

User's Guide

PF8d/PF8t Printers



Intermec



User's Guide

PF8d/Pf8t Printers

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Document Change

This page records changes to this document. The document was originally released as version 001.

Version	Date	Description of Change
002	8/07	Removed listing of accessories. Revised information about installing and using a compact flash card. Made a few minor format corrections.

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Information

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

This section explains how to identify and understand dangers, warnings, cautions, and notes that are in this document. You may also see icons which tell you when to follow ESD procedures.



Warning

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.



Caution

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.



Follow ESD
Procedures

This icon appears at the beginning of any procedure in this manual that could cause you to touch components (such as printed circuit boards) that are susceptible to damage from electrostatic discharge (ESD). When you see this icon, you must follow standard ESD guidelines to avoid damaging the equipment you are using.



Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec web site at www.intermec.com and click **Service & Support > Warranty**.

Web Support

Visit the Intermec web site at www.intermec.com to download our current manuals (in PDF). To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at intermec.custhelp.com to review technical information or to request technical support for your Intermec product.

Telephone Support

These services are available from Intermec.

Services	Description	In the USA and Canada call 1-800-755-5505 and choose this option
Order Intermec products	<ul style="list-style-type: none">Place an order.Ask about an existing order.	1 and then choose 2
Order Intermec media	Order printer labels and ribbons.	1 and then choose 1
Order spare parts	Order spare parts.	1 or 2 and then choose 4
Technical Support	Talk to technical support about your Intermec product.	2 and then choose 2
Service	<ul style="list-style-type: none">Get a return authorization number for authorized service center repair.Request an on-site repair technician.	2 and then choose 1
Service contracts	Renew a contract, ask about an existing contract.	1 or 2 and then choose 3

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec web site, click **Contact**.

Who Should Read This Manual

This user's guide is for the person who is responsible for installing, configuring, and maintaining the PF8d and PF8t printers.

This user's guide provides you with information about the features of the PF8d and PF8t printers, and how to install, configure, operate, maintain, and troubleshoot them.

Patent Information

This product is protected by one or more of the following United States patents:

5,581,293; 5,613,790; 5,927,876; 6,088,049; 6,345,920

There may be U.S. and Foreign Patents Pending.



1 Using the PF8 Printers

Use this chapter to familiarize yourself with the PF8 printers. In this chapter you will find these sections:

- Introducing the PF8 Printers
- Features of the PF8 Printers
- Understanding the LED Indicators

Introducing the PF8 Printers

The PF8 are lightweight, reliable, and easy-to-use printers. Both printers are designed to print a low volume of labels per day (less than 1000 labels per day). There are two models of the PF8 printer:

- The PF8d is a 203 dpi direct thermal printer.
- The PF8t is a direct thermal/thermal transfer printer that is available in 203 and 300 dpi models.

Both PF8 printers are provided with parallel, serial RS-232, and USB ports. As an option, both models can be fitted with a cutter attachment, or label stripper module. The PF8t can also be fitted with a compact flash card adapter.



The discharge of electrostatic energy accumulated on the human body, clothing, or other surfaces can damage or destroy the printhead or electronic components used in these printers. Avoid touching the electrical connectors while unpacking or setting up your printer.

Features of the PF8 Printers

This section describes the front controls and indicators, components of the media compartment, and connections located on the rear of the PF8d and PF8t printers.

Front Controls and Indicators

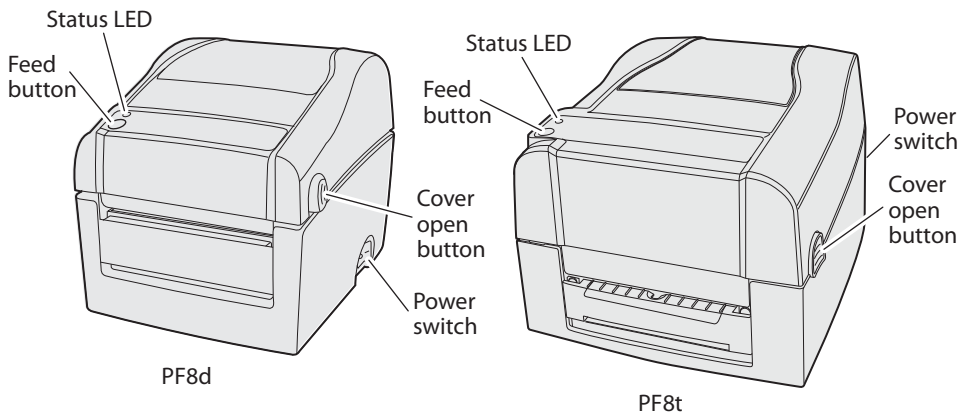
The PF8 printers are controlled by using a Power switch, a Feed button, and a multi-color status LED.

The Power switch is located on the side of the PF8d and on the back of the PF8t.

You can use the Feed button in two ways:

- Tapping it
When power is turned on and the printer is loaded with media (and possibly ribbon), tapping the Feed button causes the media to form feed.
- Holding it down
When power is turned on, holding the Feed button down causes the printer to enter Media Sensing mode and print the printer configuration page when the button is released.

There are also cover open buttons located on each side of the printer which you press to access the media compartment.

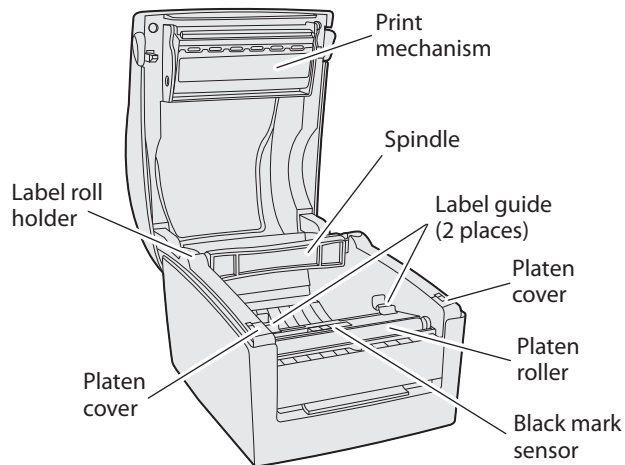


PF8d and PF8t Front Controls

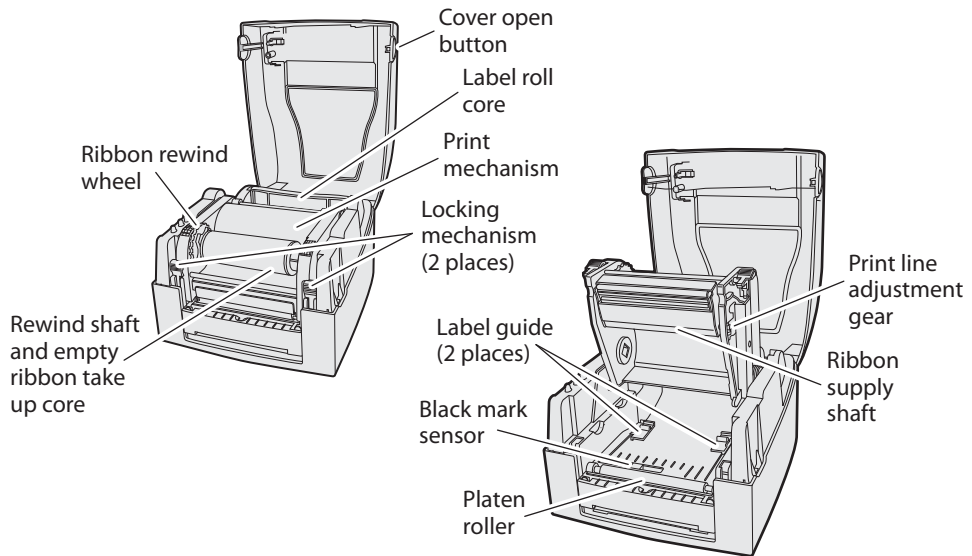
Media Compartment

The PF8t is a thermal transfer/direct thermal capable printer. The media compartment for thermal transfer printers accommodates the media supply and the transfer ribbon supply.

In direct thermal printers like the PF8d, the top cover and the print mechanism are combined into a single unit.



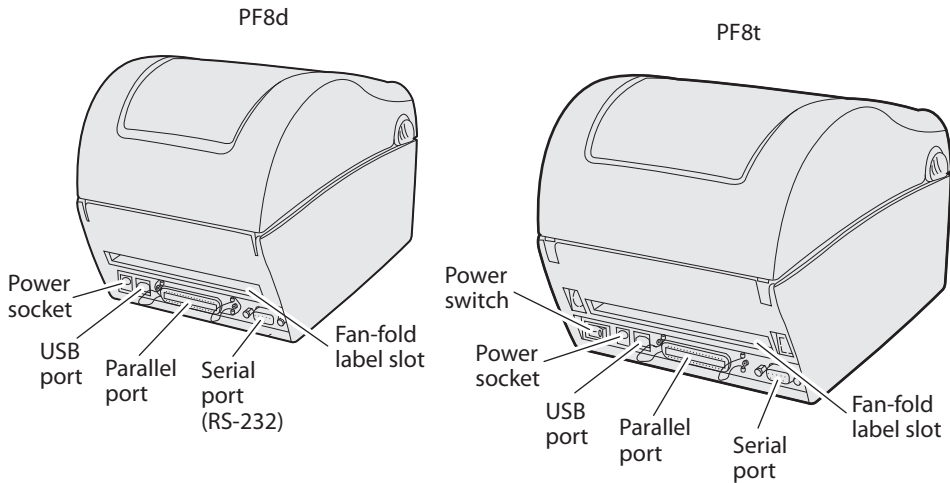
PF8d Media Compartment



PF8t Media Compartment

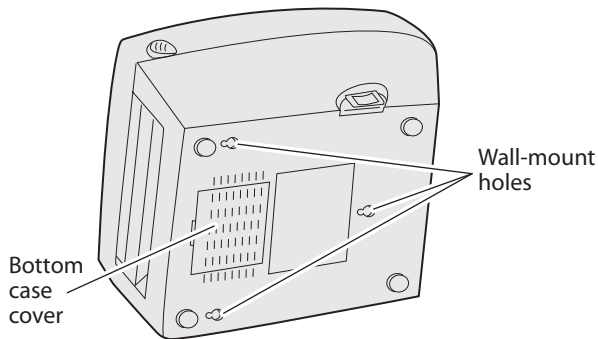
Other Features and Connections

The rear and underside of the printers contain provide USB, serial, and parallel connections and additional features.



PF8d and PF8t Rear View Connections and Controls

The bottom of the PF8d also has hanger holes that allow you to wall-mount the printer.



PF8d Wall-Mount Holes

Understanding the LED Indicators

When power to the printer is switched on, the status LED turns green indicating that the printer is ready to accept print commands.

If the printer runs out of media and/or ribbon during printing, the LED glows red. Other status indicators are shown in the table below:

LED Status Indicators

LED	Meaning
Green (blinking)	Autosensing mode
Green (blinking)	Downloading font, form, or graphic
Green (solid)	Dump mode
Green (solid)	Ready mode
Green (solid)	Print mode
Orange (solid)	Boot mode
Red (blinking)	Media jam, overheated printhead or stepper motor
Red (blinking)	Downloading firmware
Red (solid)	Error mode



2 Installing the Printer

Use this chapter to install your PF8d and PF8t printers. In this chapter you will find these sections:

- Connecting the Printer to Your Network
- Turning on the Printer
- Installing the Compact Flash (PF8t Only)
- Understanding Auto-Sensing Mode
- Creating and Printing Labels
- Loading Media
- Loading Thermal Transfer Ribbon

Connecting the Printer to Your Network

All PF8 models are fitted with a 36-pin connector for the parallel interface port, a 9-pin connector for the RS-232 serial interface port, and a USB connector.



Note: The PF8 printers ship with a USB cable.

Connecting the Printer Through the USB Interface

To use the USB connection, you need to install the Intermec InterDriver software on your computer. To ensure you get the latest version, check the Intermec web site first. This software can also be found on the PrinterCompanion CD. The USB interface is not suitable for terminal connections or programming.

Connecting the Printer Through the Serial Port

You can use the serial connection with either LabelShop or the Intermec InterDriver. You can also use it to send commands directly through the terminal connection. A serial cable is not included with the printer.

Connecting the Printer Through the Parallel Port

You can use the parallel connection with LabelShop or Intermec InterDriver. The parallel port supports Windows plug and play and additional status reporting.

Installing the Printer Driver

You must install the Intermec InterDriver print driver in order to communicate with your PF8 printer. The InterDriver files are on the PrinterCompanion CD that is shipped with your PF8 printer or from the Intermec web site at <http://www.intermec.com/support/downloads/index.aspx>.

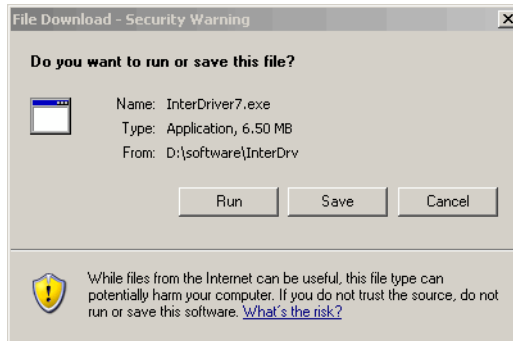
To install InterDriver

- 1 Load the PrinterCompanion CD into your PC.
- 2 On the main screen, click the **Software** button and the InterDriver with ActiveX Controls introduction screen appears. Click the **Installation Instructions** link at the bottom of the page.

- 3 Click the **Install InterDriver** link.



- 4 The File Download - Security Warning screen appears. Click the **Run** button to run the .exe or the **Save** button to save it to your PC to be run later. In this procedure, the **Run** button was selected.



- 5 The Internet Explorer - Security Warning screen appears. Click the **Run** button to start the InterDriver installation.



- 6 The Intermec End User License Agreement appears. To continue with the installation, read the agreement and select the radio button to accept the agreement, and then click the **Next** button.



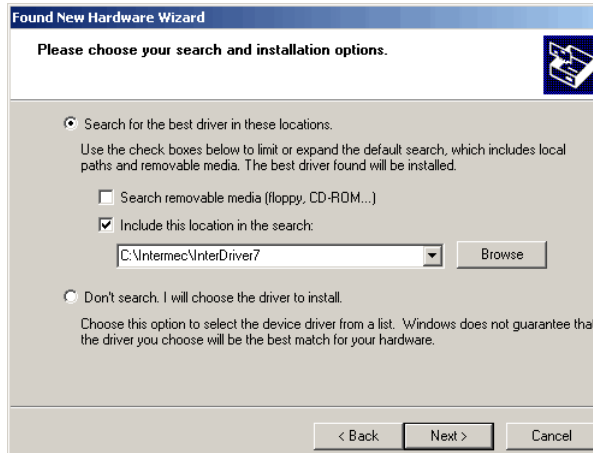
- 7 The Installation Directory screen appears. The default installation directory is c:\Intermec\InterDriver7. Click the **Next** button to use the default directory or specify a different location to install the files.
- 8 Clear the **Run Add Print Wizard after unpacking drivers** check box and click the **Finish** button.
- 9 On the New Hardware Wizard screen, click the **Install from a list or specific location** radio button and then the **Next** button to continue.



Note: For LPT connections, you must restart your PC for Windows to detect the new hardware. For USB connections, the New Hardware Wizard will launch automatically when the printer is connected and turned on.



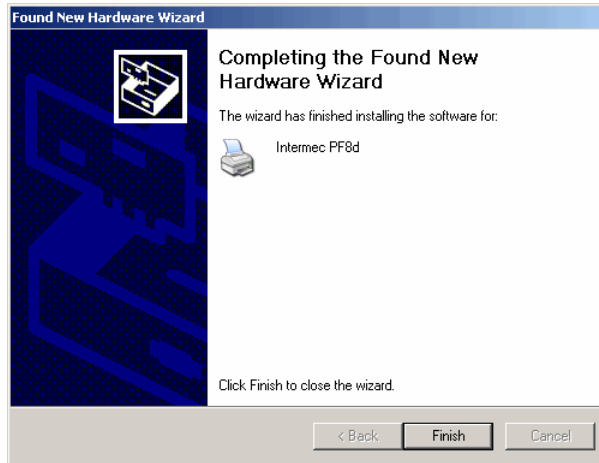
- 10 Click the **Next** button on the Search and Installation Options screen.



- 11 Click the **Continue Anyway** button on the Hardware Installation warning screen.



- 12 Click the **Finish** button to exit the New Hardware Wizard. InterDriver files are now installed on your PC.



Turning On the Printer

To power the printer

- 1 Place the printer on a stable surface.



Danger of personal injury if the printer and power supply are operated in an environment where they can get wet. Only use with Intermec power supply adapter P/N 1-092363-xx.

- 2 Place the power supply adapter in a suitable location between the printer and an electrical outlet. The power supply adapter can be use for 100 to 240 VAC, 50 to 60 Hz. The configuration of the supplied power cord differs according to national standards.
- 3 Make sure the printer's On/Off switch is in the Off position (O).
- 4 Insert the power cord's round connector into the power receptacle in the back of the printer.
- 5 Insert the power cord plug into an AC socket.
- 6 Turn the On/Off switch to the On position (—).

- 7 The status LED will cycle from red to green indicating that the power is turned on.

Installing the Compact Flash (PF8t Only)

The PF8t is supplied with 4MB flash memory and 8MB of SDRAM memory. The built-in memory can be expanded by using a compact flash card if more memory is required for your application. You will need to purchase and install a compact flash adapter to use a CF card.

You can select which memory source you want to use: built-in memory or compact flash. Use Windows HyperTerminal to send an ESim **M** command to the printer to select your memory source. You can only use one memory source.

ESim memory allocation commands are:

- M0 Select built-in memory
- M1 Select compact flash memory
- MF Format the compact flash card

For more information on ESim commands, refer to the *ESim for the PC4/PF8 Bar Code Label Printer Programmer's Reference Manual* (P/N 1-960629-xx).

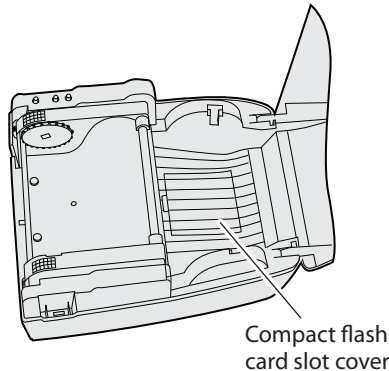


Caution

Turn the printer power off when installing or removing the compact flash card.

To install the compact flash card

- 1 Turn the PF8t power off.
- 2 Open the top cover by pressing the cover open buttons on either side of the top cover.
- 3 Remove any media and the spindle.
- 4 Open and remove the compact flash card slot cover from the printer base.



- 5 Insert the compact flash card in the compact flash adapter. Make sure that the card is oriented correctly to fit in the slot. Push firmly to seat the card.
- 6 Install the compact flash card slot cover.
- 7 Close the top cover and turn on the printer power.

Understanding Auto-Sensing Mode

The Auto-Sensing mode can be used for the following:

- Adjusting the label gap sensor
- Printing a test label with a test pattern and list of the printer's current settings
- Entering Dump mode

To use Auto-Sensing mode

- 1 Load media in the printer.
- 2 Press and hold the **Feed** button while turning the Power switch to the On position (—).

The status LED blinks green for 2 seconds, blinks red for 2 seconds, and then blinks green again.

Note: If you are using continuous stock or gap media, release the **Feed** button when the status LED is blinking green. If you are using black marked media, release the **Feed** button when the LED is blinking red.



- 3 The printer automatically adjusts the label gap sensor and media feed according to the characteristics of the media. The printer may feed three to four labels before the adjustment is completed. If you are using peel-off media, remove the labels as they are fed out.

After a short delay, a test label will print and the printer will enter Dump mode. See the *ESim for the PC4/PF8 Bar Code Label Printer Programmer's Reference Manual* (P/N 1-960629-xx) for additional information about Dump mode.

- 4 Press the **Feed** button once to return to normal operation, or press and hold the **Feed** button for at least 3 seconds after the test label prints to reset the printer to the default settings. The status LED will glow red indicating that the printer was reset to the default settings and then cycle to green.

Refer to the *ESim for the PC4/PF8 Bar Code Label Printer Programmer's Reference Manual* (P/N 1-960629-xx) for an illustration and explanation of the test label.

Creating and Printing Labels

The PrinterCompanion CD that ships with the PF8 printers contains software programs that you can use to configure the printer to create a wide variety of labels. These programs include:

- LabelShop (v6.12, SP5)
- InterDriver (v7.06 M5)
- ESim Config Tool (v2.1)

Refer to the software documentation on the PrinterCompanion CD for detailed information about using these programs.

Loading Media

Introduction

Both models of the PF8 printers can print on direct thermal media. The PF8t also has the ability to print on thermal transfer media such as self-adhesive labels, non-adhesive tags, or continuous stock. When printing on thermal transfer media you must also install a thermal transfer ribbon.

There are three ways of using media on the PF8 printers:

Tear-Off

Tear-Off (straight-through) media is fed out the front of the printers and can be torn off by pulling it upwards against the edge of the top cover.

Cut-Off

Cut-Off media requires an optional paper cutter fitted on the front of the printer. The cutter is not designed to cut through adhesive and doing so will cause the adhesive to stick to the cutting shears and prevent the cutter from operating.

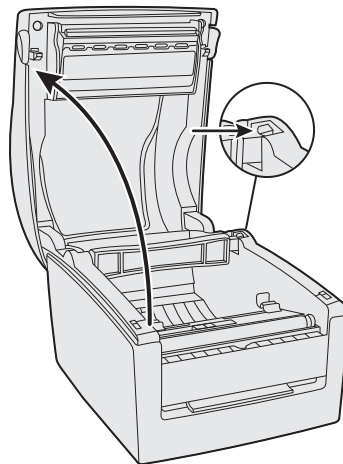
Peel-Off

Peel-Off (self-strip) media means that self-adhesive labels are automatically separated from the label backing after printing. Peel-Off media cannot be used with the cutter option.

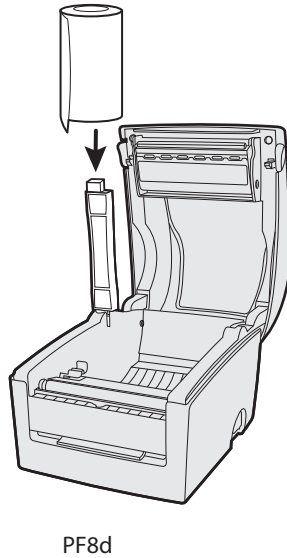
Loading Media for Tear-off Operation

To load tear-off media

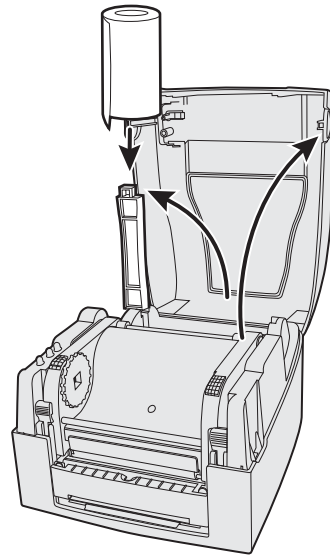
- 1 Press the cover open buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.



- 2 Pull or lift the spindle and remove the empty label roll core (if present).



PF8d



PF8t



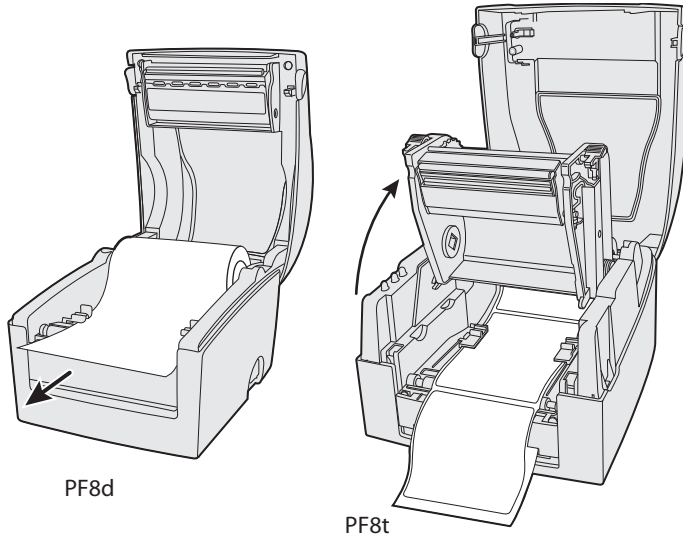
Note: The PF8d spindle lifts up, but remains attached to the printer while the PF8t spindle lifts completely out of the spindle compartment.

- 3** Insert the spindle into the core of a fresh media roll. Rotate the spindle to fit the inside diameter of the core (see the core diameter markings on the spindle).

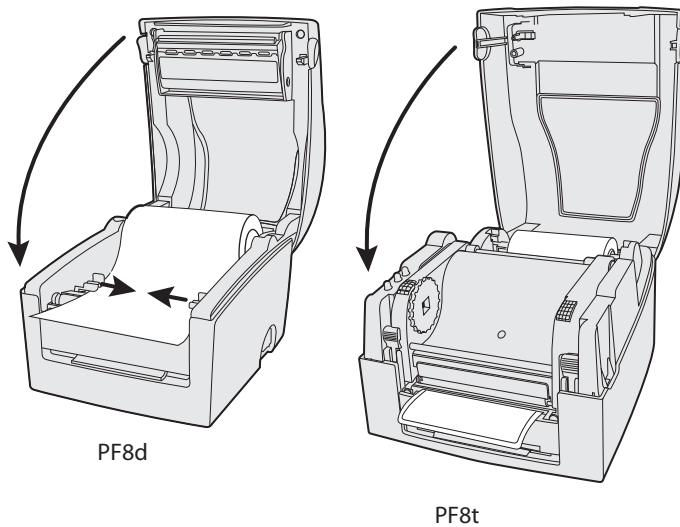
- 4 Put the label between the label guides and pull it forward.



Note: On the PF8t you will also need to press the locking mechanism and open the print mechanism/ribbon container to load media and access the media adjustment tabs.



- 5 Adjust the label guide to fit the media you are using.



- 6 Close the top cover. On the PF8t you will first need to close the print mechanism/ribbon container before closing the cover.



Note: If you are loading media for the first time or changing from another type or size of media, perform a label gap sensor adjustment as described on page 34.

Loading Media for Peel-Off Operation

To load peel-off media

- 1 Press the cover open buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.
- 2 Open the peel-off mechanism on the front of the printer.
- 3 Pull or lift the spindle and remove the empty label roll core (if present).



Note: The PF8d spindle lifts up, but remains attached to the printer while the PF8t spindle lifts completely out of the spindle compartment.

- 4 Insert the spindle into the core of a fresh media roll. Rotate the spindle to fit the inside diameter of the core (see the core diameter markings on the spindle).
- 5 Put the label between the label guides and pull it forward.
- 6 Peel away the label from the first 10 cm (4 in) of the liner.
- 7 Thread the liner around the peel-off bar and insert inside the peel-off mechanism so that it protrudes from the slot below the mechanism.
- 8 Hold the labels and pull on the liner until it becomes tight.
- 9 Close the peel-off mechanism.
- 10 Close the top cover.



Note: If you are loading media for the first time or changing from another type or size of media, perform a label gap sensor adjustment as described on page 34.

Loading Media for Cut-Off Operation



The cutter (optional accessory) cannot be used to cut through labels, only through the liner between the labels. Cutting through the labels will cause the adhesive to stick to cutting parts and prevent the cutter from working properly. Media rolls must be wound with the printable side facing upward to prevent jamming the cutter.

To load cut-off media

- 1 Press the release buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.
- 2 Pull or lift the spindle and remove the empty label roll core (if present).



Note: The PF8d spindle lifts up, but remains attached to the printer while the PF8t spindle lifts completely out of the spindle compartment.

- 3 Insert the spindle into the core of a fresh media roll. Rotate the spindle to fit the inside diameter of the core (see the core diameter markings on the spindle).
- 4 Put the label between the label guides and pull the label forward.
- 5 Adjust the label guide to fit the media you are using.
- 6 Route the media through the slot in the optional cutter mechanism just in front of the tear bar.
- 7 Close the top cover.



Note: If you are loading media for the first time or changing from another type or size of media, perform a label gap sensor adjustment as described on page 34.

Loading an Media from an External Supply

Insert the media through the slot in the back of the printer. Follow the instructions for the type of media you are using. The spindle is not used when using an external media supply.



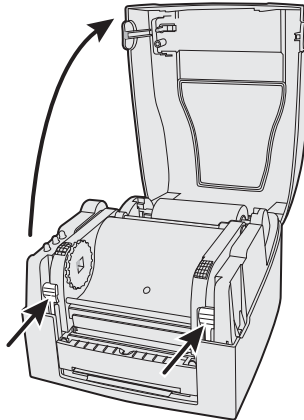
Note: Be careful to protect an external media supply from dirt, grit, dust, water, and direct sunlight.

Loading Thermal Transfer Ribbon (PF8t Only)

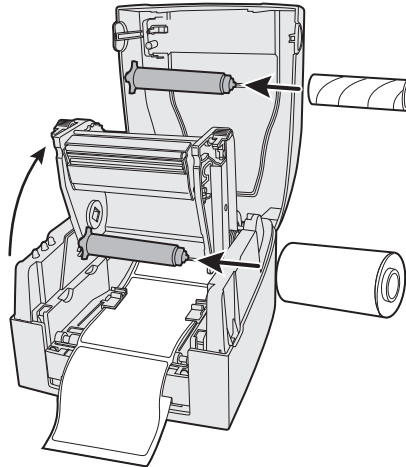
Thermal transfer ribbons are required when you print on thermal transfer (non-heat sensitive) media. The type of transfer ribbon you use should match the face materials of the media to obtain the best durability and print quality.

To load a fresh ribbon roll

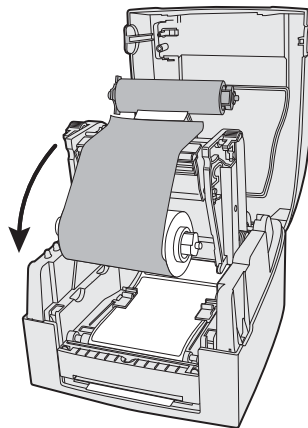
- 1 Press the cover open buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.
- 2 Press the green release tabs at the bottom of the top cover on both sides of the printhead.



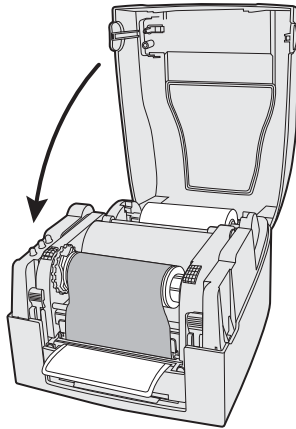
- 3** Lift the print carriage halfway up while keeping the top cover fully opened. Insert a new ribbon roll onto the ribbon supply shaft.



- 4** Feed the transfer ribbon from the ribbon supply shaft under the printhead.
- 5** Wrap the ribbon around the ribbon shaft. Using the tape fitted at the front of the ribbon leader, attach the leader to the top of the rewind core. Be careful to center align the ribbon leader with the core.



- 6 Close the print carriage by pressing firmly down on both sides. A loud click indicates the print carriage locked into place.
- 7 Firmly close the printer's top cover.



- 8 Tap the **Feed** button until the status LED glows green.

When you switch between direct thermal and thermal transfer printing, or when you switch between different types of transfer ribbon, you can remove a partially used transfer ribbon and save it for later use.

To remove a partially used ribbon

- 1 Press the cover open buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.
- 2 Press the green release tabs at the bottom of the top cover on both sides of the printhead and lift the print carriage halfway up while keeping the top cover fully opened.
- 3 Using a pair of scissors, cut the transfer ribbon just below the rewind roll.
- 4 Rewind the unused ribbon onto the supply spool. Remove the roll by pushing it to the left until the right end disengages then lift the roll up. Fasten the loose end with a piece of tape or label to prevent the roll from unwrapping.

- 5 Remove the rewind roll by pushing it to the left until the right end disengages, then lift out. Dispose of the used ribbon.



Note: Keep the ribbon core. You will need it the next time you load ribbon.



3 Troubleshooting and Maintaining the Printer

Use this chapter to troubleshoot and maintain your PF8d and PF8t printers. This chapter contains these sections:

- Troubleshooting
- Upgrading the Firmware
- Cleaning the Case
- Cleaning the Printhead
- Adjusting the Thermal Printhead Pressure
- Adjusting the Print Alignment
- Adjusting the Label Taken Sensor
- Adjusting the Label Gap Sensor

Troubleshooting

Problem	Solution or Reason
LED not green when power is on.	Make sure connections on the power supply are securely plugged into the AC receptacle on the printer and to an AC outlet.
LED is green but printer will not feed.	<ul style="list-style-type: none"> • Label taken sensor active, label not removed. • Make sure correct type of interface cable is securely plugged in to both the printer and computer.
Printer seems to be working but nothing prints.	<p>Direct Thermal Printing</p> <ul style="list-style-type: none"> • Check that the heat sensitive side of the media faces the printhead. • Verify that the media is intended for direct thermal printing by testing to see if the media is blackened by heat from a hot object (70°C [160°F] or higher). <p>Thermal Transfer Printing</p> <ul style="list-style-type: none"> • Verify that the printer is loaded with thermal transfer ribbon and that the ink coated side faces the media surface.
Print quality is poor.	Clean the printhead. If cleaning the printhead does not improve print quality, adjust the printhead contact.
Partial labels printed.	<ul style="list-style-type: none"> • Print carriage is not completely locked. • Label caught on printhead. Remove label and clean printhead.
Printer continues print or feed when it should stop printing.	<ul style="list-style-type: none"> • Label caught on the label gap sensor. Open the top cover, remove the label and clean the printhead using the Cleaning Card or isopropyl alcohol. • Possible firmware problem.
Printing stops and indicator LED glows orange.	<ul style="list-style-type: none"> • Possible problem with label gap sensor. Perform an auto adjust in Auto-Sensing mode. • Possible media jam. • Possible firmware problem.
Label stuck on roller.	Open the peel-off mechanism and peel off the stuck label while manually rotating the roller. Do not use any sharp tools to remove the label. Clean the peel-off mechanism using the Cleaning Card or isopropyl alcohol.
Label taken sensor does not hold printing until the label/tag has been removed.	<ul style="list-style-type: none"> • Label/tag bend down due to excessive length and/or too thin or soft media. • Label or tag too short. • Label taken sensor or cable defective.
Indicator LED flashes red and printing is interrupted.	Overheated. Wait for the printer to cool down and the indicator LED changes to green and printing (if halted) resumes.

Upgrading the Firmware

To upgrade the printer firmware you will need the following:

- The Intermec ESIm Config Tool for the PF8, which is on the PrinterCompanion CD that ships with the printer, or can be downloaded at www.intermec.com. You can use the Config Tool to download a new firmware version directly to the printer. The Config Tool also supports font downloading and memory partitioning. It supports seven languages and comes with comprehensive online help.
- An upgrade file (.ufz). You can also download new upgrade files from www.intermec.com.
- A host PC running Microsoft Windows with a USB, parallel, or serial RS-232 connection. Parallel or USB connections are recommended.

Cleaning the Case

Keep your PF8 printer clean by periodically wiping it with a soft cloth dampened with water. Do not use abrasive cleaners or solvents that will scratch the surface of the case.

Cleaning the Printhead

Intermec recommends using the special Cleaning Card (P/N 1-110501-00) and the procedure below to clean the printhead before loading a new media roll.

To clean the printhead

- 1 Turn off power to the printer.
- 2 Open the top cover/print carriage.
- 3 Unload the media stock. If you are doing thermal transfer printing, also remove the transfer ribbon.
- 4 Insert the cleaning card under the print carriage as when loading media. Approximately 2 to 3 cm (1 in) of the card should extend to the front of the printhead.
- 5 Fold down the print carriage to the locked position.

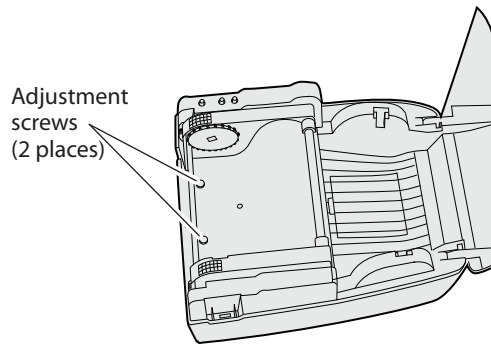
- 6** Use one hand to hold the printer and the other hand to pull the cleaning card forward until you pull the card out of the printer.
- 7** Repeat Steps 4-6 to complete a second cleaning pass.
- 8** Dispose of the used cleaning card and reload media and ribbon supplies.

Adjusting the Thermal Printhead Pressure (PF8t only)

When you print with different label materials or use different types of ribbons, print quality may be affected due to differences in the material. If this happens you will need to adjust the thermal printhead pressure for the type of material you are using.

To adjust thermal printhead pressure

- 1** Turn off power to the printer.
- 2** Press the cover open buttons on both sides of the case to open the top cover. Fold the cover upwards/rearwards.
- 3** Using a straight-slot screwdriver, turn the screws clockwise to increase printhead pressure or counterclockwise to decrease printhead pressure.

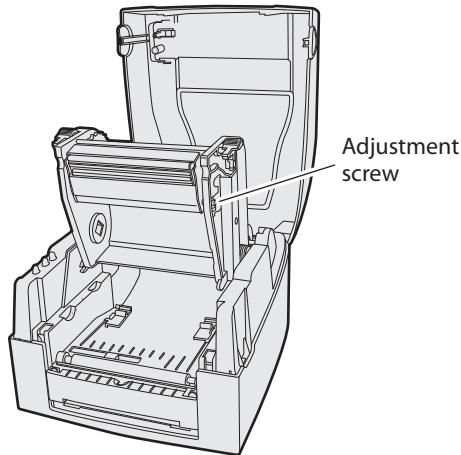


PF8t

Adjusting the Printhead Alignment

You can improve the print quality by adjusting the alignment between the printhead and the platen roller.

- Turn the printhead adjusting screw counterclockwise or clockwise to adjust the contact surface (alignment) between the printhead and the platen roller.



PF8t

Adjusting the Label Taken Sensor

The built-in label taken sensor can be enabled to stop printing until a printed label is removed from the printer's output slot. As long as the label taken sensor detects a label, the printer will be busy and unable to receive data from the host.

When you are using the ESim protocol, note the following:

- The label taken sensor must be enabled using the manual switch next to the sensor before it can be enabled or disabled using ESim commands.
- When switching between peel-off, tear-off, and cut-off operation, you must adjust the media feed in ESim by using a **j** command.

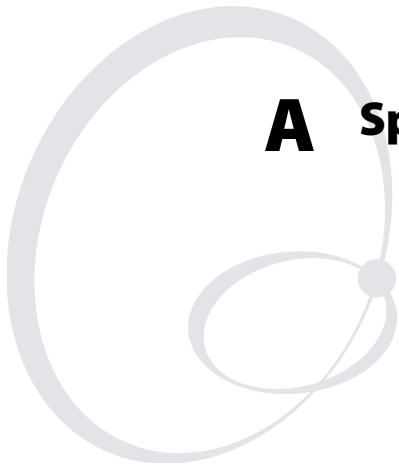
If you are using InterDriver you can select a mode of operation without issuing commands. You can select the following modes:

- Tear-off
- Peel-off with label taken sensor enabled
- Peel-off with label taken sensor disabled

Adjusting the Label Gap Sensor

The PF8 printers are fitted with a label gap sensor that detects the slots between tickets and tags or gaps between labels as media is fed past the sensor during printing. The label gap sensor determines the length of tag or labels and controls the media/ribbon feed accordingly.

The label gap sensor is a center-aligned photoelectric sensor that measures the light that passes through the media path. The transparency of the liner of a label supply may change from batch to batch, making it difficult for the sensor to determine the length of the media. If this happens, the status LED will change from green to orange, indicating you need to adjust the sensor using the Auto-Sensing mode. For more information see [“Understanding Auto-Sensing Mode” on page 17](#).



A Specifications

This appendix provides technical specifications for the PF8d and PF8t printers and their available features and options.

PF8d Specifications

Resolution

8 dot/mm (203 dpi)

Print Mode

Direct Thermal

CPU

32 bit

Memory

4MB flash, 8MB SDRAM

Print Speed

2, 3, and 4 ips

Print Length

Max. 1727 mm (68 in) Min. 12.0 mm (0.47 in)

Print Width

Max. 104 mm (4.09 in)

Sensor Type

Adjustable reflective sensor, Fixed transmissive sensor center aligned

Sensor Detection

Label gap and black mark sensing, Label length autosensing and/or program command setting

Media

Label roll outside diameter: Max. 127 mm (5 in)

Core diameter: 25 mm, 38 mm (1 in, 1.5 in)

Width: 25 mm to 118 mm (1 in to 4.65 in)

Thickness: 0.05 to 0.18 mm (.002 to .007 in)

Firmware

ESim (v7.x)

Software

ActiveX Controls (v1.3)

InterDriver (v7.06 M5)

ESim Config Tool (v2.1)

LabelShop Patch (v6.12 SP5)

Resident Fonts

6, 7, 10, 12, 24 points

Fonts Download

Windows bitmap font: Can be rotated in 8 orientations and expandable 8 times horizontally and vertically
TrueType Font: v2.xx can be rotated in 4 orientations

Image Handling

BMP, PCX, Support ICO, WMF, JPG, EMF files through software.

Bar Codes

Code 39, Code 93, Code 128 (subset A, B, C), UCC/EAN-128, UPC A / E (add on 2 & 5), I 2 of 5, I 2 of 5 with check digit, I 2 of 5 with human readable check digit, EAN 8 / 13 (add on 2 & 5), Codabar, Post NET, MaxiCode, PDF417, Datamatrix code, QR code, UPC SCC, EAN?UCC composite code


Interfaces

Serial port: RS-232 (Baud rate: 1200 to 115200, XON/XOFF, RTS/CTS)
USB port: v2.0
Parallel port: Compatible mode

Control Panel

One tri-color power LED, Feed function button.

Power

Input: ~100-240V 1,6A 50/60 Hz
Output:  24V 2,5A

Environment

Operation: 5°C to 40°C (40°F to 104°F)
Storage: -20°C to 50°C (-4°F to 122°F)

Certification

cULus, FCC Class A, CCC, CE, cUL, BSMI

Humidity

Operation: 30% to 85%, non-condensing. Free air
Storage: 10% to 90%, non-condensing. Free air

Printer Dimensions

Length: 218 mm (8.58 in)
Height: 166 mm (6.53 in)
Width: 168 mm (6.61 in)
Weight: 2.0 Kg (4.4 lbs)

Communication Interfaces

Serial Interface Connections

Pin	Host - DB9 Socket	Printer - DB9 Plug
1		+5V, max 500ma
2	RXD	TXD
3	TXD	RXD
4	DTR	N/C
5	GND	GND
6	DSR	RTS
7	RTS	CTS
8	CTS	RTS
9	RI	N/C



Note: The total current output from the serial port cannot exceed 500 ma.

Serial Default: 9600 baud, no parity, 8 data bits, 1 stop bit, XON/XOFF protocol

Setting: RTX/CTS

RS-232 Housing: 9-pin to 9-pin

USB Interface

Pin	Function
1	VBUS
2	D-
3	D+
4	GND

Connector Type: B

Parallel Interface

Pin	Function	Transmitter
1	/Strobe	host/printer
2-9	Data 0-7	host
10	/Acknowledge	printer
11	Busy	printer
12	/Paper empty	printer
13	/Select	printer
14	/Auto line feed	host/printer
15	N/C	
16	N/C	
17	N/C	
18	+5V, max 500ma	
19-30	Signal GND	host
31	/Initialize	host/printer
32	/Error	printer
33	Signal GND	
34-35	N/C	
36	/Select in	host/printer

Handshake: DSTB connects to the printer, BUSY connects to the host

Interface cable: Parallel cable compatible with PC

Internal Interface

Pin	UART1 Wafer	Ethernet Module
1	N.C	N.C
2	TXD	RXD
3	RXD	TXD
4	CTS	RTS
5	GND	GND
6	RTS	CTS
7	E_MD	E_MD
8	RTS	CTS
9	E_RST	E_RST
10	+5V	+5V
11	GND	GND
12	+5V	+5V

PF8t Specifications

Resolution

8 dot/mm (203 dpi) or 12 dot/mm (300 dpi)

Print Mode

Direct Thermal/Thermal Transfer

CPU

32 bit

Memory

4MB flash, 8MB SDRAM

Print Speed

2, 3, and 4 ips

Print Length

203 dpi Max. 1727 mm (68.0 in) Min. 12 mm (0.47 in)

300 dpi Max. 900 mm (35.43 in) Min. 12 mm (0.47 in)

Print Width

Max. 104 mm (4.09 in)

Sensor Type

Adjustable reflective sensor, Fixed transmissive sensor center aligned

Sensor Detection

Label gap and black mark sensing, Label length autosensing and/or program command setting

Media

Label roll outside diameter: Max. 127 mm (5.00 in)

Core diameter: 25 mm, 38 mm (1 in, 1.5 in)

Width: 25 mm to 118 mm (1 in to 4.65 in)

Thickness: 0.05 to 0.18 mm (.0025 to .0098 in)

Firmware

ESim (v7.x)

Software

ActiveX Controls (v1.3)

InterDriver (v7.06 M5)

ESim Config Tool (v2.1)

LabelShop Patch (v6.12 SP5)

Resident Fonts

203 dpi: 6, 7, 10, 12, 24 points

300 dpi: 4, 6, 8, 10, 21 points

Fonts Download

Windows bitmap font: can be rotated in 8 orientations and expandable 8 times horizontally and vertically

TrueType Font: v2.xx can be rotated in 4 orientations

Image Handling

BMP, PCX, Support ICO, WMF, JPG, EMF files through software.

Bar Codes

Code 39, Code 93, Code 128 (subset A, B, C), UCC/EAN-128, UPC A / E (add on 2 & 5), I 2 of 5, I 2 of 5 with check digit, I 2 of 5 with human readable check digit, EAN 8 / 13 (add on 2 & 5), Codabar, Post NET, MaxiCode, PDF417, Datamatrix code, QR code, UPC SCC, EAN?UCC composite code

Interfaces

Serial port: RS-232 (Baud rate: 4800 to 115200, XON/XOFF, RTS/CTS)

USB port: v2.0

Parallel port: Compatible mode

Control Panel

One tri-color power LED, Feed function button

Power

Input: ~100-240V 1,6A 50/60 Hz

Output:  24V 2,5A

Environment

Operation: 5°C to 40°C (40°F to 104°F)

Storage: -20°C to 50°C (-4°F to 122°F)

Certification

cULus, FCC Class A, CCC, CE, cUL, BSMI

Humidity

Operation: 30% to 85%, non-condensing. Free air

Storage: 10% to 90%, non-condensing. Free air

Printer Dimensions

Length: 285 mm (11.2 in)

Height: 172 mm (6.8 in)

Width: 226 mm (8.9 in)

Weight: 2.5 Kg (5.5 lbs)

Communication Interfaces

Serial Interface Connections

Pin	Host - DB9 Socket	Printer - DB9 Plug
1		+5V, max 500ma
2	RXD	TXD
3	TXD	RXD
4	DTR	N/C
5	GND	GND
6	DSR	RTS
7	RTS	CTS
8	CTS	RTS
9	RI	N/C



Note: The total current output from the serial port cannot exceed 500 ma.

Serial Default: 9600 baud, no parity, 8 data bits, 1 stop bit,
XON/XOFF protocol

Setting: RTX/CTS

RS-232 Housing: 9-pin to 9-pin

USB Interface

Pin	Function
1	VBUS
2	D-
3	D+
4	GND

Connector Type: B

Parallel Interface

Pin	Function	Transmitter
1	/Strobe	host/printer
2-9	Data 0-7	host
10	/Acknowledge	printer
11	Busy	printer
12	/Paper empty	printer
13	/Select	printer
14	/Auto line feed	host/printer
15	N/C	
16	N/C	
17	N/C	
18	+5V, max 500ma	
19-30	Signal GND	host
31	/Initialize	host/printer
32	/Error	printer
33	Signal GND	
34-35	N/C	
36	/Select in	host/printer

Handshake: DSTB connects to the printer, BUSY connects to the host

Interface cable: Parallel cable compatible with PC

Internal Interface

Pin	UART1 Wafer	Ethernet Module
1	N.C	N.C
2	TXD	RXD
3	RXD	TXD
4	CTS	RTS
5	GND	GND
6	RTS	CTS
7	E_MD	E_MD
8	RTS	CTS
9	E_RST	E_RST
10	+5V	+5V
11	GND	GND
12	+5V	+5V

Pin	UART2 Wafer	Expansion Module
1	+5V	+5V
2	CTS	RTS
3	TXD	RXD
4	RTS	CTS
5	RXD	TXD
6	GND	GND

Accessories

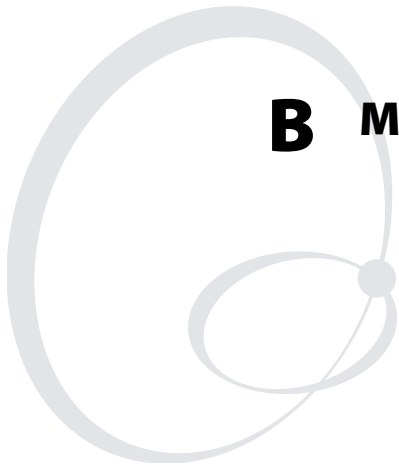
You can use these accessories (sold and ordered separately) with the PF8 printers. Installation instructions are provided in each kit. Serial and parallel cables, media, and transfer ribbons are also available for the PF8 printers. To order accessories, media, or transfer ribbon, contact your local Intermec sales representative.

Cutter Kit

The cutter is designed to cut off continuous paper-based stock or liner between labels.

Stripper Module

The self-strip feature peels the label away from the liner (backing paper) and presents the label to the operator for easier and faster on-demand labeling.



B Media Specifications

This appendix explains the different types of media that the PF8 printers can use and indicates the allowed dimensions of that media.

Direct Thermal Media

Intermec offers a premium and an economy grade of direct thermal media for the PF8 printers:

Premium Quality

Top-coated media with high demands on printout quality and resistance against moisture, plasticizers and vegetable oils.

Examples of Premium Quality Media

Europe	North America
Thermal Top Board	Duratherm Ltg.
Thermal Top	Duratherm IR
Thermal Top High Speed	

Economy Quality

Uncoated media with less resistance to moisture, plasticizers and vegetable oils. In all other respects, it is equal to premium quality.

Examples of Economy Quality Media

Europe	North America
Thermal Eco	Duratherm II
Thermal Eco Board	Duratherm II Tag

Thermal Transfer Media

Intermec offers stock media for thermal transfer printing in a wide range of quality grades.

Uncoated Papers

Used for economical high-volume printing in combinations with GP/TMX1500 ribbons.

Examples of Uncoated Papers

Europe	North America
TTR Uncoated	Not Available

Coated Papers

Coated papers have various coat-weight, smoothness, and gloss. To be used with HP/TMX2200 and GP/TMX1500 ribbons.

Examples of Coated Papers

Europe	North America
TTR Matte	Duratran II
TTR Premium	Duratran II Tag
TTR Premium Board	

Polyethylene Plastics

Good resistance to water and many common chemicals. Can be used outdoors and offers good tear resistance. Most often used in combination with HP/TMX2200 ribbons.

Examples of Polyethylene Plastics

Europe	North America
TTR Polyethylene	Duratran II Kimdura
TTR Gloss Polyethylene	Duratran II Synthetic Tag
	Duratran II Syntran

Polyesters

The materials of choice in combination with HR/TMX3201/ TMX3202 ribbons. Gives high resistance to chemicals, heat, and mechanical abrasion.

Examples of Polyesters

Europe	North America
TTR High Gloss Polyester	Duratran II Gloss Polyester

Transfer Ribbons

Intermec offer three types of thermal transfer ribbons optimized for different purposes:

General Purpose (GP/TMX1500)

General purpose transfer ribbons allow high speed printing and give a good printout, but are somewhat sensitive to smearing. These are best suited choice for uncoated and coated papers.

High Performance (HP/TMX2200)

High performance transfer ribbons allow high speed printing and gives a highly readable and defined printout on most face materials with smooth surfaces. They have good “smear resistance” and are most suitable for intricate logotypes and images on matte coated papers and synthetic face materials.

High Resistance (HR/TMX3201/TMX3202)

High resistance transfer ribbons give an extremely durable printout that is resistant to most chemical agents and high temperatures. However, such transfer ribbons set high demands on the receiving face material, which must be very smooth, such as polyesters.



Note: Intermec thermal transfer ribbons are engineered specifically for the PF8 printheads.

Labels

Media width includes liner (a)

Maximum: 116.0 mm (4.57 in)

Minimum: 25.0 mm (1 in)

Label length (b)

Minimum: 6.35 mm (0.25 in)

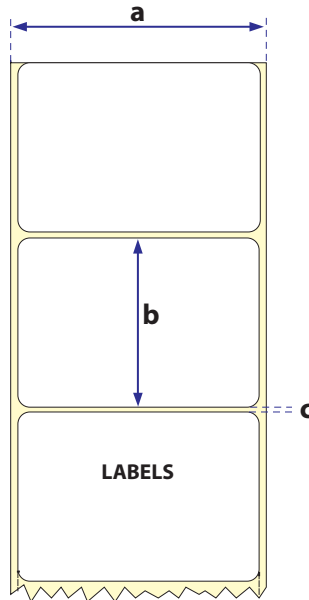
Label gap height (c)

Maximum: 10 mm (0.39 in)

Minimum: 2 mm (0.08 in)

Liner

Opacity: 75%



Tags and Strip with Slots

Tag or strip width (a)

Maximum: 116.0 mm (4.57 in)

Minimum: 25.0 mm (1.00 in)

Tag length (b)

Minimum: 6.35 mm (0.25 in)

Detection slot width (c)

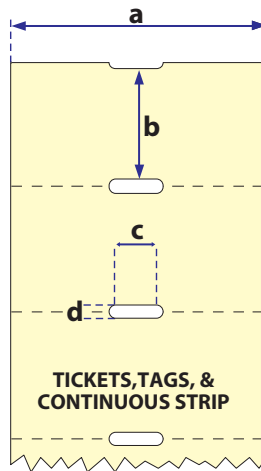
Minimum: 14 mm (0.55 in)

Detection slot height (d)

Maximum: 10 mm (0.39 in)

Minimum: 1 mm (0.08 in)

The label gap sensor is offset 4.5 mm (0.177 in) to the right of the center of the media path.



Tags and Strip with Black Marks

Tag or strip width (a)

Maximum: 116.0 mm (4.57 in)

Minimum: 25.0 mm (1.00 in)

Tag length (b)

Minimum: 6.35 mm (0.25 in)

Detection slot/Black mark width (c)

Minimum: 28 mm (1.10 in)

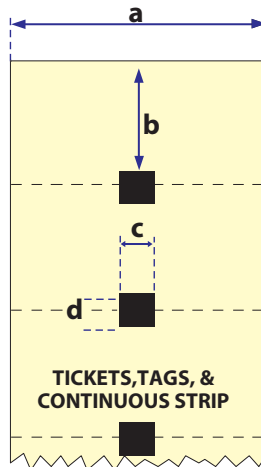
Black mark height (d)

Maximum: 10 mm (0.39 in)

Minimum: 3 mm (0.12 in)

The black mark sensor is offset 10 mm (0.394 in) to the right of the center of the media path.

Max. reflectance 5% at 940 nanometer. Carbon black.



Plain Continuous Stock

The PF8 printers can use continuous stock without any detection slots or black marks. The printer must be set for continuous stock by using the ESim **Q** command (see *ESim Programmer's Reference Manual*).

The length of each copy is decided by the size of the print image and any additional media feed is decided by the **Q** command. Continuous stock cannot be used in the Auto-Sensing mode.

Tag or strip width (a)

Maximum: 116.0 mm (4.57 in)

Minimum: 25.0 mm (1.00 in)





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PF8d/PF8t Printer User's Guide



P/N 934-011-002

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