EPSON®

9-pin Dot Matrix Printer

FX-890/FX-2190

User's Guide

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Introduction

This manual covers the following basic information to get you started using your printer:

- ❏ Setting Up the Printer
- ❏ Paper Handling
- ❏ Using the Control Panel
- ❏ Troubleshooting
- ❏ Product Information

Although the illustrations in this manual show the FX-890, the instructions apply to both the FX-890 and the FX-2190.

Warnings *must be followed carefully to avoid bodily injury.*

Cautions *must be observed to avoid damage to your equipment.*

Notes *contain important information and useful tips about using your printer.*

For detailed information about your printer, refer to the online *Reference Guide*. It describes all the printer's functions, optional products, printer software, troubleshooting, and technical specifications. See "Installing and Using the Online Reference Guide" on page 15.

For help using your printer software, you can use the online help which is installed automatically when you install the printer software.

Okidata Compatibility

You can make your FX-890 or FX-2190 work like the Okidata® Microline® 320 Turbo or 321 Turbo by turning the printer on in a different mode. For instructions, see page 40.

Options

By adding options, such as a cut-sheet feeder or roll paper holder, you can further expand your printer's capabilities. Optional interface cards are also available to supplement your printer's built-in interfaces. (See the *Reference Guide* for more information.)

You can purchase ribbon cartridges, paper, manuals, and accessories from EPSON® at (800) 873-7766, or visit the EPSON Store℠ at www.epsonstore.com (U.S. sales only). In Canada, please call (800) 463-7766 for dealer referral.

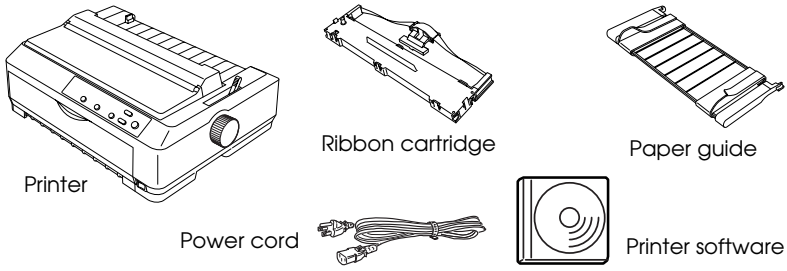
Chapter 1

Setting Up the Printer

This chapter describes how to unpack and set up your printer.

Unpacking the Printer

Make sure you have the following items.



Follow the directions on the *Notice Sheet* to remove the protective materials before you turn on the printer. Save all packing and protective materials in case you need to ship the printer in the future.

Choosing a Place for the Printer

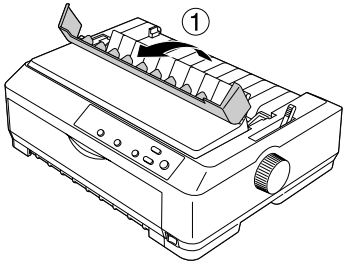
- ❏ Place the printer on a flat, stable surface. The printer will not operate properly if it is tilted or placed at an angle.
- ❏ Avoid using or storing the printer in places subject to rapid changes in temperature and humidity. Keep it away from direct sunlight, strong light, heat sources, or excessive moisture or dust.
- ❏ Place the printer near a wall outlet where you can easily unplug the power cord. Position the power cord and interface cable so they do not interfere with paper feeding.

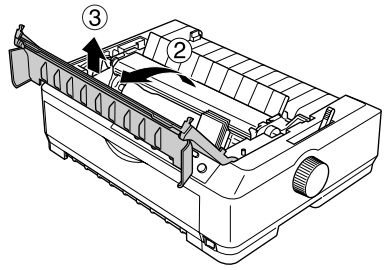
  Note for French-speaking users:
  Placez l'imprimante près d'une prise de courant où la fiche peut être débranchée facilement.

- ❏ Avoid electrical outlets controlled by wall switches or automatic timers. An interruption in power can erase information in the memory of your printer or computer. Also avoid outlets on the same circuit as large motors or other appliances that can cause voltage fluctuations.
- ❏ Use a grounded power outlet; do not use an adapter plug.

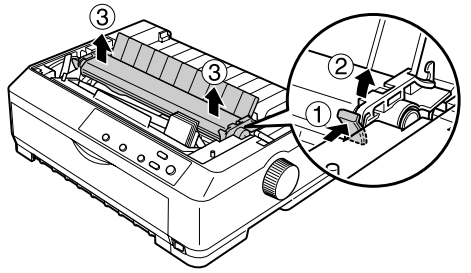
Assembling the Printer

1. Make sure the printer is turned off and unplugged. Then open the printer cover and pull it up to remove it.

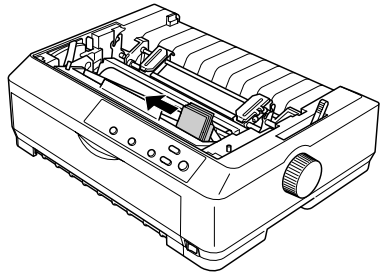




2. Remove the paper tension unit by pressing up the tabs on each side and pulling it up.

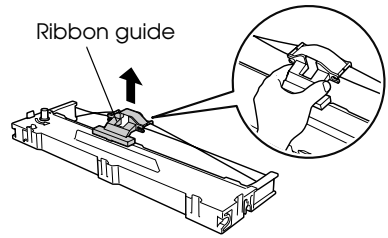


3. Use your hand to slide the print head to the middle of the printer.

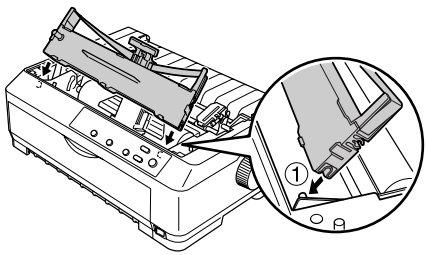


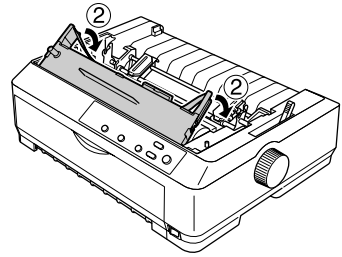
Warning:
If you have just used the printer, the print head may be hot; let it cool for a few minutes before touching it.

4. Remove the new ribbon cartridge from the package. The black plastic ribbon guide is held in place on top of the cartridge with a small tab. To release it, hold the sides of the ribbon guide and gently disconnect it. (Do not remove the ribbon guide from the ribbon, however.)



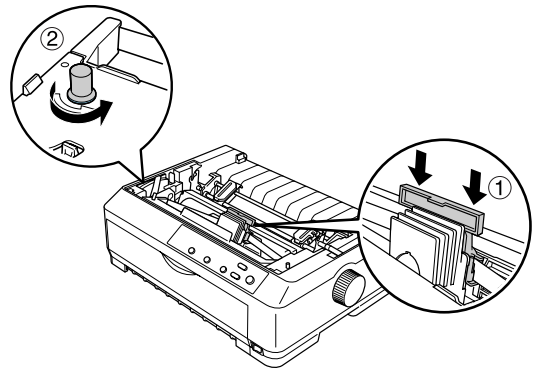
5. Hold the ribbon cartridge by its handle and insert it into the printer at an angle, as shown below; then press down on both sides of the cartridge to fit the plastic hooks into the printer slots. You should hear it click into place.



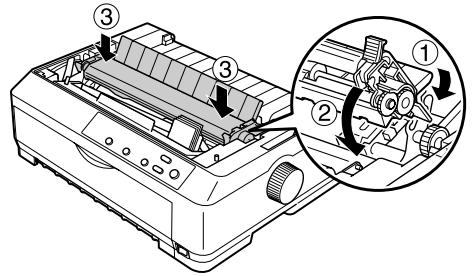


6. Slide the ribbon guide into the print head until it clicks in place. Be careful not to twist or crease the ribbon.

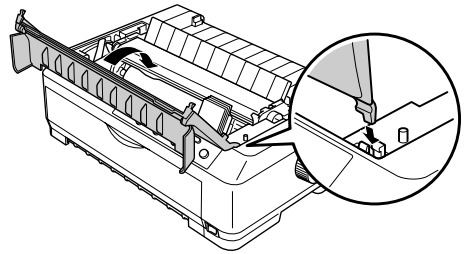
   Turn the ribbon-tightening knob to help feed the ribbon into place.



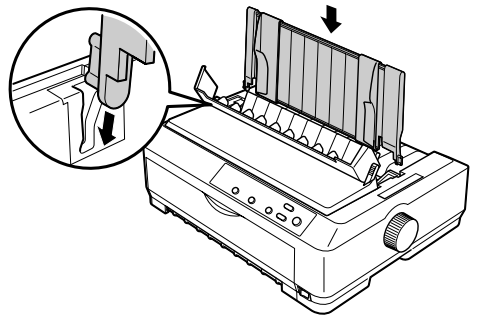
7. Reinstall the paper tension unit by lowering it onto the printer's mounting pegs. Then press down on both ends until it clicks into place.



8. To replace the printer cover, insert the front tabs into the slots on the printer and lower the cover into place. Then push it down until it clicks.



9. Make sure the top part of the cover is folded forward, as shown. Then attach the paper guide.



When printing, keep these points in mind:

- ❏ You can use the paper guide only when the tractor is installed in the front or rear push position.
- ❏ For your safety and for the fastest printing, EPSON recommends keeping the printer cover closed while printing. Although you can print with the cover open, printing speed will be slower.

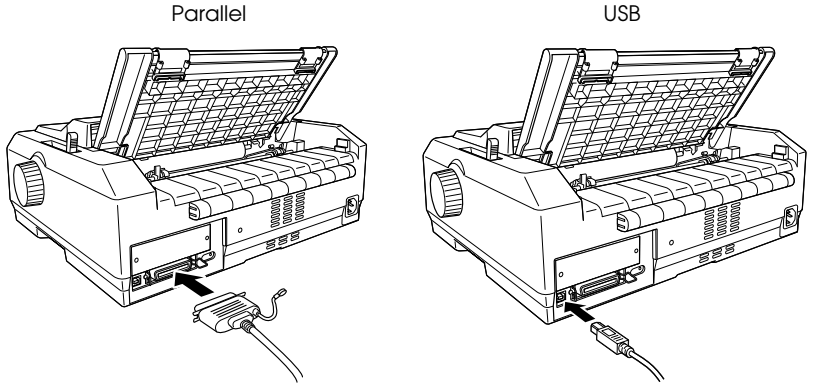
Connecting the Printer to Your Computer

Your printer is equipped with both an IEEE-1284-compatible parallel interface and a USB (Universal Serial Bus) interface. It also includes a Type-B optional interface slot in case your computer requires a different type of printer interface. (See the *Reference Guide* if you need to install an interface card.)

Note:
You can connect cables to both interfaces; the printer switches automatically to the appropriate interface when it receives data.

To connect your computer to your printer's built-in parallel interface, you need a shielded, twisted-pair parallel cable with a 36-pin Centronics® compatible connector for the printer. To connect the printer to a USB port, you need a standard, shielded USB cable.

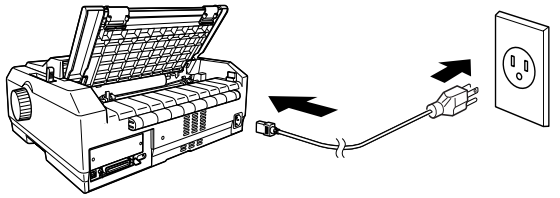
1. Make sure both the printer and computer are turned off, then connect the parallel or USB cable to the printer.



2. Connect the other end to your computer.

Caution:
There are several models of the printer designed for different voltages, and it is not possible to adjust the printer for use with another voltage. If the label on the back of the printer does not show the correct voltage for your country, contact your dealer.

3. Plug the power cord into the AC inlet on the back of the printer and plug the other end into a properly grounded electrical outlet.



Installing the Printer Software

After you connect the printer to your computer, you need to install the EPSON printer software on the CD-ROM shipped with your printer. The printer driver is the software that runs, or "drives," your printer. With it, you can select printer settings such as print quality, resolution, and paper size.

The software includes EPSON Status Monitor 3 (Windows® XP, 2000, Me, 98, 95, or NT 4.0), which displays printer status information and notifies you of printer errors. See the *Reference Guide* for more information.

Note:

- ❏ *Installing the printer software for Windows NT, XP, or 2000 may require administrator privileges. If you have problems, ask your administrator for more information.*
- ❏ *If the New Hardware Found screen or any other wizard appears when you turn on your computer, click* Cancel.
- ❏ *If the Digital Signature Not Found screen appears, click* Yes. *If you click* No, *you must reinstall the printer driver.*

The printer software CD-ROM also includes the EPSON Remote Configuration Manager, which lets you change the printer's default settings. See "Installing the Remote Configuration Manager" on page 15.

For Windows XP, Me, or 2000

1. Make sure Windows is running and the printer is turned off.

2. Insert the printer software CD-ROM into the CD-ROM or DVD drive. The Installation screen appears:

   If it does not, double-click Setup.exe on the CD-ROM.

3. Select Install Software and click ⇢.

4. Select your printer from the list, then follow the instructions on the screen.
5. When the installation is complete, see page 15 to install the *Reference Guide* and the EPSON Remote Configuration Utility.

For Windows 98, 95, or NT 4.0

1. Make sure Windows is running and the printer is turned off.
2. Insert the printer software CD-ROM into the CD-ROM or DVD drive. The Installation window shown above appears. If it does not, select Setup.exe on the CD-ROM.
3. Select Install Software and click ⇢.
4. Select your printer, then click OK and follow the instructions on the screen.
5. If you are prompted to insert your Windows CD-ROM, do it now and click OK. When the Windows installation screen appears, close the screen to continue with the driver installation.

   Note:

   ❏ *If your PC came with Windows pre-installed, Setup may not need the Windows CD-ROM to complete the installation.*

   ❏ *If you see a message that the drive is not accessible, click* Cancel *and try again.*

6. Click Browse and select the path for the printer driver. Then click OK and follow the on-screen instructions.

   If you are using Windows NT, insert your Windows CD when prompted.

7. Select the appropriate file in the folder and click OK.
8. When prompted, insert the printer software CD-ROM and click Browse to select the correct path.

   Note:

   - ❏ *If you see a message that the drive is not accessible, click* Cancel *and try again.*
   - ❏ *If a "System Error" message appears, click* Cancel. *The exact wording of the message depends on the version of Windows you are using.*
   - ❏ *If you are using Windows NT, you do not need to specify a path.*
   - ❏ *If you are using Windows 98, the Printer Utility Setup may start. If it does, follow the instructions on the screen.*

9. When the installation is complete, see page 15 to install the *Reference Guide* and the EPSON Remote Configuration Utility.

For DOS programs

To control the printer from DOS application programs, you need to select the printer you are using or another available printer from the printer list in your application. Choose the EPSON printer at the appropriate step in the installation or setup procedure. If the list in your application does not include your printer, choose the first available printer from the following list:

For FX-890:	For FX-2190:
FX-980	FX-2180
FX-880+	FX-2170
FX-880	FX-1180+
FX-870	FX-1180
FX-850	FX-1170
FX-800	FX-1050
FX-85	FX-1000
FX-80+	FX-105
FX-80	FX-100+
	FX-100

Installing and Using the Online Reference Guide

You can install the online *Reference Guide* on your hard disk and view it from your computer, or read it directly from the printer software CD-ROM.

To install the *Reference Guide* on your hard disk, select Install Reference Guide from the Installation screen and follow the on-screen instructions. When the installation is complete, the FX890 2190 Guide icon appears in the EPSON folder.

To open the *Reference Guide* on your hard disk, click Start, go to Programs (or All Programs) and select EPSON. Then, click FX890 2190 Guide.

If you don't want to install the manual on your hard disk, follow these steps to view it from the CD-ROM:

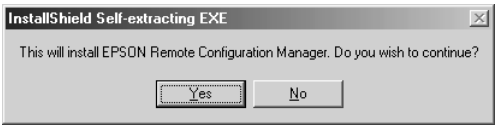
1. Insert the printer software CD-ROM in your CD-ROM or DVD drive. The Installation screen appears. If it doesn't, double-click the My Computer icon. Click the CD-ROM icon, then double-click SETUP.EXE.
2. Select User Guides.
3. To open the *Reference Guide*, select View Reference Guide.

Installing the Remote Configuration Manager

The EPSON Remote Configuration Manager provides an easy way to change your printer's default settings in Windows. Follow these steps to install it on your computer in Windows 2000, Me, 98, 95, or NT:

1. Select Install EPSON Remote Configuration Manager from the Installation screen.

   You see this window:



2. Click Yes. After a moment, you see the Welcome screen:

3. Click Next and follow the instructions on the screen. When the installation is complete, click Finish. (If you see the folder window open on the screen, close it so you can see the final installation screen.)

The Remote Configuration Manager is installed on the computer in its own program group, along with an uninstall option and the online *User's Guide*. See the *User's Guide* for instructions on using the program.

To start the program, select Programs, Epson Remote Configuration Mgr, and then click Epson Remote Configuration Manager.

To open the manual, select Programs, Epson Remote Configuration Mgr, and then click Epson Remote Configuration Manager User's Guide.

Note:
If you are using Windows 2000 and the printer is connected to the parallel port, Remote Configuration Manager may not work. In this case, do one of the following:

- ❏ *Before running the program, set the printer driver to the LPT2 port. Then use Remote Configuration Manager to check or change the default settings as desired. After you finish using the program, remember to return the setting to LPT1.*
- ❏ *Connect the printer to the USB port instead.*

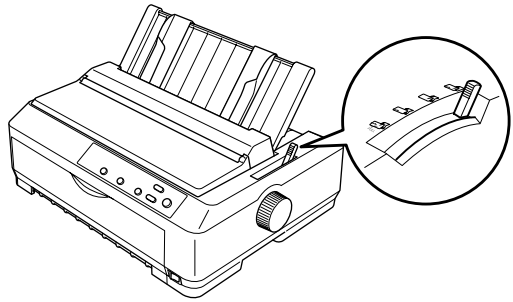
Chapter 2

Paper Handling

This chapter covers some important instructions you need to load and use paper in your printer. For complete paper handling information, see the *Reference Guide*.

Setting the Paper Release Lever

Before you start printing, be sure to set the paper release lever to indicate the paper source you want to use, as described in the table below.

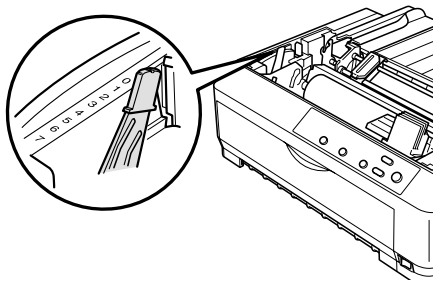


Lever position	Description
	Single-sheet position For loading single-sheet paper from the top or front slot.
	Rear push tractor position For loading continuous paper with the tractor installed in the rear push position or when using the rear push and pull tractors in combination.
	Front push tractor position For loading continuous paper with the tractor installed in the front push position or when using the front push and pull tractors in combination.
 PULL	Pull tractor position For loading continuous paper from the tractor installed on top of the printer in the pull position. You can load paper in the front, rear, or bottom slot.

Adjusting the Paper-Thickness Setting

Before you start printing, make sure the paper-thickness setting is correct for the type of paper you are using.

Turn the printer off and open the printer cover. The paper-thickness lever is located on the left side of the printer. The numbers next to the lever indicate the thickness setting.



Select the correct setting according to this table:

Paper type	Lever position
Ordinary paper	0 or 1 (single sheets) 0 (continuous paper)
Thin paper	0
Carbonless multipart forms with: 2 parts (original + 1 copy) 3 parts (original + 2 copies) 4 parts (original + 3 copies) 5 parts (original + 4 copies) 6 parts (original + 5 copies) 7 parts (original + 6 copies)*	 1 3 5 6 7 7
Continuous paper with labels	2
Postcards	2
Envelopes	5 or 6

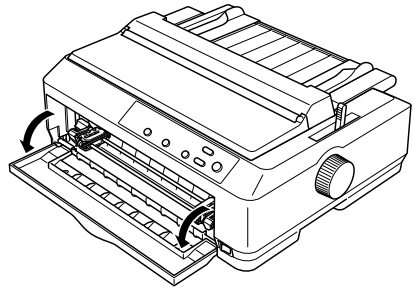
* Available when using the tractor in the bottom or front pull position.

Note:

- ❏ *When the temperature is 41°F (5°C) or lower, or 95°F (35°C) or higher, set the paper-thickness lever one position lower to improve print quality.*
- ❏ *When the temperature is 41°F (5°C) or lower, or 95°F (35°C) or higher, multipart forms with 7 parts cannot be used.*

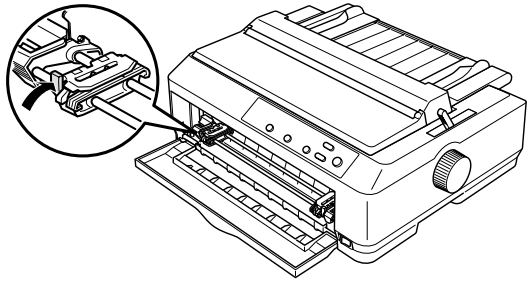
Loading Continuous Paper with the Front Push Tractor

1. Make sure the printer is turned off. Then open the front cover and the flap. Make sure the tractor is installed in the front push position. (You may need to move it from the rear push or pull position.)

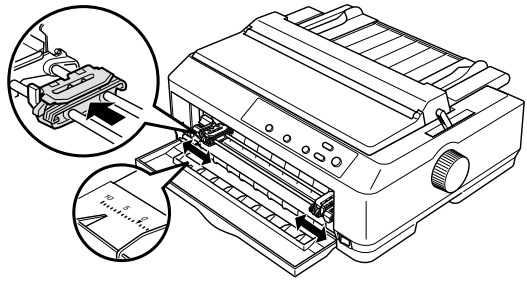


2. Set the paper release lever to the front push tractor position. Also set the paper-thickness lever to the proper position for your paper's thickness. See "Adjusting the Paper-Thickness Setting" on page 18 for instructions.

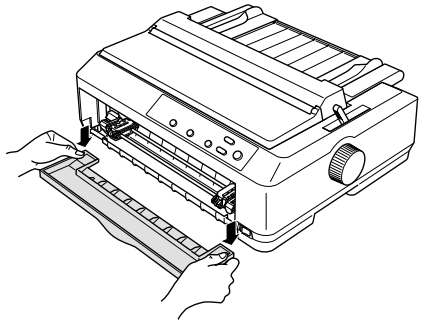
3. Release the left and right sprockets by pushing the blue lock levers backward.



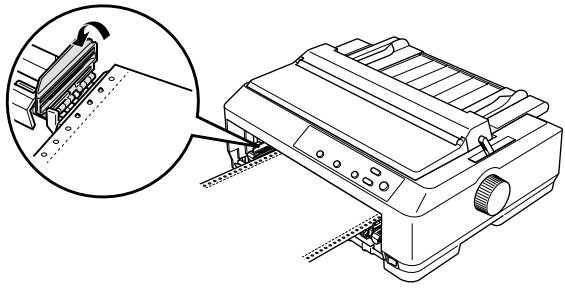
4. Slide the left sprocket approximately 0.5 inch (12 mm) from the far left position and pull the blue lever forward to lock it in place. Then slide the right sprocket to match the width of your paper, but do not lock it.



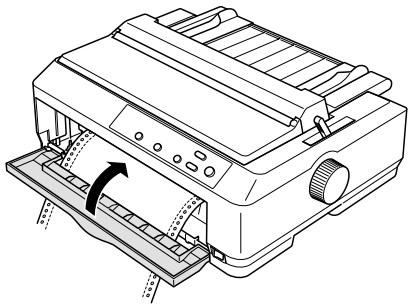
5. Remove the front cover by pulling it straight down.



6. Make sure your paper has a clean, straight edge. Then open both sprocket covers and fit the first four holes of the paper, with printable side up, over the tractor pins.



7. Close the sprocket covers.
8. Slide the right sprocket to remove any slack in the paper; then lock it in place by pushing the sprocket lock down.
9. Attach the front cover with the continuous paper positioned as shown.
10. Make sure the paper guide is lying flat on the printer and slide the edge guides to the middle of the paper guide.



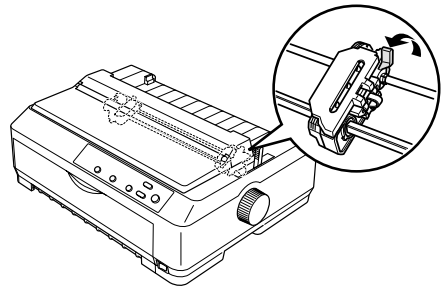
11. Turn on the printer. When the printer receives data, it automatically loads the paper and starts printing.

If the first line on your page appears too high or low, you can change its position using the Micro Adjust function as described on page 32.

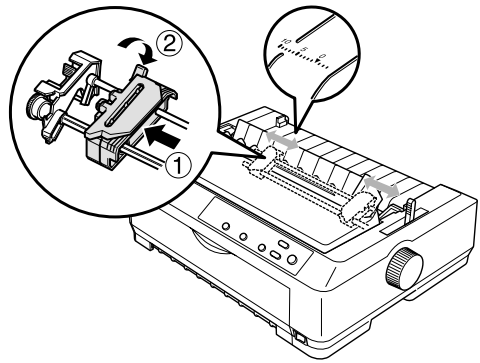
Caution:
Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

Loading Continuous Paper with the Rear Push Tractor

1. Make sure the printer is turned off, the tractor is installed in the rear push position, and the paper guide is removed. (You may need to move the tractor from the front push or pull position.)
2. Set the paper release lever to the rear push tractor position.
3. Release the left and right sprockets by pulling the blue sprocket lock levers forward.

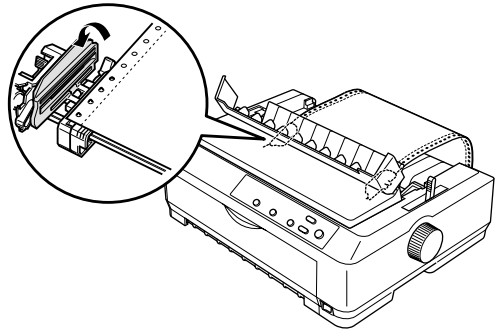


4. Slide the left sprocket approximately 0.5 inch (12 mm) from the far left position and push the blue lever back to lock it in place. Then slide the right sprocket to match the width of your paper, but do not lock it.



The triangle mark on top of the printer indicates the point furthest to the left where printing can begin.

5. Make sure your paper has a clean, straight edge. Then open both sprocket covers and fit the first four holes of the paper, with the printable side down, over the tractor pins.



6. Close the sprocket covers. Then slide the right sprocket to remove any slack in the paper and lock it in place by pushing the blue lock lever down.
7. Attach the paper guide and lay it flat on the printer. Slide the edge guides to the middle of the paper guide.
8. Turn on the printer. When the printer receives data, it automatically loads the paper and starts printing.

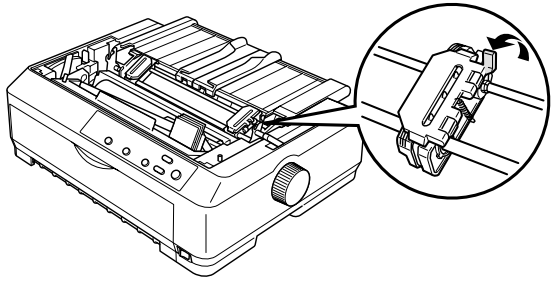
If the first line on your page appears too high or low, change its position with the Micro Adjust function. (See page 32.)

Caution:
Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

Loading Continuous Paper with the Pull Tractor

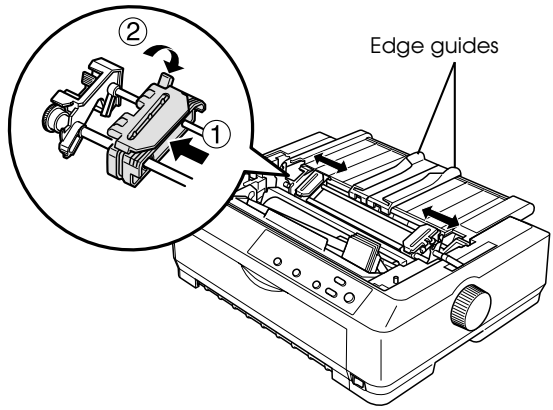
1. Make sure the printer is turned off, and the printer cover is removed. Also make sure the tractor is installed in the pull position and the paper guide is lying flat on the printer. (You may need to move the tractor from the rear push or front push position.)
2. Set the paper release lever to the pull tractor position.

3. Release the sprockets by pulling the sprocket lock levers forward.



4. Slide the left sprocket approximately 0.5 inch (12 mm) from the far left position and push the lever back to lock it in place.

   Then slide the right sprocket to match the width of your paper, but do not lock it.



   Slide the edge guides to the center.

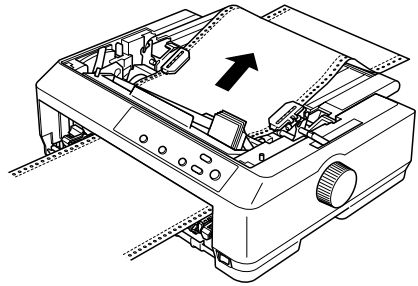
5. Make sure your paper has a clean, straight edge. Then open the sprocket covers.

   Note:
   Make sure the printer is off before you insert the paper in the paper slot. If you insert the paper while the printer is on, a paper jam may occur.

6. Insert the paper into the front or bottom paper slot as shown below until it emerges between the platen and the ribbon guide. Then pull up the paper until the perforation between the first and second pages is even with the top of the printer's ribbon.

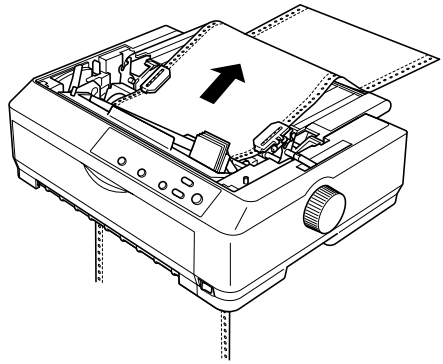
Front slot

Before you load paper in the front slot, remove the front cover. Then load paper with the printable side facing up.

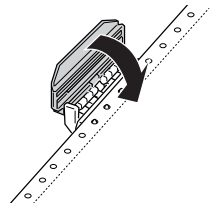


Bottom slot

Load paper in the bottom slot with the printable side facing up.

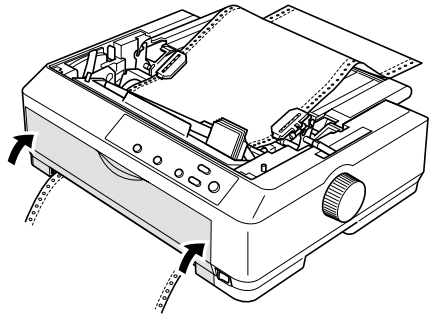


7. Fit four holes of the paper over the tractor pins on both sprockets. Then close the sprocket covers.



8. Slide the right sprocket to remove any slack in the paper, then lock it in place.

9. Reattach the front cover.

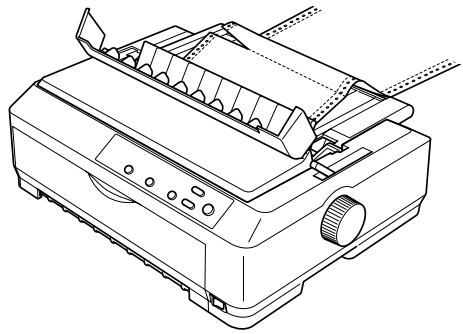


10. Turn on the printer.
11. Remove any slack in the paper by pressing the LF/FF button. (Always remove any slack from the paper; otherwise print quality may deteriorate.)

    When the printer receives data, it will start printing at the current position without advancing the paper. If necessary, adjust the current position of the paper using the Micro Adjust function (described on page 32).

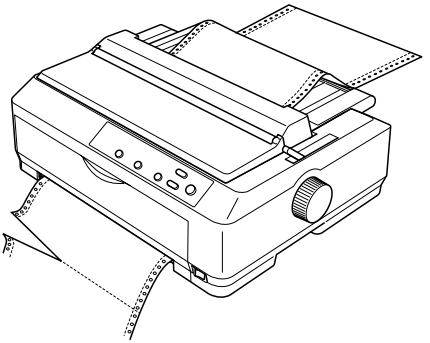
    Caution:
    Never use the knob to adjust the top-of-form position; turning the knob when the printer is on may damage it or cause it to lose the top-of-form position.

12. Attach the printer cover by inserting the front tabs into the slots, then lowering the cover into place. Close the paper guide cover.
13. Send a print job to the printer. The printer starts printing from the top-of-form position. After you finish printing, open the paper guide cover and tear off the printed document at the perforation nearest the paper exit slot.



Removing paper from the pull tractor

1. After you finish printing, tear off the paper supply at the perforation nearest the paper entry slot.

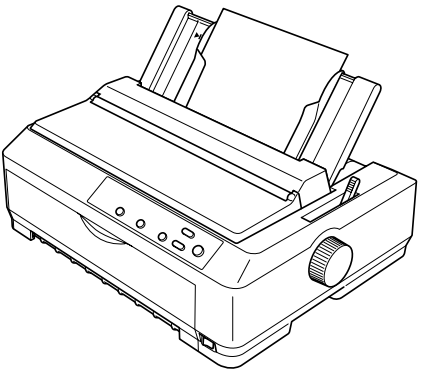


2. To feed paper forward and eject it, hold down the LF/FF button.

> ***Caution:***
> *Never press the* Load/Eject *or* Tear Off/Bin *button when you are using the pull tractor; the paper could come off the pull tractor and jam the printer.*

Loading Single Sheets with the Paper Guide

You can load ordinary single sheets and envelopes one at a time from the top of the printer using the paper guide. The paper can be up to 10.1 inches (257 mm) wide on the FX-890 and 16.5 inches (420 mm) wide on the FX-2190.



To load single-sheet multipart forms, use the front paper entry slot with the optional front paper guide or front sheet guide installed. For more information, see the *Reference Guide*.

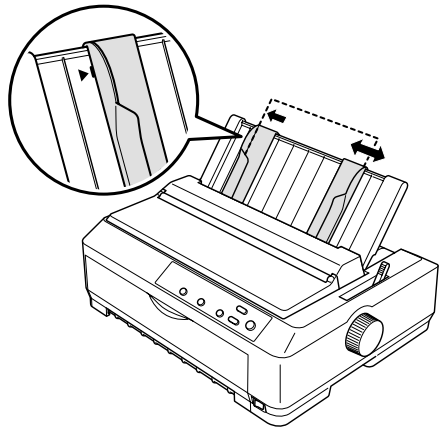
> ***Caution:***
> *Do not load multipart forms, carbon paper, or labels in the paper guide.*

1. Make sure the paper guide is in the upright position. Then set the paper-thickness lever to 0 if you are using ordinary single-sheet paper. (If you are using envelopes, see “Envelopes” on page 29 to set the lever.)

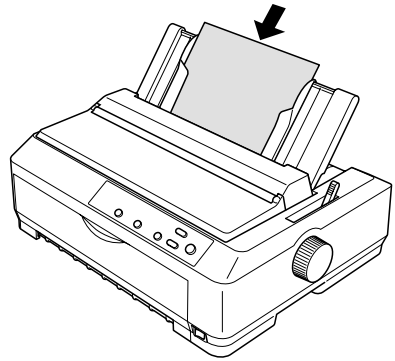
   Also move the paper release lever to the single-sheet position.

2. Turn on the printer, if necessary.

3. Slide the left edge guide until it locks in place next to the triangle mark on the paper guide. Next adjust the right edge guide to match the width of your paper.



4. Insert a sheet of paper with the printable side down between the edge guides until it meets resistance. The printer feeds the paper automatically and is ready to print.



If the first printed line on your page appears too high or low, you can use the Micro Adjust function to adjust the top-of-form position. See page 32 for more information.

Loading Special Papers

Follow the guidelines in this section when loading single-sheet multipart forms, labels, envelopes, and postcards.

Single-sheet multipart forms

To load single-sheet multipart forms, use the front paper entry slot with the optional front paper guide or front sheet guide installed. Thick paper, such as multipart forms with five or six parts, requires a straight paper path to avoid paper jams. For more information, see the *Reference Guide*.

Labels

When printing on labels, use only the type of labels that are mounted on continuous backing sheets with sprocket holes for use with a tractor feeder. Do not try to print on single sheets with labels because the printer may not feed labels on a shiny backing sheet properly.

Thick paper, such as continuous paper with labels, requires a straight or almost straight paper path. You can load labels in the front (to the pull tractor) or bottom (pull tractor) paper slot.

The loading procedure for continuous paper with labels is the same as that for ordinary continuous paper, except you must set the paper-thickness lever to 2 before printing.

Note:

- ❏ *It is best to load continuous paper with labels on the pull tractor. Do not load labels on the rear or front push tractor.*
- ❏ *Never feed labels backward using the* Load/Eject *or* Tear Off/Bin *button. When fed backward, labels can easily peel off the backing sheet and cause a paper jam.*
- ❏ *Because labels are sensitive to temperature and humidity, use them only under normal operating conditions:*

  Temperature 59 to 77°F (15 to 25°C)
  Humidity 30 to 60% RH

- ❏ *Do not leave labels loaded in the printer between jobs; they may curl around the platen and jam when you resume printing.*

❏ *Do not load continuous paper with labels from the rear paper slot. Because the rear paper path is curved, labels may come off their backing sheets inside the printer and cause a paper jam.*

❏ *Do not load paper that is curled or has been folded.*

Removing continuous paper with labels

To prevent labels from peeling off the backing sheet and jamming the printer, follow these steps to remove continuous paper with labels from the printer:

1. Tear off the fresh supply of continuous labels at the perforation nearest the paper entry slot.
2. Hold down the LF/FF button to eject the remaining labels from the printer.

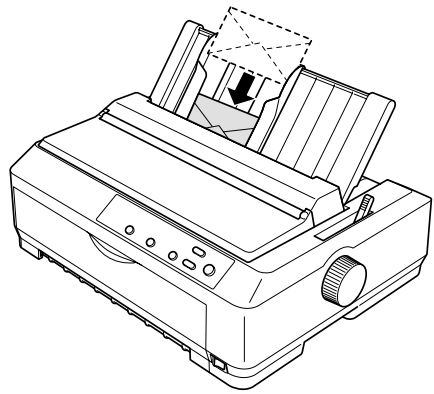
Caution:
Never feed labels backward using the Load/Eject *or* Tear Off/Bin *button. When fed backward, labels can easily come off the backing sheet and cause a paper jam.*

Envelopes

You can feed envelopes one at a time using the paper guide, or you can load multiple envelopes using the optional high-capacity cut-sheet feeder (bin 1 of the double-bin cut-sheet feeder).

Before loading envelopes, set the paper-thickness lever to position 5 (for thin envelopes) or 6 (for thick envelopes).

To load single envelopes, follow the instructions in "Loading Single Sheets with the Paper Guide" on page 26. To load multiple envelopes, see the *Reference Guide*.



Note:

❏ *Be sure to place the envelope printable side down and insert the top edge of the envelope into the printer first.*

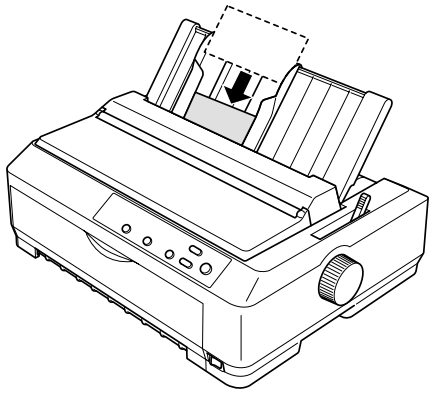
- ❏ *The print head must not print past the left or right edge of the envelope or other thick paper. Make sure your application program prints entirely within the printable area of your envelope. See "Printer Specifications" in the* Reference Guide *for more information on the printable area of envelopes.*
- ❏ *If you are using No. 6 envelopes, make sure the left edge guide is aligned with the arrow on the paper guide.*

Postcards

You can feed postcards one at a time using the paper guide, or you can load multiple cards using the optional high-capacity cut-sheet feeder (bin 1 of the double-bin cut-sheet feeder). The cards can be loaded only in the front or rear paper slot.

Before loading postcards, set the paper-thickness lever to position 2 and set the paper release lever to the single-sheet position.

To load a single card, follow the instructions in "Loading Single Sheets with the Paper Guide" on page 26. To load multiple cards, see the *Reference Guide*.



Note:

- ❏ *When you are loading postcards long edge first, always load them in the top slot.*
- ❏ *Before printing, turn on the card mode by pressing the* Tear Off/Bin *button several times until the left* Tear Off/Bin *light is on.*
- ❏ *When loading A6 size cards, always load them long edge first.*

Using the Micro Adjust Function

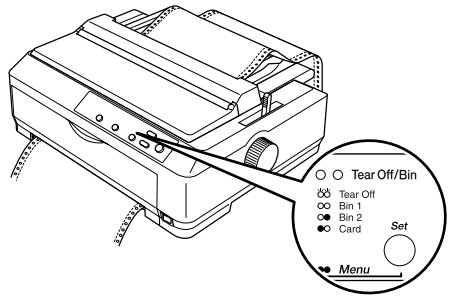
The Micro Adjust function allows you to move the paper forward or backward in 1/216-inch (0.118 mm) increments to adjust the tear-off and top-of-form positions.

Adjusting the tear-off position

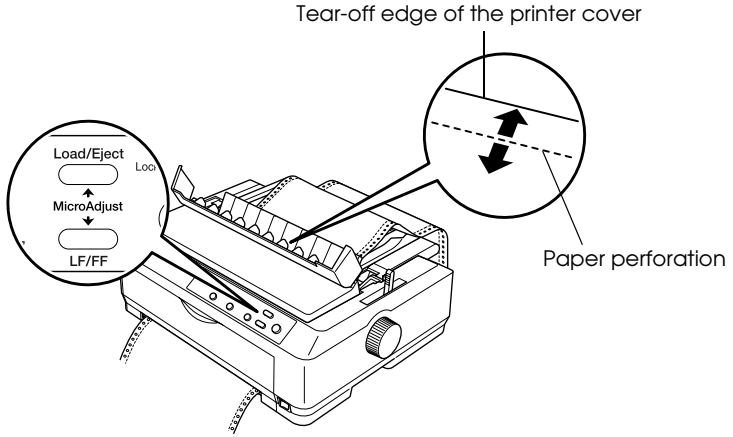
If your paper's perforation is not aligned with the tear-off edge, you can use the Micro Adjust function to move the perforation to the tear-off position, as described below. Your tear-off position setting remains in effect until you change it, even if you turn off the printer.

Caution:
Never use the knob to adjust the tear-off position; this may damage the printer or cause it to lose the tear-off position.

1. You may need to press the Tear Off/Bin button to advance the paper to the tear-off position. Make sure the Tear Off/Bin light is flashing (the paper is at the current tear-off position).
2. Hold down the Pause button for about three seconds. The Pause light begins flashing and the printer enters the Micro Adjust mode.



3. Open the paper guide cover, then press the LF/FF ⬇ button to feed paper backward, or press the Load/Eject ⬆ button to feed paper forward, until the paper perforation is aligned with the tear-off edge of the printer cover.



Note:
The printer has a minimum and a maximum tear-off position. If you try to adjust the tear-off position beyond these limits, the printer beeps and stops moving the paper.

4. Tear off the printed pages.
5. Press the Pause button to turn off Micro Adjust mode.

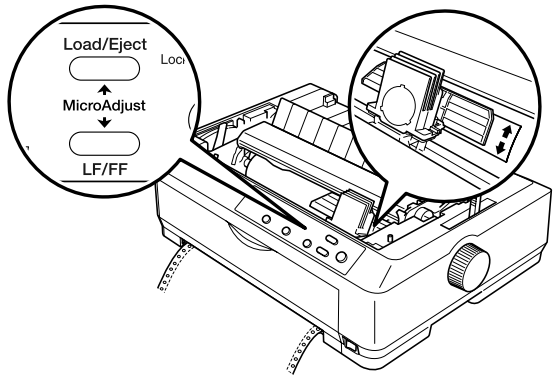
When you resume printing, the printer automatically feeds the paper back to the top-of-form position and begins printing.

Adjusting the top-of-form position

The top-of-form position is the position on the page where the printer starts printing. If your printing appears too high or low on the page, you can use the Micro Adjust function to adjust the top-of-form position, as described below. Your top-of-form position setting remains in effect until you change it, even if you turn off the printer.

Caution:
Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

1. Make sure the printer is turned on.
2. Load paper. (If the tractor is in a push position, press the Load/Eject button to advance continuous paper to the current top-of-form position.) If necessary, lift up the printer cover so you can see the paper position.
3. Hold down the Pause button for three seconds. The Pause light flashes and the printer enters the Micro Adjust mode.
4. Press the LF/FF ⬇ button to move the top-of-form position up on the page, or press the Load/Eject ⬆ button to move the top-of-form position down on the page.



5. Press the Pause button to exit the Micro Adjust mode.

Note:

- ❏ *The printer has a minimum and a maximum top-of-form position. If you try to adjust it beyond these limits, the printer beeps and stops moving the paper.*
- ❏ *When the paper reaches the default top-of-form position, the printer beeps and stops moving the paper briefly. You can use this setting as a reference point when adjusting the position.*
- ❏ *The top margin setting made in some software overrides the top-of-form position setting you make with the Micro Adjust function.*

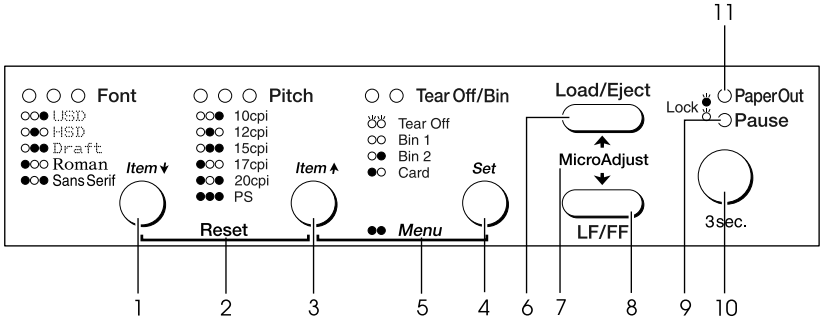
Chapter 3

Using the Control Panel

This chapter describes the buttons and lights on the control panel, plus:

- ❏ Selecting a font and pitch
- ❏ Changing the printer's default settings
- ❏ Emulating the Okidata Microline 320/321 Turbo printer

Buttons and Lights



Button/Light		Function
1	Font (Item⬇) button	Selects one of the fonts. See "Selecting a Font and Pitch" on page 37. In default setting mode, Item⬇ selects the next menu.
	Font lights	Indicate which font is selected.
2	Reset (Font and Pitch) buttons	When you press both the Font and Pitch buttons simultaneously, the printer clears the buffer and restores its default settings.
3	Pitch (Item⬆) button	Selects one of the pitch settings. See "Selecting a Font and Pitch" on page 37. In default setting mode, Item⬆ selects the previous menu.
	Pitch lights	Indicate which pitch is selected.

4	Tear Off/Bin (Set) button	Feeds continuous paper forward to the tear-off position. Feeds continuous paper backward from the tear-off position to the top-of-form position. Selects a cut-sheet feeder bin when it is installed. In default setting mode, works as the Set button to select a value.
	Tear Off/Bin lights	Both flash when continuous paper is in the tear-off position. Both off when continuous paper is not in the tear-off position or when bin 1 of the optional cut-sheet feeder is selected. Both on when the printer is in default setting mode. Left light is on when Card mode is selected. Right light is on when bin 2 of the optional cut-sheet feeder is selected.
5	Menu buttons	When you press the Pitch (Item⬆) and Tear Off/Bin (Set) buttons at the same time, the printer enters or exits default setting mode. See "Changing the Printer's Default Settings" on page 38.
6	Load/Eject button	Loads a single sheet of paper. Ejects a single sheet of paper. Loads continuous paper from the standby position. Feeds continuous paper backward to the standby position if a sheet is loaded.
7	Micro Adjust	When you hold down the Pause button for three seconds, the printer enters the Micro Adjust mode. In this mode, you can press the LF/FF ⬇ and Load/Eject ⬆ buttons to adjust the top-of-form or tear-off position. See "Using the Micro Adjust Function" on page 31.
8	LF/FF button	Feeds paper line by line when pressed quickly. Ejects a single sheet or advances continuous paper to the next top-of-form position when held down.
9	Pause light	On when the printer is paused. Flashes when the printer is in the Micro Adjust mode.
10	Pause button	Stops printing temporarily, and resumes printing when pressed again. When held down for three seconds, enters Micro Adjust mode. When pressed again, exits Micro Adjust mode.
11	Paper Out light	On when no paper is loaded in the selected paper source or paper is not loaded correctly. Flashes when paper has not been fully ejected or paper is jammed.

Selecting a Font and Pitch

Usually, you use your application program to select the font and pitch you want to use in a document. However, you can select one of the printer's five fonts (in different pitches) with the buttons on the printer's control panel, as described below. (The settings you make in application programs usually override settings you make from the printer's control panel.) The pitches available depend on the font you select:

Font	Pitch
USD	10, 12
HSD	10, 12, 15, 17, 20
Draft	10, 12, 15, 17, 20, PS
Roman	10, 12, 15, 17, 20, PS
Sans Serif	10, 12, 15, 17, 20, PS

1. Make sure that the printer is not printing. Then press the Font button until the three Font lights indicate the desired font.

○ ○ ●	USD
○ ● ○	HSD
○ ● ●	Draft
● ○ ○	Roman
● ○ ●	Sans Serif

●=On, ○=Off

2. Press the Pitch button until the three Pitch lights indicate the desired pitch.

○ ○ ●	10 cpi
○ ● ○	12 cpi
○ ● ●	15 cpi
● ○ ○	17 cpi
● ○ ●	20 cpi
● ● ●	PS

●=On, ○=Off

Changing the Printer's Default Settings

While you can often change the printer's settings through your software or printer driver, you may sometimes need to change one or more of the printer's default settings. There are two ways to do this:

- ❏ Using the EPSON Remote Configuration Manager on the printer software CD-ROM. (See page 15.)
- ❏ From the printer's control panel using the default-setting mode.

For instructions on using the Remote Configuration Manager, see the PDF manual on the CD-ROM. To use the control panel, see below. For detailed information about default settings, see the *Reference Guide*. The following table shows the options available for each printer setting.

Setting	Options (default in bold)
Page length for front tractor	Length in inches: 3, 3.5, 4, 5.5, 6, 7, 8, 8.5, **11**, 70/6, 12, 14, 17
Page length for rear tractor	Length in inches: 3, 3.5, 4, 5.5, 6, 7, 8, 8.5, **11**, 70/6, 12, 14, 17
Skip over perforation	**Off**, On
Auto tear-off	**Off**, On
Auto line feed	**Off**, On
Print direction	**Bi-D**, Uni-D
Software	**ESC/P**, IBM PPDS
0 slash	**0**, Ø
I/F (interface) mode	**Auto**, Parallel, USB, Option
Auto I/F wait time	**10 seconds**, 30 seconds
Parallel I/F bidirectional mode	Off, **On**
Packet mode	**Auto**, Off
Character table	Italic, **PC 437**, PC 850, PC 860, PC 863, PC 865, PC 861, BRASCII, Abicomp, Roman 8, ISO Latin 1, PC 858, ISO 8859-15
International character set for italic table	**Italic U.S.A.**, Italic France, Italic Germany, Italic U.K., Italic Denmark 1, Italic Sweden, Italic Italy, Italic Spain 1
Manual feed wait time	1 second, **1.5 seconds**, 2 seconds, 3 seconds
Buzzer	Off, **On**

Setting	Options (default in bold)
Auto CR (available in IBM PPDS emulation mode)	**Off**, On
IBM character table	**Table 2**, Table1

Default-setting mode

Follow the steps below to enter the default-setting mode. If you use single sheets, you need to load a new sheet of paper each time the printer ejects a printed page.

1. Make sure the printer is on and paper is loaded. Then press the Menu buttons (Item↑ and Set) until the printer beeps and both the Tear Off/Bin lights turn on.

   The printer enters default-setting mode and prints a line showing which language is currently selected for printing the instructions. The selected language is underlined.

2. If you want a different language, press the Item↓ button until the printout shows the language you want underlined.
3. Press the Set button to accept the language. The printer prints a line asking if you want to print all the current settings.
4. To print a list of all the current settings, press the Set button. The printer prints all the settings and then the first setting again. Go to step 5.

   To go through the settings one at a time, press the Item↓ or Item↑ button. The printer prints the first setting and its current value.

5. Press the Set button to scroll through the options for the selected setting until you see the one you want.

   Press the Item↓ or Item↑ button to select the next or previous setting you want to change.

6. Repeat step 5 for any other settings you want to change.
7. When you finish, press the Menu buttons again to exit default-setting mode.

Your new settings become the printer's defaults.

Emulating the Okidata Microline 320/321 Turbo

You can make your FX-890 or FX-2190 work like the Okidata Microline 320 Turbo or 321 Turbo. In Okidata mode, the printer emulates Okidata functions, and the following additional settings can be selected in the default setting mode. The default settings (shown in bold) are consistent with Okidata Microline 320/321 Turbo factory settings.

Feature	Printer settings in Okidata mode
Software emulation	**IBM PPDS**, EPSON ESC/P, Oki ML 320T
Auto tear off wait time	**0.5 second**, 1 second, 2 seconds, Others
Bottom margin	4.2 mm, 20 mm, 22 mm, **24 mm**, Others
Line spacing (lines per inch)	**6 LPI**, 8 LPI
Paper out override	**Off** (No), On (Yes)

Note:
The FX-890 and FX-2190 do not support the USB interface in Okidata mode.

If you want to use your printer in Okidata mode, do not install the Windows driver that came with your printer. If you have been using an Okidata driver, you can continue to use it with your printer in Okidata mode.

If you have been using an Okidata printer, you may want to print out its default settings for reference before changing modes on the FX-890/FX-2190. To do this on the Okidata printer, press SHIFT + SEL to enter Menu mode, and then press PRINT.

To enter Okidata mode on your FX-890/FX-2190, make sure the printer is turned off. Then hold down the Tear Off/Bin and Pause buttons while you turn on the printer. The printer beeps once to indicate it is now in Okidata mode. It remains in Okidata mode until you repeat the above procedure. To return to FX-890/FX-2190 mode, hold down the Tear Off/Bin and Pause buttons while you turn on the printer. The printer beeps twice and is now operating in FX-890 mode.

When you switch from one mode to the other, any changes you made to the printer's settings in the original mode are restored to their default values. You can print the default settings for the printer to check the current settings and change them if necessary. See page 38.

Chapter 4

Troubleshooting

This chapter explains the error indicators and describes how to clear paper jams and print a self test. For more troubleshooting information, see your *Reference Guide*. If you cannot resolve the problem using the information in the manuals, see "Where To Get Help" on page 44.

Using the Error Indicators

Use the following table to diagnose printer errors.

Light status	Beep pattern	Problem
		Solution
● Paper Out ● Pause	●●●	No paper is loaded in the selected paper source.
		Load paper in the printer or select a different paper source; the Paper Out light goes off. Then press the Pause button; the Pause light goes off and the printer starts printing.
	●●●	The paper is not loaded correctly.
		Remove your paper and reload it correctly. See Chapter 2 or the *Reference Guide*.
● Pause	●●●	The paper release lever is set to the wrong position.
		Set the paper release lever to the position for the paper source you want to use. If paper from another paper source is currently in the paper path, press the Load/Eject button to eject the paper; then move the paper release lever to the desired position.
○ Paper Out ● Pause	●●●	A single sheet of paper is not fully ejected.
		Press the Load/Eject button to eject the sheet.
	●●●	Continuous paper is not fed to the standby position.
		Tear off the printed page at the perforation; then press Load/Eject to feed the paper to the standby position.
	●●●	Paper is jammed in the printer.
		To clear the paper jam, see page 42.

Light status	Beep pattern	Problem
		Solution
● Pause	—	The print head is overheated.
		Wait a few minutes; the printer resumes printing automatically once the print head cools.
● Paper Out ● Pause ● ● Tear Off/Bin ● ● ● Font light ● ● ● Pitch light	●●●●●	The print head is stuck.
		Turn off the printer and clear any obstruction blocking the print head. Turn the printer back on. If the print head is still stuck, contact EPSON for service.
	●●●●●	An unknown or fatal printer error has occurred.
		Turn off the printer and leave it off for several minutes; then turn on the printer again.

● = On, ● = Flashing

●●● = Three beeps, ●●●●● = Five beeps

Clearing Paper Jams

1. Turn off the printer and open the printer cover.
2. If continuous paper is jammed in the printer, tear off the fresh supply at the perforation nearest the paper entry slot.
3. Turn the knob on the left side of the printer away from you to remove the paper in the printer and any remaining pieces of paper.
4. If the paper is stuck where the printer ejects it, gently pull the paper out of the printer.

   Caution:
   Use the knob on the left side of the printer to clear paper jams only when the printer is off. Otherwise, you may damage the printer or change the top-of-form or tear-off position.

5. Close the printer cover and turn on the printer. Make sure the Paper Out light is not flashing and the Pause light is off.

Printing a Self Test

Running the printer's self test helps you determine whether the printer or the computer is causing the problem. If the self test results are satisfactory, the printer is working properly and the problem probably results from your printer driver settings, application settings, computer, or interface cable. (Be sure to use a shielded interface cable.)

If the self test does not print properly, there is a problem with the printer. See the *Reference Guide* for possible causes and solutions to the problem.

You can print the self test using either single sheets or continuous paper of at least the following width:

Paper type	FX-890	FX-2190
Continuous paper (including perforated border)	9.5 inches (241 mm)	14.8 inches (376 mm)
Single sheet	A4 or letter size	A3 landscape

1. Make sure paper is loaded and the printer is turned off.
2. To run the test using the Draft font, turn on the printer while holding down the LF/FF button. To run the test using the printer's near letter-quality fonts, hold down the Load/Eject button while you turn on the printer. Either self test can help you determine the source of your printing problem; however, the draft self test prints faster than the near letter-quality test.

   After a few seconds, the printer loads the paper automatically and begins printing the self test. A series of characters is printed.

   Note:
   To temporarily stop the self test, press the Pause *button. To resume the test, press the* Pause *button again.*
3. To end the self test, press the Pause button to stop printing. If paper remains in the printer, press the Load/Eject button to eject the printed page. Then turn off the printer.

Caution:
Do not turn off the printer while it is printing the self test. Always press the Pause *button to stop printing and the* Load/Eject *button to eject the printed page before you turn off the printer.*

Where To Get Help

If your EPSON printer is not operating properly and you cannot solve the problem using the troubleshooting information, see the contact information below. EPSON provides technical assistance 24 hours a day through the electronic support services and automated telephone services listed below.

Service	Access
World Wide Web	From the Internet, you can reach EPSON Support at **http://support.epson.com**. At this site, you can download drivers and other files, look at product documentation, access troubleshooting information, and receive technical advice through e-mail.
Automated Telephone Services	A variety of automated help services are available 24 hours a day, seven days a week. To use these services, you must have a touch tone telephone and call **(800) 922-8911**. Use one of the following SoundAdvice℠ Express Codes to quickly select your printer in SoundAdvice: 70470 (for the FX-890) or 70475 (for the FX-2190).

To speak to a technical support representative, dial:

- U.S.: **(562) 276-4322**, 6 AM to 6 PM, Pacific Time, Monday through Friday.
- Canada: **(905) 709-2170**, 6 AM to 6 PM, Pacific Time, Monday through Friday.

Toll or long distance charges may apply. Before you call, please have the following information ready:

- Product name (EPSON FX-890 or FX-2190)
- Product serial number (located on the back of the printer)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer configuration
- Description of the problem

You can purchase ribbon cartridges, paper, manuals, and accessories from EPSON at (800) 873-7766, or visit the EPSON Store at www.epsonstore.com (U.S. sales only). In Canada, please call (800) 463-7766 for dealer referral.

Chapter 5

Product Information

Safety Instructions

Hot Parts Caution Symbol

This symbol is placed on the print head and other parts to indicate that they may be hot. Never touch those parts just after the printer has been used. Let them cool for a few minutes before touching them.

Important Safety Instructions

Read all of these safety instructions before using the printer. In addition, follow all warnings and instructions marked on the printer itself.

- ❏ Do not place the printer on an unstable surface or near a radiator or heat source.
- ❏ Place the printer on a flat surface. It will not operate properly if it is tilted or placed at an angle.
- ❏ Do not block or cover the slots and openings in the printer's cabinet, and do not insert objects through the slots.
- ❏ Use only the type of power source indicated on the printer's label.
- ❏ Connect all equipment to properly grounded electrical outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.
- ❏ Do not use a damaged or frayed power cord.
- ❏ If you use an extension cord with the printer, make sure the total ampere rating of all devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total ampere of all devices plugged into the electrical outlet does not exceed the electrical outlet's ampere rating.
- ❏ Unplug the printer before cleaning it, and always clean it with a piece of damp cloth only.
- ❏ Do not spill liquid onto the printer.
- ❏ Except as specifically explained in this guide, do not attempt to service the printer yourself.

- ❏ Unplug the printer and refer servicing to qualified service personnel under the following conditions: if the power cord or plug is damaged, if liquid has entered the printer, if the printer has been dropped or the cabinet damaged, if the printer does not operate normally or exhibits a distinct change in performance.
- ❏ Adjust only those controls that are covered by the operating instructions.

ENERGY STAR Compliance

As an ENERGY STAR® Partner, EPSON has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

The International ENERGY STAR Office Equipment program is a voluntary partnership with the computer and office equipment industry to promote the introduction of energy-efficient personal computers, monitors, printers, fax machines, copiers, and scanners in an effort to reduce air pollution caused by power generation.

FCC Compliance Statement for United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian users

This Class B digital apparatus meets all requirements of the Canadian Interface Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouileur du Canada.

EPSON AMERICA, INC., LIMITED WARRANTY

What Is Covered: Epson America, Inc. ("EPSON") warrants to the first end user customer of the EPSON product enclosed with this limited warranty statement that the product, if purchased and used in the United States or Canada, conforms to the manufacturer's specifications and will be free from defects in workmanship and materials for a period of three years from the date of original purchase. EPSON also warrants that the consumable ribbon enclosed with the product will perform to the manufacturer's specified usage, which usage may expire before the expiration of the limited warranty for the EPSON product.

What EPSON Will Do To Correct Problems: Should your EPSON product prove defective during the warranty period, please call the EPSON Connection^{SM} at (562) 276-4322 or (905) 709-2170 (Canada) for warranty repair instructions and return authorization, if required. EPSON will, at its option, repair or replace on an exchange basis the defective unit, without charge for parts or labor. When warranty service involves the exchange of the product or of a part, the item replaced becomes EPSON property. The exchanged product or part may be new or previously repaired to the EPSON standard of quality. Exchange or replacement products or parts assume the remaining warranty period of the product covered by this limited warranty. For warranty service, you must provide proof of the date of original purchase.

What This Warranty Does Not Cover: This warranty covers only normal consumer use in the United States and Canada. This warranty is not transferable and will not apply to products purchased from an end user. This warranty does not cover damage to the Epson printer caused by parts and supplies not manufactured, distributed or certified by Epson. This warranty does not cover ribbon or third party parts, components or peripheral devices added to the EPSON product after its shipment from EPSON, e.g., dealer-added boards or chips. EPSON is not responsible for warranty service should the EPSON label or logo or the rating label or serial number be removed or should the product fail to be properly maintained or fail to function properly as a result of misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood, and lightning, improper electrical current, software problems, interaction with non-EPSON products, or service other than by an EPSON Authorized Servicer. Packaging, postage, insurance and shipping costs incurred in presenting your EPSON product for warranty service are your responsibility. If a claimed defect cannot be identified or reproduced in service, you will be held responsible for costs incurred.

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