*Printer*

**Cross-head screwdriver**

*Paper guide*

**Platen knob**

**Ribbon cartridge**

## Printer Specifications

### Printing

Print method:   9-pin impact dot matrix

**Print speed:**

| Quality | Pitch | Characters/second/line |
|---------|-------|------------------------|
| Draft   | 10    | 220                    |
|         | 12    | 264                    |
| NLQ     | 10    | 45                     |
|         | 12    | 54                     |

**Printing direction:**   Bidirectional logic-seeking for text
unidirectional for graphics

**Line spacing:**   1/6" or 1/8" or programmable in increments
of 1/216th of an inch

**Paper feed speed:**   Single sheet: 48 ms/line (3.6" per sec)
Continuous: 53 ms/line (3.0" per sec)

**Printable** columns:

| Character pitch | Maximum printed characters | |
|-----------------|--------|---------|
|                 | FX-850 | FX-1050 |
| 10 pitch        | 80     | 136     |
| 10 pitch condensed | 137 | 233     |
| 12 pitch        | 96     | 163     |
| 12 pitch condensed | 160 | 272     |

**Buffer:**   8 Kbyte

**Character fonts:**   Draft
NLQ Epson Roman
Epson Sans Serif

## Interfaces

The Epson interfaces that are compatible with the FX-850 and FX-1050
are listed below.

| Interface number | Name |
|------------------|------|
| #8143 | RS-232 C/current loop interface |
| #8148 | Intelligent serial interface |
| #8149 | 32Kbyte buffer serial interface |
| #8165 | Intelligent IEEE-488 interface |
| #8172 | 32 Kbyte buffer parallel interface |

**Paper feeding methods:**   Friction
Push tractor
Cut sheet feeder (optional)
Pull tractor (optional)

**Ribbon**   Cartridge ribbon, available in black only:
**#8750 (FX-850)**
**#8755(M) (FX-1050)**

**Life expectancy of ribbon:**
3 million characters (14 dots/character)

**MCBF:**   For all components excluding print head:
5 million lines

**MTBF:**   **FX 850**   4000 power-on hours
FX-1050  6000 power-on hours

**Print head life:**   100 million characters (14 dots/character)

**Dimensions and weight:**

|         | FX-850  | FX-1050 |
|---------|---------|---------|
| Height: | **5.9"** | **5.9"** |
| Width.  | **17.9"** | **24.8"** |
| Depth:  | 14.2"   | **14.2"** |
| Weight: | **20.9** lbs | **27.5** lbs |

**Voltage:**   120 VAC ± 10%

**Power consumption:**   120 watts maximum

**Frequency:**   **49.5** to 60.5 Hz

**Insulation resistance:**   10M ohms between AC power line and chassis

**Dielectric strength (between AC line and chassis):**
Can withstand 1.0 kV rms applied for one
minute or 1250 VAC rms applied for one
second.

**Temperature:**   Operation: 40°F to 95°F (5°C to 35°C)
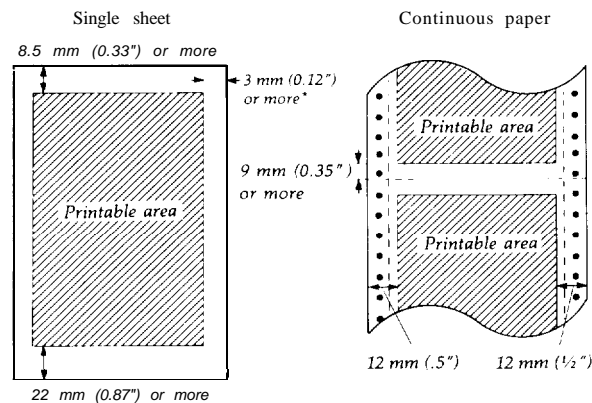Storage: -22°F to 140°F (-30°C to 60°C)

**Characters:**   96 standard ASCII character set
(including italic characters)
13 international character sets
Epson Extended Graphics characters set

**Paper width:**

| Paper Sheet | FX-850 | FX-1050 |
|-------------|--------|---------|
| Single Sheet | 7.2 to 10.1" (182-257mm) | 7.2 to 14.4"(162-366mm) |
| Continuous | 4 to 10" (101-254 mm) | 4 to 16" (101-406.4 mm) |
| Envelopes | 6.5" or 9.5" | 6.5" or 9.5' |
| Labels | 2.5" or 4.0" | 2.5" or 4.0" |

**Paper Length:**   Single sheet
7.2 to 14.3 inches (182 to 364 mm)

**Printable area:**

Single sheet                Continuous paper

8.5 mm (0.33") or more

3 mm (0.12") or more*

*Printable area*

9 mm (0.35") or more

*Printable area*

*Printable area*

12 mm (.5")   12 mm (½")

22 mm (0.87") or more

**Number of copies:**   Up to 4 sheets including the original. Total
thickness must not exceed 0.012" (0.32 mm)

**Humidity:**  Operation: 10% to 80% (without condensation)
Storage: 5% to 85% (without condensation)

Shock:  Operation: Up to 1 G within 1 ms
Storage: Up to 2 G within 7 ms

**Vibration:**  Operation: Up to 0.25 G at up to 55 Hz
Storage: up to 0.50 G at up to 55 Hz

## SelecType

You can use the SelecType control panel to choose fonts, pitches, and condensed printing. The settings you select using the SelecType panel remain valid even after the printer is turned off. reset, or initialized. However, commands from your software application program temporarily override the SelecType settings.

### Character fonts

The FX-850 and FX-1050 have three built-in character fonts:

**DRAFT**

!"##$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuv
wxyz{|}~

    We've just seen your excellent ad for
miniature zebras in a recent back issue of
Trader's Times. What is the price of these
items for quantities of more than one gross?

**ROMAN**

!"##$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuv
wxyz{|}~

    We've just seen your excellent ad for
miniature zebras in a recent back issue of
Trader Times. What is the price of these
items for quantities of more than one gross?

**SANS SERIF**

!"##$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuv
wxyzc: }~

    We've just Seen your excellent ad for
miniature zebras in a recent back issue of
            Times. What is the price of these
items far quantities of more than one gross?

### Interface timing

The figure below shows the timing for the parallel interface.
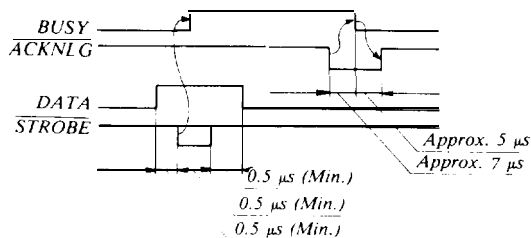


### Initialization

There are three ways that the printer can be initialized (returned to a fixed set of conditions).

Hardware initialization
- When the power is turned on
- When the printer receives an INIT signal at the parallel interface (pin 31 goes LOW).

Software initialization
- Software sends the ESC @ (initialize the printer) command.

---

**Epson Extended Graphics Character Table**



**Italic Character Table**



### Default Settings

The table below shows the default conditions that become valid when the printer is initialized.

| Item | Reset to: |
|---|---|
| Top of form position | Current paper position |
| Left and right margins | Cancelled |
| Line spacing | 1/6-inch line spacing |
| Vertical tab position | Cleared |
| Horizontal tab positions | Every eight characters |
| VFU channel | Channel 0 |
| Font selection | Reset to the current SelecType setting |
| CPI | Reset to the current SelecType setting |
| Justification | Left justification |
| Special printing effects | Cancelled |

In addition, the data buffer is cleared when the printer is initialized by turning on the power or by an INIT signal.

**Note: The user-defined character set is not cleared** when **the printer is initialized.**

---

# DIP Switch Functions

The tables below describe the DIP switch functions. The page numbers refer you to the page on which each printer feature is described. The shaded settings are the preset factory settings.

DIP Switch I

| SW | Description | ON | OFF | Page |
|----|-------------|-----|------|------|
| 1-1 | Default character set | User-defined | ROM | 3-7 |
| 1-2 | Zero character | Slashed | Not slashed | 3-7 |
| 1-3 | Character table | Graphic | Italic | 3-7 |
| 1-4 | Printer mode | IBM emulation | Epson ESC/P | 3-8 |
| 1-5 | Short tear-off mode | OFF | ON | 3-8, 2-15 |
| 1-6 | | | | |
| 1-7 | International character set | See table below | | 3-9 |
| 1-8 | | | | |

*DIP Switch 2*

| SW | Description | ON | OFF | Page |
|----|-------------|-----|------|------|
| 2-1 | Page lenght | 12 inch | 11 inch | 3-9 |
| 2-2 | Cut sheet feeder | On | Off | 3-10 |
| 2-3 | 1-inch skip over perforation | On | Off | 3-10 |
| 2-4 | Automatic line feed | On | Off | 3-10 |

International character sets

| Country | SW1-6 | SW1-7 | SW1-8 |
|---------|-------|-------|-------|
| USA | On | On | On |
| France | On | On | Off |
| Germany | On | Off | On |
| UK | On | Off | Off |
| Denmark | Off | On | On |
| Sweden | Off | On | Off |
| Italy | Off | Off | On |
| Spain | Off | Off | Off |

# International Character Sets

Selecting an international character set provides you with the characters used in other languages. To obtain the desired international character set, set switches 1-6, 1-7, and 1-8 according to the DIP switch table on page 3-7. The following table shows the characters that differ in each international character set.

*International* character sets

| | 35 | 36 | 64 | 91 | 92 | 93 | 94 | 96 | 123 | 124 | 125 | 126 |
|---|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| 0 USA | # | $ | @ | [ | \ | ] | ^ | ` | { | ¦ | } | ~ |
| 1 France | # | $ | à | ° | ç | § | ^ | ` | é | ù | è | ¨ |
| 2 Germany | # | $ | § | Ä | Ö | Ü | ^ | ` | ä | ö | ü | ß |
| 3 UK | £ | $ | @ | [ | \ | ] | ^ | ` | { | ¦ | } | ~ |
| 4 Denmark I | # | $ | @ | Æ | Ø | Å | ^ | ` | æ | ø | å | ~ |
| 5 Sweden | # | ¤ | É | Ä | Ö | Å | Ü | é | ä | ö | å | ü |
| 6 Italy | # | $ | @ | ° | \ | é | ^ | ù | à | ò | è | ì |
| 7 Spain I | ₧ | $ | @ | ¡ | Ñ | ¿ | ^ | ` | ¨ | ñ | } | ~ |
| 8 Japan | # | $ | @ | [ | ¥ | ] | ^ | ` | { | ¦ | } | ~ |
| 9 Norway | # | ¤ | É | Æ | Ø | Å | Ü | é | æ | ø | å | ü |
| 10 Denmark II | # | $ | É | Æ | Ø | Å | Ü | é | æ | ø | å | ü |
| 11 Spain II | # | $ | á | ¡ | Ñ | ¿ | é | ` | í | ñ | ó | ú |
| 12 Latin America | # | $ | á | ¡ | Ñ | ¿ | é | ü | í | ñ | ó | ú |

The countries numbered 8 through 12 are available only through the ESC R software command. See the Command Summary in Chapter 8. Also, in IBM emulation mode (DIP switch 1-4 on), a character set containing international characters (CG character table 2) is selected whenever any one of DIP switches 14. 1-7, or 1-8 is set to off. If all three switches are on, CG character table 1 is selected. See Appendix B.

**Page** length

When DIP switch 2-1 is on, the page length is set to 12 inches. When it is off, the page length is 11 inches. Other page lengths can be set with the ESC C and ESC C0 commands. See the Command Summary in Chapter 8.

### Cut sheet feeder mode

When DIP switch 2-2 is on, you can use your printer's optional cut sheet feeder. See Chapter 7 for more information on using a cut sheet feeder with your printer.

### Skip over perforation

When DIP switch 2-3 is on, a one-inch margin is provided between the last line printed on one page and the first line printed on the next page. When using continuous paper, this feature causes the printer to stop printing, skip over the perforation, and then resume printing. If you adjust your loading position correctly, you can get half of the margin at the bottom of one page and half at the top of the next page. See the section on adjusting the loading position later in this chapter.

Note: Most application programs take care of the top and bottom margins. Only use skip over perforation if your program does not provide these margins

### Automatic line feed

When DIP switch 2-4 is on. a carriage return code (CR! causes an automatic line feed. When it is off, line feeds occur only when the printer receives line feed codes (LF). Since some computers and application programs automatically add line feeds to carriage returns, the setting you use depends on your computer and application program.

### Default character set

When DIP switch 1-1 is on, the user-defined character set is the default. User-defined characters are maintained in printer memory even when the power is turned off, so the user-defined character set can be selected simply by setting this switch to on. However, when this switch is on, new user-defined characters cannot be defined. See Chapter 4 for more information on user-defined characters. This switch is effective only in the Epson ESC/P mode.

### Zero character

When DIP switch 1-2 is on, the printer prints slashed zeroes (0). When the DIP switch is off, the printer prints open zeroes (0). This is useful for clearly distinguishing between uppercase O and zero when printing such items as program lists.

### Character table

When DIP switch 1-3 is on, the Epson Extended Graphics character table is selected. When it is off, the italics character table is selected. The Epson Extended Graphics character table contains international accented characters, Greek characters, and character graphics for printing lines, corners, and shaded areas. If you have an IBM@ computer or an IBM compatible, select the Epson Extended Graphics table when you wish to print the character graphics as they are displayed on the screen. Since the character table setting affects only half of the character table, you can
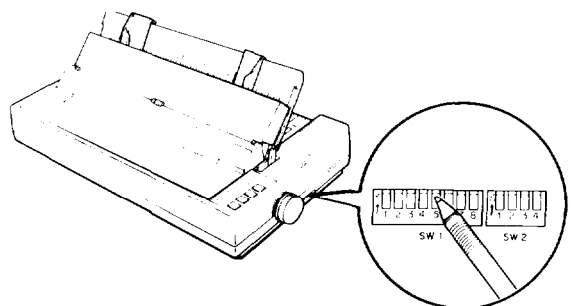


still print text if you have selected the Extended Graphics set. Also, you can still print italics if you use the proper software command. If your printer is in IBM emulation mode (DIP switch 1-4 on), the graphics characters are available no matter which character table you select.

The printouts below show which characters are printed in each table.

Italics

```
"'#$%&  (  )*+.-./0123456789:  ;<=>?@ABCDEFGH
IJKLRNOPQRSTUVWXYZ[\]^_  abcdefghijklmnop
qrstuvwxyz{:}
```

**Epson Extended Graphics**



Note: You may need to use the ESC 6 command to print some of the Extended Graphics characters. See Appendix 8.

### Printer mode

When DIP switch 1-4 is on, the printer operates in the IBM emulation mode. When it is off, the printer operates in the Epson ESC/P mode. In the IBM emulation mode, DIP switch 1-3 controls the automatic carriage return. When switch 1-3 is off, a carriage return is added to each line feed. The functions of DIP switches 1-6, 1-7. and 1-8 are also different when using the printer in the IBM emulation mode.

## Software

Now that you've set up and tested the printer, you need to start using it with your application programs.

Most application programs let you specify the type of printer you're using so that the program can take full advantage of the printer's features. Many programs provide an installation or setup procedure that present\ a list of printers to choose from. If your application program has a printer selection menu. use the instructions below.

### Using printer selection menus

If your software has a printer selection menu, simply choose FX-850 or FX-1050. If the menu does not list either of these printers, choose one of the following. They are listed in order of preference.

| | |
|---|---|
| FX-850 | FX-1050 |
| FX-86e | FX-286e |
| EX-800 | EX-1000 |
| FX-85 | FX-286 |
| FX-80+ | FX-185 |
| FX-80 | FX-100+ |
| FX | FX-100 |
| LX | FX |
| MX | LX |
| Epson printer | MX |
| Draft printer | Epson printer |
| | Draft printer |

If you plan to use the IBM emulation mode, choose IBM Proprinter (if you have an FX-850). IBM Proprinter XL (if you have an FX-1050). IBM Graphics printer, or IBM printer, in that order of preference.

## The Control Panel

The buttons on the control panel let you control many of the printer settings. The control panel also has Indicator lights so you can check the current status of the printer's various settings.

### Lights
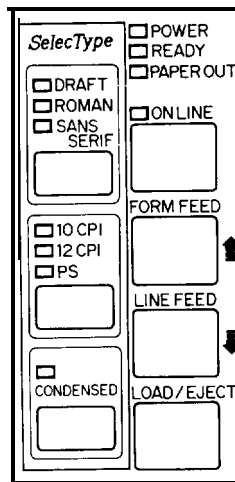


**POWER**
On when the power switch is on and power is supplied.

**READY**
On when the printer is ready to accept input data. Flickers when receiving data.

**PAPER OUT**
On when the printer is out of paper or when continuous paper is in the standby position.

**ON LINE**
On when the printer is on line and ready to accept data. This light flashes immediately after you load paper or use short tear-off to Indicate that micro-adjustment can be used.

### Other control panel features

The control panel of the FX also gives you access to several special functions.

**Self test** — By holding down the FORM FEED or LINE FEED button while you turn on the printer, you can start the printer's self test. This prints out the DIP switch settings and the characters in the printer's ROM (Read Only Memory). See the section on the self test in Chapter 1 for more information.

**Micro-adjustment** — By pressing the FORM FEED and LINE FEED buttons immediately after loading paper or using short tear-off, you can make fine adjustments to the loading and short tear-off positions. See the section on micro-adjustment in Chapter 2 for more information.

**Data dump** — By holding down both the FORM FEED and LINE FEED buttons while you turn on the printer, you can turn on the data dump mode. This feature allows advanced users to diagnose many problems. See the section on the data dump mode in Chapter 6 for more information

**Buttons**



**ON LINE**
This button controls the printer's on line/off line status. When the printer is on line, the printer can receive and print data from the computer.

**FORM FEED**
When the printer is off line, press this button to eject a single sheet of paper or advance continuous paper to the top of the next page. When the printer is on line, you can use the micro-adjustment feature by pressing this button to advance the paper.

**LINE FEED**
When the printer is off line, press this button to feed the paper one line. or hold it down to feed the paper continuously. When the printer is on line, you can use the micro-adjustment feature by pressing this button to reverse the paper.

**LOAD/EJECT**
When the printer is off line, press this button to load paper if paper is not loaded, or to elect it if paper is loaded. (Single sheet paper is ejected forward and continuous paper is ejected backward.)
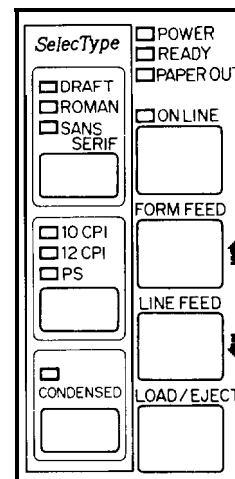
## SelecType

The settings you select using the SelecType panel remain valid even after you turn off, reset, or initialize the printer.



**FONT**

Press this button to select draft, near letter quality Roman. or near letter quality Sans Serif. The indicator light shows which font has been selected.
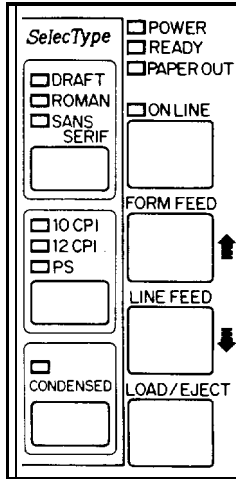
**CHARACTERS PER INCH**

Press this button to select the characters per inch (cpi). You can choose 10 CPI. 12 CPI. or PS (proportional spacing). The indicator light shows the selected character spacing.

**CONDENSED**

Press this button to select either condensed or normal printing. The light is on when the printer is in condensed mode. In this mode, all characters are approximately 60% of their normal width.

**Note:** Proportional spacing and condensed mode cannot be combined. If you select both, only proportional spacing works.

## Interface Specifications

Your printer is equipped with an &bit parallel interface. For specifications for optional interfaces, see the manuals provided with the optional interfaces.

### Pin assignments for the parallel interface

Connector pin assignments and a description of their respective interface signals are shown in the following table.

| Signal Pin | Return Pin | Signal | Direc-tion | Description |
|---|---|---|---|---|
| 1 | 19 | STROBE | IN | STROBE pulse lo read data in. Pulse width must be more than 0.5 microseconds at the receiving terminal |
| 2 | 20 | DATA 1 | IN | These signals represent information of the 1st to 8th bits of parallel data respectively Each signal is at HIGH level when data is logical 1 and LOW when it is logical 0 |
| 3 | 21 | DATA 2 | IN | |
| 4 | 22 | DATA 3 | IN | |
| 5 | 23 | DATA 4 | IN | |
| 6 | 24 | DATA 5 | IN | |
| 7 | 25 | DATA 6 | IN | |
| 8 | 26 | DATA 7 | IN | |
| 9 | 27 | DATA 8 | IN | |
| 10 | 28 | ACKNLG | OUT | About a 12-microsecond pulse LOW indicates that data has been received and that the printer is ready lo accept more data |

| | | | | |
|---|---|---|---|---|
| 11 | 29 | BUSY | OUT | A HIGH signal indicates that the printer cannot receive data. The signal goes HIGH in the following cases: 1) During data entry (ea. char. time) 2) During printing 3) When off line 4) During printer-error state. |
| 12 | 30 | PE | OUT | A HIGH signal indicates that the printer is out of paper. |
| 13 | — | — | — | Pulled up to 5 volts through 3.3K ohm resistance. |
| 14 | — | AUTO FEED XT | IN | When this signal is LOW, the paper is automatically fed 1 line after printing. (The signal level can be fixed to this by setting DIP switch 2-4 to ON.) |
| 15 | — | NC | — | Not used. |
| 16 | — | GND | — | Logic ground level. |
| 17 | — | CHASSIS GND | — | Printer's chassis ground. which is isolated from the logic ground. |
| 18 | — | NC | — | Not used. |
| 19 - 30 | — | GND | — | Twisted-pair return signal ground level. |
| 31 | — | INIT | IN | When this level becomes LOW, the printer controller is reset to its power-up state and the print buffer is cleared. This level is usually HIGH. its pulse width must be more than 50 microseconds at the receiving terminal. |
| 32 | — | ERROR | OUT | This level becomes LOW when the printer is: 1) in paper-out state 2) off line 3) in error state. |
| 33 | — | GND | — | Same as for Pins 19 - 30. |
| 34 | — | NC | — | Not used. |
| 35 | — | — | — | Pulled up to 5V through 3.3K ohm resistance. |
| 36 | — | SLCT IN | IN | The DC1/DC3 code is valid only when this signal is "HIGH". (Internal fixing can be carried out with Jumper J1. The level of this signal is factory-set to "LOW".) |

- The column heading "Direction" refers to the direction of signal flow as viewed from the printer.

· "Return" denotes the twisted-pair return. to be connected at signal ground level. For the interface wiring, be sure to use a twisted-pair cable for each signal and to complete the connection on the return side. These cables should be shielded and connected to the chassis of the host computer and the printer.

- All interface conditions are based on TTL level. Both the rise and the fall times of each signal must be less than 0.2 microseconds.

- Data transfer must be carried out by observing the ACKNLG or BUSY signal. Data transfer to this printer can be carried out only after receipt of the ACKNLG signal or when the level of the BUSY signal is LOW.

### Printing enabled/disabled signals and control conditions

The following table shows the relationship between printing being enabled or disabled, the on line/off line status, and the receipt of the data on/off control characters, DC1 or DC3.

| ON LINE (Indicator | SLCT IN | DC1/DC3 on/off control) | ERROR | BUSY | ACKNLG | Printing (Disabled/ enabled) |
|---|---|---|---|---|---|---|
| on line | Low (J1/ interface) | DC1/DC3 (no effect) | High | High/Low | Pulsed ea. char. | Enabled (normal cond.) |
| on line | High | DC1 Recv'd | High | High/Low | Pulsed ea. char. | Enabled |
| on line | High | DC3 Recv'd | High | High/Low | Pulsed ea. char. | Disabled' |
| off line | High/Low (no effect) | DC1/DC3 (no effect) | Low | High | Not generated | Disabled |

*While printing is disabled, character data is being received and acknowledged so that the printer can look for another DC1 character, which would allow it to resume printing.

# Commands in Numerical Order

This section lists all the FX commands, with their decimal and hexadecimal values. The numbers in the columns on the right are the page numbers in this chapter where a complete description of the command can be found. If the Epson and IBM emulation mode page numbers are the same, the command is the same in both modes and is described only in the Epson mode section.

| ASCII | Decimal | Hexadecimal | Description | Epson Mode | IBM Emulation Mode |
|---|---|---|---|---|---|
| BEL | 7 | 07 | Beeper | 8-12 | 8-12 |
| BS | 8 | 08 | Backspace | 8-20 | 8-20 |
| HT | 9 | 09 | Tab horizontally | 8-22 | 8-22 |
| LF | 10 | 0A | Line feed | 8-15 | 8-15 |
| VT | 11 | 0B | Tab vertically | 8-18 | 8-18 |
| FF | 12 | 0C | Form feed | 8-14 | 8-14 |
| CR | 13 | 0D | Carriage return | 8-13 | 8-13 |
| SO | 14 | 0E | Select double-wide (1 line) | 8-27 | 8-27 |
| SI | 15 | 0F | Select condensed mode | 8-26 | 8-26 |
| DC1 | 17 | 11 | Select printer | 8-8 | 8-8 |
| DC2 | 18 | 12 | Cancel condensed mode | 8-26 | |
| DC2 | 18 | 12 | Cancel condensed/12 cpi prop. | | 8-47 |
| DC3 | 19 | 13 | Deselect printer | 8-9 | |
| DC4 | 20 | 14 | Cancel double-wide (1 line) | 8-27 | 8-27 |
| CAN | 24 | 18 | Cancel line | 8-13 | 8-13 |
| DEL | 127 | 7F | Delete character | 8-13 | |
| ESC SO | 14 | 0E | Select double-wide (1 line) | 8-27 | 8-27 |
| ESC SI | 15 | 0F | Select condensed mode | 8-26 | 8-26 |
| ESC EM | 25 | 19 | Cut sheet feeder on/off | 8-11 | |
| ESC SP | 32 | 20 | Set intercharacter space | 8-32 | |
| ESC ! | 33 | 21 | Master Select | 8-24 | |
| ESC # | 35 | 23 | Cancel MSB control | 8-12 | |
| ESC $ | 36 | 24 | Set absolute print position | 8-21 | |
| ESC % | 37 | 25 | Select user-defined set | 8-36 | |
| ESC & | 38 | 26 | Define user-defined characters | 8-35 | |
| ESC * | 42 | 2A | Select graphics mode | 8-39 | |
| ESC - | 45 | 2D | Turn underlining on/off | 8-31 | 8-31 |
| ESC / | 47 | 2F | Select vertical tab channel | 8-19 | |
| ESC 0 | 48 | 30 | Select 1/8 inch line spacing | 8-16 | 8-16 |
| ESC 1 | 49 | 31 | Select 7/72-inch line spacing | 8-16 | 8-16 |
| ESC 2 | 50 | 32 | Select 1/6-inch line spacing | 8-16 | |
| ESC 2 | 50 | 32 | Programmable line spacing | | 8-43 |
| ESC 3 | 51 | 33 | Select n/216-inch line spacing | 8-17 | 8-17 |
| ESC 4 | 52 | 34 | Select italic mode | 8-33 | |
| ESC 4 | 52 | 34 | Set top of form | | 8-43 |
| ESC 5 | 53 | 35 | Cancel italic mode | 8-34 | |
| ESC 5 | 53 | 35 | Turn automatic line feed on/off | | 8-44 |
| ESC 6 | 54 | 36 | Printable code area expansion | 8-36 | |
| ESC 6 | 54 | 36 | Select international character set | | 8-49 |
| ESC 7 | 55 | 37 | Cancel ESC 6 | 8-37 | |
| ESC 7 | 55 | 37 | Select standard character set | | 8-49 |
| ESC 8 | 56 | 38 | Disable paper-out sensor | 8-10 | |
| ESC 9 | 57 | 39 | Enable paper-out sensor | 8-10 | |
| ESC : | 58 | 3A | Copy ROM into RAM | 8-35 | |
| ESC : | 58 | 3A | Select 12 cpi | | 8-46 |
| ESC < | 60 | 3C | Unidirectional mode (1 line) | 8-9 | |
| ESC = | 61 | 3D | Set MSB to 0 | 8-11 | |
| ESC = | 61 | 3D | Define user-defined characters | | 8-50 |
| ESC > | 62 | 3E | Set MSB to 1 | 8-12 | |
| ESC ? | 63 | 3F | Reassign graphics mode | 8-40 | |
| ESC @ | 64 | 40 | Initialize printer | 8-8 | |
| ESC A | 65 | 41 | Select n/72-inch line spacing | 8-17 | |
| ESC A | 65 | 41 | Set n/72-inch line spacing | | 8-42 |
| ESC B | 66 | 42 | Set vertical tabs | 8-18 | 8-18 |
| ESC C | 67 | 43 | Set page length in lines | 8-14 | 8-14 |
| ESC C0 | 67 | 43 | Set page length in inches | 8-14 | 8-14 |
| ESC D | 68 | 44 | Set horizontal tabs | 8-22 | 8-45 |
| ESC E | 69 | 45 | Select emphasized mode | 8-29 | 8-29 |
| ESC F | 70 | 46 | Cancel emphasized mode | 8-29 | 8-29 |
| ESC G | 71 | 47 | Select double-strike mode | 8-29 | 8-29 |
| ESC H | 72 | 48 | Cancel double-strike mode | 8-30 | 8-30 |
| ESC I | 73 | 49 | Printable code area expansion | 8-37 | |
| ESC I | 73 | 49 | Select font | | 8-46 |
| ESC J | 74 | 4A | Perform n/216-inch line feed | 8-17 | 8-43 |
| ESC K | 75 | 4B | Select single-density graphics | 8-38 | 8-38 |
| ESC L | 76 | 4C | Select double-density graphics | 8-38 | 8-38 |
| ESC M | 77 | 4D | Select 12 cpi | 8-25 | |
| ESC N | 78 | 4E | Set skip over perforation | 8-15 | 8-15 |
| ESC O | 79 | 4F | Cancel skip over perforation | 8-15 | 8-15 |
| ESC P | 80 | 50 | Select 10 cpi | 8-24 | |
| ESC P | 80 | 50 | Turn proportional on/off | | 8-47 |
| ESC Q | 81 | 51 | Set right margin | 8-20 | |
| ESC Q 3 | 81 | 51 | Deselect printer (FX-850) | | 8-42 |
| ESC Q 22 | 81 | 51 | Deselect printer (FX-1050) | | 8-42 |
| ESC R | 82 | 52 | International character set | 8-34 | |
| ESC R | 82 | 52 | Restore default tab settings | | 8-45 |
| ESC S0 | 83 | 53 | Select superscript mode | 8-30 | 8-30 |
| ESC S1 | 83 | 53 | Select subscript mode | 8-30 | 8-30 |
| ESC T | 84 | 54 | Cancel superscript/subscript | 8-31 | 8-31 |
| ESC U | 85 | 55 | Turn unidirectional mode on/off | 8-10 | 8-10 |
| ESC W | 87 | 57 | Turn double-wide on/off | 8-28 | 8-28 |
| ESC X | 88 | 58 | Set left and right margins | | 8-44 |
| ESC Y | 89 | 59 | High-speed dbl-density graphics | 8-38 | 8-38 |
| ESC Z | 90 | 5A | Quadruple-density graphics | 8-39 | 8-39 |
| ESC I@ | 91 | 5B | Double-high double-wide on/off | | 8-48 |
| ESC \ | 92 | 5C | Set relative position | 8-21 | |
| ESC \ | 92 | 5C | Print characters from symbol set | | 8-49 |
| ESC ^ | 94 | 5E | Select 9-pin graphics | 8-40 | |
| ESC ^ | 94 | 5E | Print 1 char. from symbol set | | 8-50 |
| ESC _ | 95 | 5F | Turn overscore on/off | | 8-48 |
| ESC a | 97 | 61 | Select justification | 8-32 | |
| ESC b | 98 | 62 | Set vertical tabs in channels | 8-18 | |
| ESC k | 107 | 6B | Select NLQ font | 8-23 | |
| ESC l | 108 | 6C | Set left margin | 8-19 | |
| ESC p | 112 | 70 | Turn proportional mode on/off | 8-25 | |
| ESC s | 115 | 73 | Turn half-speed mode on/off | 8-9 | |
| ESC t | 116 | 74 | Select character table | 8-33 | |
| ESC w | 119 | 77 | Turn double-high on/off | 8-28 | |
| ESC x | 120 | 78 | Select NLQ or draft | 8-23 | |

## Installation/Support  Tips

## Software

The type of printer installed on your system must be identified for each software package. This is usually done through a setup menu.  If this printer is not listed in your program, look in the printer User's Manual for the next-best model  selection.

## DIP  Switch  Settings

The default settings will usually work for most applications, but they should be checked before using the printer This will avoid unexpected results.

## Serial  Operation

The FX-850/1050 will be able to receive serial data with the addition of an Epson 81XX series interface option.

## Cut - Sheet Feeder Operation

The page length will have to be adjusted (shortened) to 61 lines per page if your software does not properly support cut -sheet paper. There will be lines from the first page printed at the top of the second page if the page length is not set correctly.

## Disabling  the  Buffer

An undocumented feature of the FX-850/1050 is the ability to disable the buffer from the SelecType panel. To toggle the buffer hold down the **Load/Eject** switch at power on. Two beeps indicate that the 8K buffer is enabled, and one beep indicates that the buffer is disabled. (Some spooler applications won't work correctly unless the buffer is disabled.)

## Information  Reference  List

**Engineering  Change  Notices**

| | | |
|---|---|---|
| FX-850/1050-001 | 10/11/88 | To  Version  MP2286<br>ROM  upgrade. |

**Product  Support  Bulletins**

| | | |
|---|---|---|
| P - 0024 | 8/01/88 | Undocumented  buffer  feature |

**Related  Documentation**

| | | |
|---|---|---|
| M-TM-FX8510 | | FX-850/1050  Technical  Manual |
| M-PL-FX8510 | | FX-850/1050  Parts  Price  List |
| Y46199101003 | | FX-850/1050  User's  Manual |

Technical  Information  Bulletins

| | | |
|---|---|---|
| FX-850/1050-001 | 7/1/88 | Loading  lever  replacement |
| FX-850/1050-002 | 10/11/88 | PEGX  removal  procedure  caution |