## Important Notice

The FX-850 and FX-1050 have changed, but the model names have not been changed. This *Product Information Guide* is supplementary to the previous FX-850/7050 Product Information Guide for new models.

The product codes for the previous and current versions of the FX-850/1050 are as follows:

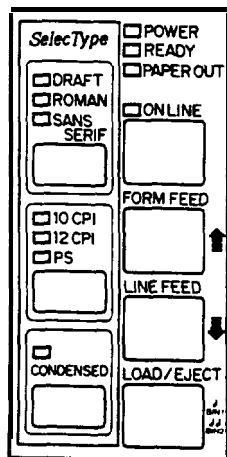|         | Previous | Current |
|---------|----------|---------|
| FX-850  | XXXPA    | P182PB  |
| FX-1050 | XXXPA    | P12PB   |

Also, the version number printed at the beginning of a self-test begins with MP for the previous version and PP for the current version.

Note:   Add this addendum to the previous FX-850/1050 *Product Information Guide* do not discard the old one.

## The Control Panel

### 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. 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.**

### other control panel features

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

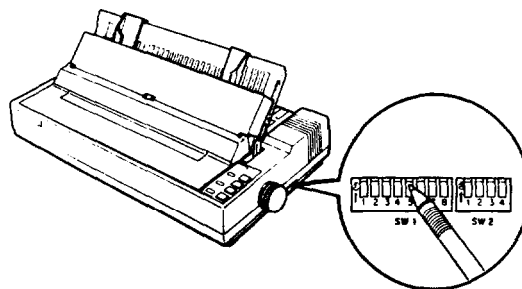| | |
|---|---|
| Self test | By holding down the FORM FEED or LINE FEED button while you turn on the printer, you can start the printer's self test. This prints out the DIP switch settings and the characters in the printer's ROM (Read Only Memory). See the section on the self test in Chapter 1 for more 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. |
| Input buffer control | The input buffer can be enabled or disabled by turning on the power while pressing the LOAD/EJECT button. The beeper sounds once if the input buffer is disabled. or twice if it is enabled. Use the self test to check the input buffer's current state. |
| Draft printing speed | The printer can be set to either high-speed draft mode or normal draft mode. Turn on the power while pressing the FONT button. The beeper sounds once if normal draft mode is selected. or twice for high-speed draft mode. |

## 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 1*

| 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 length | 12 inch | 11 inch | 3-9 |
| 2-2 | Cut sheet feeder mode | 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*

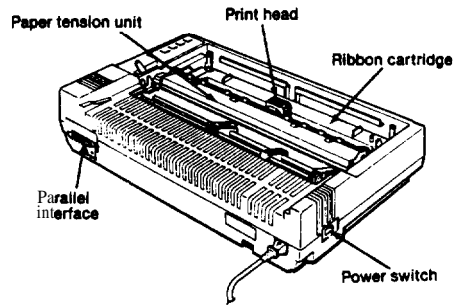| Country | SW1-6 | SW1-7 | SW1-8 |
|---|---|---|---|
| USA | On | On | On |
| France | On | On | Off |
| Germany | On | Off | On |
| UK | On | Off | Off |
| Denmark | Off | On | On |
| Sweden | Off | On | Off |
| Italy | Off | Off | On |
| Spain | Off | Off | Off |

**Default character set**

When DIP switch 1-1 is on, the user-defined character set is the default. Userdefined 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 (Ø). 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, Creek characters, and character graphics for printing liner, 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.

## 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.
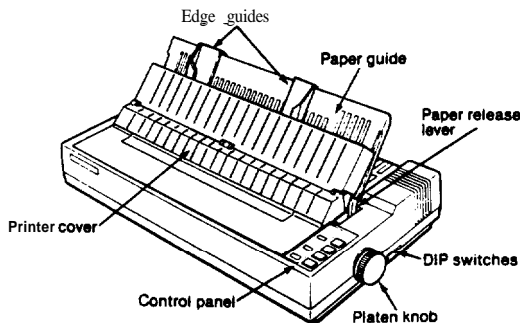
*International character sets*

| | 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 1-6, 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.



## Printer Specifications

Printing

Print method:  9-pin impact dot matrix

Print speed:

| Quality | Pitch | Characters/second/line |
|---|---|---|
| High-speed draft | 10 | 290 |
| Draft | 10 | 220 |
| | 12 | 264 |
| NLQ | 10 | 45 |
| | 12 | 54 |

Printing direction:

unidirectional for graphics

1/6' or 1/8' or program of 1/216th of an inch

Papa feed speed:  Single sheet: 48 ms/line (3.6' 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 High-speed draft
Normal draft
NLQ Epson Roman
Epson Roman Proportional
Epson Sans Serif
Epson Sans Serif Proportional

**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 1 ms

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

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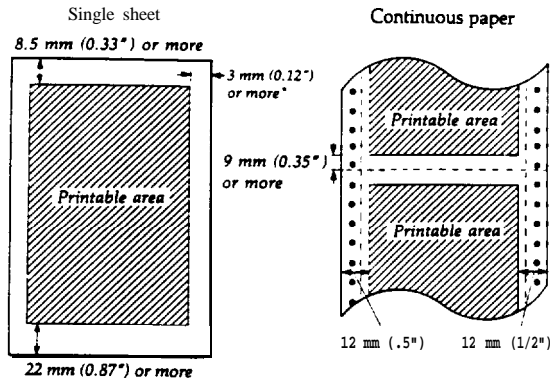Epson Extended Graphics characters set

Paper width:

| Paper Sheet | FX-850 | FX-1050 |
|---|---|---|
| Single Sheet | 7.2 to 10.1" (182-257mm) | 7.2 to 14.4" (182-366mm) |
| Continuous | 4 to 10" (1101-254 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:



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

Paper feeding methods: Friction _on_
Posh 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 limes

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

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

Dimensions and might:

| | 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)

## Paper Thickness

| Paper Type | Lever Position |
|---|---|
| Paper (single sheets or continuous) | 2 |
| Thin paper | 2 |
| Multi-part paper | |
| 2-sheet | 3 |
| 3-sheet | 3 |
| 4-sheet | 4 |
| Labels | 3 |
| Envelopes | |
| Air mail | 3 or 4 |
| Plain | 5 |
| Bond (20 lb.) | 5 |
| Bond (24 lb.) | 6 |

Always return the lever to Position 2 when you go back to printing on ordinary paper. Continuous printing with the lever set at a position higher than 2 can shorten the life of the print head.

WARNING: Printing past the edge of envelopes, multi-part forms, labels, or thick paper can damage the print head.

## 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** | B e e p c r | | **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** | CC | 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 | OF | Select condensed mode | 8-26 | 8-26 |
| DC1 | **17** | 11 | Select printer | 8-3 | 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 doublc-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 I | 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/&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** | |

| ASCII | Decimal | Hexadecimal | Description | Epson Mode | IBM Emulation Mode |
|---|---|---|---|---|---|
| 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 de 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 | |
| E S C = | 61 | 3D | Set MSB to 0 | 8-11 | |
| E S C - | 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 | Initialiaze 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 tab | 8-22 | 8-45 |
| E X 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 | Intemational characterset | 8-34 | |
| ESC R | 82 | 52 | Restore default tab settings | | 8-45 |
| ESC S 0 | 83 | 53 | Select superscript mode | 8-30 | 8-30 |
| ESC S 1 | 83 | 53 | Select subscript mode | 8-30 | 8-33 |
| 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-wick 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 [ @ | 91 | 5B | Double-high double-wide on/off | | 8-48 |
| ESC \ | 92 | 5C | Set relative position | 8-21 | |
| E S C \ | 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 I | 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 | |

## Master Select Typestyle Codes

The format of the Master Select code is shown below:

| | | | |
|---|---|---|---|
| ASCII: | ESC | I | *n* |
| Decimal: | 27 | 33 | n |
| Hexadecimal: | 1B | 21 | n |

To send the Master Select codes to your printer in a decimal format, for example. you send the codes 27, 33, and then whatever value you choose for the variable n.

The variable n is a number that identifies the typestyle or combination of typestyles. To find the value of n. look at the Master Select table below and add up either the decimal or hexadecimal numbers for the features you want.

Master Select Table

| Feature | Dec. | Hex. |
|---|---|---|
| 10 cpi | 0 | 00 |
| 12 cpi | 1 | 01 |
| proportional | 2 | 02 |
| condensed | 4 | 04 |
| emphasized | 8 | 08 |
| double-strike | 16 | 10 |
| double-wide | 32 | 20 |
| italics | 64 | 40 |
| underline | 128 | 80 |

For example, if you want to print a title using double-wide 12 cpi characters in double-strike mode, you would add these three decimal numbers together to calculate the value of n:

| | |
|---|---|
| 12 cpi | 1 |
| Double-strike | 16 |
| Double-wide | 32 |
| n - | 49 |

## SelecType

### Character Tables

Then character tables are selected by setting DIP switch 1-3 or using the ESC t software command. For the Epson Extended Graphics character table, use of the ESC 6 or ESC 7 software command lets you select whether to print hex codes 80 to 9F as characters (ESC 6) or control codes (ESC 7).

Italic Character Table

| C O D E | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | 0 | @ | P | ` | p | | | | | 0 | @ | P | ` | p |
| 1 | | ! | 1 | A | Q | a | q | | | | | ! | 1 | A | Q | a | q |
| 2 | | " | 2 | B | R | b | r | | | | | " | 2 | B | R | b | r |
| 3 | | # | 3 | C | S | c | s | | | | | # | 3 | C | S | c | s |
| 4 | | $ | 4 | D | T | d | t | | | | | $ | 4 | D | T | d | t |
| 5 | | % | 5 | E | U | e | u | | | | | % | 5 | E | U | e | u |
| 6 | | & | 6 | F | V | f | v | | | | | & | 6 | F | V | f | v |
| 7 | | ' | 7 | G | W | g | w | | | | | ' | 7 | G | W | g | w |
| 8 | | ( | 8 | H | X | h | x | | | | | ( | 8 | H | X | h | x |
| 9 | | ) | 9 | I | Y | i | y | | | | | ) | 9 | I | Y | i | y |
| A | | * | : | J | Z | j | z | | | | | * | : | J | Z | j | z |
| B | | + | ; | K | [ | k | { | | | | | + | ; | K | [ | k | { |
| C | | , | < | L | \ | l | | | | | | | , | < | L | \ | l | ¦ |
| D | | - | = | M | ] | m | } | | | | | - | = | M | ] | m | } |
| E | | . | > | N | ^ | n | | | | | | | . | > | N | ^ | n | |
| F | | / | ? | O | _ | o | | | | | | | / | ? | O | _ | o | |

## Epson Extended Graphics Character Table

| CODE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | 0 | @ | P | ` | p | Ç | É | á | ▓ | └ | ╨ | α | ≡ |
| 1 | | | ! | 1 | A | Q | a | q | ü | æ | í | ▒ | ┴ | ╤ | β | ± |
| 2 | | | " | 2 | B | R | b | r | é | Æ | ó | ▓ | ┬ | ╥ | Γ | ≥ |
| 3 | | | # | 3 | C | S | c | s | â | ô | ú | │ | ├ | ╙ | π | ≤ |
| 4 | | | $ | 4 | D | T | d | t | ä | ö | ñ | ┤ | ─ | ╘ | Σ | ⌠ |
| 5 | | | % | 5 | E | U | e | u | à | ò | Ñ | ╡ | ┼ | ╒ | σ | ⌡ |
| 6 | | | & | 6 | F | V | f | v | å | û | ª | ╢ | ╞ | ╓ | μ | ÷ |
| 7 | | | ´ | 7 | G | W | g | w | ç | ù | º | ╖ | ╟ | ╫ | τ | ≈ |
| 8 | | | ( | 8 | H | X | h | x | ê | ÿ | ¿ | ╕ | ╚ | ╪ | Φ | ° |
| 9 | | | ) | 9 | I | Y | i | y | ë | Ö | ⌐ | ╣ | ╔ | ┘ | θ | • |
| A | | | * | : | J | Z | j | z | è | Ü | ¬ | ║ | ╩ | ┌ | Ω | · |
| B | | | + | ; | K | [ | k | { | ï | ¢ | ½ | ╗ | ╦ | █ | δ | √ |
| C | | | , | < | L | \ | l | ¦ | î | £ | ¼ | ╝ | ╠ | ▄ | ∞ | ⁿ |
| D | | | - | = | M | ] | m | } | ì | ¥ | ¡ | ╜ | = | █ | ø | ² |
| E | | | . | > | N | ^ | n | ~ | Ä | ₧ | « | ╛ | ╬ | ▌ | ∈ | ■ |
| F | | | / | ? | O | _ | o | | Å | ƒ | » | ┐ | ± | ▐ | ∩ | |

## Density varieties

Although all the examples so far in this section have been in the single-density graphics mode, there are seven other eight-pin densities and two that use all nine pins.

Nine-pin graphics is not necessary for most uses, but you can find the command (ESC ^) in the Command Summary in Chapter 8. The four most common eight-pin modes are ESC K. ESC L, ESC Y, and ESC Z. There is also a general purpose command for any of the eight-pin graphics modes: ESC ● . This command is used in the same way as the individual commands. except that before n1 and n2 you must send the code for the graphics mode required.

The different graphics modes are summarized in the following table:

| Option | Alternate Code | m | Horiz. density (dots/in.) |
|--------|-----|---|-----|
| Single-density | ESC K | 0 | 60 |
| Double-density | ESC L | 1 | 120 |
| High-speed double-density* | ESC Y | 2 | 120 |
| Quadruple-density* | ESC Z | 3 | 240 |
| CRT I | none | 4 | 80 |
| Plotter (1:1) | none | 5 | 72 |
| CRT II | none | 6 | 90 |
| Double-density plotter | none | 7 | 144 |

*Adjacent dots cannot be printed in this mode

## Default Settings

The table below shows the default conditions that become valid when the printer is initialized.
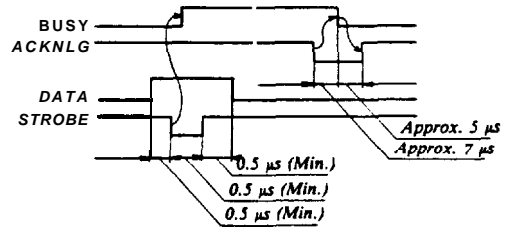
| Item | Reset to: |
|------|-----------|
| Top of form position | Current paper position |
| Left and right margins | Cancelled |
| Line spacing | 1/6-inch line spacing |
| Vertical tab position | Cleared |
| Horizontal tab positions | Every eight characters |
| VFU channel | Channel 0 |
| Font selection | 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 INIT signal.

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

## Interface timing

The figure below shows the timing for the parallel interface.



## Initialization

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 prints) command.

# Interfaces

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

| Interface number | Name |
|------------------|------|
| #8143 | RS-232C/current loop interface |
| #8148 | Intelligent serial Interface |
| #8165 | Intelligent IEEE-488 interface |

# Application Programs Printer Selection

## Using the FX with Application Programs

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 presents 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.

Note: If your application program does not list the FX-850 or FX-1050, you may want to contact the software manufacturer to see if an update is available.

| Typestyle | FX-850 | FX-1050 |
|---|---|---|
| Normal (10 cpi) | 80 | 137 |
| 12 cpi | 96 | 163 |
| Condensed | 137 | 233 |
| 12 cpi condensed | 160 | 272 |

## 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 setting will usually work for moat 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 liner 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 wont work correctly unless the buffer is disabled.)

## Information Reference List

Related Documentation

| | | |
|---|---|---|
| | | FX-850/1050 Service Addendum for Models P82PB and P12PM |
| Y46199112001 | | FX-850/1050 User's Manual |