

Zebra® P430i
Card Printer

User's Manual



Foreword



This manual contains installation and operation information for the Zebra P430i Card Printers manufactured by Zebra Technologies Corporation, Camarillo, California.

Return Materials Authorization

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Administration for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to the address listed below:

- For USA, Latin America, and Asia / Pacific:

Zebra Technologies Corporation
Zebra Card Printer Solutions
1001 Flynn Road
Camarillo, CA. 93012-8706.USA
Phone: +1 (805) 578-5001
FAX: +1 (805) 579-1808

- For Europe and Middle East:

Zebra Technologies Corporation
Zebra Card Printer Solutions
Pittman Way, Fulwood
Preston, PR2 9ZD
Lancashire, U.K.
Phone: +44 - 1 - 772 - 797555
FAX: +44 - 1 - 772 - 693000

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Trademarks

P430i is a trademark and Zebra is a registered trademark of Zebra Technologies Corporation. Windows and MS.DOS are registered trademarks of Microsoft Corp. All other trademarks or registered trademarks are marks of their respective holders.

Warranty Information

Printers:

All Zebra Card Printers are warranted against defects in material or workmanship for twelve (12) months from the purchase date.

Proof of purchase or shipment date is required to validate the warranty period. The warranty becomes void if the equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed by the user.



Note • Products returned must be packaged in the original or comparable packing and shipping container. In the event equipment is not so packaged, or if shipping damage is evident, it will not be accepted for service under warranty. Surface Transportation charges for return to customers in the continental United States is paid by Zebra. Otherwise, Zebra pays CPT (carriage paid to) nearest airport, customer pays customs, duties, taxes, and freight from airport to destination. If Zebra determines that the product returned for warranty service or replacement is not defective as herein defined, the customer will pay all handling and transportation costs.

Printheads:

Since printhead wear is part of normal operation, the original printhead is covered by a twelve (12) month date. Warranty period begins on purchase date.

To qualify for this warranty, the printer must be returned to the factory or to an authorized service center. Customers are not required to purchase Zebra supplies (media and/or ribbons) for warranty qualification. If the use of other manufacturer supplies has caused any defect in the printhead for which a warranty claim is made, the user is responsible for Zebra's labor and material charges required to repair the defect. The warranty becomes void if the printhead is damaged; also if it is determined that failure to follow the preventive maintenance schedule listed in the User's Guide has caused defect in the thermal printhead for which a warranty claim is made.

Spare Parts:

All parts, print heads, maintenance kits, options kits, and accessories are warranted to be free of defects in material and workmanship for 90 days (except where otherwise denoted) from date of purchase. This warranty becomes void if the item is modified, improperly installed or used, or damaged by accident or neglect.

Product Disposal

Product Disposal Information • Do not dispose of this product in unsorted municipal waste. This product is recyclable, and should be recycled according to your local standards. For more information, please see our web site at: <http://www.zebra.com/environment>

Declarations of Conformity



89/336/EEC modified by 92/31/EEC and 93/68/EEC	EMC Directive	EN 55022 (1998)	RF Emissions control
	EMC Directive	EN 301489-3 V1.4.1	RF Emissions and Immunity for radio equipment
	EMC Directive	EN55024 (2001)	Immunity to Electro-Magnetic Disturbances
73/23/EEC modified by 93/68/EEC	Low voltage Directive	EN 60950-1 (2001)	Product safety
1999/5/CE	R&TTE Directive	EN300330-2 V1.1.1	Radio Frequency Interferences

For a formal certificate, please contact the Compliance Office at Zebra's Camarillo facility.

EUROPE: Norway Only: This product is also designed for IT power system with phase to phase voltage 230V. Earth grounding is via the polarized, 3-wire power cord.

FI: “Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan”

SE: “Apparaten skall anslutas till jordat uttag”

NO: “Apparatet må tilkoples jordet stikkontakt”

Model P430i conforms to the following specification: FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a) Class A digital device.

Supplemental Information:

This equipment has been tested and found to comply with the limits for a Class A 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 interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference's by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the 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.

It is suggested that the user use only shielded and grounded cables to ensure compliance with FCC Rules.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful:

How to identify and resolve Radio/TV Interference Problems. This booklet is available from the U.S. Government printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4. Use of a shielded cable is required to comply within Class B limits of Part 15 of FCC Rules. Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Zebra may cause, harmful interference and void the FCC authorization to operate this equipment.

Industry Canada Notice

This device complies with Industry Canada ICES-003 class A requirements.

Cet équipement est conforme a l'ICES-003 classe A de la norm Industrielle Canadian.

P430i Printer Model

The Zebra Product Number tells a story:

Here is a quick review of the Zebra Card Printer Series numbering and lettering system to help you.

Model numbers include identifiers that specify options using the following lettering conventions:

Part Number	Description
P430i-____-__	Base Printer P430i Color Card Printer
____-0____-__ ____-A____-__ ____-B____-__ ____-C____-__ ____-D____-__ ____-E____-__ ____-F____-__ ____-G____-__ ____-H____-__	Smart Card Options None Contact encoder & MIFARE contactless & HID iCLASS Contact Encoder Contact encoder & HID iCLASS Contact encoder & MIFARE contactless Contact station HID iCLASS MIFARE contactless & HID iCLASS MIFARE contactless
____-0____-__ ____-M____-__	Magnetic Encoder None Yes (select defaults below)
____-0____-__ ____-1____-__ ____-3____-__	Magnetic Encoder Defaults None Stripe Down, HiCo Stripe Up, HiCo
____-0____-__	Memory Expansion None
____-A____-__ ____-C____-__	Interface USB Only USB and Ethernet
____-I____-__ ____-U____-__	Power Cords U. S. and Europe U. K. and Australia
____-____-D0 ____-____-A0	Windows Drivers and User Documentation / Training CD Windows Drivers and User Documentation / Training included on one CD (Software & Documentation Package) which contains Multi-language documentation Windows Drivers and User Documentation / Training included on one CD (Software & Documentation Package) which contains Multi-language documentation and free demo application software

Icons

Throughout this manual, different icons highlight important information, as follows:



Note • Indicates information that emphasizes or supplements important points of the main text.



Important • Advises you of information that is essential to complete a task, or points out the importance of specific information in the text.



Provides an example or scenario to demonstrate or clarify a section of text.



Electrostatic Discharge Caution • Warns you of the potential for electrostatic discharge.



Electric Shock Caution • Warns you of a potential electric shock situation.



Caution • Warns you of a situation where excessive heat could cause a burn.



Caution • Advises you that failure to take or avoid a specific action could result in physical harm to you, or could result in physical damage to the hardware.

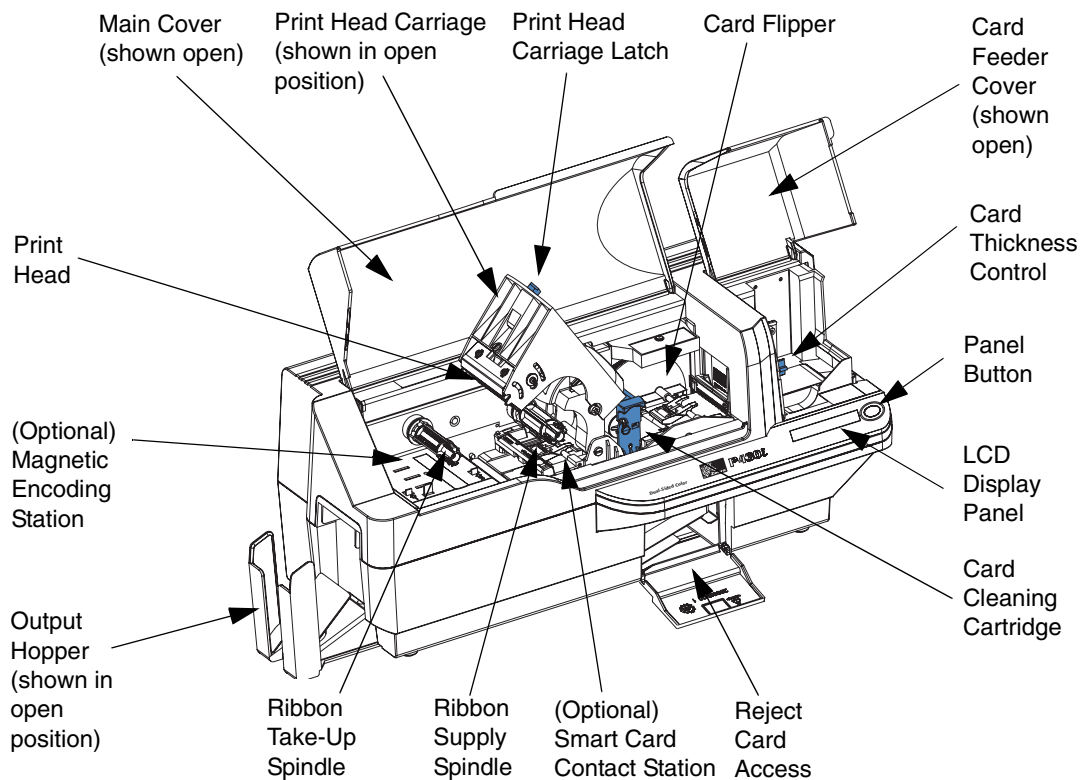


Introduction

Thank you for choosing the Zebra P430i Card Printer. This manual guides you to efficient start up and operation of your new Card Printer.

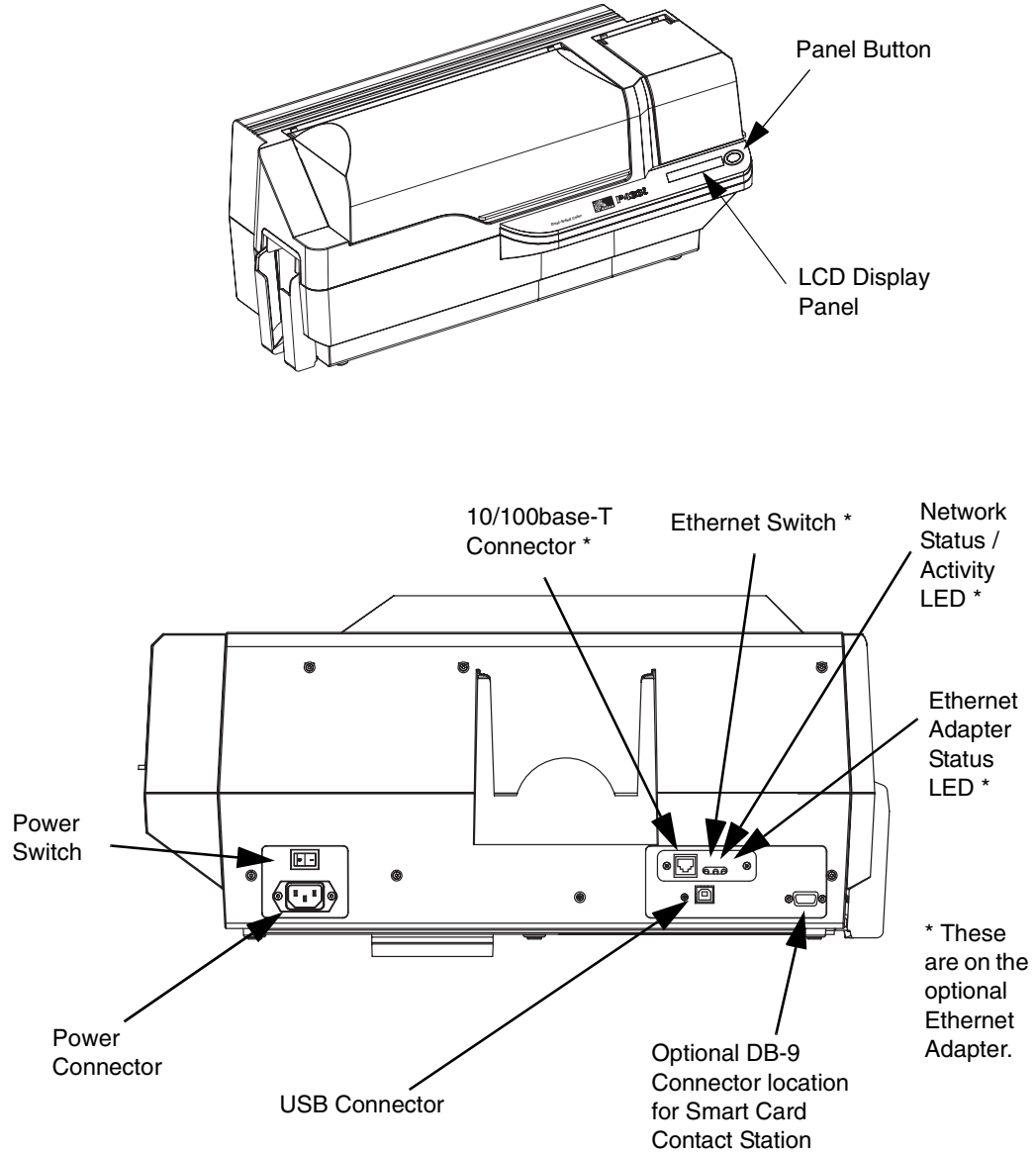
Printer Features

The following shows the main functional features found on your P430i Printer.



Controls, Connectors, and Indicators

Your P430i Printer has an LCD Display Panel and a Panel Button on the front and a power connector, power switch, and interface connector(s) on the rear panel.

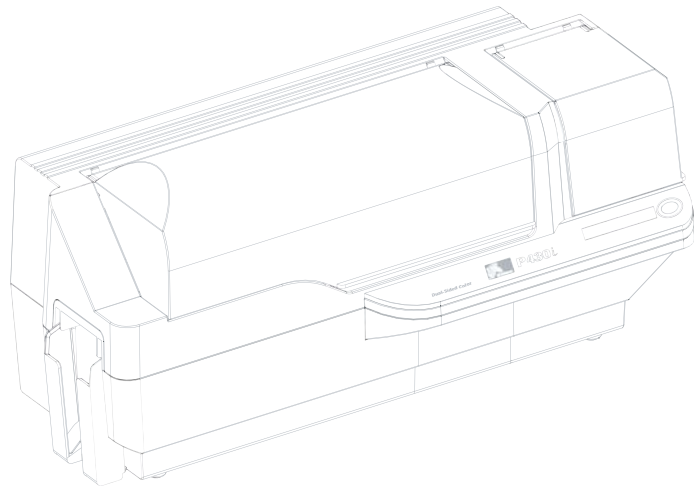


LCD Panel

The LCD Panel can display the following messages:

Message	Mode
Operational	
INITIALIZING	Scrolling
READY	Fixed
DOWNLOADING DATA	Fixed
PRINTING MONO	Fixed
MAG ENCODING	Fixed
CONTACT ENCODING	Fixed
PRINTING CYAN	Fixed
PRINTING YELLOW	Fixed
PRINTING MAGENTA	Fixed
PRINTING BLACK	Fixed
PRINTING OVERLAY	Fixed
DOWNLOADING FW	Fixed
CLEANING PRINTER	Fixed
Warnings	
CLEAN PRINTER	Scrolling
REMOVE RIBBON THEN CLOSE HEAD	Scrolling
EMPTY FEEDER & PRESS BUTTON	Scrolling
LOAD CLEANING CARD IN FEEDER	Scrolling
PRESS BUTTON TO CONTINUE	Scrolling
FEED LONG CLEANING CARD IN EXIT	Scrolling
CLEANING PRINTER	Scrolling
ENCODING ERROR (printing stops)	Blinking
INVALID MAGNETIC DATA (encoding stops)	Scrolling
REMOVE RIBBON	Fixed
Errors (Printer will not operate)	
OUT OF RIBBON	Blinking
MECHANICAL ERROR	Blinking
OUT OF CARDS	Blinking
PRINT HEAD OPEN	Blinking

Introduction
Controls, Connectors, and Indicators





Installation and Setup

General Information

This section will guide you through the installation and setup of your P430i Card Printer. This consists of the following procedures, which should be performed in the order presented.

- Unpacking the Printer
- Installing the Print Driver Software and Setting Driver Options
- Loading a Ribbon
- Installing the Card Cleaning Cartridge
- Setting the Card Thickness Control
- Loading Cards
- Connecting the Printer to your Computer
- Connecting Power
- Printing a Test Card to verify printer operation

The procedure to be followed for Packing the Printer for Shipment is given at the end of this section.

The printer should be placed in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.



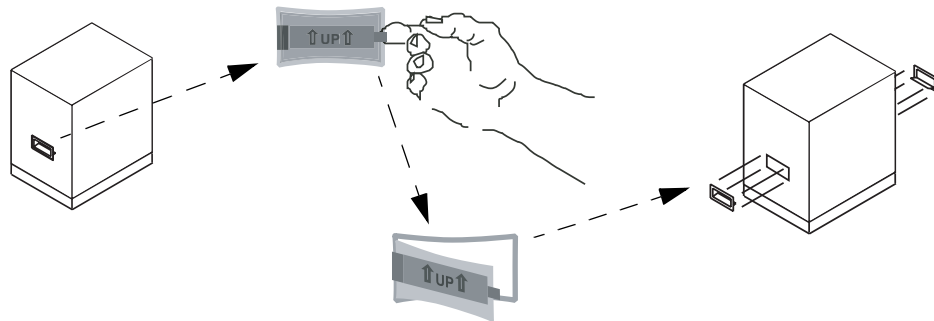
Electric Shock Caution • Limit AC power supplied to the P430i Printer to 110 ~ 230 volts, 60 ~ 50 Hertz. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power source and properly protected against electrical surges and grounding faults; the electrical reliability of the printer is based on the reliability of the mains power source and with the earth connection.

The printer's power supply is an internal unit that can only be serviced or replaced by trained and authorized personnel.

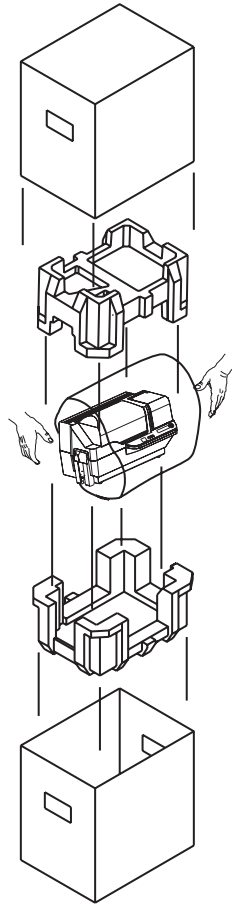
Unpacking the Printer

Your P430i Card Printer ships in a carton and protective anti-static bag. Keep all packaging material in case you need to move or re-ship the printer.

1. Inspect the shipping container to ensure that no damage has occurred during shipment. If any damage is apparent, file a claim with the shipper.
2. Unlatch and remove the handles on either end of the shipping container, as shown in the figure below.



3. (See the figure on the next page as you perform the following steps.) Lift the upper part of the shipping container off of the lower part (which will still hold the printer and its packing material).
4. Remove the packing material around the top of the printer.

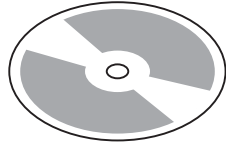


5. Lift the printer out of the carton by holding it with both hands.
6. Please ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.
7. Make sure the following items are included with your P430i printer:

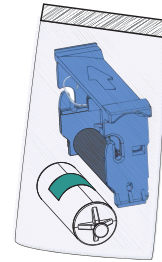
Installation and Setup

Unpacking the Printer

CD-ROM with Driver Wizard
and User's Manual



Card Cleaning Cartridge



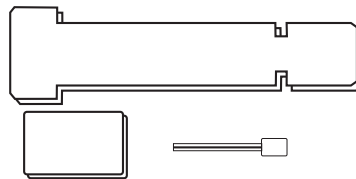
Power Cables (2)



USB Cable

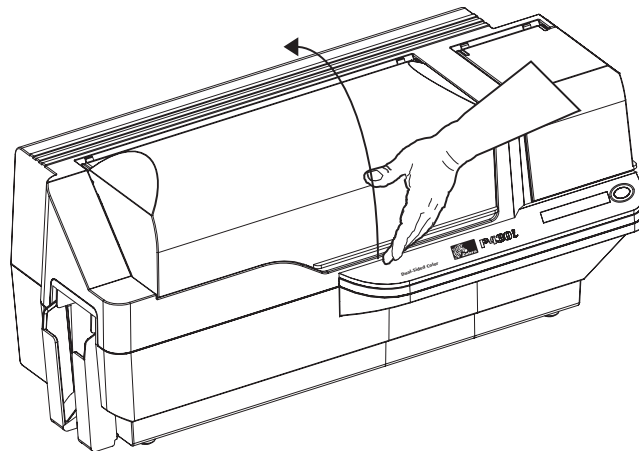


Cleaning Kit

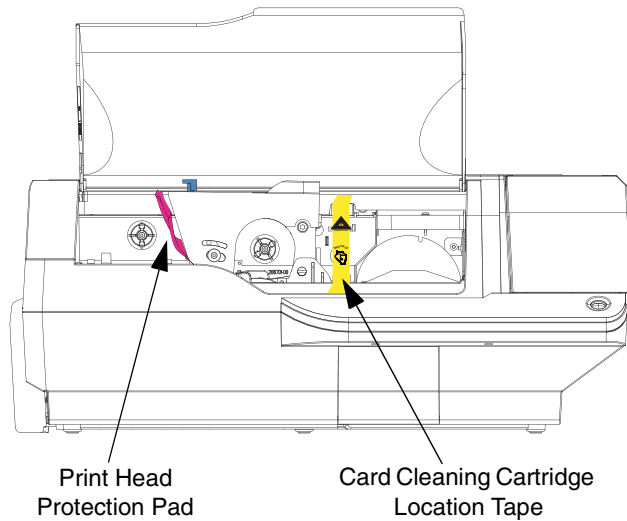


If any items are missing, please contact your dealer. To reorder, please refer to Appendix D of this manual.

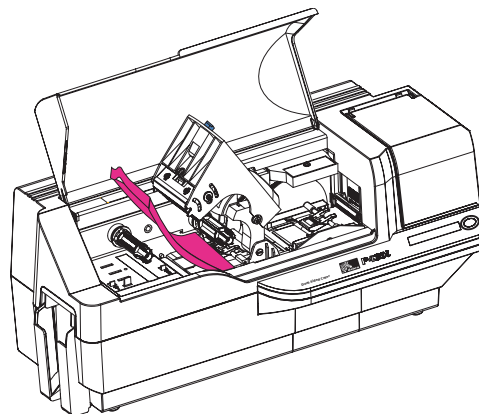
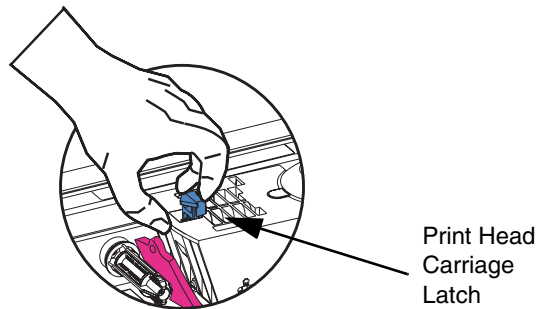
8. Remove packing tape securing the printer's Main Cover and Card Feeder Cover.
9. Your P430i Printer ships with warning tape where the Card Cleaning Cartridge will be installed, and a pad that protects the print head from possible damage in shipment. To remove the tape and pad, follow the following steps:
 - a. Open the printer's main cover by lifting at its lower front lip.



- b. Locate the Print Head protection pad and the Card Cleaning Cartridge location tape (see below). Remove the tape.



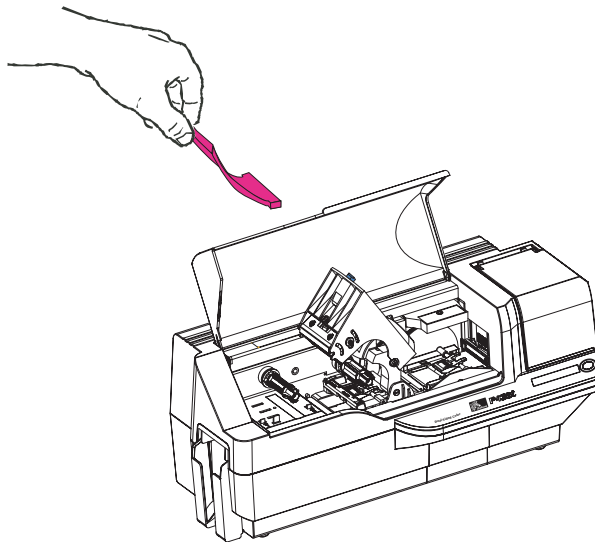
- c. Release the Print Head Carriage by pushing the Print Head Carriage Latch to the left, and raise the Print Head Carriage. It will remain open at about a 45° angle.



Installation and Setup

Installing the Print Driver Software and Setting Driver Options

- d. Remove the print head protection pad. Keep the pad, as well as the other packing material and the shipping carton, in case the printer is shipped or moved. If the original material is lost, a replacement Shipping Kit can be ordered from Zebra; please refer to the Media List on the Windows Drivers and User Documentation CD supplied with this printer.



Installing the Print Driver Software and Setting Driver Options

Printing with the P430i Printer requires the Windows Printer Driver and your card design/issuing software or printer command level programming through the printer interface.

The P430i Card Printer can be used with any Windows 2000 or Windows XP computer, using the drivers provided on CD with the printer.

This section contains information on the printing of a sample card in color (using the 5-panel color ribbon YMCKO and the Windows Printer Driver).



Note • If updating the printer driver from a previous version, before installing the updated printer driver version, always delete the existing version from your computer.

Installing the P430i Print Driver

To install the P430i Printer Driver automatically on all Operating Systems, use the Zebra Install Wizard.



Note • Ensure that you have administrative privileges to perform this installation, or contact your IT department.

The Install Wizard will walk you through the appropriate installation steps. The Wizard will:

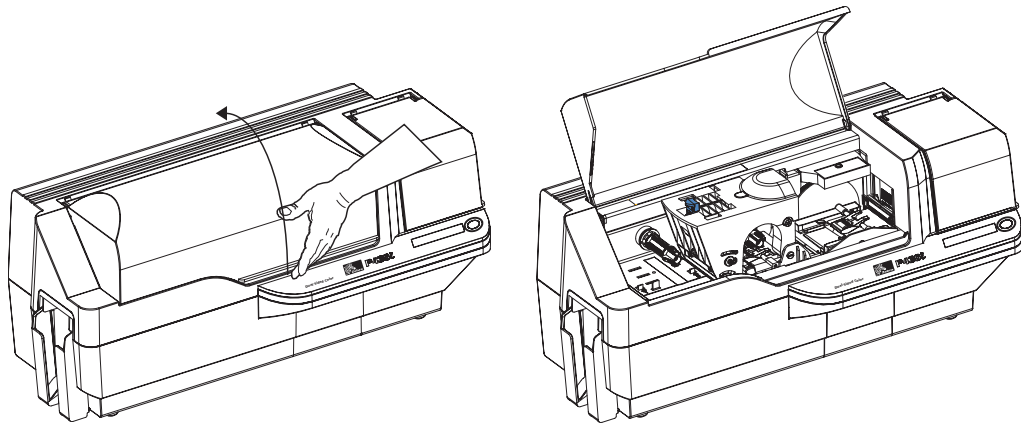
- Automatically launch when the driver CD is inserted.

- From the main menu of your documentation CD, select your desired language and then select “DRIVERS” from the subsequent menu. The Install Wizard will walk you through the appropriate steps.
- Delete previous versions of the driver and clean up any necessary Registry entries. You must select “Remove” from the install options to remove any previous driver versions.

Loading a Ribbon

i Series Printers require the use of *i* Series ribbons for full color printing. The Resin Thermal Transfer and Dye Sublimation ribbons for P430*i* are specifically designed for your P430*i* Printer.

1. Place the printer power switch in the OFF (0) position.
2. If the printer’s Main Cover is closed:
 - a. Open the printer’s Main Cover; lift it by the lip at the bottom front as shown in the figure below left.



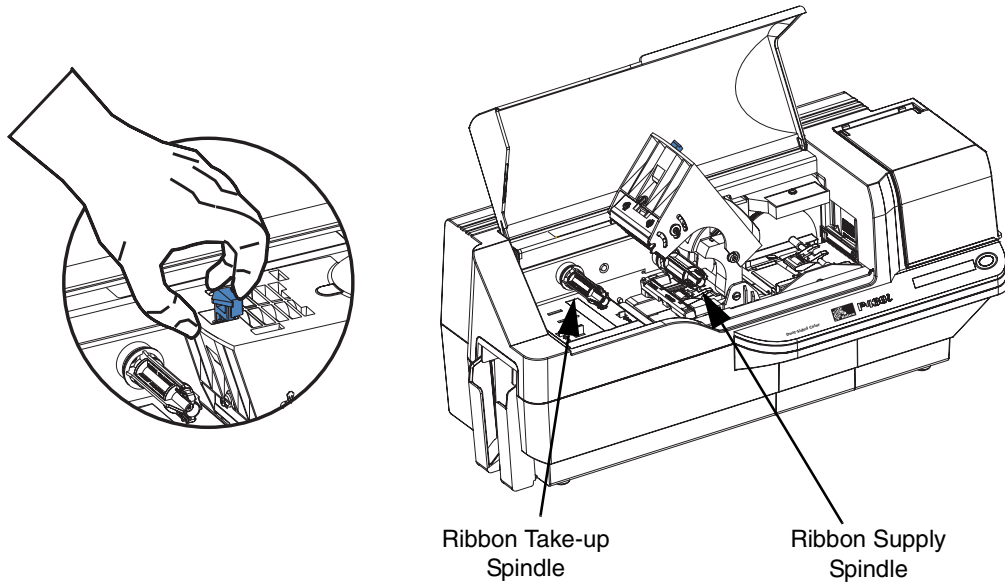
Electrostatic Discharge Caution • DO NOT TOUCH the Print Head or the electronic components on the Print Head Carriage. Discharges of electro-static energy that accumulate on the human body or other surfaces can damage the Print Head or other electronic components used in the printer.



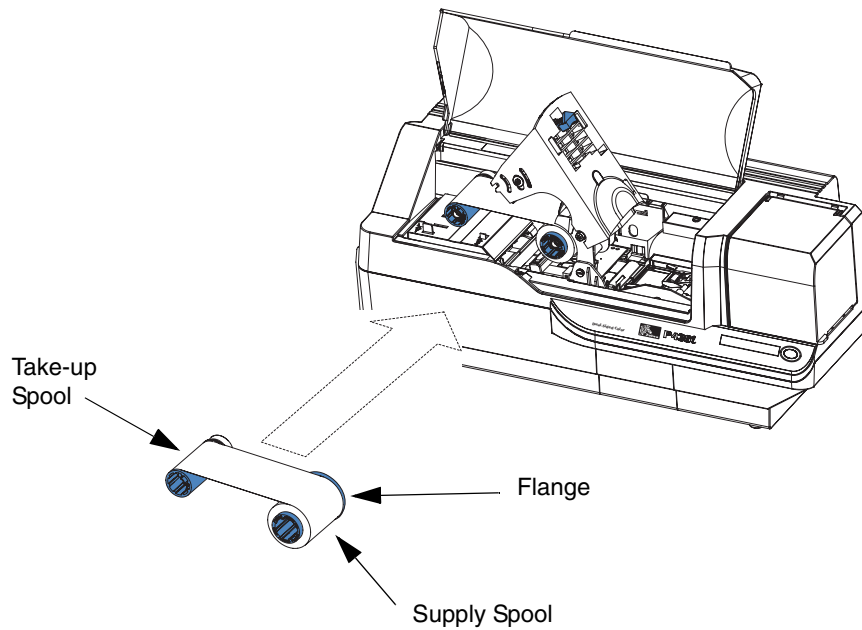
Note • Avoid any direct contact with the print head to prevent transfer of oils or contamination. Outside of normal operation, only the Zebra-approved cleaning materials should come in contact with the print head.

- b. Raise the Print Head Carriage by pressing the release latch to the left (toward the output hopper) and lifting as shown below to about a 45° angle. The Print Head Carriage will stay in that position, as shown at the right below.

Installation and Setup
Loading a Ribbon



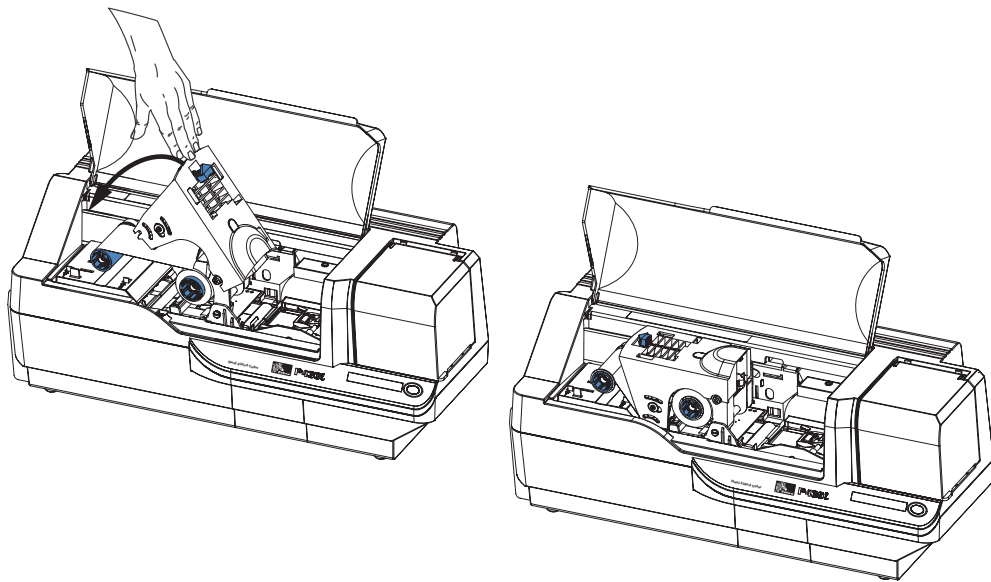
3. Locate the Ribbon Supply Spindle and the Ribbon Take-up Spindle (see above). Load ribbon onto the supply spindle (under the print head carriage) **flange side in**, and load the empty core (with tape attached) onto the take-up spindle. Make sure the ribbon comes off the top of the supply spindle and feeds to the top of the take-up spindle.



Caution • Do not touch the print head if the printer has been in service within the last 10 minutes. It could be very hot and cause a burn.

Electrostatic Discharge Caution • A static discharge is possible if you touch any exposed metal parts. Use of an anti-static wrist strap or comparable anti-static protection is required.

4. Gently press the print head carriage down until it is fully lowered, as shown below. Very little force is necessary to perform this step.



Note • During normal operation (with power connected and turned on), the ribbon would automatically synchronize when the Print Head is restored to its fully-down position. The ribbon would be identified and the corresponding parameters sent to the driver.

Since power is not connected at this point in the Installation and Setup Procedure, nothing will happen when the Print Head Carriage is closed. The ribbon will synchronize when power is turned on.