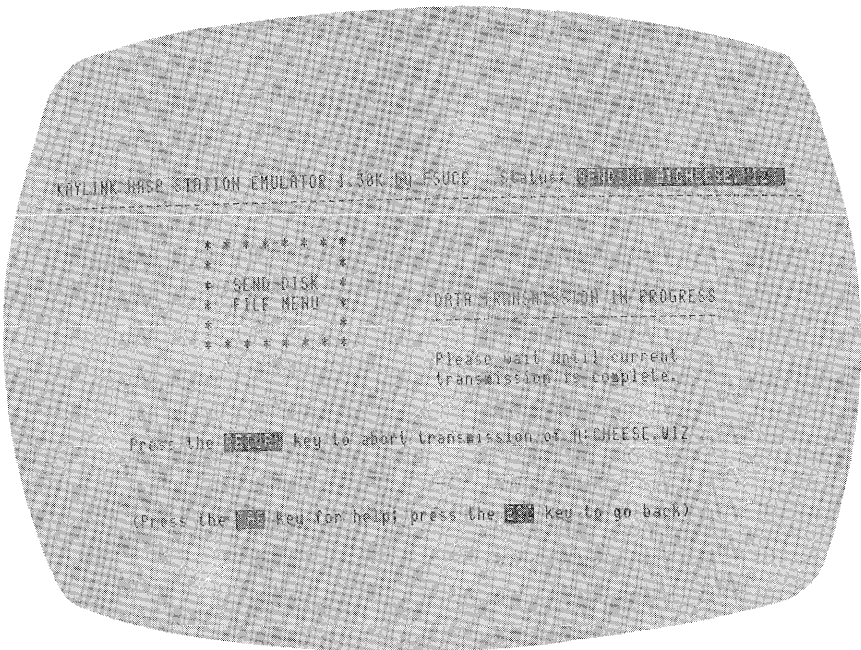
If you press the N key, the data will be considered the entire job or the last part of a job. An “End-of-File” indication will be sent after the file, and no more data will be expected later. This option should be used to send a single job or data stream or to send the last part of a job or data stream. If you want to send a single job but later want to send another job, you should still answer this question with an N rather than with a Y.

After you have sent **part** of a job (i.e. you answer Y to the More Data Question) and the status is **READY TO SEND MORE DATA**, an option **0 - No More Data to Send** will appear at the top of the menu. If you then press the “0” key, KAYLINK will send an “End-of-File” indication to the host. If you ever answer the More Data Question with a Y when you really meant N, you can select this option when you are done sending files.

If you want, you can customize KAYLINK so that it never asks this question and always assumes that your answer is Y. This is handy if you have to send jobs made up of several disk files or Text Screens. If you customize KAYLINK this way, you will have to send an “End-of-File” using option 0 when you are done with the entire job. To find out how to customize KAYLINK in this way, read about the **M-** parameter in Appendix A.

Once you have completely specified the file and the way to send it, KAYLINK will begin sending the file. The Status Window will say **SENDING d:filename.sec** with the file name you entered. Until it is through sending that file, KAYLINK will not allow you to send any other files or the Text Screen (Chapter 8).

Let's say that you are sending a file on drive **B:** named **CHEESE.WIZ**. The Send Disk File Menu would then look like this:

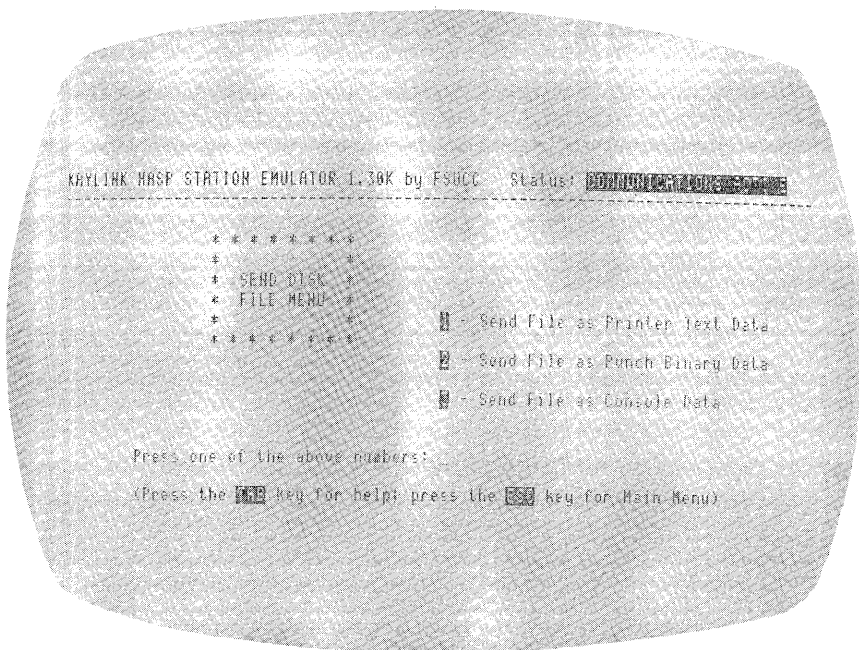


**Figure 7.4 The Send Disk File Menu While Sending a File**

This form of the menu is a warning that data is currently being sent. Normally you will just wait for the data transfer to finish. If you want to stop sending this file, press the RETURN key. KAYLINK will stop sending the file and will send an "End-of-File" message to the other computer. When the other computer responds to that message, the menu will be restored to look like Figure 7.1.

While a file is being sent, you can use any of the other features of KAYLINK (except send the Text Screen). Just press the ESC key to go to the Main Menu.

When KAYLINK is acting as a host rather than as a remote, this menu is displayed instead of Figure 7.1:



**Figure 7.5 The Send Disk File Menu for Hosts**

When selecting options with this menu, how the data is sent determines whether it is text or binary.

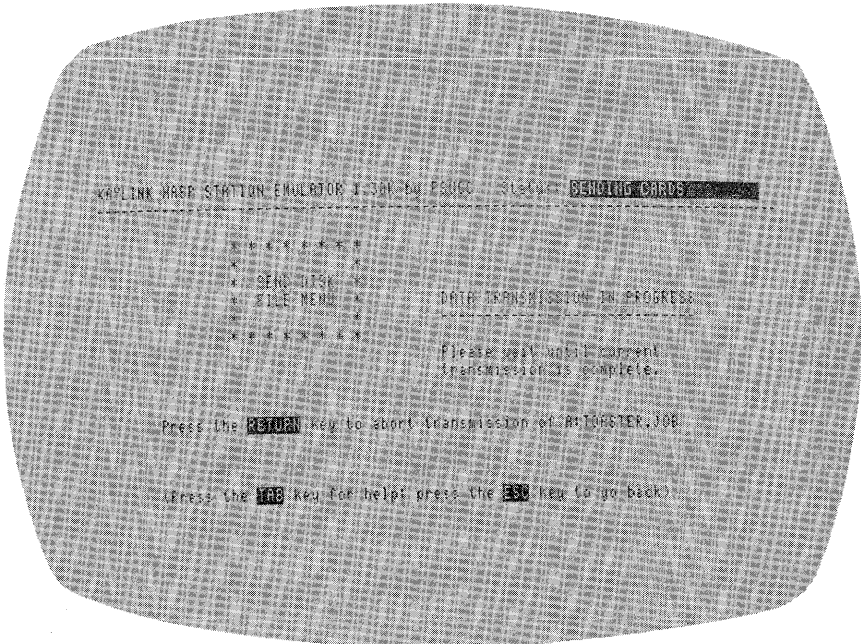
## 7.2 The Physical Card Reader

KAYLINK is designed to eliminate the need for a card reader as a means of reading data to upload to the host. However, KAYLINK does provide a means to hook up a real card reader to the system.

KAYLINK makes using the card reader very easy. For most sites, all you have to do to send a deck of cards is walk up to the card reader, put your card deck in the hopper, and press the START button (or its equivalent). The first chance KAYLINK gets it will send the deck as card reader data. If KAYLINK is sending a disk file it will wait until the file is sent or you abort transmission using the Send Disk File Menu before it starts sending the deck of cards.

KAYLINK must be able to know when it has reached the end of the card deck. Usually there will be a special card (for example, a 6-7-8-9 multipunched card) which we will call an EOF (End-of-File) card that you must put at the end of your deck.

When a card deck is being sent, the Send Disk File Menu will look like this:



**Figure 7.6 The Send Disk File Menu While Sending Cards**

Notice that the Status Window says **SENDING CARDS**. Also notice that there is no way to terminate transmission of the data. **You cannot stop sending cards through options in KAYLINK!** To stop sending cards, press the STOP button on the card reader, place a single EOF card in the hopper, and press the START button. Or, if you don't have an EOF card, press the STOP button on the card reader, then press **0 - No More Data to Send** at the Send Disk File Menu or the Text Editor Menu.

When the card reader runs out of cards without reading an EOF card, or when you press the STOP button, the Status Window will say **READY TO SEND MORE DATA**. This is a very handy feature. For example, let's say you

have a FORTRAN program on disk that you want to run on the host computer. Let's also say that you have a deck of cards that says, in effect, "Here comes a FORTRAN program. Compile it and run it." Put the deck **with no EOF card at the end** in the hopper and press the START button on the card reader. When KAYLINK gets through sending the cards and says **READY TO SEND MORE DATA**, use the Send Disk File Menu to send your FORTRAN program as Card Reader Text Data. When KAYLINK asks you the More Data Question (Figure 7.3), answer **N**. **This question serves the exact same purpose for a disk file as the EOF card does for a card deck.** KAYLINK will then send the FORTRAN program.

### 7.3 Text Data and Code Translation

Most of the data you send and receive is probably "text" data, like job control statements, your FORTRAN source program, and the printout you get back when your job runs. Each character of text data actually represents a letter, number, punctuation mark, or one of a few "carriage control" codes such as a carriage-return, line-feed, or tab.

The specific codes used to represent text data depend on the character set used. The HASP protocol defines EBCDIC as the standard character set, but your computer uses the ASCII character set. This means that KAYLINK must **translate** all text data between the two character sets: incoming text data is automatically translated from EBCDIC to ASCII, and outgoing text data is automatically translated from ASCII to EBCDIC. (The translation tables used by KAYLINK are contained in an appendix to the the Technical Manual.)

Not all data is text data, of course. When data represents machine code instructions (as in CP/M **.COM** files) or co-ordinates of vector end points (as in plot files) and so on, it should be taken **literally**, that is, it must **not** be translated or changed in any way. This kind of data is commonly called "binary" data. In HASP, binary data is always sent as "transparent" data; text data may be sent as either "transparent" or "non-transparent" data.

The HASP protocol includes information about whether data is text or not. KAYLINK adopts certain conventions, consistent with the HASP protocol, about how data associated with the four logical devices is treated.

KAYLINK always treats console and printer data as text. Data from the **physical** card reader is always sent as text and data from the **logical** card reader can be sent either way (depending on whether you select option "1" or "2" on the Send Disk File Menu, Figure 7.1). When KAYLINK receives punch data (as a remote) or card reader data (as a host), it can usually tell from

the protocol whether the data is text or not and then treat it accordingly. Many HASP remote stations do not use this part of the HASP protocol; it is for this situation that option “6” on the Incoming Data Control Menu for hosts (Figure 6.4) is provided. This option allows you to force incoming “transparent” card reader data not to be translated as text.

For a summary of how KAYLINK treats data under various circumstances, see Appendix B of this manual.

## **8.0 Sending Data from the Keyboard—the Edit and Send Text Option**

It is sometimes desirable to send a short, quick job or data stream to a host computer without the bother of leaving KAYLINK, producing a disk file with a text editor, loading KAYLINK, dialing up, rearranging the configuration, and so on. An example is when using KAYLINK as a batch workstation to send a job requesting a listing. Fortunately, KAYLINK provides such a feature for editing and sending short jobs containing seventeen lines or fewer.

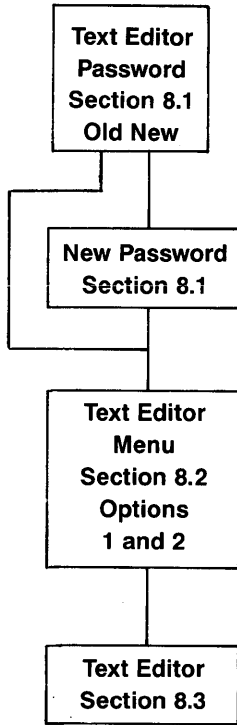
### **8.1 Security Measures**

This section refers to a form of protection which can be selected by the person customizing the program. If your version of KAYLINK is not customized for password protection on the Text Editor, you may skip this section. If you want to change whether KAYLINK uses a password or not, read Appendix A.

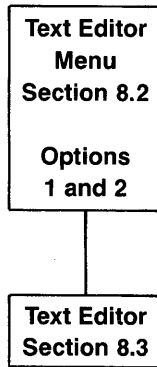
To provide security for public environments, the text editor is protected by a password. The first time you enter the text editor it will ask you for a password. You may make up a password on the spot, but be sure that you will remember it. Every other time you use the text editor, you must enter this same password to access the text which has been saved there.

If someone enters a different password, KAYLINK will give the option of trying again or clearing the old text and editing new text with the new password. Selecting the latter actually deletes the old text, so there is no way to determine what the old text was without the old password.



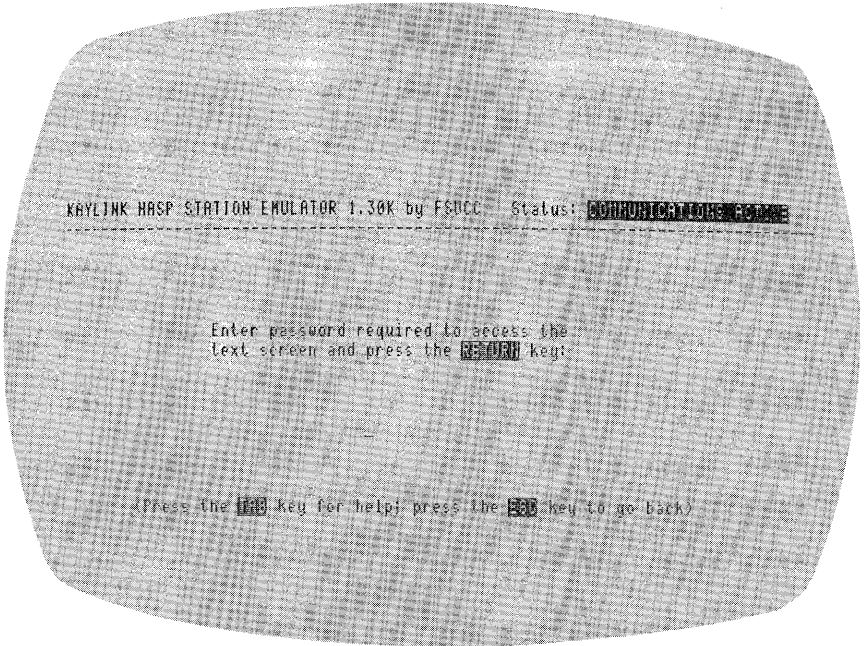


**Figure 8.1 The Text Editor With Password**



**Figure 8.2 The Text Editor Without Password**

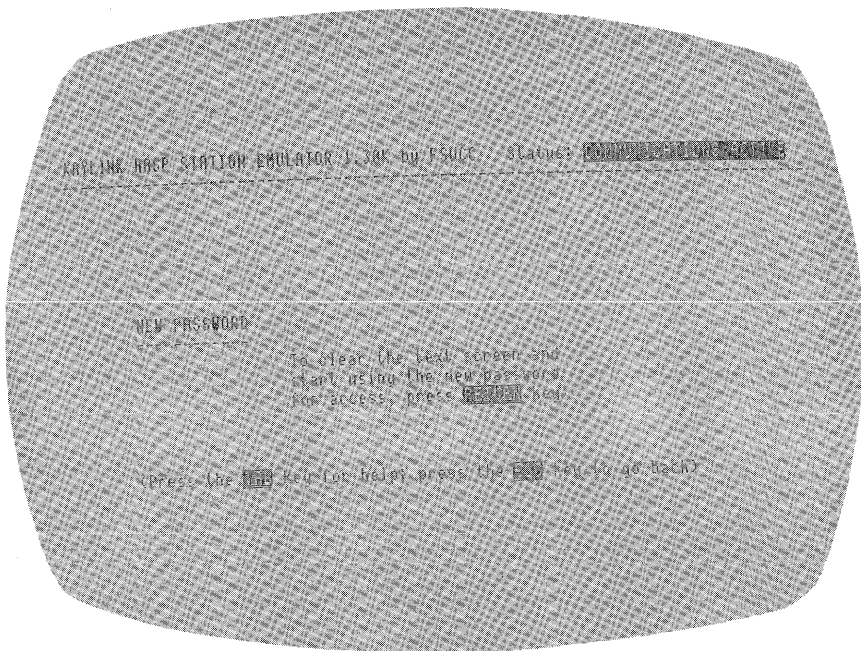
When you press the “4” key at the Main Menu, the first thing KAYLINK will do is ask you for a password. This message will appear on the screen:



**Figure 8.3 The Text Editor Password Page**

At this point, you must enter a password. It should be a word or phrase easy for you to remember but difficult for others to guess. It does not matter whether this is to be a new password or an old one. For each character you type, a capital “X” will appear on the screen so that nobody can see what you are typing.

When you are done typing your password, press the RETURN key. If the password matches the one in memory, the Text Editor Menu (Figure 8.5) will appear next and you may edit, save, or send the Text Screen. However, if this is a new password or if you have mistyped your old password, the message on the next page will promptly appear:

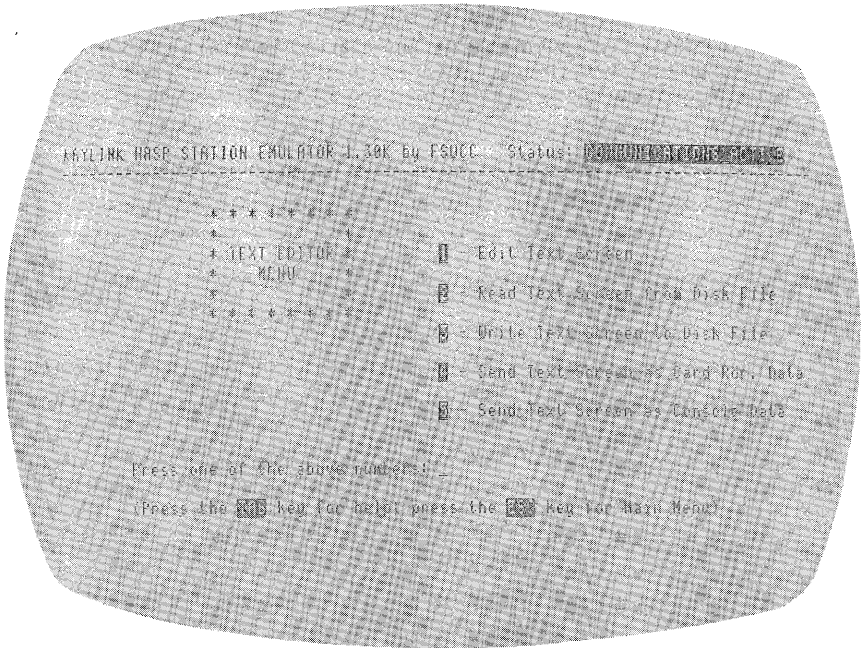


**Figure 8.4 The Text Editor New Password Page**

If you have merely mistyped your old password, press the ESC key immediately to try again. If, on the other hand, this is a new password, press the RETURN key. The old text will be deleted, and a new Text Screen will be set up with your new password.

## 8.2 The Text Editor Menu

When you have successfully entered the password, you will be able to edit one “screen” of text. This menu will appear:



**Figure 8.5 The Text Editor Menu**

If the Text Screen is empty, as it will be when you edit it for the first time, only the first two options will appear on the menu. Options “3”, “4”, and “5” do not make sense with an empty Text Screen so they appear only after you have entered some text.

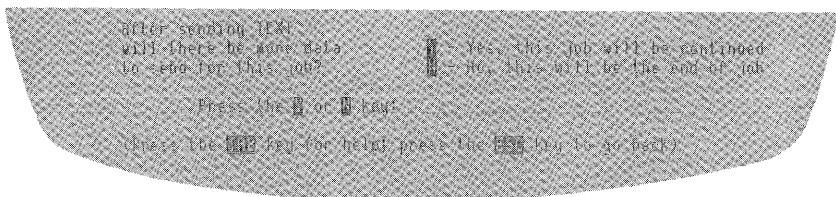
Option “1” will allow you to use the Text Editor, which is described in Section 8.3. Any previously entered text will still be present on the Text Screen (unless it was deleted by giving a new password--see Section 8.1).

Option “2” will prompt you for a file name, read that file into the Text Screen, and then enter the Text Editor. If you use a file created by an external text editor, you should keep in mind that only the first seventeen lines will be used, and any CTRL-Q characters in the file will hide text.

Option “3” will prompt you for a file name and then write the Text Screen to that file. Remember that if a file of the same name already exists, it will be deleted before the new file is written.

Options “4” and “5” will allow you to send the Text Screen over the communications link in two different ways. These ways are very similar to those described in Section 7.1 for sending disk files. Option “4” sends the text as card reader text data (such as a short job), and option “5” sends it exactly as if you typed it on the HASP console.

If you select option “4,” this message will appear (unless your copy of KAYLINK has been customized not to ask this question):



**Figure 8.6 Another More Data Question**

If at this point you press the Y key, the data will be considered only **part** of a job or data stream. When KAYLINK gets done sending the Text Screen, the message **READY TO SEND MORE DATA** will appear in the Status Window indicating that more data is expected to complete the job or data stream.

If you press the N key, the data will be considered the entire job or the last part of a job. An “End-of-File” indication will be sent following the Text Screen and no more data will be expected for this job. If you want to send a single job but later want to send another job, you should still answer this question with an N rather than with a Y.

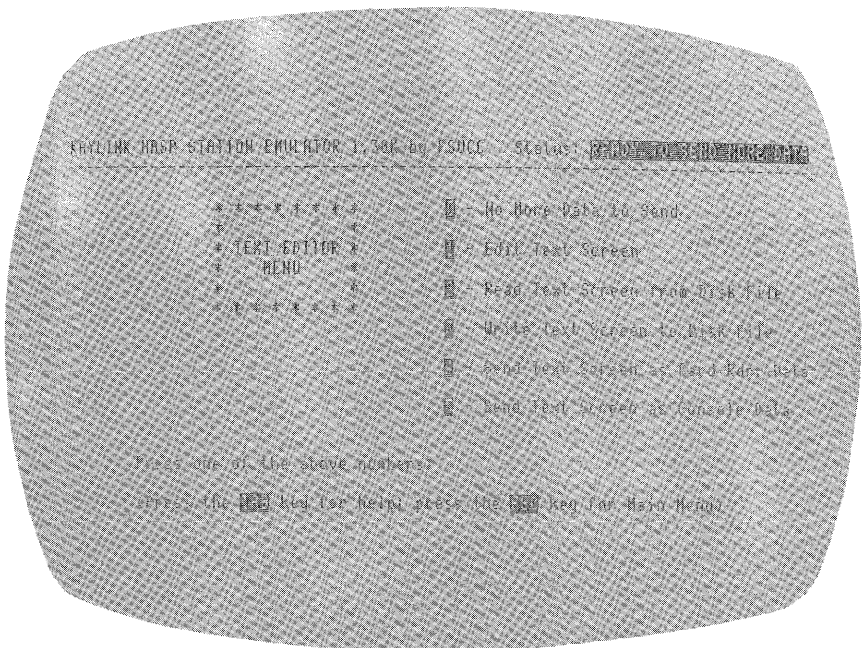
If you want, you can customize KAYLINK so that it never asks this question and always assumes that your answer is Y. This is handy if you have to send jobs made up of several disk files or Text Screens. If you customize KAYLINK this way, you will have to send an “End-of-File” using option 0 when you are done with the entire job. To find out how to customize KAYLINK in this way, read about the **M-** parameter in Appendix A.

When KAYLINK is in the process of sending a file or the Text Screen, option “4” becomes **Stop sending d:filename.sec** or **Stop sending TEXT**. This provides a convenient means of terminating the transfer when necessary without leaving the Text Editor Menu.

Option “5” on the Text Editor Menu does not appear at all when a transfer is in progress.

When KAYLINK is acting as a host rather than as a remote, option “4” will send the text as printer data rather than as card reader data.

If you have just sent a file or text screen to the host as card reader data, and you answered Y to the More Data Question to indicate that there would be more data, then the text editor menu will look like this:



**Figure 8.7 The Text Editor Menu With “No More Data To Send”**

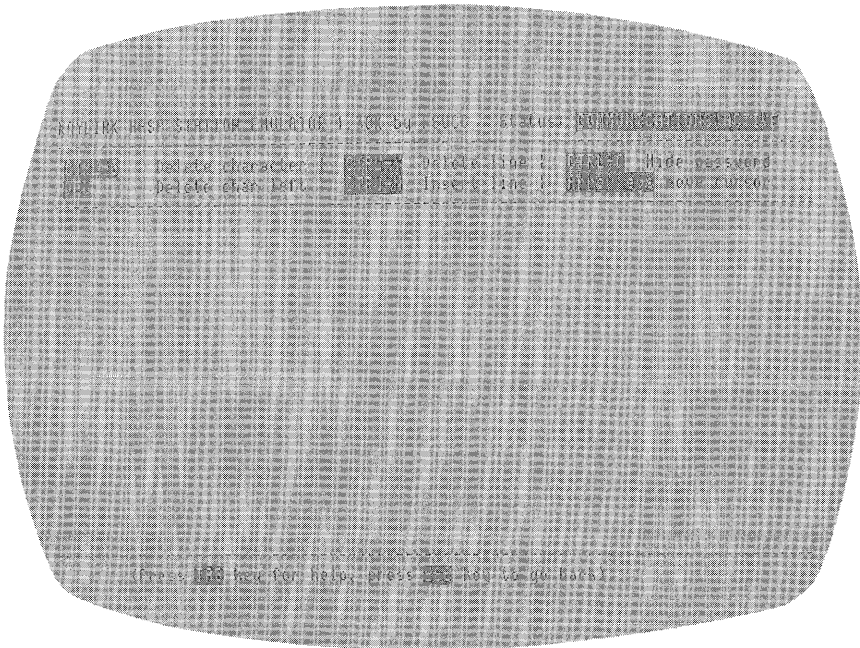
The “0” option provides you with an easy way of indicating an “End-of-File” to the host. If you really did not have any more data to send but forgot and answered Y to the More Data question, option “0” provides you with an easy way to tell the host that the job is complete.

### 8.3 Using the Text Editor

The Text Editor is a screen-oriented text editor with a capacity of seven-teen eighty-column lines. Editing is accomplished by typing normally and pressing certain keys for common editing functions. Changes appear on the screen as they are made.

When you enter the editor, you will see the screen divided into three parts. At the very top is the Status Window which will change as conditions do, even as you type. Below the Status Window is a short help guide for quick reference to the editing functions and will become more meaningful as you read further. In the middle, between horizontal lines, is your workspace. This will either be empty or contain the last edited text or text read from a file. The cursor will be somewhere in this area.

The following is a picture of the Text Editor Screen as it might appear during a typical session.



**Figure 8.8 The Text Editor**

To enter text, simply type normally. Pressing the DEL key will delete the character to the left of the cursor. Because jobs almost always contain passwords, pressing CTRL-Q will hide subsequent characters by displaying them as "X" characters. The RETURN key, of course, moves the cursor to the beginning of the next line.

Besides the DEL key described above, there are other more elegant ways of correcting your text. The arrow keys and the BACKSPACE key move the cursor around the screen **without affecting the text**. Any of several editing functions may then be used to change the text. A short list of editing keys with their functions follows (other lists can be found in Appendix B and on the Editor Help Screen):

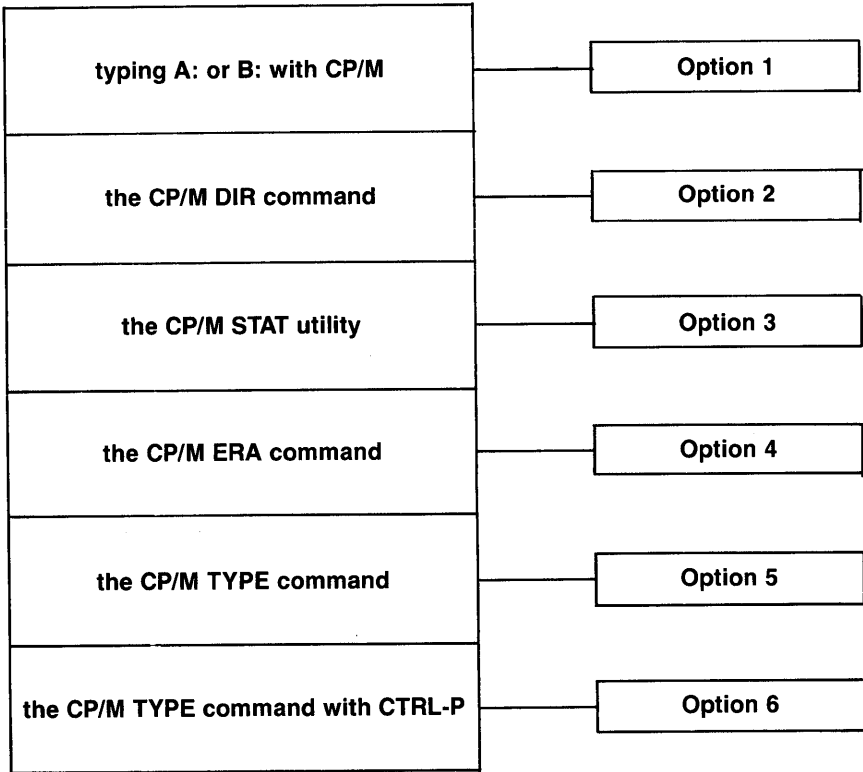
<b>Key or Keys</b>	<b>Function</b>
Arrow keys	Move the cursor around without changing anything.
DEL	Delete the character to the left of the cursor and move the rest of the line, if any, to the left.
BACKSPACE	Back up one character without deleting anything.
CTRL-G	Delete the character the cursor is on and move the rest of the line, if any, to the left.
CTRL-N	Move the current line and the rest of the lines below it down one line, making room for a new line, and put the cursor at the beginning of this new line.
CTRL-Y	Delete the current line and move the rest of the lines below it up.

When a character is typed while the cursor is in the middle of a line, all characters on that line to the right of the cursor are moved one position to the right to make room for the new character being typed. In other words, characters typed do **not** erase those characters already there but are rather inserted between characters. This feature makes it particularly easy to insert words forgotten the first time, such as arguments in job control statements. If you want to replace a word or character in the line, you must explicitly delete what is there with DEL or CTRL-G and then type the new word or character.



**If you are used to**

**Then you might like**



**Figure 9.1 Rough Equivalence of CP/M Commands and Local Disk Commands**

## 9.0 Disk Management—the Local Disk Commands Option

There are a few disk functions which are so important that they have been included in KAYLINK. Say you have a file you want to download from a host site, but you know there is not enough space on your disk. With KAYLINK it is a simple task to view the disk directory, see which files can be deleted, and then delete them to make room for the new file. You can also list a file to the screen to see if it is the right one to send to the host, or print a file you have saved on disk.

### 9.1 The Local Disk Commands Menu

Pressing the “5” key at the Main Menu will take you to the Local Disk Commands Menu. During a typical session, this menu might look like this:

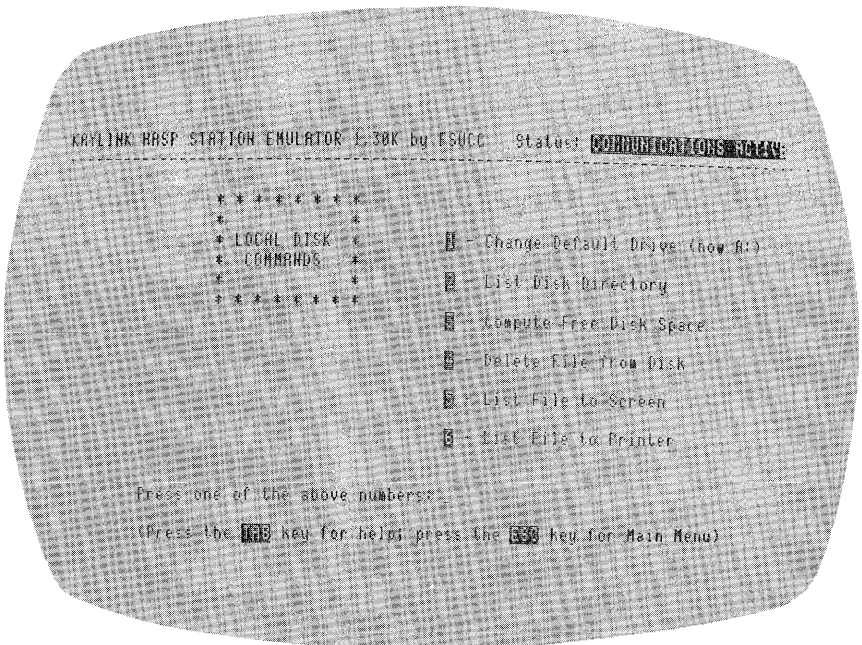
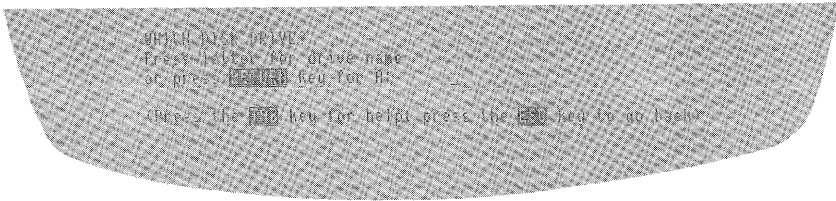


Figure 9.2 The Local Disk Commands Menu

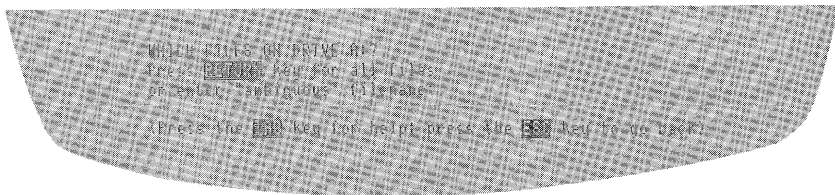
Option “1” will allow you to change the name of the default disk drive. This is the drive that is assumed whenever you enter a file name that does not specify a disk drive. KAYLINK will ask you to press the letter name of the new default drive (usually **A** or **B**). The name of the new default drive will then appear on option “1” and in subsequent file name and disk drive prompts.

Option “2” will allow you to see a directory of files in a manner very similar to the CP/M **DIR** command. When you press the “2” key, KAYLINK asks:



**Figure 9.3 The Directory Disk Drive Request**

The **d:** will of course appear as the name of the current default drive. At this point, you may either press the RETURN key for a directory of the default drive or press the letter name key (usually **A** or **B**) of the disk drive for which you would like to see the directory. KAYLINK will then ask:



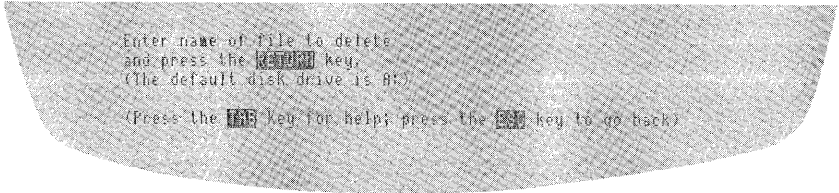
**Figure 9.4 The Directory File Request**

The **d:** in this question will be the drive you specified in the first question. Most users will then press the RETURN key to see a directory of all the files on the selected drive. More experienced users may enter a standard CP/M “ambiguous” file name to limit the directory to certain kinds of files. The ambiguous file name involves using special pattern matching characters, sometimes called “wild cards,” to select a group of files with similar names. For explanations of standard and ambiguous file names, please turn to Section 9.2.

Option “3” will first ask you for the letter name of a disk drive and then will compute and display the amount of space remaining on that disk in

number of K's (a K is 1024 characters, or about half a screen full). This function is very useful, in conjunction with option "2," to see how many and what files must be deleted to make room on the disk to save another file.

Option "4" will allow you to delete a file from the disk. When you select this option, this message will appear:

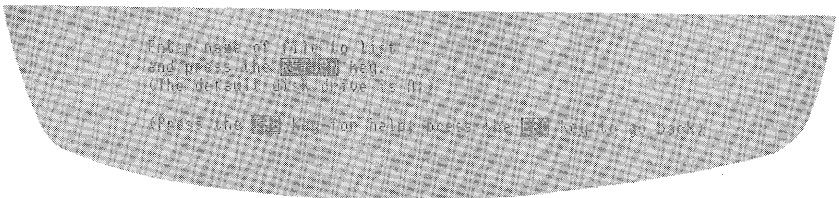


**Figure 9.5 The Delete File Request**

The normal procedure at this point is to enter a CP/M file name specifying the file you wish to delete. For more information about file names, please see Section 9.2. If you suddenly decide that you don't want to delete a file after all, press the ESC key.

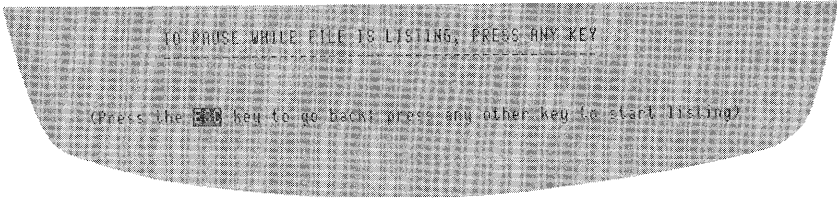
Unlike the CP/M **ERA** command, this delete function will **not** accept an ambiguous file name and therefore will not allow more than one file to be deleted at a time. Only single deletions with standard file names will be performed.

Options "5" and "6" will allow you to list local files to the screen of your terminal and to the printer, respectively. (Note that option "6" is not available and does not appear on the menu while the printer is busy printing incoming data.) When you select either option the message at the top of the next page will appear below the menu:



**Figure 9.6 The List File Request**

At this point you should enter the name of the file you want to list and press the RETURN key. If you selected option “5” to list the file to the screen, this message will then appear:



**Figure 9.7 The List Pause Message**

The first line means that, after the listing begins, if you want to pause listing to read what is on the screen, you may do so by pressing any key on the keyboard. When you do, listing of the file will stop, and KAYLINK will give you the option of aborting the rest of the listing by pressing the ESC key or continuing the listing by pressing any other key.

The second line indicates that you may press the ESC key if you decide not to list the file or any other key to let the listing begin.

If you selected option “6”, the file will begin listing on the printer after you enter the file name, and option “6” will toggle to **Stop Listing File to Printer**. If you select option “6” in this state, listing will stop, and the option will return to its original state. Note that option “6” on the Main Menu, **Suspend Printer/Punch Data**, affects even local printing. That is, if the status is **PRN/PUN DATA SUSPENDED**, listing a file to the printer cannot begin until you go to the Main Menu and press “6” to **Resume Printer/Punch Data**.

## 9.2 Things You Need to Know About File Names

Data is kept on disks in the form of files. For our purposes, files are sequential collections of data, usually in the form of ASCII characters. Each file is given a unique name, which is made up of these parts:

- 1) A drive name, usually **A:** or **B:**, which may be omitted. If the drive name is omitted, the default drive is assumed.
- 2) A primary name of up to eight characters.
- 3) An optional secondary name which contains up to three characters and is separated from the primary name by a period. If the secondary name is omitted a blank secondary name is assumed.

The following are valid file names:

**MLK.SOP            A:SKLIGIT            b:toad.mac            BORK**

Because capital letters are treated exactly as lower case letters, the third file name above is exactly the same as **B:TOAD.MAC**.

The following are **not** valid file names:

**AB:EEP            .POOKA            :WOWF            PICO.FOAMI**

Ambiguous file names are used to specify a group of files with similar names. They are just like standard unambiguous file names with two exceptions. The first is that they may contain the character “?” anywhere in either the primary or secondary file names to indicate that any character may occur in that position. The second is that they may contain the character “\*” to indicate that the rest of that particular name (primary or secondary) may contain anything at all.

The following are valid ambiguous file names:

**FUZ.\*            HUT?T.COM            A:\*\*            \*.ILK**

Ambiguous file names are used by the computer according to a process called pattern matching. The ambiguous file name is compared with all files on the selected disk. If a file is found which is equivalent to the ambiguous file name according to the rules, they are said to match.

The first file name, **FUZ.\***, will match **FUZ.MOO**, **FUZ.COM**, and **FUZ**, but will **not** match **FUZSKI.COW** or **MOOFUZ**.

The second file name, **HUT?T.COM**, will match **HUT2T.COM** and **HUTZT.COM**, but will **not** match **HUT2.COM** or **HUT2T.ASM**.

The third file name, **A:\*\***, will match **all** files on drive **A:**.

The fourth file name, **\*.ILK**, will match **OF-THAT.ILK** and **M.ILK** but will **not** match **ILK**.

The following are **not** valid ambiguous file names:

**\*:MLK,SOP            YOYOMA??????.\***

For a more comprehensive treatment of file names and the like, please consult a CP/M reference manual.

## 10.0 Examples of Use

This chapter contains examples of using KAYLINK to perform certain typical operations. Because the way you communicate with any host computer obviously differs from computer to computer, particular details are not given.

Examples generally start with loading and running the program. This is, of course, not necessary if the program is already running. These examples do assume the default configuration (see Section 6.1), so keep that in mind.

### 10.1 Using KAYLINK as an Ordinary HASP Station

To use KAYLINK as a HASP print station, follow these directions:

- 1) Load and run KAYLINK in the usual manner, dialing up the other computer if necessary. (See Section 3.2)
- 2) Wait for the status to change from **COMMUNICATIONS INACTIVE** to **COMMUNICATIONS ACTIVE**
- 3) Use the HASP Console to communicate with the host computer.
- 4) When you are done, press the ESC key to go to the Main Menu.
- 5) When you are at the Main Menu, press the "7" key to exit KAYLINK.

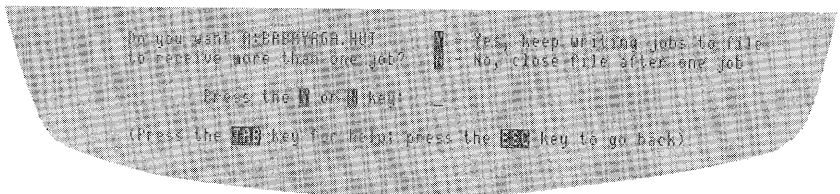
Since the default configuration of KAYLINK is for a normal print station (see Section 6.1) you don't have to do anything special to make it work as one. The only tricky thing is communicating with the host computer. Since this varies from computer to computer, this manual cannot help you do that. For the particulars, please consult documentation for the system which you have dialed.

### 10.2 Changing the Incoming Data Configuration

Let's say that you know that when you log on to your host using KAYLINK a print job will come down that you just want to save on disk. Let's further say that you want the file to be called **BABAYAGA.HUT** and you want it written to drive **B:**. To do this, use the following procedure:

- 1) Load and run KAYLINK in the usual manner, dialing up the other computer if necessary. (See Section 3.2.)

- 2) Press the ESC key to get to the Main Menu.
- 3) Press the “6” key to suspend printer data. This is to make sure that no data will come down before you are prepared.
- 4) Press the “2” key to Redirect Incoming Data. The Incoming Data Control Menu, Figure 6.1, will appear on the screen.
- 5) Press the “4” key to stop sending printer data to the printer.
- 6) Press the “5” key to write the printer data to a file.
- 7) When KAYLINK asks you for a file name, type **B:BABAYAGA.HUT** and press the RETURN key.
- 8) When KAYLINK asks you



press the **N** key, because only one job is expected.

- 9) If you want to see the data on the screen as it is being saved on disk, press the “3” key to send the data to the console as well as to the file.
- 10) Press the ESC key to return to the Main Menu.
- 11) Press the “6” key to resume receiving data.
- 12) Press the “1” key to use the HASP console. If you decided to send the data to the console, it will not be shown or saved until you do this.
- 13) Wait for the **COMMUNICATIONS INACTIVE** message to change to **COMMUNICATIONS ACTIVE**, if it has not already done so. If this message remains for a long time, something may be wrong with the communications link.
- 14) It may be necessary to type something to identify yourself to the host computer. Check the reference manuals for your site to see.

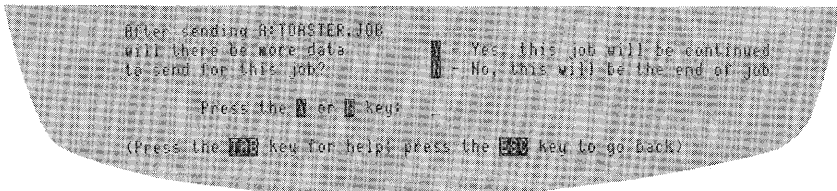


- 15) Wait for the message **RECEIVING PRINTER DATA** to appear in the Status Window. The data will be saved on the file and will be shown on the screen if you specified so in step 9.
- 16) When the print job is complete the file will be closed automatically.

### 10.3 Sending Jobs and Receiving the Results

Imagine that you want to send a job to the host computer. This job is currently stored on file **A:TOASTER.JOB**, You want printer data from the job to be stored on file **B:BABAYGA.HUT**. To do this, follow this procedure:

- 1) Follow steps 1-14 in Section 10.2 (the previous section) to tell incoming printer data to go to file **B:BABAYGA.HUT**.
- 2) Press the ESC key to get back to the Main Menu.
- 3) Press the “3” key to send a disk file. This will take you to the Send Disk File Menu, Figure 7.1.
- 4) Press the “1” key to send a file as card reader text data.
- 5) When asked for a file name, type **A:TOASTER.JOB** and press the RETURN key.
- 6) When KAYLINK asks you



press the N key because the entire job is on one file. If you had a job which resided on more than one file, you would enter Y and send the next file after the first one had been sent.

- 7) When transmission of the file begins, the Send Disk File Menu will change to Figure 7.4 and the status will change to **SENDING A:TOASTER.JOB**. Press the ESC key to return to the Main Menu.
- 8) Press the “1” key to use the HASP console and wait for the host to respond.

## 10.4 Entering a Job with the Text Editor

This section describes the entry of an imaginary job using the Text Editor, assuming that your version of KAYLINK is customized for password protection. Under no circumstances should the JCL (Job Control Language) be taken seriously.

- 1) Load and run KAYLINK in the usual manner. (See Section 3.2.)
- 2) Press the ESC key to go to the Main Menu.
- 3) Press the “4” key to Edit and Send Text.
- 4) KAYLINK will ask you to enter a password. Type **CHICKEN** or some other password and press the RETURN key. Notice that it says **XXXXXXXX** instead of what you typed.
- 5) KAYLINK will ask you if it’s O.K. to clear the old text. Press the RETURN key to signal that you want to clear it and start anew.
- 6) The Text Editor Menu, Figure 8.5, will appear (only options “1” and “2” will appear at this time). Select option “1” to begin editing.
- 7) You will be presented with a screen which will be blank except for messages at the top and bottom. This is the Text Editor, Figure 8.8. Type these job control statements:

```
JOB = 0908983,2894737,GACK  
ASSIGN OUTPUT TO PRINT LINK  
ASSIGN INPUT TO NEXT RECORD  
SPITBOL  
GO AWAY  
/*EOR  
*COPY PROGRAM  
TOAD OUTPUT = INPUT :S(TOAD)  
END
```

- 8) You decide that **PRINT** really should be spelled with an “N.” Move the cursor (which will be inverted, flashing, dim, underlined, or otherwise unlike normal characters) to the erroneous “M” by pressing the arrow keys.
- 9) Delete the erroneous “M” by holding the CTRL key and pressing the G key.

- 10) Type the correct “N.”
- 11) You remember that the **GO AWAY** statement is not necessary in a job file. Move the cursor to any position on that line by pressing the arrow keys.
- 12) Delete that line by holding the CTRL key and pressing the Y key.
- 13) When you are done changing the file, press the ESC key to go to the Editor Menu.
- 14) If you want to save the data you have entered, press the “3” key to write it to disk. Be prepared to enter a file name when asked.
- 15) If you wanted to send the text to the host computer, you would press the “4” key. Since this example does not use any real Job Control Language, don’t send this actual text to a computer.

# APPENDIX A

## Customizing KAYLINK

KAYLINK is usually loaded and run by typing

### KAYLINK

on the keyboard. Although this is probably the most common way to run it, it is by no means the only way to do so. KAYLINK allows the command line to contain various arguments which specify things about the program.

Readers of the Users' Manual will remember that typing

### KAYLINK HOST

loads and runs KAYLINK as a host site rather than as a remote site. This is an example of specifying an argument on a command line (in this case, **HOST** is the one and only argument).

In general, KAYLINK can take any number of arguments separated by commas. These arguments may take the form of a single word, such as **HOST** above, or an equivalence, which is a single word followed by an equal sign (=) which is in turn followed by a string of characters or a number. For example, the command line

### KAYLINK LP = 66, NP

will load and run KAYLINK with 66 lines per printer page and no password protection on the text editor. **LP=66** is an equivalence, while **NP** is a single word.

Although it is useful to be able to specify arguments for running KAYLINK, typing a long line of arguments every time you want to run KAYLINK can become tiring. Also, it is sometimes necessary to set up a copy of KAYLINK with certain options already changed. For this reason, a special argument is provided. This argument takes the form **O = filename**, where **filename** is replaced by a standard CP/M file name. When this argument is specified on the command line, KAYLINK will save a new copy of KAYLINK with the new setup on file **filename** with secondary name **.COM** and exit immediately. For example, typing

### KAYLINK S-, O=KAYLINK2

will save a new copy of KAYLINK on the file **KAYLINK2.COM**. This copy will be the same as the original, except that the new copy, when it is itself loaded and run, will not send a signoff card at the end of a session (**S** – argument).

The following is a list of all legal command line arguments and their meanings. If an argument is described as being the “default,” that means that the original copy of KAYLINK on your distribution disk is installed that way.

<b>Argument</b>	<b>Function</b>
<b>HOST</b>	Run KAYLINK as a host. This argument must be the first if more than one is used. It does not work in conjunction with the “ <b>O=</b> ” parameter; thus KAYLINK cannot permanently be installed to be a host.
<b>O = filename</b>	If this argument is present, KAYLINK with the new changed setup will be saved on file <b>filename</b> with type <b>.COM</b> . If this argument is absent, KAYLINK will be run immediately with the new setup.
<b>I = filename</b>	If this argument is present, KAYLINK will load <b>filename</b> as a HIOS <b>COM</b> file. See section 4.7 of the Technical Manual for more information about the HIOS.
<b>LP = nn</b>	if this argument is included with <b>nn</b> replaced by a decimal number, KAYLINK will use that number as the number of lines per printed page, including all space at the top and bottom of each page. The default is 66 lines per page.
<b>P –</b>	This argument indicates that a form feed be sent to the printer whenever it comes within four lines of the bottom of the page. For example, if there are 66 lines per page, KAYLINK will print 62 lines and then automatically execute a form feed.
<b>P –</b>	This argument disables all automatic form feeds. (Default)
<b>ML = n</b>	If <b>n</b> is replaced by a single-digit number, that number will be the minimum length of the Text Editor Password. A length of 0 will allow a null password to be entered when the RETURN key is pressed at the password page. The default minimum length is zero.

- NP** This argument specifies that no password is required to use the Text Editor. Do not use in conjunction with **ML = n**
- T** This argument causes KAYLINK to be a transparent remote station. This allows the host to send transparent and non-transparent data to the remote. KAYLINK is by default a transparent station.
- NT** This argument sets up KAYLINK as a non-transparent remote station. This prevents the host from sending any transparent data. The “**T**” and “**NT**” options have no effect on KAYLINK operating as a host.
- RL** When KAYLINK receives a record to be sent to the console, it must do a carriage return-line feed combination either before or after the record is displayed as a line of text. This argument causes the carriage to return **before** the line and may be used to allow systems to display prompts on the same line they ask for input.
- LR** This argument causes the carriage return to occur **after** the line. This is the default.
- S +** This argument causes KAYLINK to send a /\***SIGNOFF** card as card reader data before exiting to the operating system when option “7” is selected from the Main Menu. For more information on the signoff card, see Section 3.1 of the Technical Manual. This is the default.
- S -** This argument specifies than no signoff card be sent.
- SO = string** The signon card is sent over the communications line when KAYLINK is loaded as a remote. This argument changes the signon card to the characters in **string**. If you want to have commas in the signon card, use CTRL-A to represent each comma. For more information on the signon card, turn to Section 3.1 of the Technical Manual.
- RN = nn** This argument sets up a standard signon card with remote number **nn**. Since this option builds a signon card, it should not be used at the same time as **SO = string**.
- P1=string** Sets the standard HASP password to **string**. This argument

is used in conjunction with **RN = nn** to produce a standard signon card.

**P2 = string** Sets the alternate password required by some sites to **string**. This is used in conjunction with **P1 = string**.

**BS = nnn** Sets the transmitted block size to nnn. The default is 512 bytes, the maximum is 800 bytes (decimal). The minimum is 160.

**M +** Causes the "More Data" question (see the Users' Manual) to be asked whenever card reader data is sent. This is the default.

**M -** This causes KAYLINK to not ask the "More Data" question. KAYLINK will assume that there will be more data.

#### **Examples**

**KAYLINK O = KAYLIN80,LP = 80,SO = /\*SIGNON**

will produce a new copy of KAYLINK with 80 lines per page and with the specified signon card. KAYLINK does not run, but a new copy of KAYLINK is written onto file **KAYLIN80.COM**.

**KAYLINK LP = 80**

will run KAYLINK with 80 lines per page. No new copy of KAYLINK will be saved.

**KAYLINK O = KAYLIN37,RN = 37,P1 = WACKAWACKA**

will produce a new copy of KAYLINK, called **KAYLIN37.COM**, with a standard remote signon card for remote number 37 with password **WACKAWACKA**

**KAYLINK O = KAYLINNP,S + ,NP**

will produce a new copy of KAYLINK, called **KAYLINNP.COM**, with a signoff card and no password for the Text Editor.

If you do not include an argument to change a particular option, the option will remain unchanged. Therefore, the sequence

**KAYLINK O=KAYLINK,SO=/\*SIGNON,S+**

**KAYLINK O=KAYLINK,LP=88,ML=4**

is effectively equivalent to this sequence

**KAYLINK O = KAYLINK,SO = /\*SIGNON,S + ,LP = 88,ML = 4**

Notice that the output name is the same as the program name in this example. KAYLINK will write the new copy over the old one without creating an intermediate file. If you try this, make sure you have a backup copy of KAYLINK under another name or on another disk.

This technique of breaking up changes into more than one step can be used when all desired options cannot fit on one line.



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# APPENDIX B

## Instant Reference Guide

### Incoming Data

To control incoming data, select option "2," the Redirect Incoming Data option at the Main Menu.

When KAYLINK is acting as a remote, the logical devices are the console, the printer, and the punch; when KAYLINK is acting as a host, the logical devices are the console and the card reader. The following table shows to what physical devices incoming data for each logical device can be sent:

Logical Devices	Console	Physical Devices	
		Printer	Disk
Console	ALWAYS	SELECTABLE	SELECTABLE
Printer	SELECTABLE	DEFAULT	SELECTABLE
Punch	SELECTABLE	DEFAULT	SELECTABLE
Reader	SELECTABLE	DEFAULT	SELECTABLE

Where

**ALWAYS**  
**DEFAULT**

means that data is always sent there.

means that data is set up to go there when KAYLINK is loaded and run.

**SELECTABLE**

means sendable via the Incoming Data Control Menu.

The following table describes EBCDIC to ASCII translation for incoming data:

Logical Device	If Data Is Transparent	If Data Is Non-Transparent
Console	TRANSLATED	TRANSLATED
Printer	TRANSLATED	TRANSLATED
Punch	INSTALLED	TRANSLATED
Reader	SELECTABLE	TRANSLATED

Where

**TRANSLATED**

**NOT TRANSLATED**

**SELECTABLE**

**INSTALLED**

means translated from EBCDIC to ASCII.

means not translated and assumed to be binary data.

means selectable by an option on the Incoming Data Control Menu.

means that if KAYLINK is installed as a transparent terminal, punch data will not be translated, but if KAYLINK is installed as a non-transparent terminal, **all** incoming data will be translated. See Appendix A to find out how to install KAYLINK as a non-transparent terminal.

## Outgoing Data

To send data which is on a disk file, select option "3," the Send Disk File option at the Main Menu.

Data on a disk file may be sent as console, reader text, or reader binary data when KAYLINK is acting as a remote. When KAYLINK is acting as a host, data may be sent as console, punch, or printer data.

The following table describes EBCDIC to ASCII translation for outgoing data:

Logical Device	
Console	TRANSLATED
Printer	TRANSLATED
Punch	NOT TRANSLATED
Reader	SELECTABLE

Where

**TRANSLATED**

**NOT TRANSLATED**

means translated from ASCII to EBCDIC,

means not translated and assumed to be binary data, and

**SELECTABLE** means selectable by an option on the appropriate menu.

Data from the physical card reader is always translated as text.

### **Text Editor**

The following is a list of editor keys and their functions. The names of keys may vary from system to system.

<b>Key or keys</b>	<b>Function</b>
RETURN	Move the cursor to the beginning of the next line.
Arrow keys	Move the cursor around without changing anything.
DELETE	Delete the character to the left of the cursor and move the rest of the line, if any, to the left.
BACKSPACE	Move the cursor one character to the left without deleting.
CTRL-G	Delete the character the cursor is on and move the rest of the line, if any, to the left.
CTRL-N	Move the current line and the rest of the lines down one line, making room for a new line, and put the cursor at the beginning of this new line.
CTRL-Y	Delete the current line and move the rest of the lines up.
CTRL-Q	Display whatever you type next (for the rest of the line or until you press CTRL-Q again) as X's to hide password.

Pressing a character key **inserts** the character before the character the cursor is on and moves the rest of the line to the right.

### **File Names**

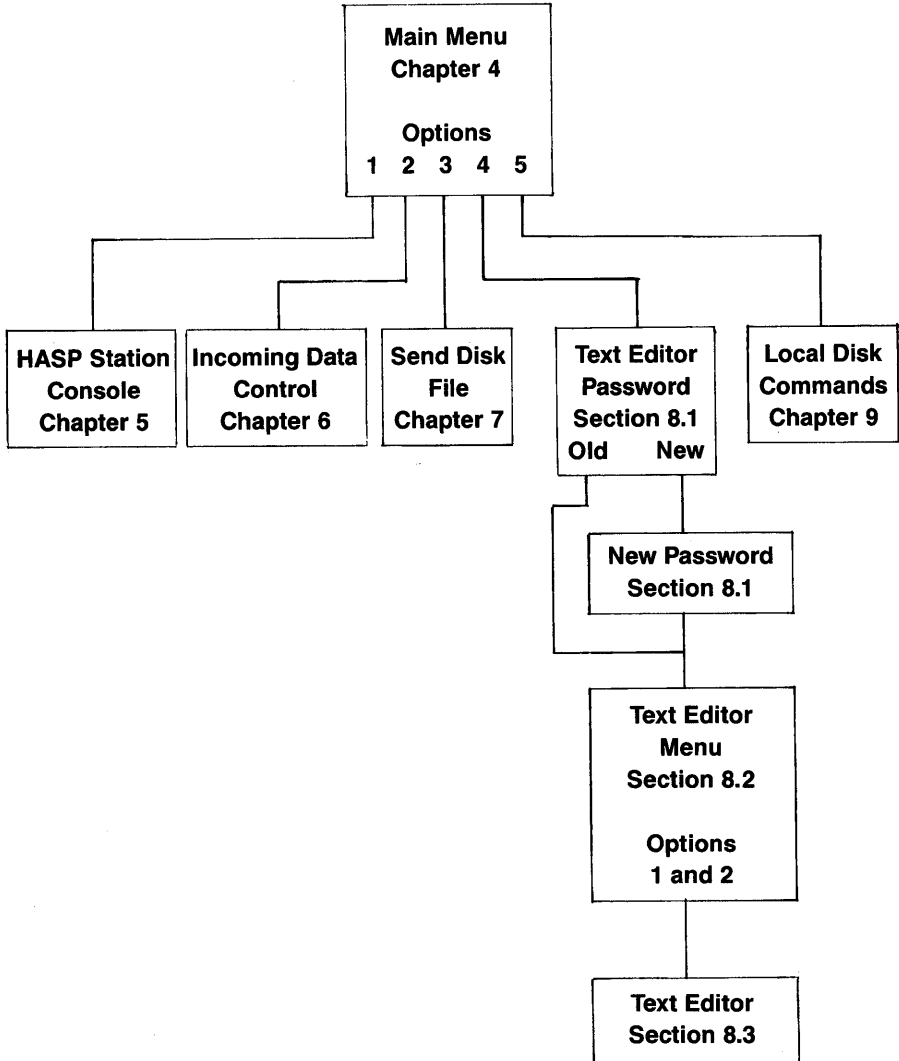
A CP/M file name is of the form **d:filename.sec** where **d** is the name of a disk drive (**A** or **B**), **filename** is a primary file name of up to eight characters which defines the name of the file, and **sec** is a secondary file

name of up to three characters, usually designating the type of the file.

If the drive name is omitted, the default drive is used. The default drive may be changed with option "1" at the Local Disk Commands Menu. If the secondary file name is omitted, three blanks will be used.

## Menus

The following is a picture of all the menus and intermediate states in KAYLINK:



Pressing the HELP key anywhere gives you help. Pressing the ESC key anywhere described by a box on this chart (except the Text Editor Menu) takes you up one box. Pressing the ESC key at the Text Editor Menu takes you to the Main Menu.

Please note that not all options are listed for every menu.

The following is a list of all the menus with their purposes:

### **The Main Menu**

The heart of the program. This menu controls all other menus, allows temporary suspension of data transmission and reception, and provides the exit from KAYLINK.

### **The Incoming Data Control Menu**

This menu allows redirection and control over all data coming in over the communications line.

### **The Send Disk File Menu**

This menu allows files on disk to be sent over the communications line in a variety of ways.

### **The Text Editor Menu**

This menu allows access to the single-screen text editor for short data streams. Text may be sent over the communications line or written to or read from a disk file.

### **The Local Disk Commands Menu**

This menu allows the user to see the directory of a drive, change the default drive, compute the amount of space on a drive, delete files, and list files either to the screen or to the printer.

Permission is given to copy the five pages of APPENDIX B, provided that they are copied as a unit, are used for scholastic purposes or for personal reference, and show the following notice:

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# APPENDIX C

## Status Messages

Status messages are messages which appear on the Status Line and tell certain things about the operation of the program. Since there is only space in the Status Line for one message, the most important message will appear.

The following is a list of status messages in order of importance, from most important to least important.

Message	Meaning
<b>*** DISK ERROR ***</b>	An error has occurred while reading or writing a disk file. This message can be caused by many different hardware and software problems. NOTE: When this error occurs, a more complete explanation will appear while you are reading the Main Menu or are using the HASP Station Console.
<b>*** PRINTER PROBLEM ***</b>	The printer is not working for some reason. This message usually indicates that the printer is off, off line, or out of paper. Correct the error, and then restart the printer with option "6" at the Main Menu. NOTE: When this error occurs, a more complete explanation will appear while you are reading the Main Menu or are using the HASP Station Console.
<b>COMMUNICATIONS INACTIVE</b>	This message appears when KAYLINK is first loaded and run. It indicates that communications have not yet been established.
<b>COMMUNICATIONS PROBLEM</b>	Communications had been established but have been broken for some reason. This message can be caused by many different hardware and software problems.
<b>PRN/PUN DATA SUSPENDED</b>	This message appears when printer and punch data have been suspended, either by the user's pressing the "6" key at the Main Menu or by some error related to the printer or to the disk. If the latter is the case, correct the error and then restore normal operations with option "6" at the Main Menu.
<b>PRN/RDR DATA SUSPENDED</b>	The version of the previous message which is used when KAYLINK is acting as a host rather than as a remote.
<b>PRN DATA DEST REQUIRED!</b>	These messages occur when data of the specified type (printer, punch, or reader) is trying to come in but has no destination. To correct any of these errors, go to the Incoming Data Control Menu and give the specified type of data a destination.
<b>PUN DATA DEST REQUIRED!</b>	
<b>RDR DATA DEST REQUIRED!</b>	
<b>SENDING CONSOLE LINE</b>	KAYLINK is sending the last line you entered at the console. Wait until the host has accepted the last line before you try to send another console line.
<b>HOLDING REDIRECTED DATA</b>	Data which is redirected to the console is waiting, either because you are not at the HASP Station Console now or because you have started to type a line at the HASP Station Console but have not pressed the RETURN key yet. To fix this problem, if you are not at the HASP Station Console go there, and if you are there complete the line you are typing or press CTRL-Y to erase it.

**SENDING CARDS**

KAYLINK is sending a deck of cards from the physical card reader.

**SENDING**

**d:filename.sec**

KAYLINK is sending the specified file over the communications line in some way. **d:filename.sec** will appear as the name of the file you had specified at the Send Disk File Menu.

**SENDING TEXT**

A Text Screen which was created using the Text Editor is being sent.

**CARD READER  
PROBLEM**

This message indicates that there is a problem with the physical card reader.

**READY TO SEND  
MORE DATA**

This message is a reminder to send more data. It appears when text or disk data has been sent and you had specified that more data would follow.

**LOSING CONSOLE  
MESSAGES!**

The host has sent you too many console messages while you were not using the HASP Station Console; KAYLINK cannot buffer them all. The oldest ones are in danger of being thrown away. Go back to the HASP Station Console and the most recent messages will be displayed.

**CONSOLE  
MESSAGES WAITING**

The host has sent you one or more messages. They are waiting for you at the console.

**RECEIVING  
PRINTER DATA**

Data of the specified type is coming in over the communications line.

**RECEIVING  
PUNCH DATA****RECEIVING  
READER DATA**

KAYLINK is listing the specified file to the printer.

**LISTING**

**d:filename.typ**

**COMMUNICATIONS  
ACTIVE**

This message indicates that KAYLINK is idling and that the computer at the other end of the line is still there.



# APPENDIX D

## Error Messages

There are two types of error messages in KAYLINK: response and automatic. **Response errors** occur when KAYLINK is unable to do something it was requested to do. When a response error occurs, a message will be displayed near the bottom of the screen. When you are done reading the message, you must press the ESC key to erase it and get back to what you were doing.

The following is a list of response error messages with their explanations:

1) **Password must be at least n characters long.**

This message will appear when you enter a Text Editor password which is shorter than the customized minimum length (see Appendix A of the User Manual). **n** will appear as a single-digit number specifying the minimum number of characters you must type. Press the ESC key and try again.

2) **\*\*\* File name conflict--you are currently using d:filename.sec**

This message will appear when, in response to some request for a file name, you enter the name of a file that is already active, that is, a file which KAYLINK is currently reading or writing. **d:filename.sec** will appear as the file name which you tried to use. Press the ESC key and try a different file name.

3) **\*\*\* There is no file d:filename.sec**

You have tried to send or read a file which does not exist. Check your directory using Option "2" on the Local Disk Commands menu.

4) **\*\*\*'xxxxxxxx' is not a valid file name.**

You have tried to enter a file name but have not followed the rules for CP/M file names. **xxxxxxxx** will appear as the characters you typed. Check section 9.2 to see what is wrong.

5) **\*\*\* Error on drive d:--'Read Only' file d:filename.sec**

This message will appear when you try to write to or erase a read-only file. **d:filename.sec** will appear as the name of the file, and **d:** will appear

as the name of the drive on which that file resides. Press the ESC key and pick another file name.

6) **\*\*\* Error on drive d:--the disk directory is full.**

This message indicates that the disk directory (the section of the disk which stores information about all the files on the disk) has too many file names or file extents to write another file or extent. Try another disk, or go to the Local Disk Commands Menu by pressing the "5" key at the Main Menu and delete a few files to make room.

7) **\*\*\* Error on drive d:--the disk is full.**

There is too much data on the disk to write any more. Try another disk, or go to the Local Disk Commands Menu by pressing the "5" key at the Main Menu and delete a few files to make room.

8) **\*\*\* Error on drive d:--unable to close d:filename.sec**

This message indicates that, for some reason, KAYLINK cannot close a file. This error usually occurs when you specify that a file not be closed automatically and change disks before closing it manually. See section 6.2.

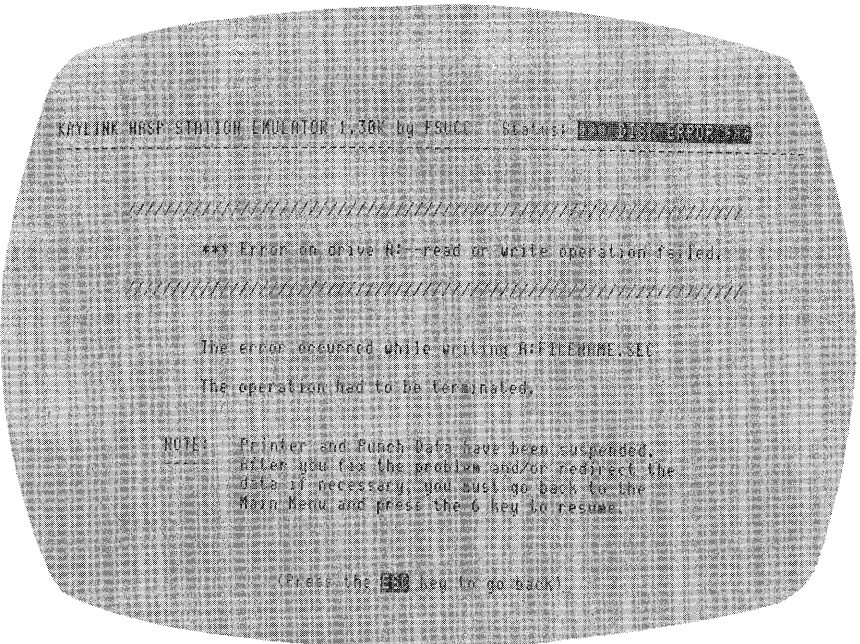
9) **\*\*\* Error on drive d:--read or write operation failed.**

This message is a catch-all for disk errors not covered by messages 2 through 8. It can mean anything from a bad, missing, or write-protected disk to an error of the operating system. Check to see that the disk is in the drive and that the gummed tab is securely in place over the write-protect notch in the disk, if any. If you are using a 5-1/4 inch disk instead of an 8 inch disk, the gummed tab must be removed.

**Automatic errors** occur in the middle of an ongoing operation, such as sending or listing a file. When an automatic error occurs, two things will happen:

- 1) The status message will change to say **\*\*\* DISK ERROR \*\*\*** or **\*\*\* PRINTER PROBLEM \*\*\***.
- 2) If you are reading the Main Menu or are using the HASP Station Console, a full-screen error message will appear.

If the error is a disk error, the full-screen message will take the following form:



The message between the rows of slashes may be any one of the response error messages 6 through 9.

The last paragraph in the message will only appear when the error caused printer and punch data to be suspended. This is generally true of errors that involve writing incoming data to disk.

If the error is a printer error, the full-screen message will be the following:

```
KRYLINK BASE STATION EMULATOR 1.30K by FSUCS Status: [XXXXXXXXXXXXXXXXXX]
```

SOMETHING IS WRONG WITH THE PRINTER

Check the printer power, on-line switch, and paper supply. If you cannot fix the problem, you may want to redirect all incoming data to the console or to a file.

NOTE: Printer and bunch bits have been suspended. After you fix the problem and/or redirect the data if necessary, you must go back to the Main Menu and press the b key to resume.

(Press the [ESC] key to go back)

This error may occur for many reasons including the printer running out of paper or the cable being disconnected. If you can't correct the problem, as the message says, the best thing to do is to go into the Incoming Data Control Menu (chapter 6) and redirect incoming data so that the printer is not used at all. If you save the data on a file, you can print it later, when the printer is fixed.

## APPENDIX E

### Security Measures for Public Environments

KAYLINK is designed to be useful in a public as well as a private environment, and therefore provides features for security. The first feature is a very simple method of hiding all characters typed. Pressing CTRL-Q (i.e. holding the CTRL key and pressing the Q key) will cause all subsequent characters typed on that line to appear as X's. Pressing CTRL-Q again will restore the character display to normal without affecting those characters which have already been hidden. Advancing to a new line will also reset the character display to normal.

The above method of hiding text is strictly internal to KAYLINK. For example, a file containing hidden characters produced by the KAYLINK Text Editor will always show X's when being examined with the Text Editor or when listed by one of the Local Disk Commands but will not be secure against being examined by another text editor or system external to KAYLINK. For this reason, it is assumed that a user who saves a file on a disk has physical security over the disk containing his file.

The other security feature is the Text Editor password. As a convenience to the user, the Text Screen is retained in memory after being created so it may be accessed as often as desired for re-editing. In public environments, however, it is necessary to guard against the next user being able to access that Text Screen, which is likely to contain the previous user's job number and password. Therefore, KAYLINK can be installed to require a password to gain access to Text Editor Menu. (The minimum length of the password required is also installable; see appendix A of this manual or the Command Line Installation section of the Technical Manual.) As long as the user supplies the password stored with the Text Screen, access is permitted; if a different password is given, the Text Screen is erased from memory. Section 8.1 of the Users' Manual describes this feature of KAYLINK more fully.

# APPENDIX F

## Help Screens

This appendix contains all of the Help Screens in KAYLINK.

The following Help Screen will appear when the HELP key is pressed at the HASP Station Console (Chapter 5):

KAYLINK HASP STATION EMULATOR 1.30K by PSUCC Status: **XXXXXXXXXXXXXXXXXXXX**

### HASP STATION CONSOLE

This is your "operator's console" for the HASP Station; it links you directly to the computer at the other end. Each line you enter on the keyboard is sent out as "console data", and the incoming console data is shown on the display.

### REDIRECTED DATA

If other data is coming to the console (see "Redirect Incoming Data" menu), it stops when you press any key so you can enter a command, and continues when you send (or erase) the entry. While you are using the help screens and menus, console data and data redirected to the console are suspended; when you resume HASP Station Console, only the console data will be restored to the display.

### KEYBOARD EDITING

To delete the whole line, hold down the CTRL key and press the "Y" key. To delete the last character entered, press the DEL key.

### HIDE YOUR PASSWORD

Pressing CTRL-N causes whatever you type next (for the rest of that line, or until you press CTRL-N again) to be displayed as X's.

### NOTE TO BEGINNERS

Help is available throughout KAYLINK on all menus and prompts. The message at the top of every screen shows current activity or status. If errors occur, a message tells you what went wrong and what you can do about it.

(Press the **ESC** key to go back)

The following Help Screen will appear when KAYLINK is acting as a remote, and the HELP key is pressed at the Main Menu (Section 4.2):

```

KAYLINK HASP STATION EMULATOR 1.30K by FS00C  Status: OPERATING SYSTEM
-----
1- HASP STATION CONSOLE
   Makes your terminal the operator's console of this HASP station. The screen shows incoming Console Data and your keyboard entries are sent as Console Data on the link.
2- REDIRECT INCOMING DATA
   Change destination(s) of incoming Console, Printer, and Punch Data. Destinations are the HASP Station Console, the printer, or a file.
3- SEND DISK FILE MENU
   Send a file to the host computer, or abort transmission of the file (or the text screen) currently being sent.
4- EDIT AND SEND TEXT
   Create and edit text on the screen of your terminal and then send it.
5- LOCAL DISK COMMANDS
   List disk files, erase files, etc.
6- SUSPEND PRINTER/PUNCH DATA
   Press to stop printer if a problem occurs, or to stop data to prepare to write it to disk. This becomes "RESUME PRINTER/PUNCH DATA" while data is suspended; press it again when you are ready to continue.
7- EXIT KAYLINK AND RETURN TO CP/M
   Close files, sign off HASP link, and return to operating system.

```

(Press the ESC key to go back)

The following Help Screen will appear when KAYLINK is acting as a host, and the HELP key is pressed at the Main Menu (Section 4.2):

```

KAYLINK HASP STATION EMULATOR 1.30K by FS00C  Status: OPERATING SYSTEM
-----
1- HASP STATION CONSOLE
   Makes your terminal the operator's console of this HASP station. The screen shows incoming Console Data and your keyboard entries are sent as Console Data on the link.
2- REDIRECT INCOMING DATA
   Change destination(s) of incoming Console Data and Card Reader Data. Destinations are the HASP Station Console, the printer, or a file.
3- SEND DISK FILE MENU
   Send a file to the remote station, or abort transmission of the file (or the text screen) currently being sent.
4- EDIT AND SEND TEXT
   Create and edit text on the screen of your terminal and then send it.
5- LOCAL DISK COMMANDS
   List disk files, erase files, etc.
6- SUSPEND PRINTER/READER DATA
   Press to stop printer if a problem occurs, or to stop data to prepare to write it to disk. This becomes "RESUME PRINTER/READER DATA" while data is suspended; press it again when you are ready to continue.
7- EXIT KAYLINK AND RETURN TO CP/M
   Close files, sign off HASP link, and return to operating system.

```

(Press the ESC key to go back)



The following Help Screen will appear when KAYLINK is acting as a remote, and the HELP key is pressed at the Incoming Data Control Menu (Section 6.2):

```

KAYLINK HASP STATION EMULATOR 1.38K by FSUCC  Status: CONSOLE DATA DEST
-----
HASP DATA STREAMS
This diagram shows data flow on the HASP link. KAYLINK can act as host or remote; right now, it is a remote station.
HOST SITE
HOST ---> Console Data <---
HOST ---> Printer Data <---
HOST ---> Punch Data <---
HOST ---> Card Reader Data <---
REMOTE STATION

REDIRECTING DATA
This menu lets you switch your incoming data to the (HASP Station) console, the printer, a file, or to any combination. Pressing a number turns one destination for one data stream on or off as shown. The column to the left of the numbers shows destinations currently assigned.

HOLDING REDIRECTED DATA
This status means data you redirected to the console is being held until you return to the HASP Station console.

PRN (or PUN) DATA DEST REQUIRED!
This status means the host wants to send Printer (or Punch) data and you have not assigned a destination; the data is forced to wait until you do.

WRITING DATA TO FILES
Use care when naming a file to write; any existing file with the same name will be replaced. Do not remove your disk until you either "Stop Writing" all open files or exit the program, or some of your data will be lost.

(Press the ESC key to go back)

```

The following Help Screen will appear when KAYLINK is acting as a host, and the HELP key is pressed at the Incoming Data Control Menu (Section 6.2):

```

KAYLINK HASP STATION EMULATOR 1.38K by FSUCC  Status: CONSOLE DATA DEST
-----
HASP DATA STREAMS
This diagram shows data flow on the HASP link. KAYLINK can act as host or remote; right now, it is acting as a host.
HOST SITE
HOST ---> Console Data <---
HOST ---> Printer Data <---
HOST ---> Punch Data <---
HOST ---> Card Reader Data <---
REMOTE STATION

REDIRECTING DATA
This menu lets you switch your incoming data to the (HASP Station) console, the printer, a file, or to any combination. Pressing a number turns one destination for one data stream on or off as shown. The last number controls translation of incoming Card Reader data (see manual).

HOLDING REDIRECTED DATA
This status means data you redirected to the console is being held until you return to the HASP Station console.

CRD DATA DEST REQUIRED!
This status means the remote station has Card Reader data to send and you have not assigned a destination; the data is forced to wait until you do.

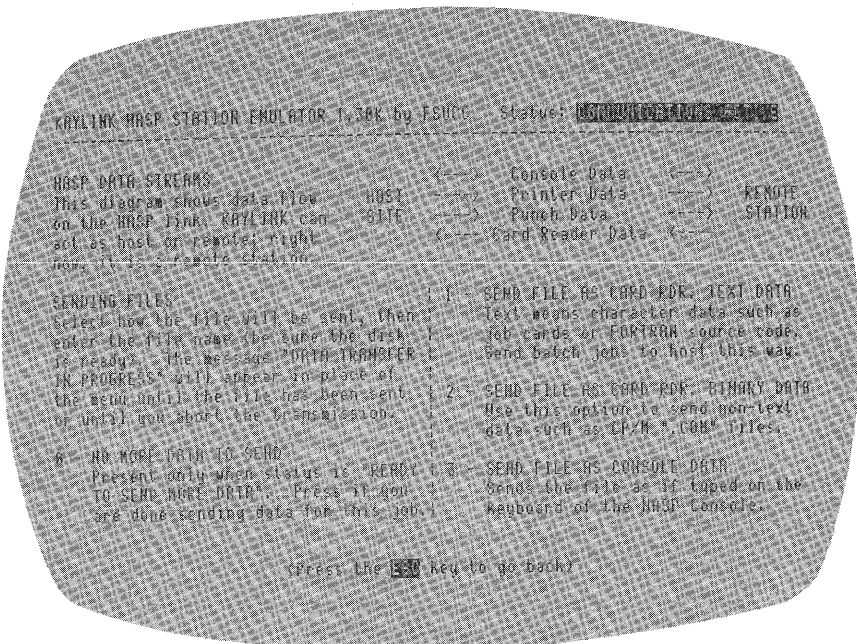
WRITING DATA TO FILES
Use care when naming a file to write; any existing file with the same name will be replaced. Do not remove your disk until you either "Stop Writing" all open files or exit the program, or some of your data will be lost.

(Press the ESC key to go back)

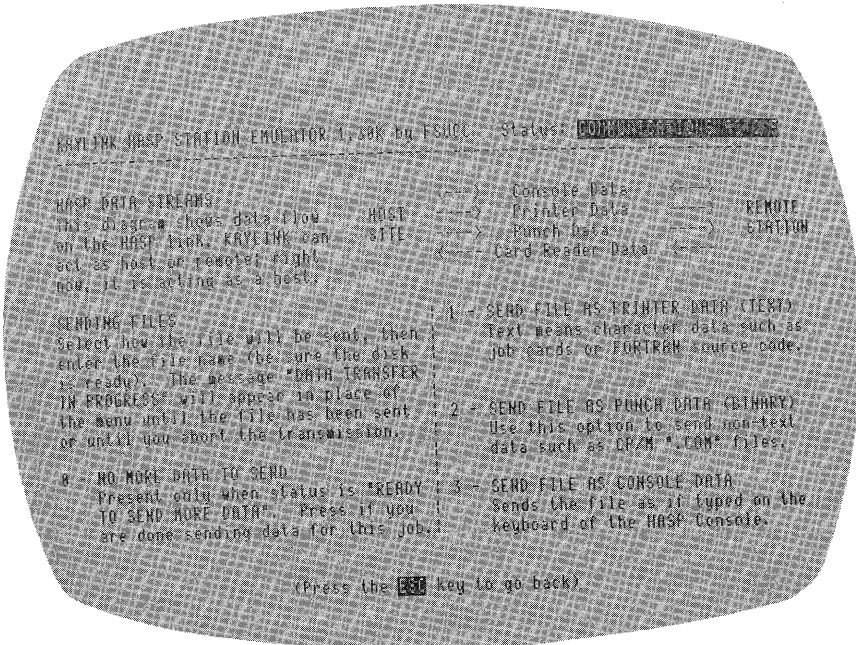
```



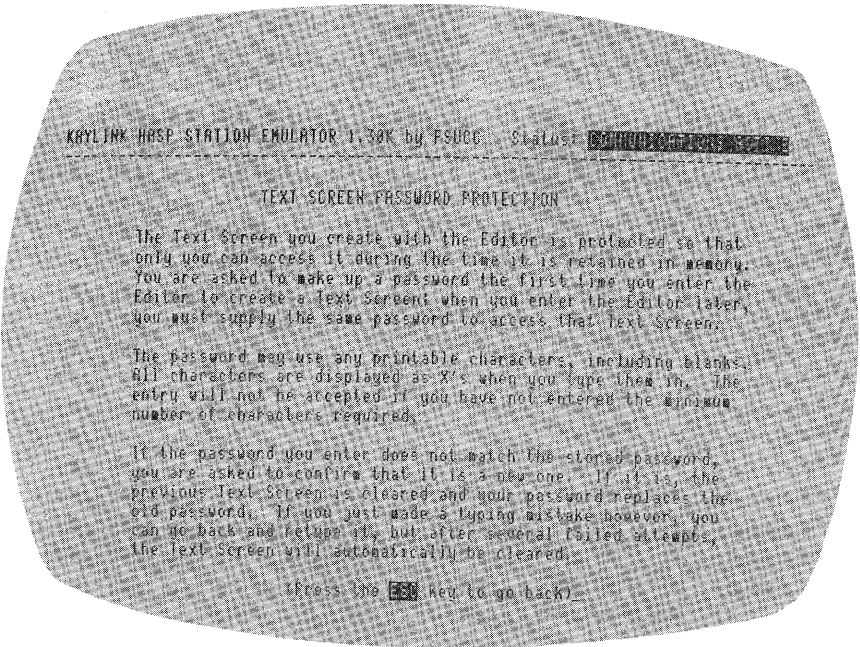
The following Help Screen will appear when KAYLINK is acting as a remote, and the HELP key is pressed at the Send Disk File Menu (Section 7.1):



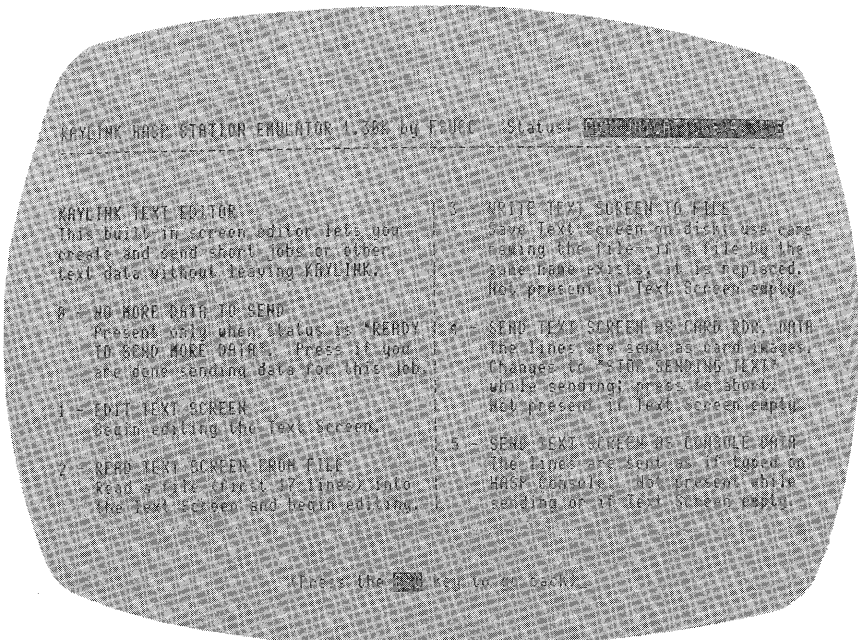
The following Help Screen will appear when KAYLINK is acting as a host, and the HELP key is pressed at the Send Disk File Menu (Section 7.1):



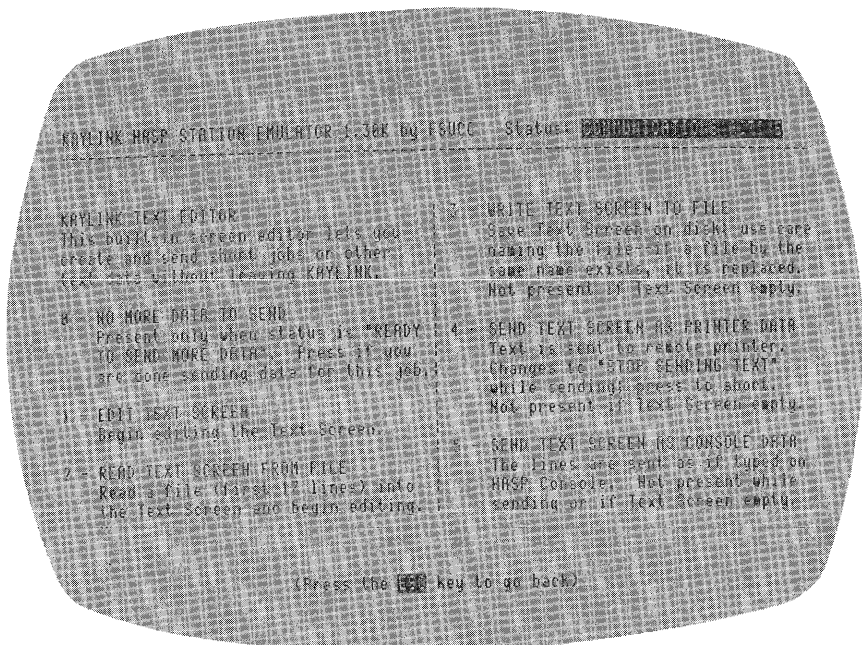
The following Help Screen will appear when the HELP key is pressed at the request for a Text Editor password (Section 8.1):



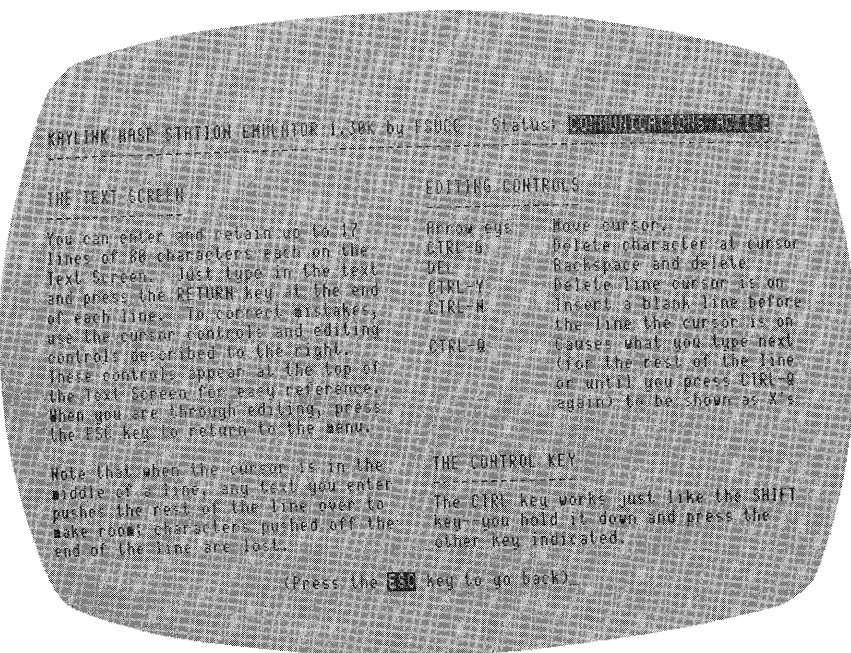
The following Help Screen will appear when KAYLINK is acting as a remote, and the HELP key is pressed at the Text Editor Menu (Section 8.2):



The following Help Screen will appear when KAYLINK is acting as a host, and the HELP key is pressed at the Text Editor Menu (Section 8.2):



The following Help Screen will appear when the HELP key is pressed while the Text Editor is in use (Section 8.3):



The following Help Screen will appear when the HELP key is pressed at the Local Disk Commands Menu (Section 9.1):

```
KAYLINK NASP STATION EMULATOR 1.30K by FSUCC  Status: COMMUNICATIONS ACTIVE
-----
LOCAL DISK COMMANDS
These commands operate "off-line" from the NASP link and may be used whether or not communications are active.

1 - CHANGE DEFAULT DISK DRIVE
   Designate drive to be used when none is specified in file names.

2 - LIST DISK DIRECTORY
   Display full or partial list of files on disk in specified drive.

3 - COMPUTE FREE DISK SPACE
   Tell how much free space is left on disk in specified drive.

4 - DELETE FILE FROM DISK
   Delete specified file from disk making more space available for writing.  *** USE WITH CARE ***

5 - LIST FILE TO SCREEN
   List a specified file directly to the screen of your terminal; press any key to pause while listing.

6 - LIST FILE TO PRINTER
   Not present when printer is busy. Switches to "STOP LISTING ..." to let you abort printing. Note that SUSPEND PRINTER/PUNCH DATA on Main Menu affects even local printing.

(Press the ESC key to go back).
```

The following Help Screen will appear when the HELP key is pressed at any request for the name of a disk drive (Section 9.1, options 1,2, and 3):

```
KAYLINK NASP STATION EMULATOR 1.30K by FSUCC  Status: COMMUNICATIONS ACTIVE
-----
DISK DRIVE NAME
-----
In CP/M, a disk drive name is a letter from "A" thru "F". In a system with just two drives, the drive name is either "A" or "B".

DEFAULT DISK DRIVE
-----
You can designate which of your disk drives should be used when you do not specify one in file names and disk commands. This is called the "default" drive.

(Press the ESC key to go back).
```



The following Help Screen will appear when the HELP key is pressed at a request for an ambiguous file name (Section 9.1, Figure 9.4):

```
KAYLINK HARP STATION EMULATOR 1.30K by FSUCC Status: COMMAND LINE MODE
```

#### \*AMBIGUOUS\* FILE NAMES

In PC/M, an "ambiguous" file name is one that may refer to more than one file. It uses two special characters that are not allowed in unambiguous file names as pattern matching symbols. The question mark matches any single character and the asterisk matches any remaining characters in the primary or secondary name. For example, JOB?.PRN matches JOB1.PRN and JOB2.PRN but not JOB1A.PRN, while JOB\*.PRN matches all three. JOB.\* matches JOB.PRN, JOB.DAY, JOB.WIZ, and so on.

NOTE: Blanks and certain special symbols are not allowed in file names, so they are not accepted when typed.

#### KEYBOARD EDITING CONTROLS

To delete the entire entry, hold down the CTRL key and press the "F" key. To delete the last character entered, press the DEL key.

(Press the ESC key to go back)

The following Help Screen will appear when the HELP key is pressed at any other request for a file name:

```
KAYLINK HARP STATION EMULATOR 1.30K by FSUCC Status: COMMAND LINE MODE
```

#### \*FILE NAME FORMAT

Optional disk drive name is a letter followed by a colon. If the drive name is omitted, the default drive is assumed.

\*Primary name\* may be one to eight characters long.

NOTE: Blanks and certain special symbols are not allowed in file names, so they are not accepted when typed.

PR:JOB1.PRN

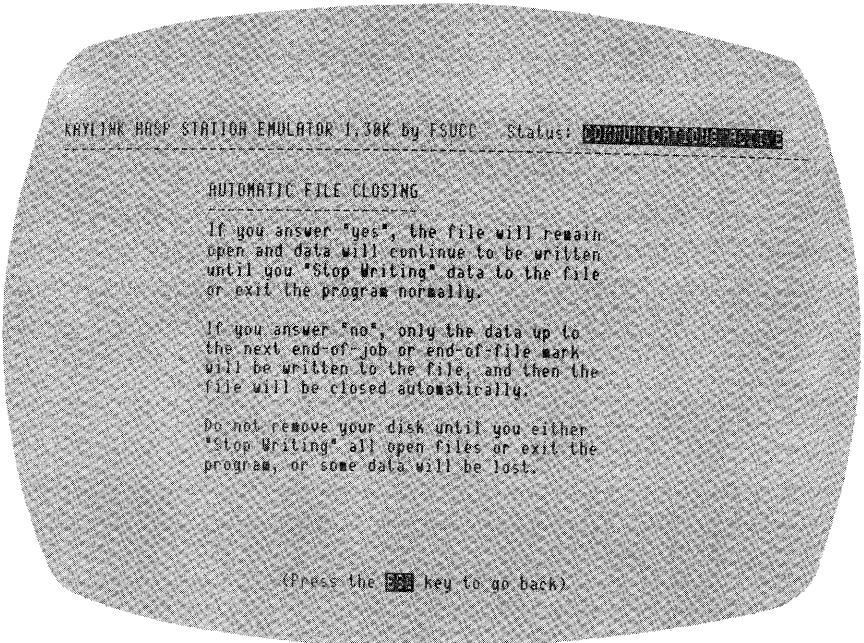
Optional "secondary name" is also called the file type, is separated from primary name by a period and may be up to three characters long.

#### KEYBOARD EDITING CONTROLS

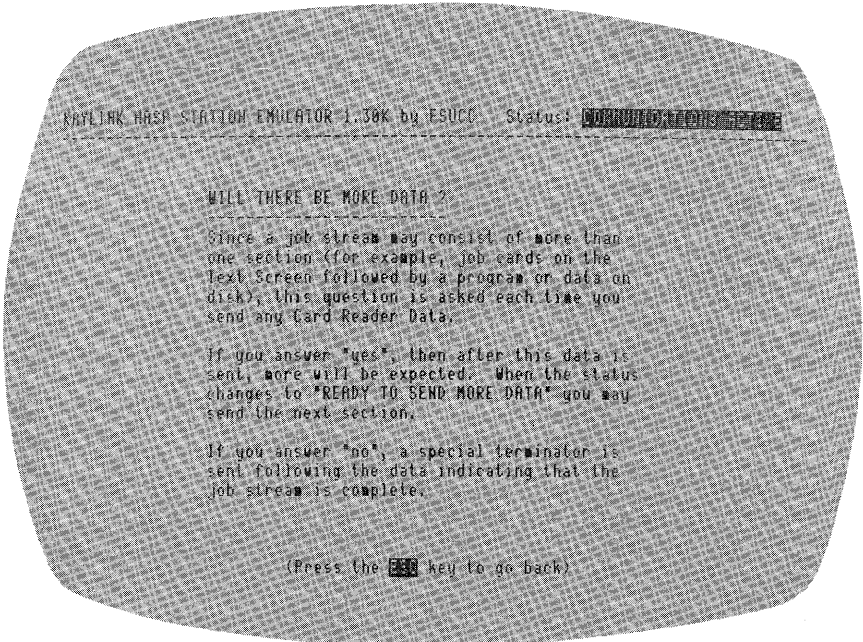
To delete the entire entry, hold down the CTRL key and press the "F" key. To delete the last character entered, press the DEL key.

(Press the ESC key to go back)

The following Help Screen will appear when the HELP key is pressed from the "More Than One Job" question (Section 6.2, Figure 6.3):



The following Help Screen will appear when the HELP key is pressed at a "More Data" question (Section 7.1, Figure 7.3; Section 8.2, Figure 8.6):



# APPENDIX G

## Revision Record

Each version of this software which is released has a unique revision number. This number is of the form "a.bc" where a, b, and c are single-digit numbers which represent levels of revision.

- a** is the major design revision level. This number increases by one whenever major changes in design are made, including major rewrites.
- b** is the documentation revision level. This number increases by one whenever a change is made which is large enough to require a change in the manual.
- c** is the minor change level. This number increases by one whenever minor changes or bug fixes are made.

Version number 1.23, for example, specifies software with the original design and no major rewrites which has received two changes large enough to cause documentation changes and subsequently three small changes. If a documentation-level change were made, the version number would be 1.30. If the software were rewritten, the version number would be 2.00.

The first release is generally version number 1.00.

When the minor change level is increased, an addendum describing the changes may be added to the manual.

Whenever the documentation revision level is changed, the manual is changed. The revision level will be on the title page and will be a letter from A to Z with I, O, Q, and X omitted. (No letter means revision A, the original.)

DATE	REVISION	VERSION	COMMENTS
01/83	A	1.00	First Release
03/83	B	1.10	HIOS made installable, Technical Manual created
06/83	C	1.20	Card reader added, file closing question changed
10/83	D	1.30	Printer problem handling changed; Statuses added, "No More Data to

			Send" option added, Buffer sizes increased
11/83	E	1.30	Manual improved
01/84	F	1.30	KAYLINK version created



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**COMMENT SHEET**

**FSUCC HASP Station Emulator  
Version 1.30**

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**NAME**

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**COMPANY**

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**ADDRESS**

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**ADDRESS**

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**CITY**

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**STATE**

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**ZIP**

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**PHONE NUMBER**

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**SOFTWARE SERIAL NUMBER**

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