

**Panasonic**

# **Operating Instructions**

Impact Dot Matrix Printer

## **KX-P1150**



Before operating this unit, please read these instructions completely.

## IMPORTANT (FOR UNITED KINGDOM)

### CLASS I FOR BS 7002

#### FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark  or the BSI mark on  the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**


If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

#### **WARNING :** THIS IS APPLIANCE MUST BE EARTHED.

**IMPORTANT:** The wires in this mains lead are coloured in accordance with the following code:

Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

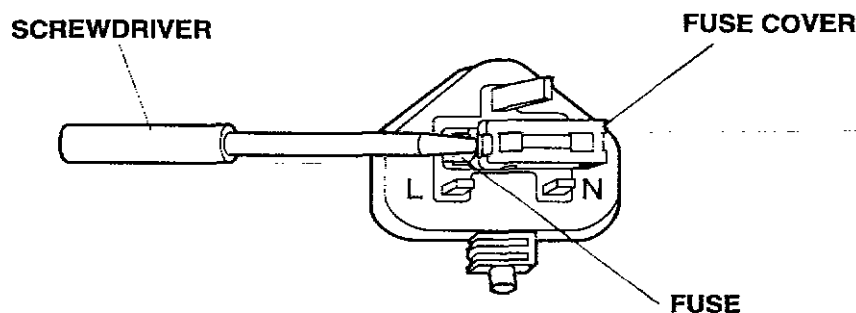
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured **GREEN-AND-YELLOW** must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol , or coloured **GREEN** or **GREEN-AND-YELLOW**.

The wire which is coloured **BLUE** must be connected to the terminal in the plug which is marked with the letter N or coloured **BLACK**.

The wire which is coloured **BROWN** must be connected to the terminal in the plug which is marked with the letter L or coloured **RED**.

**How to replace the fuse** Open the fuse compartment with a screwdriver and replace the fuse and fuse.



• This equipment is produced to BS800: 1988

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### **WARNING**

- The power source voltage of this unit is listed on the nameplate. Plug the printer only into an outlet with the proper voltage.
- To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.
- When you operate this equipment, the outlet should be near the equipment and should be easily accessible.

The serial number of the unit may be found on the label on the rear of the unit. For your convenience, note this number below, and retain this book, along with your proof of purchase, to serve as a permanent record of your purchase in the event of a theft, or for future reference.

MODEL NO. **KX-P1150** \_\_\_\_\_

NAME OF DEALER \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

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Windows is a trademark of Microsoft Corporation.

Epson is a registered trademark of Seiko Epson Corporation.

Any details given in these Operating Instructions are subject to change without notice.

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# Introduction

Congratulations on purchasing a Panasonic printer.

This printer is a versatile, high quality 9-pin dot matrix printer which is designed to meet the needs of your office, home and private use...

This printer has been factory set to operate with most of the popular software packages.

Your application software should control the printer functions. In most cases, there will be no need to change the initial printer settings.

## Features

<b>Printer Emulation:</b>	Epson FX-850 and IBM Proprinter III
<b>Setup Disk:</b>	A Printer-Driver for Windows Ver. 3.1, Initial Setup program and Command Reference program
<b>Fonts:</b>	3 Draft (Pica, Elite, Micro) 4 NLQ (Courier, Bold PS, Roman, Sans Serif)
<b>Maximum Printing Speed:</b>	Draft — 240 characters per second (15 cpi) NLQ — 38 characters per second (12 cpi)
<b>Paper Handling:</b>	Friction and Push Tractor

## Operating Environment

This printer can be installed in any normal office environment.

No special wiring or cooling is required.

- Do not use the printer under the following conditions:
  - Extremely high or low temperature [temperature range: 10~35°C (50~95°F)]
  - Extremely high or low humidity (humidity range: 20~80% RH)
  - Areas of poor ventilation [a minimum of 4" (10 cm) clearance on all sides is necessary to insure proper ventilation]
  - Areas of high dust concentration
  - Areas with chemical fume concentration
  - Areas with extreme vibration or when placed on an unstable or unlevel surface

## Precautions

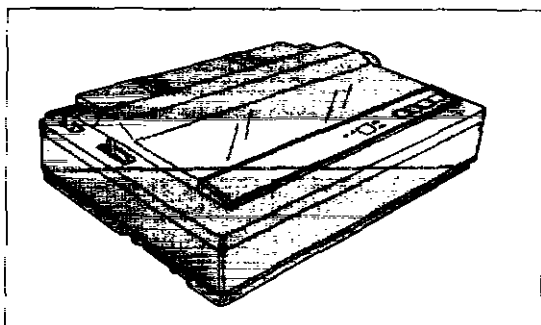
The following precautions are recommended to extend the life of the printer.

- Keep all liquids away from the printer.
- Do not place books, paper, or other items on top of the printer.
- Do not operate the printer without paper and a ribbon cassette installed.
- Avoid prolonged use without allowing the printhead time to cool.
- Do not obstruct the movement of the printhead while in operation.
- If the printer is not going to be used for an extended period, unplug the power cord.

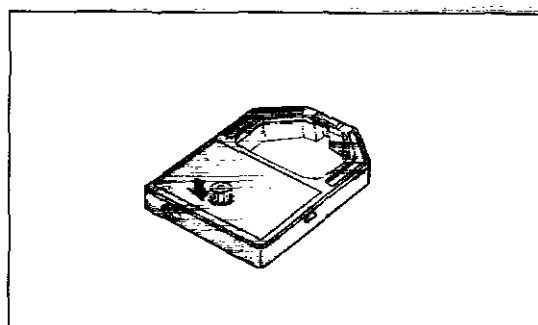
# Unpacking

Having unpacked the printer, make sure none of the contents shown below are missing or damaged. Report damages or shortages to the store from which the unit was purchased.

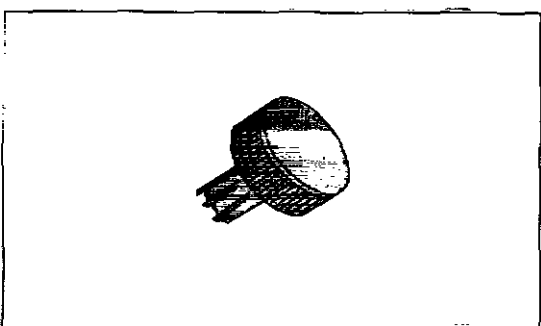
Before You Start



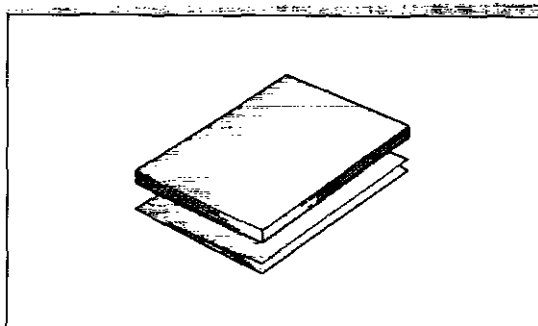
**Printer (KX-P1150)**



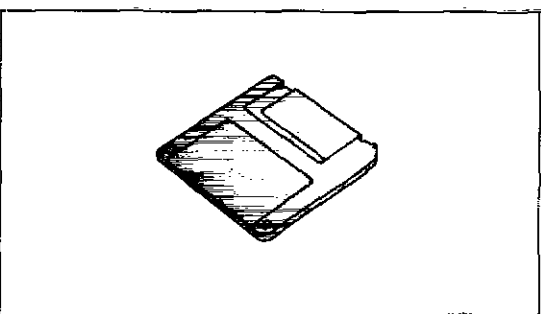
**Ribbon Cassette**



**Platen Knob**



**Operating Manual  
Quick Start Guide**



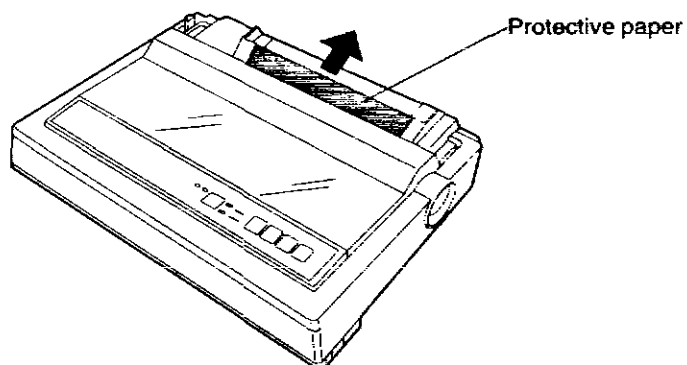
**Setup Disk**

- This Setup Disk contains a Printer-Driver for Windows Ver. 3.1 (P. 19), an Initial Setup program (P. 21) and a Command Reference program (P. 33).
- To use this Setup Disk you need to have an IBM-PC or a Compatible computer with a 3.5" floppy disk drive.

## Note:

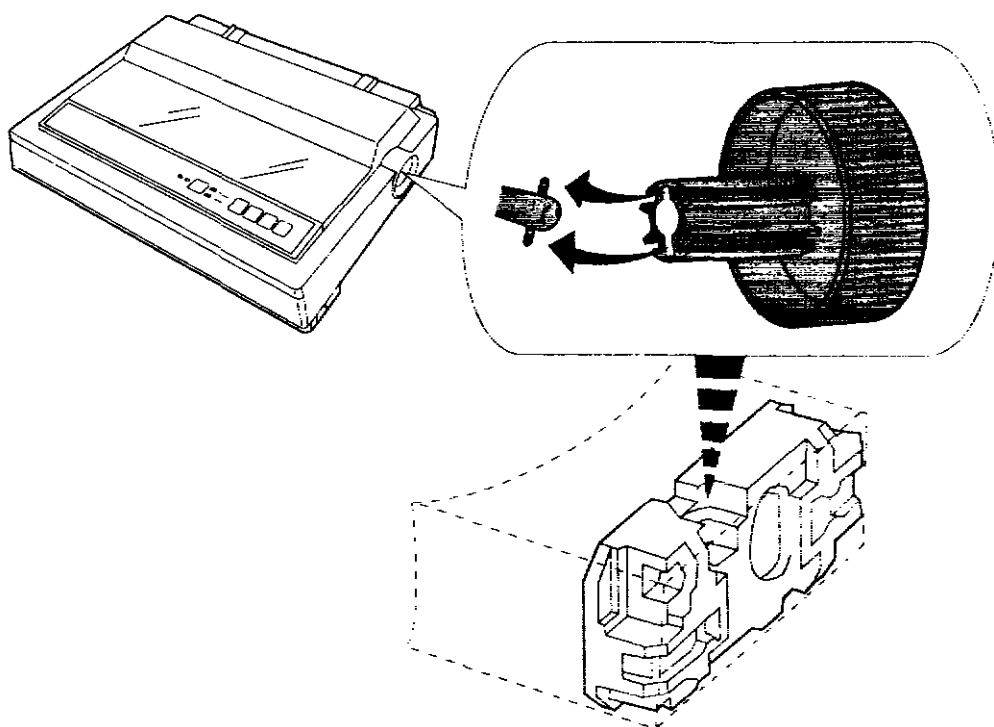
It is recommended that you save the original carton and packing materials for proper shipping and transporting of the printer.

## Removing the Protective Paper (if installed)



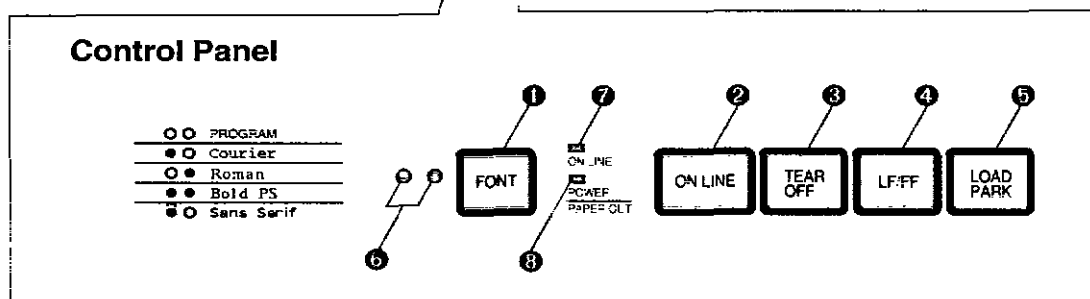
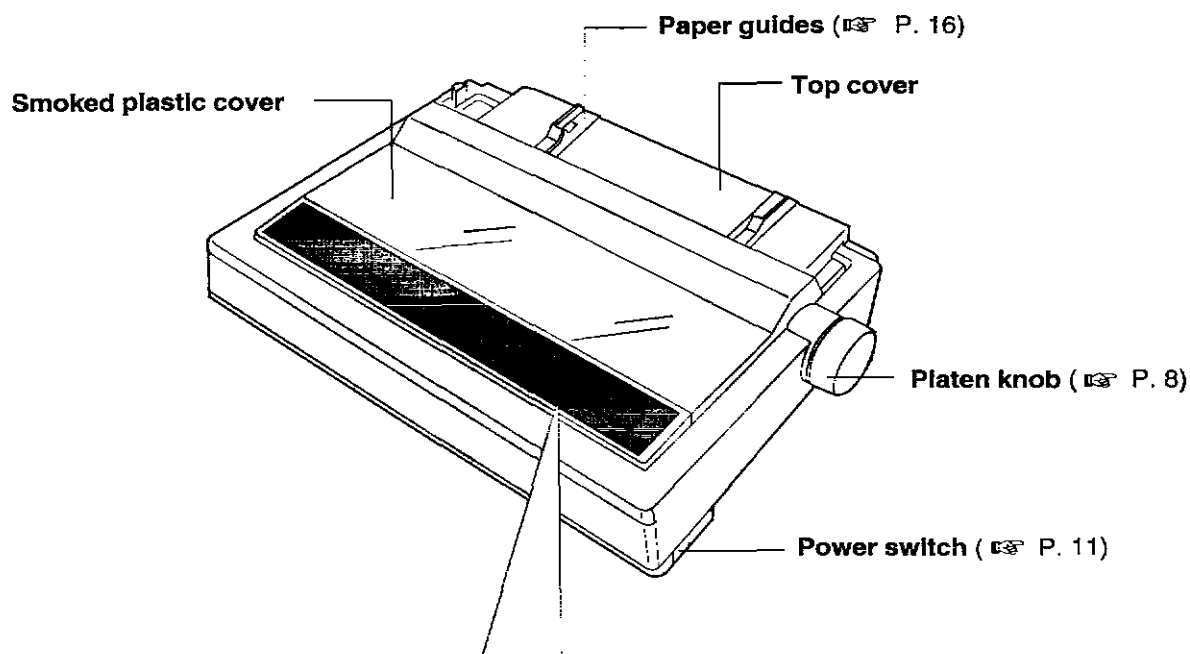
## Installing the Platen Knob

Insert the platen knob into the hole on the right side of the printer and rotate it slowly until it slips onto the shaft. Push the platen knob onto the platen shaft to secure.





# Parts of the Printer



**1 FONT switch**  
Pressing this switch will select the font style.  
(P. 30)

**2 ON LINE switch**  
This switch opens and closes the communication line with the computer.

**3 TEAR OFF switch**  
Pressing this switch will advance or reverse the paper for tearing off. (P. 31)

**4 LF/FF switch**  
Pressing this switch advances the paper one line at a time. Holding this switch advances the paper to the first print line of the next page. (P. 31)

**5 LOAD/PARK switch**  
Pressing this switch will load or park the paper. (P. 32)



**6 FONT indicators**  
These indicators identify which Font has been selected. (P. 30)

**7 ON LINE indicator**  
This indicator is lit when the printer is in the ON LINE mode, and is out in the OFF LINE mode.

**8 POWER/PAPER OUT indicator**  
This indicator is lit when the power is on and paper is installed. It blinks when paper is not installed.


## Parts of the Printer

### Paper Feed Selector

- " (Friction) Single sheets and envelopes
- " (Tractor) Fanfold paper

Top cover

Paper support (  P. 16)

Frame ground terminal (  P. 11)

Centronics parallel interface connector (  P. 11)


### Head Gap Lever

Adjusts the gap between the platen and the printhead. The lever moves in increments of 0.0028 inch (0.07 mm).




Position	Used for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets, envelopes

Tractors

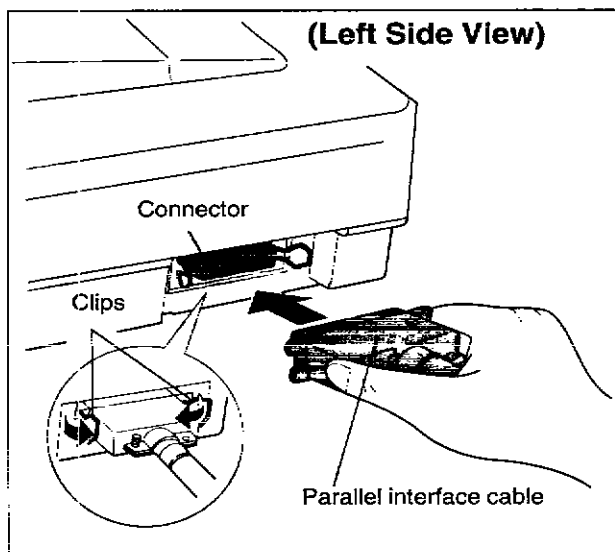
Power switch (  P. 11)

Nameplate  
Serial No. Label

AC power cord (  P. 11)

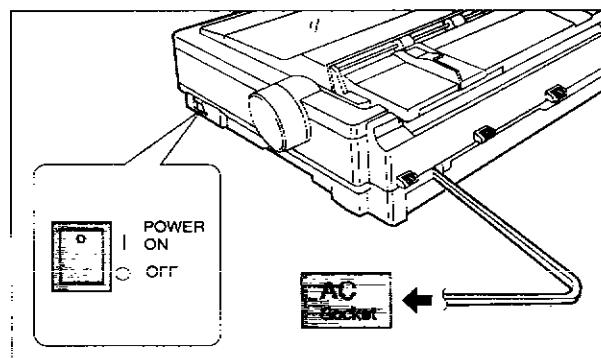
# Connecting to a Computer

- 1 Attach one end of the parallel interface cable from your computer to your printer and secure the printer clips.



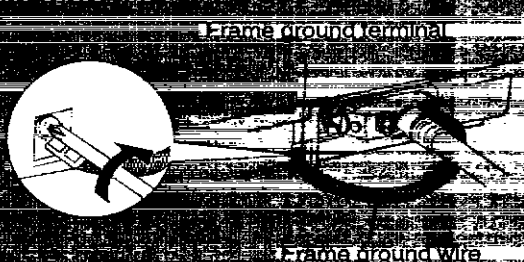
- 2 Plug printer into a grounded 3 prong AC socket.

When the power is supplied to the printer, the power indicator on the control panel will light.

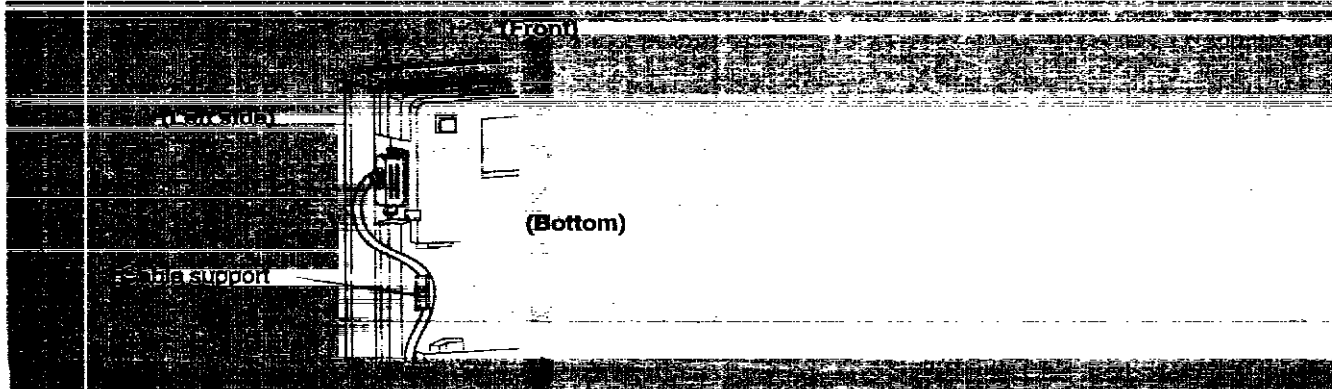


## Note

- If you do not have a parallel interface cable, you will need to purchase one from your local computer store or dealer.
- If the cable has a frame ground wire, connect it to the frame ground terminal.



- To prevent the cable from possibly disconnecting from the printer, route the cable through the cable support which is located on the bottom of the unit.



# Ribbon Cassette

## Installing the Ribbon Cassette

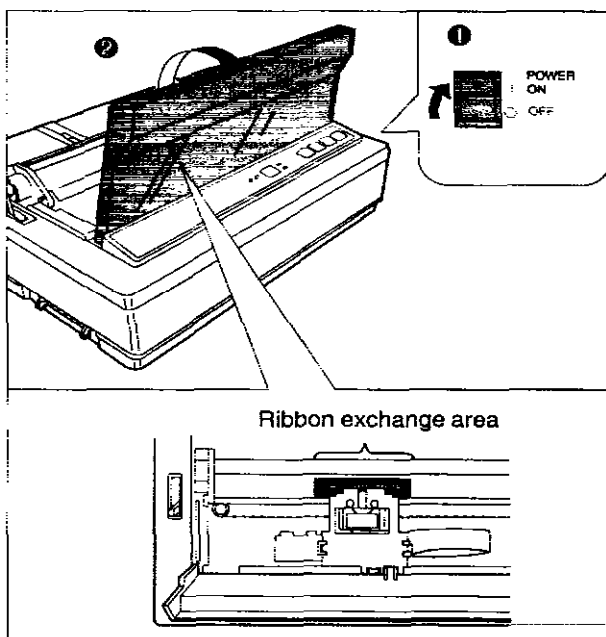
- 1 ① Turn the power on.

The carriage will automatically move to the ribbon exchange area.

**Note:**

- The printer allows the ribbon cassette to be installed only in this area.

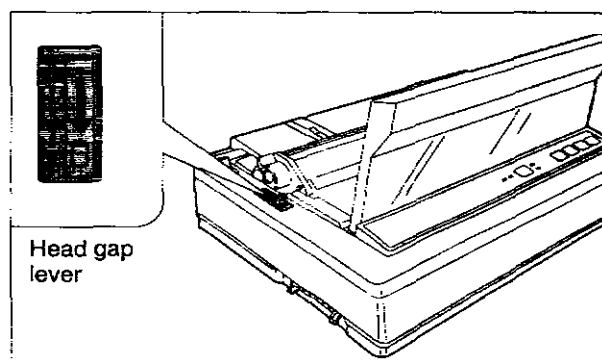
- ② Open the smoked plastic cover.



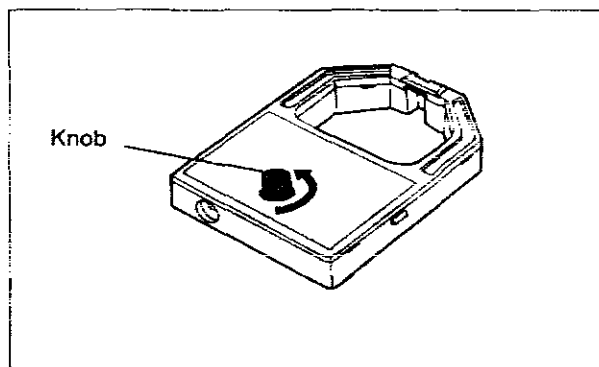
**Caution:**

- The printhead may be hot, use caution when cover is open.

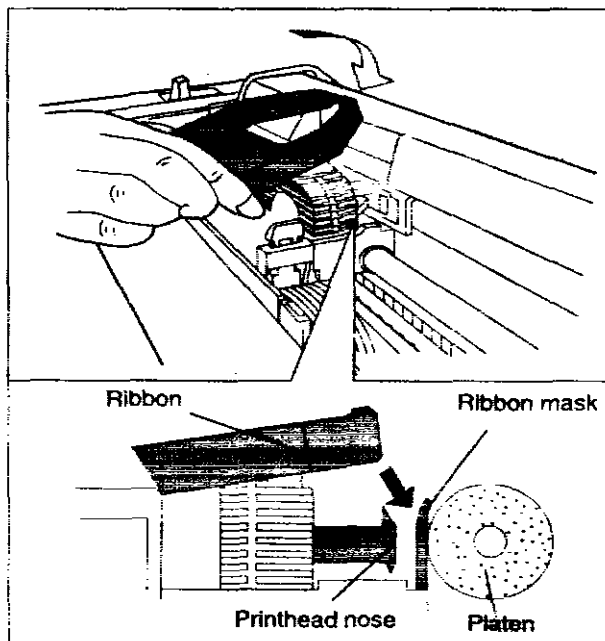
- 2 Move the head gap lever to the (+) position.



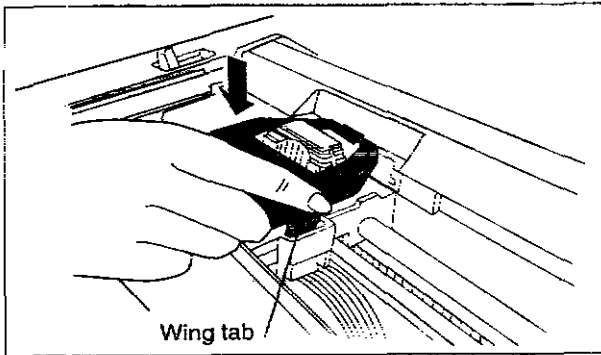
- 3 Rotate the knob on the ribbon cassette to remove any slack.



- 4 Slip the ribbon between the ribbon mask and the printhead nose.

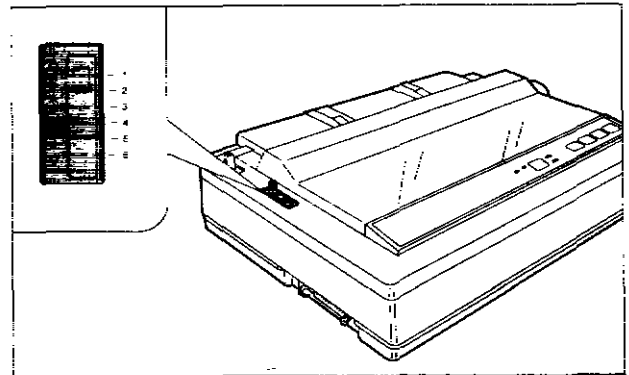


- 5** Press down on rear of the cassette until the wing tab snaps into place.



- 6** Replace the smoked plastic cover.

- 7** Adjust the head gap lever for the thickness of paper you are using.

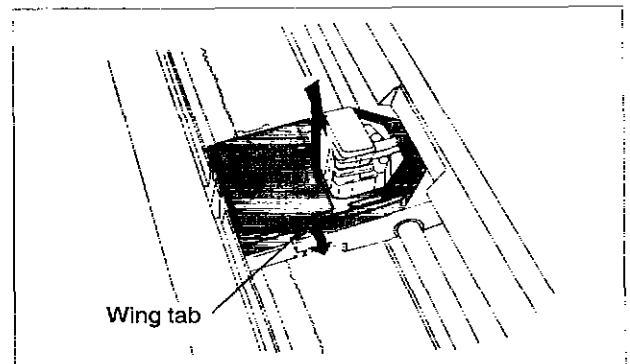


Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets or envelopes

## Removing the Ribbon Cassette

- 1** To remove the cassette, perform steps 1~2 of "Installing the Ribbon Cassette". (P. 12)
- 2** Spread the wing tab and lift up the cassette.

**Caution:**  
The printhead may be hot. Use caution when cover is open.



# Installing Paper

Your Panasonic printer offers two paper handling choices:

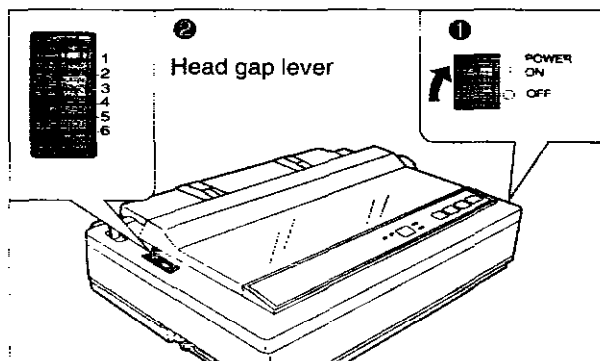
— Fanfold paper (Tractor mode) — Single sheets and envelopes (Friction mode)

## Fanfold Paper (Tractor Mode)

### 1 Turn the power on.

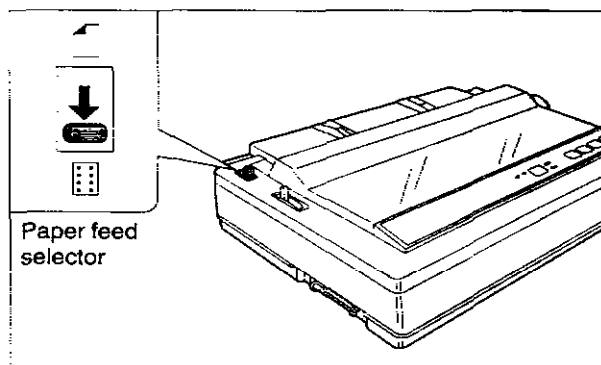
The PAPER OUT indicator will flash indicating that paper is not installed in the printer.

### 2 Adjust the head gap lever for the thickness of paper you are using.

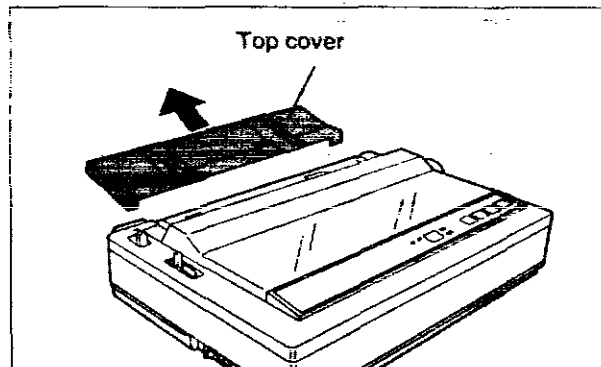


Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets

### 2 Set the paper feed selector to " " (Tractor mode)



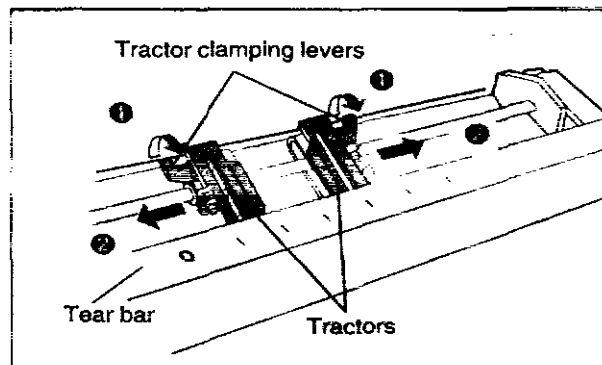
### 3 Remove the top cover.



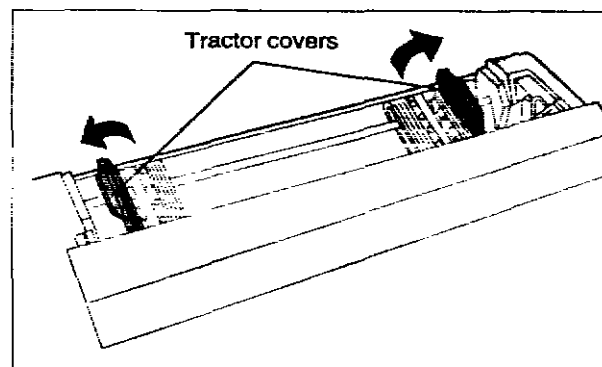
### 4 Unlock the tractors by pulling the tractor clamping levers forward.

### 2 Slide the tractors to accommodate the approximate width of the paper being used.

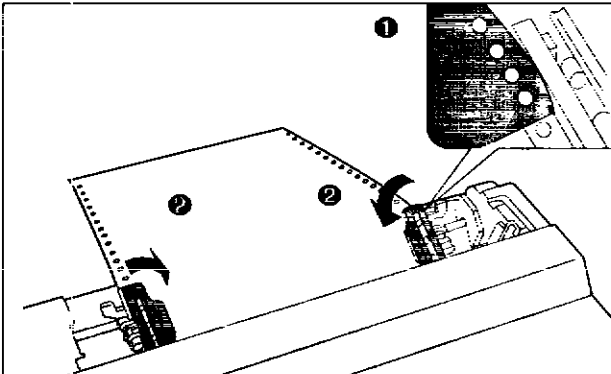
In most applications, you will find that the 0 indicator on the tear bar is a useful tool for predetermining your left most print position.



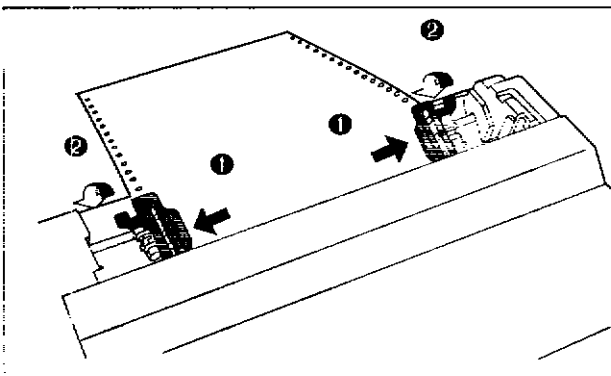
### 5 Open the tractor covers.



- 6**
- ① Align the paper sprocket holes with the tractor pins making sure the paper is straight.
  - ② Close the tractor covers.

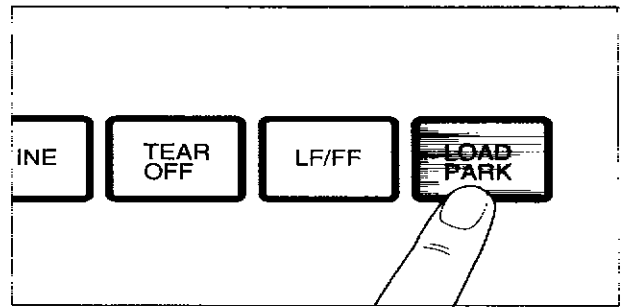


- 7**
- ① Adjust the tractors to remove any slack in the paper.
  - ② Lock the tractor clamping levers.



- 8** Press **LOAD/PARK**.

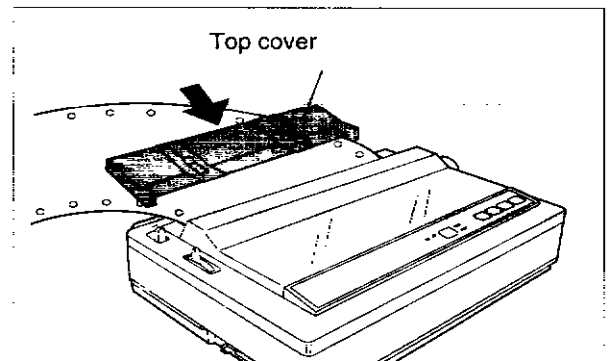
This will load the paper to the first print line.



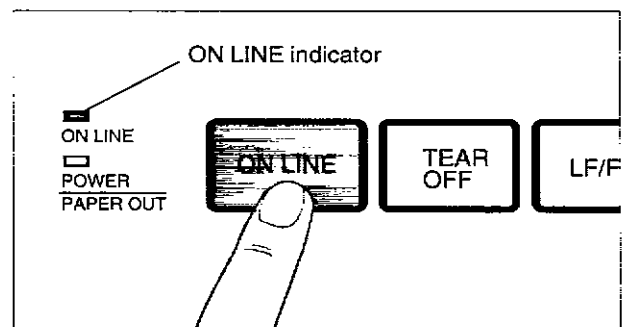
**Note:**

- Do not use **LF/FF** to load paper.

- 9** Replace the top cover.



- 10** If the ON LINE indicator is not lit, press **ON LINE** to get ready to print.

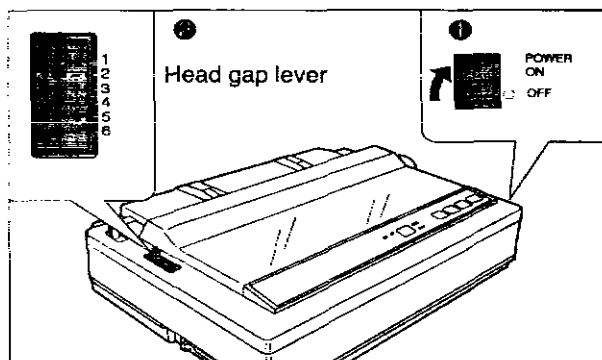


## Single Sheets and Envelopes (Friction Mode)

- 1 ① Turn the power on.

The PAPER OUT indicator will flash indicating that no paper is installed in the printer.

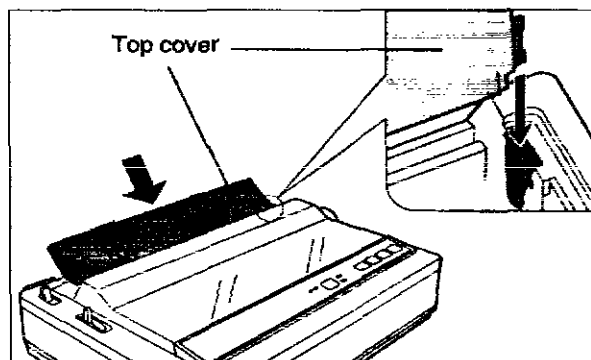
- ② Adjust the head gap lever for the thickness of paper you are using.



Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick sheets or envelopes

- 3 Raise the top cover to the single sheet feed position.

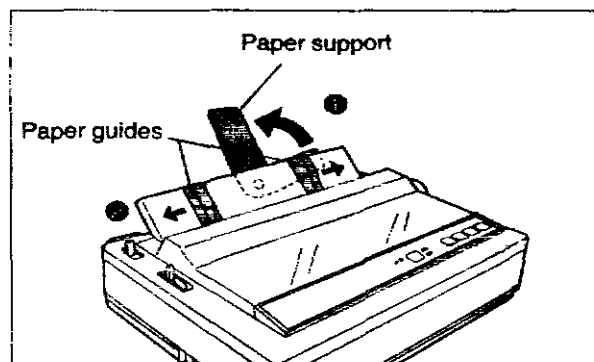
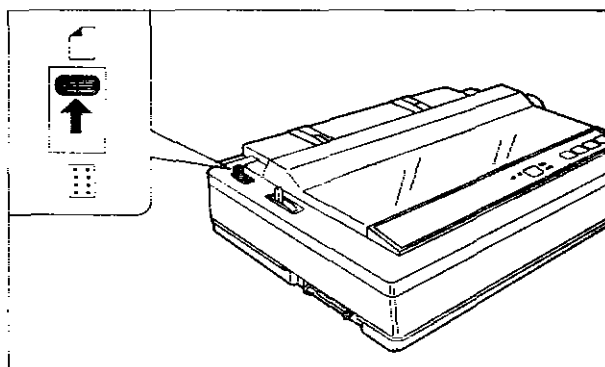
This is done by inserting the side pins of the top cover into the slots on the upper cabinet.



- 4 ① Rotate the paper support.

- ② Separate the paper guides to the approximate width of your paper or envelope.

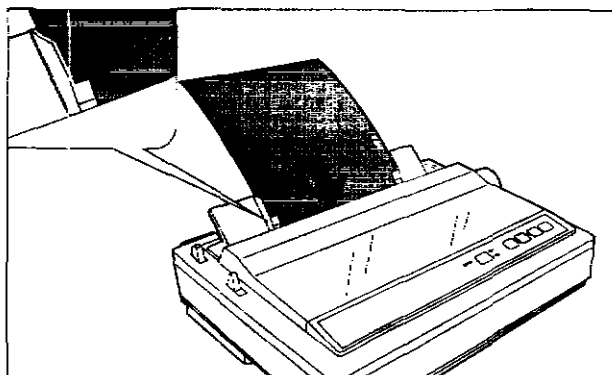
- 2 Set the paper feed selector to " " (Friction mode)





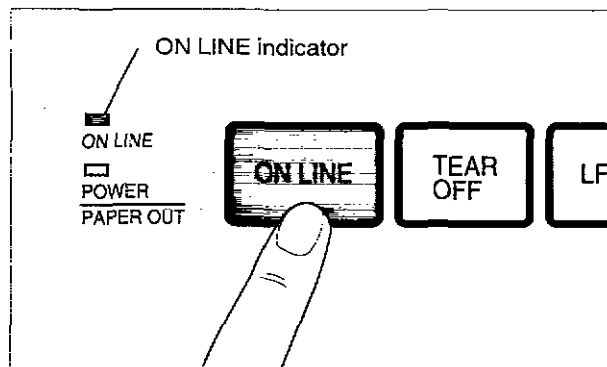
- 5 Insert a sheet of paper through the paper guides and behind the platen.

The paper will automatically be loaded to the first print line.



**Note:**  
 To disable Auto Load, turn Auto Load OFF in the Initial Setup Mode on disk.  
 If Auto Load is disabled, press **LOAD/PARK** to automatically load paper and return to the line.

- 6 If the ON LINE indicator is not lit, press **ON LINE** to get ready to print.



# Printer-Driver Selection

This procedure is the final step before printing and is performed in your application software program. The steps will vary, depending on the software program. Consult your software package for proper procedures. The Panasonic KX-P1150 will be your first choice. However, if the Panasonic KX-P1150 printer is not listed in your software, you must select an alternative from the following table.

**Printer-Driver Selections (In order of priority)**

<b>Panasonic KX-P1150</b>
<b>Panasonic KX-P2180</b>
<b>Epson FX-850</b>
<b>Panasonic KX-P1180/P1170</b>
<b>Epson FX series</b>
<b>IBM Proprinter III *</b>

- \* If selecting the IBM Proprinter III in your software, printer emulation must also be changed in the initial setup mode. (P. 21-29)

# Installing a Printer-Driver (Windows Ver. 3.1)

If you are using Windows Ver. 3.1, please insert your Setup Disk into drive A or B and follow the directions below.

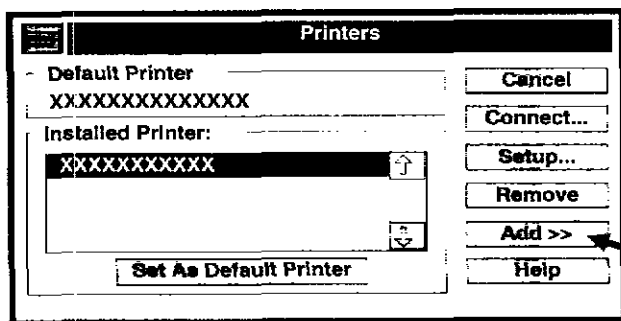
Before you use the Setup Disk, it is recommended that you make a back-up copy and store the original in a safe place.

**Note:** Use the DISKCOPY command of the operating system to make a back-up copy. Refer to your DOS manual for further information.

1 In "Main Group", select "Print Manager".

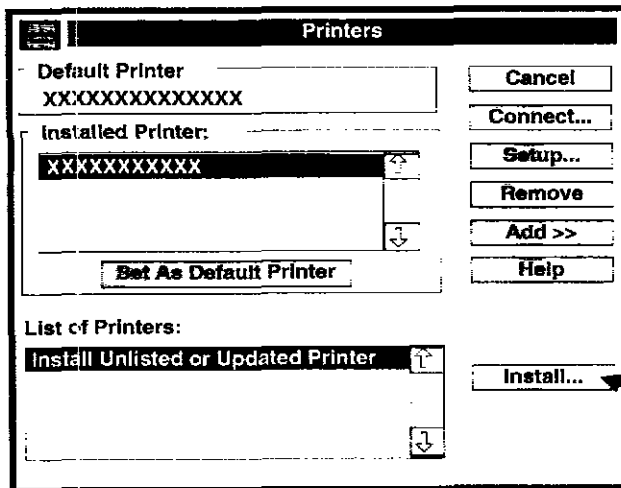
2 In "Options", select "Printer Setup".

3 Click **Add >>**.



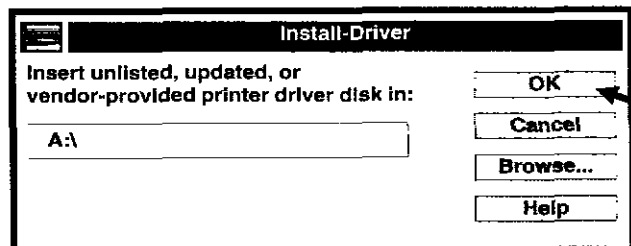
4 In "List of Printers", select "Install Unlisted or Updated Printer".

5 Click **Install...**.



6 Insert the Setup Disk into drive A.

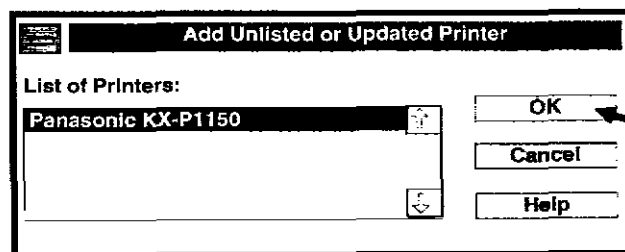
If reading the printer driver disk from drive B, type B:\



7 Click **OK**.

The printer driver of KX-P1150 is shown in a dialog box.

8 Click **OK**.



9 Click **Set As Default Printer**.

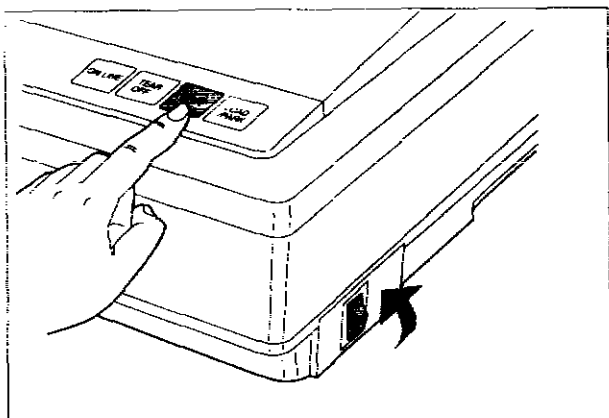
10 Click **Close**.

11 Exit the "Print Manager".

The printer has a self test feature which allows you to test the printer.

- 1 Load a sheet of paper (fanfold or single sheet), then turn the power off.  
(P. 14-17)

- 2 While pressing **LF/FF**, turn the power on, then release.



- 3 A sample printout will begin, which serves as a self test.

```
Version A
Draft
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
Courier
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
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Roman
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
```

- 4 If the printer is functioning properly, you may turn the power off during the self test, or you may run the entire test.

# Using the Setup Disk

The printer allows you to select 16 Initial Setup Items shown in the table below. You can select all these items by using the Setup Disk.

	<b>Emulation</b>		
17	EPSON* .....Epson FX-850 IBM .....IBM Proprinter III		
	<b>Character Set (P. 44)</b>		
18	ITALIC* (Epson mode only) GRAPHIC 1 GRAPHIC 2		
	<b>Code Page (P. 44)</b>		
19	USA (PC-437)* MULTILINGUAL (PC-850) PORTUGAL (PC-860) CANADA-FRENCH (PC-863) NORWAY (PC-865) TURKEY (PC-857)		
	<b>International Character Set (P. 49)</b>		
20	USA	SWEDEN	DENMARK 2
	FRANCE	ITALY	SPAIN 2
	GERMANY	SPAIN 1	L. AMERICA
	UK*	JAPAN	KOREA
	DENMARK 1	NORWAY	LEGAL
	<b>Font</b>		
21	DRAFT*	BOLD PS	
	COURIER	SANS SERIF	
	ROMAN		
	<b>Pitch</b>		
22	10 CPI*	17 CPI	
	12 CPI	20 CPI	
	15 CPI	P.S	
	<b>Zero Font</b>		
23	NORMAL* (0) SLASHED (Ø) [When you select NORWAY in Code Page or International Character Set, SLASHED ZERO (Ø) will be POINT ZERO (0).]		
	<b>Page Length</b>		
24	11 INCH*	11 2/3 INCH	
	12 INCH	8 INCH	
	14 INCH	8 1/2 INCH	

<b>Auto LF</b>	
25	ON ..... CR+LF
	OFF* ..... CR only
<b>Auto CR</b>	
26	ON ..... LF, VT, ESC+"J"+CR
	OFF* ..... LF, VT, ESC+"J" only (This setting is effective only in the IBM mode.)
<b>Skip Perforation</b>	
27	ON ..... 1 inch skip
	OFF* ..... No skip
<b>Cut Sheet Feeder (C.S.F.) Mode</b>	
28	ENABLE
	DISABLE* [The setting is effective only when the paper feed selector is in the " " position and the cut sheet feeder option (KX-PT12) is installed.]
<b>Download †</b>	
29	ENABLE
	DISABLE*
<b>Auto Load</b>	
30	ON* ..... Enabled
	OFF ..... Disabled (This setting is effective only when using the single sheets and envelopes.)
<b>Selects 20 cpi</b>	
31	ENABLE* ..... enable 20 cpi by ESC+;, SI
	DISABLE ..... disable 20 cpi by ESC+;, SI (This setting is effective only in the IBM mode.)
<b>TOF (Top of Form) Set</b>	
32	TRACTOR* 0/72 INCH
	FRICTION 0/72 INCH
	C.S.F. 0/72 INCH [1/2 inch (n=0 to 360)] (The number increases from 0.00" to 5.00" by 1/2")

\* denotes setting when shipped from factory.

Some of the factory settings of Portugal, Netherlands, Venezuela and Greece are different from the table. Please refer to the next page.

## † Download characters

You can custom design up to 16 characters of DRAFT without the buffer option and up to 256 characters of both DRAFT and NLQ with the buffer option.

## Using the Setup Disk:

### Note:

- Factory settings of Portugal, Netherlands, Venezuela and Greece are changed as follows:

Items	Portugal	Netherlands/ Venezuela	Greece
Emulation	IBM		
Character Set	GRAPHIC 2		GRAPHIC 2
Code Page	PC-860 (PORTUGAL)		
International Character Set	USA	USA	USA
Page Length	12 INCH		

This Setup Disk can only be used in an IBM-PC or a compatible computer with a 3.5" floppy disk drive.

Before you use the Setup Disk, it is recommended that you make a back-up copy and store the original in a safe place.

This printer has been factory set to operate with most of the popular software packages. In most cases there will be no need to change the initial setup items. Refer to page 21 to verify that the factory settings meet your requirements. If no changes are required, you should be ready to print.

### Note:

- Use the DISKCOPY command of the operating system to make a back-up copy. Refer to your DOS manual for further information.
- You may find it convenient to install the Setup Disk programs directly onto your C Drive, rather than reading them from the Setup Disk each time a change is necessary. Either method is acceptable.

To perform an automatic installation of the Setup Disk files onto your C Drive, follow the steps below:

1. Insert the Setup Disk into drive A or B.
2. Type A: (or B:) and press **Enter**.
3. Type INSTALL and press **Enter**.

This procedure automatically creates a directory called 1150 and copies all of the programs from your Setup Disk onto your C Drive.

To recall the programs from your C Drive,

At your C:\ > prompt, type CD 1150 and press **Enter**.

Type SETUP and press **Enter** to complete the procedure. Be sure to type this instruction as one word.

If not, you will receive a Syntax error message.

- You can proceed through the Setup Disk using a computer mouse or your arrow keys. When using the mouse, highlight the selection and click the left mouse button.

## Running the Initial Setup Program

- 1** Insert your setup disk into either drive A or B.

### <For DOS>

- 2** Type A: (or B:) and press **Enter** .
- 3** Type SETUP
- 4** Press **Enter** .

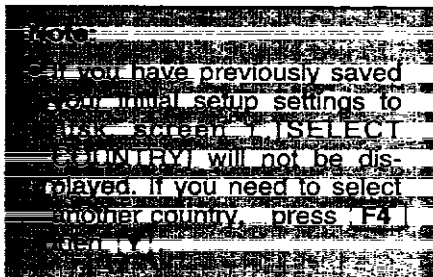
### <For WINDOWS>

- 2** Select Run from the File menu.
- 3** Type A:\SETUP (or B:\SETUP)
- 4** Click **OK** (or Press **Enter** ).

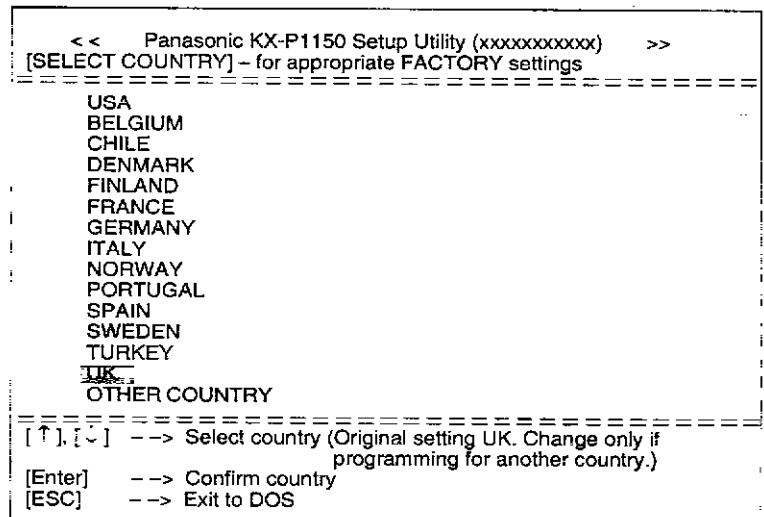
- 5** The first screen is an introduction to the operation of the Setup Disk. Please read it through and press any key to continue.

- 6** Screen 1 [SELECT COUNTRY] will be displayed (for first time installation).

The screen default to a UK setting.  
If you do not have to change this setting, touch Enter to confirm your country and advance to screen 2.

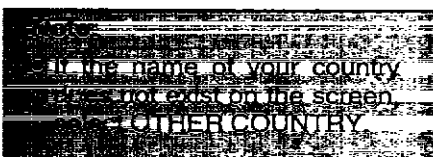


Screen 1



- 7** Press **↑** or **↓** .

Select the desired country.



- 8** Press **Enter** .

The country will be set and  
screen 2 will be displayed.

## Using the Setup Disk

### Setting the Initial Setup Items

1 Press **↑** or **↓**.

Select the desired item.  
A brief description  
accompanies each item.

2 Press **→** or **←**.

Select the desired setting.

If you want to change the  
settings of more items,  
perform steps 1 and 2.

3 When all changes have been made,  
you may perform any one of the  
following operations:

- Save to Disk — **F2**
- Print Settings — **F3**
- Send to printer — **F10**

Screen 2

```

<<  Panasonic KX-P1150 Setup Utility (xxxxxxxxxx)  >>
=====
Item      Setting      Item      Setting
Emulation  EPSON      Auto CR   OFF
Character set  ITALIC     Skip perforation  OFF
Code page    USA        C.S.F mode  DISABLE
International char.  UK        Download    DISABLE
Font         DRAFT     Auto load   ON
Pitch        10 CPI    Selects 20 cpi  ENABLE
Zero font    NORMAL    TOF set      TRACTOR 0/72 INCH
Page length  11 INCH   FRICTION 0/72 INCH
Auto LF      OFF       C.S.F       0/72 INCH
=====
Select emulation
  EPSON      IBM
=====
Allows KX-P1150 to operate like another printer. Be sure to select a printer
driver in your application software that supports the emulation selected

==<<  KEY OPERATION  >>  ==
=====
[↑],[↓] --> Select item      [F3] --> Print settings
[←],[→] --> Select setting  [F4] --> Select country mode
[F1] --> Reset to factory settings  [F10] --> Send to printer
[F2] --> Save to disk          [ESC] --> Exit to DOS
=====

```

<b>[↑/↓]</b>	Moves the cursor one line up/down
<b>[←/→]</b>	Changes the setting
<b>[F1]</b>	Resets the current settings to FACTORY settings
<b>[F2]</b>	Saves the settings to the disk
<b>[F3]</b>	Prints the current printer settings
<b>[F4]</b>	Returns to screen 1
<b>[F10]</b>	Sends the settings to printer
<b>[ESC]</b>	Exits to DOS

### Sending the Settings to the Printer

1 Press **F10**.

2 Press **Y** or **N**.

"Y": The screen 4 will  
be displayed.

"N": The display will  
return to screen 2.

3 Press **Y** or **N**.

"Y": All the settings will be sent to  
the printer and screen 2 will be  
displayed.

"N": The current settings won't be  
sent to the printer and screen 2  
will be displayed.

Screen 3

```

=====
Do you want to send your settings to the printer ?
      YES      NO
=====

```

Screen 4

```

=====
Are you sure ?
      YES      NO
=====

```



## Resetting to the Factory Settings

- 1 Press **F1**.
- 2 Press **Y** or **N**.
  - "Y": All the items will be reset to the factory settings.
  - "N": The display will return to screen 2.
- 3 If **Y** was selected, you may perform one of the following operations:
  - Save to Disk — **F2**
  - Print Settings — **F3**
  - Send to Printer — **F10**

Screen 5

```

=====
Do you want to reset to FACTORY settings ?
      [YES]      [NO]
=====
  
```

## Printing the Current Printer Settings

- 1 Press **F3**.
- 2 Press **Y** or **N**.
  - "Y": All the settings will be printed and screen 2 will be displayed.
  - "N": The current settings won't be printed and screen 2 will be displayed.

Screen 6

```

=====
Do you want to print the current printer settings ?
Paper must be installed.
      [YES]      [NO]
=====
  
```

## Saving the Settings to the Disk

- 1 Press **F2**.
- 2 Press **Y** or **N**.
  - "Y": All the settings will be saved on the disk and screen 2 will be displayed.
  - "N": The settings won't be saved on the disk and screen 2 will be displayed.

Screen 7

```

=====
Do you want to save settings to disk ?
      [YES]      [NO]
=====
  
```

## Using the Setup Disk

### Return to SELECT COUNTRY screen

1 Press **F4**.

2 Press **Y** or **N**.

"Y": The screen 1 will be displayed and all the items will be reset to the factory settings.

"N": The display will return to screen 2.

Screen 8

```
=====
All screen settings will return to their factory defaults.
Do you want to continue ?

  YES      NO
=====
```

### Exit to DOS

1 Press **ESC**.

2 Press **Y** or **N**.

"Y": You have exited the Initial Setup program.

"N": The display will return to screen 2.

Screen 9

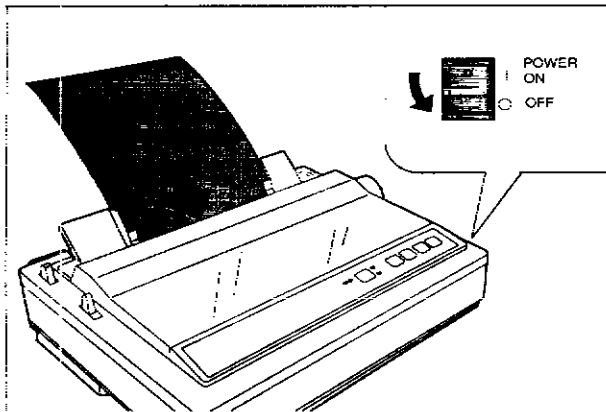
```
=====
Exit to DOS ?

  YES      NO
=====
```

# Using the Control Pane

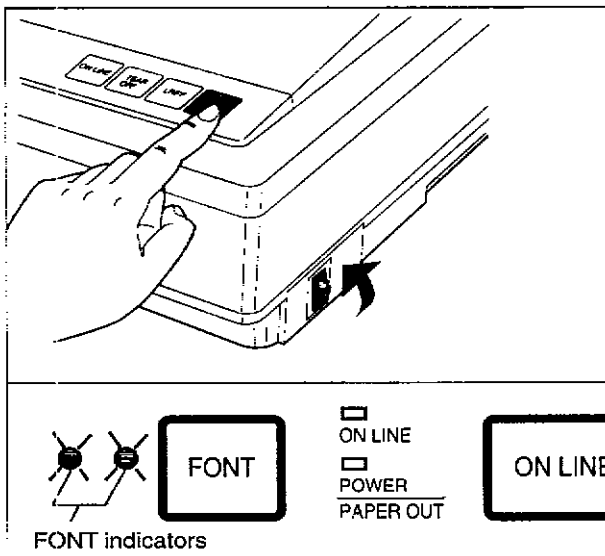
The Control Panel allows you to set only Emulation, Auto Line Feed, Cut Sheet Feeder, Download and Page Length. (P. 28)

- 1 Load a sheet of paper (P. 14~17), and turn the power off.



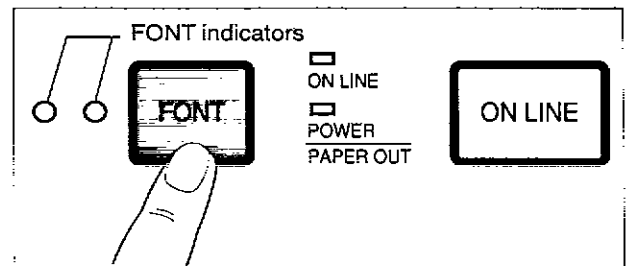
- 2 ▶ Entering Initial Setup Mode  
While pressing **LOAD/PARK**, turn the power on.

Both font indicators will be blinking.  
The current settings will be printed automatically.



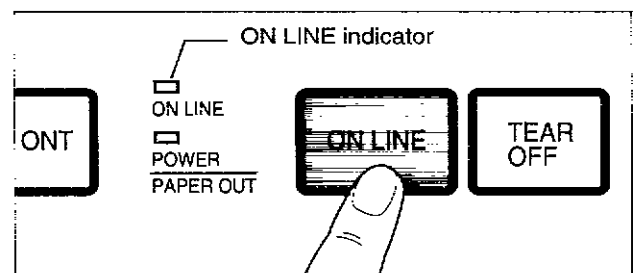
- 3 ▶ Selecting the Item (Ex; Emulation)  
Press and release **FONT**.

Select the desired item according to the status of the FONT indicators (on, off, blinking). Each time you press FONT, you will advance to the next item. (P. 28)



- 4 ▶ Setting the Item's Status (Ex; Epson/IBM)  
Press and release **ON LINE**.

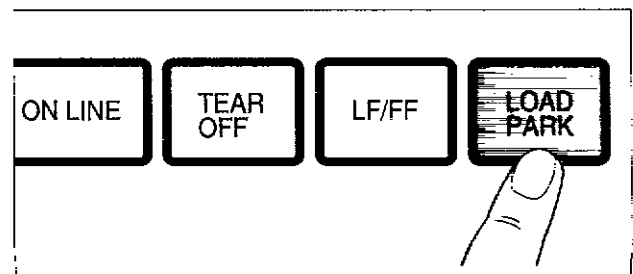
To change the item's status, press ON LINE. The item's status will change each time you press ON LINE. (P. 28)



If you want to change the settings of some more items, perform steps 3 and 4.

- 5 ▶ Exiting Initial Setup Mode  
Press **LOAD/PARK**.

Font indicators will go off and the current conditions will print.

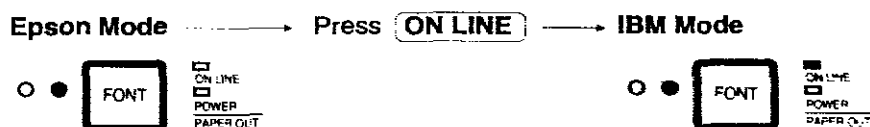


# Using the Control Pane

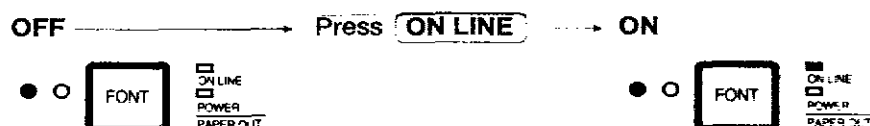
## EXAMPLES

1. While pressing **LOAD/PARK**, turn the power on.
2. Press **FONT** until font indicators reflect the item you wish to change.
3. Press **ON LINE** if you wish to make a change to that item's status.

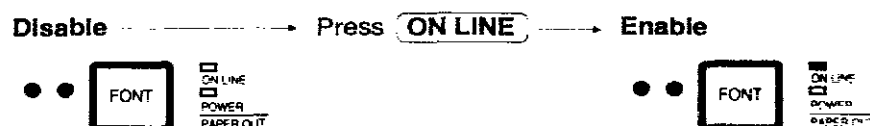
Emulation: Press **FONT** once.



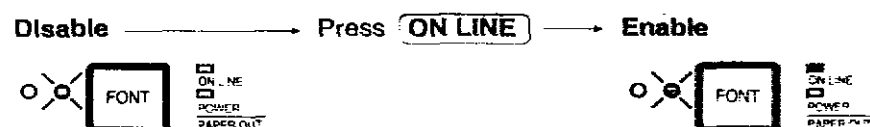
Auto LF: Press **FONT** twice.



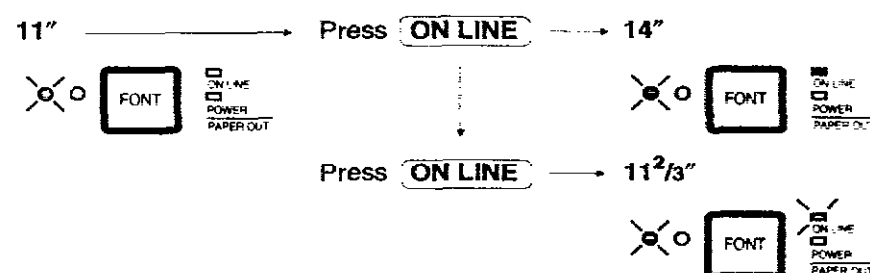
C.S.F.: Press **FONT** 3 times.



Download: Press **FONT** 4 times.



Page Length: Press **FONT** 5 times.



FONT indicators condition:

● = light is lit      ○ = light is out      ✕ = light is blinking

ON LINE indicator condition:

■ = light is lit      □ = light is out      ▨ = light is blinking

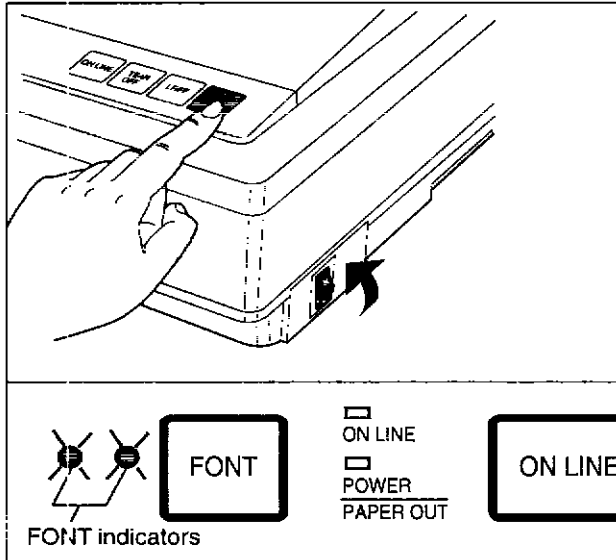
## Resetting All Current Settings to the Factory Settings

Follow the instructions below:

If there is paper loaded, you will automatically get a printout of the current settings.

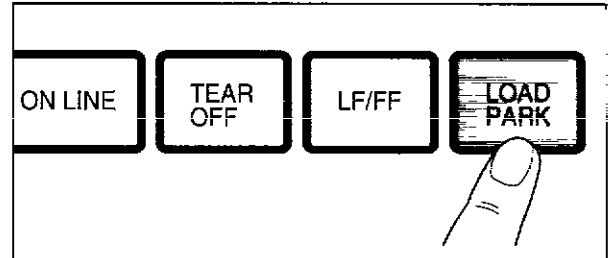
- 1 While pressing **LOAD/PARK**, turn the power on, then release.

Make sure that both FONT indicators are blinking.



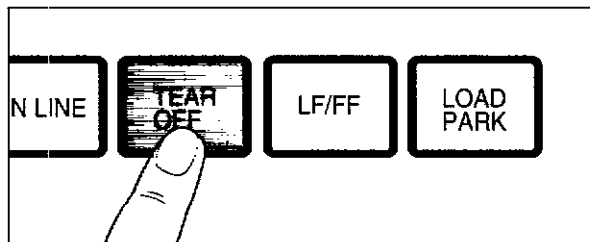
- 3 Press **LOAD/PARK**.

A printout will verify the current settings.  
You have exited the Initial Setup Mode.



- 2 Press **TEAR OFF**.

All the current settings will be reset to the Factory settings.



# Selecting a Character Font


## • Press and release **FONT**


You can select any one of the character fonts by pressing the FONT switch on the Control Panel. The combination of FONT indicators show the current character font status, as shown below.


### EXAMPLES

○ ○ **FONT**  =PROGRAM

● ○ **FONT**  =Courier

○ ● **FONT**  =Roman

● ● **FONT**  =Bold PS

⊗ ○ **FONT**  =Sans Serif

● =light is lit      ○ =light is out      ⊗ =light is blinking

#### Note:

- When the power is turned off, font will reset to default setting. If you want to save a font selection as your default, you may do so by using the Initial Setup disk. ( P. 21)
- When both font indicators are off, the font commands from your software program will control your printer.

# Feeding Paper

You can adjust the paper position by using the control panel switches when the printer is in the OFF LINE mode or when the printer is not printing in the ON LINE mode.

## Line Feed/Form Feed LF/FF

With paper installed, pressing **LF/FF** once advances the paper one line.

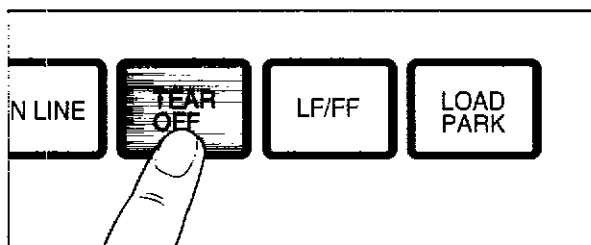
Holding **LF/FF** will move the printhead to the center of the printer and advance the paper.

**Note:**  
Fanfold paper will advance to the top of the next page. When using a cut sheet feeder or single sheets, the current sheet of paper will be ejected.

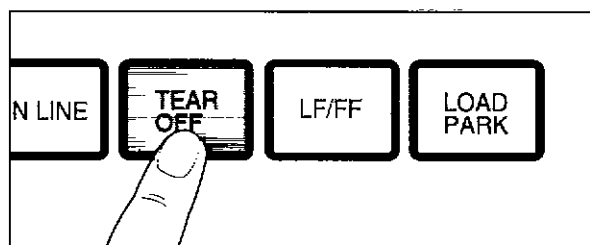
## Tear Off TEAR OFF

With fanfold paper installed, this function allows you to advance your paper to the tear position. After tearing off the page you can return your paper to the first printing line.

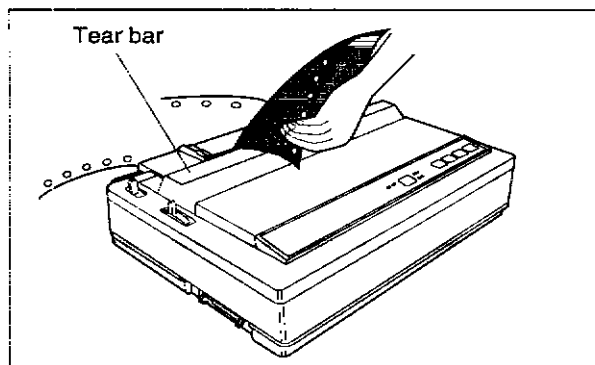
- 1** Press **TEAR OFF** to advance the paper to the tear bar.



- 3** Press **TEAR OFF** to reverse the paper back to the first print line.



- 2** Tear off the page.

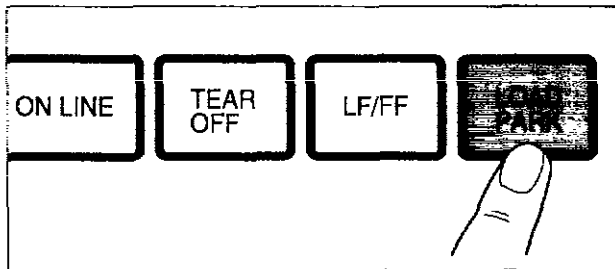


**Note:**  
If **TEAR OFF** is not pressed a second time, the printer will automatically reverse to the first print line upon receiving data from the computer.

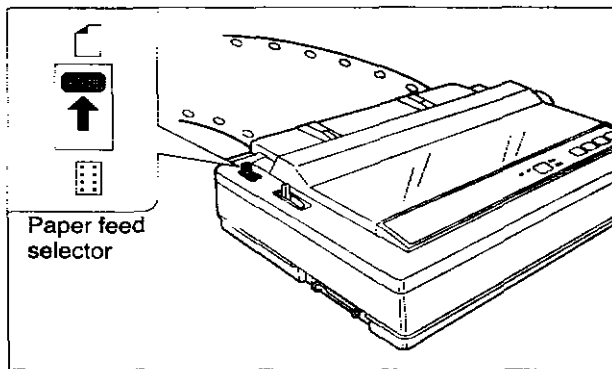
## Paper Parking LOAD/PARK

This function allows you to use single sheets or envelopes without removing or wasting your fanfold paper.

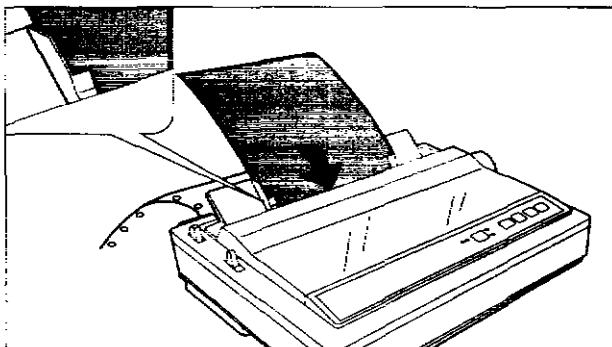
- 1 Tear off the printed page(s) of the fanfold paper being used.
- 2 Press **LOAD/PARK** to reverse the fanfold paper to the park position.



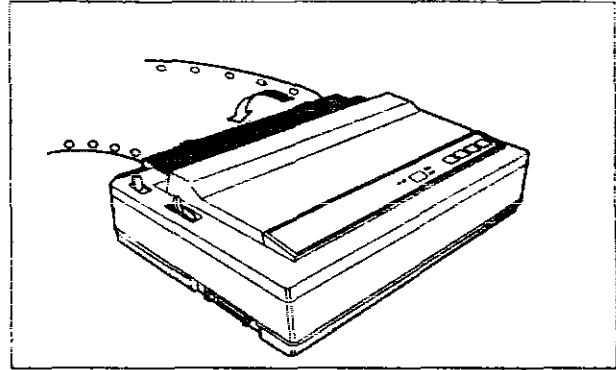
- 3 Move the paper feed selector to " " (Friction mode)



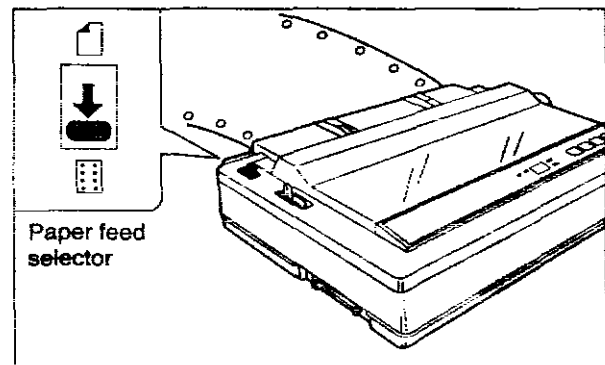
- 4 Load a single sheet or an envelope.  
(P. 16 "Single Sheets and Envelopes")  
When you are finished printing, remove the sheet (or envelope) from the printer.



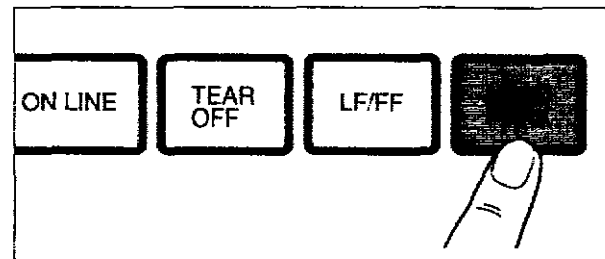
- 5 Lower the top cover for fanfold paper.



- 6 Move the paper feed selector to " " (Tractor mode)



- 7 Press **LOAD/PARK** to reload the fanfold paper to the first print line.





# Command Reference Program

The Command Reference program allows you to display a detailed explanation of each software command or the proportional spacing tables on your computer screen. Each displayed explanation can be printed out if required.

Before you use the Setup Disk, it is recommended that you make a back-up copy and store the original in a safe place.

Use the DISKCOPY command of the operating system to make a back-up copy. Refer to your DOS manual for further information.

It may also be convenient to install the Setup Disk programs directly onto your C Drive, rather than reading them from the Setup Disk each time a change is necessary. Either method is acceptable.

To perform an automatic installation of the Setup Disk files onto your C Drive, refer to page 22.

**1** Insert your Setup Disk into either drive A or B.

## <For DOS>

**2** Type A: (or B:) and press **Enter**.

**3** Type CMDREF

**4** Press **Enter**.

Screen 1 will be displayed.

## <For WINDOWS>

**2** Select Run from the File menu.

**3** Type A:\CMDREF (or B:\CMDREF)

**4** Click **OK** (or Press **Enter**).

Screen 1 will be displayed.

**5** Press **↑** or **↓**.

Select an emulation.

Screen 1

```
<< Panasonic KX-P1150 command reference utility (xxxxxxxxxx) >>
-- SELECT EMULATION --
=====
IBM
=====

[↑]/[↓] : Select emulation
[Enter] : Set emulation
[E]      : Exit to DOS
```

### Note:

You can proceed through the Command Reference Program using a computer mouse or your keyboard. Highlight the desired item and click the left mouse button, or follow the directions on this screen for keyboard operation.

There is a list of proportional spacing tables after the software commands list. If you want to see a proportional spacing table, select your desired table and press **Enter**.



## Command Reference Program

### 6 Press **Enter**.

The emulation will be set and screen 2 will be displayed.

### Screen 2

<< Panasonic KX-P1150 command reference utility (xxxxxxxxxxxx) >>	
-- SELECT COMMAND -- (EPSON)	
=====	
FONT SELECTION	
ESC+'x'+n	Selects print quality
ESC+'k'+n	Selects print font style
ESC+'S'+1	Selects subscript printing
ESC+'S'+0	Selects superscript printing
ESC+'T'	Releases sub/superscript printing
CHARACTER PITCH SELECTION	
ESC+'P'	Sets pica pitch (10 cpi) printing
ESC+'M'	Sets elite pitch (12 cpi) printing
ESC+'g'	Sets micron (15 cpi) printing
SI	Sets compressed (17 cpi) printing
ESC+SI	Sets compressed (17 cpi) printing
DC2	Releases compressed printing
ESC+'p'+1	Sets proportional spacing
=====	
[↑]/[↓]	Select command
[Pg.Up]/[Pg.Down]	Go to previous/next category
[Enter]	View command description
[Esc]	SELECT EMULATION mode
[E]	Exit to DOS

### 7 Press **Pg.Up** / **Pg.Down** or **↑** / **↓**.

Select a command.

[↑]/[↓]	Moves the cursor one line up/down
[Pg.Up] / [Pg.Down]	Moves the cursor to the first command of the previous/next item
[Enter]	Displays the explanation of the command
[Esc]	Returns to screen 1
[E]	Exits to DOS

### Screen 3

### 8 Press **Enter**.

The screen will show the detailed explanation of the command.

If you want to exit the Command Reference Program, go to step 9.

If you want to print this explanation, press **Enter** again and press **Y**.

"Y": The explanation will be printed.

"N": The display will return to screen 3.

<< Panasonic KX-P1150 command reference utility (xxxxxxxxxxxx) >>	
[EPSON]	
=====	
ESC+'x'+n	Selects print quality
<PRINT QUALITY>	
Selects print quality	
Name:	ESC      x      n
Dec.:	27      120      n
Hex.:	1B      78      n
Comment:	
*The following values of n can be used:	
n=0: Draft font	
n=1: NLQ font	
-- END --	
=====	
[↑]/[↓]	Text scroll-down/up
[Pg.Up] / [Pg.Down]	Go to previous/next command
[Esc]	SELECT COMMAND mode
[Enter]	Print current command description
[E]	Exit to DOS

### 9 Press **E**.

You have exited the Command Reference program.

[↑]/[↓]	Scrolls the text one line down/up
[Pg.Up] / [Pg.Down]	Displays the explanation of previous/next command
[Esc]	Returns to screen 2
[Enter]	Prints the detailed explanation of the command
[E]	Exits to DOS



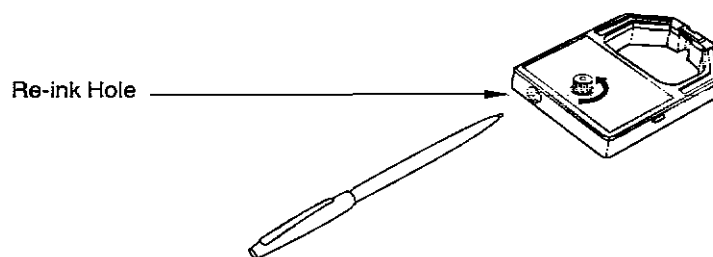
# Periodic Maintenance

The printer does not require any routine maintenance. However, reasonable care of the printer will extend its life. The following periodic measures are recommended:

- Cleaning the unit is the most important action the user can perform. The frequency of cleaning is dependent upon the environment.
  - Turn the power OFF.
  - Clean the case and covers with a soft cloth. Use any mild commercial cleaner on the cloth, do not spray directly on to the printer.
  - Remove the top and the smoked plastic covers. Vacuum or dust the inside area of the unit. Be very careful not to damage the printhead flat cable or the carriage drive belt.
  - The platen should be cleaned with denatured alcohol only.
  - The carriage guide bar can be lubricated with a very light oil. Contact your Authorized Panasonic Service Center for advice on lubrication.

## Ribbon Cassette

A single ribbon permits the printing of approximately 4 million total draft characters. When the printing starts to fade, gently push the counter spring in the ribbon cassette hole with the tip of a ballpoint pen or other object. Once the ribbon cassette is mounted onto the carriage and printing is performed for a short time, the characters will become darker.



**Note**

- Do not re-ink the ribbon until printing starts to fade. If the ribbon has too much ink, the characters may smear when printed.
- If the ribbon begins to catch, snag, or tear from the printhead, your printer requires servicing.

## Self Test

After re-inking the ribbon, to make sure that the characters are no longer smearing you may perform steps 1~4 of "Self Test". (P. 20)

# troubleshooting

Most problems associated with the printer can be traced to improper setup, installation, or cabling. The following table will assist the user in identifying and correcting some of the more common problems. If you need additional help, contact the store from which the unit was purchased.

Symptom	Possible Cause	Probable Solution
Ink smears	Head gap lever is not in the proper position	Move the lever toward the lower position (+) until ink doesn't smear ( P. 10)
Printout is faint	Head gap lever is not in proper position	Set the lever to the proper position ( P. 10)
Printhead moves but does not print	Ribbon is not installed correctly	Re-insert ribbon ( P. 12~13)
	Head gap lever is not in proper position	Set the lever to the proper position ( P. 10)
Printer does not power up	No AC power	Check power cord ( P. 11)
Power is on but printer does not print	Printer is not ON LINE	Press ON LINE switch
	Interface cable is not properly connected	Secure connection ( P. 11)
	Out of paper	Install new paper ( P. 14~17)
	Printhead has become overheated	Allow the printhead some time to cool down. The printer will automatically resume printing
Carriage stops moving, all indicators start blinking	Path of printhead is blocked	Clear the path, turn the power off, then back on to resume printing
Paper wrinkles when using tractor feed	No reverse tension on paper	Set paper supply lower than printer
Printer can't load single sheet in Friction mode	Cut Sheet Feeder is Enable	Set Cut Sheet Feeder to Disable when not using the Cut Sheet Feeder ( P. 21~28)
Cut Sheet Feeder does not work	Cut Sheet Feeder is Disable	Set Cut Sheet Feeder to Enable ( P. 21~28)
Unexpected characters appear in printing	Emulation is set incorrectly	Check printer driver of your software package and set emulation accordingly ( P. 18, 21~28)
KX-P44 (buffer chip) is installed but cannot download	Download is Disable	Set Download to Enable ( P. 21~28)
Printout is double-spaced	Auto LF is ON	Set Auto LF to OFF ( P. 21~28)
Keeps printing on the same line	Computer is not sending a LF command	Set Auto LF to ON ( P. 21~28)
Wrong character set printed	Wrong character set selected	Set the character set as required ( P. 21~26)

Table Troubleshooting

# Printer Specifications

Power requirements	Refer to the nameplate located on the rear of the printer.		
Frequency			
Current			
Interface	Centronics parallel		
Print fonts	3 Draft (Pica, Elite, Micron) 4 Near Letter Quality (Courier, Bold PS, Roman, Sans Serif)		
Software emulation	Epson FX-850 IBM Proprinter III		
Buffer	4K (standard), additional 32K (optional KX-P44)		
Character sets	96 ASCII characters, 33 International characters — 14 countries & LEGAL Set no Science, 158 IBM-PC special characters 38 Multilingual characters		
Dot configuration	1/84 inch (0.3 mm) dot diameter		
Maximum number of characters per line (cpl):	<b>Matrix</b> (Hor. x Ver)	<b>Draft</b> 9 x 9	<b>NLQ</b> 18 x 18
	<b>Dot pitch</b> (Hor.)	1/120" (0.21 mm)	1/240" (0.11 mm)
	(Ver.)	1/72" (0.35 mm)	1/144" (0.18 mm)
	Pica [10 cpi (characters per inch)]		80 cpl
	Elite (12 cpi)		96 cpl
Characters per line (cpl):	Micron (15 cpi)		120 cpl
	Compressed (17 cpi)		137 cpl
	Elite compressed (20 cpi)		160 cpl
	Pica elongated (5 cpi)		40 cpl
	Elite elongated (6 cpi)		48 cpl
	Micron elongated (7.5 cpi)		60 cpl
	Compressed elongated (8.5 cpi)		68 cpl
	Elite compressed elongated (10 cpi)		80 cpl
Print speed (characters per second (cps)):	<b>Draft</b>	<b>Micron</b> 240 cps	<b>Elite</b> 192 cps
	<b>Near Letter Quality</b>	32 cps	38 cps
Print speed (characters per second (cps)):	<b>Pica</b> 160 cps		
	32 cps		
Print speed (characters per second (cps)):	Text printing: Bi-Directional		
	Bit Image printing: Uni-Directional		
Line feed time	Approx. 100 msec [with 1/6 inch (4.2 mm) line feeding]]		
Paper feed	Push Tractor feed (with fanfold paper) Friction feed (with single sheets or envelopes)		
Operating environment	Temperature: 10°C~35°C {50°F~95°F} Humidity: 20~80% RH (Please allow the printer to stabilize at room temperature within the operating temperature range before operation)		
Storage environment	Temperature: -20°C~60°C {-4°F~140°F} Humidity: 10~90% RH		

(Continued)

## Printer Specifications

Head service life:	Approx. 200 million strokes in draft mode
Power consumption:	MAX — 56.7 W Stand by — 4.50 W Self Test — 31.8 W
Ribbon:	Cassette seamless fabric ribbon Black ribbon cassette KX-P115: Life expectancy (in Draft mode) (rolling ASCII) Approx. 4 million
Detectors:	Paper out detector Overheat detector
Dimensions:	434 (W) × 314 (D) × 134.5 (H) mm {17.1" × 12.4" × 5.3"}
Mass (Weight):	Approx. 4.8 kg {10.6 lbs}



# Paper Specifications

Paper which may be used with this unit must be within the specifications provided below.

## Fanfold Paper

**Width:** 4 ~ 10 inches (102 ~ 254 mm)

**Quality and number of sheets:**

Type of paper	Sheets	Weight	
		In lbs	In g/m <sup>2</sup>
Fine-quality paper	1	16 ~ 24	60 ~ 90
Non-carbon	2 ~ 4	11 ~ 14 (17*)	41 ~ 53 (64*)
Multi-layered with carbon	2	11 ~ 14 (17*)	41 ~ 53 (64*)

(\* only for the last sheet)

### Note:

- For multi-layered paper with carbon, the carbon is equivalent to a sheet of paper.
- "In pounds" represents the weight of 500 (17x22 inches (423x559 mm)) sheets.
- The printer will handle multipart papers up to 0.013 inch (0.32 mm). Up to 4 copies of 14 lb. chemical release paper can be used.
- When printing on multi-layered paper, tractor feed method is recommended.

## Single Sheets

**Width:** 4 ~ 11.7 inches (102 ~ 297 mm)

**Height:** 5 ~ 14.3 inches (127 ~ 363 mm)

**Weight In pounds (g/m<sup>2</sup>):** 14 ~ 24 lbs (53 ~ 90 g/m<sup>2</sup>)

- Paper should be within operating temperature and humidity ranges at least 24 hours prior to use.

## Envelopes

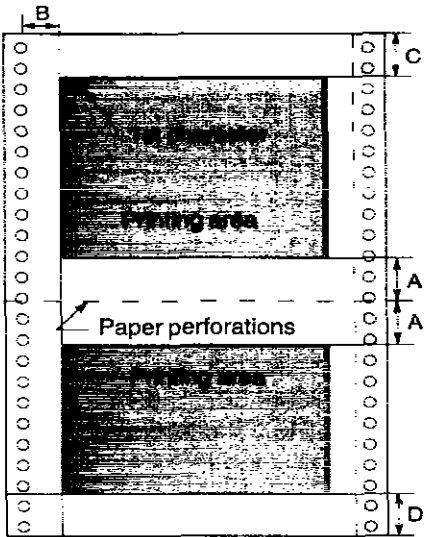
#6 and #10 size envelopes are recommended. Since envelopes vary in size, paper weight and construction, we cannot guarantee print quality and paper handling for all types of envelopes.

### Note:

- To optimize print quality, printing should not occur in areas where the edges overlap.

Printing Area

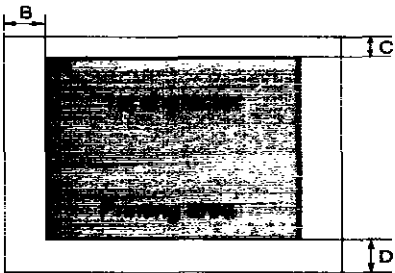
Fanfold Paper



	Fanfold Paper
A	1" (25.4 mm)
B	0.7" (17.8 mm)
C	0.33" (8.38 mm)
D	1" (25.4 mm)

- A:** Value A indicates the area near the paper perforations where the quality may not be optimum.
- B:** Value B indicates the minimum distance between the sprockets and first printable character. (When the left tractor is set on the left end and the margin is set to 0.)
- C:** Value C indicates the area from the top edge of the paper to the top of the first printed character.
- D:** Value D indicates the position where paper out is detected and printing may not be optimum.

Single Sheets and Envelopes



	Single Sheets and Envelopes
B	1.5" (38 mm)
C	0.33" (8.38 mm)
D	1" (25.4 mm)

- B:** Value B indicates the minimum distance between the edge of the paper and the first printable character. (When the left paper guide is set to the left end and the margin is set to 0.)
- C:** Value C indicates the area from the top edge of the paper to the top of the first printed character.
- D:** Value D indicates the position where paper out is detected and printing may not be optimum. (When printing on envelopes, do not print on area where edges overlap. Print quality may not be optimum.)



## Parallel Interfacing

Communication with a computer is accomplished through a parallel interface based on the Centronics standard.

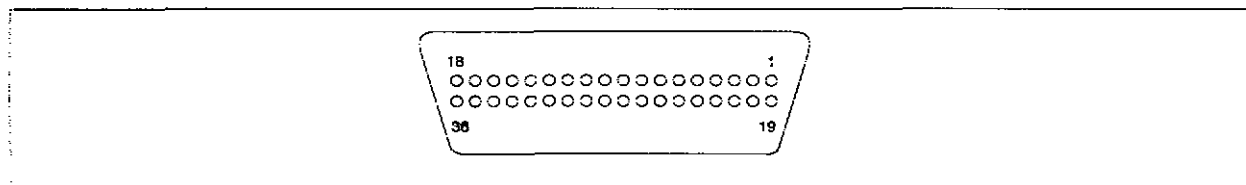
### Specifications:

- data transfer speed: 1000 cps minimum
- synchronization: external STROBE pulse
- logic levels: TTL (Transistor-Transistor-Logic) levels
- handshaking: BUSY and ACK signals
- connector type: 57-30360 (AMPHENOL) or equivalent
- cable: use a shielded cable (6'5"/1.95 meters) or less in length.

When the printer is processing data, the BUSY signal is high. The printer will not accept new data from the computer. After the processing is completed, the BUSY signal goes low. (The BUSY signal is also high when the printer is OFF LINE). When the busy signal occurs, the ACK signal goes low indicating to the computer that the data has been processed and the printer is ready to accept more data. This handshaking routine occurs each time a character is sent to the printer.

	BUSY	SLCT	PO	ERROR
ON LINE	LOW	HIGH	LOW	HIGH
OFF LINE	HIGH	LOW	LOW	LOW
PAPER OUT	HIGH	LOW	HIGH	LOW

Printer Status signals



Parallel Interface Connector (Printer side)

Signal pin	Return side pin	Signal	Direction
1	19	STB	Input
2	20	DATA 1	
3	21	DATA 2	
4	22	DATA 3	
5	23	DATA 4	
6	24	DATA 5	
7	25	DATA 6	
8	26	DATA 7	
9	27	DATA 8	Output
10	28	ACK	
11	29	BUSY	
12		PO	

Signal pin	Return side pin	Signal	Direction
13		SLCT	Output
14		AUTO FEED XT	Input
15			
16		SG	
17		FG	
18		+5 V	Output
31	30	PRIME	Input
32		ERROR	Output
33		SG	
34			
35			
36			

Pin Configuration (Parallel)

## Connector pin signals

### STB...STROBE

- This is a synchronizing input signal to read data into the printer.
- This signal is normally high. Data is read in when it is low.

### DATA1-DATA8

- These are the input signals which carry the 8 data bits of information.
- The signal is read in synchronization with the STROBE pulse. A high level indicates a logical "1".

### ACK...ACKNOWLEDGE

- This is an output signal to the computer indicating that the printer is ready to receive the next data. When the condition becomes true, the signal goes low.
- The ACK signal is automatically sent whenever the printer is switched ON LINE and the BUSY signal drops from high to low.

### BUSY

- This output signal indicates the status of the printer cannot receive data.
- The signal is high under the following conditions:
  1. receive buffer full
  2. printer is processing data
  3. printer is OFF LINE
  4. printer is in an error condition

### PO...PAPER OUT

- This output signal indicates the absence of paper and goes high during a "Paper Out" condition.

### SLCT...SELECT

- This output signal is high in the ON LINE state and low when OFF LINE.
- The printer enters the ON LINE state:
  1. When the printer is turned on
  2. when PRIME is received
  3. when the RESET command is received
  4. when the ON LINE switch is pressed
- The printer enters the OFF LINE state:
  1. when the printer is out of paper
  2. when the printer is switched OFF LINE

### AUTO FEED XT (AFXT)

- While this input signal is low, one line feed (LF) command will be added to each carriage return (CR).
- Auto LF setting in the Function mode can alter the response by the printer to an AFXT signal. If auto LF is ON, the printer will perform a CR+LF regardless of the level of the AFXT signal. When auto LF is OFF, automatic action is disabled.

### SG...SIGNAL GROUND

- The twisted pair return wires (pins 19-30) are connected to signal ground.

### FG...FRAME GROUND

- Frame ground is the same as chassis ground.

### +5V

- This is for evaluation only. It should not be used to supply power for external equipment.

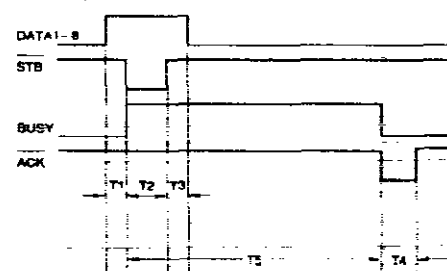
### PRIME

- This input signal is normally high and goes low to reset the printer. It can be received anytime during printer operation.

### ERROR

- This output signal is normally high, and goes low when an error occurs. An error condition can be caused by:
  1. a "Paper Out" condition
  2. the printer is OFF LINE
  3. an overload condition exists

Timing Chart (When normal printing code is received)



- T1...0.5  $\mu$ s (Min)
- T2...1  $\mu$ s (Min)
- T3...0.5  $\mu$ s (Min)
- T4...5  $\mu$ s (Max)
- T5...1 ms or less when buffer is not full  
1 s or less when buffer is full

# Initialization/Hex Dump

## Initialization

The printer is initialized under the following conditions:

- the AC power is turned on
- the **PRIME** signal is received
- the **RESET PRINTER** command is received
- the clear buffer function is used

When the printer is initialized, the following conditions are set:

- the print buffer is cleared
- the receive buffer is cleared (not cleared by **RESET PRINTER** command)
- the download character buffer is cleared (not cleared by **PRIME** signal in IBM Proprinter III mode or by **RESET PRINTER** command)
- horizontal tabs are set every 8 columns
- vertical tab settings are cleared
- all modes set by control and escape commands will be cleared
- present form position is designated as top of form
- the Self Test mode is cleared
- the Control Panel settings are read and set
- Control Panel settings are not changed by **PRIME** signal or **RESET PRINTER** command\*
- the printhead goes to the home position

\* Some software packages send **PRIME** signal at the beginning of their programs. Print modes set by the Control Panel will not change.

## User Clear Function

This function initializes the printer from the Control Panel. This feature is very useful when you want to clear the receive buffer (information recently sent from the computer and is currently printing) without changing the Control Panel.

1. Press **ON LINE** to stop the printing and enter the OFF LINE mode.
2. While pressing **FONT**, press **ON LINE** to clear the data in the receive buffer.
3. Press **ON LINE** to re-enter the ON LINE mode.

## Hex Dump

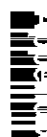
In this mode, all data received from the computer is printed in hex code instead of the normal ASCII characters. Function codes for the printer (CR, LF, HT, etc.) are not executed. This mode is very useful to debug programs.

### To enter the Hex Dump mode:

While pressing **FONT**, turn the power on.

### To release the Hex Dump mode:

Turn the power off, then back on.



## Character Set Tables

## Epson Italic Character Set

		0	35	32	48	84	80	26	112	128	144	160	176	192	208	224	240	
HT	EM	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
		NUL		SP	0	@	P		p			SP	0	@	P		p	
		DC1	!	!	A	Q	a	q				DC1	!	!	A	Q	a	q
		DC2	"	2	B	R	b	r				DC2	"	2	B	R	b	r
		DC3	#	3	C	S	c	s				DC3	#	3	C	S	c	s
		DC4	\$	4	D	T	d	t				DC4	\$	4	D	T	d	t
			%	5	E	U	e	u					%	5	E	U	e	u
			&	6	F	V	f	v					&	6	F	V	f	v
			'	7	G	W	g	w	!				'	7	G	W	g	w
BS	CAN	(	8	H	X	h	x			BS	CAN	(	8	H	X	h	x	
HT	EM	)	9	I	Y	i	y			HT	EM	)	9	I	Y	i	y	
LF		*	:	J	Z	j	z			LF		*	:	J	Z	j	z	
VT	ESC	+	:	K	[	k	(			VT	ESC	+	:	K	[	k	(	
FF		.	<	L	\	l	)			FF		.	<	L	\	l	)	
CR		-	=	M	]	m	)			CR		-	=	M	]	m	)	
SO			>	N	^	n	-			SO			>	N	^	n	-	
SI		/	?	O	_	o	DEL			SI		/	?	O	_	o	NUL	

## Epson Graphic Character Set 2 (USA) (PC437)

[illegible]

**Note:**

- Set 1 is the same one which 80H~9FH is switched to 00H~1FH.

## Epson Character Set 2 (Multilingual) (PC850)

[illegible]

## Epson Character Set 2 (Portugal)

[illegible]

**Note:**

- Set 1 is the same one which 80H~9FH is switched to 00H~1FH.

## Epson Character Set 2 (Canada-French) (PC863)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	:	1	A	Q	a	q	ü	æ	:							
DC2	*	2	B	R	b	r	é	Æ	ó							
DC3	#	3	C	S	c	s	à	ô	ù							
DC4	\$	4	D	T	d	t	â	ö	ñ							
%	5	E	U	e	u	ä	ö	ñ								
&	6	F	V	f	v	ä	ö	ñ								
'	7	G	W	g	w	ç	ü									
BS CAN	(	8	H	X	h	x	ê	ï								
HT EM	)	9	I	Y	i	y	ê	ï								
LF	*	:	J	Z	j	z	è	ü								
VT ESC	-	:	K	[	k	{	í	ç	½							
FF	.	<	L	\	l	l	í	ç	½							
CR	-	=	M	] m	] i	*										
SO	.	>	N	^	n	-	À	Š	<<							
SI	/	?	O	_	o		\$	f	>>							SP

## Epson Character Set 2 (Norway) (PC865)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	:	1	A	Q	a	q	ü	æ	:							
DC2	*	2	B	R	b	r	é	Æ	ó							
DC3	#	3	C	S	c	s	à	ô	ù							
DC4	\$	4	D	T	d	t	â	ö	ñ							
%	5	E	U	e	u	ä	ö	ñ								
&	6	F	V	f	v	ä	ö	ñ								
'	7	G	W	g	w	ç	ü									
BS CAN	(	8	H	X	h	x	ê	ï								
HT EM	)	9	I	Y	i	y	ê	ï								
LF	*	:	J	Z	j	z	è	ü								
VT ESC	-	:	K	[	k	{	í	ç	½							
FF	.	<	L	\	l	l	í	ç	½							
CR	-	=	M	] m	] i	*										
SO	.	>	N	^	n	-	À	Š	<<							
SI	/	?	O	_	o		\$	f	>>							SP

Note:

Character 1 is the same one which 80H-9FH is switched to 00H-1FH

## Epson Character Set 2 (Turkey) (PC857)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	:	1	A	Q	a	q	ü	æ	:							
DC2	*	2	B	R	b	r	é	Æ	ó							
DC3	#	3	C	S	c	s	à	ô	ù							
DC4	\$	4	D	T	d	t	â	ö	ñ							
%	5	E	U	e	u	ä	ö	ñ								
&	6	F	V	f	v	ä	ö	ñ								
'	7	G	W	g	w	ç	ü									
BS CAN	(	8	H	X	h	x	ê	ï								
HT EM	)	9	I	Y	i	y	ê	ï								
LF	*	:	J	Z	j	z	è	ü								
VT ESC	-	:	K	[	k	{	í	ç	½							
FF	.	<	L	\	l	l	í	ç	½							
CR	-	=	M	] m	] i	*										
SO	.	>	N	^	n	-	À	Š	<<							
SI	/	?	O	_	o	DEL	À	Š	>>							SP

Character 1 is the same one which 80H-9FH is switched to 00H-1FH

# Character Set Tables

## IBM Character Set 2 (USA)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	1	A	Q	a	q	u										
DC2	2	B	R	b	r	e	o									
DC4	3	C	S	c	s	a	o	u								
	4	D	T	d	t	e	a	o	u							
	5	E	U	e	u	a	o	n								
	6	F	V	f	v	a	o	b								
	7	G	W	g	w	c	u	o								
BS	(	8	H	X	h	x	a	y	z							
HT	)	9	I	Y	i	y	a	o								
LF	.	:	J	Z	j	z	a	o								
VT ESC	-	:	K		k		i	e	1							
FF	.	<	L		l		i	e	1							
CR	-	=	M		m		i	e	1							
SO	.	>	N		n		A	P	<<							
SI	/	? O					A	f	>>							SP

### Note:

- Set 1 is the same one which 03H~06H and 15H are switched to NUL, and 80H~9FH is switched to 00H~1FH.

## IBM All Character Chart (USA)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	1	A	Q	a	q	u										
DC2	2	B	R	b	r	e	o									
DC4	3	C	S	c	s	a	o	u								
	4	D	T	d	t	e	a	o	u							
	5	E	U	e	u	a	o	n								
	6	F	V	f	v	a	o	b								
	7	G	W	g	w	c	u	o								
BS	(	8	H	X	h	x	a	y	z							
HT	)	9	I	Y	i	y	a	o								
LF	.	:	J	Z	j	z	a	o								
VT ESC	-	:	K		k		i	e	1							
FF	.	<	L		l		i	e	1							
CR	-	=	M		m		i	e	1							
SO	.	>	N		n		A	P	<<							
SI	/	? O					A	f	>>							SP

## IBM Character Set 2 (Multilingual)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	1	A	Q	a	q	u										
DC2	2	B	R	b	r	e	o									
DC4	3	C	S	c	s	a	o	u								
	4	D	T	d	t	e	a	o	u							
	5	E	U	e	u	a	o	n								
	6	F	V	f	v	a	o	b								
	7	G	W	g	w	c	u	o								
BS CAN	(	8	H	X	h	x	a	y	z							
HT	)	9	I	Y	i	y	a	o								
LF	.	:	J	Z	j	z	a	o								
VT ESC	-	:	K		k		i	e	1							
FF	.	<	L		l		i	e	1							
CR	-	=	M		m		i	e	1							
SO	.	>	N		n		A	P	<<							
SI	/	? O					A	f	>>							SP

### Note:

- Set 1 is the same one which 03H~06H and 15H are switched to NUL, and 80H~9FH is switched to 00H~1FH.

## IBM All Character (Multilingual)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
DC1	1	A	Q	a	q	u										
DC2	2	B	R	b	r	e	o									
DC4	3	C	S	c	s	a	o	u								
	4	D	T	d	t	e	a	o	u							
	5	E	U	e	u	a	o	n								
	6	F	V	f	v	a	o	b								
	7	G	W	g	w	c	u	o								
BS CAN	(	8	H	X	h	x	a	y	z							
HT	)	9	I	Y	i	y	a	o								
LF	.	:	J	Z	j	z	a	o								
VT ESC	-	:	K		k		i	e	1							
FF	.	<	L		l		i	e	1							
CR	-	=	M		m		i	e	1							
SO	.	>	N		n		A	P	<<							
SI	/	? O					A	f	>>							SP

## IBM Character Set 2 (Portugal)

[illegible]

Is the same one which 03H-06H and 15H  
is switched to 00H and 80H-95H is switched  
to 15H.

## IBM All Character (Portugal)

[illegible]

## IBM Character Set 2 (Canada-French)

		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL		SP	0	@	P	p	Ç	É						L	I	α	=
	DC1	!	1	A	O	a	q	û	Ê					⌣	⌢	ß	≡
	DC2	"	2	B	R	b	r	é	Ë	ó				⌤	⌣	Γ	≥
+		#	3	C	S	c	s	à	ô	ù				⌥	⌤	κ	≤
+ DC4	\$	4	D	T	d	t	À	È						—	≡	Σ	∫
+	%	5	E	U	e	u	á	Í	.					⌦	⌥	σ	
+	&	6	F	V	f	v	Ā	Œ	Ʒ					⌧	⌦	ℎ	+
	'	7	G	W	g	w	ç	ú	-					⌨	⌧	τ	-
B3	(	8	H	X	h	x	ê	ı	İ					〈	⌨	Φ	
HT	)	9	I	Y	i	y	ë	Ö	—					〉	〈	ø	*
LF	-		J	Z	j	z	è	Ù	~					⌫	〉	Ω	
VT	ESC +	:	K	[	k	{	ı	Ɔ	½					⌬	⌫	δ	√
F=	,	<	L	\	l		İ	¾	†					⌭	⌬	∞	°
CR	_	=	M	]	m	}	„	̈	‡					⌮	⌭	ø	²
SD	.	>	N	^	n	~	Á	Ú	<<					⌯	⌮	€	■
SI	/	?	O	_	o	˘	š	ƒ	>>					⌰	⌯	◊	SP

It is the same one which 03-156H and 15H is switched to NUJ and 80-9-1 is switched to 00F-15H.

## IBM All Character (Canada-French)

	D	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
Row	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	B	▶	SP	0	●	P	p	Ç	É							
1	C	◀	!	1	A	Q	a	q	Ê							
2	●	I	•	2	B	R	b	r	É	Ê	Ó					
3	v		•	3	C	S	c	s	À	Ó	Ú					
4	•	¶	\$	4	D	T	d	t	À	Ê						
5	A	\$	%	5	E	U	e	u	À	I	•					
6	A	-	&	6	F	V	•	v	Ê	Ó	3					
7	•	•	•	7	G	W	g	w	Ç	Ú	-					
8	■	†	(	8	H	X	h	x	Ê	□	!					
9	•	l	)	9	I	Y	i	y	Ê	Ó	-					
A	■	→	•		J	Z	j	z	Ê	Ú	L					
B	■	←	•		K	†	k	†	†	Ç	½					
C	Ç	†	<		L	†	l	l	†	Ê	½					
D	†	→	-		M	†	m	†	•	Ú	½					
E	†	▲	>		N	^	n	•	À	Ó	<<					
F	•	▼	/	?	O	-	o	Ç	\$	f	>>					SP

# Character Set Tables

## IBM Character Set 2 (Norway)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	•	P	•	p	Ç	É	À							
DC1	1	A	Q	a	q	ü	•									
DC2	2	B	R	b	r	æ	Ö									
•	3	C	S	c	s	å	Ó									
•	4	D	T	d	t	ä	Ö									
•	5	E	U	e	u	ä	Ö	R								
•	6	F	V	f	v	ä	Ö									
•	7	G	W	g	w	ç	Ü									
BS	(	B	H	X	h	x	•	Y	•							
HT	)	9	I	Y	i	y	•	Ö								
LF	*	:	J	Z	j	z	•	Ü								
VT	ESC	+	:	K	[	k	[	•	•							
FF	.	<	L	\	•	•	•	•	•							
CR	-	=	M	]	m	]	•	•	•							
SO	.	>	N	^	n	^	•	•	•							
SI	/	?	O	_	o	_	•	•	•							

### Note:

- Set 1 is the same one which 03H~06H and 15H are switched to NUL, and 80H~9FH is switched to 00H~1FH.

## IBM All Character (Norway)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
SP	0	•	P	•	p	Ç	É	À								
•	1	A	Q	a	q	ü	•									
•	2	B	R	b	r	æ	Ö									
•	3	C	S	c	s	å	Ó									
•	4	D	T	d	t	ä	Ö									
•	5	E	U	e	u	ä	Ö	R								
•	6	F	V	f	v	ä	Ö									
•	7	G	W	g	w	ç	Ü									
•	8	H	X	h	x	•	Y	•								
•	9	I	Y	i	y	•	Ö									
•	:	J	Z	j	z	•	Ü									
•	+	:	K	[	k	[	•	•								
•	.	<	L	\	•	•	•	•	•							
•	-	=	M	]	m	]	•	•	•							
•	.	>	N	^	n	^	•	•	•							
•	/	?	O	_	o	_	•	•	•							

## IBM Character Set 2 (Turkey)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
NUL	SP	0	•	P	•	p	Ç	É	À							
DC1	1	A	Q	a	q	ü	•									
DC2	2	B	R	b	r	æ	Ö									
•	3	C	S	c	s	å	Ó									
•	4	D	T	d	t	ä	Ö									
•	5	E	U	e	u	ä	Ö	R								
•	6	F	V	f	v	ä	Ö									
•	7	G	W	g	w	ç	Ü									
BS	(	B	H	X	h	x	•	Y	•							
HT	)	9	I	Y	i	y	•	Ö								
LF	*	:	J	Z	j	z	•	Ü								
VT	ESC	+	:	K	[	k	[	•	•							
FF	.	<	L	\	•	•	•	•	•							
CR	-	=	M	]	m	]	•	•	•							
SO	.	>	N	^	n	^	•	•	•							
SI	/	?	O	_	o	_	•	•	•							

### Note:

- Set 1 is the same one which 03H~06H and 15H are switched to NUL, and 80H~9FH is switched to 00H~1FH.

## IBM All Character (Turkey)

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
SP	0	•	P	•	p	Ç	É	À								
•	1	A	Q	a	q	ü	•									
•	2	B	R	b	r	æ	Ö									
•	3	C	S	c	s	å	Ó									
•	4	D	T	d	t	ä	Ö									
•	5	E	U	e	u	ä	Ö	R								
•	6	F	V	f	v	ä	Ö									
•	7	G	W	g	w	ç	Ü									
•	8	H	X	h	x	•	Y	•								
•	9	I	Y	i	y	•	Ö									
•	:	J	Z	j	z	•	Ü									
•	+	:	K	[	k	[	•	•								
•	.	<	L	\	•	•	•	•	•							
•	-	=	M	]	m	]	•	•	•							
•	.	>	N	^	n	^	•	•	•							
•	/	?	O	_	o	_	•	•	•							



# International Character Set

	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	
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**ASCII:** "ASCII" is an acronym for "American Standard Code for Information Interchange". In ASCII, each character has a unique code.

**BASIC:** BASIC is a commonly used microcomputer programming language.

**Baud (baud rate):** Baud is a unit of data transmission speed between computer devices. Can be, but not necessarily, equal to bits per second.

**Binary:** Binary is a numbering system using the two digits of zero (0) and one (1).

**Bit:** Bit is an abbreviation for "binary digit (0-1)", and is the smallest unit of information used by a printer or computer.

**Buffer:** Buffer is an area of memory which stores data temporarily.

**Byte:** Byte is the unit of information used by a printer or computer. One byte is equivalent to eight (8) bits.

**Character set:** Character set is the set of characters, numbers, and symbols available for printing.

**Code page:** Code page selections are available to provide compatibility between keyboard, displayed/printed characters and stored files.

**Control codes:** Control codes are commands from the computer to the printer that are non-printable characters. They are used to control printer functions.

**cpi:** "cpi" is an abbreviation for "characters per inch", and means the maximum number of characters printed in one horizontal inch.

**cpl:** "cpl" is an abbreviation for "characters per line", and means the maximum number of characters printed on one line.

**cps:** "cps" is an abbreviation for "characters per second", and means the number of characters printed in one second.

**CR (Carriage Return):** "CR" is a control code that returns the printhead to the left margin.

**Decimal (Dec.):** Decimal is a numbering system composed of 10 digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.

**Default:** Default has two meanings: one indicates the previously set condition or settings executed when the power is turned on, reset or initialized; and the other indicates the original settings when shipped from the factory.

**Double strike printing:** Double printing is a print quality enhancing mode which uses a double strike with two passes of the printhead, feeding the paper 1/216" (0.12 mm) between the first and second pass (in Epson mode only).

**Double high printing:** Double high printing makes the height of a character twice that of a normal one.

**Double wide printing:** Double wide printing makes the width of a character twice that of a normal one.



<b>Download character:</b>	Download character is a character which the user can design.
<b>Draft:</b>	Draft is one of two print qualities available on this printer. Draft mode uses a minimum number of dots per character to maximize printing speed.
<b>Emphasized printing:</b>	Emphasized printing is a print quality enhancing mode done in one pass of the printhead at half speed, allowing horizontally adjacent dots to be printed producing a darker character.
<b>Emulation:</b>	Emulation means to operate like another printer. KX-P1150 can emulate the Epson FX-850 or the IBM Proprinter III.
<b>Escape (ESC) sequence:</b>	"ESC" is a control code that begins most printer commands. The characters which follow the "ESC" are interpreted as the command, rather than characters to print.
<b>Fanfold paper:</b>	Fanfold paper has sprocket holes on the left and right sides and pages are separated by a perforation. Fanfold paper may also be known as computer paper or tractor paper.
<b>FF (Form Feed):</b>	"FF" is a control code that advances the paper one page.
<b>Font:</b>	Font is a style and size of type designated by a family name.
<b>FORTTRAN:</b>	FORTTRAN is one of many computer programming languages, which is used primarily in scientific applications.
<b>Hexadecimal:</b>	Hexadecimal is a numbering system using the 16 digits, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F.
<b>Initialization:</b>	Initialization means to reset the printer to the initial start up condition.
<b>Interface:</b>	Interface is the connection between the two separate systems, such as the computer and the printer. A parallel interface transfers data one character or code at a time, and a serial interface transfers data one bit at a time.
<b>I/O:</b>	"I/O" is the symbolic notation for "Input/Output".
<b>LF (Line Feed):</b>	"LF" is a control code that advances the paper one line.
<b>LSB:</b>	"LSB" is an acronym for "Least Significant Bit", and means the rightmost position in a binary number.
<b>MSB:</b>	"MSB" is an acronym for "Most Significant Bit", and means the leftmost position in a binary number.
<b>OFF LINE:</b>	OFF LINE is the condition in which the printer can not communicate with the computer.

- ON LINE:** ON LINE is the condition in which the printer can communicate with the computer.
- Overline printing:** Overline printing produces a continuous line above the characters, using the first pin of the printhead.
- Parallel Interface:** Synchronized 8 bit transmission of data from the computer to the printer. (☞ P. 51 "Interface".)
- Parity:** Parity is a method for a computer and printer to check the accuracy of data transfer.
- PASCAL:** PASCAL is a commonly used microcomputer programming language.
- Perforation:** Perforation indicates the tear position on the fanfold paper. (☞ P. 40)
- Pitch:** Pitch is the number of characters which will print in one inch. Pitch is equivalent to characters per inch (dpi).
- Platen:** Platen is the rubber roller which is a backing for the paper when printing.
- Printable area:** The area of a page where the print quality is assured.
- Printer drivers:** Most of today's off the shelf software programs use printer drivers to control printer functions. These drivers contain the software codes your software program uses to access printer features. With the printer driver installed, you will seldom need to know any of the KX-P1150 commands.
- Printing area:** The area of the page within the margins, where printing actually occurs. The printing area is equal to or less than the printable area.
- Proportional spacing (PS):** Proportional spacing is a printing method of adjusting the space in which a character is printed.
- RAM:** RAM is an acronym for "Random Access Memory". It is the part of the printer's memory in which data is stored, control codes or download characters are to be printed. RAM is cleared when the printer is turned off.
- ROM:** ROM is an acronym for "Read Only Memory". It is the part of the printer's memory in which predefined characters and operating information for the printer are stored. ROM is not cleared when the printer is turned off.
- Self test:** Self test is a method for testing the operation of the printer. (☞ P. 20)
- Shielded Cable:** Shielded cable is a cable wrapped with a special metal around its wires. This guards against radio interference.
- String concatenation:** This is the joining of two or more bytes of data into a single command.
- Top of Form:** Top of Form is the first line position on the paper.



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# Options and Supplies

- KX-PT12**      **Auto Cut Sheet Feeder (Single bin)**  
This option allows you to automatically load 50 cut sheets (20 lbs) of paper into the printer.
- KX-P44**        **32K Buffer Chip**  
This option allows you to download custom-designed characters, or can be used to expand the printer's receive buffer.
- KX-P115i**      **Ribbon Cassette (Black)**  
This ribbon is useful for 4 million characters.



150

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