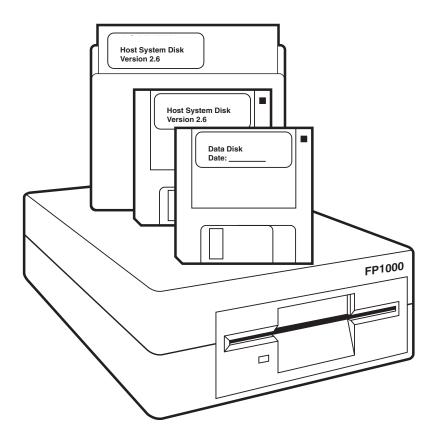


NOVEMBER 1992 FX130A

FP1000



CUSTOMER SUPPORT INFORMATION Order toll-free in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: 877-877-BBOX FREE technical support, 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 Mail order: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018 Web site: www.blackbox.com • E-mail: info@blackbox.com

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for Radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

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1. Specifications

Standards — CCITT Group III

Speed — 9600, 7200 bps

Operation — Half-duplex

System Requirements — Printer:

HP LaserJet[®], LaserJet +, II, IID, III, HP[®] DeskJet[®], EPSON[®] FX80; Computer: IBM[®] PC, PC/XT[™], AT[®], PS/2[®], or true compatible, MS-DOS[®] 3.0 or higher

FCC Registration —

BZQUSA65225-F-AE

Ringer Equivalency -0.2 dB

Interface — RJ-11 parallel Centronics to PC, DB25 parallel to printer

Connectors — (1) RJ-11 female,

(1) DB25 female, (1) Centronics[®],(1) power connector

Power — 110 VAC, 60 Hz, 12 VAC input

Size — 2.5"H x 5.5"W x 7.5"D (6.4 x 13.9 x 19 cm)

Weight — 3 lb. (1.4 kg)

2. Introduction

The FP1000 turns your computer printer into an intelligent, plain paper fax machine. It prints highquality faxes and transmits/receives high-quality, computer-generated documents and graphics.

In addition, the FP1000 provides features that can control how your fax is used and who can use it. You can eliminate junk faxes, and confirm reception to specific fax senders. You can even forward faxes to another location.

This chapter introduces the features and functions available with your FP1000. Please read the rest of the manual to learn how to properly install and operate the FP1000.

The FP1000 includes many features that allow you to tailor its operation to your specific needs. The options for the features and functions are factory preset, and it is unlikely that you will need to make many changes. However, if you do, you will find the information you need in **Chapter 5, Using Features** and **Options**.

The following list briefly describes the features of the FP1000:

Fax Archiving: Maintains a floppy disk copy of all received faxes.

Reprint Fax: Reprints a previously received fax from its data disk.

Fax Forwarding: Sends incoming faxes to a preset location. **Reception Confirmation**: Tells the sender of a fax exactly what was received.

Junk Fax Screening: You can create a list of up to 100 Fax ID numbers from which you want to receive faxes. Any fax not on the list cannot transmit a document. You can enable or disable this feature at any time.

Scheduled Transmission: Sends faxes at a time that telephone rates are at their lowest and there is less chance of a busy signal automatically.

Serial Broadcasting: Sends fax documents (for example, newsletters, publications, or updates) to a network of up to 100 fax machines.

Polling: Calls another fax and "polls" (asks to receive a fax instead of sending) or organizes a document to be "polled" (requested by other calling fax machines).

High Speed Fax Transmission: Faxes documents consisting of text and/or graphics at 9600 bits per second.

Number of Retries: Sets the number of times the FP1000 redials a previously busy fax attempt or a no answer call.

Print Activity Log: Prints a detailed list of how and when the FP1000 was used.

Fax ID: Sets a personal Fax ID number you can use with the FP1000.

Printer Type: Configures the FP1000 to print faxes to your printer.

Printer Port: Sets the FP1000 to the printer port to which your PC prints.

Printer Resolution: Sets the quality of resolution that the FP1000 prints incoming faxes.

Time/Date: Sets the current time and date in the FP1000.

Number of Copies: Configures the number of fax copies to print upon reception.

Number of Rings: Sets the number of rings that the FP1000 receives before answering.

Dial Type: Sets the dialing method that you wish to use: pulse or tone.

3. Installation

3.1 Installation Requirements

The FP1000 requires the following equipment for proper installation and operation:

- IBM PC or compatible with at least 384KB RAM running MS-DOS 3.x or higher, and a single floppy disk drive.
- HP LaserJet or compatible, HP DeskJet, Canon[®] LBP Series Laser Printer, IBM Proprinter, or Epson FX-80 printer.
- Environment with the following:
- 110 volts AC ±10% 60 Hz singlephase power
- USOC RJ-11C telephone jack
- No excessive dust or humidity

CAUTION

- 1. Do not remove power from the FP1000 when the disk-drive LED is lit.
- 2. There is no guarantee that the FP1000 will operate in a PBX environment. You must check with the PBX manufacturer first to determine whether or not fax machines can be used on that PBX system.

3.2 Unpacking the FP1000

When you open the FP1000 box for the first time, inspect the contents. In the box you will find all of the items you need to connect the FP1000:

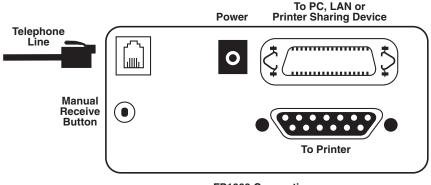
- FP1000
- FP1000 Operator's Guide
- two 3-1/2 inch floppy disks
- one 5-1/4 inch floppy disk
- printer cable
- telephone cord
- external power supply

3.3 Installing the FP1000 in Different Configurations

This section explains how to install the FP1000 in a number of different configurations. For complete instructions, see the subsection that best suits your needs.

3.3.1 INSTALLING ON A DEDICATED PHONE LINE WITH A PC AND A PRINTER CONNECTED

Fig. 1 shows a typical connection for the FP1000 using a PC and a printer.



FP1000 Connections

Fig. 3-1. Typical Connection for FP1000 Using a PC and Printer.

To connect the FP1000, follow these steps:

1. Place the 3-1/2 inch floppy disk labeled "FP1000 Data Disk" into the FP1000 floppy disk drive. The disk used by the FP1000 is a high-density 1.44 MB 3-1/2 inch IBM compatible floppy disk. The disk must be formatted before you put it into the FP1000, or the unit will not operate. However, the data disk that comes with the FP1000 is preformatted.

- 2. Plug the printer cable's 25-pin connector into the 25-pin connector on the FP1000. Plug the printer cable's larger connector into your printer.
- 3. Plug the other printer cable from your PC into the large printer connector on the FP1000 (as if the FP1000 were the printer for your PC.)

To lock the connector into place, squeeze the two arrowshaped wires toward the connector.

4. Plug the small end of the AC power cord provided with the FP1000 into the power input port on the back of the unit. Plug the AC adapter into a standard 110-volt outlet.

CAUTION

Do not try to plug in the power supply through the arrow-shaped wire. This can potentially damage the power supply. Make sure that the arrow-shaped wires are correctly seated on the printer cable from your PC.

5. Plug one end of the telephone cable provided with the FP1000 into the TEL LINE-IN jack in the upper left corner on the rear panel of the FP1000. Plug the other end of the cable into the wall jack where the phone was connected.

- 6. Turn your printer on.
- NOTE: The FP1000 does not have an ON/OFF switch. It operates continuously and uses only a minimum amount of power (about 20 watts.)

The only time the FP1000 will take control of the printer is when it is printing a received fax, or when you have requested that it print status information.

3.3.2 INSTALLING TO SHARE A PHONE LINE WITH A TELEPHONE

Fig. 3-2 shows the FP1000 installed to share the phone line with a telephone.

NOTE: For automatic operation, you need an additional peripheral device that connects a fax (such as our FX125A-R2), PC modem, answering device, and telephone to one phone line.

The peripheral device (FX125A-R2) automatically routes all fax calls with CNG tones directly to the FP1000 without ringing your telephones. It routes voice calls directly to your phone.

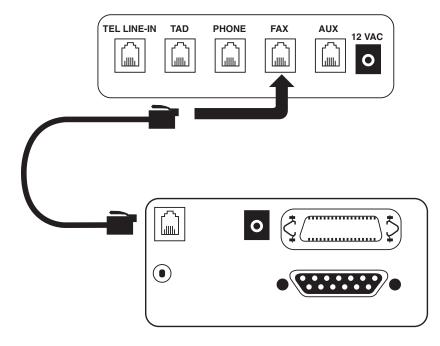


Fig. 3-2. Sharing a Phone Line with a Telephone.

3.3.3 INSTALLING TO A PRINTER SHARING DEVICE

You can effectively share the FP1000 with many PC users when you place it between a printer and a printersharing device. Each user can then send or receive faxes with the FP1000, as well as maintain standard use of other printer functions.

To install the FP1000 to operate with a printer-sharing device, see Fig. 3-3 and follow these steps:

- 1. Remove the printer cable from the sharing device and connect it to the bottom connector on the rear panel of the FP1000.
- 2. Plug the new printer cable into the top connector on the FP1000. Then connect the other end to the printer-sharing device.

CHAPTER 3: Installation

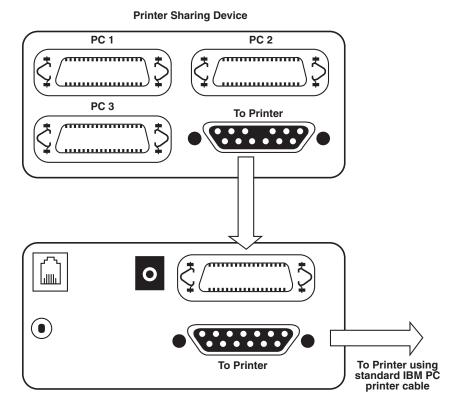


Fig. 3-3. Installing to a Printer Sharing Device.

3.3.4 INSTALLING ON A LOCAL AREA NETWORK (LAN)

As shown in Fig. 3-4, the FP1000 may share fax transmission capabilities with everyone on a network. Simply connect the FP1000 between the printer and the print server. Follow these steps:

1. Disconnect the printer cable from the print server and reconnect it to the bottom connector on the rear panel of the FP1000.

2. Connect the printer cable supplied with the FP1000 to the top connector on the rear panel of the FP1000. Then connect the other end of the printer cable to the print server of the LAN.

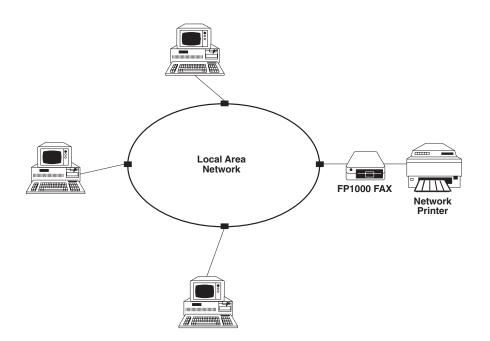


Fig. 3-4. Installing on a LAN.

In this configuration, all users have access to the FP1000. For individualized programming and cover sheets, simply load the FP1000 software into each user's personal directory. When the software is loaded, users can personalize their own letters and dialing directory. All incoming faxes go directly to the output printer.

3.3.5 INSTALLING ON A PHONE LINE WITHOUT A PRINTER OR PC

You do not need to connect the FP1000 to a printer to operate. The FP1000 can receive faxes regardless of whether a printer or even a PC is connected.

All incoming faxes are recorded on to the floppy disk so you can view them with a PC. Simply remove the data disk from the FP1000 and place the disk in your PC. Then view the faxes via the view option (see **Section 4.1.2, Viewing Faxes**.)

NOTE: You should periodically change disks. Floppy disks do wear out, and replacing them on a periodic basis assures continued error-free operation of your FP1000. If you wish to retain an audit trail of received faxes, change the disks after about every 50 fax pages. If you do not wish to retain a record of received faxes, change the disk about once a month. Each disk retains information about fax ID numbers and FP1000 settings. If power is lost, the FP1000 will read the setup information from the disk when power is restored.

However, if you power down the FP1000 and then change the disk before powering it up, all of the FP1000 configuration information will be lost. The configuration information can be easily restored by powering down the FP1000 and replacing the new disk with the original disk, then powering up the machine. You can then change disks, and the FP1000 will update the new disk with the configuration information.

3.4 Installing FP1000 Software

You can operate the FP1000 software from either a hard drive or a disk drive. Both means of operation are explained in this section.

First, make a copy of the Host System Disk. Format a new disk and copy the contents of the Host System Disk to the new disk with the "COPY" or "DISKCOPY" command. If you need assistance with the DOS commands for ths procedure, consult your DOS manual.

3.4.1 INSTALLING SOFTWARE ON A HARD DRIVE

To install software on a hard drive, follow these steps:

- 1. Use the "MKDIR" or "MD" commands to create a directory on your hard disk for the FP1000 Software.
- 2. Enter that directory and place the 5-1/4 inch or 3-1/2 inch floppy disk marked "Host System Disk" in your personal computer floppy-disk drive.
- 3. Use the "COPY" command to copy the entire floppy-disk contents to the new directory.
- 4. Once you copy the software to the new directory, type ASAP from the directory prompt and press [Enter]. This procedure opens condensed files that are stored on the Host System Disk.

If you do not understand the above DOS commands, consult your DOS manual.

3.4.2 OPERATING SOFTWARE FROM A DISK DRIVE

Place the 3-1/2 inch Host System Disk in the PC floppy-disk drive. Access the drive using DOS commands, type ASAP at the directory prompt and press [Enter]. This procedure opens condensed files that are used by the FP1000.

NOTE: Because of the condensed files that open when you type ASAP, this software will operate using the 3-1/2-inch floppy disk only. Operation from a disk drive using the 5-1/4-inch floppy is not possible.

3.5 Setting FP1000 Software Configurations

This section explains how to customize FP1000 software for your configuration.

1. Once you have connected the FP1000 and copied the host software to another disk or your hard disk, type FAX at the directory prompt and press [Enter] to start the FP1000 software. The following menu appears.

Main Menu
Send Documents Print Activity Log Reprint a Fax Fax Settings Menu Printer Settings Menu Quit

Fig. 3-5. Main Menu.

NOTE: On-line help is available in any field by pressing [F1]. Press [F1] two times for a chart of available function key commands.

To select a menu option, use the UP or DOWN arrow to highlight your choice and press the [F10] key.

You may also select an option by typing the bold character of a menu item. For example, to select the Fax Settings Menu, press the [F] key. Or, if you are using a mouse, move the cursor over the item and press the left button on the mouse to select the menu item.

To move from one input line to another without filling in the information requested, use the cursor keys. To mark one or more items in a list, such as telephone numbers or files that you want to use or delete, press the [F5] key on the highlighted item. The option requested will be performed on all items marked with the [F5] key.

To switch from insert mode to typeover mode, press the [F9] key. The [F9] key toggles the insert and typeover mode.

To enter information in a field from a list, press the [Insert] key one or more times. This brings up additional lists of options that you may select.

To cancel a selection, press the [Esc] key.

To select an option, press either the [F10] or [Enter] key.

2. To begin configuration, select the "Fax Settings Menu" option from the Main Menu. The menu shown in Fig. 3-6 appears.

FAX Settings Menu
Print Current Settings
Time/Date
Security/Confirmation Menu
Fax ID
Fax Header Line
Set Polling Documents
Fax Forwarding
Fax Archiving
Number of Rings
Number of Retries
Return to Previous Menu

Fig. 3-6. Fax Settings Menu.

3. Select the "Time/Date" option from the Fax Settings Menu and press [Enter]. The window shown in Fig. 3-7 appears.

Set	Date and Time
	12:00 pm May 4, 1992

Fig. 3-7. Set Date and Time.

- 4. Fill in the correct time and date in the format shown in the window. When you are finished, press the [F10] key to return to the Fax Settings Menu.
- 5. Select "ASAP Fax ID." The following window appears:

ASAP-Fax ID Fax ID:

- Fig. 3-8. Fax ID Screen.
- 6. Type in the phone number for your fax and press [F10].
- 7. Return to the Fax Settings Menu. Other items in this menu are not necessary for installation, and are explained in detail in Section 4.4, Using Features and Options.
- 8. Return to the Main Menu by pressing the [Esc] key.
- 9. Highlight "Printer Settings Menu" and press [Enter]. The menu shown in Fig. 3-9 appears.

Printer Settings Menu Print Current Settings Multiple Copies Printer Port Printer Type Printer Initialization Printer Termination Printer Resolution Paper Size Return to Previous Menu

Fig. 3-9. Printer Settings Menu.

10. Set your printer port by selecting the Printer Port option from the Printer Settings Menu. The menu shown in Fig. 3-10 appears.

The ASAP-FAX connects to:

LPT1 - First Parallel Port LPT2 - Second Parallel Port LPT3 - Third Parallel Port

Fig. 3-10. Printer Port Screen.

- 11. Highlight the port on your PC that your printer cable is connected to and press [F10].
- 12. Return to the Printer Settings Menu.

 Set your printer type by selecting the "Printer Type" option from the Printer Settings Menu. The menu shown in Fig. 3-11 appears.

Printer Type

HP LaserJet Canon LBP Canon BJ-10e Epson None

Fig. 3-11. Printer Type Menu.

14. Select the HP LaserJet, Canon, Epson, or None option by highlighting your selection and press [F10]. (If your printer is not listed, select a mode that the printer emulates.) 15. Return to the Printer Settings Menu.

NOTE: When the printer selection is set to the None option, the FP1000 does not allow any print jobs to be serviced by the connected printer.

The printer resolution sets the quality at which incoming faxes are printed.

16. To set the printer resolution, select the "Printer Resolution" option from the Printer Settings menu and press [Enter]. The menu shown in Fig. 3-12 appears.

Printer Resolution	
300 Dots/Inch 150 Dots/Inch	

Fig. 3-12. Printer Resolution.

To determine which setting is appropriate for your installation, see **Section 4.1, Receiving Faxes**.

Other items located in this menu are not necessary for installation. They are explained in detail in "Using Features and Options." To exit the Printer Settings Menu, press [Esc]. You then return to the Main Menu. To exit the Main Menu, press [Esc] again. The menu shown in Fig. 3-13 appears.

]	Exit Fax
	No Yes

Fig. 3-13. Exit Fax.

Select YES or NO by highlighting your option and pressing the [F10] key. The DOS prompt of the current directory is displayed.

You may also exit the program at any time by pressing the [Alt] key and the [X] key simultaneously. Your FP1000 is now ready to send and receive fax transmissions. You may wish to include the directory containing FP1000 in your DOS path. This allows you to run the software from any directory in your system. If you do not know how to change the path, consult your DOS manual for instructions.

4. Using the FP1000

This section explains how to receive and send faxes, print activity log, reprint a fax, and set-up the Fax Settings Menu and Printer Settings Menu.

4.1 Receiving Faxes

Once you have installed the FP1000, it is ready to receive faxes. However, you may want to set up the various options.

If a laser printer is connected to the FP1000, you will need a minimum amount of free memory available to print faxes. If you are printing faxes at 300 dots per inch, which is the default setting, you will need at least 1MB free RAM in the laser printer. If you choose to print faxes at 150 dots per inch, the connected laser printer should have at least 256KB RAM free. Many laser printers come with only 512KB RAM. If you want to print at 300 dpi, you will need to upgrade the printer's memory. Ask your printer dealer for details on how to expand your printer memory.

NOTE: Even if you have 1MB of RAM in the laser printer, it may not all be free for the FP1000 to use. Some laser printers keep existing memory for their own internal use. In addition, if you download any fonts, the fonts fill up required memory, thus lowering the available free memory.

4.1.1 MANUALLY RECEIVING FAXES

The FP1000 includes a Manual Receive button on the rear of the unit.

If you are sharing the telephone line with the FP1000 and you wish to receive a fax during an already established phone call, simply press the Manual Receive button on the rear panel of the FP1000. The FP1000 immediately begins receiving the fax.

4.1.2 VIEWING FAXES

To view previously received faxes, remove the data disk from the FP1000 drive and place it in your PC. All received faxes are stored on the data disk and named according to the date and time received (MO-DAY-HR-MIN.001.)

CHAPTER 4: Using the FP1000

Enter the directory that contains the FP1000 software, then type the appropriate command from the following list. (Choose the command that goes with the graphics card used in the PC.)

	FAXVGA.EXE	<drive>:<filename.001></filename.001></drive>
1.	FAXEGA.EXE) FAXCGA.EXE) FAXHGA.EXE) FAXVGA.EXE)	(Type the command that relates to your graphics card)
2.	<drive>=</drive>	Drive in which the data disk is located
3.	<filename></filename>	Fax you wish to view

When you view a document, the space bar acts as a toggle to start and stop the scrolling. To exit the view option, press [Esc].

NOTE: When using FAXVGA.EXE, press the [Pause] key to stop scrolling. Press the space bar to continue the view option.

4.2 Sending Faxes

There are several different ways to fax documents using the FP1000:

- directly from the FP1000 Host System Software
- directly from your DOS-based application (for example, WordPerfect[®], Lotus[®], and so on)

- from a Microsoft[®] WindowsTM Version 3.0 Application
- using the FP1000 and an optional scanner

4.2.1 FAXING FROM THE FP1000 HOST SYSTEM SOFTWARE

NOTE: Computer-generated files faxed from the Host System Software must be in either ASCII or FX-80/IBM Proprinter print format.

To send a document using this method, select "Send Documents" from the Main Menu. The cover sheet shown in Fig. 4-1 appears.

Cover	Sheet

To: Subject: Message:

From: Company: Address: Fax Number: Confirmation Number:

Fig. 4-1. Cover Sheet.

The cover sheet is an optional file that you can use to identify your organization and the document(s) being transmitted. Once entered, the cover sheet retains all information for future documents and changes only when you replace it. You only need to edit information that pertains to the document you are sending.

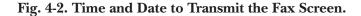
If your document already has a cover sheet, you can bypass this feature by pressing the [Esc] key. To enter information into the cover sheet, move the cursor to the field you wish to edit and press the [Ins] key. Then type in the information you want to store in that field.

When you finish editing the cover sheet, press the [F10] key to continue. The display shown in Fig. 4-2 appears.

When you finish editing the Time and Date window, press the [F10] key to continue. The display shown in Fig. 4-3 appears.

Time and Date to Transmit the Fax

Time: Date:



Send What Files Where? Phone Numbers... Files to Send... Check for Polled Fax YES Dial Type: Pulse Resolution: 100 Vertical 200 Horizontal

Fig. 4-3. Send Files Display.

This display gives the FP1000 all the information it needs to send your documents. Move the cursor from field to field by pressing the cursor keys. Fields contained within this display are described in the following subsections.

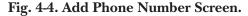
PHONE NUMBERS

This window displays all of the phone numbers that you selected to send a fax to.

To select a phone number, press the [Ins] key twice. A list of phone numbers that have been previously entered is displayed. Select a phone number on this list by highlighting it and pressing [F10]. You can select more than one phone number by moving the cursor through the directory and pressing [F5] on each number. When finished selecting numbers, press [F10] to return to the previous window. There you see a list of the selected phone numbers.

Delete a phone number from this list by highlighting it and pressing the [Delete] key. Add a phone number to this list by pressing the [Insert] key. You are then prompted to type a description (for example, company name) and the fax number.

Add Phone Number Description... Fax Number...



When you finish entering the new fax number, press the [F10] key twice to add it to the existing phone list.

NOTE: If you use the FP1000 to send faxes through a phone system and the system requires a number to access an outside line, simply type the access number into the FP1000 dialing string and enter a command to create a delay for dial tone. Then type the remainder of the phone number.

Example: 9, 555-1234

FILES TO SEND

This window displays a list of the files in your current directory.

When the cursor is in the Files To Send field, the list of files to choose from is displayed when you press the [Ins] key twice. To select a file from the file list, highlight it and press the [F10] key. Select multiple files by pressing [F5] on each selected file.

If you want to use an alternate directory to send from in the files list, highlight DIR and press the [Enter] key.

CHECK FOR POLLED FAX

This option allows you to call another fax machine and "poll" or request a fax transmission. Not all fax machines support polling and the machines that do may or may not have a fax available for polling. Therefore, when you attempt to "poll" another fax machine, you may not receive a fax.

DIAL

This window indicates to the FP1000 the type of dialing (tone or pulse) for your phone system. You need to enter this information only once, unless you change phone systems. The selected values remain in the window until you change them.

To set the dialing type, place the cursor in this field and press the [Ins] key. Then, select TONE or PULSE and press the [F10] key.

When all information is correct, press the [F10] key twice to complete the transmission.

4.2.2 FAXING FROM YOUR PC APPLICATION

The FP1000 has a memory-resident program called FAXTSR.EXE. This program pops up when you press a special key sequence. This pop-up program provides a phone directory that allows you to select a number to fax the current file to.

CHAPTER 4: Using the FP1000

For example, if you are in WordPerfect and desire to fax the file that you are editing, select the EPSON FX 80 as your printer and press the special key sequence and your fax number directory appears on the screen. Then, type in appropriate information, select the fax number, and send the document using the print command from the current software package. The FP1000 then intercepts this document and processes it accordingly.

NOTE: Follow all procedures exactly for error-free fax transmissions.

To install FAXTSR.EXE, at the DOS prompt of the FP1000 directory, type FAXTSR.EXE. Or enter FAXTSR.EXE in your AUTOEXEC.BAT file. You are then able to go on about normal operations until you want to send a fax.

To access this pop-up window, press the [Alt], Left [Shift], and [E] keys simultaneously and the following screen overlays your current screen.

Command Communications ASAP-FAX Printer Emulation v 1.08			
New Phone Number Stop Fax Transmission Albert Hanks Carmen LaRouse Edward Morrow Vinnie Zeb	You will be asked to enter it 514 555-8788 716 555-2134 408 555-5456 212 555-1222 404 555-1234		
To begin, choose a number and press <enter>. To cancel, press <esc>. Printing must begin within 30 seconds.</esc></enter>			

Fig. 4-5. Printer Emulation Screen.

Once you select a phone number, you have 30 seconds in which to print the fax using your software package.

After 2 minutes, anything that you print is sent directly to the printer.

NOTE: Any document that has text and/or graphics that can be printed by an EPSON FX-80 printer can be faxed by the FP1000.

You can remove this program from background operation by pressing the special key sequence and then pressing the R key, or by pressing R when the TSR menu overlays your screen.

NOTE: A mouse will not function during the time that the TSR program is activated.

If the FP1000 and the printer are connected to a different parallel port than LPT1, you should invoke FAXTSR by typing the following command at your DOS prompt:

FAXTSR 2 or FAXTSR 3

Invoking the FAXTSR with a parameter of 2 will set LPT2; a parameter of 3 will set LPT3.

4.2.3 FAXING FROM WINDOWS APPLICATIONS VERSION 3.0

This section explains how to install the Windows printer driver, and how to send a fax from a Windows Ver. 3.0 application.

INSTALLING THE WINDOWS PRINTER DRIVER

Located on the Host System disk is a file called ASAPFAX.DRV. This is a printer driver that enables you to send a fax from any Windows application that can print. To install the driver, follow these steps:

- 1. Select the Control Panel from the Main Group Window in the program Manager. The Control Panel Window appears.
- 2. Select the Printers icon. The Printers dialog box appears.
- 3. Select the Add Printer button. If you did not install a printer when you installed Windows, the Control Panel will activate the Add Printer button for you. The dialog box will expand, showing a list of printers.
- 4. Scroll to the end of the list of Printers and select Unlisted Printer. Then press the Install Button. The Add Unlisted Printer dialog box will appear.

- 5. Select the file ASAPFAX.DRV on the diskette provided and press OK. The Add Unlisted Printer dialog box disappears and you are back in the Printer dialog box. "ASAPFAX FX80 on NONE, Inactive" will have been added to the list of Installed Printers.
- 6. Select the Configure button. The Printers—Configure dialog box appears.
- 7. In the list of Ports, select the LPT1, LPT2, or LPT3 port the FP1000 and your printer share.
- 8. Select OK. The Printers— Configure dialog box disappears.

You are now back in the Printers dialog box again. The FP1000 driver should be listed as LPT1, 2, or 3, but still inactive.

- 9. Select the Active button. The FP1000 driver is now listed as Active and the normal printer is Inactive.
- 10. Select OK. The Printers dialog box disappears and you are returned to the Control Panel icons.
- 11. Close the Control Panel. You have finished installing the FP1000 Printer Driver.

SENDING A FAX IN WINDOWS

To send a fax, follow these steps:

1. Enter a Windows application that can print, such as Write, Paint, or Notepad, and create or retrieve the document that you wish to fax.

Some applications remember the printer you last used with that application. They often have a Printer Setup option in the file menu. Make sure the FP1000 is the selected printer.

- 2. Select "Print" (usually from the File menu). The application may show you a dialog box. Complete it as you usually would. As in the previous step, sometimes there is a Setup or Printer Setup button in this dialog box. Make sure the FP1000 is the selected printer.
- 3. Next, the Cover Sheet dialog box appears.
- 4. Enter any textual information you want to appear in the fax before the document in the application. It is customary to include who the fax is to, who the fax is from, a phone number where you can be reached, a short message indicating the content of the fax, and the number of pages.

This dialog box conforms to the Common User Access defined by Microsoft for all Windows programs. If you press Enter, it is the same as pressing the OK button. It does not go to a new line in the edit box. To go to a new line in the edit box, press the Control and Enter keys simultaneously. If you mistakenly press Enter when you should have pressed Control-Enter, you can come back to the Cover Sheet dialog box later and change it. If you do not wish to have a cover sheet, deselect the Send Cover Sheet checkbox.

- 5. Press OK. The Cover Sheet dialog box disappears and the FP1000 dialog box appears. If the FP1000 printer driver is able to find the file FAX.CFG created by the DOS program to send faxes, you see the same list of phone numbers you are used to in the Phone Directory List. If the file could not be found (it should be in the PATH), the list will be empty.
- 6. Select a fax phone number from the Phone Directory or type a new one into the Description and Phone Number Fields.
- 7. Select the Add button. This adds the description to the Phone Directory and the Send To lists (if it is new).
- 8. If you need to change the cover sheet, select the Cover Sheet button.
- 9. If you want to set the time and date the fax should be sent, select the Options button.

10. When you are ready to send the fax, select the Send Fax button. If you are using the Print Manager, it may appear. The FP1000 Printer Driver works with it properly.

You have now sent a fax from Windows.

RETURN TO NORMAL PRINTING

To return to normal printing, follow these steps:

- 1. Choose the Control Panel from the Main Group Window in the Program Manager. The Control Panel Window appears.
- 2. Choose the Printers icon. The Printers dialog box appears.
- 3. Select the printer you wish to use.
- 4. If the printer you wish to use is not active, select Active.
- 5. Select OK. The Printers dialog box disappears.
- 6. Close the Control Panel.

4.2.4 SENDING FAXES FROM SCANNERS

You may send a fax of an existing document by scanning it into your computer and printing it via the Epson FX-80 driver of your scanner's software.

To fax a document from your scanner, follow these steps:

1. Scan the document.

Follow the directions provided by the scanner manufacturer.

- 2. Select the Epson or IBM Proprinter printer driver.
- 3. Use the FAXTSR program to select a telephone number.
- Print the document to FP1000, following the instructions in Section 4.2.2, Faxing from your PC Application, earlier in this chapter.

4.2.5 INTERRUPTING A FAX TRANSMISSION

To interrupt a fax transmission, press the special key sequence to bring up the phone directory. The second line in the telephone list is an option to interrupt the current fax transmission. If you decide not to send a fax, select this option to halt the transmission. You may use this option in the following situations:

- when you have selected a number using FAXTSR and have changed your mind about faxing a file.
- when you have selected a number and sent the file to the FP1000.
- when you have sent a fax via the FAX.EXE program and you wish to halt that transmission.

The transmission is interrupted once the FP1000 recognizes the selected option. If the printer is off, the option will not be recognized because the FP1000 will also appear to be off-line.

4.3 Polling Another Fax Machine

This feature allows the FP1000 to call another fax and request a fax transmission. To perform this operation, follow these steps.

- 1. Select "Send Documents" from the Main Menu of the Host software and press [F10].
- 2. Press [Esc] twice when the Cover Sheet appears.
- 3. Enter the Time and Date for polling to occur and press [F10].
- 4. Press [Ins] twice to select a phone number, three times to enter a new phone number.

- 5. Highlight the number of the fax to be polled and press [F10] twice to accept the number.
- 6. Leave the Files to Send field blank.
- 7. Move the cursor down to "Check for a Poll Fax" and press [Ins].
- 8. Highlight YES and press [F10].
- 9. Press [F10] to complete the process.

The FP1000 then begins the polling as instructed.

4.4 Using Features and Options

The FP1000 includes many features and options that allow you to tailor its operation to your specific needs. This chapter provides the information you need to customize your FP1000. To customize the FP1000 software, enter the directory containing its software, at the DOS prompt type FAX, and the Main Menu appears. Each field of this menu is described in this section.

4.4.1 PRINT ACTIVITY LOG

The FP1000 logs each transmission and stores that log on its 3-1/2 inch disk. To print the activity log, simply highlight Print Activity Log on the Main Menu and press [F10].

The columns of the Activity Log printout include Type of Transmission, Fax ID, Time, Date, Connect, Pages, Speed, and Status of Transmission. Fax reception and polling information are also recorded in the activity log.

In addition to viewing the Activity Log as a printout, you can view it as an ASCII text file by transferring the FP1000 diskette to a 3-1/2 inch disk drive on your computer.

4.4.2 REPRINT A FAX

This option allows you to print a fax that has been stored on the data disk. To select the fax that you want to reprint, first print an Activity Log and search for the desired fax. To reprint the fax, highlight "Reprint a Fax" in the Main Menu and press [F10]. The menu shown in Fig. 4-6 appears. Date and Time of Fax to Reprint Time: Date: Starting Page: Ending Page:

Fig. 4-6. Reprint a Fax Screen.

Type the appropriate information into each field of this menu and press [F10] to return to the Main Menu. The FP1000 then reprints the fax according to the time and date of the fax that you entered.

4.4.3 FAX SETTINGS MENU

This section explains the items in the Fax Settings Menu that were not discussed in the installation section of this guide.

SECURITY/CONFIRMATION MENU

The FP1000 allows you to control specifically from whom you will receive faxes and polling attempts, as well as to whom you wish to send confirmations of received faxes.

To select this option, highlight "Security/Confirmation Menu" and press [F10]. The menu shown in Fig. 4-7 appears.

Security/Confirmation Menu					
	Fax Protect: .ng Protectio		NABLED NABLED		
Caller's Name:	Incoming Fax ID:	Confirm Level:	ation Number:	Can Poll:	

Fig. 4-7. Security/Confirmation Menu.

With this menu, you can modify your levels of security and confirmations. The following subsections provide instructions for each option on this menu.

Junk Fax Protection

This feature turns the junk fax screening process ON and OFF. When screening is enabled, the FP1000 receives faxes only from fax machines whose ID numbers appear in the Fax ID list. When screening is disabled, the FP1000 receives faxes from any fax machine. To enable or disable the Junk Fax Protection, highlight "Junk Fax Protection" and press [Ins]. The menu shown in Fig. 4-8 then appears.

Junk Fax Protection

Enabled

Fig. 4-8. Junk Fax Protection. Highlight the desired option and press [F10].

Polling Protection

This feature turns Polling Protection ON and OFF. When enabled, the FP1000 allows only authorized fax machines (located in the Fax ID list) to "poll" or request the transmission of a fax stored on the floppy disk. (See Set Polling Documents in for more information.) To enable or disable, highlight "Polling Protection" and press [Ins]. The menu shown in Fig. 4-9 then appears.

Polling Protection

Enabled Disabled

Fig. 4-9. Polling Protection Menu.

Highlight the desired option and press [F10].

To add new Fax IDs to the list, highlight the bottom half of the Security/Confirmation menu and press [Ins] twice. The window shown

in Fig. 4-10 appears.

Add New Security/Confirmation Type

Name: Fax ID: Confirmation Type: Confirmation Phone: Polling:

Fig. 4-10. Add New Security/Confirmation Type Menu.

To enter a new Fax ID, simply type the new values to the far right. When finished, press [F10].

NOTE: You must enter new Fax IDs to the far right. If the new Fax ID number is Example:

- 1. Enter the phone number in its highlighted position.
- 2. Move the cursor to the beginning of the phone number.
- 3. Press the space bar to move the phone number to the far right.

Caller's Name

This field contains the name associated with the fax number authorized to call you in the future. It is for your reference only, and does not affect disallowing a transmission. To enter the name, type it into the highlighted field.

Incoming Fax ID

This field contains the Fax IDs of fax machines to which you want to send confirmations of received faxes or polling requests.

To enter data in this field, press [Insert] and enter the Fax ID number. You must enter the number exactly as stated by the sending fax to the Screening/Confirmation menu.

Selecting the Confirmation Level

This feature automatically tells the sender of a fax exactly what was received. The FP1000 provides the following four levels of confirmations:

The Single Page Report option:

Sends a single-page report verifying the number of pages transmitted, as well as the time and date that they were received.

The Partial Page option: Returns the first 2 to 3 inches of each received page to the sending fax machine.

The Full Page option: Returns to the sending fax machine the entire document that was sent.

The None option: Does not send confirmation to the sending fax machine.

To select a confirmation type, place the cursor over the "Confirmation Type" line and press [Ins]. The menu shown in Fig. 4-11 then appears.

```
Confirmation Level
```

```
None
Single Page Report
Partial Page
Full Page
```

Fig. 4-11. Confirmation Level Menu.

Highlight the desired option and press [F10].

Confirmation Number

This field allows you to enter a telephone number, assigning the destination for a confirmation of the received fax. To enter a number, simply type the number into its highlighted field.

To exit this menu, press the [Esc] key and you return to the Security/Confirmation menu.

Can Poll

This field allows you to indicate whether a calling fax machine may poll the FP1000 when Polling Protection is enabled. To enable or disable, highlight "Polling" and press [INS]. Select the desired option and press [F10]. You then return to the Security/Confirmation Menu. Once this feature is enabled, calling fax machines use their standard procedures for polling other fax machines.

Fax Header Line

The Header is an identification placed at the top of each faxed document. To enter information into this field, highlight "FAX Header Line" and press [F10]. The window shown in Fig. 4-12 appears. Header Line on Outgoing Faxes

FAX Header Line:

Fig. 4-12. Header Line on Outgoing Faxes.

Enter information into this field by typing the desired header line (up to 34 characters), then press [F10] to return to the Fax Settings Menu.

Set Polling Documents

Polling is the process by which a fax machine calls another fax machine and requests a fax transmission. This feature allows the receiver of a fax, rather than the sender, to pay for the phone charges.

The Set Polling Documents option from the FP1000 Settings Menu allows you to insert or remove a file that can be polled by other fax machines. You may restrict which fax machines can poll the FP1000 by enabling Polling Protection in the Security/Confirmation Menu and by entering YES in the Can Poll Field for each Fax ID # allowed to poll the FP1000. If you want to allow other fax machines to poll the FP1000, you can select an ASCII file, or Epson FX-80 print file, as the document to be polled. To select this option, highlight "Select Polling Documents" from the Fax Settings Menu and press [F10]. The menu shown in Fig. 4-13 then appears.

CHAPTER 4: Using the FP1000

Polling

Select Polling File Remove Polling File

Fig. 4-13. Polling Menu.

Select Polling File

When you select this option, the menu shown in Fig. 4-14 appears.

This option allows you to identify and download one or more files to your FP1000 for polling by other fax machines. Once you select the files, the FP1000 downloads the information to its data disk for future use.

Cover Sheet
To:
Subject:
Message:
From:
Company:
Address:
Fax Number:
Confirmation Number:

Fig. 4-14. Cover Sheet.

This is the optional cover sheet used to identify the polling file. If the cover sheet is not part of the fax to be polled, press [Esc]. Otherwise, enter the appropriate information. When you are in the Confirmation Number field of the Cover Sheet screen, press [F10]. The window shown in Fig. 4-15 then appears.

Select Pol	ling Files
Files to Send	

Fig. 4-15. Select Polling Files Screen.

To enter file names, press [Ins] twice. This brings up another window similar to the one shown in Fig. 4-16, containing a list of files in your current directory. This window also lets you move through the DOS directory structure.

File List for C:\FAX\								
DIR								
<parent></parent>								
CARSON.BID	2048	2 AUG 90	08:52:01					
CARSON.BAK	1778	1 AUG 90	16:24:05					
EXTRAS	24	3 JUL 90	07:32:04					
EXTRAS.BAK	23	1 JUN 90	12:23:09					
FARM.TXT	76234	7 SEP 90	14:34:45					
<sam></sam>								
TEST.TMP	334	3 APR 90	11:04:56					
A:								

Fig. 4	4-16.	File	List	Screen.
--------	-------	------	------	---------

Select a file for polling by highlighting it and pressing [F10]. You can select more than one file by moving the cursor through the directory and pressing [F5] on each file. When finished selecting files, press [F10], to return to the previous window. There you see a list of the selected files under the column "Files to Send."

NOTE: After a receiving fax polls a file, simply remove the file from the Files to Send list with the Remove Polling File option.

Remove Polling File

After polling, you may want to remove a polling file from the data disk. Once it is removed, until you select more files to be polled, no more polling can take place. To turn off polling, select the "Remove Polling File" option from the Polling Menu.

Fax Forwarding

This option allows the FP1000 to send all incoming fax transmissions to another FP1000 or fax machine at a remote phone number of your choice.

When you highlight this option and press [F10] from the Fax Settings Menu, the menu shown in Fig. 4-17 appears.

FAX Forwarding

Enable Fax Forwarding

Fig. 4-17. FAX Forwarding.

To forward fax transmissions to a remote number, highlight Enable Fax Forwarding and press [F10]. Type the phone number of the fax you wish to forward transmissions to, and press [F10]. Then press [Esc] to return to the Fax Settings Menu. The FP1000 forwards all faxes it receives to the selected number until you delete them, or until you select another remote phone number.

Fax Archiving

This option tells the FP1000 to produce a signal when the data disk is full of faxes. This allows you to replace the data disk to keep an audit trail of received faxes.

The default operation of the FP1000 is to erase old fax files that have already been printed to accommodate newly received faxes.

To enable or disable fax archiving, highlight "Fax Archiving" on the Fax Settings Menu and press [F10]. The menu shown in Fig. 4-18 appears.

FAX Archiving

Disable Enable

Fig. 4-18. FAX Archiving.

Highlight the desired option and press [F10] to return to the Fax Settings Menu.

Number of Rings

This feature sets the number of rings that the FP1000 receives before answering. The factory default for this setting is 2 rings. To change this setting, press [Delete] on the highlighted number, and type in the new value (2-9 rings available.)

Number of Retries

This feature sets the number of times that the FP1000 redials a previously busy fax attempt or no answer call. The factory default for this setting is 3 retries. To change this setting, press [Delete] on the highlighted number, and type in the new value (1-9 retries available).

4.4.4 PRINTER SETTINGS MENU

This section explains the items in the Printer Settings Menu that were not discussed in the installation section of this guide.

Multiple Copies

This option allows the FP1000 to automatically print more than one copy of incoming fax transmissions. The Multiple Copies option is especially useful in offices that have central filing systems to track correspondence.

NOTE: This feature functions only with the HP laser printers.

To print multiple copies of incoming faxes, highlight "Multiple Copies" and press [F10]. The widow shown in Fig. 4-19 appears.

Number of Copies to Print

Number of Copies:

Fig. 4-19. Number of Copies to Print Screen.

Type the number of copies you wish the FP1000 to print (from 1 to 99) and press [F10] to return to the Printer Settings Menu.

Printer Initialization

Some laser printers have features that must be turned on or off before faxes are printed, such as selection of a paper tray in a dual-tray laser printer.

The Printer Initialization feature allows you to enter a printer initialization string of up to 60 characters. This string is then sent to the printer at the beginning of a fax transmission. To enter a printer initialization string, highlight Printer Initialization and press [F10]. The window shown in Fig. 4-20 appears.

Printer Initialization String

Init String:

Fig. 4-20. Printer Initialization String Screen.

Type the string in hexadecimal. See Appendix B for a hexadecimal chart. Consult your printer operator's guide for the actual command strings you need. Then press [F10] to return to the Printer Settings Menu.

Printer Termination

Some laser printers have features that you must turn on or off after faxes are printed, such as selection of a paper tray in a dual-tray laser printer. The Printer Termination feature allows you to enter a printer termination string of up to 60 characters. This string is then sent to the printer at the end of a fax transmission.

To enter a printer termination string, highlight Printer Termination and press [F10]. The window shown in Fig. 4-21 appears. Printer Termination String

Term String:

Fig. 4-21. Termination String.

Type the string in hexadecimal. See Appendix B for a hexadecimal chart. Consult your printer operators guide for the actual command strings you need or to verify the need to reset. Then press [F10] to return to the Printer Settings Menu.

Printer Resolution

You can print incoming faxes at either 150 dots per inch (dpi) or 300 dpi. Faxes sent to the FP1000 are sent at either 200 dpi horizontally and 100 dpi vertically or 200 dpi horizontally and 200 dpi vertically.

Printing a fax at 150 dpi may reduce the image quality slightly, but it takes less time to print and less memory in your laser printer.

Printing a fax at 300 dpi does not improve the image quality of a fax. No fax can be improved beyond the ability of the sending fax's scanning mechanism. The better the scanner, the better the image. However, printing a fax at 300 dpi gives the truest representation of the image received by the sending fax machine.

Paper Size

The HP and Canon laser printers support three paper sizes: letter, A4, and legal. Depending on the type of business that you do, you may receive faxes in one or more sizes.

To select the paper size appropriate to your needs, highlight "Paper Size" and press [F10]. The menu shown in Fig. 4-22 appears.

Paper Size
Letter Legal A4 Legal, Manual Feed A4, Manual Feed

Fig. 4-22. Paper Size Screen.

Highlight the desired paper size, and press [F10] to return to the Printer Settings Menu.

If you set the paper size to "letter" and receive A4 or legal-sized faxes, the document will print on two letter-sized pages. To correctly print incoming faxes, set the paper size to correspond to the printer paper tray and the fax page size. If the printer has only a letter-size paper tray and you receive an A4 or legal-sized fax, place A4 or legalsized paper into the manual feed tray. Then set the paper size to "A4, Manual Feed" or "Legal, Manual Feed" and reprint the fax.

NOTE: If you are printing at 300 dpi, you need more than one megabyte of free RAM on your laser printer to print an A4 or legal-sized fax. You need more than 256KB free RAM to print an A4 or legal fax at 150 dpi.

5. Troubleshooting

If you suspect that your FP1000 is not functioning properly, first check the status indicator light. Table 5-1 describes the status indications.

Color of LED	Meaning
Steady green	FP1000 is ready to receive or send transmissions.
Slow flashing green	FP1000 is receiving.
Rapid flashing green	FP1000 is transmitting.
Red-Green Blink	The printer is offline or a printer error condition exists.
Blinking Red	The disk is full, a disk error exists, or the disk is not formatted.
No Light	FP1000 is unplugged or non-operational.

Table 5-1. Status Indicators.

Some problems are not indicated by the status indicator light. Use Table 5-2 to identify and solve problems you may encounter using your FP1000.

Table 5-	2. Probl	ems and	Solutions.
----------	----------	---------	------------

Problem	Solution				
FAX.EXE cannot communicate with FP1000.	Cables are not attached properly. Check the cables and reseat them.				
Partial page printed out	The laser printer has inadequate free memory. Free at least 1MB for 300-dpi printing or 256KB for 150-dpi.				
You receive an error message that the printer is out of memory.	The laser printer has inadequate free memory. Free at least 1MB for 300-dpi printing or 256KB for 150-dpi.				
FP1000 does not send faxes at the correct time.	Reset the time in the FP1000 Software.				

Appendix A: Glossary

ASCII file—A computer text file without formatting codes.

Fax—Abbreviation for facsimile. A fax is a graphical representation of a document that is sent over switched telephone lines.

Fax forwarding—A feature similar to the call forwarding available for most telephones. In fax forwarding, the FP1000 receives a fax, then transmits it to another fax machine at another site. This allows a person to receive a fax at a site other than where the original receiving fax machine resides.

Junk fax—An unwanted fax. Junk faxes typically are unsolicited advertisements from direct-marketing companies.

Polling—A function that many fax machines have that allows a calling fax machine to request that the receiving fax machine transmit a document instead of receiving a fax.

Resolution—The density of the printed dots on a page. The higher the resolution, the more dots are used to create an image. The larger the number of dots, the higher the quality of the image.

TSI—Telephone Subscriber Index. The TSI is an identification string, up to 20 characters long, that is unique to each telephone number. The TSI is typically the full telephone number of the fax machine, including its area or country code.

Appendix B: Function Keys

Table B-1 contains all function key assignments that the FP100 Software uses. You can view this chart at any time in the FP1000 Software by pressing the [F1] key twice.

Table B-1. Function Key

ACCEPT	F10	Accept Form, Field, or Menu Item.
EXIT	Alt-x	Exit the program.
ABORT	Esc	Abort Form, Field, or Menu.
BACKSPACE	Backspace	Delete the character to the left of the
		cursor.
INSERT	Ins	Insert a new item.
DELETE	Delete an item.	
MODIFY	F3	Rename/Modify/Edit the item.
SELECT	Enter	Accept information entered or select the
		item.
HELP	F1	Provide on-line help.
MARK	F5	Toggle marking for current item.
CYCLE	Tab	Cycle through menus or screens.
MODE	F9	Change modes.
UP	Up	Move up one line.
DOWN	Down	Move down one line.
LEFT	Left	Move left one position.
RIGHT	Right	Move right one position.

Assignments.

Appendix C: ASCII Chart

	r Hex	Cha	ar Hex	Ch	ar Hex	Ch	ar Hex	CI	nar Hex	CH	ar Hex
^A	01	1	31	а	61	æ	91		C1	_	FO
^B	02	2	32	b	62	Æ	92	т	C2	±	F1
^C	03	3	33	С	63	ô	93	÷	C3	≥	F2
^D	04	4	34	d	64	ö	94		C4	5	F3
^E	05	5	35	е	65	ð	95	+	C5	۔ آ	F4
^F	06	6	36	f	66	û	96	, ⊨	C6		F5
^G	07	7	37	g	67	ù	97	i.	C7	י +	F6
^H	08	8	38	ĥ	68	ij	98	Ë	C8	-	F7
<u>^ </u>	09	9	39	i	69	Ö	99	٦	C9	0	F8
۰J	0 A	:	3A	j	6A	Ü	9A	" جالہ	CA	•	F9
^К	OB	;	3B	k	6B	¢	9B		СВ		FA
^L	0C	<	3C	1	6C	£	9C	ŀ	cc	\checkmark	FB
^M	OD	=	3D	m	6D	¥	9D	-	CD	n	FC
^N	OE	>	3E	n	6E	Pt	9E	ᅻ╞	CE	2	FD
^0	OF	?	3F	0	6F	f	9F		CF		FE
^Р	10	@	40	р	70	á	AO	_11_	DO		FF
^Q	11	Α	41	q	71	í	A1		D1		••
^R	12	В	42	r	72	ó	A2	- - T	D2		
^S	13	С	43	s	73	ú	A3	Ű.	D3		
îΤ	14	D	44	t	74	ñ	A4	F	D4		
^U	15	Е	45	u	75	Ñ	A5	F	D5		
^V	16	F	46	v	76	a	A6	י חד	D6		
^W	17	G	47	w	77	0	A7	#	D7		
^Х	18	н	48	x	78	٤	A8	+	D8		
^γ	19	14	9	Y	79	r -	A9	Ļ	D9		



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