Panasonic

Operating Instructions

Impact Dot Matrix Printer

KX-P3123

Before operating this unit, please read these instructions completely.

FOR USER IN THE UNITED STATES ONLY

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the booklet "Something About Interference" available from FCC local regional offices helpful.

FCC Warning: To assure continued FCC emission limit compliance, the user must use only the recommended shield interfacing cable when connecting to a host computer. Also, any unauthorized changes or modifications to this equipment would void the users authority to operate this device.

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-P3123**	NAME OF DEALER	
SERIAL NO.		DATE OF PURCHASE	

Any details given in these operating instructions are subject to change without notice.

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Congratulations on purchasing a Panasonic printer.

This printer is a versatile, high quality 24-pin dot matrix printer which is designed to meet the needs of your office.
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.

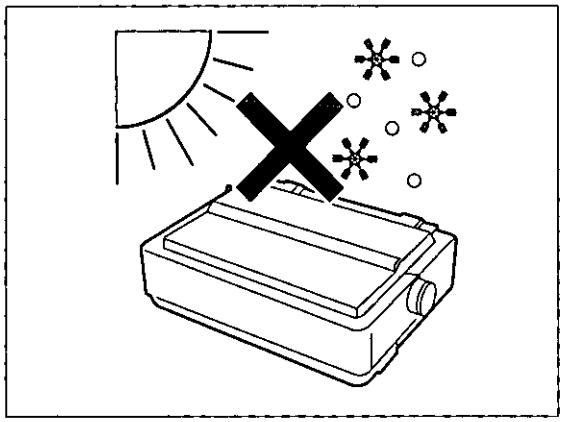
Features

Printer Emulation:	Epson LQ-570 and IBM Proprinter X24E
Setup Disk:	A printer-driver for Windows Ver. 3.1, initial setup program and command reference program
ATM Disk:	Adobe Type Manager with 13 scalable Adobe fonts for Windows Ver. 3.0 or higher
Super Quiet Mode:	Reduces printing noise
Color Printing:	7 colors with the optional color kit (KX-PCK11)
Fonts:	3 Draft (Pica , Elite , Micron) 6 Letter Quality (Courier , Bold PS, Prestige , Script , Sans Serif, Roman) 1 Super Letter Quality (Roman) 4 Scalable fonts (Roman , Sans Serif, Courier , Prestige)
Printing Speed:	Draft — 192 characters per second (12 cpi) LQ — 64 characters per second (12 cpi) SLQ — 32 characters per second (12 cpi)
Paper Handling:	Friction and Tractor (Pull and Push)
Paper Paths:	Rear, Bottom, Top
Tear Off:	Advances fanfold paper's perforation to tear position
Paper Parking:	Allows single sheets/envelopes to be used without removing/wasting fanfold paper
Cut Sheet Feeder Option (KX-PT10):	Provides fast and automatic feeding of single sheets
Serial Interface Option (KX-PS13 and KX-PS14):	You may select parallel or serial when either serial interface board is installed

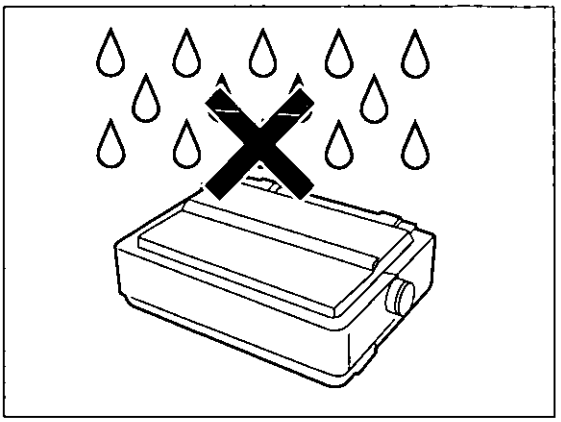
Operating Environment

- Do not use the printer under the following conditions.

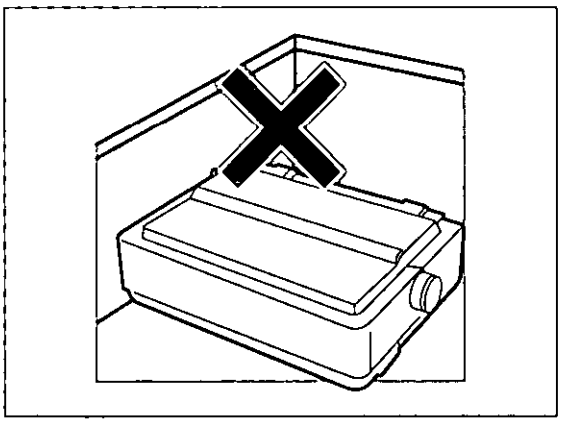
Extremely high or low temperature
[temperature range: 10~35°C (50~95°F)]



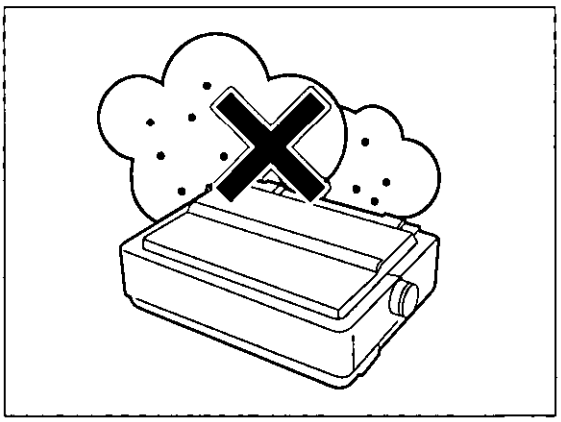
Extremely high or low humidity
(humidity range: 30~80% RH)



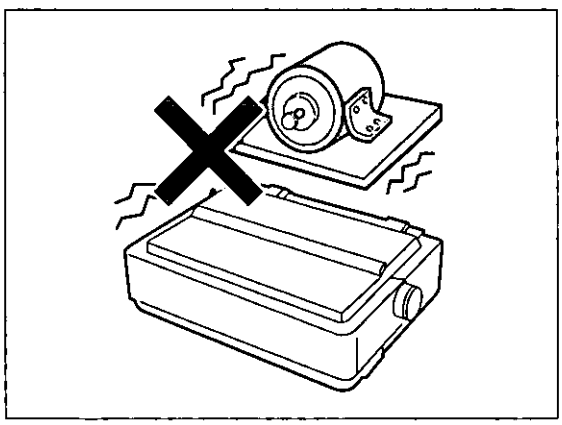
Areas of poor ventilation
[a minimum of 4" (10 cm) clearance on all sides is necessary to insure proper ventilation]



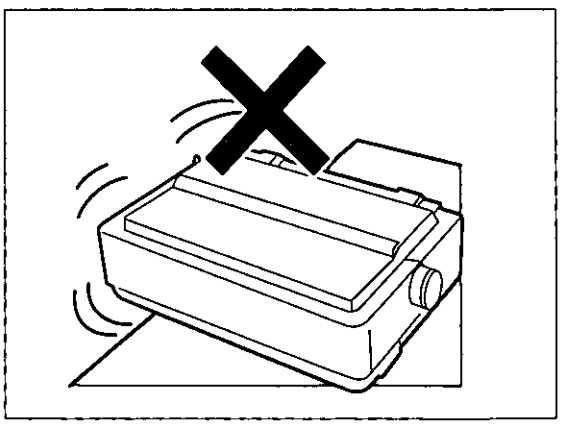
Areas of high dust concentration



Areas with extreme vibration



Areas on an unstable or unlevel surface

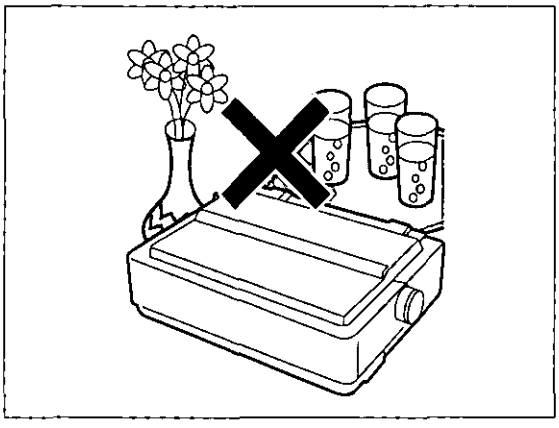


Precautions

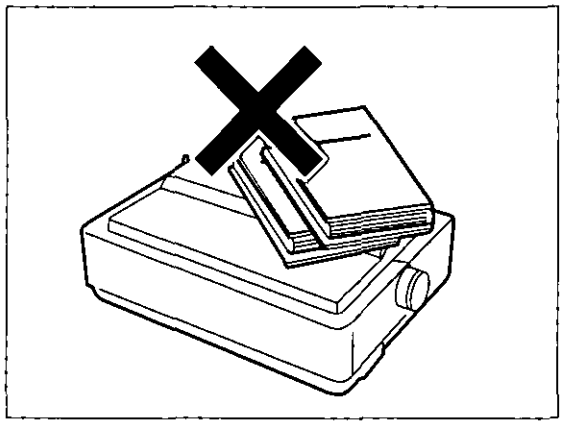
The following precautions are recommended to extend the life of the printer.

Keep all liquids away from the printer.

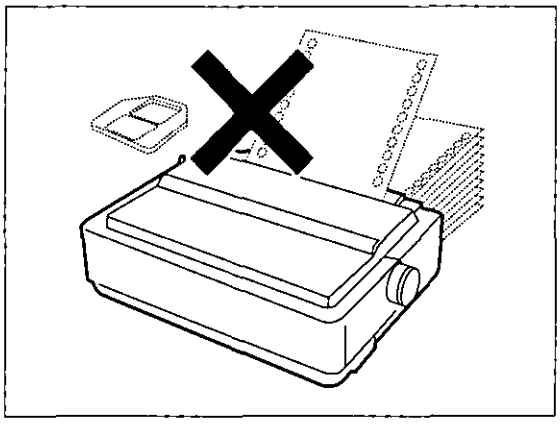
— Accidental spillage of a liquid into the printer can cause severe damage.



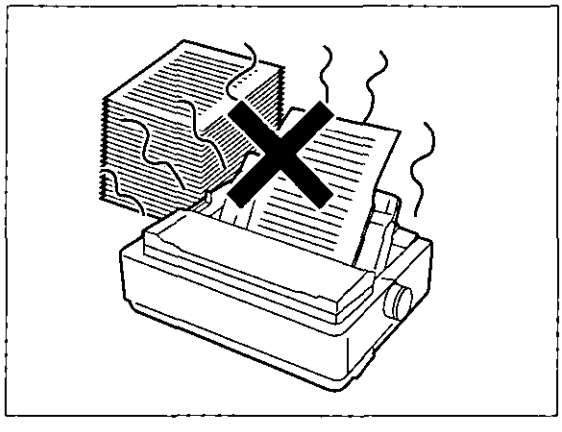
Do not place books, paper, or other items on top of the printer.



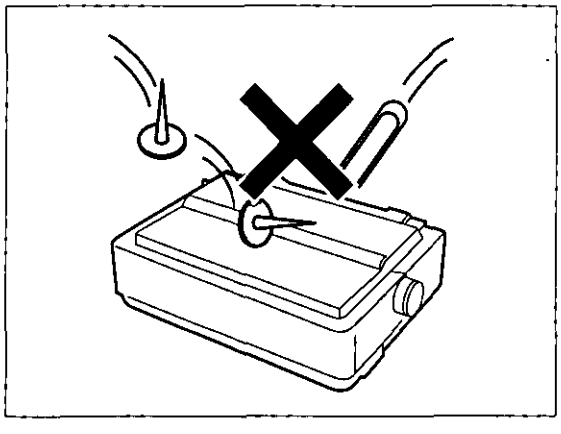
Do not operate the printer without paper and a ribbon cassette installed.



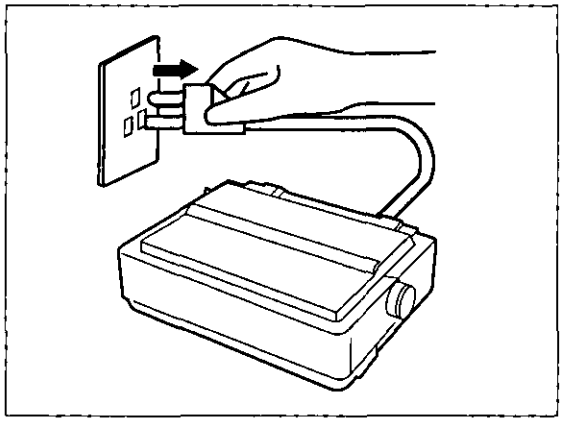
Avoid prolonged use without allowing the printhead time to cool.



Do not obstruct the movement of the printhead while in operation.

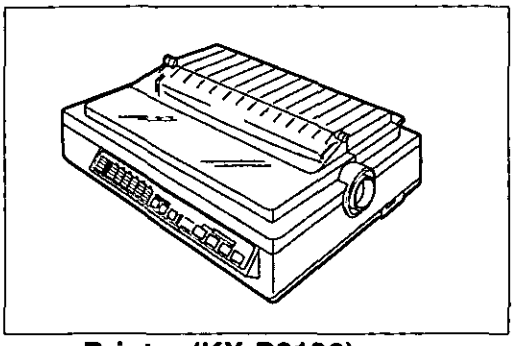


If the printer is not going to be used for an extended period, unplug the power cord.

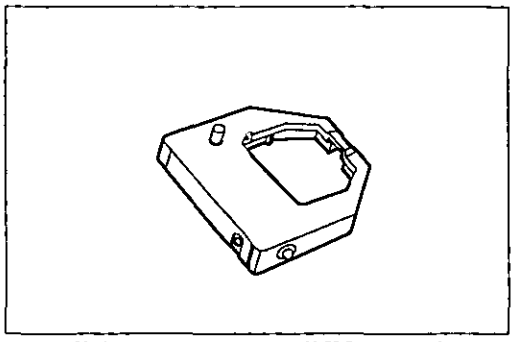


Unpacking

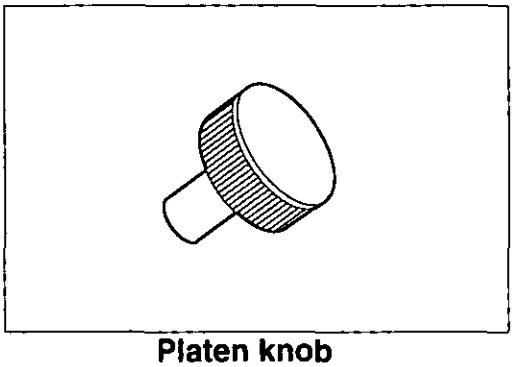
Having unpacked the printer, make sure none of the contents shown below are missing or damaged. Report damages or shortages to the store from which the unit was purchased.



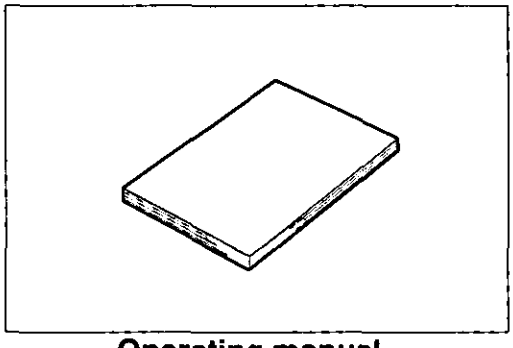
Printer (KX-P3123)



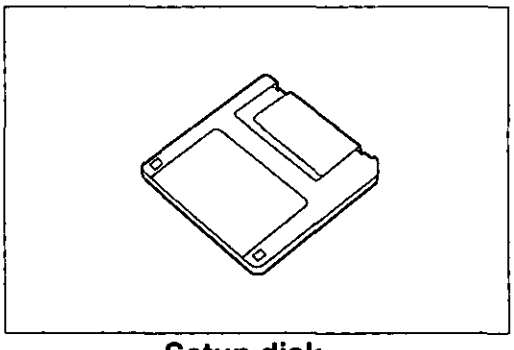
Ribbon cassette (KX-P150)



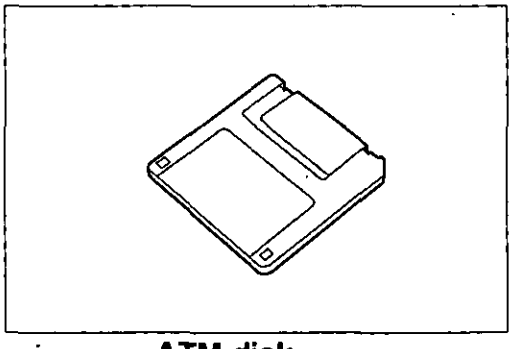
Platen knob



Operating manual



Setup disk



ATM disk

- This setup disk contains a printer-driver for Windows Ver. 3.1 (☞ P. 33), an initial setup program (☞ P. 55) and a command reference program (☞ P. 84).
- To use this setup disk you need to have an IBM-PC or a compatible computer with a 3.5″ floppy disk drive.

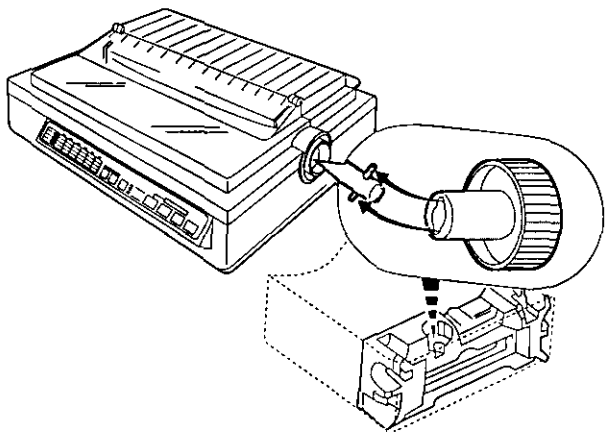
- For detailed information on ATM disk, refer to ATM disk manual.

Note:

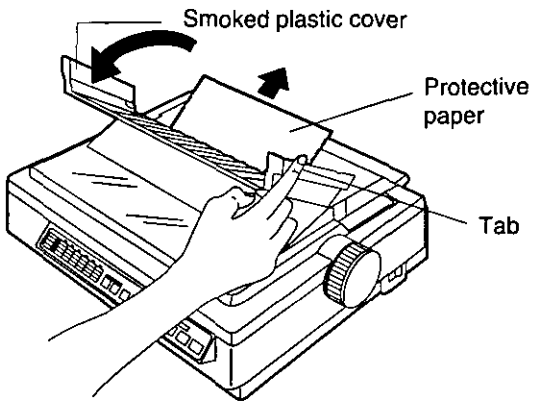
- It is recommended that you save the original carton and packing materials for proper shipping and transporting of the printer.

Assembling the Parts

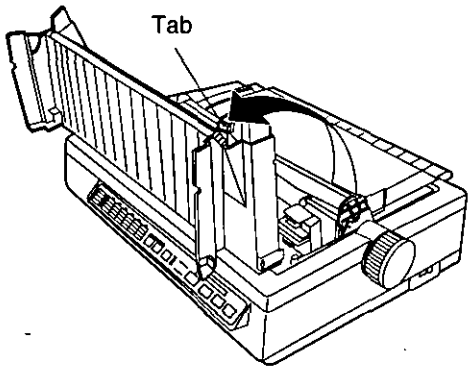
❶ Insert the platen knob into the hole on the right side of the printer and rotate it slowly until it slips onto the shaft. Push the platen knob onto the platen shaft to secure.



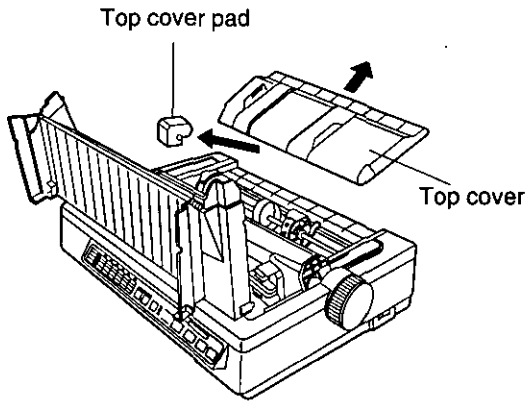
❷ Fold the smoked plastic cover forward, and remove the protective paper.



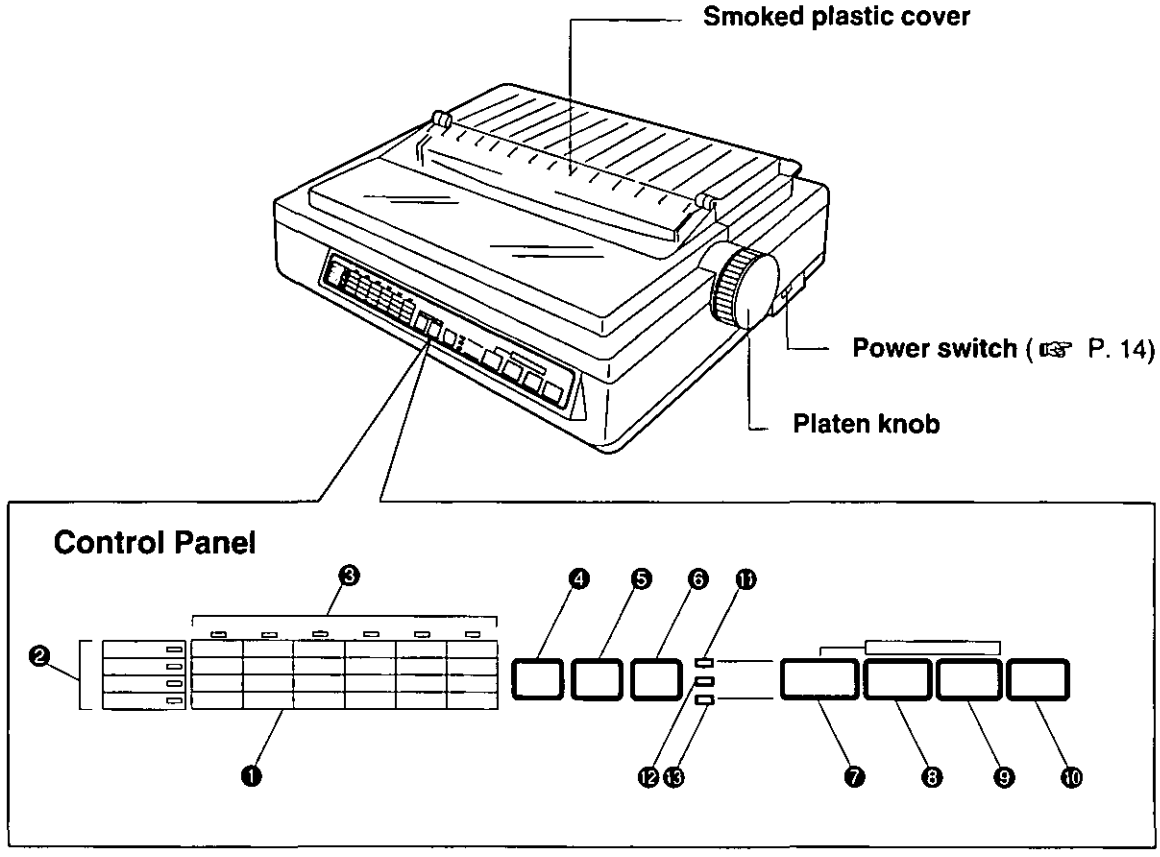
❸ Open the smoked plastic cover.



❹ Remove the top cover pad.



Parts of the Printer



① Control table
This control table shows the details of the setting for each item.

② Row indicators
This indicates the selected item.

③ Column indicators
This indicates the elements of each item.

④ SUPER QUIET (TOF) switch
Pressing this switch reduces print noise, however, it also reduces the printing speed. Pressing this switch alternately turns the SUPER QUIET mode on/off. (☞ P. 36)
In the FUNCTION mode, pressing this switch sets the Top of Form (TOF). (☞ P. 41)

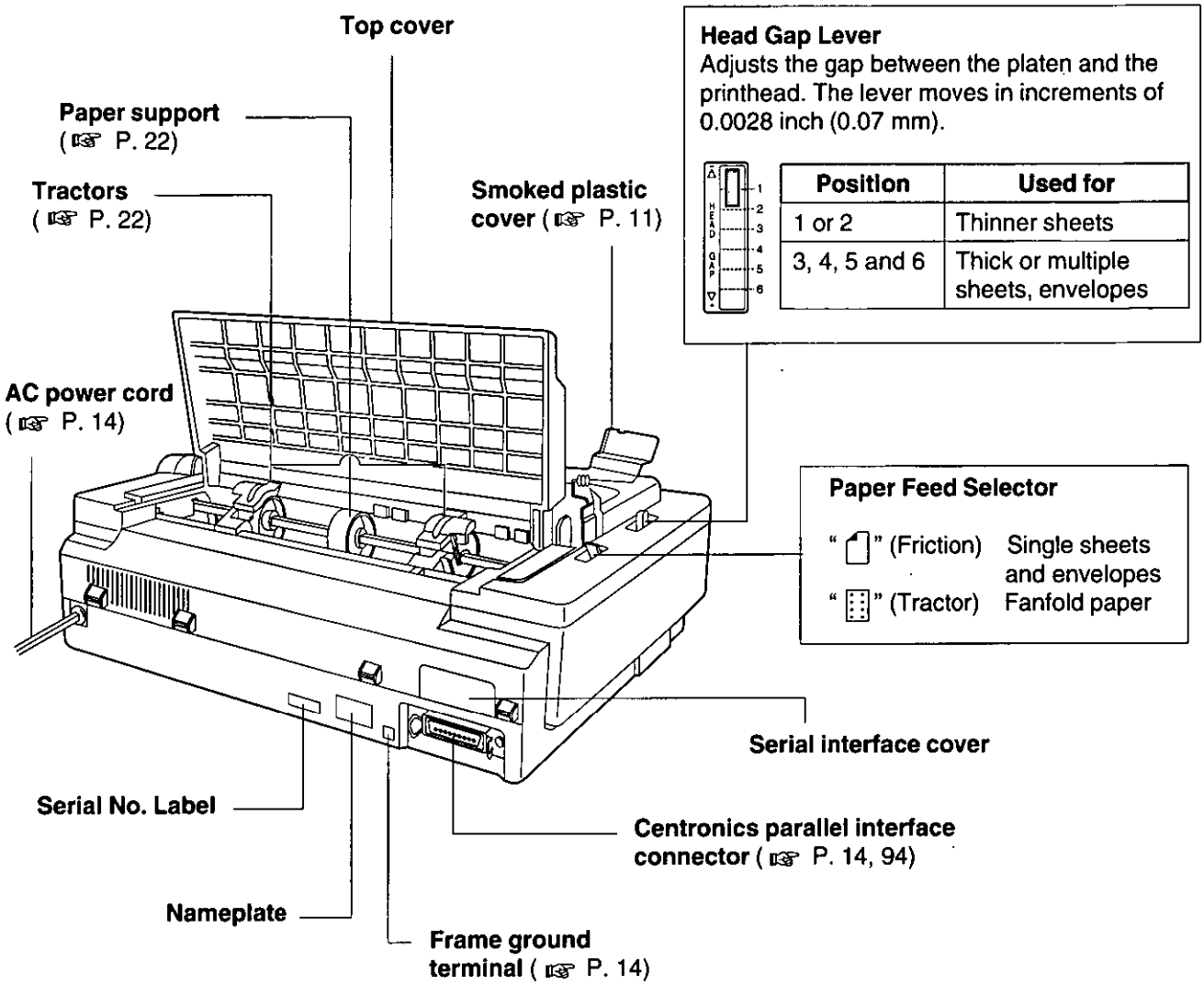
⑤ TEAR OFF (OTHERS) switch
Pressing this switch will advance or reverse the paper for tearing off in the OFF LINE mode, or when not printing in the ON LINE mode. (☞ P. 37)
In the FUNCTION mode, pressing this switch will advance the column position for the OTHERS on the control table.

⑥ LOAD/PARK (SET) switch
Pressing this switch will load/park the paper in the OFF LINE mode, or when not printing in the ON LINE mode. (☞ P. 39)
In the FUNCTION mode, pressing this switch will set or release the items on the control table.

⑦ ON LINE (FONT) switch
This switch opens and closes the communication lines with the computer.
In the FUNCTION mode, pressing this switch advances the column position for the FONT on the control table.

⑧ FF (PITCH) switch
Pressing this switch advances the paper to the top of form on next page in the OFF LINE mode or when the printer is not printing in the ON LINE mode (depending on your TOF setting).
In the FUNCTION mode, pressing this switch advances the column position for the PITCH on the control table.

(Rear View)



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

Paper Feed Selector

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

⑨ LF (FORM LENGTH) switch
Pressing this switch advances the paper one line at a time. Holding this switch will advance the paper continuously until the switch is released. These functions are active in the OFF LINE mode or when not printing in the ON LINE mode.

In the FUNCTION mode, pressing the switch advances the column for the FORM LENGTH on the control table.

⑩ FUNCTION switch
This switch allows you to enter and exit the FUNCTION mode.

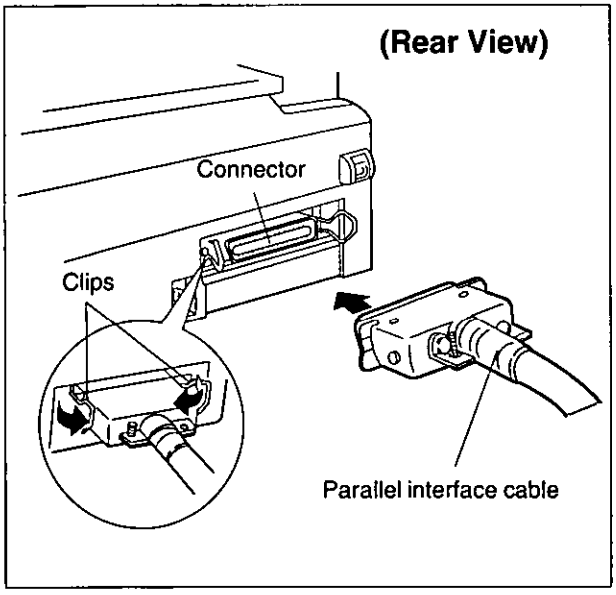
⑪ ON LINE/FUNCTION indicator
This indicator is lit when the printer is in the ON LINE mode, and is out in the OFF LINE mode. It blinks in the FUNCTION mode.

⑫ SUPER QUIET indicator
This indicator is lit when the printer is in the SUPER QUIET mode.

⑬ POWER/PAPER OUT indicator
This indicator is lit when the power is on and paper is installed. It blinks when paper is not installed.

Connecting to a Computer

1a

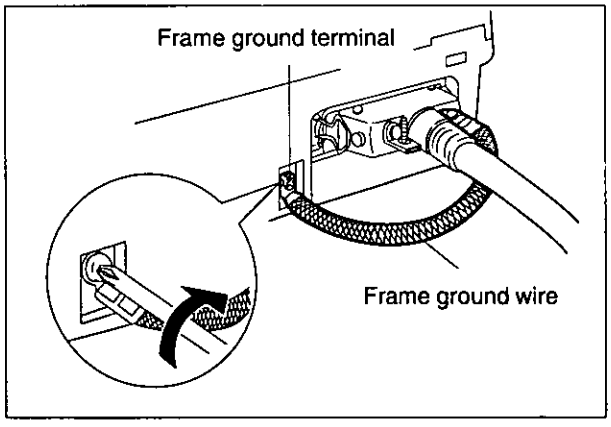


Attach one end of the parallel interface cable to your printer as shown, and the other end to your computer.
Be sure to secure the printer clips.

Note:

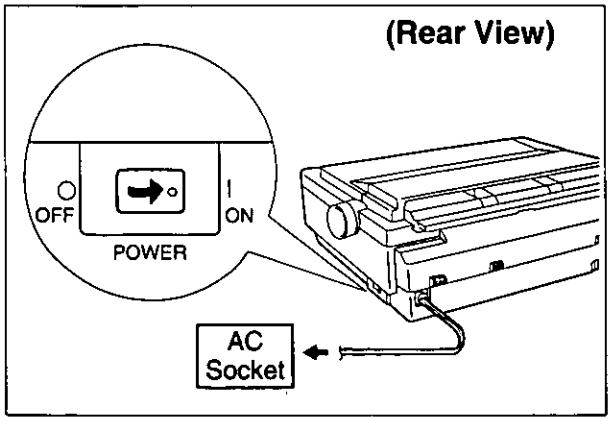
- If you do not have a parallel interface cable, you will need to purchase one from your local computer store or dealer.

1b



If the cable has a frame ground wire, connect it to the frame ground terminal.

2



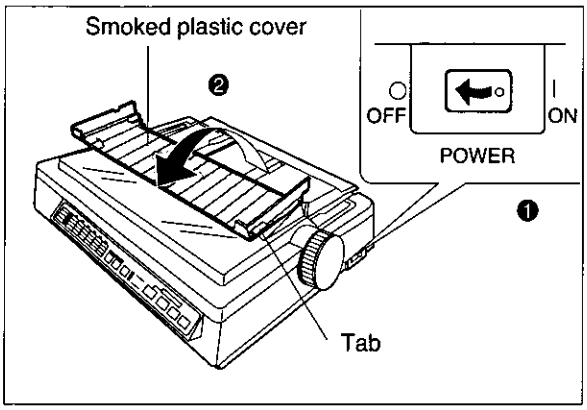
Plug the printer into a grounded 3 prong AC socket.

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

Ribbon Cassette

Installing the Ribbon Cassette

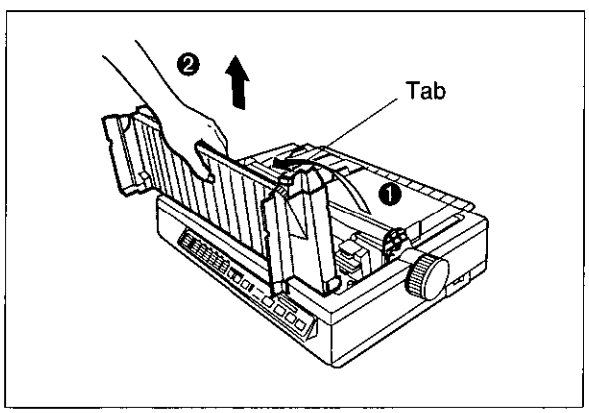
1



❶ **Turn the power switch off for safety.**

❷ **Fold the smoked plastic cover forward by lifting tab on right side.**

2



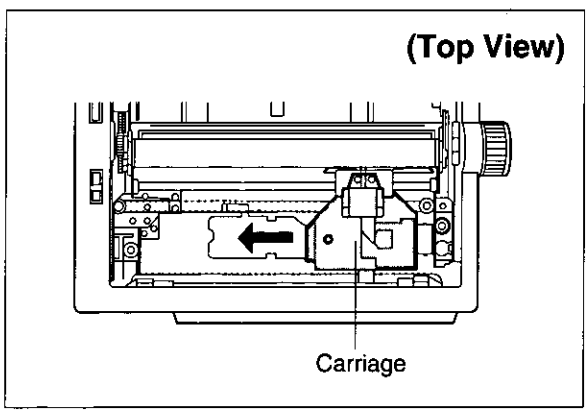
❶ **Raise the smoked plastic cover.**

❷ **Remove the smoked plastic cover.**

Caution:

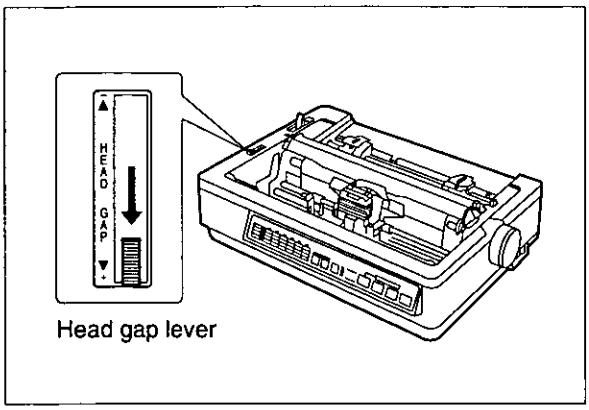
- The printhead may be hot. Use caution when the cover is open.

3



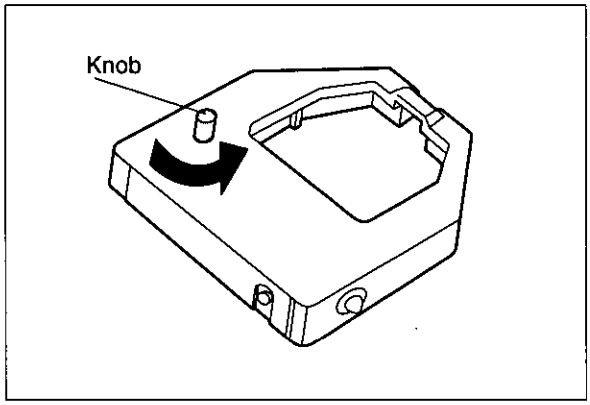
Gently slide the carriage toward the center of the unit.

4



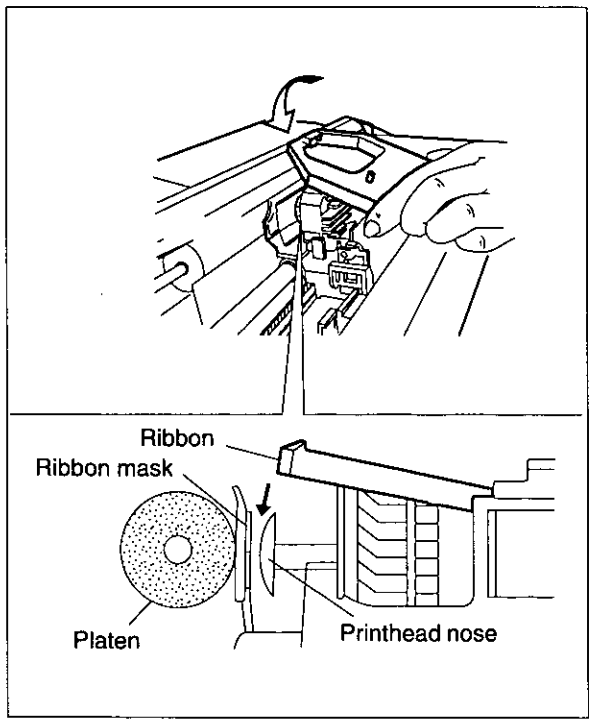
Move the head gap lever to the (+) position.

5



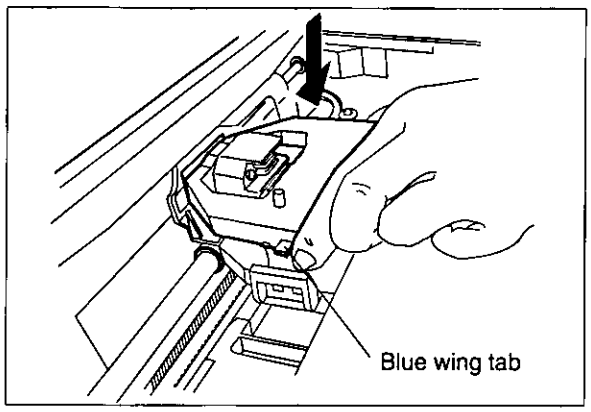
Rotate the knob on the ribbon cassette to remove any slack.

6



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

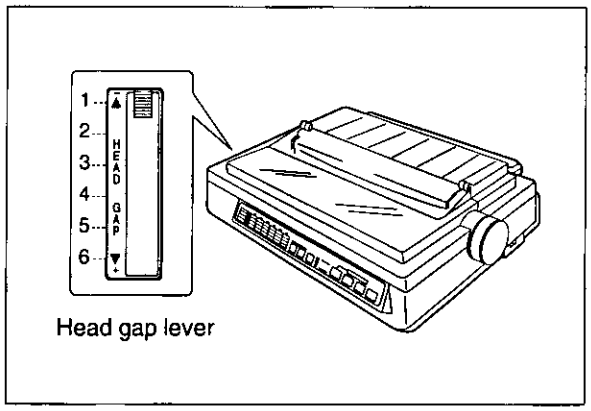
7



Press down on rear of the cassette until the blue wing tab snaps into place.

8 **Replace the smoked plastic cover to its original position.**

9

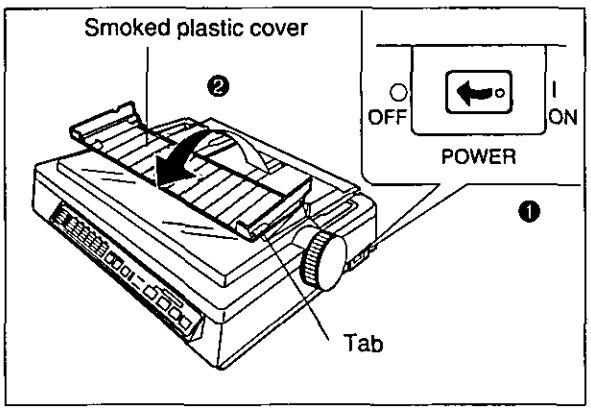


Adjust the head gap lever for the thickness of the paper you are using.

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

Removing the Ribbon Cassette

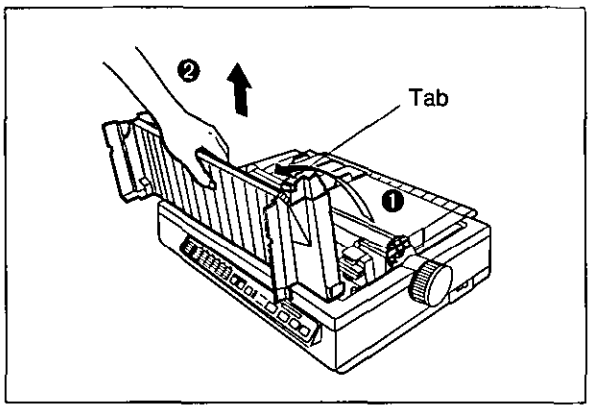
1



❶ **Turn the power switch off for safety.**

❷ **Fold the smoked plastic cover forward by lifting tab on right side.**

2



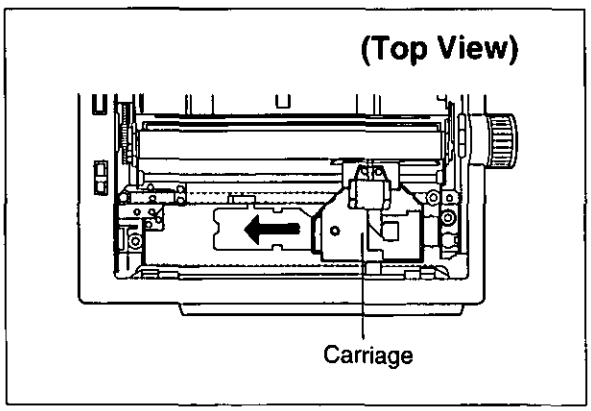
❶ **Raise the smoked plastic cover.**

❷ **Remove the smoked plastic cover.**

Caution:

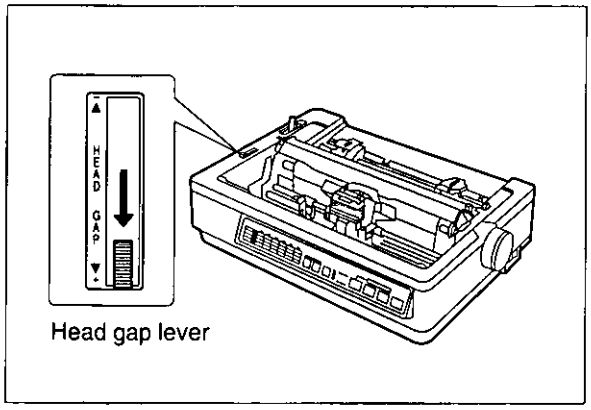
- The printhead may be hot. Use caution when the cover is open.

3



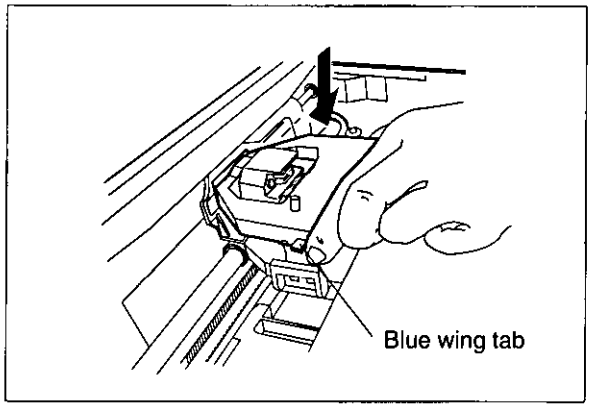
Gently slide the carriage toward the center of the unit.

4



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

5



Spread the blue wing tab and lift up the cassette.

Paper Feed Selection

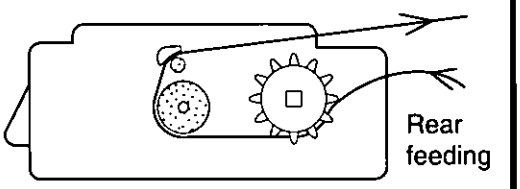
This printer has two paper feed mechanisms to support 3 paper paths. One mechanism is TRACTOR mode for contlnuously fed paper. In the tractor mode you can choose between PUSH or PULL.

The other paper feed mechanism is FRICTION mode. In the friction mode you can feed single sheets or envelopes through the top. The optional KX-PT10 Cut Sheet Feeder will accommodate automatic feeding of single sheets, from the top paper path.

Push Tractor Mode " ⁞⁞ " (Rear Feeding)

— fanfold paper (1 part)

— multipart forms consisting of 2 parts

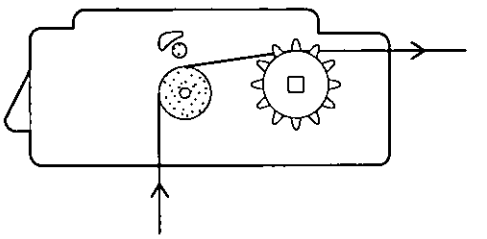


Pull Tractor Mode " ⁞⁞ " (Bottom Feeding)

— multipart forms consisting of 3 or 4 parts

— labels

— fanfold paper (1 part)

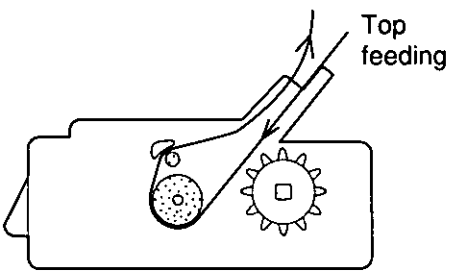


Friction Mode " ▯ "

— single sheets

(The KX-PT10 allows you to automatically feed up to 80 sheets of 20 lb paper.)

— envelopes



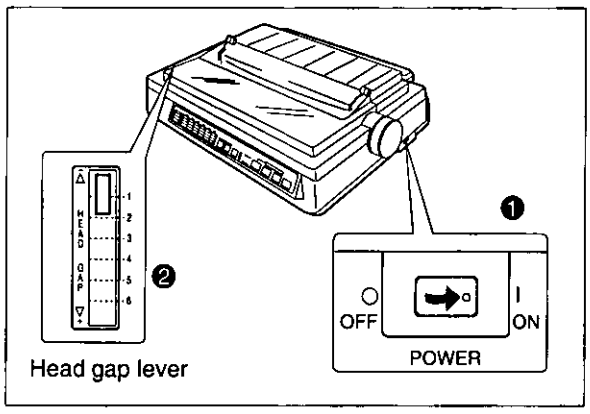
Note:

- When feeding paper from the bottom, do not use reverse line feed. Paper may not feed correctly and print quality may not be optimum.
- Paper Parking is not available when the paper is installed from the bottom.
- Multipart forms consisting of 2 parts may be used for rear feeding (Push mode). For 3 or 4 part forms, we recommend bottom feeding (Pull mode) for optimum print quality.

Installing Paper

Fanfold Paper (Push Tractor Mode/Rear Feeding)

1



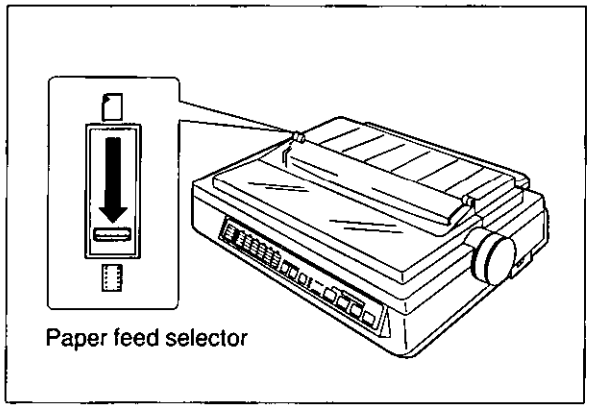
❶ Turn the power on.

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

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

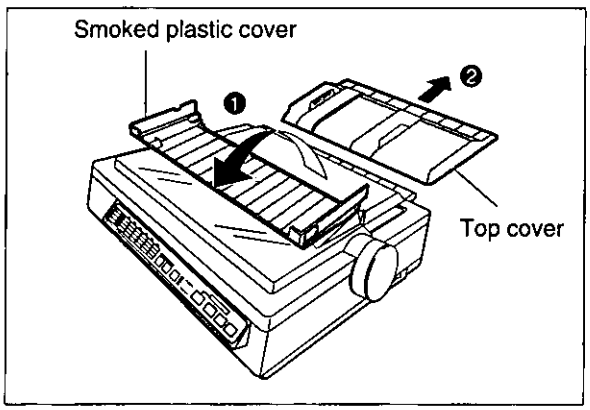
Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets

2



Set the paper feed selector to the " ⣿ " position.

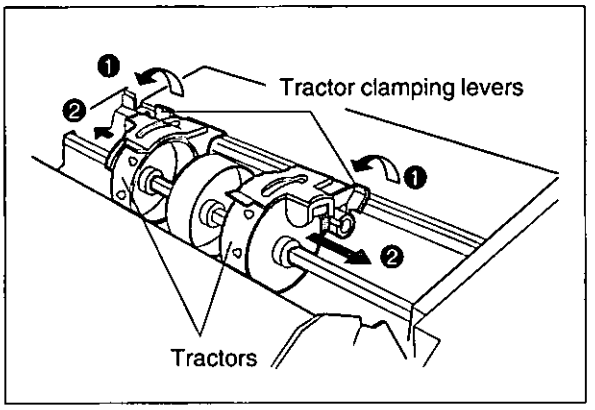
3



❶ Fold the smoked plastic cover forward by lifting the tab on right side.

❷ Remove the top cover.

4



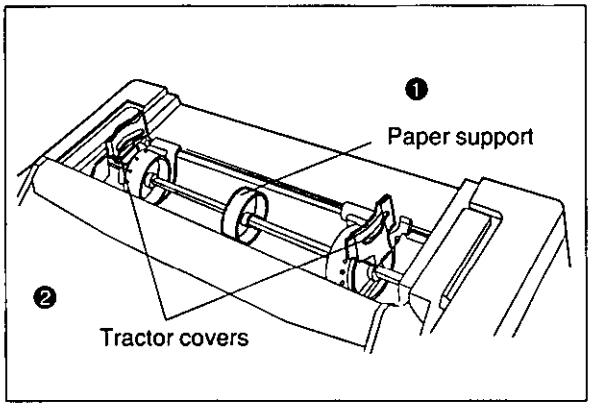
❶ **Unlock the tractors by pulling the tractor clamping levers forward.**

❷ **Slide the tractors to opposite ends of the printer.**

Note:

- 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.

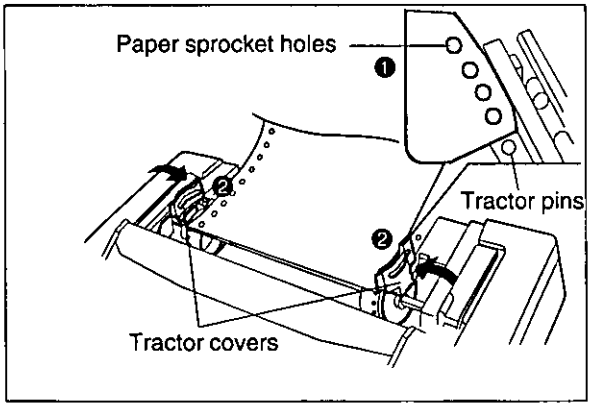
5



❶ **Move the paper support to the center position.**

❷ **Open the tractor covers.**

6



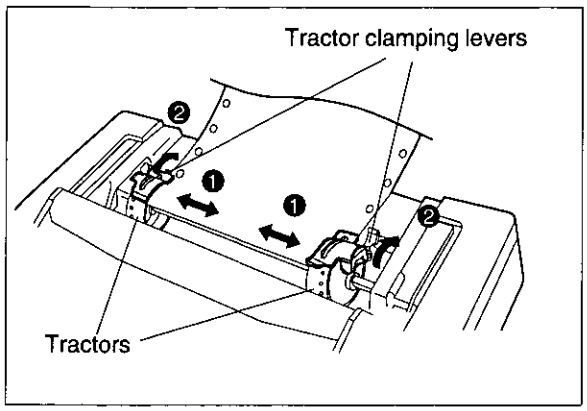
❶ **To set the tractors to the proper width, align the paper sprocket holes with the tractor pins by moving the tractors.**

Note:

- Make sure the paper is straight before closing the tractor covers.

❷ **Close tractor covers.**

7

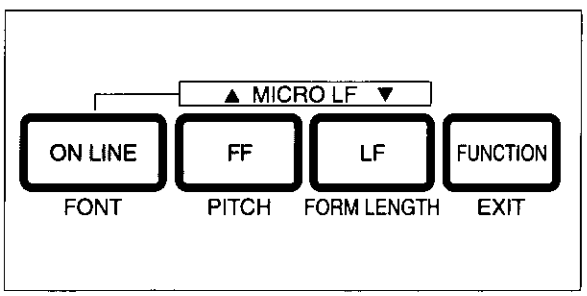


❶ **Adjust the tractors to remove any slack in the paper.**

❷ **Lock the tractor clamping levers.**

8 **Open the tractor covers and remove the paper, then close the tractor covers.**

9

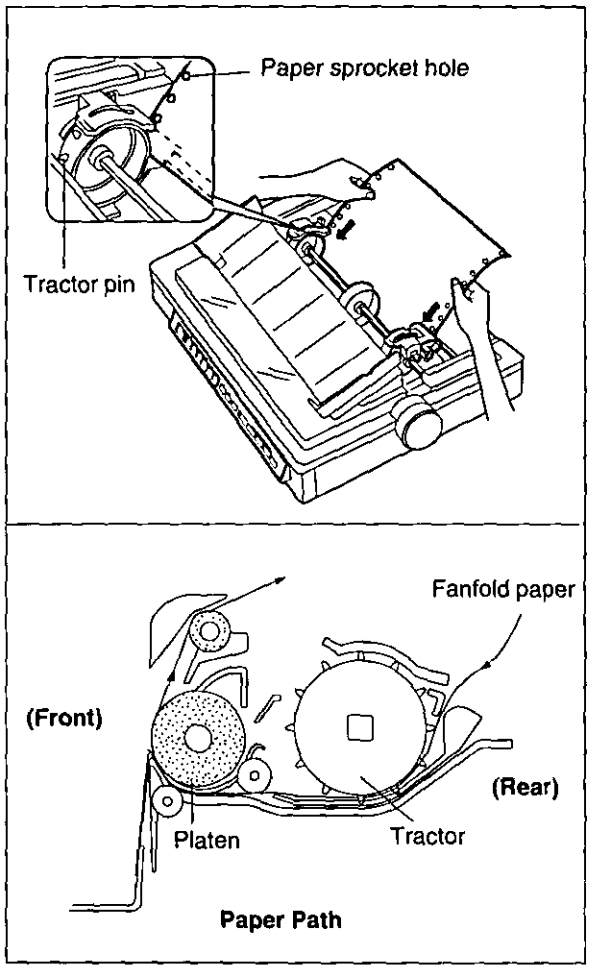


While holding down [ON LINE], press [FF].

Note:

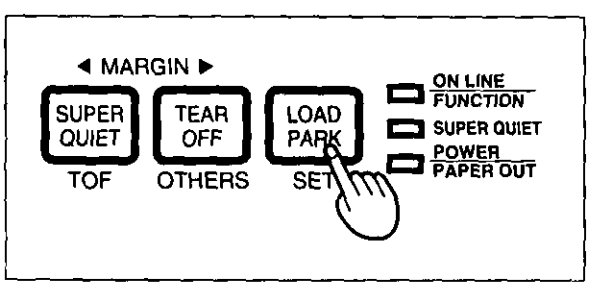
- This will cause the tractors to rotate slowly for approximately 60 seconds.

10



While the tractors are rotating, insert the fanfold paper evenly behind the tractors, until the tractor pins catch the paper sprocket holes.

11



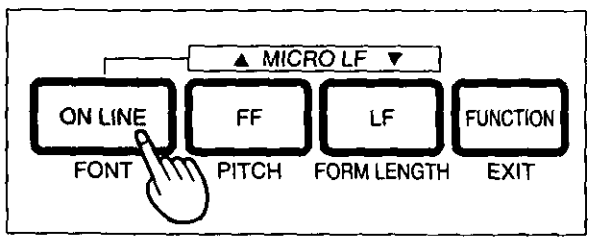
Press LOAD/PARK once.

> ***Note:***
> - This will load the paper to the first print line.

12

Replace the top cover to its original position, then close the smoked plastic cover.

13

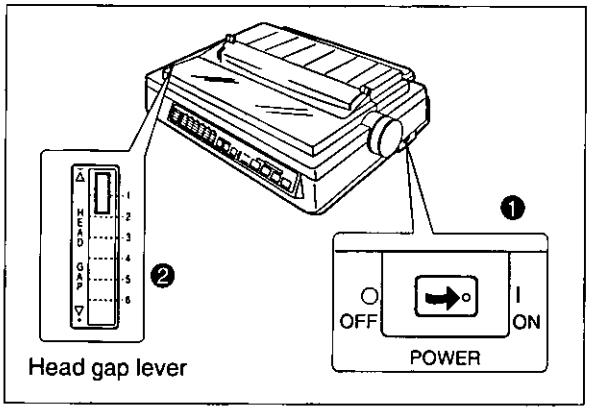


If the ON LINE indicator is not lit, press ON LINE to get ready to print.

> **Note:**
> - To avoid paper curl in push mode, park the paper after use.

Fanfold Paper (Pull Tractor Mode/Bottom Feeding)

1



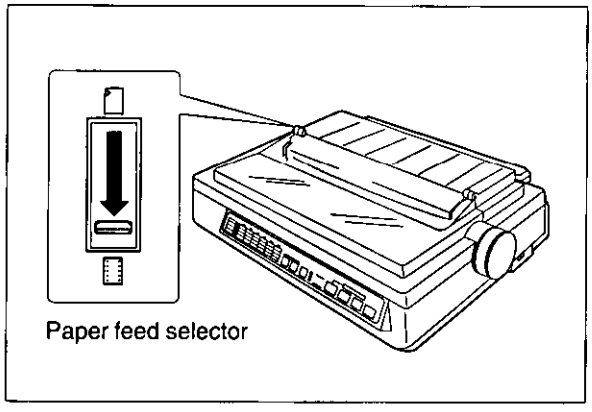
❶ Turn the power on.

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

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

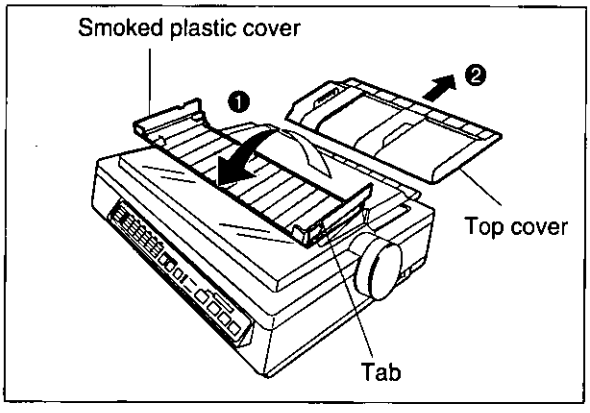
Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets

2



Set the paper feed selector to the " ⁞⁞ " position.

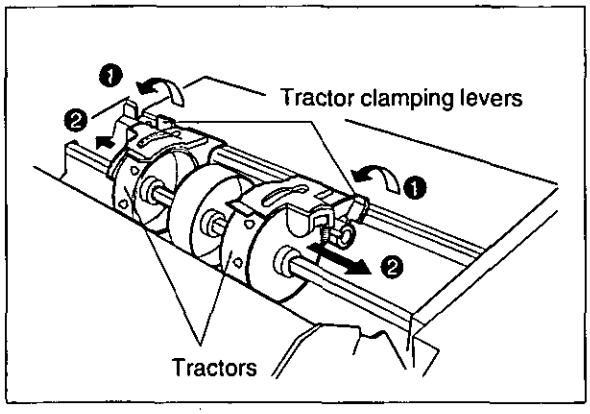
3



❶ Fold the smoked plastic cover forward by lifting the tab on the right side.

❷ Remove the top cover.

4



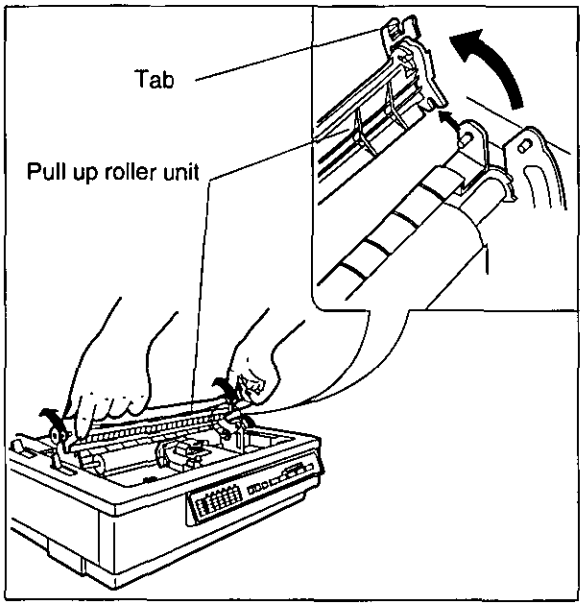
❶ **Unlock the tractors by pulling the tractor clamping levers forward.**

❷ **Slide the tractors to accommodate the approximate width of the paper you are using.**

Note:

- 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

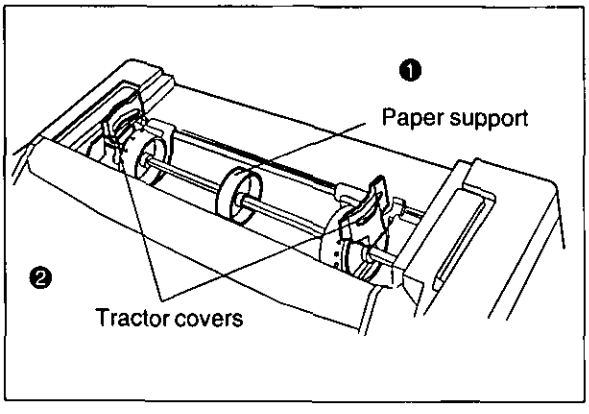


Remove the pull up roller unit.

Note:

- Be sure to remove the pull up roller unit before using the bottom feeding.

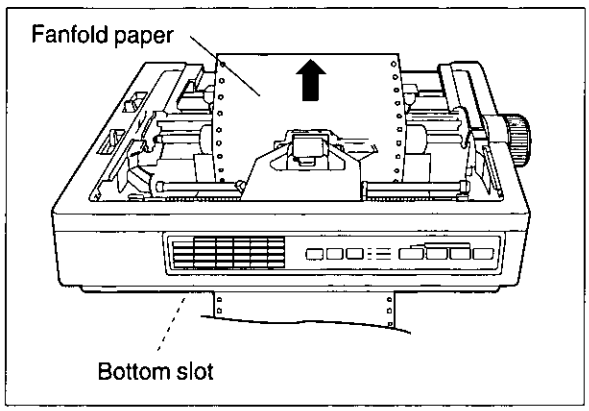
6



❶ **Move the paper support to the center position.**

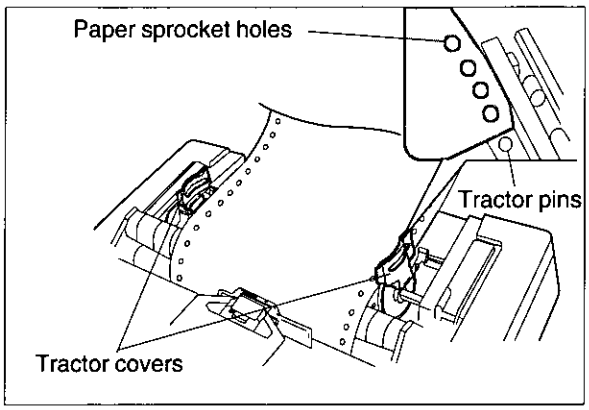
❷ **Open the tractor covers.**

7



Push the fanfold paper up through the bottom opening until it appears on the platen.

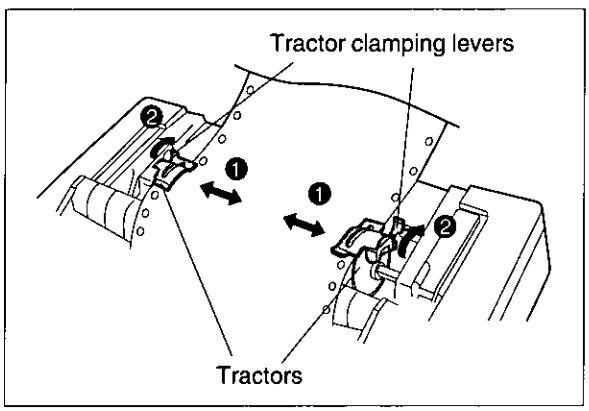
8



Align the paper sprocket holes with the tractor pins.

Make sure the paper is straight before closing the tractor covers.

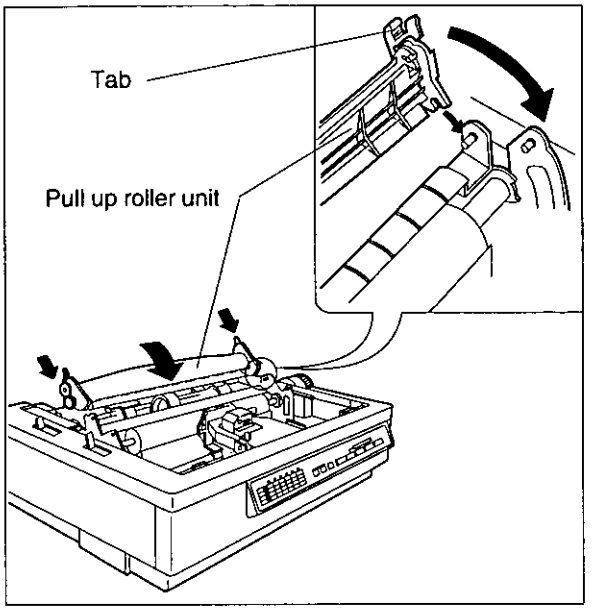
9



❶ Adjust the tractors to remove any slack from the paper.

❷ Lock the tractor clamping levers.

10



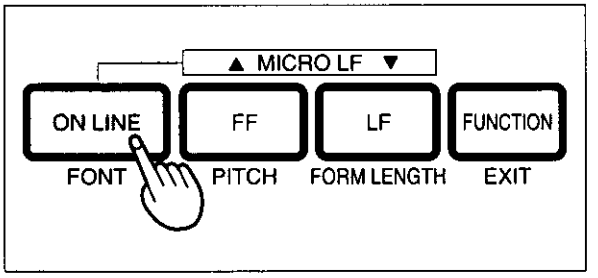
Replace the pull up roller.

> **Note:**
> - Be sure to press down the pull up roller unit it snaps into place.

11

Replace the top cover to its original position, then close the smoked plastic cover.

12

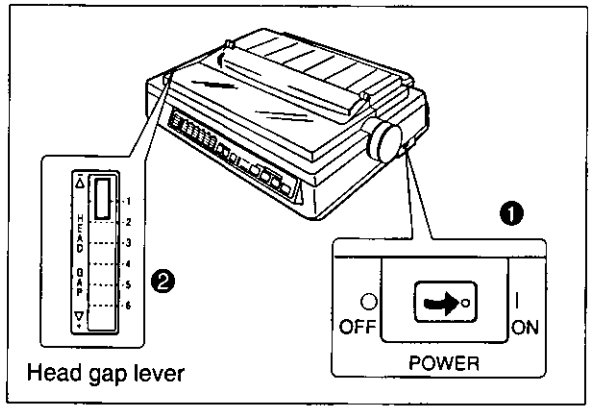


If the ON LINE indicator is not lit, press ON LINE to get ready to print.

> **Note:**
> - In the pull tractor mode (Bottom feeding), reverse line feed will not feed paper correctly and the resulting printout may not be correct.

Single Sheets and Envelopes (Friction Mode)

1



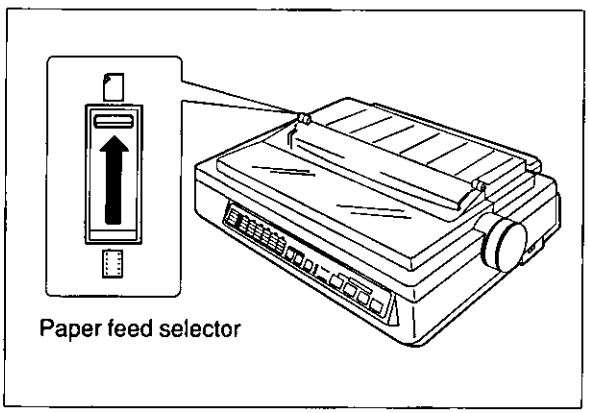
❶ Turn the power on.

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

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

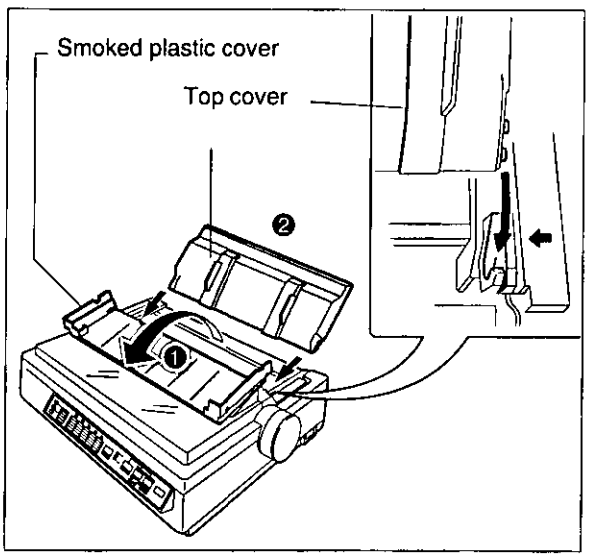
Position	Use for
1 or 2	Thinner sheets
3, 4, 5 and 6	Thick or multiple sheets or envelopes

2



Set the paper feed selector to the " " position.

3

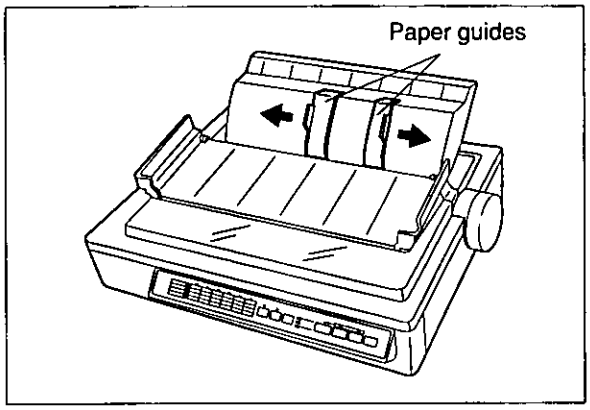


❶ Fold the smoked plastic cover forward by lifting the tab on the right side.

❷ Reposition the top cover into the single sheet position by inserting the top cover pins into the slots in the printer.

These slots are indicated by black arrows (➡ , ⬅) on the printer cabinet.

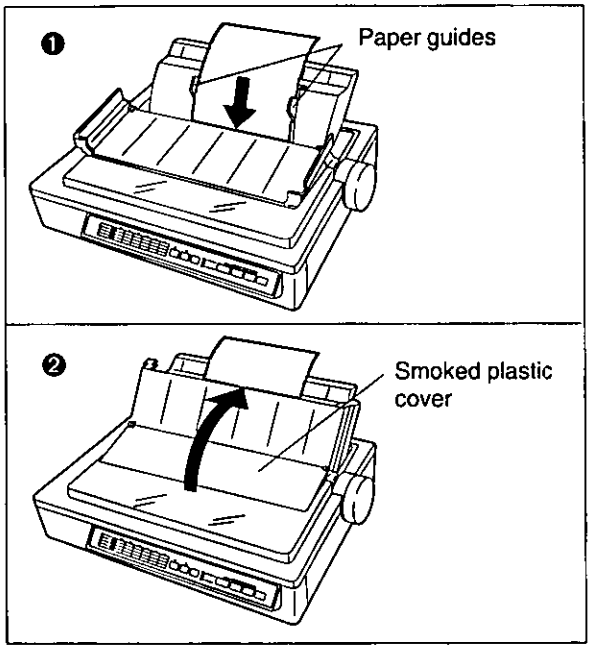
4



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

> **Note:**
> - To predetermine your left most print position, move the left paper guide until it clicks into place.

5



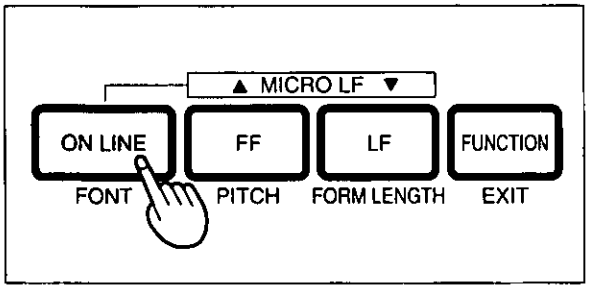
❶ Insert a sheet of paper through the paper guides and behind the platen.

The paper will automatically load to the first print line position.

❷ Fold the smoked plastic cover until it rests on the top cover.

> **Note:**
> - To disable Auto Load, turn Auto Load off in the initial setup mode. (☞ P. 55)
> - If Auto Load is disabled, press LOAD/PARK to automatically load paper to the first print line.

6



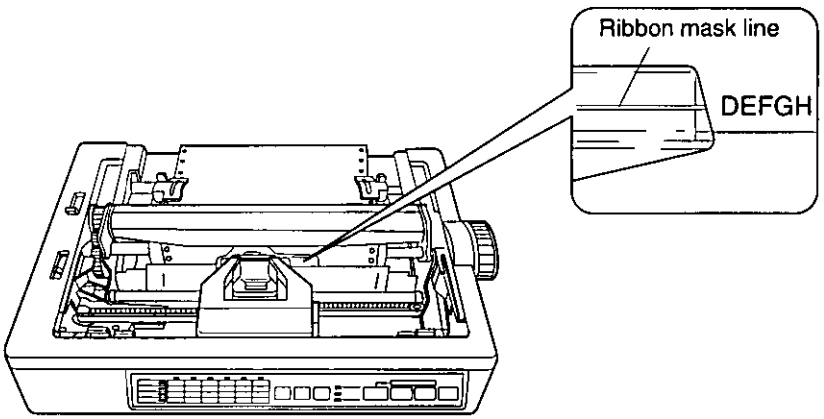
If the ON LINE indicator is not lit, press ON LINE to get ready to print.

Note:

- When Automatic load is set to off in the initial setup mode, press the (LOAD/PARK) switch to load the paper to the first print line.
- When the paper feed selector is in the " ⁞⁞ " position, the buzzer will sound to inform you that the selector is in the wrong position.
- When loading an envelope, if the envelope will not load smoothly, move the paper feed selector to the " ⁞⁞ " position and insert the envelope manually, then move the selector back to the " ⌐ " position.

Characters Alignment

The center of all characters printed on this printer will be aligned with the ribbon mask line (RML). The RML is a useful marker that shows you exactly where your print line is located.



Note:

- Remember that once you rotate the platen knob, the top of form (TOF) will no longer be recognized.

Printer-Driver Selection

The Printer-Driver Selection contains the software codes your application software program uses to access the printer's features.
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-P3123 will be your first choice. However, if the Panasonic KX-P3123 printer is not listed in your software, you must select an alternative from the following table.

Printer-Driver Selections (in order of priority)

Printer Selections	Color Printer Selections *2 (KX-PCK11 Color Kit must be installed)
Panasonic KX-P3123	Panasonic KX-P3123
Panasonic KX-P3124	Panasonic KX-P3124
Epson LQ-570 (ESC/P2™)	Panasonic KX-P2123
Panasonic KX-P2123	Panasonic KX-P2124
Panasonic KX-P2124	Epson LQ-860
Panasonic KX-P1124*i*	Epson LQ-2500/2550
Epson LQ series	
IBM Proprinter X24E *1	
IBM Proprinter X24 *1	

*1 If selecting the IBM Proprinter X24E or IBM Proprinter X24 in your software, printer emulation must also be changed in the initial setup mode. (☞P. 55~72)

*2 To obtain color and utilize the internal scalable fonts, the Panasonic KX-P3123 printer-driver must be selected in your software.

Installing a Printer-Driver (Windows Ver. 3.1)

If you are using Windows Ver. 3.1, please insert your setup disk in 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.

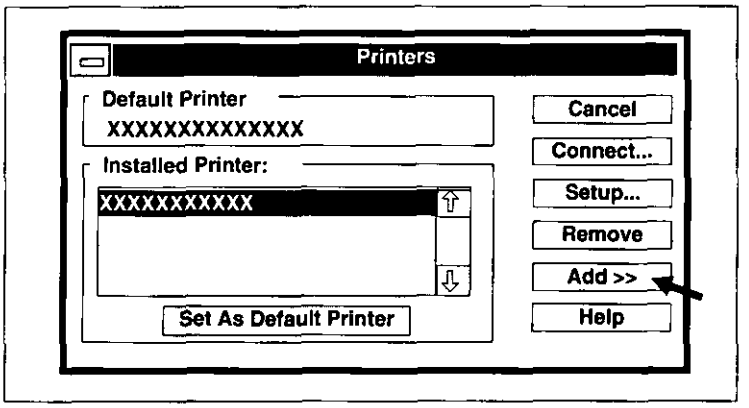
Note:

- 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".**

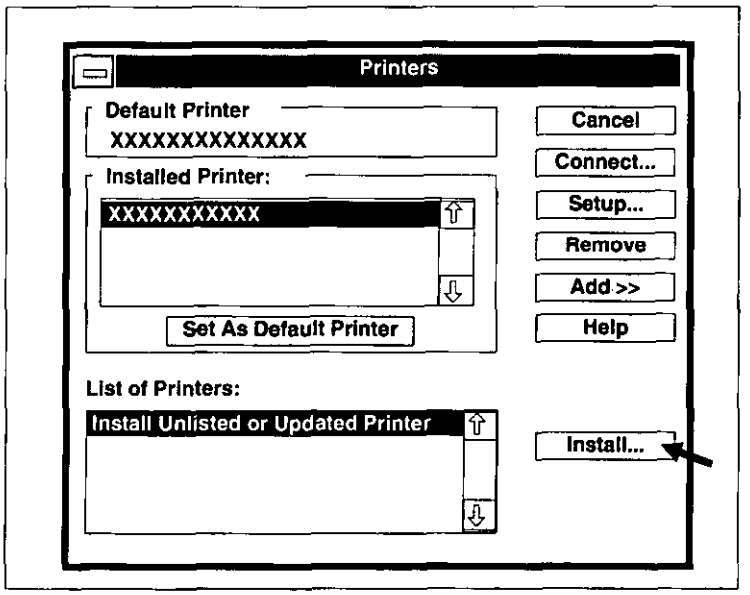
2 **In "Options", select "Printer Setup".**

3 **Click** Add >> .



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

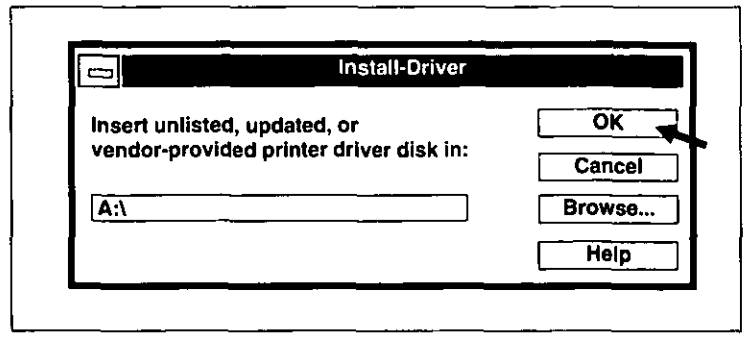
5 **Click** Install... .



6 **Insert the setup disk into drive A.**

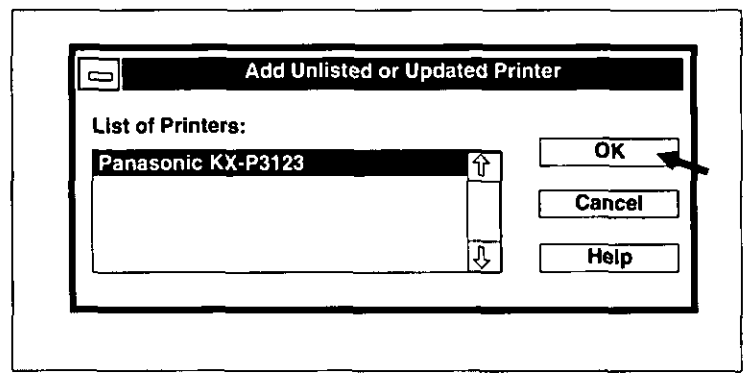
If you choose to insert the setup disk into drive B, you must type B:\

7 Click [OK].



8 **Highlight your Panasonic Printer model.**

9 Click [OK].



10 Click [Set As Default Printer].

11 Click [Close].

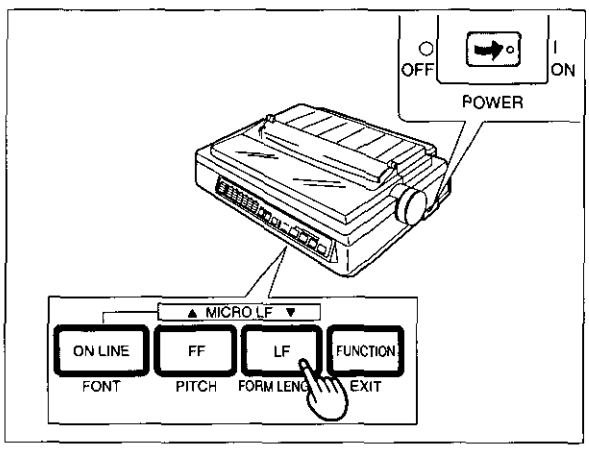
12 Exit "Print Manager".

Self Test

This 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. 21~31)

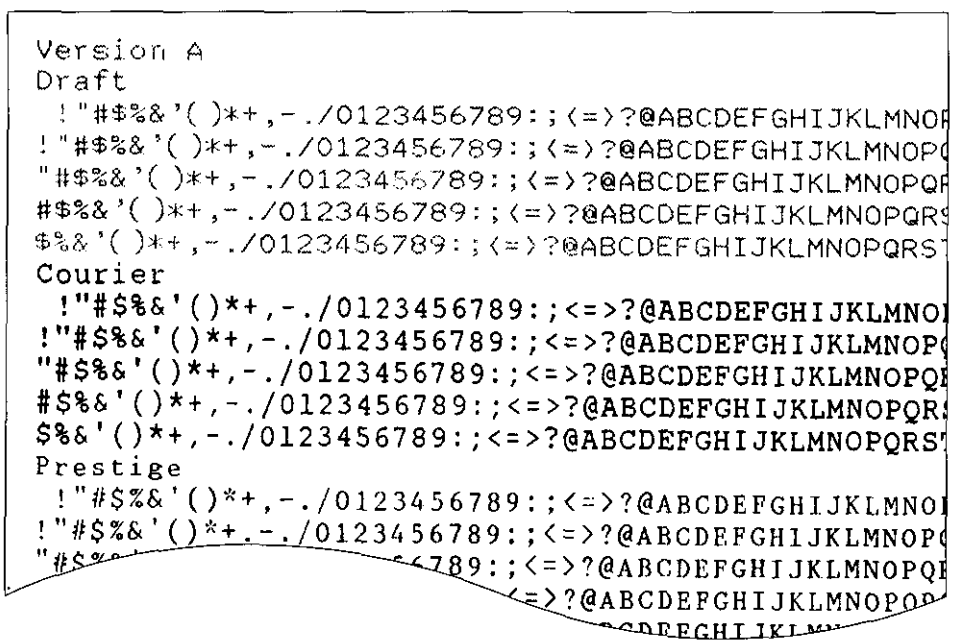
2



While pressing [LF], turn the power on, then release.

Do not release [LF] until printing has started.

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



4 **If the printer is functioning properly, you may turn the power off during the self test, or you may run the entire test.** (approximately 20 minutes.)

SUPER QUIET Mode

The SUPER QUIET mode is a useful feature for further reducing print noise, however, it also reduces the printer's speed.
The printer can store this function in the MACRO as one of the printing conditions. To simplify the MACRO setting process, you should set the SUPER QUIET mode before setting any other item on the control table.

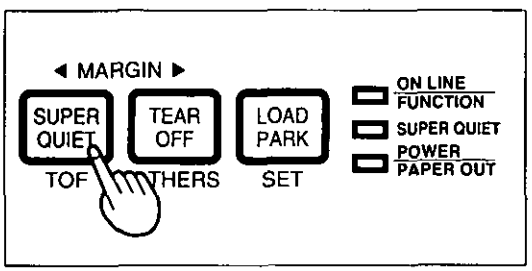
Turning on the SUPER QUIET mode:

1 **Be sure the power is on.**

Note:

- Make sure the ON LINE/FUNCTION indicator is not blinking. If it is blinking, press FUNCTION.

2



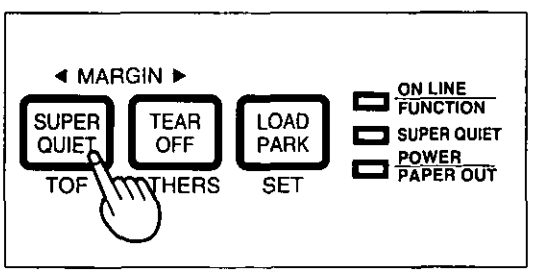
Press SUPER QUIET to turn the SUPER QUIET mode on.

You will hear a beep and the SUPER QUIET indicator will light.

Turning off the SUPER QUIET mode:

1 **Be sure the power is on.**

2



Press SUPER QUIET again to turn the SUPER QUIET mode off.

The SUPER QUIET indicator will not be lit.

Feeding Paper

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

Form Feed

With paper installed, pressing [FF] moves the printhead to the center and advances the paper to the next Top of Form (TOF) position.

Line Feed

With paper installed, pressing [LF] once advances the paper one line. Holding the switch will move the printhead to the center and advances the paper continuously until you release the switch.

Micro Line Feed

With paper installed, while pressing [ON LINE], press [FF] once to advance the paper one micro line (1/180″). Holding the switch will advance the paper continuously until you release the switch.

Reverse Micro Line Feed

With paper installed, while pressing [ON LINE], press [LF] once to reverse the paper one micro line (1/180″). Holding the switch will reverse the paper continuously until you release the switch. The printer cannot reverse the paper past the printable area. (☞ P. 93)

Note:

- Reverse Micro Line Feed will not work correctly in the pull tractor mode.
- When pressing [FF] or [LF], the amount of paper which is fed is determined by the current setting for lines per inch (lpi). The lpi is specified by the software command or through the control panel.

Tear Off (Rear Feeding Only)

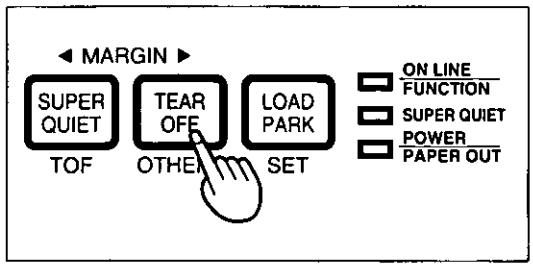
This function allows you to advance your fanfold paper's perforation to the tear position. This is not dependent on your Top of Form (TOF) position, but is dependent on your form length. After tearing off the page, you can return your paper to your Top of Form. This function can be automatic through the FUNCTION mode.

1 **Be sure the power is on.**

Note:

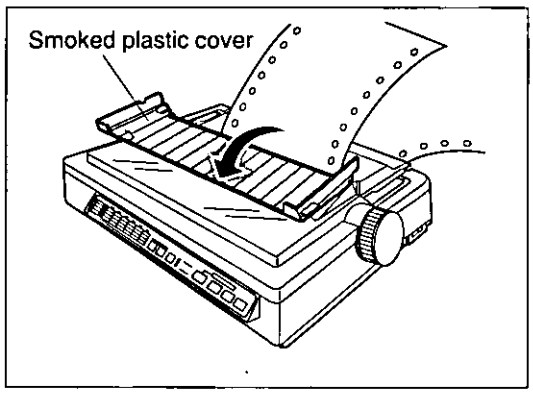
- Make sure the ON LINE/FUNCTION indicator is not blinking. If it is blinking, press [FUNCTION].

2



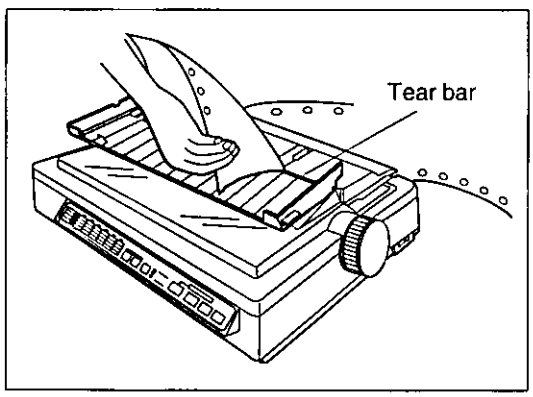
Press [TEAR OFF] to advance the paper's perforation to the tear bar.

3



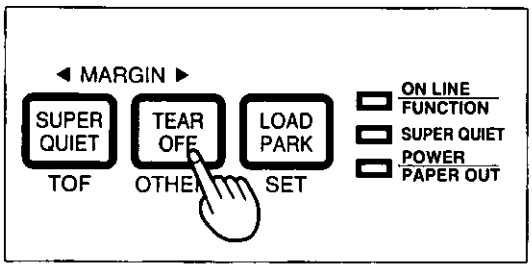
Fold the smoked plastic cover forward by lifting tab on right side.

4



Tear off the page, using the tear bar.

5



Press [TEAR OFF] to reverse the paper back to the Top of Form.

6 **Close the smoked plastic cover.**

Note:

- A Top of Form setting (☞ P. 41) in the non-printable area is ignored by Tear Off. Tear Off will use the Top of Form setting that was last saved.
- If you do not press [TEAR OFF] the second time, once data is received, the printer will automatically reverse the paper to the top of form position. if you choose the automatic Tear Off function.

Paper Parking (Rear Feeding Only)

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

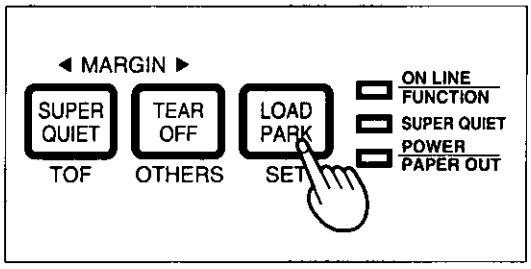
Parking the Fanfold Paper

1 **Be sure power is on and the paper feed selector is in the " ⣿ " position.**

2 **Tear off the printed page(s) of the fanfold paper being used.**

3 **If the ON LINE/FUNCTION indicator is blinking, press [FUNCTION].**

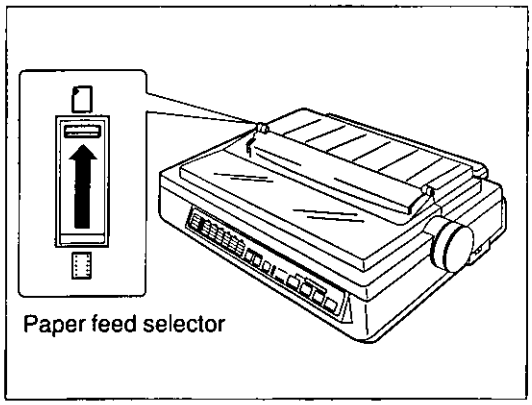
4



Press [LOAD/PARK] to reverse the fanfold paper to the park position.

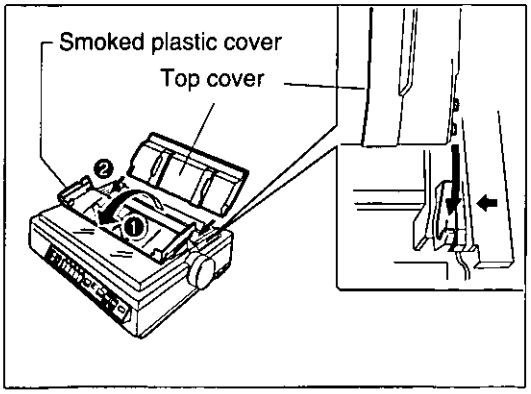
Loading Single Sheets or Envelopes

1



Move the paper feed selector to " ⎕ " (Friction mode).

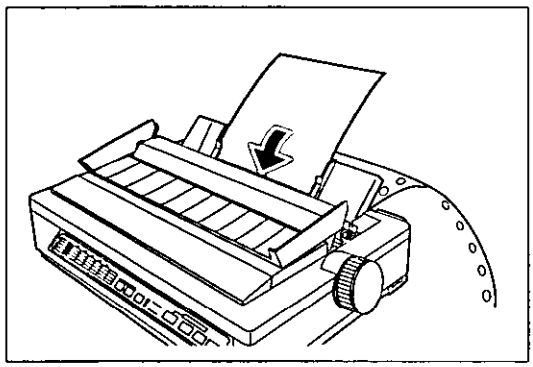
2



❶ Fold the smoked plastic cover by lifting tab on right side.

❷ Raise the top cover to single sheet position.

3

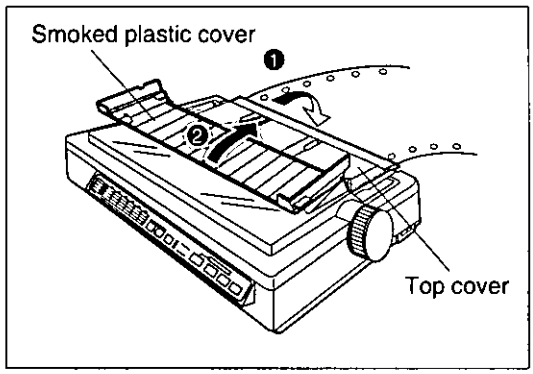


Separate the paper guides and load a single sheet or an envelope.

(☞ P. 29 "Single Sheets and Envelopes") **When you are finished printing, remove the sheet (or envelope) from the printer.**

Reloading the Fanfold Paper

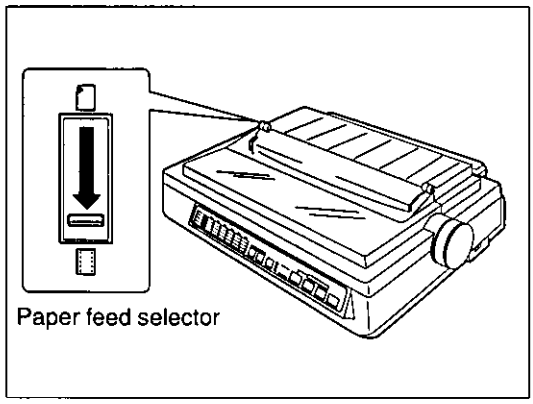
1



❶ Lower the top cover for fanfold paper.

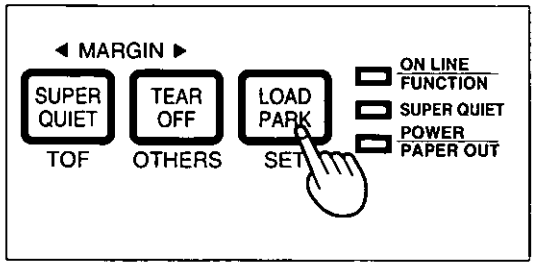
❷ Replace the smoked plastic cover to its original position.

2



Move the paper feed selector to " ⦙⦙ " (Push Tractor mode).

3



Press [LOAD/PARK] to reload the fanfold paper to the Top of Form.

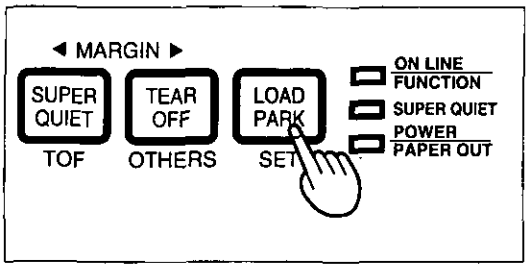
Setting the Top of Form (TOF)

This printer has a Top of Form (TOF) function which stores the first print line position and loads the paper to the designated position automatically. The first print line position will be stored even after the power is turned off. Additionally, the printer can store 3 different Top of Form positions depending on the paper feed method. [fanfold paper-push ( ), single sheet ( ) and single sheet using the cut sheet feeder (option: KX-PT10)]

1 **Be sure the power is on.**

If necessary, redefine the FORM LENGTH of the paper you are using through your application software or the printer's control table (☞ P. 44).

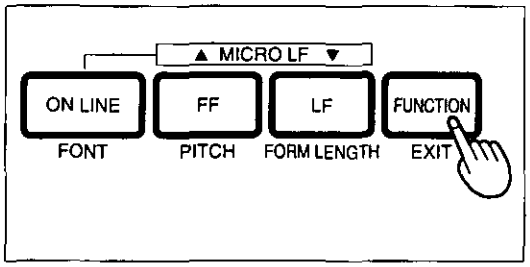
2



Press [LOAD/PARK] to load the paper.

3 **To redefine your paper's first print line position, it is recommended to use your application software. If this feature is not provided in your software, adjust the paper position by using the Line Feed, Micro Line Feed, or Reverse Micro Line Feed.** (☞ P. 37)

4

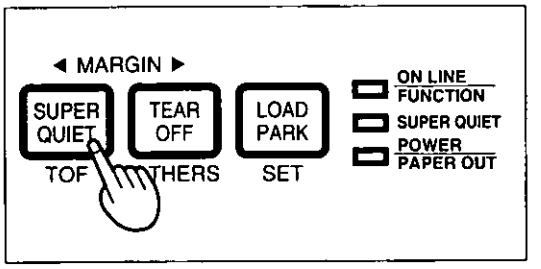


Press [FUNCTION] to enter the FUNCTION mode.

Note:

- Do not rotate the platen knob, otherwise the printer will not be able to count the number of lines.

5

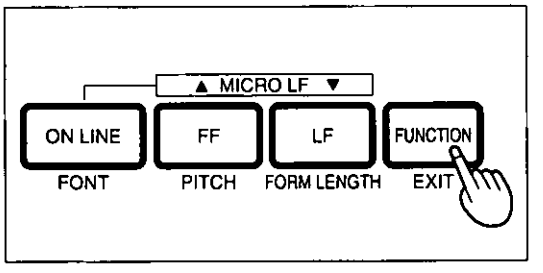


Press SUPER QUIET (TOF) to set the Top of Form for the current position.

Note:

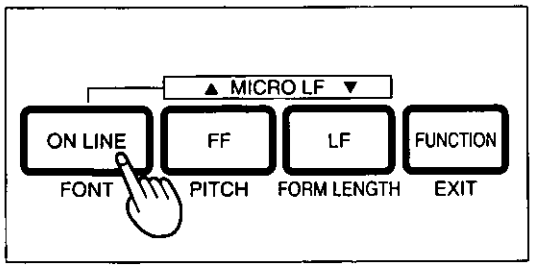
- A Top of Form position (less than 5 inches from the top of page) will be saved even after the power is turned off. Pressing LOAD/PARK will advance the paper to the most recently saved Top of Form setting.
- A Top of Form position set in the area greater than 5 inches will not be saved after the power is turned off, after parking the paper, or after using Tear Off.
- Temporary Top of Form setting is indicated by one beep. Saved Top of Form is indicated by two beeps.
- When you use fanfold paper, the Top of Form position must be set on the first page because the printer does not accept a top margin which is longer than one page.
- When bottom feeding, do not use this function.

6



Press FUNCTION (EXIT) to exit the FUNCTION mode.

7



Press ON LINE to receive data.

Setting the Control Table

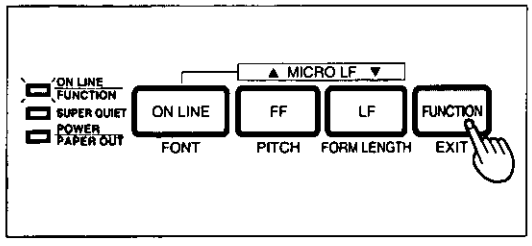
While in the function mode, the black lettering (FONT, PITCH, FORM LENGTH, etc.) will help you navigate through the Control Table. These settings will be temporary, unless stored in a MACRO. Refer to page 48.

Printing Out the Current Settings in MACROs

Before changing any settings on the control table, you should verify the current settings.

1 **Load a sheet of paper (fanfold or single sheet).**

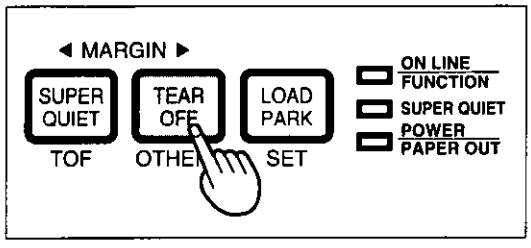
2



Press (FUNCTION) to enter the FUNCTION mode.

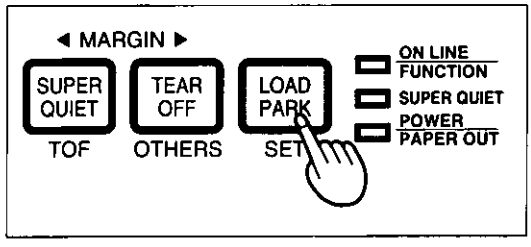
The ON LINE/FUNCTION indicator will blink.

3



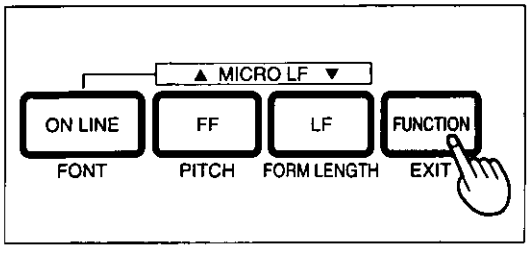
Press and release (TEAR OFF) (OTHERS) until all the column indicators are blinking.

4



Press (LOAD/PARK) (SET) to print out the current settings.

5

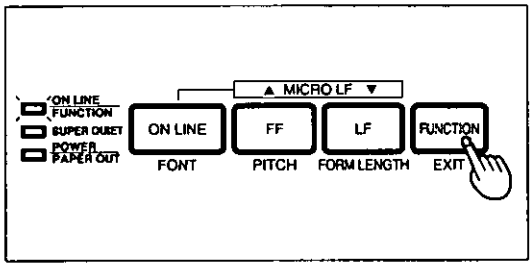


Press (FUNCTION) (EXIT) to exit the FUNCTION mode.

Setting the FONT/PITCH/FORM LENGTH

1 **Be sure the power is on.**

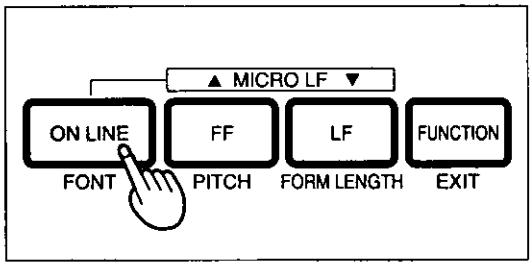
2



Press [FUNCTION] to enter the FUNCTION mode.

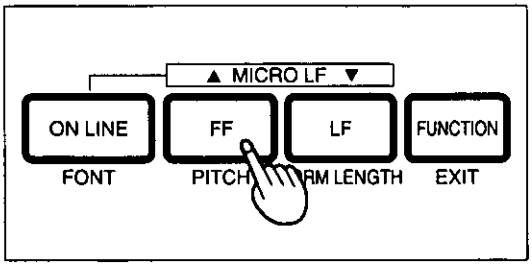
The ON LINE/FUNCTION indicator will blink.

3A **FONT**



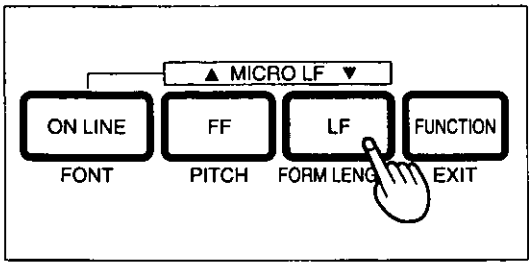
Press and release [ON LINE] (FONT) to reach the desired font. Go to step 4.

3B **PITCH**



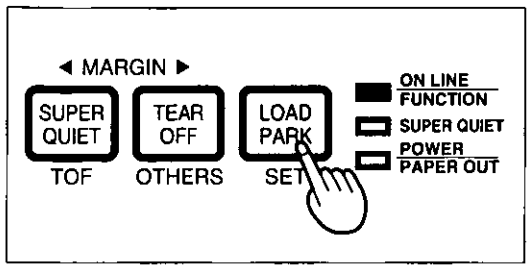
Press and release [FF] (PITCH) to reach the desired pitch. Go to step 4.

3C **FORM LENGTH**



Press and release [LF] (FORM LENGTH) to reach the desired form length.

4



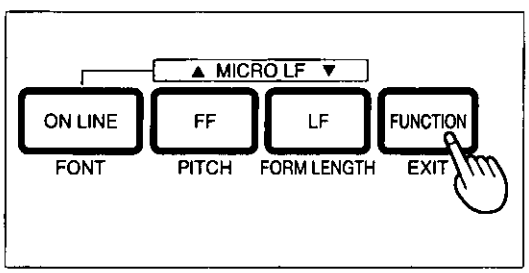
Press LOAD/PARK (SET) to store the setting into the temporary memory.

You will hear a beep. The ON LINE/FUNCTION indicator will stop blinking and be lit.
If you wish to make additional changes, refer to step(s) 3A, B or C.

Note:

- When making multiple changes, LOAD/PARK (SET) must be pressed after each selection is made.

5

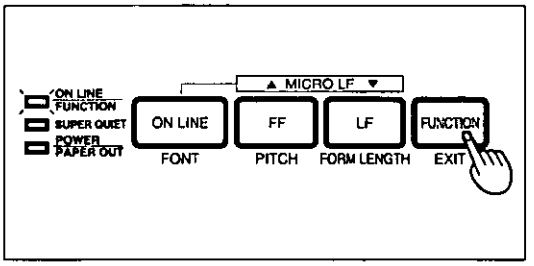


Press FUNCTION (EXIT) to exit the FUNCTION mode.

Setting the LEFT/RIGHT MARGIN

1 **Be sure the power is on.**

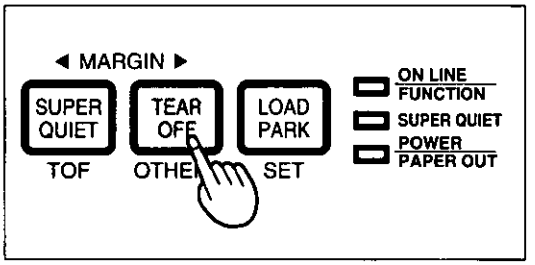
2



Press FUNCTION to enter the FUNCTION mode.

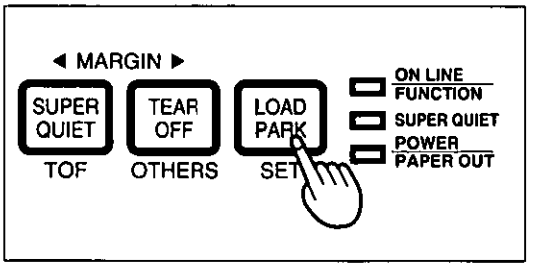
The ON LINE/FUNCTION indicator will blink.

3



Press and release TEAR OFF (OTHERS) until the column indicator is blinking over the desired margin.

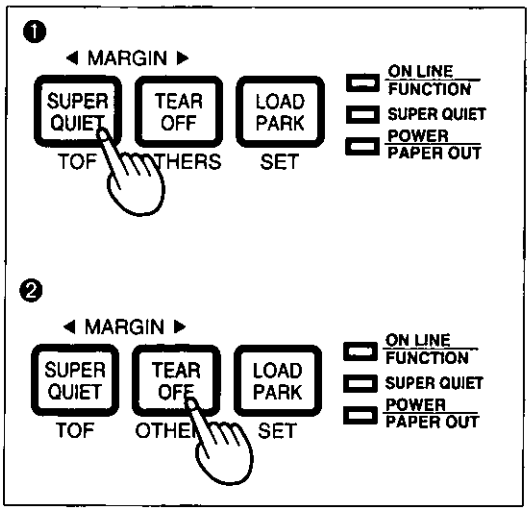
4



Press LOAD/PARK (SET) to enter the MARGIN mode.

The column indicator will be lit.

5



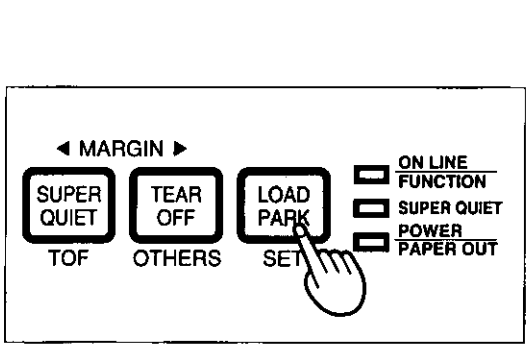
❶ Press SUPER QUIET (TOF) to move the printhead to the left.

❷ Press TEAR OFF (OTHERS) to move the printhead to the right.

NOTE:

- **When the printhead is at the far left,** press **SUPER QUIET** twice to move it to the far right. You will hear a beep a few times.
- **When the printhead is at the far right,** press **TEAR OFF** twice to move it to the far left. You will hear a beep a few times.

6



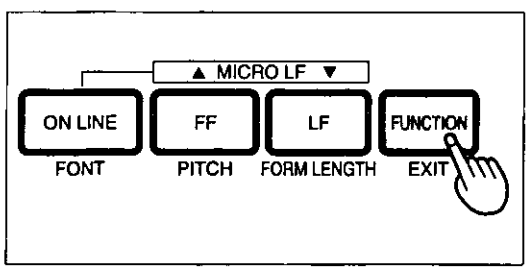
Press LOAD/PARK (SET) to specify the margin location, and to exit the MARGIN mode.

You will hear two beeps. The column indicator will blink.

Note:

- If the left margin is set to the right of the right margin, the right margin is reset to 80 (10 cpi) automatically.
- If the right margin is set to the left of the left margin, the left margin is reset to 0 automatically.

7



Press FUNCTION (EXIT) to exit the FUNCTION mode.

Note:

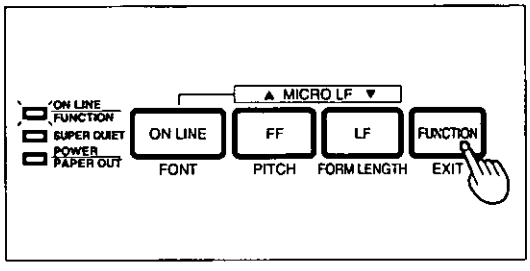
- You can set either the left or the right margin first.
- You can also change the margins by software commands. This will override the control table settings.

Defining MACRO (MACRO Save)

A MACRO allows you to store a combination of your most frequently used Font, Pitch, Form Length, Left/Right Margin, Color, and Super Quiet mode settings into the printer's memory which can be easily recalled and/or changed. This will enable you to recall one of two combinations (MARCOs #1, #2) at the touch of a button eliminating the need to reset all your features each time you have a print job that uses a previously set combination.
When you turn the power switch on, the printer reads MACRO #1 automatically. Therefore it is recommended to store the format you use most often in MACRO #1.

1 **Be sure the power is on.**

2



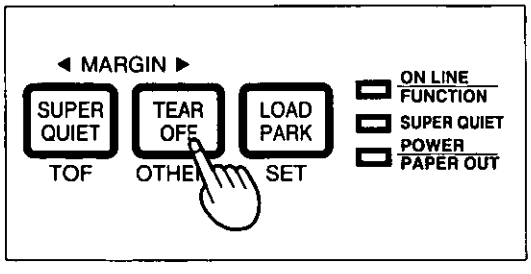
Press [FUNCTION] to enter the FUNCTION mode.

The ON LINE/FUNCTION indicator will blink.

3 **Set the print features you wish to store as the current settings. [FONT/PITCH/FORM LENGTH** (☞ P.44)**, LEFT/RIGHT MARGIN** (☞ P.46)**, COLOR** (☞ P.53)**, SUPER QUIET** (☞ P.36)**]**

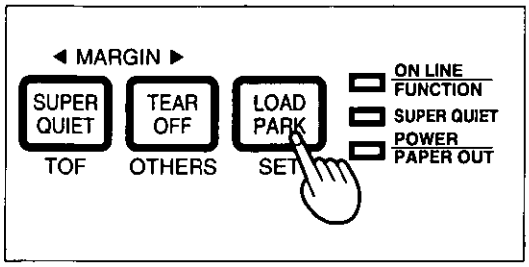
> **Note:**
> - COLOR can not be set without installation of the color kit (KX-PCK11).

4



Press and release [TEAR OFF] (OTHERS) until the column indicator is blinking over MACRO #1 or #2.

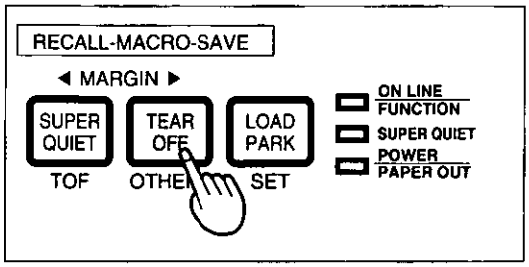
5



Press LOAD/PARK (SET) to set the MACRO mode.

You will hear a beep. The column indicator over your desired MACRO will be lit.

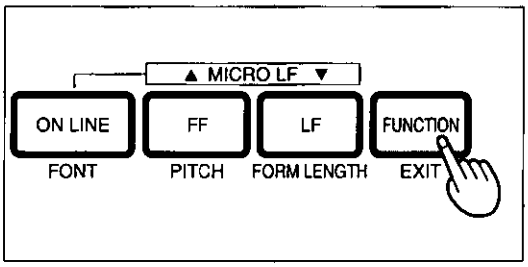
6



Press TEAR OFF [SAVE] to save the current settings to the MACRO.

You will hear two beeps.

7

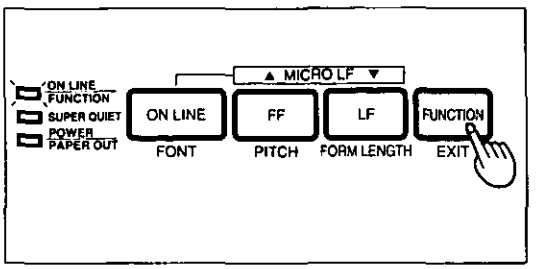


Press FUNCTION (EXIT) to exit the FUNCTION mode.

Recalling a Defined MACRO (MACRO Recall)

1 **Be sure the power is on.**

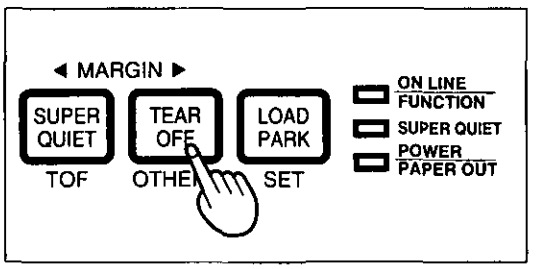
2



Press [FUNCTION] to enter the FUNCTION mode.

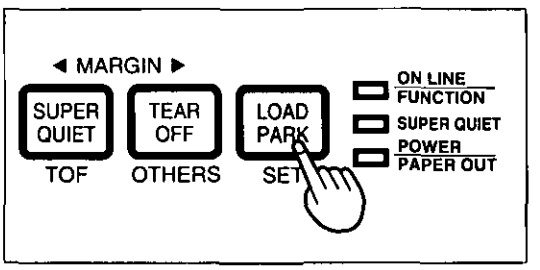
The ON LINE/FUNCTION indicator will blink.

3



Press and release [TEAR OFF] (OTHERS) until the column indicator is blinking over MACRO #1 or #2.

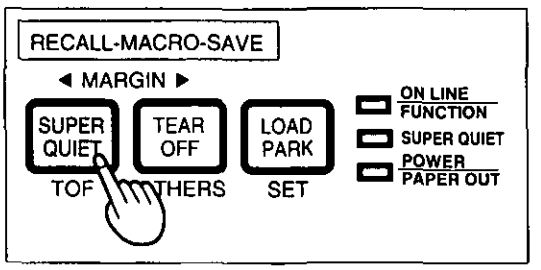
4



Press [LOAD/PARK] (SET) to set the MACRO mode.

You will hear a beep. The column indicator over your desired MACRO will be lit.

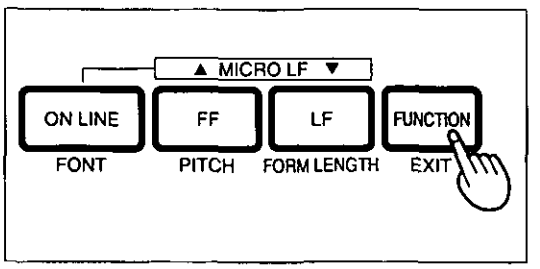
5



Press [SUPER QUIET] [RECALL] to recall the MACRO.

You will hear a beep. The previously defined MACRO is recalled as a current setting.

6



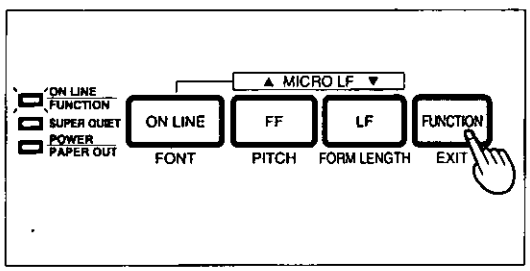
Press [FUNCTION] (EXIT) to exit the FUNCTION mode.

Recalling FACTORY Settings (Default Settings)

All of the original settings in the Function mode can be restored in the printer as they were originally set when the printer was shipped. You can recall the factory settings anytime. (You cannot change the factory settings. The MACROs settings are **not** canceled by recalling the factory settings.)

1 **Be sure the power is on.**

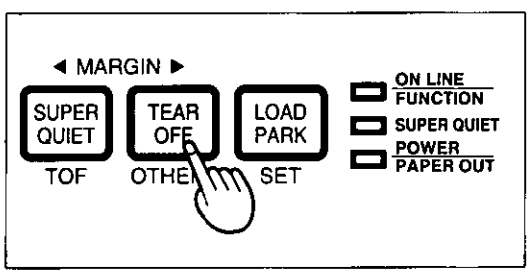
2



Press [FUNCTION] to enter the FUNCTION mode.

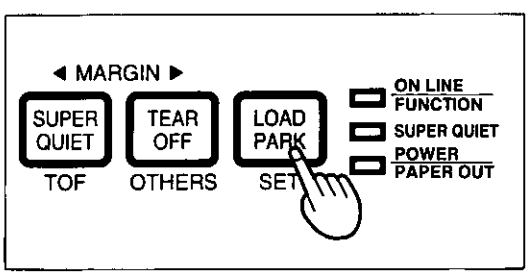
The ON LINE/FUNCTION indicator will blink.

3



Press and release [TEAR OFF] (OTHERS) until the column indicator is blinking over FACTORY.

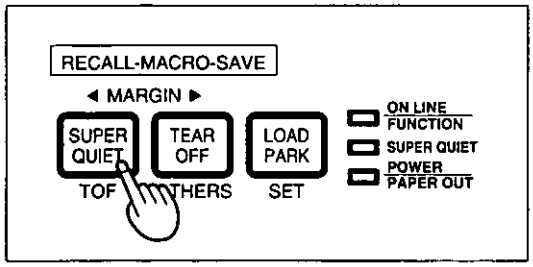
4



Press [LOAD/PARK] (SET) to set the FACTORY mode.

You will hear a beep. The column indicator over FACTORY will be lit.

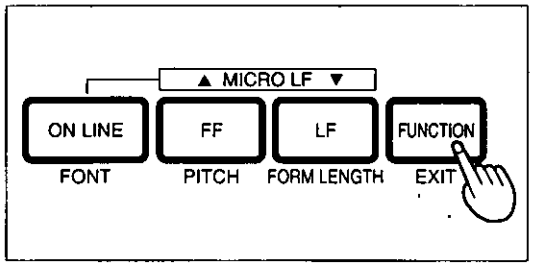
5



Press [SUPER QUIET] [RECALL] to recall the FACTORY setting.

You will hear a beep. The FACTORY setting is recalled as a current setting.

6



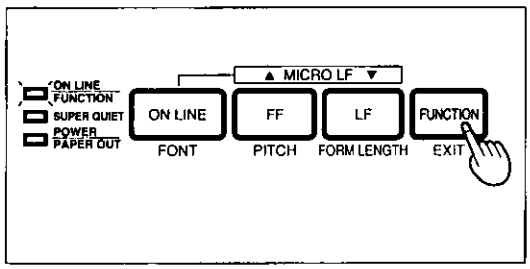
Press [FUNCTION] (EXIT) to exit the FUNCTION mode.

Setting a COLOR

Before you use this function, make sure that the color kit (KX-PCK11) is installed in the printer.

1 **Be sure the power is on.**

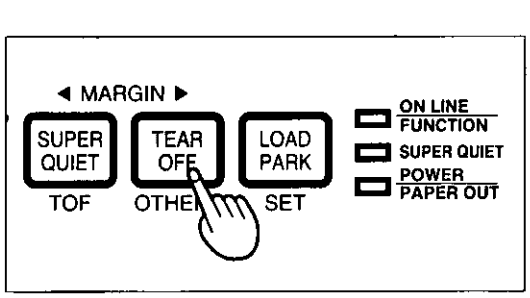
2



Press [FUNCTION] to enter the FUNCTION mode.

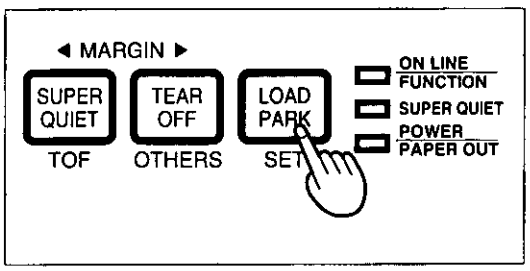
The ON LINE/FUNCTION indicator will blink.

3



Press and release [TEAR OFF] (OTHERS) until the column indicator is blinking over COLOR (OPTION).

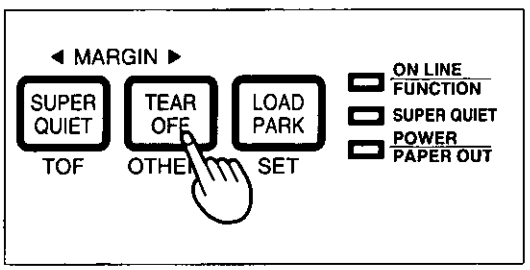
4



Press [LOAD/PARK] (SET) to enter the COLOR mode.

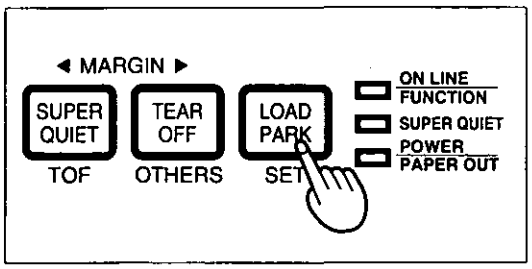
You will hear a beep. The OTHERS row indicator will blink.

5



Press and release [TEAR OFF] (OTHERS) until the column indicator combination is blinking over your desired color.

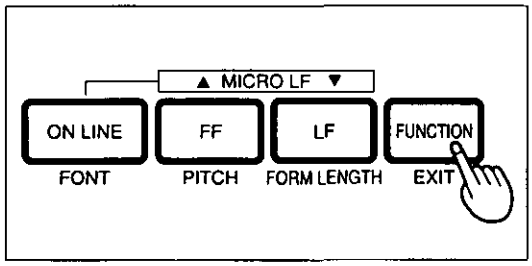
6



Press [LOAD/PARK] (SET) to store this setting into the temporary memory and exit the COLOR mode.

You will hear two beeps. The OTHERS row indicator will be lit. The column indicator over COLOR will blink.

7



Press [FUNCTION] (EXIT) to exit the FUNCTION mode.

This printer allows you to select any one of the colors given in the table below.

COLOR	COLUMN indicator					
	C1	C2	C3	C4	C5	C6
BLACK	□	□	■	□	□	□
RED (MAGENTA)	□	□	□	■	□	□
ORANGE	□	□	□	■	■	□
YELLOW	□	□	□	□	■	□
GREEN	□	□	□	□	■	■
BLUE (CYAN)	□	□	□	□	□	■
VIOLET	□	□	□	■	□	■

(Control table) ■= ON □= OFF

Note:

- C3, C4, C5 and C6 are used to represent the color selection C1 and C2 have no function when selecting color.
- Only one color can be printed at a time. Multi-color printing may be accessible through your application software.

Using the Control Panel

Your Printer allows you to select 32 initial setup items.
You can use the control panel to select following 24 of all the initial setup items.

①	**Emulation**
	Epson* . . . . . Epson LQ-570 IBM . . . . . IBM Proprinter X24E
②	**Character Set** (☞ P. 99)
	Italic* (Epson only) Graphic character set 1 Graphic character set 2
③	**Code Page** (☞ P. 99)
	PC-437 (USA)* PC-850 (Multilingual) PC-860 (Portugal) PC-863 (Canada-French) PC-865 (Norway) PC-853 (Turkey)
④	**International Character Set** (☞ P. 104)
	USA* Sweden Denmark 2 France Italy Spain 2 Germany Spain 1 Latin America U.K. Japan Korea Denmark 1 Norway LEGAL
⑤	**Zero Font**
	0* (Normal zero) Ø (Slashed zero) θ (Point zero)
⑥	**Download Buffer Control**
	ON . . . . . Enable OFF* . . . . . Disable
⑦	**Cut Sheet Feeder**
	ON . . . . . Enable OFF* . . . . . Disable [C.S.F. option (KX-PT10) is installed.]
⑧	**Paper Out Detector**
	ON* . . . . . Active OFF . . . . . Ignored
⑨	**Buzzer Sound Control**
	ON* . . . . . Enable OFF . . . . . Disable
⑩	**Alternate Graphics Mode (AGM)**
	ON . . . . . AGM is ON OFF* . . . . . AGM is OFF (This setting is effective only in the IBM mode.)

⑪	**Auto LF**
	ON . . . . . .CR+LF OFF* . . . . . .CR only
⑫	**Auto CR**
	ON . . . . . .LF, VT, ESC+"J"+CR OFF* . . . . . .LF, VT, ESC+"J" only (This setting is effective only in the IBM mode.)
⑬	**Skip Perforation**
	ON . . . . . .1 inch OFF* . . . . . .No skip
⑭	**Graphic Direction**
	Uni* . . . . . .Uni-directional printing Bi . . . . . .Bi-directional printing
⑮	**Auto Tear Off**
	ON . . . . . .Auto Tear Off OFF* . . . . . .Manual Tear Off (using TEAR OFF switch)
⑯	**Interface**
	ON . . . . . .Serial interface OFF* . . . . . .Parallel interface (This setting is effective only when KX-PS14 is installed.)
⑰	**Data Length**
	ON . . . . . .7 bit data length OFF* . . . . . .8 bit data length
⑱	**Auto Loading**
	ON* . . . . . .Enabled OFF . . . . . .Disabled (This setting is ineffective when using the fanfold paper or C.S.F.)
⑲	**Baud Rate**
	150 2400 300 4800 600 9600* 1200
⑳	**Parity Control**
	None parity* Odd parity Ignore parity Even parity

* denotes setting when shipped from factory.

㉑	**Protocol Select**
	ON . . . . . X/ON-X/OFF Protocol OFF* . . . . . DTR Protocol
㉒	**Remaining Buffer Capacity to Suspend Data Transfer (S.D.T.) (X/OFF)**
	ON* . . . . . 128 byte OFF . . . . . 512 byte
㉓	**Remaining Buffer Capacity to Resume Data Transfer (R.D.T.) (X/ON)**
	— When the S.D.T. is set to ON ON* . . . . . 256 byte OFF . . . . . 384 byte — When the S.D.T. is set to OFF ON* . . . . . 640 byte OFF . . . . . 768 byte

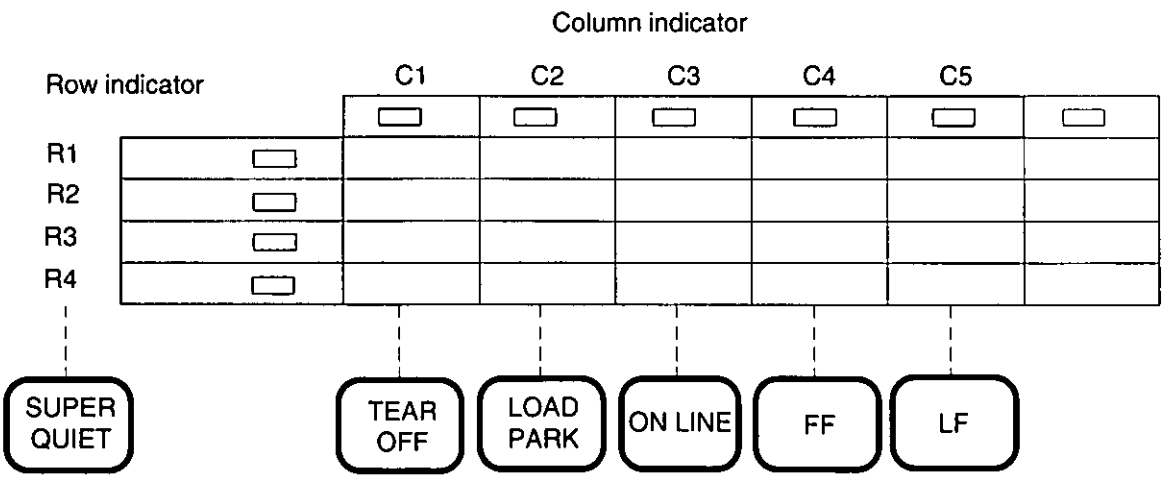
㉔	**Designation of Signal Polarity for DTR Protocol Mode**
	NO . . . . . When the signal is "space", the printer tells the computer that it cannot accept transferring data. OFF* . . . . . When the signal is "mark", the printer tells the computer that it cannot accept transferring data.

Note:

- Items ⑲ ~ ㉔ will only appear when the optional KX-PS14 serial interface board is installed.

* denotes setting when shipped from factory.

The control table is replaced with the following table.



Note:

- The rightmost column indicator is ignored.
- Each indicator is controled by using the keys below.

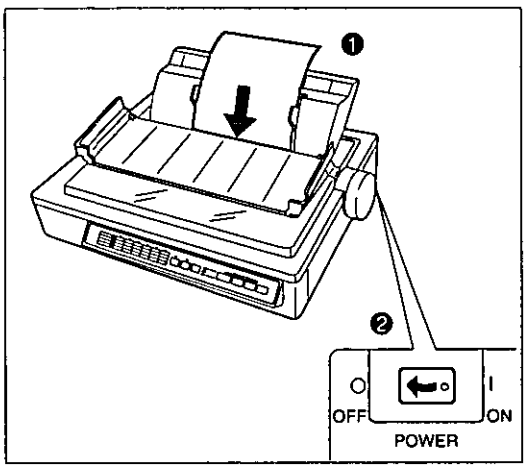
SUPER QUIET	TEAR OFF	LOAD PARK	ON LINE	FF	LF
	C1	C2	C3	C4	C5
R1 R2 R3 R4	Print Current Initial Setup Condition				Factory Read
R1 R2 R3 R4	① Epson	IBM			
R1 R2 R3 R4	② Italic	G1	G2		
R1 R2 R3 R4	③ USA	Multilingual	Portugal	Canada-French	Norway
R1 R2 R3 R4	Turkey				
R1 R2 R3 R4	④ USA	France	Germany	U.K.	Denmark 1
R1 R2 R3 R4	Sweden	Italy	Spain 1	Japan	Norway
R1 R2 R3 R4	Denmark 2	Spain 2	Latin America	Korea	Legal
R1 R2 R3 R4	⑤ 0	ø	θ		
R1 R2 R3 R4	⑥ Download Buffer	⑦ C.S.F.	⑧ P.O. Detector	⑨ Buzzer	⑩ A.G.M.
R1 R2 R3 R4	⑪ Auto LF	⑫ Auto CR	⑬ Skip Perf.	⑭ G. Direction	⑮ Auto Tear Off
R1 R2 R3 R4	⑯ Interface	⑰ Data Length	⑱ Auto Loading		
R1 R2 R3 R4	⑲ 150	300	600	1200	2400
R1 R2 R3 R4	4800	9600			
R1 R2 R3 R4	⑳ None Parity	Ignore Parity	Odd Parity	Even Parity	
R1 R2 R3 R4	㉑ Protocol	㉒ S.D.T.	㉓ R.D.T.	㉔ Signal Polarity	

ROW indicator condition:
■ =light is lit □ =light is not lit ▯ =light is blinking

Printing Out the Current Settings

Before changing the items of the initial setup mode, you should get a print out to verify the current settings.

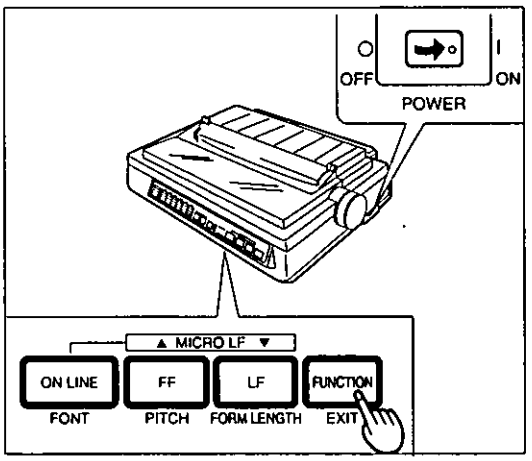
1



❶ Load a sheet of paper (fanfold or single sheet).

❷ Turn the power switch off.

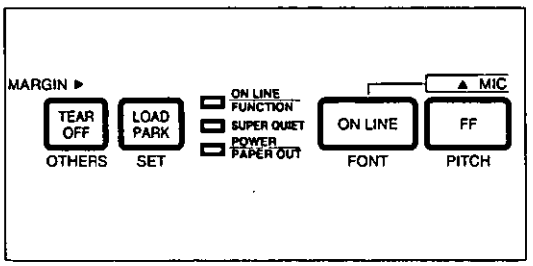
2



While pressing [FUNCTION], turn the power switch on.

The ON LINE/FUNCTION indicator will blink, and all the row indicators will be lit.

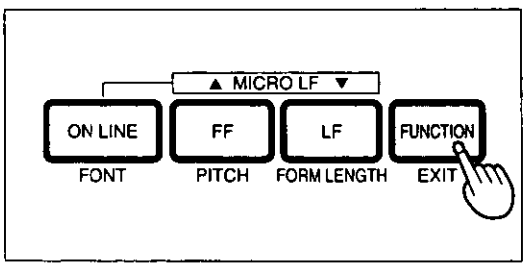
3



Press [TEAR OFF], [LOAD/PARK], [ON LINE], or [FF].

All current settings will be printed.

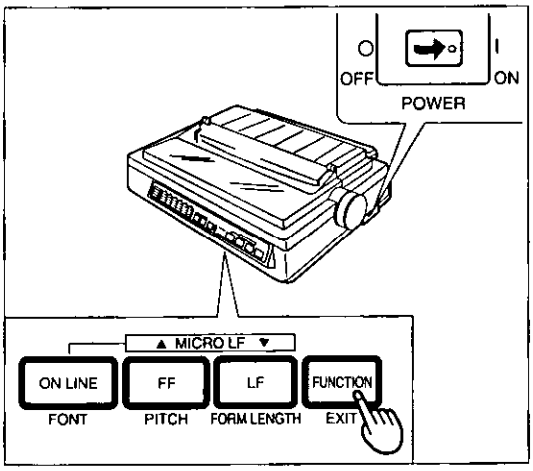
4



Press [FUNCTION] (EXIT) to exit the FUNCTION mode, or continue by proceeding to page 59, step 2, if you wish to make changes.

Setting the Initial Setup Mode

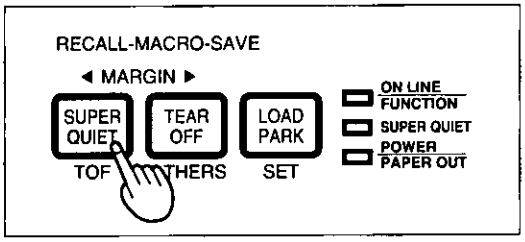
1



While pressing [FUNCTION], turn the power switch on.

The ON LINE/FUNCTION indicator will blink, and all the row indicators will be lit.

2

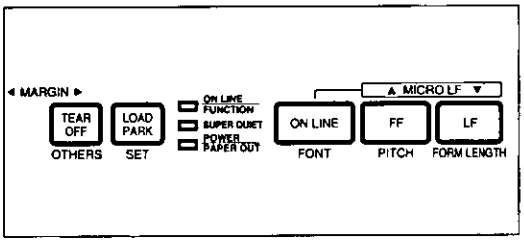


Press and release [SUPER QUIET] until your desired row indicator combination is lit. (☞ P. 57)

Note:

- Row indicators will switch each time you press [SUPER QUIET].

3

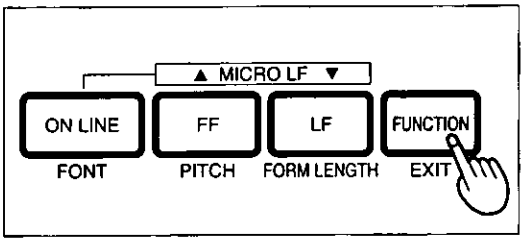


Use [TEAR OFF] (C1), [LOAD/PARK] (C2), [ON LINE] (C3), [FF] (C4), and [LF] (C5) to change the settings of the column indicators. (☞ P. 57)

Note:

- Each column indicator is simply controlled by pressing one of the 5 switches.

4



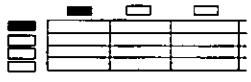
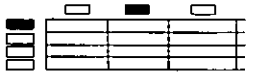
Press [FUNCTION] (EXIT) to store your selection(s) and exit the initial setup mode.

Examples

1. While pressing [FUNCTION] , turn the power on.
2. Press and release [SUPER QUIET] until the desired row indicator combination is lit.
3. Use [TEAR OFF] (C1), [LOAD/PARK] (C2), [ON LINE] (C3), [FF] (C4), and [LF] (C5) to change the settings of the column indicators.
4. Press [FUNCTION] **(EXIT)** to store the settings and exit the initial setup mode.

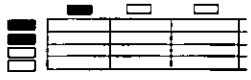
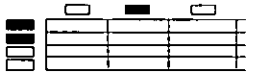
Emulation: Press [SUPER QUIET] once.

Epson Mode ⟶ Press [LOAD/PARK] ⟶ **IBM Mode**

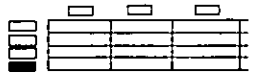
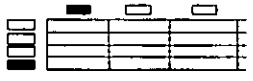
Code Page: Press [SUPER QUIET] 3 times.

USA ⟶ Press [LOAD/PARK] ⟶ **Multilingual**

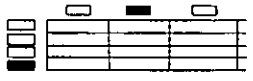
Download Buffer Control: Press [SUPER QUIET] 8 times.

OFF ⟶ Press [TEAR OFF] ⟶ **ON**

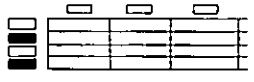
Cut Sheet Feeder: Press [SUPER QUIET] 8 times.

OFF ⟶ Press [LOAD/PARK] ⟶ **ON**

Auto Loading: Press [SUPER QUIET] 10 times.

ON ⟶ Press [ON LINE] ⟶ **OFF**

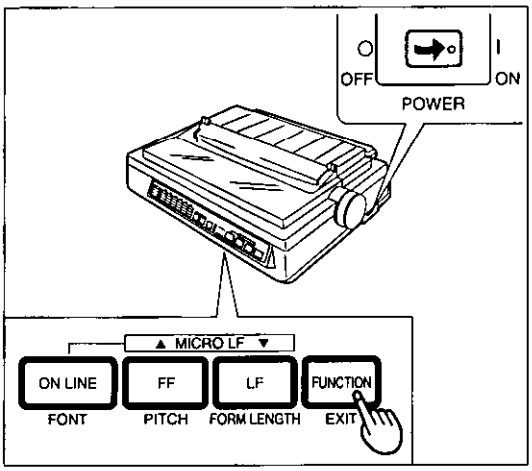



Indicators condition:
■ =light is lit
□ =light is not lit

Resetting to FACTORY Settings

You can reset all the initial setup mode settings to the FACTORY settings anytime. Follow the steps below.

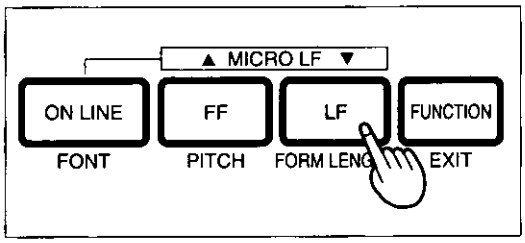
1



While pressing [FUNCTION], turn the power switch on.

The ON LINE/FUNCTION indicator will blink, and all the row indicators will be lit.

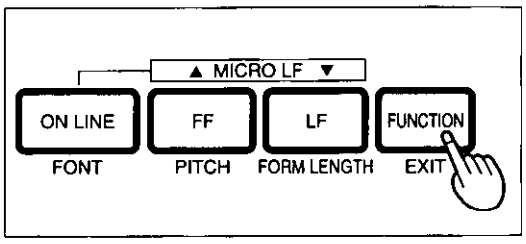
2



Press [LF].

You will hear a beep.

3



Press [FUNCTION] (EXIT) to exit the initial setup mode.

Using the Setup Disk

This printer allows you to select 32 initial setup items shown in the table below. You can select all these items by using the setup disk.

Menu	Item	Setting	
PRINT STYLE	FONT	PROGRAM* SCRIPT DRAFT SUPER LQ BOLD PS COURIER SC COURIER PRESTIGE SC PRESTIGE ROMAN SC ROMAN SANS SERIF SC SANS SERIF	"SC" is a scalable font.
	PITCH	PROGRAM* 15 CPI 10 CPI 17 CPI 12 CPI PROPORTION	When -SC sequences are selected, PITCH is automatically set to PROPORTION.
	POINT SIZE	8* to 96 with 10.5 and 21 (every 2 points)	POINT SIZE is displayed only when -SC sequences are selected in FONT.
EMULATION	EMULATION	EPSON* IBM	
PAGE FORMAT	SKIP PERF.	1 INCH* NO SKIP	(This condition can also be changed through software commands.)
	P. LENGTH	11 INCHES* 8 INCHES 12 INCHES 8.5 INCHES 14 INCHES 11⅔ INCHES	
	L. MARGIN	0* to 78 (10 CPI)	
	R. MARGIN	2 to 80* (10 CPI)	
PRINT MODE	G. DIRECTION	UNI* BI	
TEXT ENHANCEMENT	ZERO FONT	NORMAL* SLASH POINT	
CHARACTER SET	COUNTRY	USA* JAPAN FRANCE NORWAY GERMANY DENMARK 2 U.K. SPAIN 2 DENMARK 1 L. AMERICA SWEDEN KOREA ITALY LEGAL SPAIN 1	(☞ P. 104 "International Character Set")
	CHARACTER SET	ITALIC* GRAPHIC 2 GRAPHIC 1	
	CODE PAGE	USA* MULTILINGUAL PORTUGAL CANADA FRENCH NORWAY TURKEY	(☞ P. 99 "Character Set Tables")

* denotes setting when shipped from factory.

Menu	Item	Setting		
INSTALL	AGM/IBM	OFF*	ON	(This setting is effective only in the IBM mode.)
	AUTO CR/IBM	OFF*	ON	(This setting is effective only in the IBM mode.)
	AUTO LF	OFF*	ON	(This condition can also be changed through software commands.)
	AUTO LOADING	ON*	OFF	(This setting is effective only when the paper feed selector is in position.)
	BUZZER	ON*	OFF	(This setting is available only for BEL command.)
	P. O. DETECTOR	OFF*	ON	
	QUIET MODE	OFF*	ON	
	TEAR OFF	MANUAL*	AUTO	
	CSF MODE	OFF*	ON	[This setting is effective only when C.S.F. option (KX-PT10) is installed.]
	DOWNLOAD	OFF*	ON	
	COLOR	BLACK* BLUE GREEN ORANGE	RED VIOLET YELLOW	[This setting is effective only when Color Kit option (KX-PCK11) is installed.]
INTERFACE	INTERFACE	PARALLEL*	SERIAL	(This setting is effective only when KX-PS14 is installed.)
	DATA LENGTH	8 BIT*	7 BIT	
	BAUD RATE	150 300 600 1200	2400 4800 9600*	(These settings are effective only when KX-PS14 is installed.)
	PARITY	NONE* IGNORE	ODD EVEN	
	PROTOCOL	DTR*	XNO/OFF	
	RDT	SDT+128*	SDT+256	
	SDT	RBC 128*	RBC 512	
	SIGNAL POLARITY	MARK*	SPACE	

* denotes setting when shipped from factory.

Using the Setup Disk

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 62 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 3123 and copies all of the programs from your Setup Disk onto your C Drive.

  At your C:\ >prompt, type CD 3123 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.

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.**

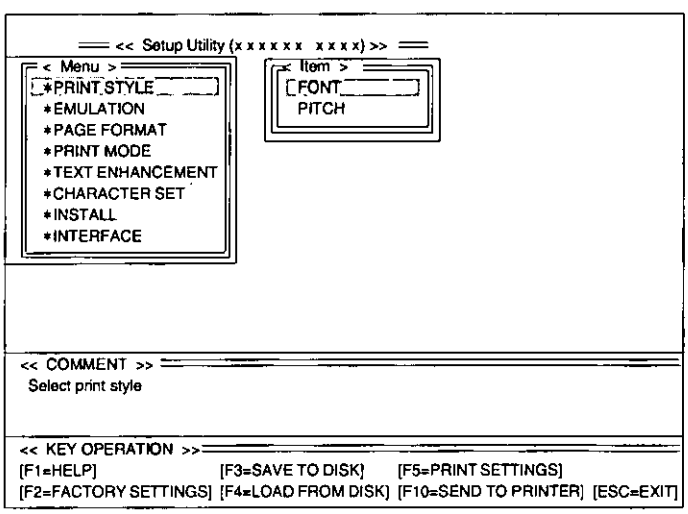
3 **Type A:\SETUP (or B:\SETUP)**

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

You will receive a "Please Wait" message until your first screen automatically appears.

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 **The <Menu> window will be highlighted.**



Note:

- You can proceed through the Setup Disk using a computer mouse or your arrow keys.
- [ESC] exits you to DOS when you are at the <Menu> window.

Using the keyboard:

- [↓] / [↑] to move within the current window.
- [→] to advance to <Item> and <Setting> windows.
- [Enter] to make selection in <Setting> window.
- [←] to return to previous window.

Using the mouse:

- Highlight the selection and click the left mouse button.
- Click the right mouse button to move to the previous screen.

Printing Settings

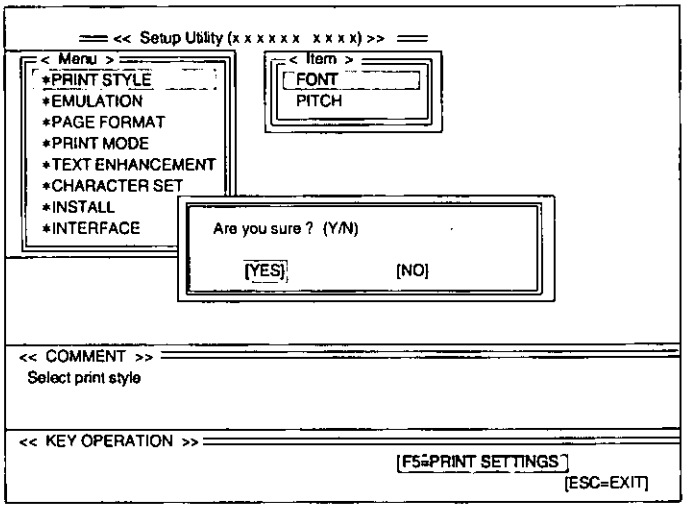
Before you change the initial setup mode settings, you can verify the settings by printing them.

1 **Press [F5].**

A Print Setting window will be displayed.

2 **Press [Y] or [N].**

"Y": All the settings (current, MACROs, FACTORY) will be printed.
"N": The display will return to previous screen.



Setting Selections on Setup Disk

1 **In the <Menu> window, press [↑] or [↓].**

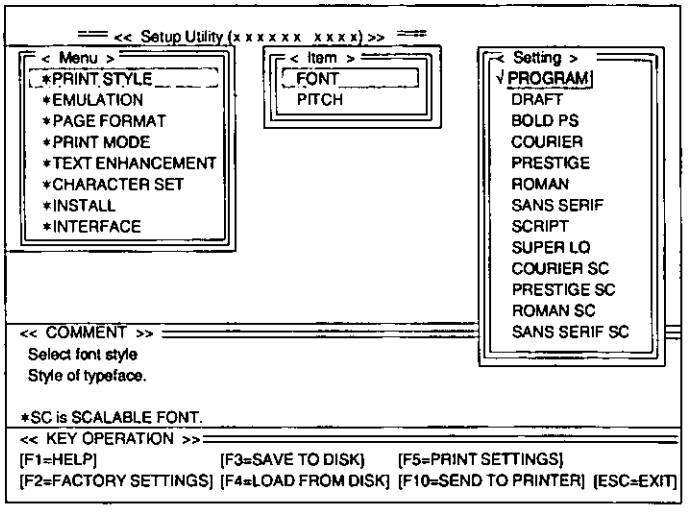
Select your desired menu (ex; PRINT STYLE).

2 **Press [→].**

The <Item> window will be highlighted.

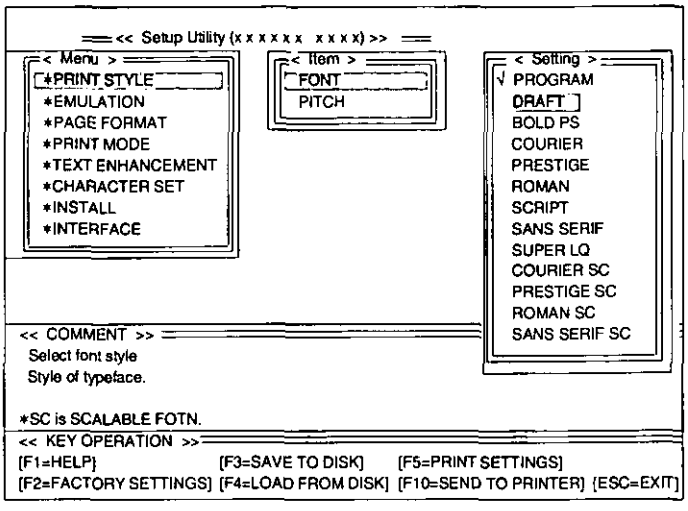
3 **Press [↑] or [↓].**

Highlight the desired item (ex; FONT).



4 Press ➡ .

The <Setting> window will be highlighted.



5 Press ⬆ or ⬇.

Highlight the desired setting (ex; DRAFT).

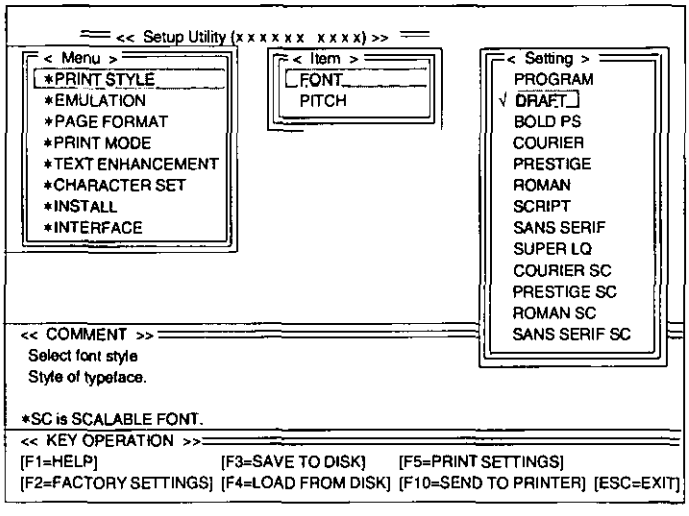
6 Press Enter .

The desired item has been set. A √ will appear next to the new setting.

7 Press ⬅ .

The <Item> window will be highlighted.

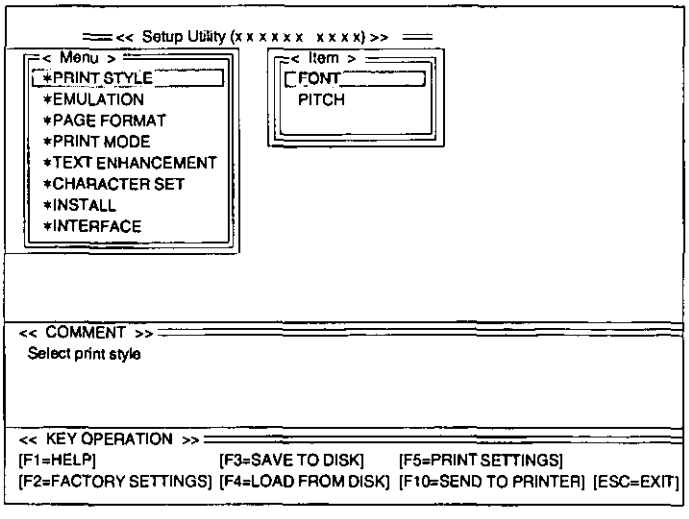
To make additional changes in the <Item> window, repeat steps 3 to 6.



8 Press ⬅ .

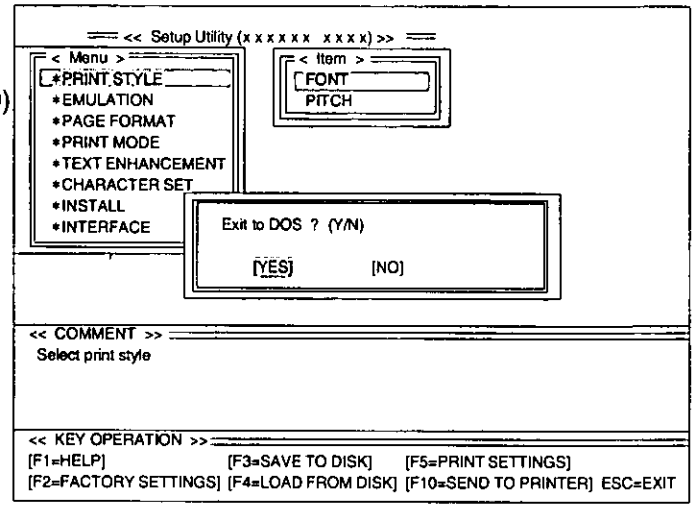
The <Menu> window will be highlighted.

To make additional changes in the <Menu> window, repeat steps 1 to 6.



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

Save to Disk – F3 (☞ P. 68)
Print Settings – F5 (☞ P. 66)
Send to Printer – F10 (☞ P. 69)



10 **Press ESC .**

An Exit window will be displayed.

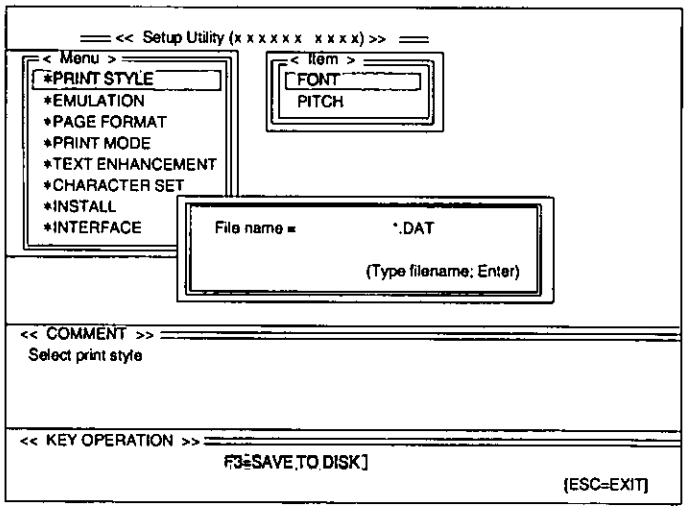
11 **Press Y or N .**

"Y": You have exited the Initial Setup program.
"N": The display will return to the <Menu> window.

Save to Disk

1 **Press F3.**

A Save to Disk window will be displayed.



2 **Enter a file name (up to 8 characters, upper or lower case).**

3 **Press Enter .**

All the settings will be saved on the disk and the display will return to the <Menu> window.

4 **Press ESC , Y to exit to DOS.**

Load from Disk

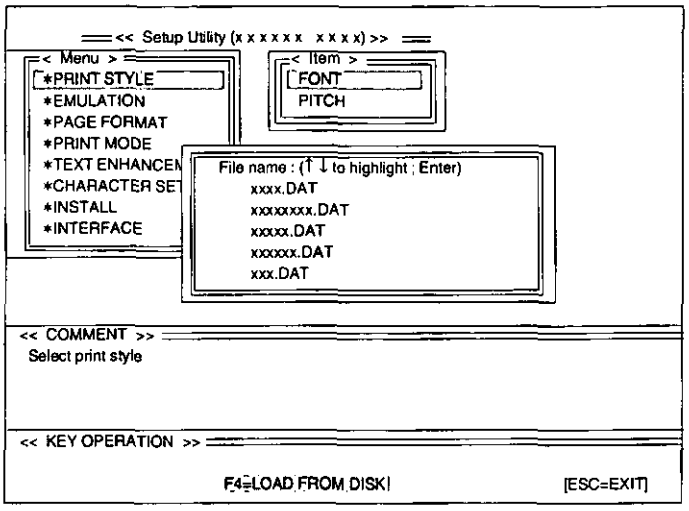
1 **Press F4 .**

A Load from Disk window will be displayed.

2 **Use ↑ or ↓ to highlight your desired file name.**

3 **Press Enter .**

All the settings in the file will be loaded to your screen. To transfer these settings to your printer, you must perform the F10 Send to Printer operation: (☞ P. 71)



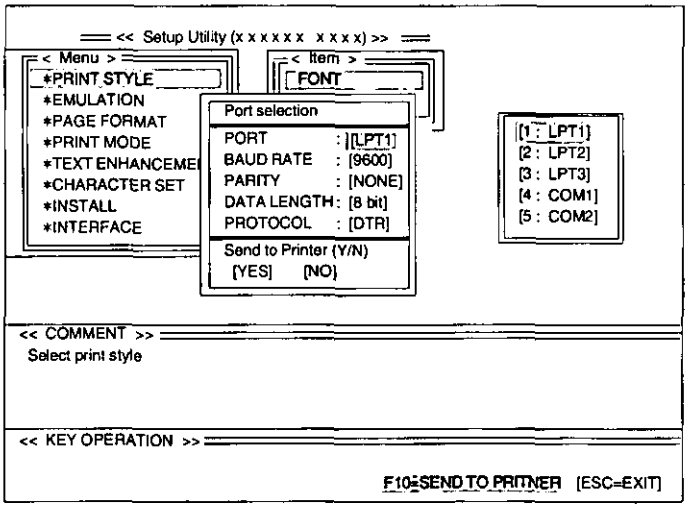
Send to Printer

1 **Press F10 .**

A Port Selection window will be displayed.

Note:

- Before setting the Port selections, it is recommended to print out the current settings of your printer (☞ P. 58). Set the Port selections so as to match the settings of your printer.

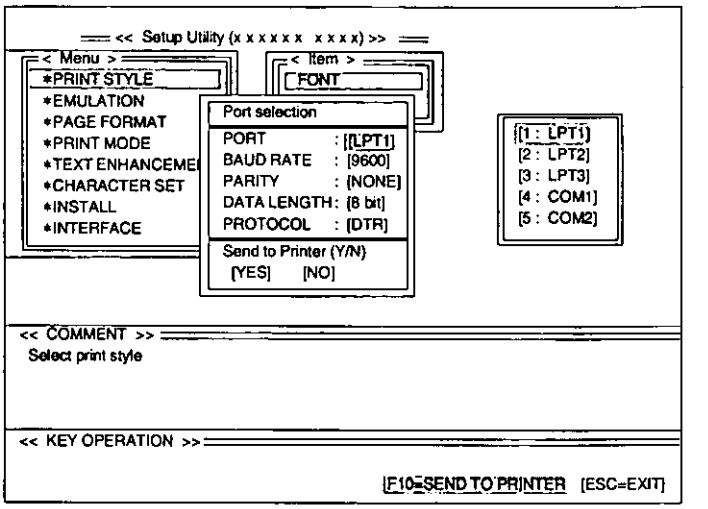


2 **Press ↑ or ↓ .**

Select the desired Port selection item. (ex; PORT)

3 **Press [→] .**

A Selection window will be displayed.



4 **Press [↑] or [↓] .**

Highlight the desired setting (ex; LPT1).

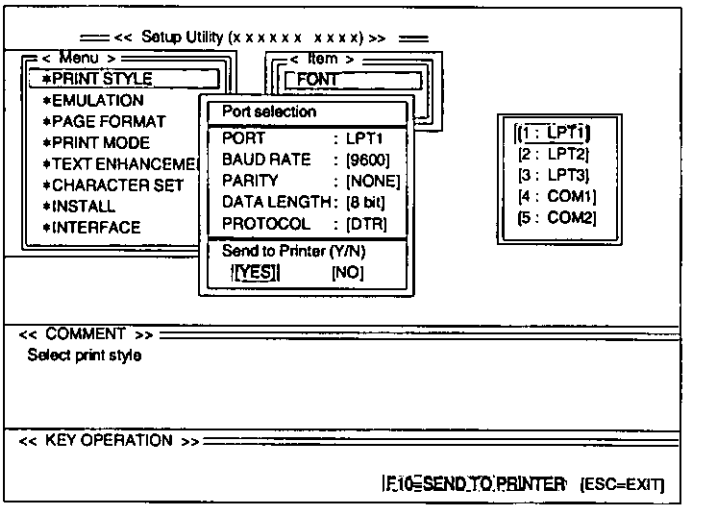
5 **Press [Enter] .**

The desired item has been set.

6 **Press [←] .**

To make additional changes in the Port selection menu, repeat steps 2 to 5.

7 **Press [↓] until YES is highlighted.**



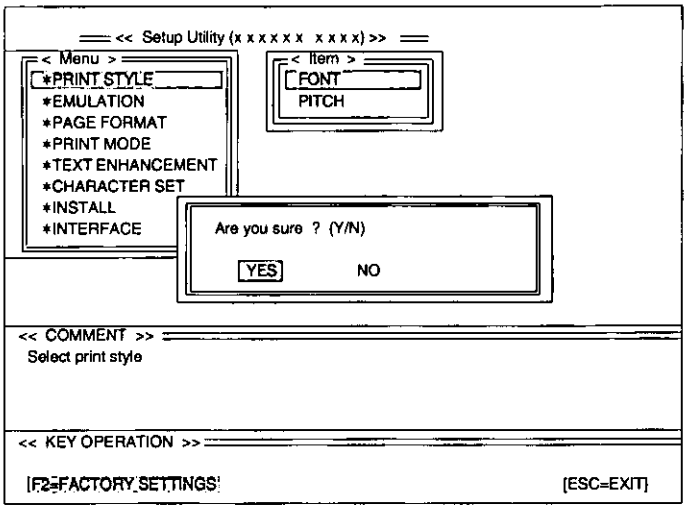
8 **Press [Y] or [N] .**

"Y": All the settings will be sent to the printer.
"N": The display will return to the <Menu> window.

9 **Press [ESC] , [Y] to exit to DOS.**

Resetting to FACTORY Settings

1 **Press F2 .**



2 **Press Y or N .**

"Y": All the settings will be reset to FACTORY settings.
"N": The display will return to the <Menu> window.

3 **If Y was selected, you may perform one of the following operations:**

Save to Disk — F3 (☞ P. 68)
Print Settings — F5 (☞ P. 66)
Send to printer — F10 (☞ P. 69)

4 **Press ESC , Y to exit to DOS.**

Help

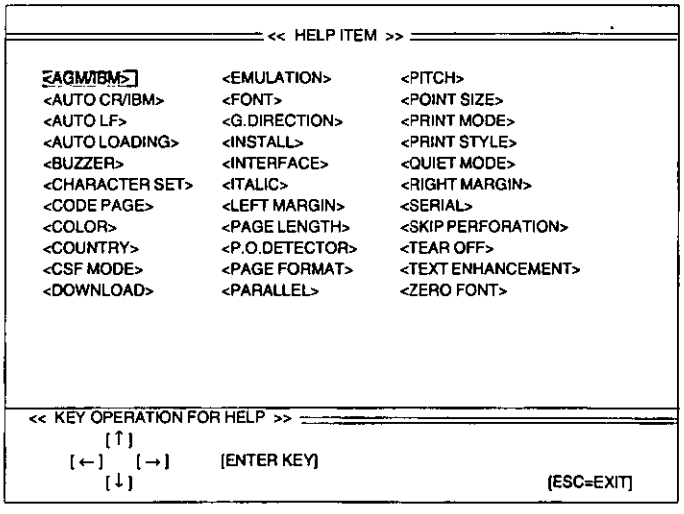
When you cannot remember what a particular function is, HELP will show you the explanations of the functions.

1 **Press F1 .**

A Help Item screen will be displayed.

2 **Press ← / → / ↑ / ↓ .**

Highlight your desired item. (ex; AGM/IBM)



3 **Press Enter .**

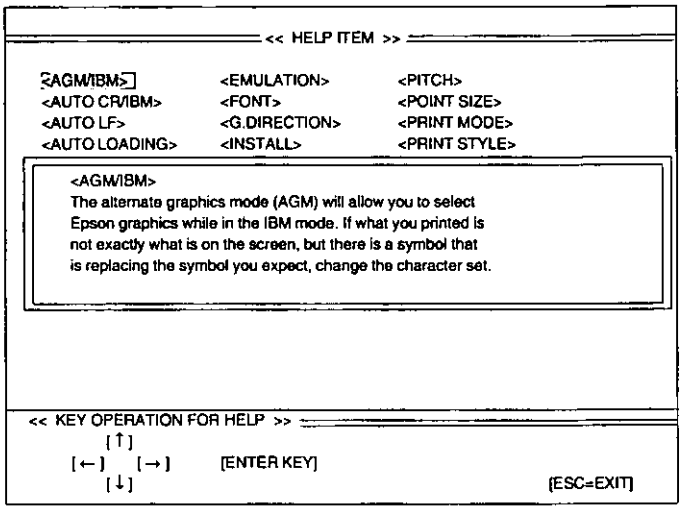
A definition will be displayed.

4 **Press ESC .**

The Help Item screen will be displayed.

5 **Press ESC .**

The display will return to the <Menu> window.



Epson ESC/P2 Mode (Epson LQ-570 Mode)

This section is for the development of programs and printer-drivers and assumes the reader is proficient in programming. More detailed information has been stored in the command reference program on the setup disk.

Font Selection

Function	Name	Parameter
Selects print quality	ESC "x" n	n=0: Draft font n=1: LQ font n=2: SLQ mode (Roman 5, 10, 6, and 12 CPI fonts only))
Selects print typeface	ESC "k" n	n=0: Roman n=1: Sans Serif n=2: Courier n=3: Prestige n=4: Script n=6: Bold PS
Selects sub/superscript printing	ESC "S" n	n=0: Superscript n=1: Subscript
Releases sub/superscript printing	ESC "T"	
Selects font by pitch and point	ESC "X" m n_1 n_2	$0 \leqq m \leqq 127$ except 2,3 and 4 m=0: No change to character spacing m=1: Character spacing is set to PS m>4: Sets character spacing to $^{360}/_{m}$ CPI $(0 \leqq n_1 \leqq 255)_{DEC}$ $(0 \leqq n_2 \leqq 127)_{DEC}$ n_1=0 n_2=0: No change to point size [Total points]=$^{(n1+n2\times256)}/_{2}$

Character Pitch Selection

Function	Name	Parameter
Sets pica pitch (10 cpi) printing	ESC "P"	
Sets elite pitch (12 cpi) printing*	ESC "M"	
Sets micron (15 cpi) printing	ESC "g"	
Sets compressed (17 cpi) printing*	SI or ESC SI	
Releases compressed printing	DC2	
Sets/Releases proportional spacing	ESC "p" n	n=0: Release n=1: Set
Sets programmable pitch/ highlighting based on the value of n	ESC "!" n	$(0 \leqq n \leqq 255)_{DEC}$ n=0: Pica n=16: Double-strike n=1: Elite n=32: Double-width n=2: PS n=64: Italic n=4: Comp. n=128: Underlining n=8: Emphasized

* When elite and compressed pitches are set simultaneously, subsequent output is printed in 20 cpi (up to 160 cpl).

Character Highlight Selection

Function	Name	Parameter
Sets emphasized printing	ESC "E"	
Releases emphasized printing	ESC "F"	
Sets/Releases double high printing	ESC "w" n	n=0: Release n=1: Set
Sets single-line double wide printing	SO or ESC SO	
Releases single-line double wide printing	DC4	
Sets/Releases double wide printing	ESC "W" n	n=0: Release n=1: Set
Sets outline and shadow printing	ESC "q" n	n=0: Releases outline/shadow n=1: Outline n=2: Shadow n=3: Outline with Shadow
Sets double strike printing	ESC "G"	
Releases double strike printing	ESC "H"	
Sets/Releases underlining	ESC "-" n	n=0: Release n=1: Set
Sets/Releases score	ESC "(" "-" 3 0 1 d_1 d_2	d_1=1: Underline d_1=2: Strikethrough d_1=3: Overscore d_2=0: Cancel the score line selected by d_1 d_2=1: Single continuous line d_2=2: Double continuous line d_2=5: Single broken line d_2=6: Double broken line

Word Processing Mode Selection

Function	Name	Parameter
Sets character dots spacing	ESC SP n	$(0 \leq n \leq 127)_{DEC}$
Sets unit	ESC "(" "U" 1 0 m	m=10, 20, 30, 40, 50, 60 (unit=m/3600 inch)
Sets horizontal motion index (HMI)	ESC "c" n_1 n_2	HMI=n_1+n_2×256 $(0 \leq n_1 \leq 255)_{DEC}$ $(0 \leq n_2 \leq 4)_{DEC}$

Character Set Selection

Function	Name	Parameter
Sets Italic printing	ESC "4"	
Releases Italic printing	ESC "5"	
Sets international character set	ESC "R" n	n=0: USA n=1: France n=2: Germany n=3: UK n=4: Denmark 1 n=5: Sweden n=6: Italy n=7: Spain 1 n=8: Japan n=9: Norway n=10: Denmark 2 n=11: Spain 2 n=12: Latin America n=13: Korea n=64: Legal
Selects graphic character set 1	ESC "7"	
Selects graphic character set 2	ESC "6"	
Selects alternate character set	ESC "t" n	n=0: Italic n=1: PC437 (US) n=2: User-defined characters n=3: PC437 (US)
Assign character table	ESC "(" "t" 3 0 n_1 n_2 0	$(0 \leqq n_1 \leqq 3)$ $(48 \leqq n_1 \leqq 51)$ $(0 \leqq n_2 \leqq 255)$ n_2=0: Italic n_2=1: PC437 (US) n_2=3: PC850 (Multilingual) n_2=5: PC853 (Turkey) n_2=7: PC860 (Portugal) n_2=8: PC863 (Canada-French) n_2=9: PC865 (Norway)
Prints data as character	ESC "(" "^" n_1 n_2 Data	$(0 \leqq n_1 \leqq 255)_{DEC}$ $(0 \leqq n_2 \leqq 125)_{DEC}$

Bit Image (Graphics) Mode Selection

Function	Name	Parameter
Sets 8-pin image standard density (60 dpi)	ESC "K" n_1 n_2 Data	
Sets 8-pin image double density (120 dpi)	ESC "L" n_1 n_2 Data	
Sets 8-pin image double density/ double speed (120 cpi)	ESC "Y" n_1 n_2 Data	
Sets 8-pin bit image quadruple density (240 dpi)	ESC "Z" n_1 n_2 Data	
Sets bit image mode selection	ESC "*" m n_1 n_2 Data	**8-pin Dots/Inch** m=0: 60 m=1: 120 m=2: 120D m=3: 240 m=4: 80 m=6: 90 **24-pin Dots/Inch** m=32: 60 m=33: 120 m=38: 90 m=39: 180 m=40: 360

Bit Image (Graphics) Mode Selection (Continued)

Function	Name	Parameter
Reassigns graphics mode density	ESC "?" n m	n=75: Reassign Standard Density (ESC "K" n1 n2) n=76: Reassign Double Density (ESC "L" n1 n2) n=89: Reassign Double Speed, Double Density (ESC "Y" n1 n2) n=90: Reassign Quadruple Density (ESC "Z" n1 n2) m is same as m of "Sets bit image mode selection"
Selects graphics mode	ESC "(" "G" 1 0 n	n=1, 49
Prints raster graphics	ESC "." c v h m n1 n2 Data	c=0, 1 v=10, 20 h=10, 20 (1≦m≦24) (0≦n1≦255)DEC (0≦n2≦127)DEC

Paper Feed Selection—Amount

Function	Name	Parameter
Sets paper feed to 1/8 inch (3.2 mm)	ESC "0"	
Sets paper feed to 1/6 inch (4.2 mm)	ESC "2"	
Sets paper feed to n/60 inch	ESC "A" n	(0≦n≦127)DEC
Sets paper feed to n/180 inch	ESC "3" n	(0≦n≦255)DEC
Sets paper feed to n/360 inch	ESC "+" n	(0≦n≦255)DEC

Paper Feed Selection

Function	Name	Parameter
Feeds paper one line	LF	
Feeds paper to next Top of Form	FF	
Executes paper feed of n/180 inch for one line	ESC "J" n	(0≦n≦255)DEC
Executes reverse paper feed of n/180 inch for one line	ESC "j" n	(0≦n≦255)DEC

Page Format Selection

Function	Name	Parameter
Sets page length in inches	ESC "C" 0 n	(0≦n≦22)DEC
Sets page length in lines	ESC "C" n	(1≦n≦127)DEC
Sets left margin	ESC "l" n	0≦n≦78: Pica 0≦n≦93: Elite 0≦n≦117: Micron 0≦n≦133: Compressed
Sets skip perforation	ESC "N" n	(1≦n≦127)DEC

Page Format Selection (Continued)

Function	Name	Parameter
Sets right margin	ESC "Q" n	2≦n≦80: Pica 3≦n≦96: Elite 3≦n≦120: Micron 4≦n≦137: Compressed
Releases skip perforation	ESC "O"	
Sets page length in defined unit	ESC "(" "C" 2 0 n1 n2	n=n1+n2×256
Sets page format	ESC "(" "c" 4 0 m1 m2 n1 n2	m=m1+m2×256 m: Top margin in defined units n+n1+n2×256 n: Bottom margin in defined units

Tabulation—Horizontal

Function	Name	Parameter
Sets horizontal tab	ESC "D" n1 ... nx 0	(1≦x≦32)
Releases horizontal tab	ESC "D" 0	
Executes horizontal tab	HT	

Tabulation—Vertical

Function	Name	Parameter
Sets vertical tab	ESC "B" n1 ... nx 0	(1≦x≦16)
Releases vertical tab	ESC "B" 0	
Executes vertical tab	VT	

Carriage Control

Function	Name	Parameter
Prints, then backspaces one character	BS	
Prints a line, then returns carriage	CR	
Unidirection mode (single line)	ESC "<"	
Sets/Releases single direction printing	ESC "U" n	n=0: Release n=1: Set
Sets/Releases half speed printing	ESC "s" n	n=0: Release n=1: Set
Moves the print position to an absolute horizontal position	ESC "$" n1 n2	n=n1+n2×256 (0≦n1≦255)DEC (0≦n2≦127)DEC
Moves the print position to a relative horizontal position	ESC "\" n1 n2	n=n1+n2×256 (0≦n1≦255)DEC (0≦n2≦127)DEC

Carriage Control (Continued)

Function	Name	Parameter
Sets absolute vertical print position	ESC "(" "V" 2 0 n1 n2	(0≦n1≦255)DEC (0≦n2≦127)DEC
Sets relative vertical print position	ESC "(" "v" 2 0 n1 n2	(0≦n1≦255)DEC (0≦n2≦127)DEC

Data Control

Function	Name	Parameter
Clears data in line buffer	CAN	
Selects printer remotely	DC1	
Deselects printer remotely	DC3	
Deletes last printable character	DEL	
Sets MSB on	ESC ">"	
Sets MSB off	ESC "="	
Cancels MSB setting	ESC "#"	

Download Character Selection

Function	Name	Parameter
Defines download font	ESC "&" 0 n m d0 d1 d2 Data	
Selects ROM CG	ESC "%" n	n=0: Select ROM Character Generator
Selects download CG		n=1: Select download CG
Copies internal ROM CG font into download CG	ESC ":" 0 n 0	n=0: Roman n=3: Prestige n=1: Sans Serif n=4: Script n=2: Courier n=6: Bold PS

Miscellaneous

Function	Name	Parameter
Initializes the printer	ESC "@"	
Cut sheet feeder control	ESC EM n	n="R": Eject a sheet n="0": Cut sheet feeder mode is OFF n="4": Cut sheet feeder mode is ON
Sounds the buzzer	BEL	

Color Selection

Function	Name	Parameter
Selects print color	ESC "r" n	n=0: Black n=4: Yellow n=1: Red n=5: Orange n=2: Blue n=6: Green n=3: Violet

IBM Proprinter X24E Mode

This section is for the development of programs and printer-drivers and assumes the reader is proficient in programming. More detailed information has been stored in the command reference program on the setup disk.

Font Selection

Function	Name	Parameter
Selects print quality	ESC "I" n	n=0: Internal Draft 10 cpi font n=2: Internal LQ 10 cpi font n=3: Internal Proportional LQ font n=4: Download Draft 10 cpi font n=6: Download LQ 10 font n=7: Download Proportional LQ font n=8: Internal Draft 12 cpi font n=10: Internal LQ 12 cpi font n=12: Download Draft 12 cpi font n=14: Download LQ 12 cpi font n=16: Internal Draft 17 cpi font n=18: Internal LQ 17 cpi font n=20: Download Draft 17 cpi font n=22: Download LQ 17 cpi font
Selects print typeface	ESC "k" n	n=0: Roman n=1: Sans Serif n=2: Courier n=3: Prestige n=4: Script n=6: Bold PS
Selects subscript printing Selects superscript printing	ESC "S" n	n=0: Superscript n=1: Subscript
Releases sub/superscript printing	ESC "T"	

Character Pitch Selection

Function	Name	Parameter
Sets elite pitch (12 cpi) printing	ESC ":"	
Sets compressed (17 cpi) printing	SI or ESC SI	
Releases elite and compressed printing	DC2	
Sets/Releases proportional spacing	ESC "P" n	n=0: Release n=1: Set

Character Highlight Selection

Function	Name	Parameter
Sets emphasized printing	ESC "E"	
Releases emphasized printing	ESC "F"	
Sets double strike printing	ESC "G"	
Releases double strike printing	ESC "H"	
Sets single-line double wide printing	SO or ESC SO	
Releases single-line double wide printing	DC4	
Sets/Releases double wide printing	ESC "W" n	n=0: Release n=1: Set
Sets double high & double wide printing	ESC "[" "@" 4 0 0 0 m3 m4	**m3 Line feed Character height** 0: Unchanged Unchanged 1: Unchanged Single-line 2: Unchanged Double-high 16: Single Unchanged 17: Single Single-high 18: Single Double-high 32: Double Unchanged 33: Double Single-high 34: Double Double-high m4=0: No change m4=1: Single-wide m4=2: Double-wide
Sets/Releases underlining	ESC "-" n	n=0: Release n=1: Set
Sets/Releases overlining	ESC "_" n	n=0: Release n=1: Set

Character Set Selection

Function	Name	Parameter
Setects alternate character set 1	ESC "7"	
Selects alternate character set 2	ESC "6"	
Changes the current code page	ESC "[" "T" 4 0 0 0 n1 n2	n1=00H and n2=00H: Current n1=01H and n2=B5H: USA n1=03H and n2=52H: Multilingual n1=03H and n2=5CH: Portugal n1=03H and n2=5FH: Canada French n1=03H and n2=61H: Norway n1=03H and n2=59H: Turkey Except the above: Download font

Bit Image (Graphics) Mode Selection

Function	Name	Parameter
Sets 8-pin image standard density (60 dpi)	ESC "K" n1 n2 Data	
Sets 8-pin image double density (120 dpi)	ESC "L" n1 n2 Data	
Sets 8-pin image double density/ double speed (120 dpi)	ESC "Y" n1 n2 Data	
Sets 8-pin image quadruple density (240 dpi)	ESC "Z" n1 n2 Data	
Sets bit image mode selection (A.G.M. mode only)	ESC "*" m n1 n2 Data	**8-pin Dots/Inch** m=0: 60 m=1: 120 m=2: 120D m=3: 240 m=4: 80 m=6: 90 **24-pin Dots/Inch** m=32: 60 m=33: 120 m=38: 90 m=39: 180 m=40: 360
Sets bit image mode selection	ESC "[" "g" n1 n2 m Data	**8-pin Dots/Inch** m=0: 60 m=1: 120 m=2: 120D m=3: 240 **24-pin Dots/Inch** m=8: 60 m=9: 120 m=11: 180 m=12: 360

Paper Feed Selection—Amount

Function	Name	Parameter
Sets paper feed to $^1/_8$ inch (3.2 mm)	ESC "0"	
Sets paper feed to $^7/_{72}$ inch (2.5 mm)	ESC "1"	
Executes line spacing set by ESC "A" n	ESC "2"	
Sets paper feed to $^n/_{72}$ inch (or $^n/_{60}$ inch in A.G.M. mode)	ESC "A" n	$(0 \leqq n \leqq 255)_{DEC}$
Sets paper feed to $^n/_{216}$ inch (or $^n/_{180}$ inch in A.G.M. mode)	ESC "3" n	$(0 \leqq n \leqq 255)_{DEC}$
Selects the base line feed unit for ESC "3" and ESC "J"	ESC "[" "\" 4 0 0 0 0 n	n=180: $^1/_{180}$ inch base unit n=216: $^1/_{216}$ inch base unit
Sets/Release automatic line feed	ESC "5" n	n=0: Release n=1: Set

Paper Feed Selection

Function	Name	Parameter
Feeds paper one line	LF	
Feeds paper to next top of form	FF	
Executes one-line paper feed of $n/216$ inch (or $n/180$ inch in A.G.M. mode)	ESC "J" n	$(0 \leqq n \leqq 255)_{DEC}$

Page Format Control

Function	Name	Parameter
Sets page length in inches	ESC "C" 0 n	$(1 \leqq n \leqq 255)_{DEC}$
Sets page length in lines	ESC "C" n	$(1 \leqq n \leqq 255)_{DEC}$
Sets left and right margins	ESC "X" n_1 n_2	Pica: $1 \leqq n_1 \leqq 78$ $3 \leqq n_2 \leqq 80$ Elite: $1 \leqq n_1 \leqq 93$ $4 \leqq n_2 \leqq 96$ Comp.: $1 \leqq n_1 \leqq 133$ $5 \leqq n_2 \leqq 137$
Sets skip perforation	ESC "N" n	$(0 \leqq n \leqq 255)_{DEC}$
Releases skip perforation	ESC "O"	
Sets Top of Form	ESC "4"	

Tabulation—Horizontal

Function	Name	Parameter
Sets horizontal tab	ESC "D" n_1 n_2 ...n_x 0	$(1 \leqq x \leqq 32)$
Releases horizontal tab	ESC "D" 0	
Executes horizontal tab	HT	

Tabulation—Vertical

Function	Name	Parameter
Sets vertical tab	ESC "B" n_1 n_2 ... n_x 0	$(1 \leqq x \leqq 64)$
Releases vertical tab	ESC "B" 0	
Executes vertical tab	VT	
Returns to default tabs	ESC "R"	

Carriage Control

Function	Name	Parameter
Prints, then backspaces on character	BS	
Prints a line, then returns carriage	CR	
Sets/Release single direction printing	ESC "U" n	n=0: Release n=1: Set
Moves the print position to a relative horizontal position ($n/120$ inch)	ESC "d" n_1 n_2	Position: $n_1+(256\times n_2)$

Data Control

Function	Name	Parameter
Clears data in line buffer	CAN	
Selects printer remotely	DC1	
Deselects printer remotely	ESC "Q" 36	

Download Character Selection

Function	Name	Parameter
Defines download font	ESC "=" n_1 n_2 35 A_1 A_2 Data	

Miscellaneous

Function	Name	Parameter
Prints continuously from All Character Chart	ESC "\" n_1 n_2	Total count: $n_2\times256+n_1$
Prints one character from All Character Chart	ESC "^"	
Sets OFF LINE mode	ESC "j"	
Resets to initial state	ESC "[" "K" n_1 0 m 36 p_1 p_2	
Sounds the buzzer	BEL	

Color Selection

Function	Name	Parameter
Select print color	ESC "r" n	n=0: Black n=1: Red n=2: Blue n=3: Violet n=4: Yellow n=5: Orange n=6: Green

Command Reference Program

The command reference program allows you to access 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.

> **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, refer to page 64.

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.

Screen 1

```
      <<  Panasonic KX-P3123 command reference utility (xxxxxxxxxxx)  >>

   -- SELECT EMULATION --
=======================================================

         [EPSON]
          IBM








=======================================================

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

5 Press [↑] or [↓].

Select an emulation.

6 Press [Enter].

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

7 Press [Pg.Up] / [Pg.Down] or [↑] / [↓].

Select a command.

Screen 2

```
<<  Panasonic KX-P3123 command reference utility (xxxxxxxxxxx)  >>
  -- 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) prining
  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
```

[↑]/[↓]	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

Note:

- 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].

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 out this explanation, press Enter again and press Y.

"Y": The explanation will be printed.
"N": The display will return to screen 3.

Screen 3

```
<<  Panasonic KX-P3123 command reference utility (xxxxxxxxxx)  >>
                                                          [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: LQ font
                n=2: SLQ mode (Roman 5, 10, 6 and 12 CPI fonts only)
                                                        -- END --
================================================================
        [↑]/[↓]          : Text scroll-down/up
        [Pg.Up]/[Pg.Down]: Go to previous/next command
        [Esc]            : SELECT COMMAND mode
        [Enter]          : Print current command description
```

Screen 4

```
<<  Panasonic KX-P3123 command reference utility (xxxxxxxxxx)  >>
                                                          [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: LQ font
                n=2: SLQ mode (Roman 5, 10, 6 and 12 CPI fonts only)
                                                        -- END --
================================================================
        Print current command description ?  (Y / N)

                YES                 NO
```

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

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 your screen for keyboard operation.

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 operation 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.

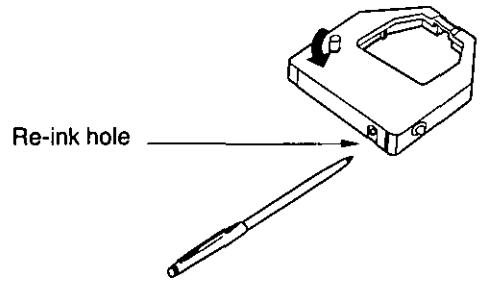
  — Remove the top and the smoked plastic covers. Vacuum or dust the inside area of the unit. Be very careful not to damage the printhead ribbon cable or the carriage drive belt.

  — 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 3 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 1~3 of "Self Test". (☞ P. 35)

Troubleshooting

Most problems associated with the printer can be traced to improper setup, installation, or cabling. The following table 5.1 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.

Table 5.1 — Troubleshooting

Symptom	Possible Cause	Probable Solution
Ink smears	Head gap lever is not in the proper position	Move the lever toward the (+) position until ink does not smear (☞ P. 13)
Printout is faint	Head gap lever is not in the proper position	Set the lever to the proper position (☞ P. 13)
Carriage moves but there is no printing	Ribbon is not installed correctly	Re-insert ribbon (☞ P. 15)
	Head gap lever is not in proper position	Set the lever to the proper position (☞ P. 13)
Paper out detector inoperative	P.O. Disable	Set P.O. Enable (☞ P. 55, 63)
Printer does not power up	No AC power	Check power cord (☞ P. 13)
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. 14)
	Out of paper	Install new paper (☞ Note on next page)
	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	Turn the power off. Clear the path then turn the power back on to resume printing
Paper wrinkles when using tractor feed	No reverse tension on paper	Set paper supply lower than printer
	Selector switch is in " " position	Set selector to " " position
Printer cannot 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. 55, 63)
	Paper feed selector is in " " position	Set selector to " " position
Cut sheet feeder does not work	Cut sheet feeder is Disable	Set cut sheet feeder to Enable (☞ P. 55)
	Paper feed selector is in the " " position	Set paper feed selector to the " " position
Unexpected characters appear in printing	Emulation is set incorrectly	Check printer software pack emulation accor (☞ P. 32)
Printout is double-spaced	Auto LF is ON	Set Auto LF to C (☞ P. 55, 63)

(Continued)

Symptom	Possible Cause	Probable Solution
Keeps printing on the same line	Computer is not sending a LF command	Set Auto LF to ON (☞ P. 55, 63)
Cannot change form length	Cut sheet feeder is Enable	Set cut sheet feeder in Disable (☞ P. 55, 63)
Cannot print ASCII characters with code above 127	Data length is set incorrectly	Set data length as required (☞ P. 55, 63)
Wrong character set is printed	Wrong character set is selected	Set the character set as required (☞ P. 55, 62)
Cannot change print mode from computer	FONT and PITCH modes are set incorrectly	Set to PROGRAM mode (☞ P. 62)
Fanfold paper is jamming	Paper not installed correctly in tractors	Set selector switch to " " position to easily remove jammed paper Reinstall paper correctly into the tractors (☞ P. 21~31)
*Printer does not print in color	Color kit (KX-PCK11) is not installed	Install the color kit (KX-PCK11)
	Incorrect emulation is set	Select proper printer driver in your software (☞ P. 32)
*Prints in 2 different colors	Yellow color gap lever of color kit is not in the proper position	Set color gap lever of color kit to the proper position (☞ "Color Adjustment" in the color kit installation manual) Reinstall the color kit (☞ "Installing the Color Kit" in the color kit installation manual)

(* Option)

Note:

- Your printer has a paper out detector. When an out of paper condition occurs, printing stops, the printer goes to the OFF LINE mode, and the PAPER OUT light starts blinking. To continue printing to the end of the current page, follow the steps below.

  ① Press [ON LINE] repeatedly until the page is completed.
  ② Install the new paper.
  ③ Press [ON LINE].

- The paper out detector can be disabled through the initial setup mode.

Printer Specifications

Power requirements: Frequency: Current:	Refer to the nameplate located on the rear of the printer.
Interface:	Centronics parallel RS-232C/Serial interface board [KX-PS14, KX-PS13] (option)
Print fonts:	3 Draft (Pica, Elite, Micron) 6 Letter Quality (Courier, Bold PS, Prestige Elite, Sans Serif, Script, Roman) 1 Super Letter Quality (Roman) 4 Scalable Font (Roman, Courier, Prestige, Sans Serif)
Software emulation:	Epson LQ-570 IBM Proprinter X24E
Buffer:	46K (standard)
Character sets:	96 ASCII characters, ITALIC 33 International characters (14 countries + LEGAL Set no Science) 158 (IBM-PC special characters 38 Multilingual characters
Dot configuration:	1/127 inch (0.2 mm) dot diameter

	Draft	LQ	SLQ
Matrix			
(Hor. × Ver)	9 × 24	30 × 24	30 × 48
Dot pitch			
(Hor.)	1/120″ (0.21 mm)	1/360″ (0.07 mm)	1/360″ (0.07 mm)
(Ver.)	1/180″ (0.14 mm)	1/180″ (0.14 mm)	1/360″ (0.07 mm)

Maximum number of characters per line (cpl):	Pica [10 cpi (characters per inch)] 80 cpl Elite (12 cpi) 96 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

Printing speed [characters per second (cps)]: With Black Ribbon	Micron	Elite	Pica
Draft	240 cps	192 cps	160 cps
LQ	80 cps	64 cps	53 cps
SLQ		32 cps	26 cps

Printing direction:	Bi-directional character & graphics Uni-directional character & graphics ..... Color printing
Line feed time:	Approx. 100 msec [with 1/6 inch (4.2 mm) line feeding]
Paper feed:	Pull/Push tractor feed (with fanfold paper) (user selectable) Friction feed (with single sheets or envelopes)

(Continued)

Operating environment:	Temperature: 10°C~35°C {50°F~95°F} Humidity: 30~80% RH (Please allow the printer to stabilize at room temperature within the operating temperature range before operation)
Power consumption:	MAX — 150 W Stand by — 11 W Self Test — 49 W
Storage environment:	Temperature: –20°C~60°C {–4°F~140°F} Humidity: 10~90% RH
Head service life:	Black ribbon: Approx. 200 million strokes in DRAFT mode Color ribbon: Apporx. 100 million strokes in DRAFT mode
Ribbon:	Cassette seamless fabric ribbon Black ribbon cassette KX-P150: Life expectancy (in DRAFT mode) (rolling ASCII) Approx. 3 million characters Color ribbon cassette KX-P150C (option): Life expectancy (in DRAFT mode) (rolling ASCII) Black Approx. 0.7 million characters Red (Magenta)/Blue (Cyan): Apporx. 0.7 million characters Yellow: Approx. 0.4 million characters
Detectors:	Paper out detector Overheat detector Overload detector
Dimensions:	459 (W) × 365 (D) × 149 (H) mm {18.1″ × 14.3″ × 5.8″}
Mass {Weight}:	Approx. 8.6 kg {19 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			
		lbs		g/m^2	
		push	pull	push	pull
Fine-quality paper	1	16 ~ 24	16 ~ 22	60 ~ 90	60 ~ 82.5
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:

- When using multi-part fanfold paper especially in environments that have very high or low temperature and/or humidity, we recommend the use of the bottom feed pull mode to optimize paper handling and print quality.
- To insure optimum print quality, 16 ~ 22 lbs (60 ~ 82.5 g/m^2) is recommended for graphic printing.
- In multi-layered paper with carbon, the carbon is equivalent to a sheet of paper.
- "Weight in pounds" represents the weight of 500 [17×22 inches (432×559 mm)] sheets.
- The printer will handle multipart papers up to 0.013 inch (0.32 mm) thick. Up to 4 copies of 14 lb. chemical release paper can be used.
- Multipart forms consisting of 2 parts may be used for rear feeding (Push mode). For 3 or 4 part forms, we recommend bottom feeding for optimum print quality.

Single Sheets

Width: 4 ~ 11.7 inches (102 ~ 297 mm)
Height: 5 ~ 14.3 inches (127 ~ 363 mm)
Weight in pounds (g/m^2): 14 ~ 24 lbs (53 ~ 90 g/m^2)

Note:

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

Envelopes

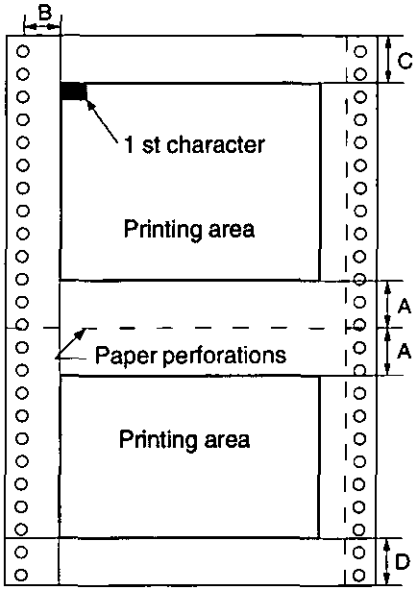
#6 and #10 size envelopes are recommended. Since envelopes vary in size, paper weight and construction, we cannot guarantee print quality and paper handling for all types of envelopes.

Note:

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

Printing Area

Fanfold Paper



	Push	Pull
A	1″ (25.4 mm)	
B	0.7″ (17.8 mm)	
C	0.6″ (15.2 mm)	5.4″ (137 mm)
D	1″ (25.4 mm)	

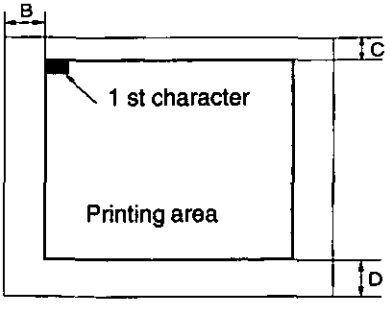
A: Value A indicates the area near the paper perforations where the quality may not be optimum.

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	0.6″ (15.2 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.)

Interfacing

Parallel Interfacing

A method of transfering data from a computer to a printer through a parallel interface based on the centronics standard.

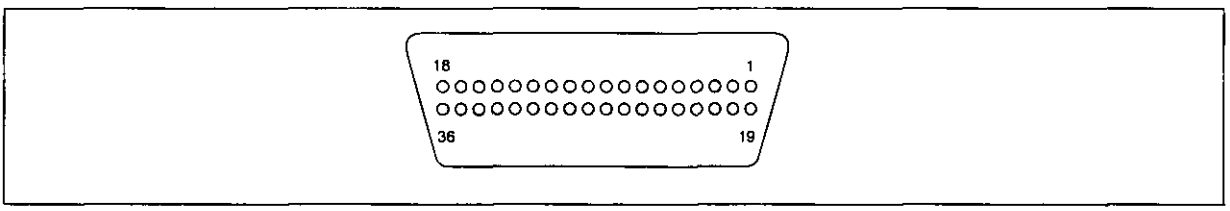
Specifications:

- data transfer speed: 1000 cps minimum
- synchronization: external STROBE pulse
- logic levels: TTL (Transistor-Transistor-Logic) levels
- handshaking: BUSY and $\overline{\text{ACK}}$ 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 $\overline{\text{ACK}}$ 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	$\overline{\text{ERROR}}$
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	$\overline{\text{STB}}$	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	
10	28	$\overline{\text{ACK}}$	Output
11	29	BUSY	
12		PO	

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

Pin configuration (Parallel)

Connector Pin Signals

$\overline{\text{STB}}$...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".

$\overline{\text{ACK}}$...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 $\overline{\text{ACK}}$ 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 on which 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 mode and low when OFF LINE.
- The printer enters the ON LINE mode:
  1. When the printer is turned on
  2. when $\overline{\text{PRIME}}$ is received
  3. when the RESET command is received
  4. when the ON LINE switch is pressed
- The printer enters the OFF LINE mode:
  1. when the printer is out of paper
  2. when the printer is switched OFF LINE

$\overline{\text{AUTO FEED XT}}$ ($\overline{\text{AFXT}}$)

- 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 $\overline{\text{AFXT}}$ signal. If auto LF is ON, the printer will perform a CR+LF regardless of the level of the $\overline{\text{AFXT}}$ 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.

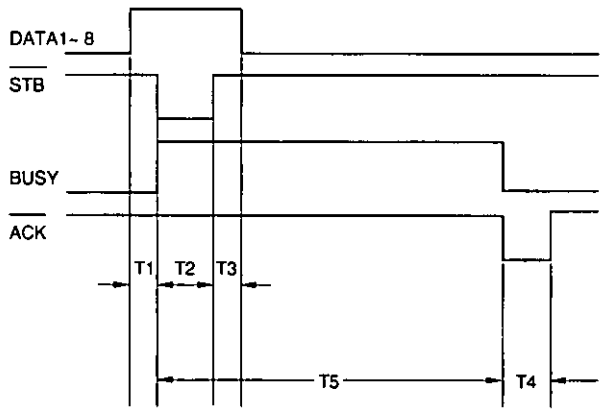
$\overline{\text{PRIME}}$

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

$\overline{\text{ERROR}}$

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

Timing diagram

Initialization

The printer is initialized under the following conditions:
— the AC power is turned on
— the $\overline{\text{PRIME}}$ signal is received
— the RESET PRINTER command is received
— the clear buffer function is used

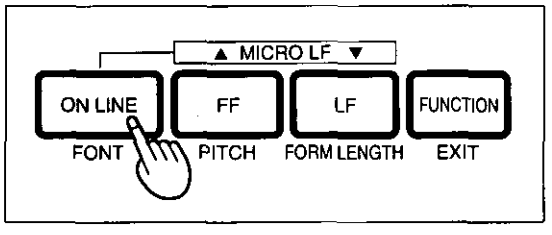
When the printer is initialized, the following conditions are set:
— the print buffer is cleared
— the receive buffer is cleared (not cleared by RESET PRINTER command)
— the download character buffer is cleared (not cleared by $\overline{\text{PRIME}}$ signal in IBM Proprinter X24E mode or by RESET PRINTER command)
— the initial setup modes are read and set
— 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 $\overline{\text{PRIME}}$ signal or RESET PRINTER command*
— the printhead goes to the home position

* Some software packages send $\overline{\text{PRIME}}$ signal at the beginning of their programs. Print modes set by the control panel will not change.

User Clear Function

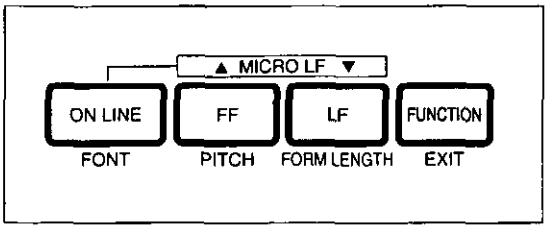
This function initializes the printer from the control panel. This feature is very useful when you want to clear the receive buffer (information recently sent from the computer and is currently printing) without changing the control panel.

1



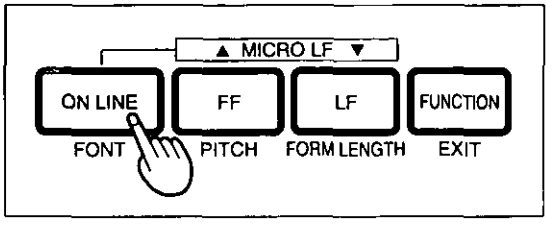
Press (ON LINE) to stop the printing and enter the OFF LINE mode.

2



While pressing (FUNCTION), press (LF) to clear the data in the receive buffer.

3

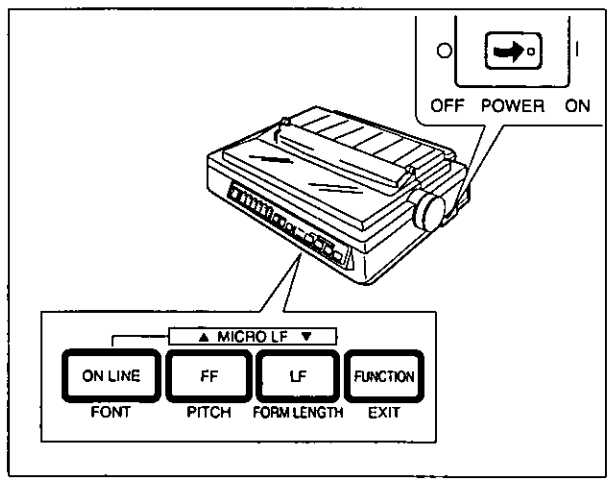


Press (ON LINE) to re-enter the ON LINE mode.

Hex Dump

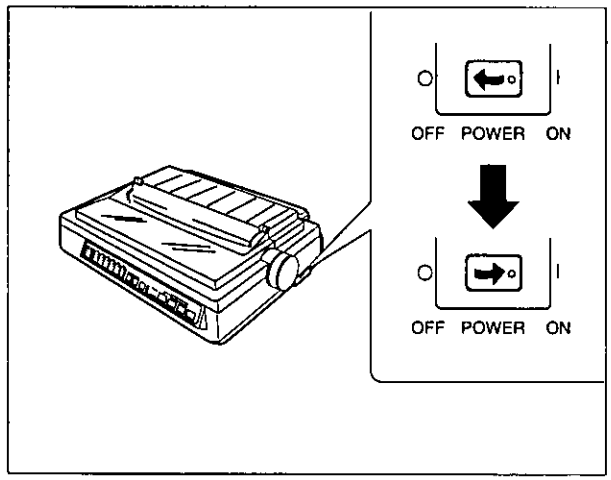
In this mode, all data received from the computer is printed in hex code instead of the normal ASCII characters. Function codes for the printer (CR, LF, HT, etc.) are not executed. This mode is very useful to debug programs.

To Enter the Hex Dump Mode:



While pressing both [LF] and [FF], turn the **power on**.

To Release the Hex Dump Mode:



Turn the **power off**, then back on.

Character Set Tables

Epson Italic Character Set (USA)

PC-437

Dec.		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
0	0	NUL		SP	0	@	P	`	p			SP	0	@	P	`	p
1	1		DC1	!	1	A	Q	a	q		DC1	!	1	A	Q	a	q
2	2		DC2	"	2	B	R	b	r		DC2	"	2	B	R	b	r
3	3		DC3	#	3	C	S	c	s		DC3	#	3	C	S	c	s
4	4		DC4	$	4	D	T	d	t		DC4	$	4	D	T	d	t
5	5			%	5	E	U	e	u			%	5	E	U	e	u
6	6			&	6	F	V	f	v			&	6	F	V	f	v
7	7	BEL		'	7	G	W	g	w	BEL		'	7	G	W	g	w
8	8	BS	CAN	(	8	H	X	h	x	BS	CAN	(	8	H	X	h	x
9	9	HT	EM	)	9	I	Y	i	y	HT	EM	)	9	I	Y	i	y
10	A	LF		*	:	J	Z	j	z	LF		*	:	J	Z	j	z
11	B	VT	ESC	+	;	K	[	k	{	VT	ESC	+	;	K	[	k	{
12	C	FF		,	<	L	\	l	|	FF		,	<	L	\	l	|
13	D	CR		-	=	M	]	m	}	CR		-	=	M	]	m	}
14	E	SO		.	>	N	^	n	~	SO		.	>	N	^	n	~
15	F	SI		/	?	O	_	o	DEL	SI		/	?	O	_	o	NUL

Epson Graphic Character Set 2 (USA)

Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á		└	╨	α	■
1	1		DC1	!	1	A	Q	a	q	ü	æ	í		┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	4		DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	•
10	A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	▌	δ	√
12	C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▐	∞	ⁿ
13	D	CR		-	=	M	]	m	}	ì	¥	¡	╜	═	▀	ø	²
14	E	SO		.	>	N	^	n	~	Ä	Pt	<<	╛	╬	▄	ε	■
15	F	SI		/	?	O	_	o	DEL	Å	ƒ	>>	┐	╧	▌	∩	SP

Note:

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

Epson Character Set 2 (Multilingual)

PC-850

Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á		└	ð	Ó	-
1	1		DC1	!	1	A	Q	a	q	ü	æ	í		┴	Ð	ß	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó		┬	Ê	Ô	‗
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	Ë	Ò	¾
4	4		DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
5	5			%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
6	6			&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	¸
8	8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	þ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
10	A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	•
11	B	VT	ESC	+	;	K	[	k	{	ï	ø	½	╗	╦	▌	Ù	¹
12	C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▐	ý	³
13	D	CR		-	=	M	]	m	}	ì	Ø	¡	¢	═	▀	Ý	²
14	E	SO		.	>	N	^	n	~	Ä	×	<<	¥	╬	▄	¦	¯
15	F	SI		/	?	O	_	o	DEL	Å	ƒ	>>	┐	¤	▌	´	SP

Epson Character Set 2 (Portugal)

PC-860

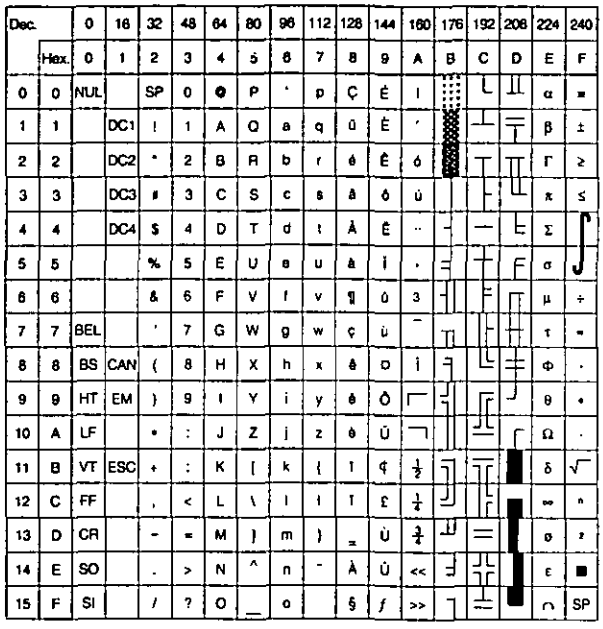
Dec.		0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	Hex.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	NUL		SP	0	@	P	`	p	Ç	É	á		└	╨	α	■
1	1		DC1	!	1	A	Q	a	q	ü	À	í		┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	È	ó		┬	╥	Γ	≥
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	4		DC4	$	4	D	T	d	t	ã	õ	ñ	┤	─	╘	Σ	⌠
5	5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	6			&	6	F	V	f	v	Á	Ú	ª	╢	╞	╓	µ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	ì	¿	╕	╚	╪	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	Ê	Õ	ò	╣	╔	┘	Θ	•
10	A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	Í	¢	½	╗	╦	▌	δ	√
12	C	FF		,	<	L	\	l	|	ì	£	¼	╝	╠	▐	∞	ⁿ
13	D	CR		-	=	M	]	m	}	Ó	¥	¡	Ú	═	▀	ø	²
14	E	SO		.	>	N	^	n	~	Ã	Pt	<<	¡	╬	▄	ε	■
15	F	SI		/	?	O	_	o		Â	Ó	>>	┐	¤	▌	∩	SP

Note:

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

Epson Character Set 2 (Canada-French)

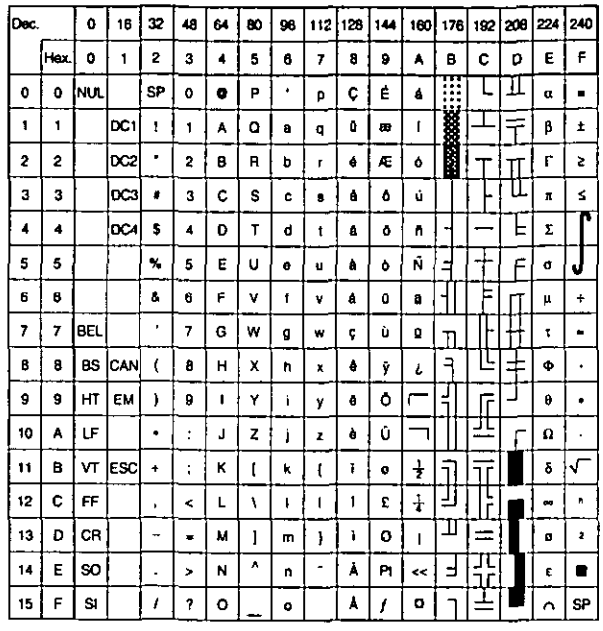
PC-863



Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	⌐		└	╨	α	≡
1	1		DC1	!	1	A	Q	a	q	ü	È	¬		┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	Ê	ó		┬	╥	Γ	≥
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	4		DC4	$	4	D	T	d	t	À	Ë	¨		─	╘	Σ	⌠
5	5			%	5	E	U	e	u	à	ï	´		┼	╒	σ	⌡
6	6			&	6	F	V	f	v	¶	ô	3		╞	╓	μ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	¯		╟	╫	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	¤	î		╚	╪	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐		╔	┘	θ	∙
10	A	LF		*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	¢	½		╦	╖	δ	√
12	C	FF		,	<	L	\	l	|	î	£	¼		╠	╕	∞	ⁿ
13	D	CR		-	=	M	]	m	}	ì	¥	¾		═	╡	ø	²
14	E	SO		.	>	N	^	n	~	Ä	ú	«		╬	╞	ε	■
15	F	SI		/	?	O	_	o		§	ƒ	»		╧	▌	∩	SP

Epson Character Set 2 (Norway)

PC-865



Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á		└	╨	α	≡
1	1		DC1	!	1	A	Q	a	q	ü	æ	í		┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	4		DC4	$	4	D	T	d	t	ä	ö	ñ		─	╘	Σ	⌠
5	5			%	5	E	U	e	u	à	ò	Ñ		┼	╒	σ	⌡
6	6			&	6	F	V	f	v	å	û	ª		╞	╓	μ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º		╟	╫	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿		╚	╪	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐		╔	┘	θ	∙
10	A	LF		*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	ø	½		╦	╖	δ	√
12	C	FF		,	<	L	\	l	|	î	£	¼		╠	╕	∞	ⁿ
13	D	CR		-	=	M	]	m	}	ì	Ø	¡		═	╡	ø	²
14	E	SO		.	>	N	^	n	~	Å	Pt	«		╬	╞	ε	■
15	F	SI		/	?	O	_	o		Å	ƒ	¤		╧	▌	∩	SP

Note:

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

Epson Character Set 2 (Turkey)

PC-853

Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á		└	╨	α	≡
1	1		DC1	!	1	A	Q	a	q	ü	æ	í		┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3	3		DC3	#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	4		DC4	$	4	D	T	d	t	ä	ö	ñ		─	╘	Σ	⌠
5	5			%	5	E	U	e	u	à	ò	Ñ		┼	╒	σ	⌡
6	6			&	6	F	V	f	v	å	û	Ğ		╞	╓	μ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	ğ		╟	╫	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	ı	¿		╚	╪	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐		╔	┘	θ	∙
10	A	LF		*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	¢	½		╦	╖	δ	√
12	C	FF		,	<	L	\	l	|	î	£	¼		╠	╕	∞	ⁿ
13	D	CR		-	=	M	]	m	}	ì	¥	¡		═	╡	ø	²
14	E	SO		.	>	N	^	n	~	Ä	Ş	«		╬	╞	ε	■
15	F	SI		/	?	O	_	o	DEL	Å	ş	»		╧	▌	∩	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 Character Set 2 (USA)

Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á	▒	└	╨	α	■
1	1		DC1	!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó	▒	┬	╥	Γ	≥
3	3	♥		#	3	C	S	c	s	â	ô	ú	▒	├	╙	π	≤
4	4	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	▒	─	╘	Σ	⌠
5	5	♣	§	%	5	E	U	e	u	à	ò	Ñ	▒	┼	╒	σ	⌡
6	6	♠		&	6	F	V	f	v	å	û	ª	▒	╞	╓	µ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º	▒	╟	╫	τ	≈
8	8	BS		(	8	H	X	h	x	ê	ÿ	¿	▒	╚	╪	Φ	°
9	9	HT		)	9	I	Y	i	y	ë	Ö	⌐	▒	╔	┘	θ	•
10	A	LF		*	:	J	Z	j	z	è	Ü	¬	▒	╩	┌	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	¢	½	▒	╦	▉	δ	√
12	C	FF		,	<	L	\	l	|	î	£	¼	▒	╠	∞	ⁿ
13	D	CR		-	=	M	]	m	}	ì	¥	¡	▒	═	▌	ø	²
14	E	SO		.	>	N	^	n	~	Ä	Pt	<<	▒	╬	▐	ε	■
15	F	SI		/	?	O	_	o		Å	ƒ	>>	▒	╧	▀	∩	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)

Dec.		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
0	0	∅	▶	SP	0	@	P	`	p	Ç	É	á	▒	└	╨	α	■
1	1	☺	◀	!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2	2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▒	┬	╥	Γ	≥
3	3	♥	‼	#	3	C	S	c	s	â	ô	ú	▒	├	╙	π	≤
4	4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	▒	─	╘	Σ	⌠
5	5	♣	§	%	5	E	U	e	u	à	ò	Ñ	▒	┼	╒	σ	⌡
6	6	♠	-	&	6	F	V	f	v	å	û	ª	▒	╞	╓	µ	÷
7	7	☻	↨	'	7	G	W	g	w	ç	ù	º	▒	╟	╫	τ	≈
8	8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	▒	╚	╪	Φ	°
9	9	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	▒	╔	┘	θ	•
10	A	◙	→	*	:	J	Z	j	z	è	Ü	¬	▒	╩	┌	Ω	·
11	B	♂	←	+	;	K	[	k	{	ï	¢	½	▒	╦	▉	δ	√
12	C	♀	∟	,	<	L	\	l	|	î	£	¼	▒	╠	∞	ⁿ
13	D	♪	↔	-	=	M	]	m	}	ì	¥	¡	▒	═	▌	ø	²
14	E	♫	▲	.	>	N	^	n	~	Ä	Pt	<<	▒	╬	▐	ε	■
15	F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	>>	▒	╧	▀	∩	SP

IBM Character Set 2 (Multilingual)

Dec.		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
0	0	NUL		SP	0	@	P	`	p	Ç	É	á	▒	└	ð	Ó	-
1	1		DC1	!	1	A	Q	a	q	ü	æ	í	▒	┴	Ð	ß	±
2	2		DC2	"	2	B	R	b	r	é	Æ	ó	▒	┬	Ê	Ô	‗
3	3	♥		#	3	C	S	c	s	â	ô	ú	▒	├	Ë	Ò	¾
4	4	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	▒	─	È	õ	¶
5	5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
6	6	♠		&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	7	BEL		'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	¸
8	8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	þ	°
9	9	HT		)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ù	¨
10	A	LF		*	:	J	Z	j	z	è	Ü	¬	▒	╩	┌	Û	·
11	B	VT	ESC	+	;	K	[	k	{	ï	ø	½	╗	╦	▉	Ù	¹
12	C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	ý	³
13	D	CR		-	=	M	]	m	}	ì	Ø	¡	¢	═	▌	Ý	²
14	E	SO		.	>	N	^	n	~	Ä	×	<<	¥	╬	▐	ì	¯
15	F	SI		/	?	O	_	o		Å	ƒ	>>	┐	¤	▀	´	SP

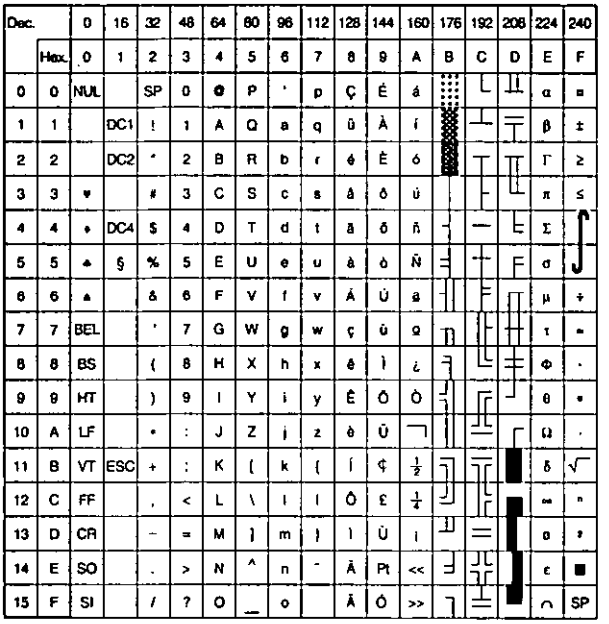
Note:

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

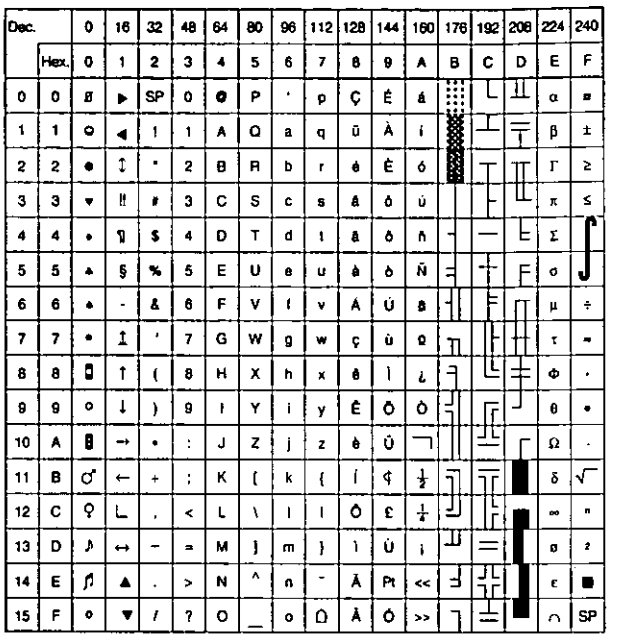
IBM All Character (Multilingual)

Dec.		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
0	0	∅	▶	SP	0	@	P	`	p	Ç	É	á	▒	└	ð	Ó	-
1	1	☺	◀	!	1	A	Q	a	q	ü	æ	í	▒	┴	Ð	ß	±
2	2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▒	┬	Ê	Ô	‗
3	3	♥	‼	#	3	C	S	c	s	â	ô	ú	▒	├	Ë	Ò	¾
4	4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	▒	─	È	õ	¶
5	5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
6	6	♠	-	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	7	☻	↨	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	¸
8	8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	þ	°
9	9	○	↓	)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ù	¨
10	A	◙	→	*	:	J	Z	j	z	è	Ü	¬	▒	╩	┌	Û	·
11	B	♂	←	+	;	K	[	k	{	ï	ø	½	╗	╦	▉	Ù	¹
12	C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	ý	³
13	D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	¢	═	▌	Ý	²
14	E	♫	▲	.	>	N	^	n	~	Ä	×	<<	¥	╬	▐	ì	¯
15	F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	>>	┐	¤	▀	´	SP

IBM Character Set 2 (Portugal)



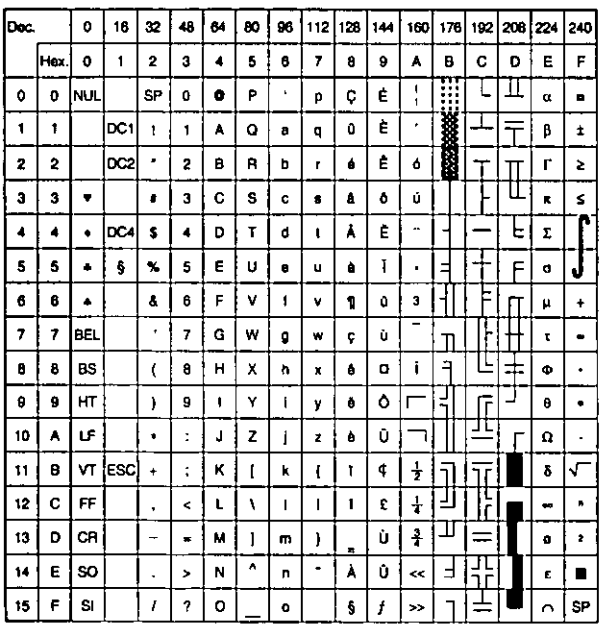
IBM All Character (Portugal)



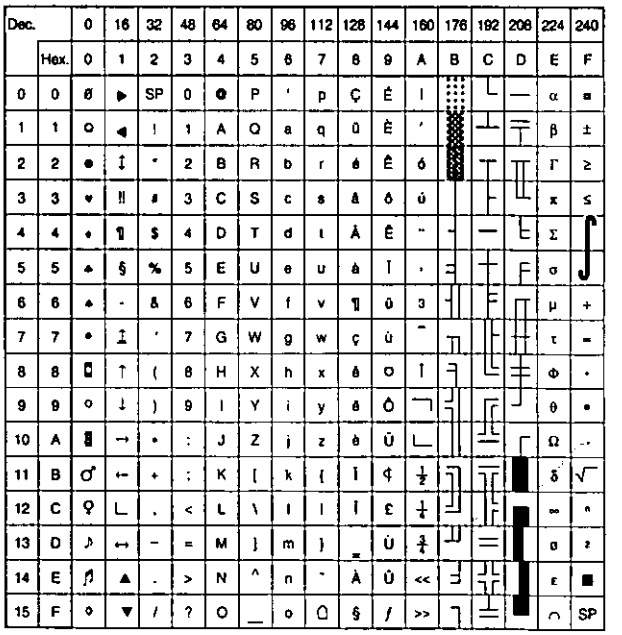
Note:

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

IBM Character Set 2 (Canada-French)



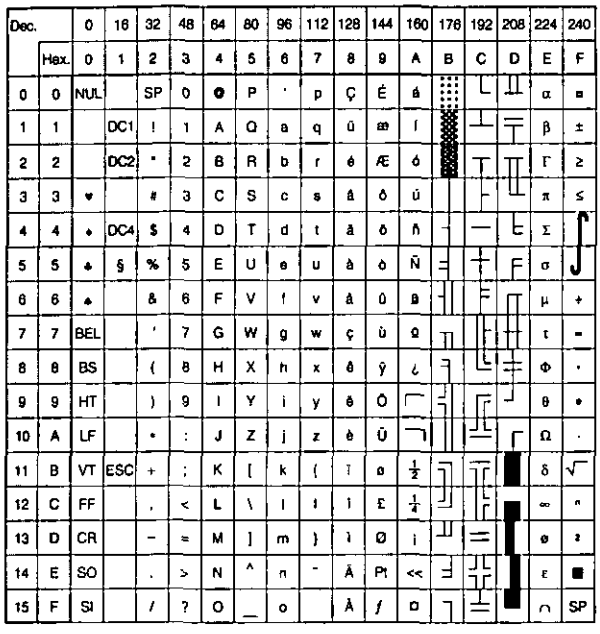
IBM All Character (Canada-French)



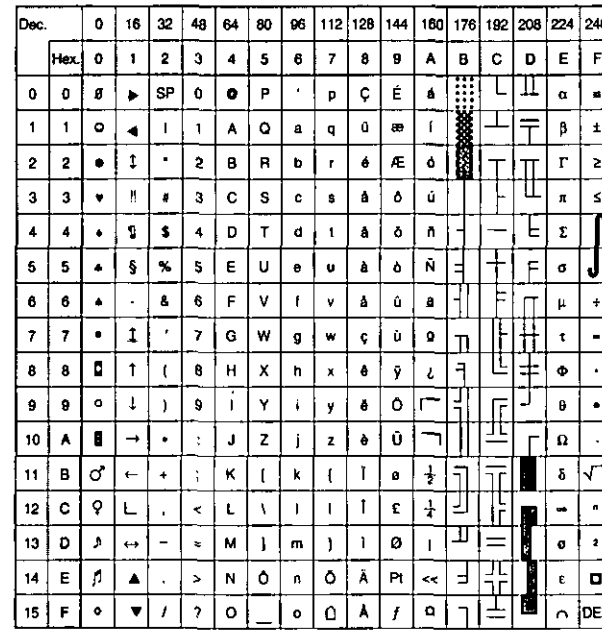
Note:

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

IBM Character Set 2 (Norway)



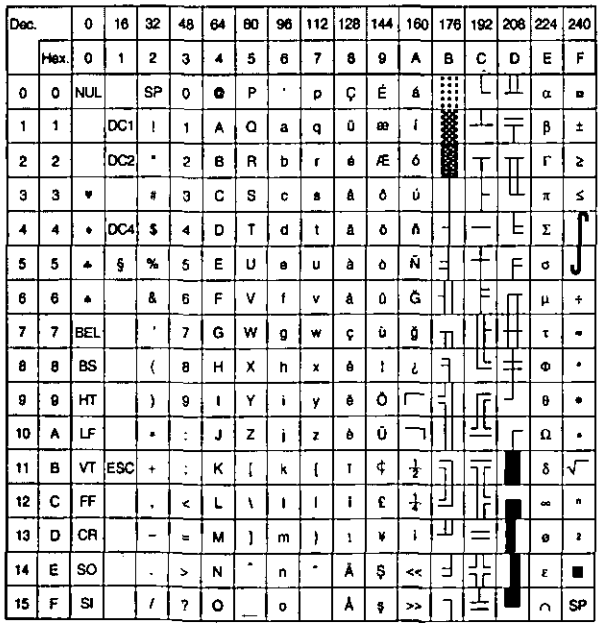
IBM All Character (Norway)



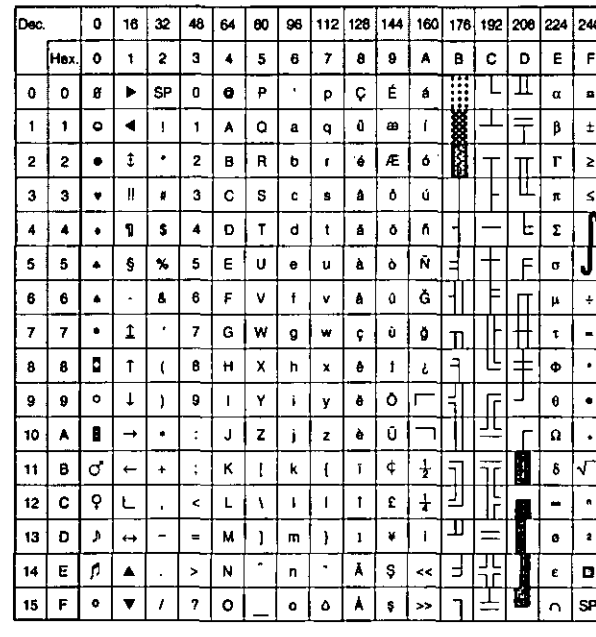
Note:

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

IBM Character Set 2 (Turkey)



IBM All Character (Turkey)



Note:

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

International Character Set

	n	35D 23H	36D 24H	64D 40H	91D 5BH	92D 5CH	93D 5DH	94D 5EH	96D 60H	123D 7BH	124D 7CH	125D 7DH	126D 7EH	155D 9BH	157D 9DH
USA	0	#	$	@	[	\	]	^	`	{	¦	}	~	¢	¥
FRANCE	1	#	$	à	°	ç	§	^	`	é	ù	è	¨	¢	¥
GERMANY	2	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	¢	¥
U.K.	3	£	$	@	[	\	]	^	`	{	¦	}	~	¢	¥
DENMARK I	4	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~	¤	Ø
SWEDEN	5	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	¢	¥
ITALY	6	#	$	@	°	\	é	^	ù	à	ò	è	ì	¢	¥
SPAIN I	7	Pt	$	@	¡	Ñ	¿	^	`	~	ñ	}	~	¢	¥
JAPAN	8	#	$	@	[	¥	]	^	`	{	¦	}	~	¢	¥
NORWAY	9	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü	ø	Ø
DENMARK II	10	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü	ø	Ø
SPAIN II	11	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú	¢	¥
LATIN AMERICA	12	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú	¢	¥
KOREA	13	#	$	@	[	₩	]	^	`	{	¦	}	~	¢	¥
LEGAL	64	#	$	§	°	'	"	¶	·	©	®	†	™	¢	¥

*1 *2

Note:

*1 These characters can be changed only in the Epson mode. In the IBM mode, International Character Set is set to USA and it cannot be changed.

*2 These characters are effective in Graphic Character Set 2 of both the Epson and IBM modes.

Glossary

AGM (Alternate Graphics Mode): AGM will allow you to select Epson graphics while in the IBM mode.

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.

Bidirectional printing: Processing speed is increased by bidirectional printing. That is, the printer prints right-to-left as well as in the normal left-to-right manner.

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.

Bit-image graphics: Graphics which are created through a series of dots printed in vertical columns.

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: The computer system stores characters and numbers as a numerical data. The code page is a table which is used to change them into the numerical data.

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 conditions or settings executed when the power is turned on, reset or initialized; and the other indicates the original settings when shipped from the factory. (FACTORY settings)

Dot matrix printer: An impact printer whereby wires (pins) strike the ribbon and subsequently a dot prints on the paper. The software in the printer supplies the commands which determine which pins are activated to form the appropriate character(s).

Dot per inch (DPI): A measure of resolution used for monitors and printers.

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 1/180″ (0.14 mm) between the first and second pass (in Epson ESC/P2 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.

Download character: Download character is a character which the user can design.

Draft: Draft is one of three print qualities available on this printer. Draft mode uses a minimum number of dots per character to maximize printing speed.

Driver: ☞ P. 109 "Printer drivers"

Emphasized printing: 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.

Emulation: Emulation means to operate like another printer.
KX-P3123 can emulate the Epson LQ-570 or the IBM Proprinter X24E.

Escape (ESC) sequence: "ESC" is a control code that begins most printer commands. The characters which follow the "ESC" are interpreted as command, rather than characters to print.

ESC/P2: An expanded level of commands for 24 and 48 pin dot matrix printers.

Fanfold paper: Fanfold paper has regularly spaced sprocket holes on the left and right sides and pages are separated by a perforation between each sheet. May also be known as computer paper or tractor paper.

FF (Form Feed): "FF" is a control code that advances the paper one page.

Fixed pitch printing: A type of printing whereby each characters is the same width and prints as equal intervals.

Font: All characters of a typeface having the same size, weight, style character table, typeface and rotation. Changing an attribute selects a new font.

Function: Function allows you to determine how the printer will operate.

Graphics: Groups of dots or characters that are used to create images, as opposed to text and numbers.

Graphics mode: A special mode of print in which only raster graphics printing is possible.

Hexadecimal: 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.

Horizontal motion index: A fixed distance to move horizontally when printing characters.

Initialization: Initialization means to reset the printer to the initial start up condition.

Interface: 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.

International character set: A set of characters defined by each country.

I/O: "I/O" is the symbolic notation for "Input/Output".

Italics: A font style in which the character slants to the right. Used for emphasis, this is sometimes called oblique.

Justification: The alignment of multiple lines of text along the left margin, right margin or both margins. When both margins are fustified, the term is full justification.

Letter Quality (LQ): LQ is one of three print qualities available on this printer. LQ mode increases the number of dots per character to improve the print quality but decreases the printing speed.

LF (Line Feed): "LF" is a control code that advances the paper one line.

Line spacing: The space between lines of type. Also called leading.

LSB: "LSB" is an acronym for "Least Significant Bit", and means the rightmost position in a binary number.

MACRO memory function: This feature allows the printer to easily save and recall a particular combination of functions, even if the power is turned off.

Margin: The area between the edge of the paper and the first or last print position; left, right, top or bottom margin.

Menu: Menu is a list of topics from which you can enter to select the desired conditions or settings.

Micro Line Feed: Micro Line Feed function allows you to feed the paper by one micro line (1/180"). (☞ P. 37)

MSB: "MSB" is an acronym for "Most Significant Bit", and means the leftmost position in a binary number.

Multipoint mode: The mode in which the printing of scalable fonts is possible.

OFF LINE: OFF LINE is the condition in which the printer cannot 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: An interface that transfers data one byte at a time.

Parity: Parity is a method for a computer and printer to check the accuracy of data transfer.

Perforation: Perforation indicates the tear position on the fanfold paper. (☞ P. 37)

Pitch: Pitch is the number of characters which will print in one inch. Pitch is equivalent to characters per inch (cpi).

Platen: Platen is the rubber roller which is a backing for the paper when printing.

Point size: A measure of character height used in typesetting. A point=1/72 of an inch.

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-P3123 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 character space in which a character is printed. A "w" will take up more space than an "i".

Protocol: Protocol is the set of rules permitting communication between a computer and printer when a serial interface (RS-232C) is used. It covers polarity, baud rate, parity, data length, start bit and stop bit.

Pull tractor: A paper feeding device that "pulls" continuous paper through the printer from the exit side.

Push tractor: A paper feeding device that "pushes" continuous paper through the printer from the loading side.

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.

Raster graphics: The method used to send graphics in one-dot high lines.

Reset: Returning to the printer's original settings.

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.

Scalable fonts: The user can alter the point size of a selected font to make the font larger or smaller.

Self test: Self test is a method for testing the operation of the printer. (☞ P. 35)

Serial interface: Transmitting data one bit at a time from computer to printer.

Skip perforation: Skip perforation means nothing is printed in a specified area before and after the page perforation.

String concatenation: This is the joining of two or more bytes of data into a single command.

Style: A font attribute which changes the apperance by printing the character on a slant. (Italic)

Super Letter Quality (SLQ): SLQ is one of three print qualities available on this printer. SLQ mode uses a maximum number of dots per character to improve the print quality more than LQ mode but decreases the printing speed less than LQ mode.

SUPER QUIET mode: SUPER QUIET mode is a helpful feature of this printer which reduces printing noise.

Top of Form: Top of Form is the first line position on the paper. This printer has the "Top of Form function", a helpful feature which loads the paper automatically to the designated position.

Typeface: All characters of a single, unified design at any size and rotation. Example: Roman, Prestige, etc.

Unidirectional printing: The printer prints left-to-right only. Printing speed is slow compared with bidirectional printing. This print method permits better vertical alignment.

User-defined characters: Also called download characters, these are custom characters defined within RAM.

Weight: A font attribute that determines the thickness of the lines creating the character. (Bold)

Windows: An operating environment which lies between the operating system (DOS) and an application, that controls the system devices.

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Options and Supplies

KX-PS13	RS-232C/Current Loop Serial Interface Board (19.2 K Bps)
KX-PS14	RS-232C/Serial Interface Board (9600 Bps)
KX-PT10	Auto Cut Sheet Feeder (Single Bin)
KX-P150	Ribbon Cassette (Black)
KX-P150C	Ribbon Cassette (4 Colors)
KX-PCK11	Color Kit (KX-P150C, Gear Unit, Motor Unit)

*** Each of the above options has its own Installation and Instruction Manuals.**

FOR USERS IN CONTINENTAL UNITED STATES ONLY

TECHNICAL SUPPORT CALLS

If you have read this manual and tried the troubleshooting procedures and you are still having difficulty please contact the store from which the unit was purchased.

You may also call the technical support telephone number which is operational during east coast business hours (9:00 AM to 5:00 PM).

The technical support number is: 1-800-222-0584
(Options and supplies: 1-800-346-4768)

Panasonic Communications & Systems Company,
Computer Products Division
Division of Matsushita Electric Corporation of America
Two Panasonic Way, Secaucus, New Jersey 07094

Panasonic Sales Company
Division of Matsushita Electric of Puerto Rico, Inc.
San Gabriel Industrial Park, 65th Infantry Avenue KM 9 5
Carolina, Puerto Rico 00630

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