The RC11 radio module will only be installed in the grantee’s host devices.

This is a representative manual for one of those host devices.

Note that this host only uses 802.11b/g functionality and not the 802.11a portion, nor the Bluetooth portion of the radio.

Intermec®

PD41 | PD42

Commercial Printer

User's Guide

Intermec Technologies Corporation

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This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (www.openssl.org).

This product includes cryptographic software written by Eric Young (EAY@cryptsoft.com).

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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 that tell you when to follow ESD procedures and when to take special precautions for handling optical parts.

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.

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 **Support** > **Returns and Repairs** > **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

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 **www.intermec.com** and click **Support** > **Knowledge Central** to review technical information or to request technical support for your Intermec product.

Telephone Support

In the U.S.A. and Canada, call **1-800-755-5505**.

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

Service Location Support

For the most current listing of service locations, go to **www.intermec.com** and click **Support** >**Returns and Repairs** > **Repair Locations.**

For technical support in South Korea, use the after service locations listed below:

AWOO Systems
102-1304 SK Ventium
522 Dangjung-dong
Gunpo-si, Gyeonggi-do Korea, South 435-776
Contact: Mr. Sinbum Kang
Telephone: +82-31-436-1191
E-mail: **mjyun@awoo.co.kr**

IN Information System PTD LTD
6th Floor
Daegu Venture Center Bldg 95
Shinchun 3 Dong
Donggu, Daegu City, Korea
E-mail: **jmyou@idif.co.kr** or **korlim@gw.idif.co.kr**

Who Should Read This Manual

This user's guide is written for the person who is responsible for installing, configuring, and maintaining the PD41 or PD42 printer.

This user's guide provides you with information about the features of the printer, and how to install, configure, operate, maintain, and troubleshoot it.

Before you work with the printer, you should be familiar with your network and general networking terms, such as IP address.

Related Documents

The Intermec web site at **www.intermec.com** contains our documents (as PDF files) that you can download for free.

To download documents

1. Visit the Intermec web site at **www.intermec.com**.
2. Click **Support** > **Manuals**.
3. Use the **Product Category** field, the **Product Family** field, and the **Product** field to help you locate the product whose documentation you want to download.

1

Using the Printer

In this chapter, you will find these sections:

- **Learning About the Printers**
- **Loading Media**
- **Loading Thermal Transfer Ribbon**
- **Printing a Test Label**
- **Creating and Printing Labels**

Learning About the Printers

The PD41 and PD42 Commercial Printers are dependable and versatile printers suitable for medium-duty applications in manufacturing, transportation, and warehousing environments. With all-metal chassis and covers, proven printing mechanics and powerful electronics, they provide the sturdiness and performance your business depends on. The PD42 features an intuitive user interface with a large graphical screen and programmable buttons.

Throughout this manual, both models of the printer are referred to as "printer" unless the information is specific to one model.

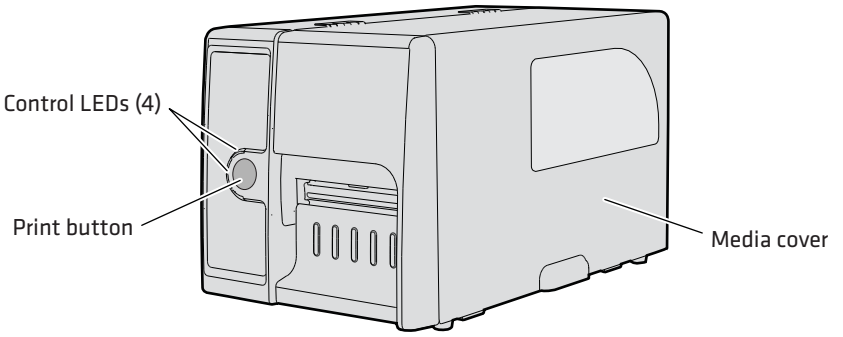
What's New?

There have been many updates to the PD41 and PD42 printers. This version of the printer user's guide contains these changes:

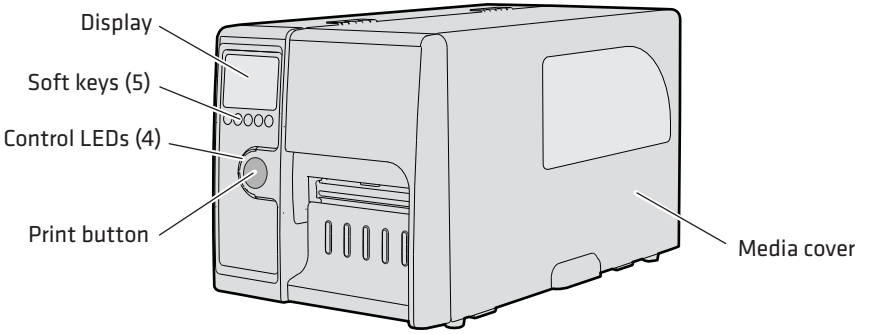
- Ability to choose between these six command languages: IPL, ESim, ZSim, DSim, Fingerprint, and Direct Protocol.
- Support for IPv6.
- Ethernet is now standard on both printers.
- 802.11 option is available on both printers.
- USB mass storage device support for booting the printer and downloading fonts.
- Monotype font support to support downloading TrueType fonts.

Identifying the Parts of the Printer

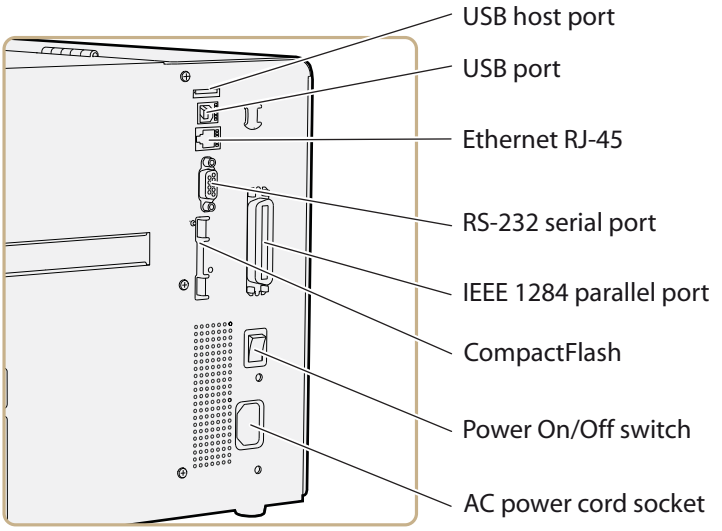
Use this section to familiarize yourself with the parts of the PD41 and PD42 printers.



Front View of the PD41 Printer



Front View of the PD42 Printer



Rear View of the PD41 and PD42 Printers

Selecting the Printer Command Language

The PD41 and PD42 printers come loaded with five different printer command languages. On the PD42 printer, you select the command language the first time you power up the printer. For more information see the following procedure.

The PD41 printer always starts up using the Fingerprint printer language because it does not have a screen to select the command language. You will need to use the printer home page or PrintSet to choose a printer command language. For help, see **"Configuring the Printer From the Home Page" on page 38** or **"Configuring the Printer Using PrintSet" on page 52**.

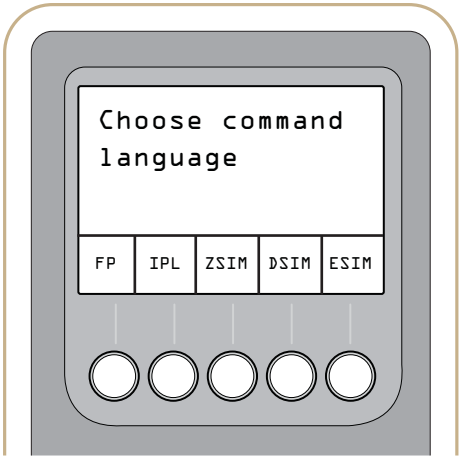
The language you select automatically runs each time you turn on your printer. The printer language you choose affects the functionality of the printer and how you interact with it.

Printer Command Language Descriptions

Command Language	Description
Fingerprint	Intermec Fingerprint is a BASIC-inspired, printer-resident programming language you use to design label formats and write custom printer application software.
IPL	Intermec Printer Language (IPL) is an easy-to-use programming language that lets you design, download, and modify formats.
ZSim	ZSim is a Zebra™ interpreter program that interprets ZPL II or later programs. To set up, configure, and use ZSim, see the ***ZSim User's Guide***.
DSim	DSim is a Datamax™ simulation program that runs Datamax programs. To set up, configure, and use DSim, see the ***DSim User's Guide***.
ESim	ESim is a built-in protocol for use with Intermec bar code label printer. To set up, configure, and use ESim, see the ***ESim Programmer's Reference Manual***.

To select the printer command language on the PD42 printer

- Press the soft key that corresponds to the printer language you want to run on your printer.



PD42 Startup Screen: *This screen appears the first time you turn on the PD42.*

Once your printer is running a particular printer language, you can change the printer language from the Setup menu.

To change the printer command language from the PD42 Setup menu

1. Press the Setup (⚙) button.
2. Press › until you see PRINT DEFS and then press ↵.
3. Press › until you see CMD LANGUAGE and then press ↵.
4. Press › until you reach the command language you want to use, and then press ↵.
5. Press (⚙) to exit the Setup menu.

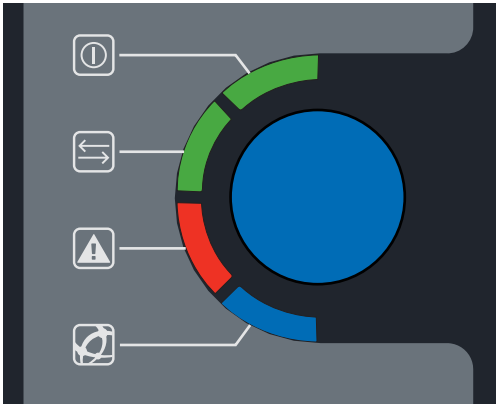
You can also use the printer home page or PrintSet to choose a printer command language. For help, see **"Configuring the Printer From the Home Page" on page 38** or **"Configuring the Printer Using PrintSet" on page 52**.

Understanding the Front Panel

The PD41 control panel consists of one button and four LEDs. The PD42 control panel consists of one button, four LEDs, a screen, and five soft keys. Use the next two sections to understand how to use the front panel on each printer.

Understanding the Print Button and LEDs

The blue button on the front panel is the **Print** button. The main function of the **Print** button is to feed media and pause print jobs. When the printer is in a different state such as Testmode, the **Print** button performs other functions. For more information, see **"Understanding Printer States" on page 10**. There are four LEDs surrounding the **Print** button.



The Print Button and Four Surrounding LEDs

The four LEDs can be on, off, or flashing depending on the state of the printer.

Understanding the Printer LEDs

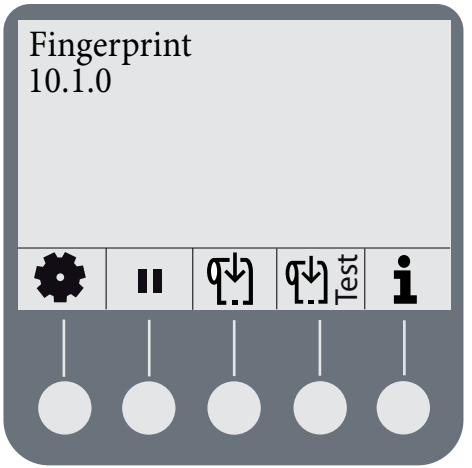
Symbol	LED	Color	Description
	Power	Green	The printer is powered on.
	Ready/Data	Green	The printer is ready to receive data.
	Error	Solid or flashing red	There is an error condition with the printer. Most causes of an error condition are hardware related. For help, see **"Printer Problems and Possible Solutions" on page 61**.

Understanding the Printer LEDs (continued)

Symbol	LED	Color	Description
	Ready-to-Work™	Blue	Turns on when the printer is operational.
		Flashing blue	The printer is not fully operational because: • the printer is waiting for an IP address. • an error condition has occurred. • the printer is in Testmode or Extended Testmode. For more information, see **"Using Testmode and Extended Testmode to Troubleshoot" on page 65**.
		Off	The printhead temperature is too high.

Understanding the PD42 Screen and Soft Keys

The PD42 screen communicates detailed information about the current state of the printer. The printer can tell you if a specific error has occurred or if it is waiting for input from you.



The PD42 Screen and Soft Keys

Below the display screen, there are five buttons that act as "soft keys." The function of the buttons depends on the state of the printer. The function of the button is indicated with a small icon in the screen right above the associated button.

Understanding the Soft Key Functions

Soft Key	Function
F1 to F5	The function of these keys is defined by the Fingerprint application.
	Enters or exits Setup mode.
	Pauses the printer.
	Feeds out media.
	Performs a testfeed.
	Enters or exits Information mode.
	Moves to the left or the previous option.
	Moves to the right or the next option.
	Moves up a level in the menu system.
	Applies a setting or selects a command.
	Allows you to edit a value.
	Decreases the selected number.
	Increases the selected number.
	Exits or cancels editing, test mode, and dump mode.
	Continue.
	Saves to file.

Note: If the printer is running a Fingerprint application, access to Setup mode is controlled by the application.

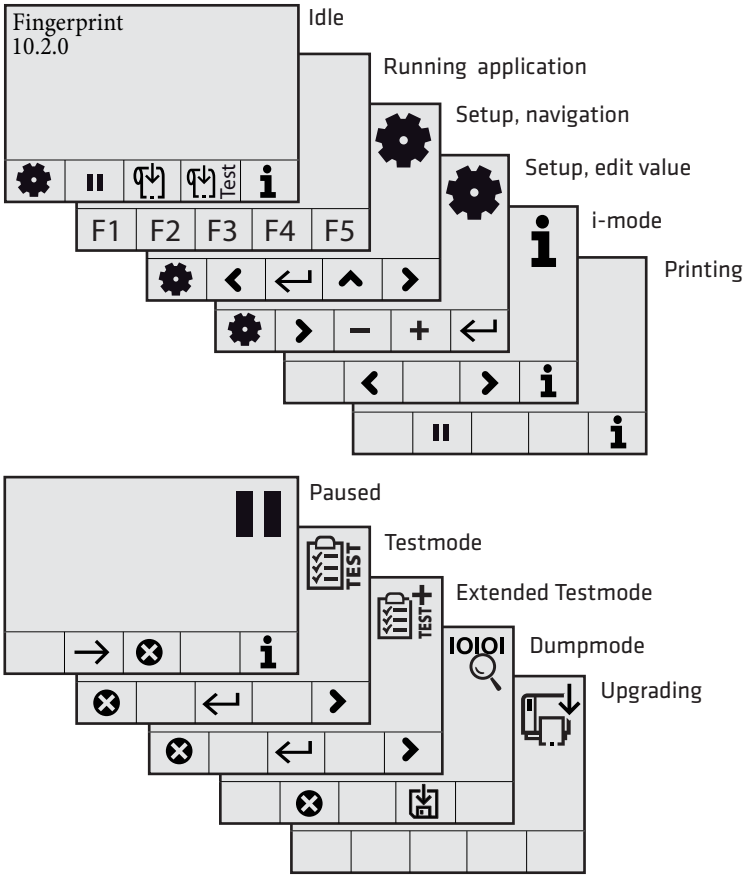
Understanding Printer States

The printers can enter various states which indicate the current mode of operation.

PD41 and PD42 Printer States

State	Explanation
Power off	
Upgrading	Firmware is being upgraded.
Testmode	The printer is in Testmode. For more information, see **"Using Testmode" on page 65**.
Extended Testmode	The printer is in Extended Testmode. For more information, see **"Using Extended Testmode" on page 66**.
PUP	Power-UP (starting up)
Idle	The printer is operational and is waiting for print jobs.
Application running	The printer is running a Fingerprint application.
Printing	
Printing (wait for LTS)	The printer is waiting for the label taken sensor to indicate that a label has been taken.
Paused	The printer is paused during a print job.
Error	The printer is in an error state.
Dumpmode	The printer is in Dumpmode, which means it is listening on all communication ports and prints incoming characters.
Setup mode	(PD42 only) You can access Setup mode through the soft keys associated with the screen. Use Setup mode to change some of the printer settings.
Information mode	(PD42 only) You can access Information mode from the soft keys when the printer is idle. In Information mode, the printer cycles through some of the interface settings in 5 second intervals.

The state of the printer also determines the functions and icons that are active in the screen.



Active Soft Keys in Different Printer States

Loading Media

The printers can print on labels, tickets, tags, and continuous stock. For more information on media types, media dimensions, and media specifications, see **“” on page 100**.

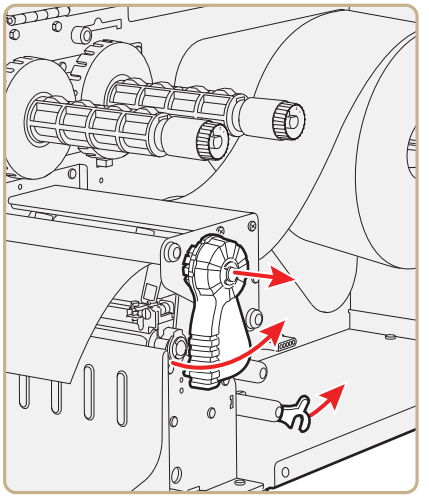
Loading Media for Tear-Off Printing

Use this section to load media when you are manually tearing off labels against the tear bar on the printer. You can use these types of media for tear-off printing:

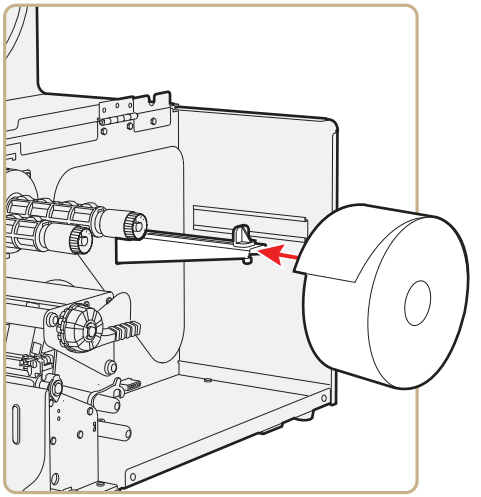
- Non-adhesive continuous stock
- Self-adhesive continuous stock with liner
- Self-adhesive labels with liner
- Tickets with gaps, with or without perforations
- Tickets with black marks, with or without perforations

To load media for tear-off printing

1. Open the media cover.
2. Pull out the printhead lever and turn it counterclockwise. Lift up on the label feed guide.



3. Load a media roll onto the media supply hub. Be sure to push the roll all the way against the inner wall of the printer and adjust the edge guide.



4. Route the media through the print mechanism.
5. If you are using fanfold media, load it through the external media slot at the rear of the printer and route it the same way as you would a media roll.
6. Reset the label feed guide and the printhead lever.
7. Close the media cover.
8. Press the Print button to advance the media. If you are switching to a new type of media, you must run a Testfeed (Test) to calibrate the sensors on the printer.

Loading Media for Peel-Off (Self-Strip) Printing

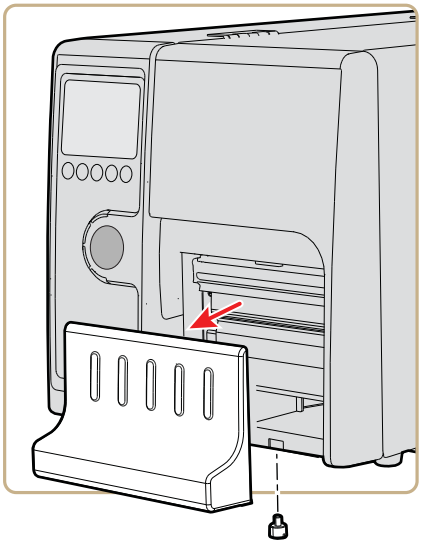
Use the procedure in this section when you are using self-adhesive labels that are separated from the liner immediately after printing. Peel-off printing is also called self-strip printing. With peel-off printing, you use the label taken sensor to sense when a label has been removed. After a label is removed, the sensor lets the printer know it is okay to print another label. Peel-off printing only supports self-adhesive labels with a liner.

You can also use this procedure to load media for batch takeup. For batch takeup, both the label and liner are rewound and the label taken sensor is not used.

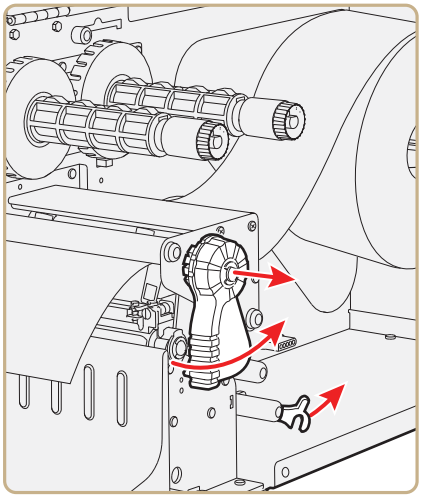
Peel-off printing and batch takeup printing require you to install the internal rewinder kit. For more information on the internal rewinder kit, see **"Printer Accessories" on page 20**.

To load media for peel-off printing

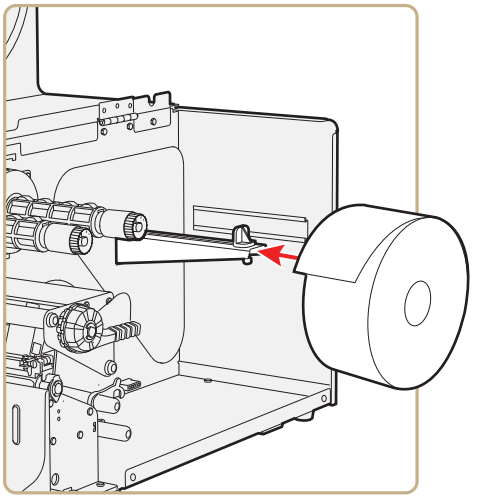
1 Remove the thumbscrew that attaches the front cover and remove it.



2 Open the media cover, pull out the printhead lever and turn it counterclockwise. Lift up on the label feed guide.

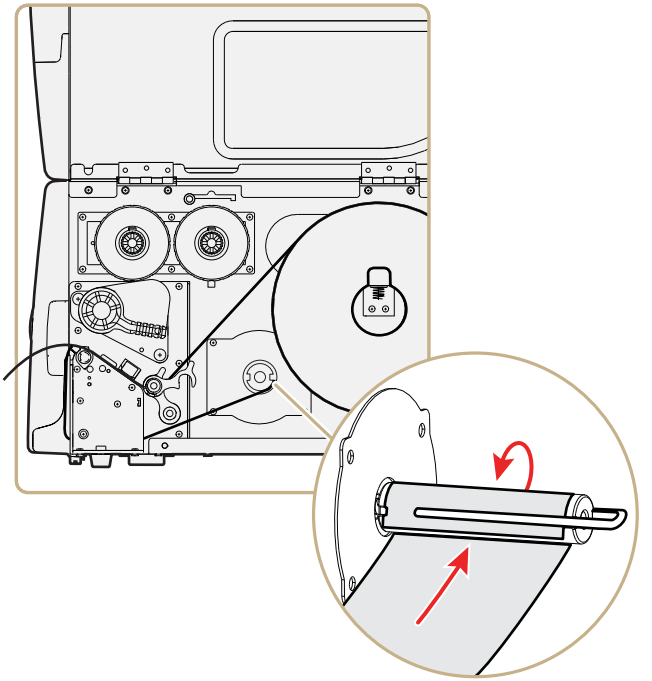


3 Load a media roll onto the media supply hub. Be sure to push the roll all the way against the inner wall of the printer and adjust the edge guide.

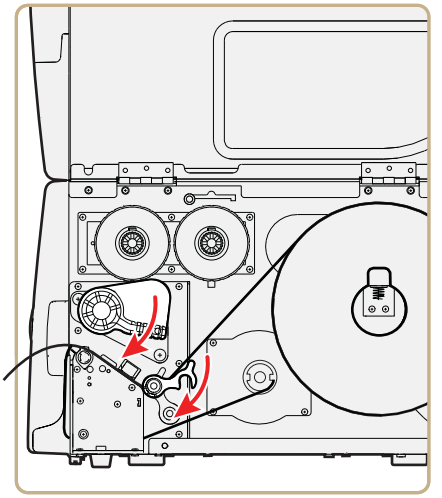


4 Route the media through the print mechanism and back into the media compartment.

5 Wrap the liner around the internal rewinder takeup roll and lock it in place.

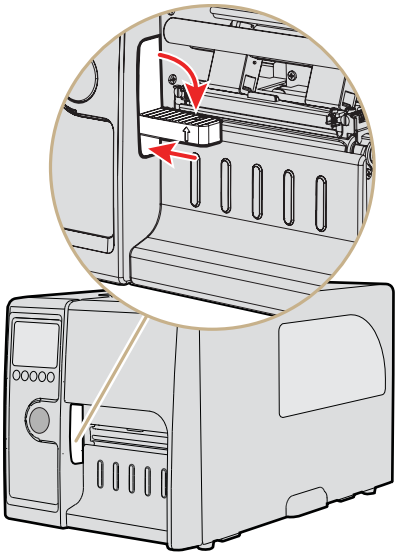


6 Reset the label feed guide and the printhead lever.



7 Reattach the front cover and secure with the thumbscrew.

8 Push in on the lower part of the label taken sensor and bring it out to a fully horizontal position.



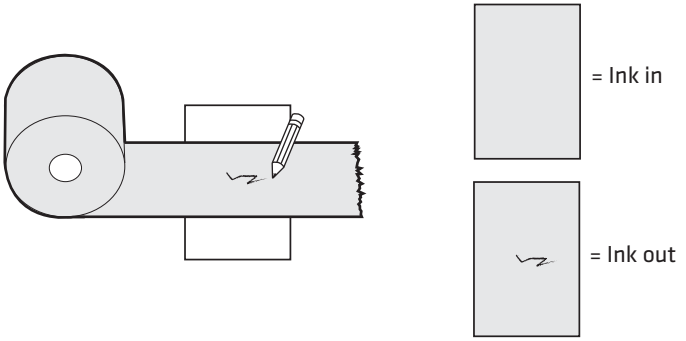
9 Close the media cover.

10 Press the **Print** button to advance the media.

Loading Thermal Transfer Ribbon

Thermal transfer printing gives you a durable printout that is less vulnerable to chemicals, heat, sunlight and so on than direct thermal printing. Make sure you select a ribbon type that matches the media you are using and configure the printer for thermal transfer paper.

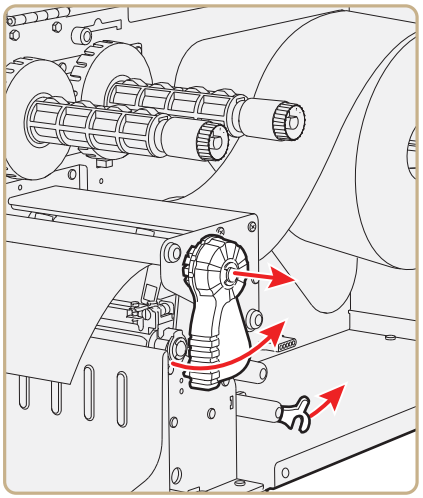
The printer supports thermal transfer ribbon rolls with the ink-coated side facing either inward or outward. To determine which type of ribbon you have, use a pen or other sharp object to scratch through the ribbon against a piece of paper. If you see a mark on the paper, your ribbon is wound ink out.



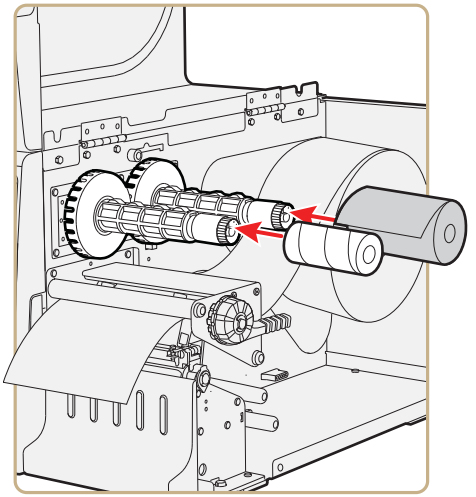
Determining Whether Your Ribbon is Wound Ink In or Ink Out

To load thermal transfer ribbon

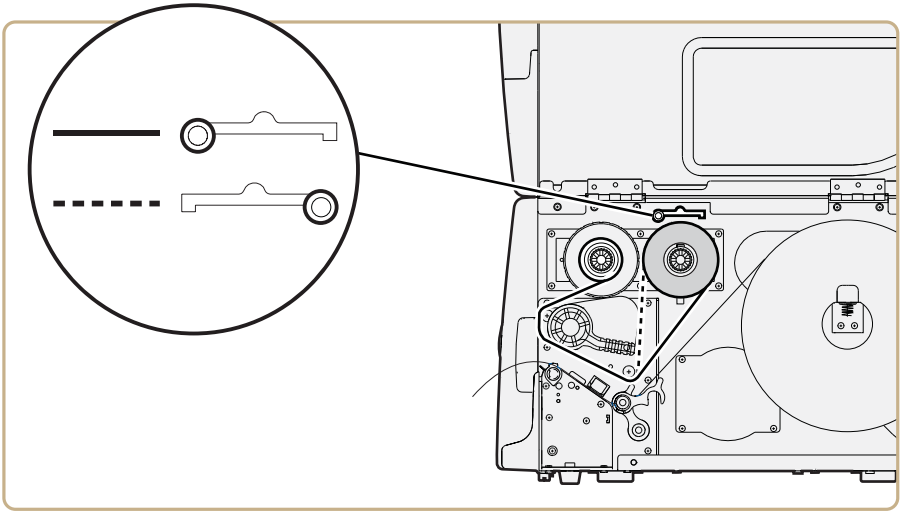
1. Open the media cover.
2. Pull out the printhead lever and turn it counterclockwise.



3. Slide the ribbon roll onto the ribbon hub closest to the media roll holder and slide the empty ribbon core onto the hub closest to the front of the printer.



4 For ink out ribbon (—): route the ribbon around the printhead and set the ink position lever to the left.



5 For ink in ribbon(---): route the ribbon around the printhead and set the ink position lever to the right.

6 Load media in the printer For help, see **"Loading Media for Tear-Off Printing" on page 12** or **"Loading Media for Peel-Off (Self-Strip) Printing" on page 13**.

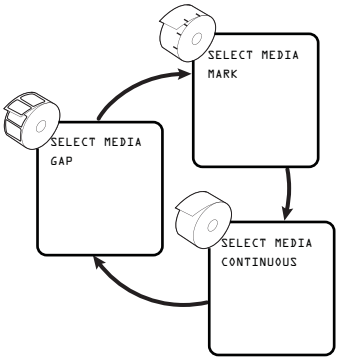
7 Press the **Print** button to advance the media.

Printing a Test Label

To verify that the printer is fully functional and to obtain the current configuration, you can print the test labels. The test labels contain hardware and software configuration information.

To print a set of test labels

1. Turn off the printer.
2. Load media and ribbon (if necessary). For help see, **"Loading Media" on page 11** and **"Loading Thermal Transfer Ribbon" on page 17**.
3. Press and hold the **Print** button.
4. Continue to keep the **Print** button pressed down and turn on the **Power** switch. After approximately ten seconds, the printer screen lights up, runs a media setup routine, enters Testmode, and three of the LEDs start to flash one at a time (green, red, and then blue).
5. Continue to press the **Print** button until the printer starts cycling through the selectable media types: gap, mark and continuous.
6. Select your media type by releasing the **Print** button when your type of media appears on the screen.



The printer prints several test labels containing hardware, setup, and network information and then enters Dump mode.

7. Press the **Print** button once or press the cancel soft key (⊗) to exit Dump mode.

Creating and Printing Labels

The easiest way to create and print labels, is to use the label design software LabelShop®. You can download LabelShop from the PrinterCompanion CD that shipped with your printer or you can download it from the Downloads page for your printer on **www.intermec.com**.

You can also use Fingerprint and IPL to create and print labels. For more information, see either the ***Intermec Fingerprint Command Reference Manual*** or the ***IPL Command Reference Manual***.