

**Panasonic**

Impact Dot Matrix Printer

# Operating Instructions

Model No. **KX-P1131**



Please carefully read this manual and keep this documentation in a safe place for future reference.

**Thank you for purchasing the Panasonic KX-P1131 Impact Dot Matrix 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 the most popular software packages. Your application software should control the printer functions. In most cases, there will be no need to change the factory settings.



These instructions are subject to change without notice.

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**FOR USERS IN U.K.**

**IMPORTANT:  
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY**

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

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

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

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 5 AMP SOCKET.**


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

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

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

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

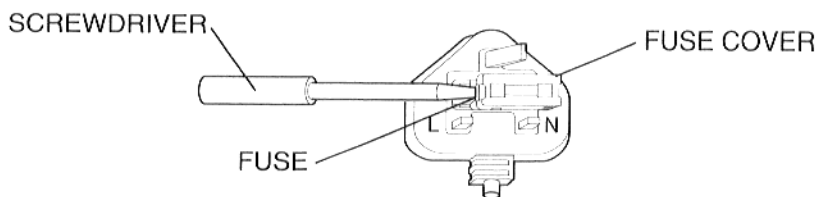
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

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

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

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

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



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The Setup Disk contains the following programs and informations.  
Please refer to this manual how to use.

- Printer Driver for Windows® 3.1\*1 ( P. 16)
- Printer Driver for Windows® 95\*2 ( P. 17)
- Control Panel Software Program ( P. 18)
- Command Reference Program ( P. 21)
- Character Set Tables ( P. 21)
- Proportional Spacing Tables ( P. 21)

\*1 Microsoft® Windows® operating system Version 3.1 (hereafter Windows 3.1)

\*2 Microsoft® Windows® 95 operating system (hereafter Windows 95)

# For Your Safety

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## General

### ***Warning***

- To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

### ***Caution***

- Do not attempt to repair the unit yourself. Refer servicing to qualified personnel.

## Power Source

### ***Warning***

- The power source voltage of this unit is listed on the nameplate. Only plug the unit into an outlet with the proper voltage.
- When you operate this equipment, the outlet should be near the equipment and accessible.
- To ensure safe operation the three-prong plug supplied must be inserted only into a standard three-prong AC outlet which is effectively grounded (earthed) through the normal wiring.
- Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Improperly wired extension cords are a major cause of fatalities.
- The fact that the equipment operates satisfactorily does not imply that the power point is grounded (earthed) and that the installation is completely safe. For your safety, if in any doubt about the effective grounding (earthing) of the power point, consult a qualified electrician.
- If the plug cannot be inserted into the AC outlet, contact a licensed electrician to replace the outlet with properly grounded (earthed) one. Do not defeat the purpose of the grounding (earthing) plug (ex. do not use a conversion plug).

# End-User License Agreement

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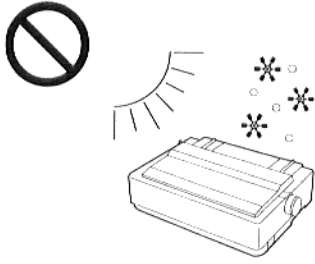

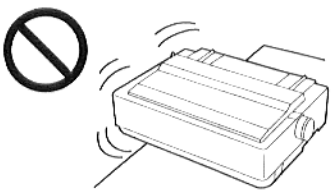
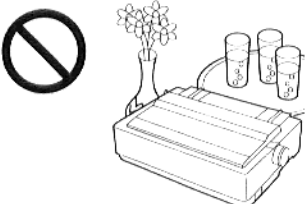
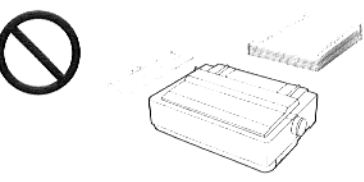
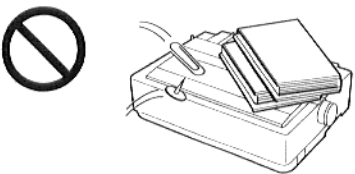
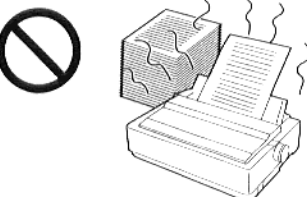
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# Cautions

To avoid machine malfunction, do not use the equipment under the following conditions:

|  |   |  |
|--|---|--|
|   | <ul style="list-style-type: none"><li>• Direct exposure to sunlight</li><li>• Extremely high or low temperature [temperature range: 10°C to 35°C (50°F to 95°F)]</li><li>• Extremely high or low humidity (humidity range: 30% to 80% RH)</li><li>• Condensation due to rapid change of temperature</li></ul> |  <ul style="list-style-type: none"><li>• Areas of poor ventilation</li><li>• Areas of high dust or chemical fume concentration (solvent etc.)</li></ul> |
|  <ul style="list-style-type: none"><li>• Unstable or unlevel surface</li><li>• Areas with extreme vibration</li></ul>   |  <ul style="list-style-type: none"><li>• Liquids near the equipment</li></ul>  |  <ul style="list-style-type: none"><li>• Without paper and a ribbon cassette installed when the printer is operating</li></ul>                          |
|  <ul style="list-style-type: none"><li>• Books, paper or other items on top of the printer</li><li>• Obstruction of the printhead movement while the printer is operating</li></ul> |  <ul style="list-style-type: none"><li>• Prolonged use without allowing the printhead time to cool</li></ul>   |  |

## ■Static Electricity Damage

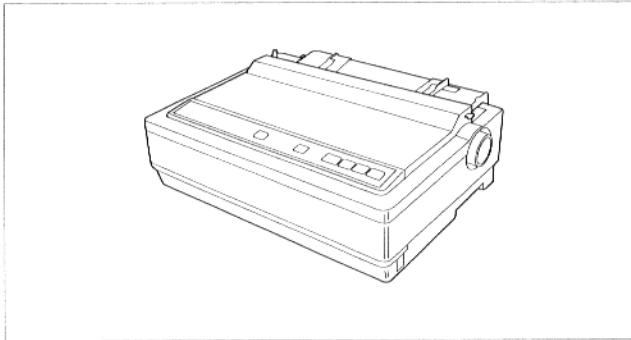
To prevent static electricity damage to parallel/serial interface and printhead, touch a grounded metal surface, such as the screw on the plate cover of an electrical outlet prior to touching the interface or printhead. (However, do not touch the printhead when it is hot.)

# Unpacking

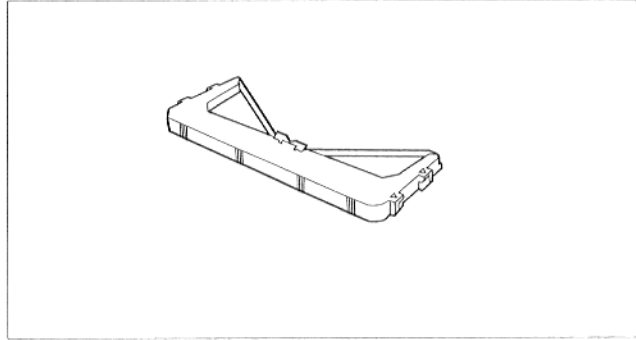
Having unpacked the printer, make sure none of the contents shown below are missing or damaged. Report damages or shortages to the store from which the unit was purchased.

**Note:**

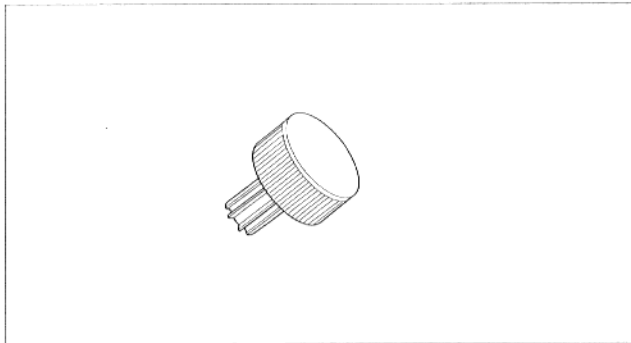
- Save the original carton and packing materials for future shipping and transporting of the unit. They have been specifically designed to protect the equipment during shipment.



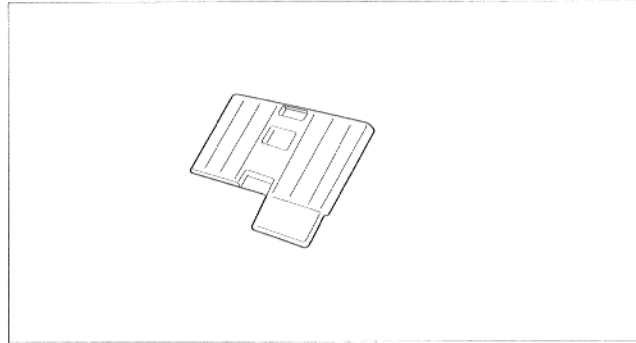
**Printer (KX-P1131)**



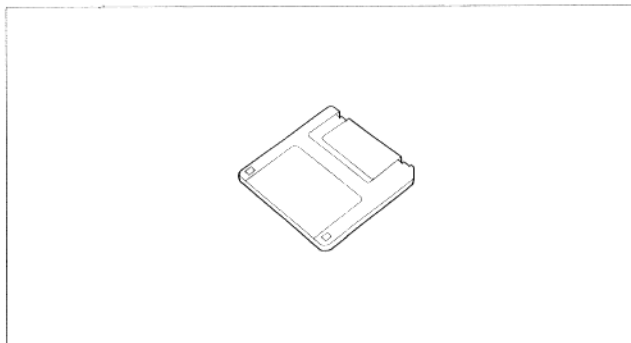
**Ribbon Cassette (KX-P181)**



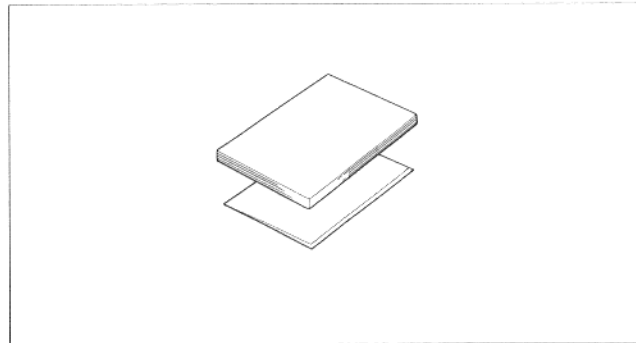
**Platen Knob**



**Extension Plate**



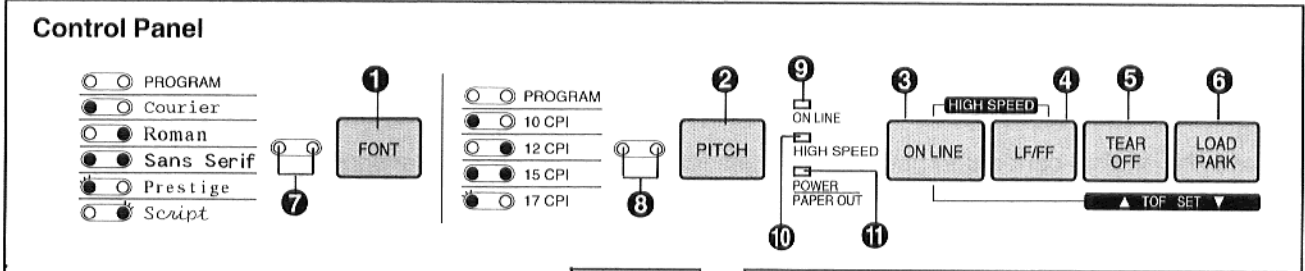
**Setup Disk**



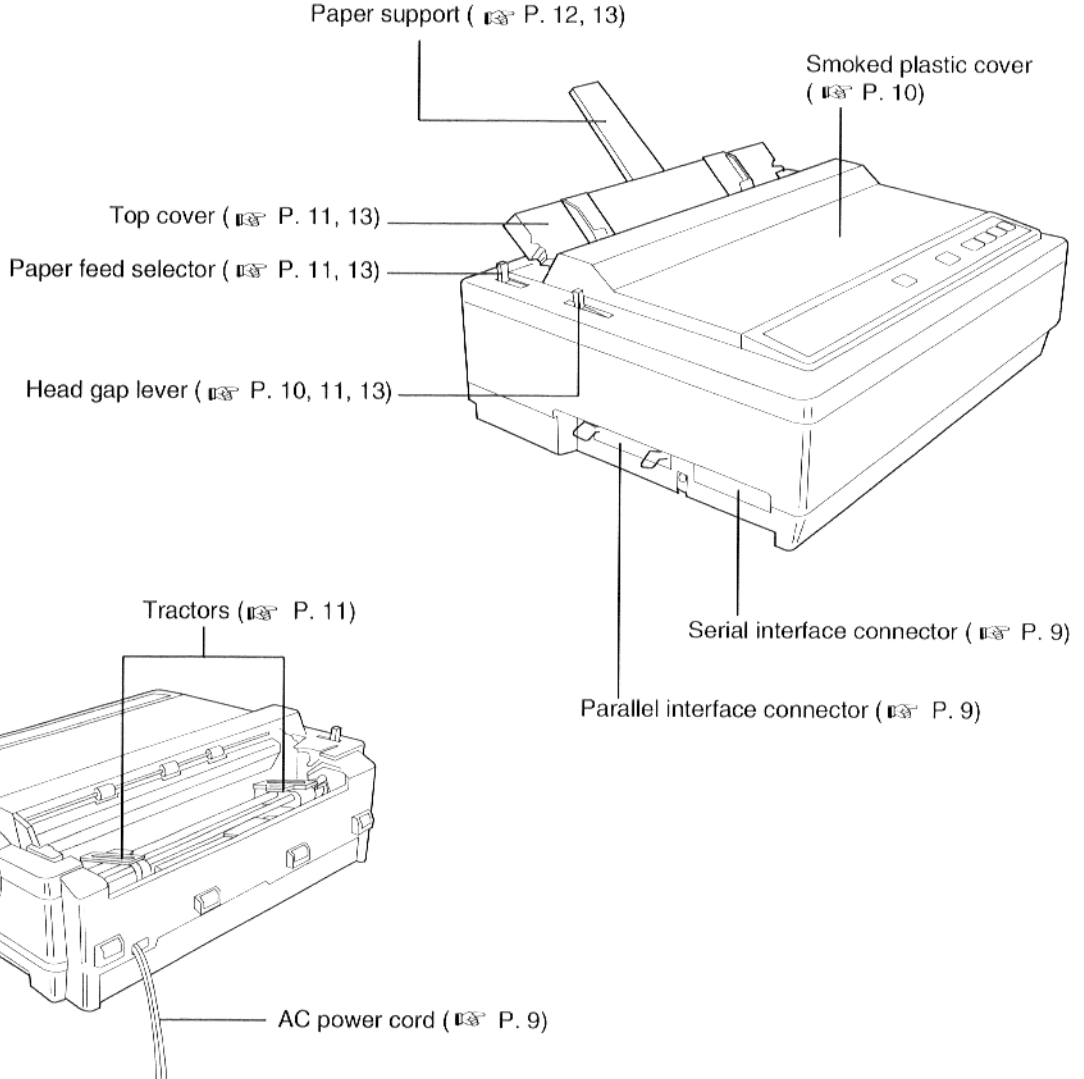
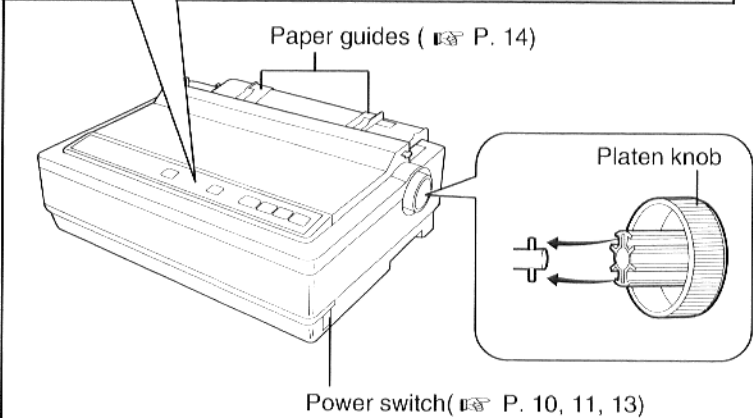
**Operating Instructions  
Quick Start Guide**

- Extension Plate is used for fanfold paper ( P. 12).
- The Setup Disk contains a Printer Driver for Windows 3.1 ( P. 16) and Windows 95 ( P. 17), a Control Panel Software program ( P. 18) and a Command Reference program ( P. 21).
- To use this Setup Disk, you need to have an IBM-PC or a compatible computer with 3.5" floppy disk drive.

# Parts of the Printer



- 1 FONT switch ( P. 22, 26, 28)
- 2 PITCH switch ( P. 22, 26, 28)
- 3 ON LINE switch ( P. 12, 13, 23, 24, 25, 26)
- 4 LF/FF switch ( P. 15, 23)
- 5 TEAR OFF switch ( P. 14, 24, 26, 28)
- 6 LOAD/PARK switch ( P. 24, 25, 26, 28)
- 7 FONT indicators ( P. 22, 27, 28)
- 8 PITCH indicators ( P. 22, 27, 28)
- 9 ON LINE indicator ( P. 12, 13, 26, 27)
- 10 HIGH SPEED indicator ( P. 23)
- 11 POWER/PAPER OUT indicator ( P. 25)

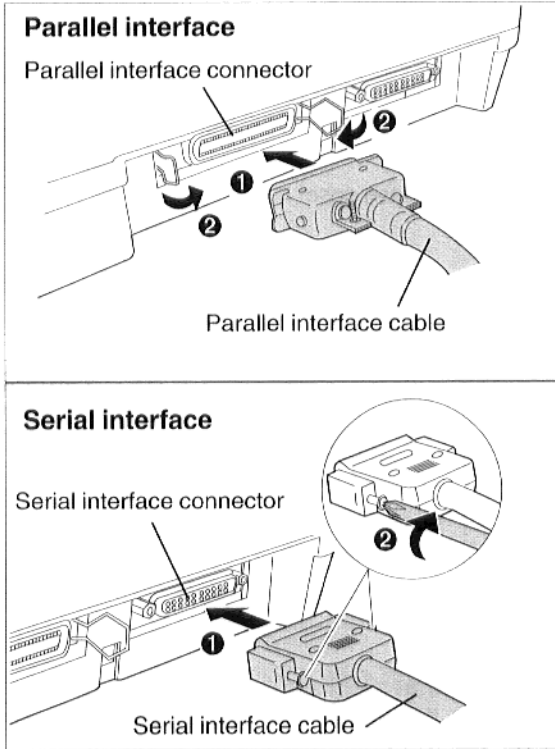




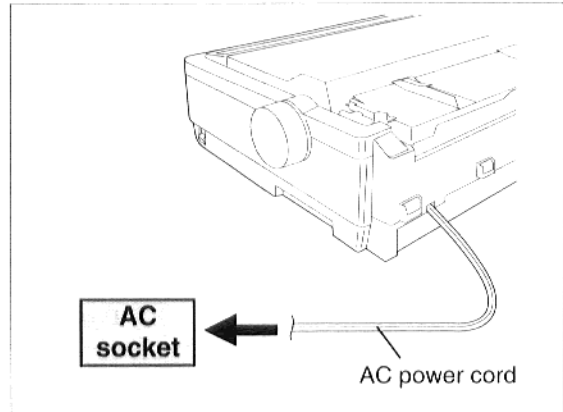
# Connecting to a Computer

**1** Turn the power off on both the printer and the computer.

**2** Attach the other end of the interface cable from your computer.



**3** Connect the AC power cord to a grounded AC socket.

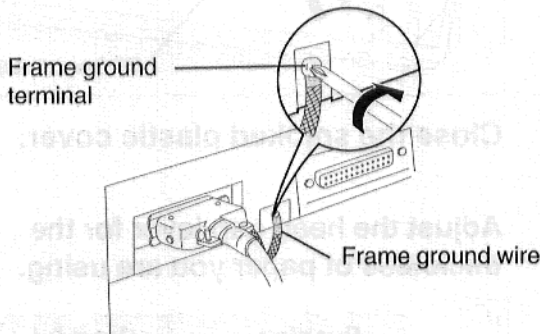


**Note:**

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

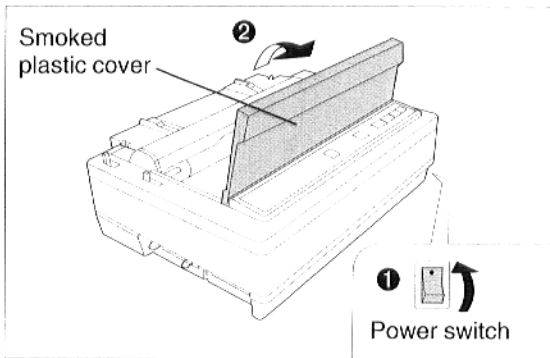
**Note:**

- Use a shielded cable 1.95 m (6'5") or less in length for both of parallel and serial. If you do not already have a interface cable, you will need to purchase one from your local computer store or dealer. For details, refer to "Interfacing" (P. 34).
- If the cable has a frame ground wire, connect it to the frame ground terminal.

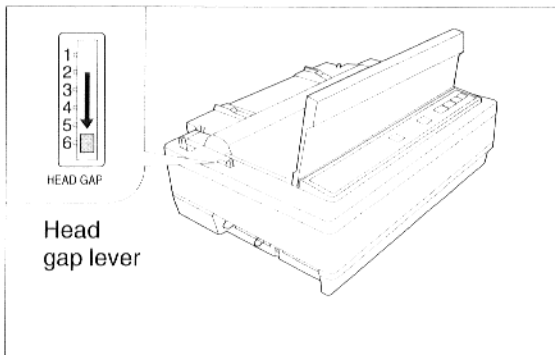


# Installing Ribbon Cassette

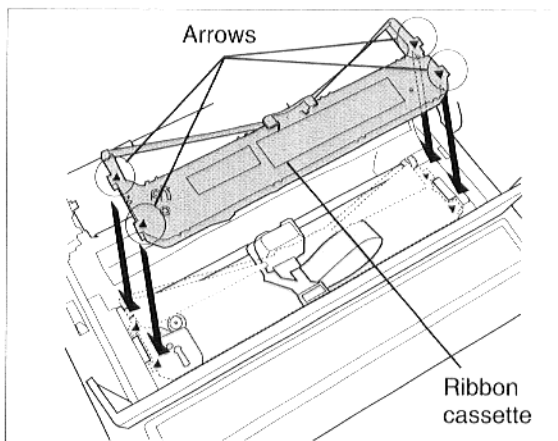
- 1 ① Turn the power on.  
② Open the smoked plastic cover.



- 2 Move the head gap lever to position "6".



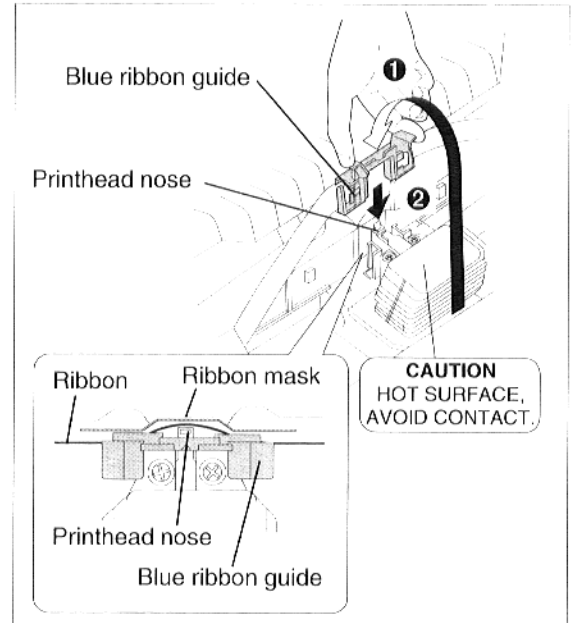
- 3 Install the ribbon cassette and push down 4 arrows until they click into place.



**Note:**

- Do not take off the blue ribbon guide from the ribbon.

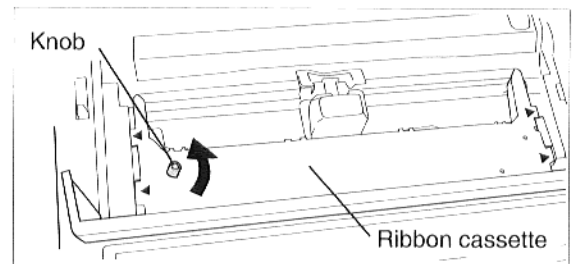
- 4 ① Lift the blue ribbon guide from the ribbon cassette.  
② Slide the blue ribbon guide between the printhead nose and the ribbon mask, and push it down.



**Note:**

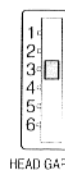
- If the ribbon does not insert easily between the printhead nose and the ribbon mask, rotate the knob on the ribbon cassette to reduce the slack.

- 5 Make sure the ribbon is not twisted and rotate the knob to remove any slack.



- 6 Close the smoked plastic cover.

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



| Position     | Used for                         |
|--------------|----------------------------------|
| 1 or 2       | Thinner sheets                   |
| 3, 4, 5 or 6 | Thick sheets or multi-part forms |

# Handling Paper

Your Panasonic printer offers two paper feed choices:  
 —Fanfold paper (Push tractor mode)  
 —Single sheets and envelopes (Friction mode)

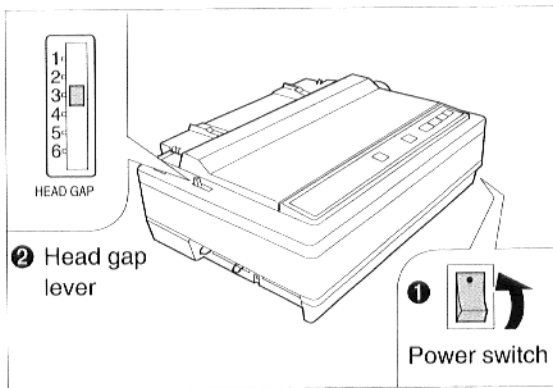
## Fanfold Paper (Push Tractor Mode)

### 1 Turn the power on.

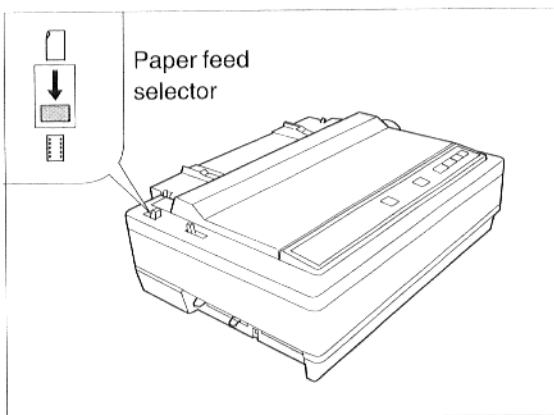
The PAPER OUT indicator will flash indicating that no paper is installed in the printer.

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

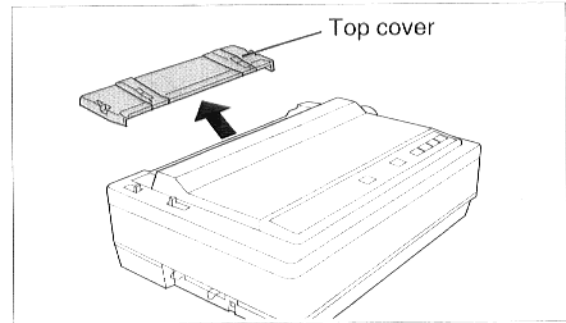
| Position     | Used for                         |
|--------------|----------------------------------|
| 1 or 2       | Thinner sheets                   |
| 3, 4, 5 or 6 | Thick sheets or multi-part forms |



### 2 Set the paper feed selector to the “ ” position.

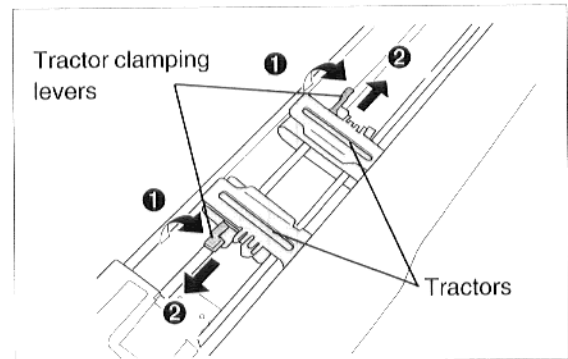


### 3 Lift off the top cover.

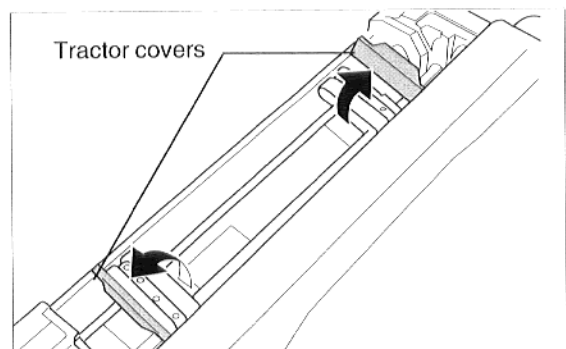


### 4 Unlock the tractors by pulling the tractor clamping levers forward.

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

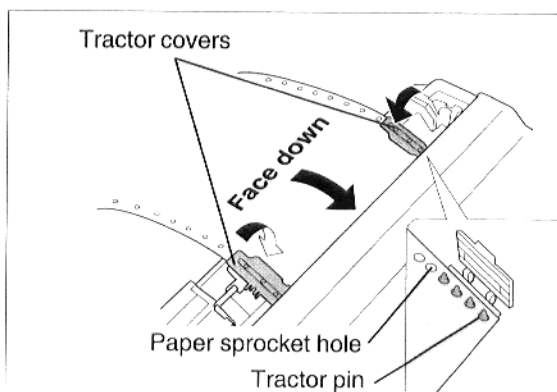


### 5 Raise the tractor covers.

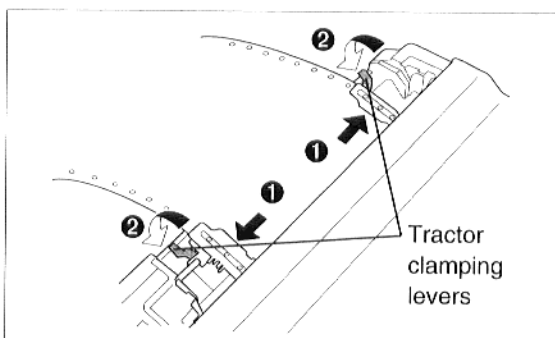


# Handling Paper

- 6** Align the paper sprocket holes with the tractor pins, then close the tractor cover.



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



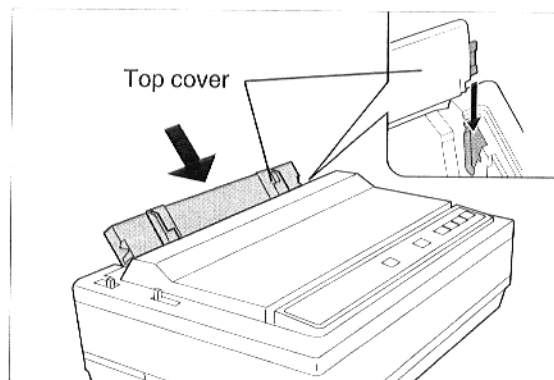
**Note:**

- Make sure the paper is straight.

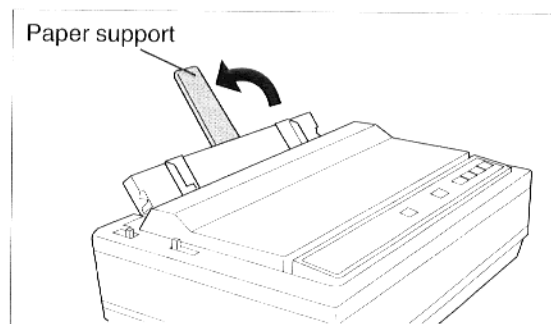
- 8** Press **LOAD/PARK**.

This will load the paper to the first print line.

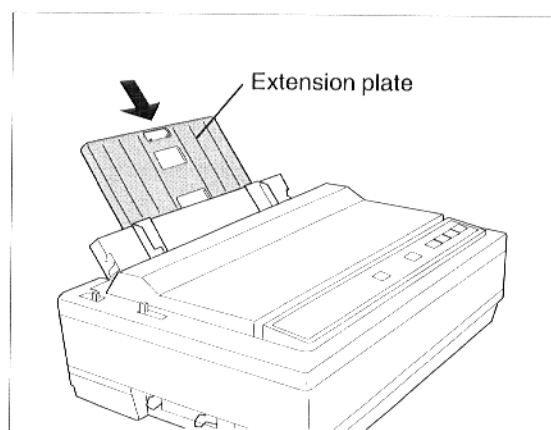
- 9** Place the top cover along the groove diagonally.



- 10** Raise the paper support.



- 11** Insert the paper support into the slot of the extension plate until it stops.



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

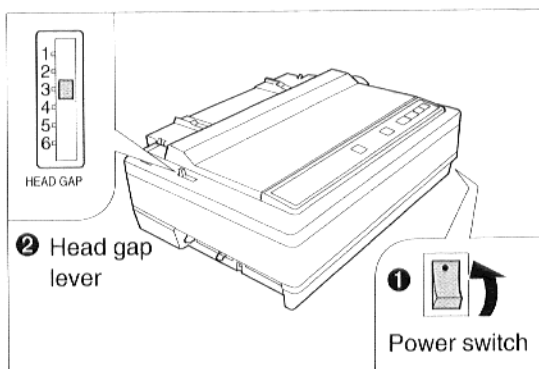
## Single Sheets and Envelopes (Friction Mode)

### 1 Turn the power on.

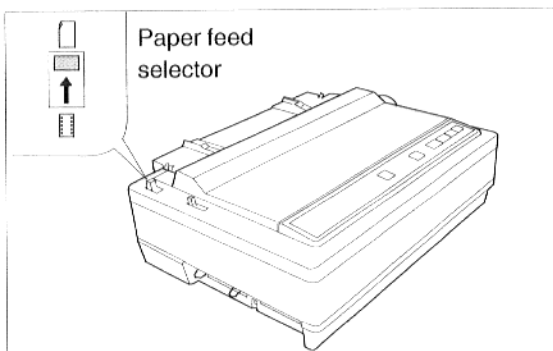
The PAPER OUT indicator will flash indicating that no paper is installed in the printer.

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

| Position     | Used for                  |
|--------------|---------------------------|
| 1 or 2       | Thinner sheets            |
| 3, 4, 5 or 6 | Thick sheets or envelopes |

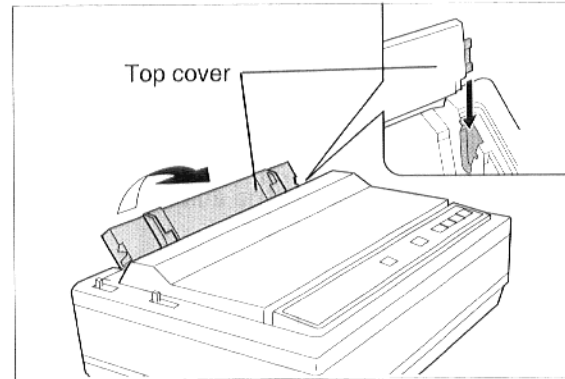


### 2 Set the paper feed selector to the “ ” position.

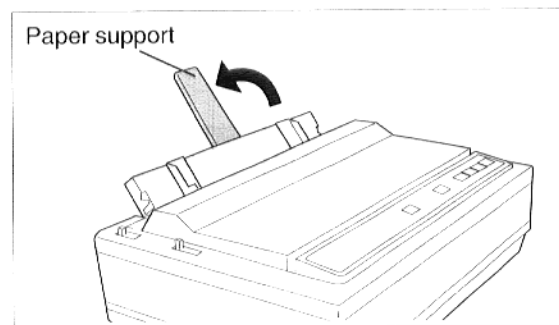


### 3 Raise the top cover.

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



### 4 Raise the paper support.



#### Note:

- If the extension plate is already installed ( P. 12), it does not need to be removed.

# Handling Paper

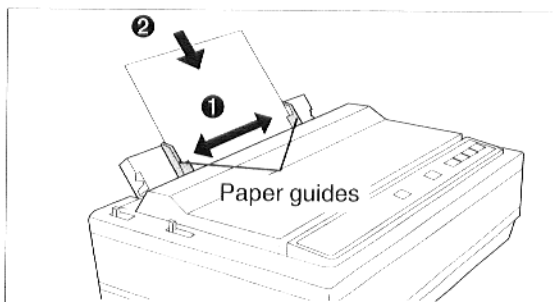
- 5 ① **Separate the paper guides to the approximate width of your paper or envelope.**

**Note:**

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

- ② **Insert a sheet of paper through the paper guides.**

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



**Note:**

- To disable Auto Loading, turn it OFF in the INSTALL Menu on your Setup Disk ( P. 18-20) or by using the Control Panel ( P. 26-27).
- If Auto Loading is disabled, you must press **LOAD/PARK** to load paper.
- If you need to align the paper horizontally or vertically, set the paper feed selector to "⌋". This releases the paper and allows the paper to be positioned manually as required. Set the selector back to "⌋" before printing.

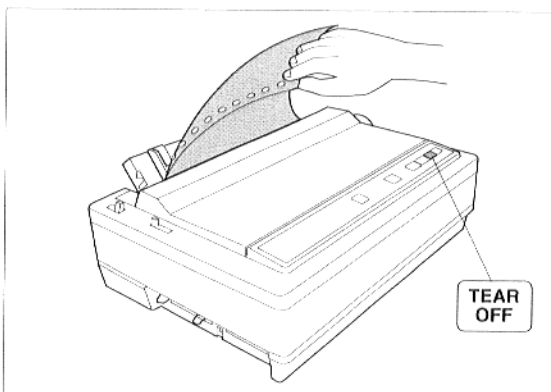
- 6 **If the ON LINE indicator is not lit, press **ON LINE** to get ready to print.**

## Tearing off Paper

With fanfold paper installed, this function allows you to advance your paper to the tear position. After tearing off the page you can return your paper to the first printer line by pressing **TEAR OFF** again. If **TEAR OFF** is not pressed a second time, the printer will automatically reverse to the first print line upon receiving data from the computer.

- 1 **Press **TEAR OFF** to advance the paper to the tear position.**
- 3 **Press **TEAR OFF** to reverse the paper back to the first print line.**

- 2 **Tear off the page.**



# Self Test / Printer Driver Selection

## Self Test

The printer has a self test feature which allows you to test the printer. When activated, this feature will print 5 lines of each resident font. When complete, it will return to the draft font and continue for approximately 20 minutes.

- 1 Install the ribbon cassette and paper, then turn the power off** ( P. 10-14).
- 2 While pressing **LF/FF** , turn the power on, then release.**
- 3 Once you see that the printer is functioning properly, you may turn the power off during the self test, or you may run the entire test.**

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

## Printer Driver Selection

This procedure is the final step before printing and is performed in your application software program. The steps will vary, depending on the software program. Consult your software package for proper procedures. The Panasonic KX-P1131 will be your first choice. However, if the Panasonic KX-P1131 printer is not listed in your software, you must select an alternative from the following table.

### Note:

- If using Microsoft Windows 3.1 or Windows 95, you will need to install a Windows printer driver. These drivers are located on the Setup Disk supplied with your printer. Proceed to Installing the Setup Disk on pages 16-17 for the installation procedure.

**Printer Selections (in order of priority)**

|                       |
|-----------------------|
| Panasonic KX-P1131    |
| Epson LQ-300          |
| Panasonic KX-P1121    |
| Panasonic KX-P2023    |
| Panasonic KX-P1123    |
| Panasonic KX-P1124    |
| Epson LQ series       |
| IBM Proprinter X24E * |
| IBM Proprinter X24 *  |

\* If selecting the IBM Proprinter X24E or X24 in your software, printer emulation must also be changed through the Setup Disk ( P. 18-20) or using the Control Panel ( P. 26-27).

# Installing the Software

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

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

The following steps will automatically create a directory called P1131 and copy Control Panel Software (CPS1131.EXE) and Command Reference utility (CMDREF.EXE) from the Setup Disk to your C Drive. (You can change the directory and drive.)

## For DOS

| Program                   | Function   |
|---------------------------|--|
| Control Panel Software    | Allows you to view and change the printer settings on the computer screen.                   |
| Command Reference utility | Allows you to access a detailed explanation of each software command on the computer screen. |

For installation, follow the steps below.

- 1 Insert the Setup Disk into drive A (or B).
- 2 Type A: (or B:) and press **Enter**.
- 3 Type SETUP and press **Enter**.
- 4 Follow the instructions on your computer screen.

## For Windows 3.1

| Program                   | Function  |
|---------------------------|---|
| Printer Driver            | A printer driver is the part of the software that allows the software to communicate with the printer via the interface in use. |
| Control Panel Software    | Allows you to view and change the printer settings on the computer screen.  |
| Command Reference utility | Allows you to access a detailed explanation of each software command on the computer screen.                                    |

For installation, follow the steps below.

- 1 Start Windows 3.1
- 2 Insert the Setup Disk into drive A (or B).
- 3 Click **File** from the Program Manager window.
- 4 Click **Run...**.
- 5 Type A:\SETUP (or B:\SETUP) and then press **Enter** (or click **OK**).
- 6 Follow the instructions on your computer screen.



## For Windows 95

### For Printer Driver

| Program        | Function  |
|----------------|---|
| Printer Driver | A printer driver is the part of the software that allows the software to communicate with the printer via the interface in use. |

For installation, follow the steps below.

- 1 Insert the Setup Disk into drive A (or B).
- 2 Click **Start**, point to "Settings" and "Printers", then click.
- 3 Double click **Add Printer**, and click **Next**.
- 4 When the option "Local printer" or "Network printer" appears, select **Local printer** then **Next**.
- 5 Click **Have Disk**, **OK**.
- 6 Select your Panasonic printer model.
- 7 Click **Next**.
- 8 Click **Next** to set up.
- 9 Select "Yes" and click **Next**.
- 10 Click **Finish**.
- 11 Follow the instructions on your computer screen.

### For Utilities

| Program                   | Function   |
|---------------------------|--|
| Control Panel Software    | Allows you to view and change the printer settings on the computer screen.                   |
| Command Reference utility | Allows you to access a detailed explanation of each software command on the computer screen. |

For installation, follow the steps below.

- 1 Start computer using Windows 95.
- 2 Click **Start**, point to "Run..." and click.
- 3 Type A:\SETUP (or B:\SETUP) and then press **Enter** (or click **OK**).
- 4 Follow the instructions on your computer screen.

# Using the Software

## Control Panel Software Program

The printer allows you to select 42 initial setup items shown in the table below by using the Control Panel Software program.

**The printer has been factory set to operate with most of the popular software packages. If no changes are required, you should be ready to print. In most cases there will be no need to change the initial setup items.**

You can verify the current settings by pressing **F5** ( P. 20) after running the Control Panel Software program. You can also verify the factory and current settings by turning the power on while pressing **PITCH** + **ON LINE**.

| Menu             | Item              | Menu                            | Item                 |
|------------------|-------------------|---------------------------------|----------------------|
| PRINT STYLE      | FONT *1           | CHARACTER SET                   | CHARACTER SET        |
|                  | PITCH             |                                 | COUNTRY              |
|                  | POINT SIZE *2     |                                 | CODE PAGE            |
| EMULATION        | EMULATION         | INSTALL                         | AGM/IBM              |
| PAGE FORMAT      | LINE/INCH         |                                 | AUTO CR/IBM          |
|                  | PAGE LENGTH       |                                 | AUTO LF              |
|                  | TOP MARGIN        |                                 | AUTO LOADING         |
|                  | BOTTOM MARGIN     |                                 | PAPER OUT DETECT     |
|                  | LEFT MARGIN       |                                 | TEAR OFF             |
|                  | RIGHT MARGIN      |                                 | CSF MODE *3          |
|                  | CTR PRINTHEAD     |                                 | BUFFER CONTROL *4    |
| PRINT MODE       | GRAPHIC DIRECTION |                                 | AUTO ON LINE         |
|                  | TEXT DIRECTION    |                                 | AUTO FEED XT CONTROL |
| TEXT ENHANCEMENT | BOLD              | INTERFACE                       | INTERFACE            |
|                  | DOUBLE HIGH       |                                 | DATA LENGTH          |
|                  | DOUBLE STRIKE     |                                 | BAUD RATE *5         |
|                  | DOUBLE WIDE       |                                 | PARITY *5            |
|                  | ITALICS           |                                 | PROTOCOL *5          |
|                  | OUTLINE           | T.O.F. (Top of Form)<br>SETTING | TRACTOR              |
|                  | SHADOW            |                                 | FRICTION             |
|                  | ZERO FONT         |                                 | CUT SHEET FEEDER *3  |

\*1 -SC sequences are displayed only when one of the following CODE PAGE is selected: U.S.A., Multilingual, Portugal, Canada French, Norway, Turkey.

\*2 displayed only when - SC sequences are selected in FONT.

\*3 operational when using the optional Auto Cut Sheet Feeder (KX-PT12).

\*4 Download font function is disabled when ALL is selected.

\*5 displayed when AUTO or SERIAL is selected in INTERFACE.

### Note:

- This program communicates between printer and computer. Before running this program under Windows 3.1 or Windows 95, be sure printing is completed.

To recall the programs, follow the steps below.

## <For DOS>

- 1\* At your C:\prompt, type CD P1131 and press **Enter**.
- 2 Type CPS1131 and press **Enter**.

## <For Windows 3.1>

- 1 Select **Run** from the File menu.
- 2 Type C:\P1131\CPS1131 and press **Enter** (or click **OK**).

## <For Windows 95>

- 1 Click **Start**, point to "Run..." and click.
- 2 Type C:\P1131\CPS1131 and press **Enter** (or click **OK**).

\* If you changed the directory when installing utilities for DOS, select your changed directory and press **Enter**.

### Note:

• If you want to run the Control Panel Software program using the Setup Disk, follow the steps below.

1. Insert your Setup Disk into drive A (or B).

#### <For DOS>

2. ① Type A: (or B:) and press **Enter**.
- ② Type CD DOS and press **Enter**.
- ③ Type CPS1131 and press **Enter**.

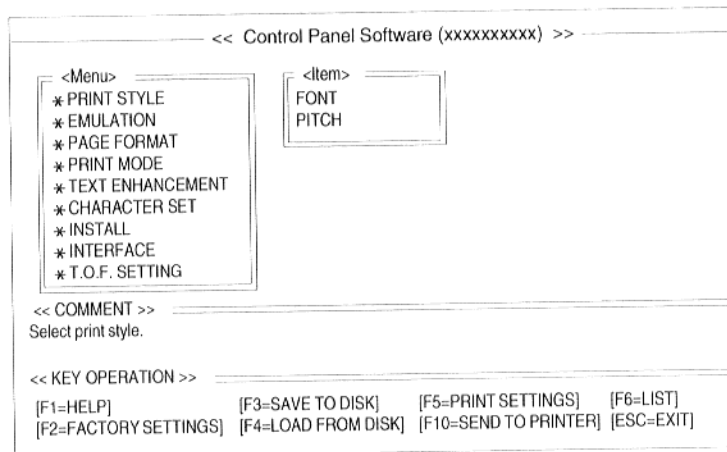
#### <For Windows 3.1>

2. ① Select **Run** from the File menu.
- ② Type A:\DOS\CPS1131 (or B:\DOS\CPS1131).
- ③ Press **Enter** (or click **OK**).

#### <For Windows 95>

2. ① Click **Start**, point to "Run..." and click.
- ② Type A:\DOS\CPS1131 (or B:\DOS\CPS1131).
- ③ Press **Enter** (or click **OK**).

- 3 The first screen is an introduction to the operation of the Control Panel Software program. Please read it through and press any key to continue. (If your display is monochrome, press "M" key.)



- 4 The <Menu> window will be highlighted.

# Using the Software

## Note:

You can proceed through the Control Panel Software program using a computer mouse or your arrow keys.

### 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 the previous window.

- **TAB** / **SHIFT** + **TAB** to move the cursor in [SAVE TO DISK] and [LOAD FROM DISK] windows.

### Using the mouse:

- Highlight the selection and click the left mouse button.

|                    |                  |  |
|--------------------|------------------|--|
| F1                 | HELP             | displays explanation of the functions                          |
| F2 * <sup>1</sup>  | FACTORY SETTINGS | resets to the factory settings                                 |
| F3                 | SAVE TO DISK     | saves the setting as a file* <sup>2</sup> to the Disk          |
| F4                 | LOAD FROM DISK   | loads your desired setting saved using <b>F3</b> from the Disk |
| F5 * <sup>3</sup>  | PRINT SETTINGS   | prints out the current settings                                |
| F6                 | LIST             | displays the current setting list                              |
| F10 * <sup>3</sup> | SEND TO PRINTER  | sends the settings to the printer                              |
| ESC                | EXIT             | exits the Control Panel Software program                       |

\*<sup>1</sup> If you want to reset the printer settings to the factory settings when using the Control Panel Software program, press **F2** to recall the factory settings and then press **F10** to send the settings to the printer.

\*<sup>2</sup> “\*.DAT” appears in the File Name position. Delete the \* and enter a file name (up to 8 characters).

\*<sup>3</sup> When sending the data through the Serial Interface (or Parallel Interface), change the option items (INTERFACE and PORT) to the required setting. (ex; INTERFACE)

1. Press **↑** to highlight PARALLEL (or SERIAL) and press **Enter**.
2. Press **↓** to highlight SERIAL (or PARALLEL) and press **Enter**.

## Command Reference Program

The Command Reference program allows you to access a detailed explanation of each software command on the screen. Each displayed explanation can be printed out if required.

**Note:**

- You can print the **Character Set Tables**. On the SELECT COMMAND screen, press **[C]**. Then select your desired table and press **[Enter]**.
- If 7 bit is selected for Data Length, you cannot print the command lists and character set tables.
- There is a list of Proportional Spacing Tables after the software commands lists. If you want to see a proportional spacing table, select your desired table and press **[Enter]**.

To recall the programs, follow the steps below.

**<For DOS>**

- 1\* At your C:\prompt, type CD P1131 and press **[Enter]**.
- 2 Type CMDREF and press **[Enter]**.

**<For Windows 3.1>**

- 1 Select **[Run]** from the File menu.
- 2 Type C:\P1131\CMDREF and press **[Enter]**. (or click **[OK]**).

**<For Windows 95>**

- 1 Click **[Start]**, point to "Run..." and click.
- 2 Type C:\P1131\CMDREF and press **[Enter]** (or click **[OK]**).

\* If you changed the directory when installing utilities for DOS, select your changed directory and press **[Enter]**.

**Note:**

- If you want to run the Command Reference program using the Setup Disk, follow the steps below.

1. Insert your Setup Disk into drive A (or B).

**<For DOS>**

- 1 Type A: (or B:) and press **[Enter]**.
- 2 Type CD DOS and press **[Enter]**.
- 3 Type CMDREF and press **[Enter]**.

**<For Windows 3.1>**

- 1 Select **[Run]** from the File menu.
- 2 Type A:\DOS\CMDREF (or B:\DOS\CMDREF).
- 3 Click **[OK]** (or press **[Enter]**).

**<For Windows 95>**

- 1 Click **[Start]**, point to "Run..." and click.
- 2 Type A:\DOS\CMDREF (or B:\DOS\CMDREF).
- 3 Click **[OK]** (or press **[Enter]**).

3 The first screen is an introduction to the operation of the Command Reference program. Please read it through and press any key to continue. (If your display is monochrome, press "M" key.)

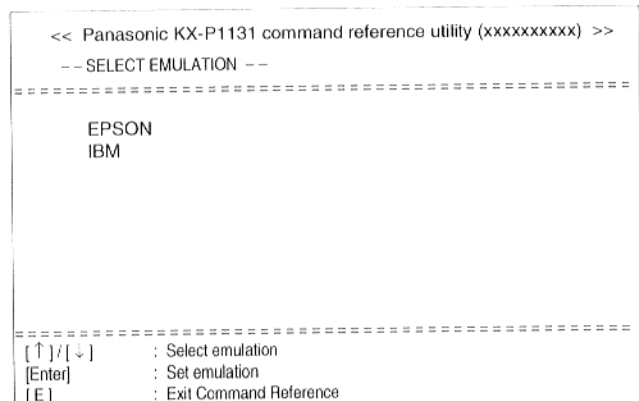
4 Select the desired emulation and press **[Enter]** (or click **[OK]**).

The commands list will be displayed.

5 Select the desired command and press **[Enter]** (or click **[OK]**).

The detailed explanation of the command will be displayed.

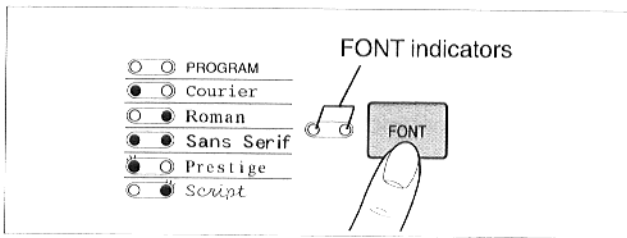
6 Press **[E]** to exit Command Reference.



# Using the Control Panel

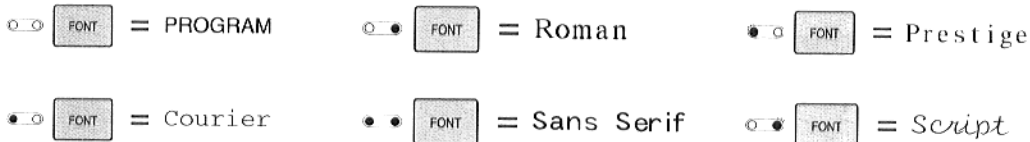
## Selecting a Character Font

This printer contains resident fonts which are accessible through the Control Panel. You can select any one of the character fonts by pressing the FONT switch on the Control Panel.



- Press and release **FONT**.

The combination of FONT indicators indicates the current character font selected, as shown on the Control Panel.



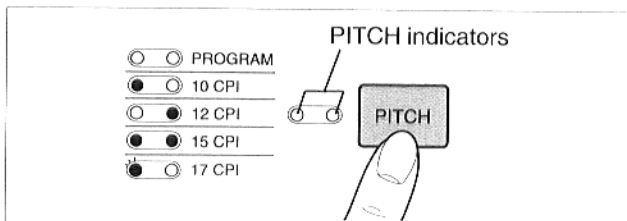
●=light is lit      ○=light is out      ●=light is blinking

### Note:

- You must be in PROGRAM (both FONT indicators are off) to allow your software to control your font selection.

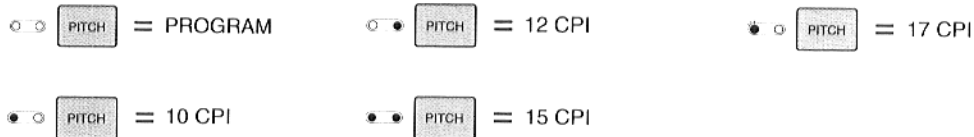
## Selecting a Character Pitch

This printer contains resident pitches which are accessible through the control panel. You can select any one of the character pitches by pressing the PITCH switch on the control panel.



- Press and release **PITCH**.

The combination of PITCH indicators indicates the current character pitch selected, as shown on the Control Panel.



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

### Note:

- You must be in PROGRAM (both PITCH indicators are off) to allow your software to control your pitch selection.

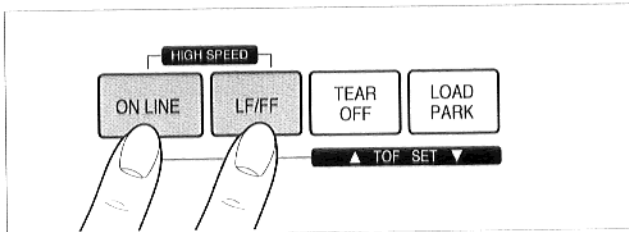
## High Speed Mode

The High Speed mode is a feature for doubling the print speed only when LQ Font and one of the 120 dpi, 180 dpi or 360 dpi of 24-pin bit image are selected.

**Note:**

- When enabled, this feature will lower the print density.

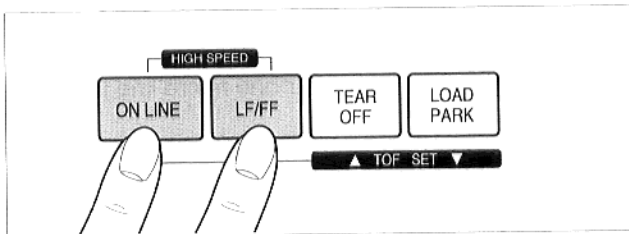
### Turning on the High Speed mode:



While pressing **ON LINE**, press **LF/FF**.

The HIGH SPEED indicator is on.

### Turning off the High Speed mode:

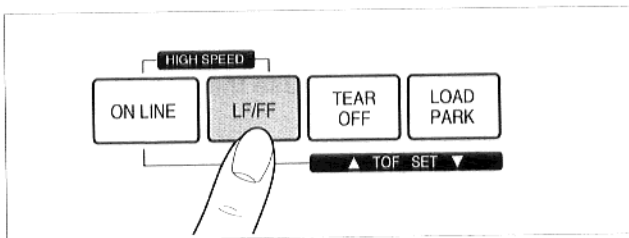


While pressing **ON LINE**, press **LF/FF**.

The HIGH SPEED indicator is off.

## Line Feed / Form Feed (LF/FF)

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.



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

With paper installed, holding **LF/FF** moves the printhead to the center and advances the paper to the top of the next page.

**Note:**

- When pressing **LF/FF**, the amount of paper which is fed is determined by the current setting for lines per inch as specified through the Control Panel Software program, control panel (Initial Setup mode) or your application software.

# Using the Control Panel

## Top of Form Function (TOF SET)

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.

You can adjust the Top of Form position through the Control Panel Software program ( P. 18), or using Micro Line Feed or Reverse Micro Line Feed ( below) from the Control Panel within 125 mm (5") from the top of your paper.

### Note:

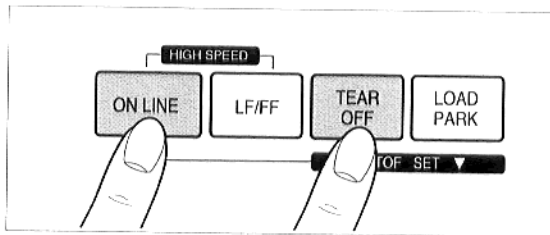
- Do not rotate the platen knob, otherwise the printer will not be able to count the number of lines properly.
- All adjustments must be made on the first sheet. If you decide to change the setting and save it, remove the paper from the tractors, then reset and reload the paper.

**1** If necessary, redefine the page length of the paper you are using through the Control Panel Software program ( P. 18-20), Control Panel ( P. 26-27) or your application software.

**2** (Micro Line Feed)

While pressing **ON LINE**, press **TEAR OFF**.

This advances the paper one micro line [0.14 mm (1/180")].

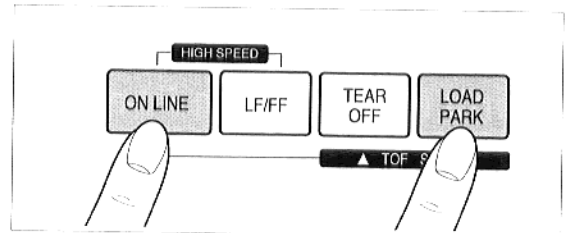


(Reverse Micro Line Feed)

While pressing **ON LINE**, press **LOAD/PARK**.

This reverse the paper one micro line [0.14 mm (1/180")].

The printer cannot reverse the paper past the printable area ( P. 33 "Printing Area").



**3** At your desired position within 125 mm (5") from the top of your paper, release the switches.

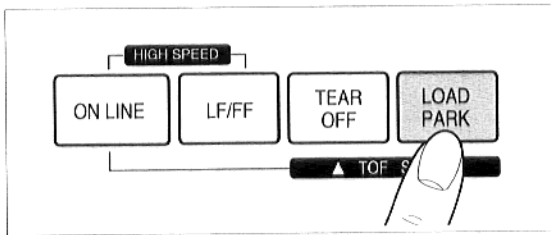
The paper position will be stored automatically as the new Top of Form position.



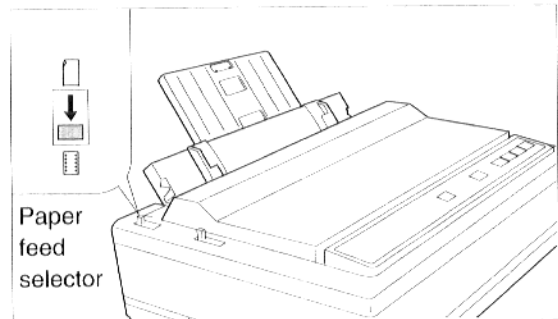
## Paper Parking **LOAD/PARK**

This function moves the fanfold paper to the park position, enabling you to use single sheets or envelopes without removing or wasting your fanfold paper.

- 1 Tear off the printed page(s) of the fanfold paper being used ( P. 14).
- 2 Press **LOAD/PARK** to reverse the fanfold paper to the park position.

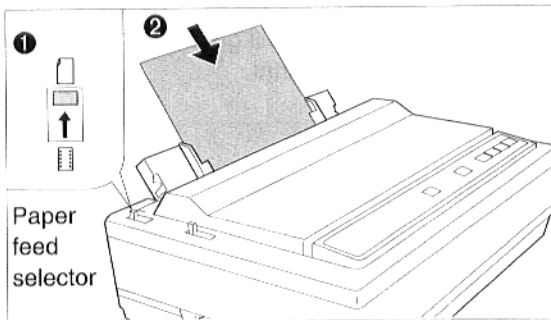


- 4 Move the paper feed selector to “ ” (Tractor Mode).



- 3
  - 1 Move the paper feed selector to “ ” (Friction Mode).
  - 2 Load single sheets or envelopes.

When you have finished printing, remove the sheet (or envelope) from the printer.



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

## Paper Out Detector

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 POWER/PAPER OUT indicator 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 Insert the new paper ( P. 11-14).
- 3 If the **ON LINE** indicator is not lit, press **ON LINE**.

### Note:

- When PAPER OUT DETECT is set to ON ( P. 27), printing stops at 1.26 mm (0.5”) from the bottom of the paper.
- The paper out detector can be disabled through the Control Panel Software program ( P. 18).

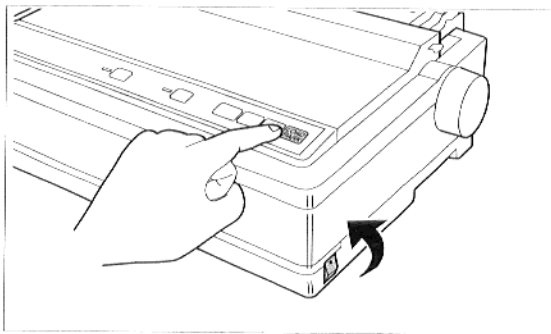
# Using the Control Panel

## Initial Setup Mode

The 19 features (items) can be set in the Initial Setup mode through the Control Panel. For the features and the indicators condition, refer to page 27. These features can also be set through the Control Panel Software program ( P. 18).

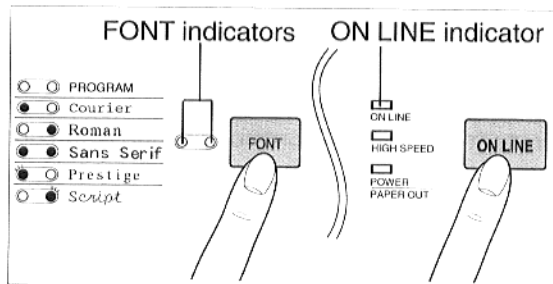
- 1 Load a sheet of paper ( P. 11-14), and turn the power off.
- 2 While pressing **LOAD/PARK**, turn the power on to enter the Initial Setup mode.

Both FONT indicators and the HIGH SPEED indicator will be blinking.  
The current settings will be printed automatically.



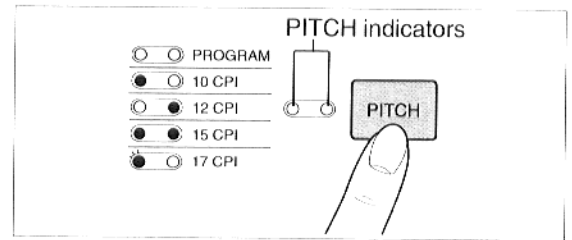
- 3 Press and release **FONT** and **ON LINE** to select the item.

Each time you press **FONT** and **ON LINE**, you will advance to the next item. Select the desired item according to the status of the FONT and ON LINE indicators (on, off, blinking) ( P. 27).



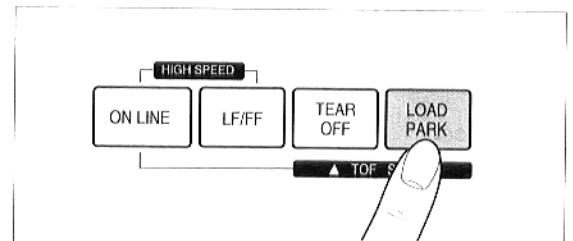
- 4 Press and release **PITCH** to set the item's status.

The item's status will change each time you press **PITCH** ( P. 27).  
To change additional settings, repeat step 3 and 4.



- 5 Press **LOAD/PARK** to exit the Initial Setup mode.

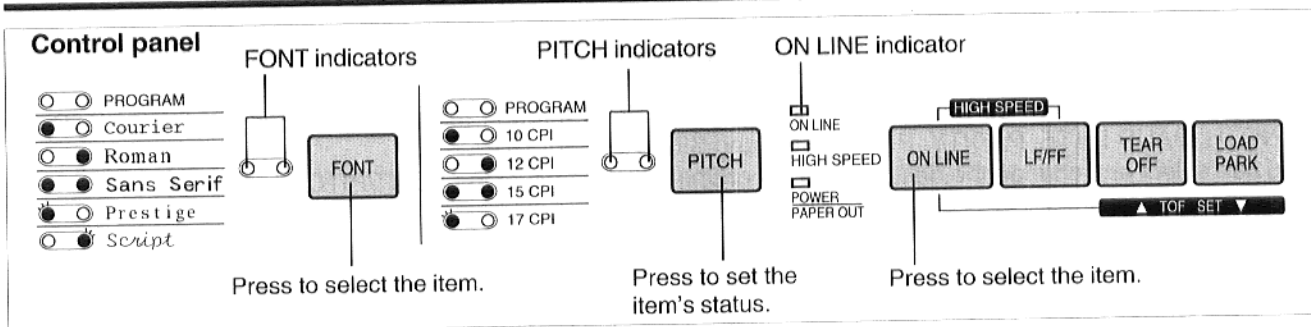
FONT indicator will go off and the current conditions will print.



### Note:

- To return all current settings to the factory settings, follow the steps below.
  1. While pressing **LOAD/PARK**, turn the power on, then release.
  2. Press **TEAR OFF**.
  3. Press **LOAD/PARK** to exit the Initial Setup mode.

# Using the Control Panel



| Item             |                                   | Setting                      |                                |            |           |            |            |        |
|------------------|-----------------------------------|------------------------------|--------------------------------|------------|-----------|------------|------------|--------|
|                  | ON LINE indicator (Press ON LINE) | FONT indicators (Press FONT) | PITCH indicators (Press PITCH) |            |           |            |            |        |
|                  |                                   |                              | ○ ○                            | ○ ●        | ● ○       | ● ●        | ○ ●        | ● ○    |
| EMULATION        | ■                                 | ○ ●                          | EPSON                          | IBM        | —         | —          | —          | —      |
| G.DIRECTION      |                                   | ● ○                          | BI                             | UNI        | —         | —          | —          | —      |
| CSF MODE         |                                   | ● ●                          | OFF                            | ON         | —         | —          | —          | —      |
| TEAR OFF         |                                   | ○ ●                          | MANUAL                         | AUTO       | —         | —          | —          | —      |
| PAGE LENGTH      |                                   | ● ○                          | 11"                            | 12"        | 11.66"    | 14"        | 8"         | 8.5"   |
| LINE/INCH        |                                   | ● ●                          | 6 LPI                          | 8 LPI      | 3 LPI     | 4 LPI      | 7.5 LPI    | 12 LPI |
| FONT             |                                   | ● ●                          | DRAFT                          | COURIER    | ROMAN     | SANS SERIF | PRESTIGE   | SCRIPT |
| PITCH            |                                   | ○ ○                          | 10 CPI                         | 12 CPI     | 15 CPI    | 17 CPI     | 20 CPI     | PS     |
| AUTO LF          | □                                 | ○ ●                          | OFF                            | ON         | —         | —          | —          | —      |
| AGM/IBM          |                                   | ● ○                          | OFF                            | ON         | —         | —          | —          | —      |
| AUTO CR/IBM      |                                   | ● ●                          | OFF                            | ON         | —         | —          | —          | —      |
| AUTO LOADING     |                                   | ○ ●                          | OFF                            | ON         | —         | —          | —          | —      |
| PAPER OUT DETECT |                                   | ● ○                          | OFF                            | ON         | —         | —          | —          | —      |
| AUTO ON LINE     |                                   | ● ●                          | OFF                            | ON         | —         | —          | —          | —      |
| BUFFER CONTROL   |                                   | ● ●                          | 22 KB                          | 8 KB       | 0 KB      | ALL*1      | —          | —      |
| ZERO FONT        |                                   | ○ ○                          | NORMAL                         | POINT      | SLASH     | —          | —          | —      |
| CHARACTER SET    |                                   | ○ ●                          | ITALIC                         | GRAPHIC1   | GRAPHIC2  | —          | —          | —      |
|                  |                                   | ● ○                          | U.S.A.                         | FRANCE     | GERMANY   | U.K.       | DENMARK1   | SWEDEN |
|                  | ● ●                               | ITALY                        | SPAIN1                         | JAPAN      | NORWAY    | DENMARK2   | SPAIN2     |        |
| COUNTRY*2        | ○ ●                               | L.AMERICA                    | KOREA                          | SLOVENIA   | LEGAL     | —          | —          |        |
|                  | ● ○                               | U.S.A.                       | MULTI                          | PORTUGAL   | CANADA F. | NORWAY     | TURKEY     |        |
|                  | ● ●                               | BRASCII                      | ABICOMP                        | PC855      | PC866     | USSR GOST  | POLISH     |        |
| CODE PAGE*2      | ● ●                               | CZECH                        | PC852                          | ISO LATIN2 | HUNGARIAN | BULGARIA   | ISO 8859-2 |        |

Indicators condition:

■, ● = light is lit   □, ○ = light is out   ■, ● = light is blinking

\*1 Download font function is disabled when ALL is selected.

\*2 If the current Country/Code Page setting is located under the other condition of FONT indicators, the both PITCH indicator will blink.

# Using the Control Panel

## Interface Setup Mode

The following items can be set in the Interface Setup mode through the Control Panel: INTERFACE, DATA LENGTH, BAUD RATE, PARITY, PROTOCOL and SIGNAL POLARITY.

You can select and change the desired item according to the status of the FONT/PITCH indicators.

**1** Load a sheet of paper (see P. 11-14), and turn the power off.

**2** While pressing **PITCH**, turn the power on to enter the Interface Setup mode.

Both FONT indicators and the HIGH SPEED indicator will be blinking.  
The current settings will be printed automatically.

**3** Press and release **FONT** to select the item.

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

**4** Press and release **PITCH** to set the item's status.

The item's status will change each time you press **PITCH**. See the table below to verify desired status.

To change additional settings, repeat steps 3 and 4.

| Item            | FONT indicators (Press <b>FONT</b> ) | Setting                                |          |        |       |       |       |        |
|-----------------|--------------------------------------|--|----------|--------|-------|-------|-------|--------|
|                 |                                      | PITCH indicators (Press <b>PITCH</b> ) |          |        |       |       |       |        |
|                 |                                      | ○ ○                                    | ○ ●      | ● ○    | ● ●   | ○ ●   | ● ○   | ● ●    |
| INTERFACE       | ○ ●                                  | AUTO                                   | PARALLEL | SERIAL | —     | —     | —     | —      |
| DATA LENGTH     | ● ○                                  | 8 bit                                  | 7 bit    | —      | —     | —     | —     | —      |
| BAUD RATE       | ● ●                                  | 300                                    | 600      | 1,200  | 2,400 | 4,800 | 9,600 | 19,200 |
| PARITY          | ○ ●                                  | NONE                                   | IGNORE   | ODD    | EVEN  | —     | —     | —      |
| PROTOCOL        | ● ○                                  | DTR                                    | XON/XOFF | —      | —     | —     | —     | —      |
| SIGNAL POLARITY | ● ●                                  | MARK                                   | SPACE    | —      | —     | —     | —     | —      |

FONT/PITCH indicators condition:

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

**5** Press **LOAD/PARK** to exit the Interface Setup mode.

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

### Note:

- To return all current settings to the factory settings, follow the steps below.
  - While pressing **LOAD/PARK**, turn the power on, then release.
  - Press **TEAR OFF**.
  - Press **LOAD/PARK** to exit the Initial Setup mode.

# Periodic Maintenance / Troubleshooting

## Periodic Maintenance

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

- Cleaning the unit is the most important action you can perform. The frequency of cleaning is dependent upon the environment.
  - Turn the power off and unplug the AC power cord.
  - 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.
  - Raise the top cover and pull up the roller cover. Vacuum or dust the inside area of the unit. Be very careful not to damage the printhead ribbon cable or the carriage drive belt.

**Caution:**

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

- 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 when lubrication will be needed.

### Ribbon Cassette

**Note:**

- If the ribbon begins to catch, snag, or tear from the printhead, your printer requires servicing.

## Troubleshooting

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

| Symptom  | Possible Cause                               | Probable Solution  |
|--|--|--|
| Ink smears   | Head gap lever is not in the proper position | Move the lever toward the position "6" until ink doesn't smear ( P. 10)                    |
| Printout is faint                                    | Head gap lever is not in proper position     | Adjust the lever to the proper position ( P. 10, 11, 13)                                   |
| Printhead moves but there is no printing             | Ribbon is not installed correctly            | Re-insert ribbon ( P. 10)  |
| Paper out detector inoperative                       | PAPER OUT DETECT is OFF                      | Set PAPER OUT DETECT to ON ( P. 18, 25)  |
| Printer does not power up                            | No AC power                                  | Check AC power cord ( P. 9)  |
| Paper slips around platen                            | Paper feed selector is set to "E"            | Set selector to " "  |
| Power is on but printer does not print               | Printer is not ON LINE                       | Press <b>ON LINE</b>   |
|  | Interface cable is not properly connected    | Secure connection ( P. 9)  |
|  | Out of paper                                 | Install new paper ( P. 11-14)  |
|  | Printhead has become overheated              | Allow the printhead some time to cool down. The printer will automatically resume printing |
|  | Interface setting is incorrectly set         | Set interface setting to match the computer's interface ( P. 18, 28)                       |
| Carriage stops moving, all indicators start blinking | Path of printhead is blocked                 | Turn the power off, clear the path. Turn the power back on to resume printing              |

(continued)

# Periodic Maintenance / Troubleshooting

| Symptom  | Possible Cause  | Probable Solution  |
|--|---|--|
| Paper wrinkles when using tractor feed   | No reverse tension on paper   | Set paper supply lower than printer  |
| Printer cannot load single sheet through the top   | CSF MODE is ON  | Set CSF MODE to OFF when not using the cut sheet feeder ( P. 18, 27)   |
|  | Paper feed selector is set to " " ( )                                       | Set paper feed selector to " " ( )   |
| Cut Sheet Feeder (KX-PT12) is installed but does not work                                | CSF MODE is OFF   | Set CSF MODE to ON ( P. 18, 27)  |
| Unexpected characters appear in printing   | EMULATION is set incorrectly  | Check printer driver of your software package and set EMULATION accordingly ( P. 18, 27)   |
| Fanfold paper is jamming   | Paper is not installed correctly in tractor                                 | Set paper feed selector to " " ( ) and rotate platen knob to remove jammed paper<br>Reinstall paper correctly into tractor ( P. 11)  |
| Printout is double-spaced  | AUTO LF is ON   | Set AUTO LF to OFF ( P. 18, 27)  |
| Keeps printing on the same line  | Computer is not sending a LF command  | Set AUTO LF to ON ( P. 18, 27)   |
| Wrong CHARACTER SET prints   | Wrong CHARACTER SET is selected   | Set the CHARACTER SET as required ( P. 18)   |
| Cannot print ASCII characters with code above 127  | DATA LENGTH is set incorrectly  | Set DATA LENGTH as required ( P. 18, 28)   |
| When using serial interface, printer does not print or data loss occurs                  | Parallel interface is selected on your printer                              | Set INTERFACE to AUTO or SERIAL ( P. 18, 28)   |
|  | BAUD RATE, PARITY, PROTOCOL or DATA LENGTH does not match with the computer | Set BAUD RATE, PARITY, PROTOCOL and DATA LENGTH to match the computer ( P. 18, 28)   |
| When printing is completed, paper is not advanced automatically                          | TEAR OFF, PAGE LENGTH, TOP MARGIN and BOTTOM MARGIN are set incorrectly     | Set Tear off to AUTO and set Page length, Top margin and Bottom margin to meet your software package ( P. 18)  |
| A communication error occurs when running the CPS (Control Panel Software) in Windows 95 | Printer Driver of KX-P1131 is spooling the data sent from DOS               | <ol style="list-style-type: none"> <li>1. Select "Printers" from "Settings" in Windows 95</li> <li>2. Select "Properties" of the KX-P1131</li> <li>3. Select "Port Settings" from "Details" and disable "Spool MS-DOS print jobs" by clicking off its check box</li> </ol> |

## Option

| Model Number | Description                             |
|--------------|---|
| KX-PT12      | Automatic Cut Sheet Feeder (single bin) |

## Supply

| Model Number | Description             |
|--------------|-------------------------|
| KX-P181      | Ribbon Cassette (black) |

# Printer Specifications

|  |   |                                     |                  |
|--|---|-------------------------------------|------------------|
| <b>Power requirements:</b>                           | Refer to the nameplate located on the rear of the printer.  |                                     |                  |
| <b>Frequency:</b>                                    |   |                                     |                  |
| <b>Current:</b>                                      |   |                                     |                  |
| <b>Interface:</b>                                    | Centronics parallel<br>RS-232C/Serial interface   |                                     |                  |
| <b>Print fonts:</b>                                  | 3 Draft (Pica, Elite, Micron)<br>7 Letter Quality (Courier, Bold PS, Prestige, Script, Sans Serif, Roman, OCR-B)<br>6 Scalable Fonts *1 (Courier, Bold PS, Roman, Sans Serif, Prestige, Script) |                                     |                  |
| <b>Software emulation:</b>                           | Epson LQ-300 without color<br>IBM Proprinter X24E   |                                     |                  |
| <b>Buffer:</b>                                       | Selectable<br>[0 KB / 8 KB / 22 KB (default) / All (54 KB max.)]  |                                     |                  |
| <b>Character sets:</b>                               | EPSON mode ONE Italic and 18 characters set tables<br>15 International characters and LEGAL Set<br>IBM mode 18 character set tables   |                                     |                  |
| <b>Dot configuration:</b>                            | 0.2 mm (1/127") dot diameter  |                                     |                  |
|  |   | <b>Draft</b>                        | <b>LQ</b>        |
|  | <b>Matrix</b> (Hor. × Ver.)   | 9 × 24                              | 30 × 24          |
|  | <b>Dot pitch</b> (Hor.)   | 0.21 mm (1/120")                    | 0.07 mm (1/360") |
|  | (Ver.)  | 0.14 mm (1/180")                    | 0.14 mm (1/180") |
| <b>Maximum number of characters per line (cpl):</b>  | <b>Font</b>   | <b>Print line size: 203 mm (8")</b> |                  |
|  | Pica [10 cpi (character 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                             |                  |
| <b>Printing speed [characters per second (cps)]:</b> |   | <b>Micron</b>                       | <b>Elite</b>     |
|  | <b>Draft</b>  | 300 cps                             | 240 cps          |
|  | <b>Letter Quality</b>   | 100 cps                             | 80 cps           |
| <b>Printing direction:</b>                           | Uni-directional / Bi-directional (user selectable)  |                                     |                  |
| <b>Line feed time:</b>                               | Approx. 65 msec [with 4.2 mm (1/6") line feeding]   |                                     |                  |
| <b>Paper feed:</b>                                   | Push tractor feed (with fanfold paper)<br>Friction feed (with single sheets or envelopes)   |                                     |                  |
| <b>Operating environment:</b>                        | Temperature: 10°C to 35°C (50°F to 95°F)<br>Humidity: 30% to 80% RH (Please allow the printer to stabilize at room temperature within the operating temperature range before operation)         |                                     |                  |
| <b>Power consumption:</b>                            | Max — 180 W<br>Stand by — 10 W<br>Self Test — 55 W  |                                     |                  |
| <b>Storage environment:</b>                          | Temperature: -20°C to 60°C (-4°F to 140°F)<br>Humidity: 10% to 90% RH   |                                     |                  |
| <b>Head service life:</b>                            | Approx. 200 million strokes in DRAFT mode   |                                     |                  |
| <b>Ribbon:</b>                                       | Endless fabric ribbon<br>Black ribbon cassette KX-P181:<br>Life expectancy (in DRAFT mode/rolling ASCII)<br>Approx. 6 million characters  |                                     |                  |
| <b>Detectors:</b>                                    | Paper out detector<br>Printhead Overheat detector<br>Overload detector  |                                     |                  |
| <b>Dimensions:</b>                                   | 434 (W) × 326 (D) × 140 (H) mm [17.1" (W) × 12.8" (D) × 5.5" (H)]   |                                     |                  |
| <b>Mass (Weight):</b>                                | Approx. 5.2 kg {11.5 lbs.}  |                                     |                  |
| <b>CPU:</b>  | TOSHIBA CORPORATION TMP90C845AF 16 MHz  |                                     |                  |

\*1 Scalable Fonts are available only when one of the following Code Page is selected: U.S.A., Multilingual, Portugal, Canada French, Norway, Turkey.

# Paper Specifications

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

## Fanfold Paper

Width: 102-254 mm (4-10")

Quality and number of sheets:

| Type of paper             | Sheets | Weight      |                  |
|---------------------------|--------|-------------|------------------|
|                           |        | lbs.        | g/m <sup>2</sup> |
| Fine-quality paper        | 1      | 16-24       | 60-90            |
| Non-carbon                | 2-5    | 11-14 (17*) | 41-53 (64*)      |
| Multi-layered with carbon | 2      | 11-14 (17*) | 41-53 (64*)      |

(\*only for the last sheet)

**Note:**

- To insure optimum print quality, 60-82.5 g/m<sup>2</sup> {16-22 lbs.} 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 [432 × 559 mm (17 × 22")] sheets.
- The printer will handle multipart forms up to 0.36 mm (0.014") thick. Up to 5 copies of 14 lbs. chemical release paper can be used.

## Single Sheet

Width: 102-297 mm (4-11.7")

Height: 127-363 mm (5-14.3")

Weight in pounds (g/m<sup>2</sup>): 53-90 g/m<sup>2</sup> {14-24 lbs.}

**Note:**

- Paper should be within operating temperature and humidity ranges at least 24 hours prior to use.
- Due to letter head varying in paper weight and construction, we cannot guarantee print quality and paper handling for all types.

## Envelope

#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.

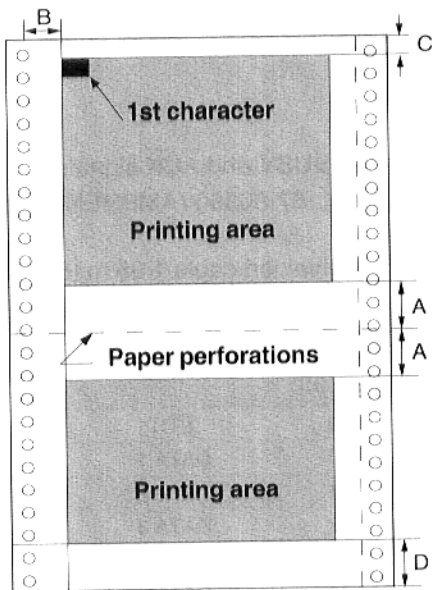
**Note:**

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



## Printing Area

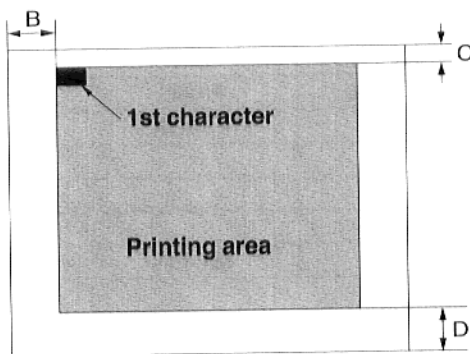
### Fanfold Paper



|          |                |
|----------|----------------|
| <b>A</b> | 25.4 mm (1")   |
| <b>B</b> | 17.8 mm (0.7") |
| <b>C</b> | 2 mm (0.08")   |
| <b>D</b> | 15 mm (0.6")   |

- A:** The area near the paper perforations where the print quality may not be optimum.
- B:** 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:** The area from the top edge of the paper to the top of the first printed character.
- D:** The area from the bottom edge of the paper where the print quality may not be optimum.

### Single Sheet and Envelope



|          |              |
|----------|--------------|
| <b>B</b> | 3 mm (0.12") |
| <b>C</b> | 2 mm (0.08") |
| <b>D</b> | 15 mm (0.6") |

- B:** The minimum distance between the edge of the paper and first printable character. (When the left paper guide is set to the 0 position and the margin is set to 0.)
- C:** The area from the top edge of the paper to the top of the first printed character.
- D:** 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

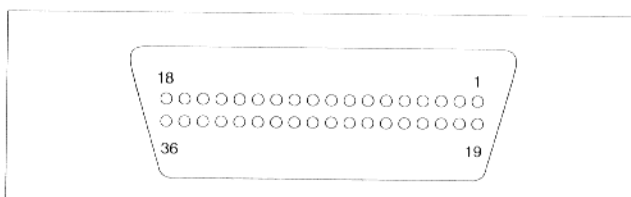
This information should be provided to the company from which you are purchasing the interface cable to ensure the proper wiring of the cable.

## Parallel Interfacing

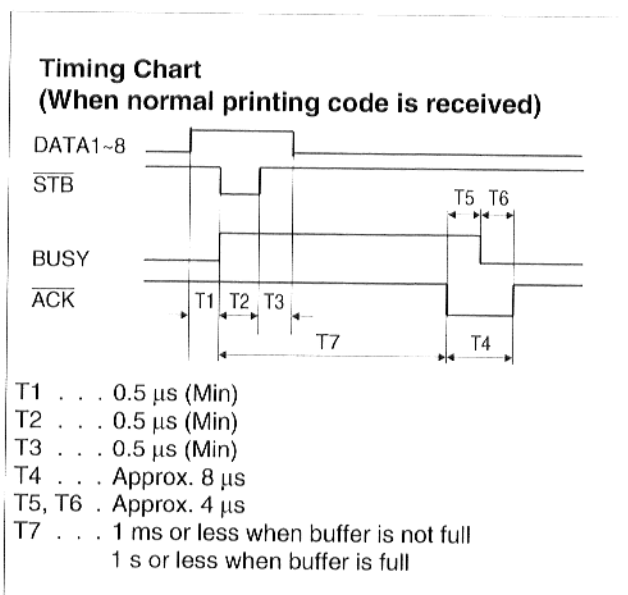
A method of transferring data from a computer to a printer through a parallel interface is based on the Centronics Standard.

### 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 1.95 m (6'5") or less in length.



Parallel Interface Connector (printer side)



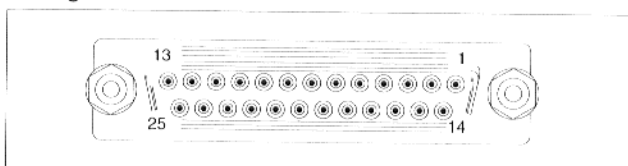
Timing Diagram

| 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                      | Output    |
| 10         | 28              | $\overline{\text{ACK}}$     |           |
| 11         | 29              | BUSY                        |           |
| 12         |                 | PO                          | Input     |
| 13         |                 | SLCT                        |           |
| 14         |                 | AUTO FEED XT                |           |
| 15         |                 |                             |           |
| 16         |                 | SG                          |           |
| 17         |                 | FG                          |           |
| 18         |                 | +5 V                        | Output    |
| 31         | 30              | PRIME                       | Input     |
| 32         |                 | $\overline{\text{ERROR}}$   | Output    |
| 33         |                 |                             |           |
| 34         |                 |                             |           |
| 35         |                 |                             |           |
| 36         |                 | $\overline{\text{SLCT IN}}$ | Input     |

Pin Configuration

## Serial Interfacing

- Cable: Use a shielded cable 1.95 m (6'5") or less in length.



Serial Interface Connector (printer side)

| Signal pin | Signal | Direction |
|------------|--------|-----------|
| 1          | FG     |           |
| 2          | TXD    | OUTPUT    |
| 3          | RXD    | INPUT     |
| 7          | SG     |           |
| 20         | DTR    | OUTPUT    |

Pin Configuration

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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-P1131** \_\_\_\_\_

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

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

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



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N52

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