

# **Zebra® ZXP Series 8™ Card Printer**

## **User's Manual**



**Card  
Printer  
Solutions**

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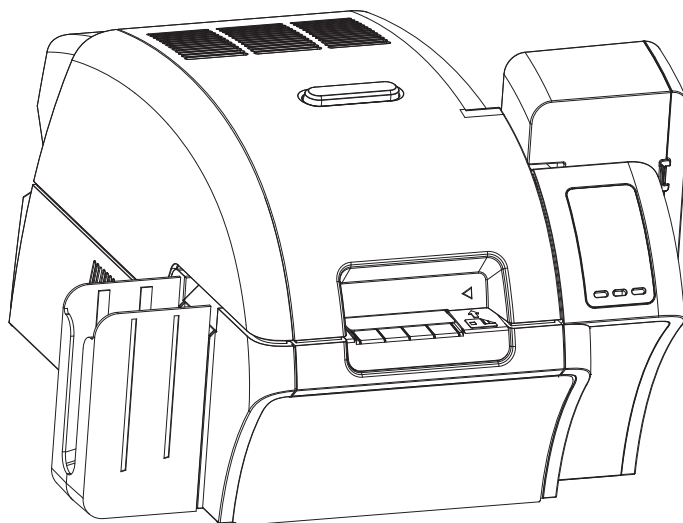




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# Introduction

This manual contains installation and operation information for the Zebra ZXP Series 8 Card Printers manufactured by Zebra Technologies Corporation.

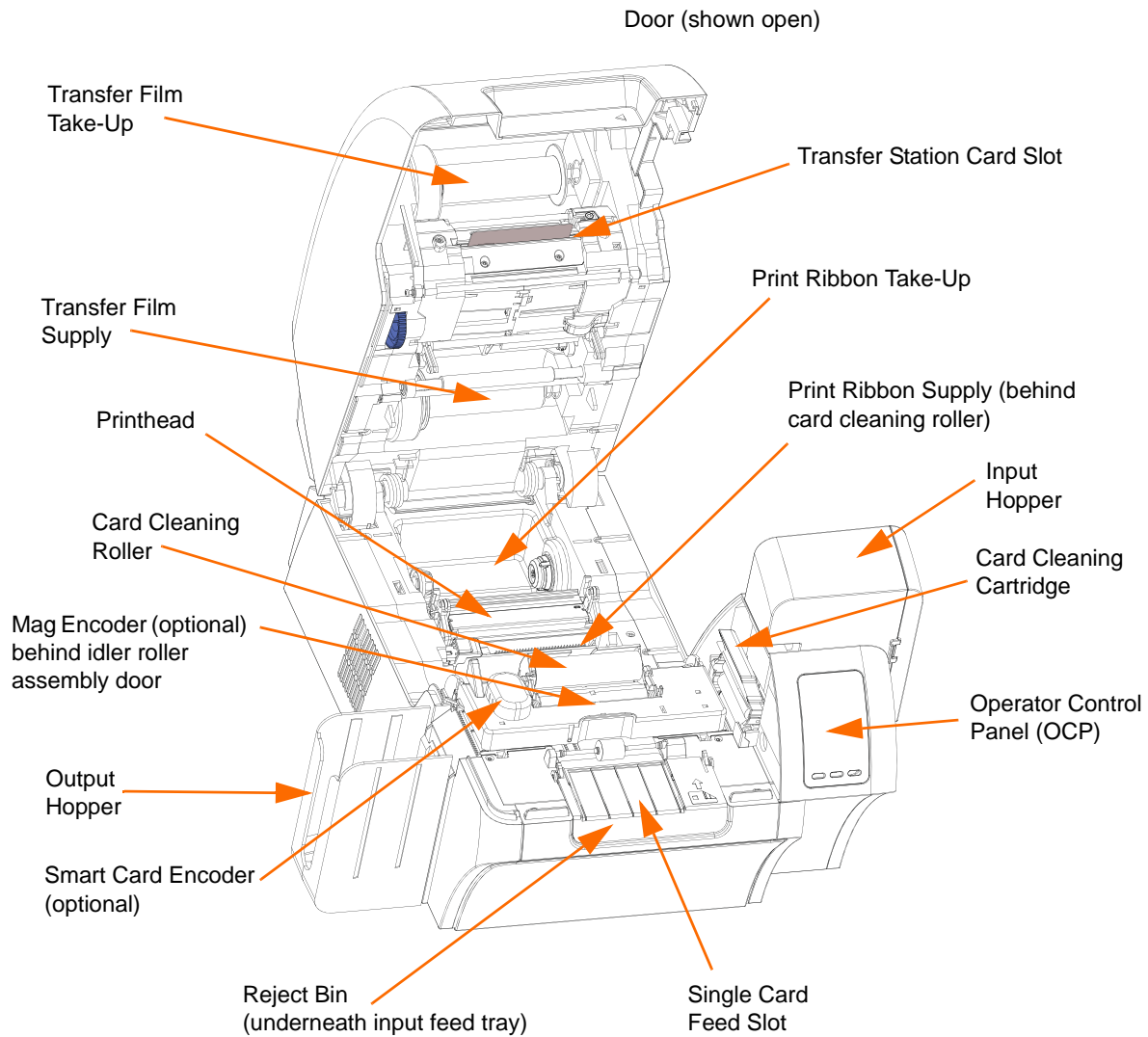


The Zebra ZXP Series 8 Card Printers use reverse transfer printing technology to create photo-quality and over-the-edge images on plastic identification cards.

Zebra's reverse transfer printers provide fast throughput and a range of encoding options for a variety of markets and applications.

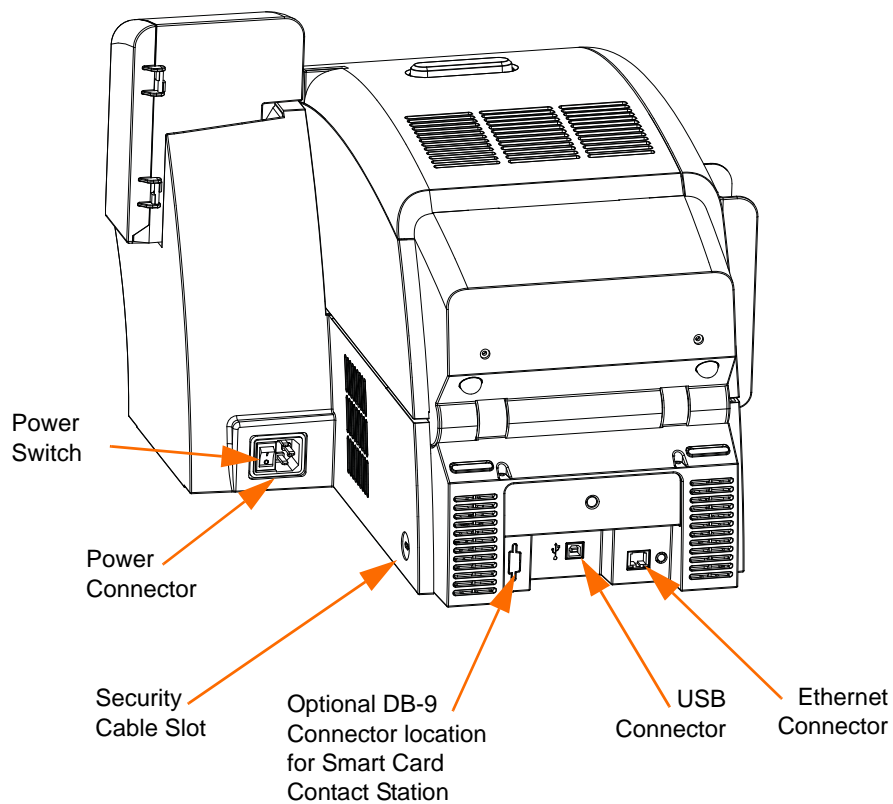
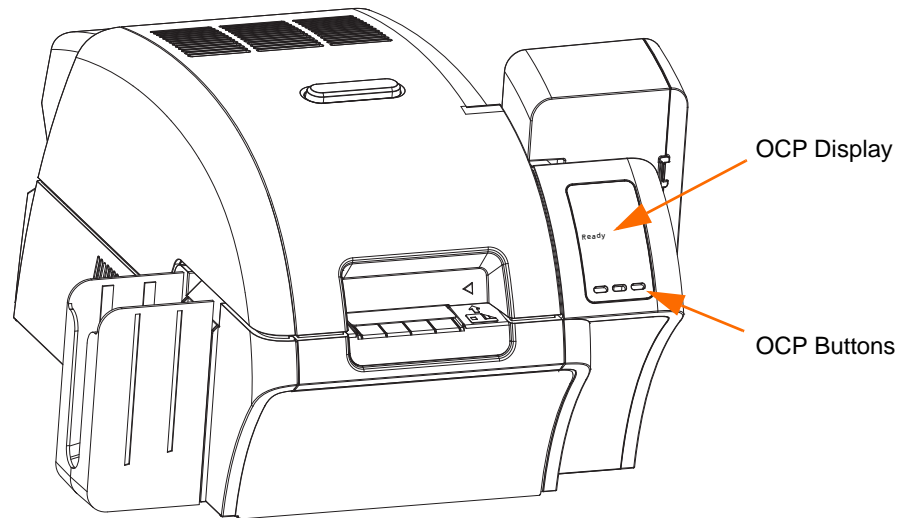
## Printer Features

The following figure shows features of the printer.



## Controls, Connectors, and Indicators

Your printer has an OCP Display and three OCP Buttons on the front and a power connector, power switch, and interface connector(s) on the rear panel.



## 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.



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

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

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**Hot Surface** • Warns you of a situation where excessive heat could cause a burn.

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**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.

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## Zebra Supplies

Genuine Zebra supplies meet stringent quality standards and are recommended for optimal printing quality and proper printer performance. The ZXP Series 8 printer is designed to work only with Zebra True Colours® i Series™ Ribbons and Transfer Film.



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# Installation and Setup

## General Information

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

- Unpacking the Printer ..... 6
- Installing the Card Hoppers ..... 8
- Loading Cards ..... 9
- Opening the Printer Door ..... 10
- Installing the Card Cleaning Cartridge ..... 11
- Installing the Card Cleaning Roller ..... 12
- Loading the Transfer Film ..... 13
- Loading a Print Ribbon ..... 15
- Connecting Power ..... 17
- Connecting the Printer to your Computer ..... 18
- Installing the Windows Printer Driver ..... 19

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

## Unpacking the Printer

**Step 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.

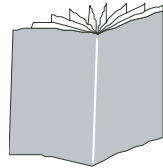
**Step 2.** Open the shipping container.

**Step 3.** Remove the packing material and accessories.

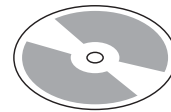


**Important •** Save all the packing material and the shipping carton in case the Printer needs to be moved or shipped. If the original material is lost or damaged, a replacement Shipping Kit can be ordered from Zebra.

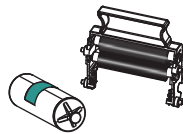
**Step 4.** Make sure the following items are included with your Printer:



Quick Start Guide



CD-ROM with InstallWizard



Card Cleaning Cartridge

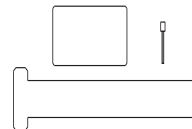


Card Cleaning Roller

USB



USB Cable



Cleaning Kit



Power Cable

If any items are missing, please contact your dealer. To reorder, please refer to [Appendix E](#) of this manual.

**Step 5.** Lift the Printer out of the carton by holding it with both hands.



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**Caution** • The Printer weighs approximately 27.5 lbs (12.5 kg).

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**Step 6.** Place the Printer in a location that meets the following requirements:

- A reasonably dust- and dirt-free environment.
- Flat surface at least 27 in (686 mm) x 28 in (711 mm) that can support the weight of the Printer; additional space preferred. Allow a 4-inch clearance, minimum, on all sides.
- Vertical clearance at least 32 in (813 mm).
- Temperature within the range of 59° to 77°F (15° to 25°C).
- Relative Humidity 20 to 80% inclusive, non-condensing.
- AC power accessible.

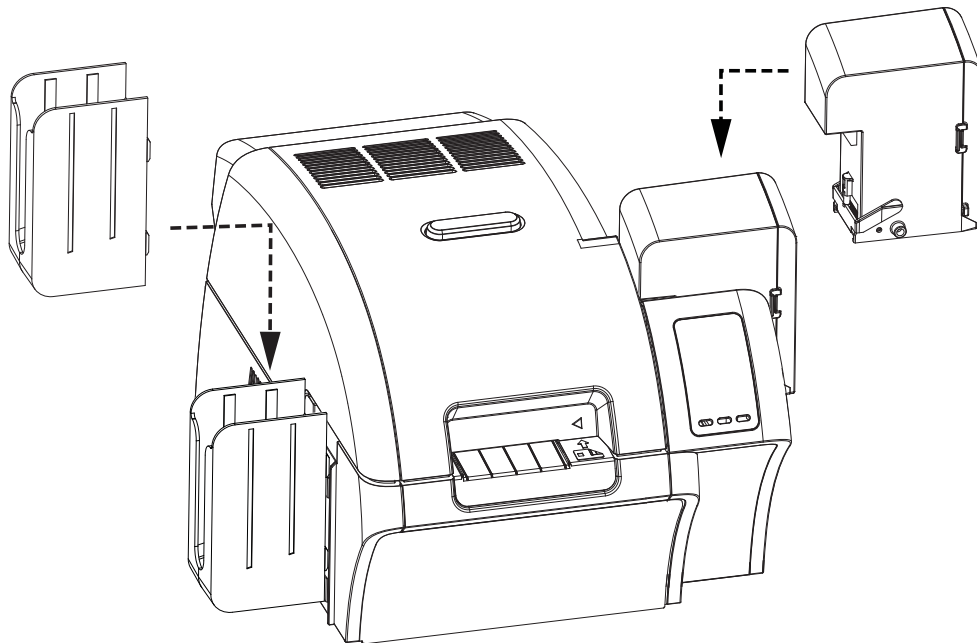
**Step 7.** Remove the protective plastic bag from the Printer.

## Installing the Card Hoppers

### Input Hopper

The Input Hopper is positioned on the right side of the Printer and holds the cards to be printed.

- Step 1.** Install the Input Hopper by sliding the hopper into the receptacle on the right side of the Printer.
- Step 2.** Ensure that the Input Hopper locks securely in place.



### Output Hopper

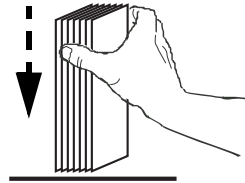
The Output Hopper is positioned on the left side of the Printer and receives the printed cards.

- Step 1.** Install the Output Hopper by inserting the four tabs on the right side of the hopper into the four slots on the left side of the Printer.
- Step 2.** Ensure that the Output Hopper locks securely in place.

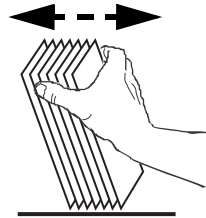


## Loading Cards

- Step 1.** Open the Input Hopper Door.
- Step 2.** Remove the wrapping from the card deck.
- Step 3.** Holding the card deck by the sides, hold it vertically against a flat surface such as a desktop. If the deck is too thick for your hand to hold it comfortably, use about half a deck at a time.

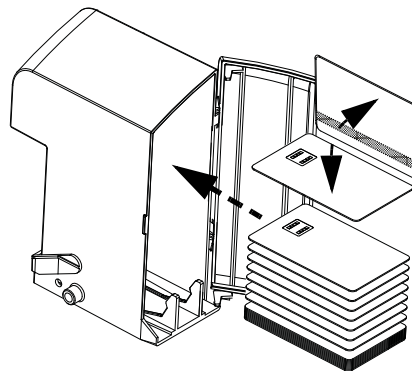


- Step 4.** Push the stack back and forth to an angle of about 45° from vertical, so as to separate all of the cards.



**Note** • Static charges and edge burrs from the card die-cutting process can render individual cards stuck together with significant adhesion force. These cards *must be* physically separated from each other before inserting into the feeder; if not separated, feeding or printing problems may occur.

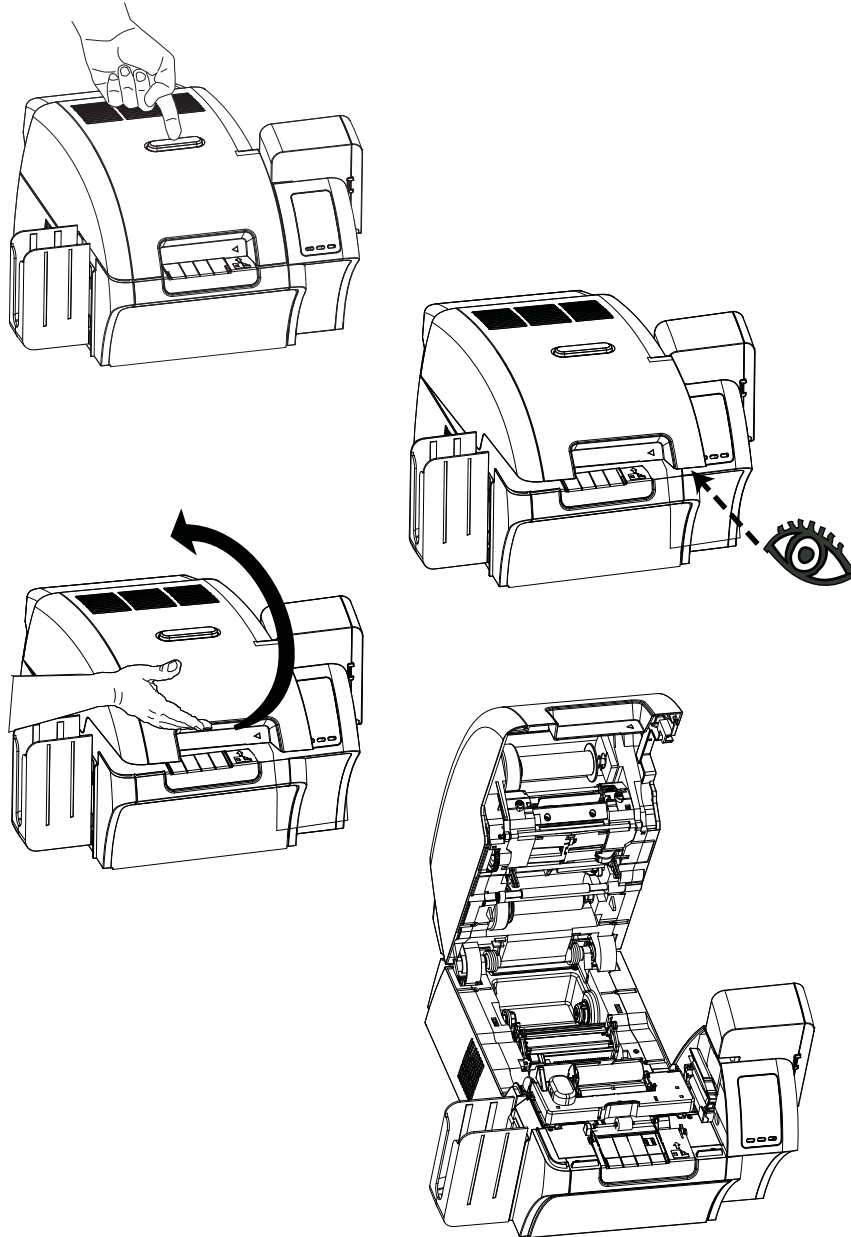
- Step 5.** Restore the card stack to its original squared-off condition.
- Step 6.** Place the cards in the Input Hopper in the correct orientation as shown. Ensure that the cards are seated properly the hopper.



- Step 7.** Close the Input Hopper Door.

## Opening the Printer Door

**Step 1.** Press the Door Release button on the top of the Printer.



**Step 2.** Observe that the Door releases and pops up approximately half an inch.

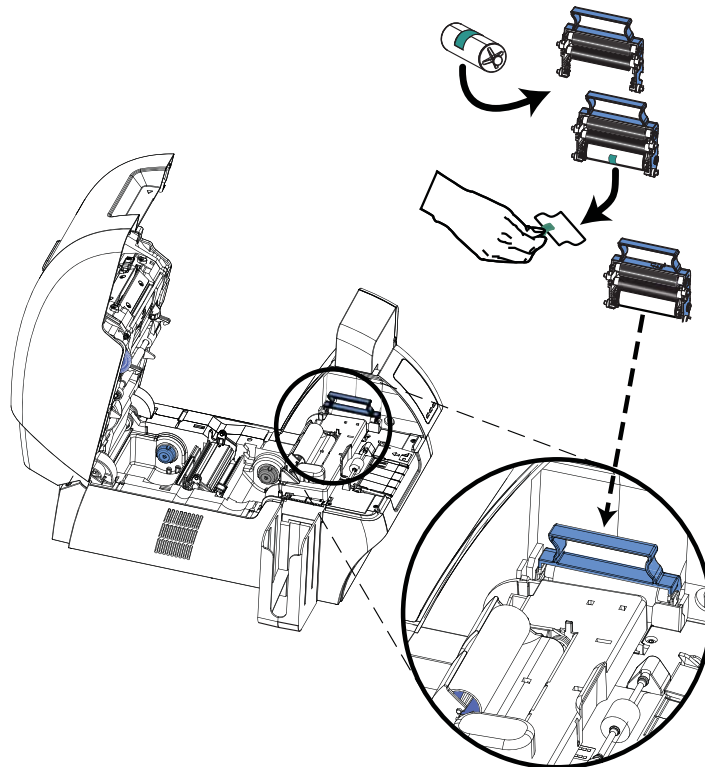
**Step 3.** Grasp the Door at the bottom front.

**Step 4.** Lift the Door to its upright position. It will remain in that position.

## Installing the Card Cleaning Cartridge

The Card Cleaning Cartridge cleans the cards entering the Printer from the Input Hopper. The Card Cleaning Cartridge consists of a Cartridge Frame and an Adhesive Roller, which are packed together.

- Step 1.** Remove the Cartridge Frame and the Adhesive Roller from their packaging.
- Step 2.** Insert the Adhesive Roller into the Cartridge Frame. To avoid contamination, always hold the frame and the roller by the ends.
- Step 3.** Peel the protective wrapper from the Adhesive Roller.
- Step 4.** Open the Printer Door by pressing the Door Release button on the top of the Printer.
- Step 5.** Locate the area where the Card Cleaning Cartridge will be installed (adjacent to the Input Hopper); circled below.

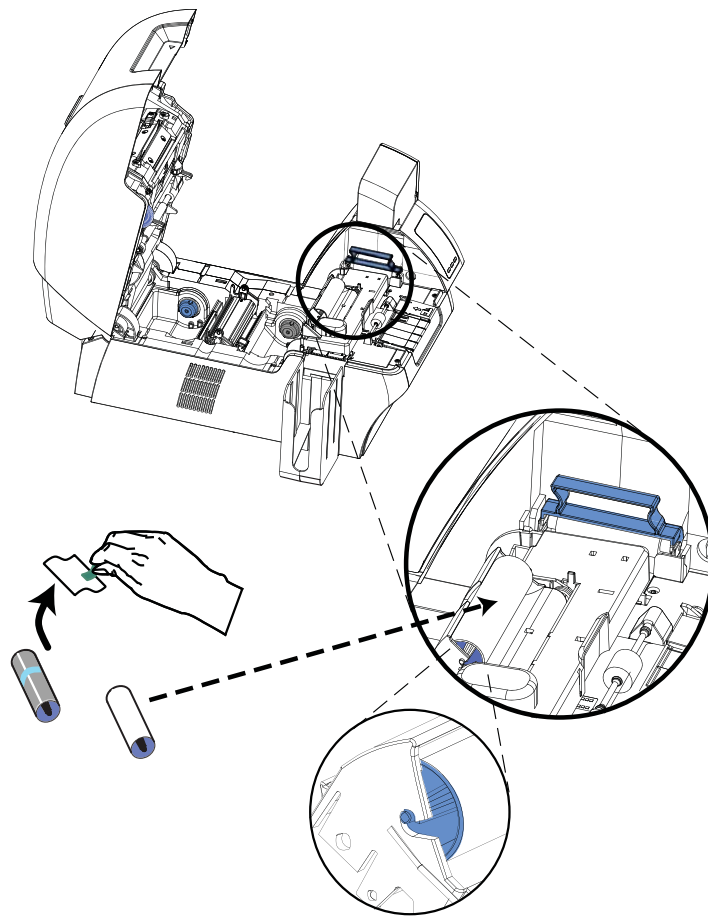


- Step 6.** Hold the Card Cleaning Cartridge by the extended handle.
- Step 7.** With the cartridge at about a 30° angle (pointing downward), insert the lip of the cartridge into the slot, until the cartridge seats against the back wall.
- Step 8.** Press the front of the cartridge down until it seats all the way down and latches.
- Step 9.** Close the Printer's Door.

## Installing the Card Cleaning Roller

The Card Cleaning Roller cleans the cards entering the Printer from either the Input Hopper or the Single-Feed Input.

- Step 1.** Remove the Card Cleaning Roller from its packaging. To avoid contamination, always hold the roller by the ends.
- Step 2.** Peel the protective wrapper from the Card Cleaning Roller.
- Step 3.** Open the Printer Door by pressing the Door Release button on the top of the Printer.
- Step 4.** Locate the area where the Card Cleaning Roller will be installed; circled below.

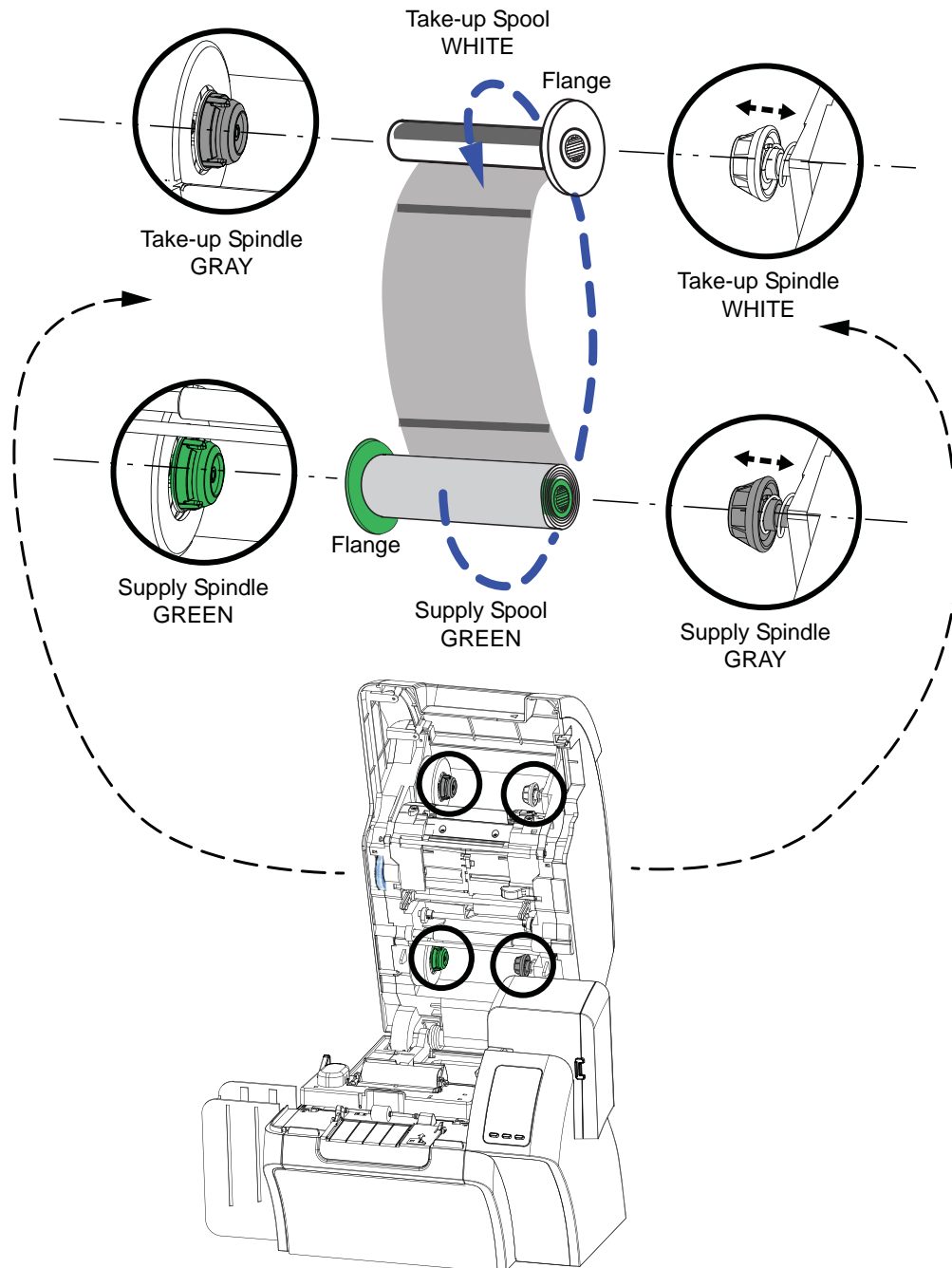


- Step 5.** Hold the Card Cleaning Roller by the ends.
- Step 6.** Position the ends of the Card Cleaning Roller in the slots. Push until the roller fully seats and latches.
- Step 7.** Close the Printer's Door.

## Loading the Transfer Film

The ZXP Series 8 printer is designed to work only with Zebra True Colours® i Series™ Transfer Film for near photographic print resolution and over-the-edge printing.

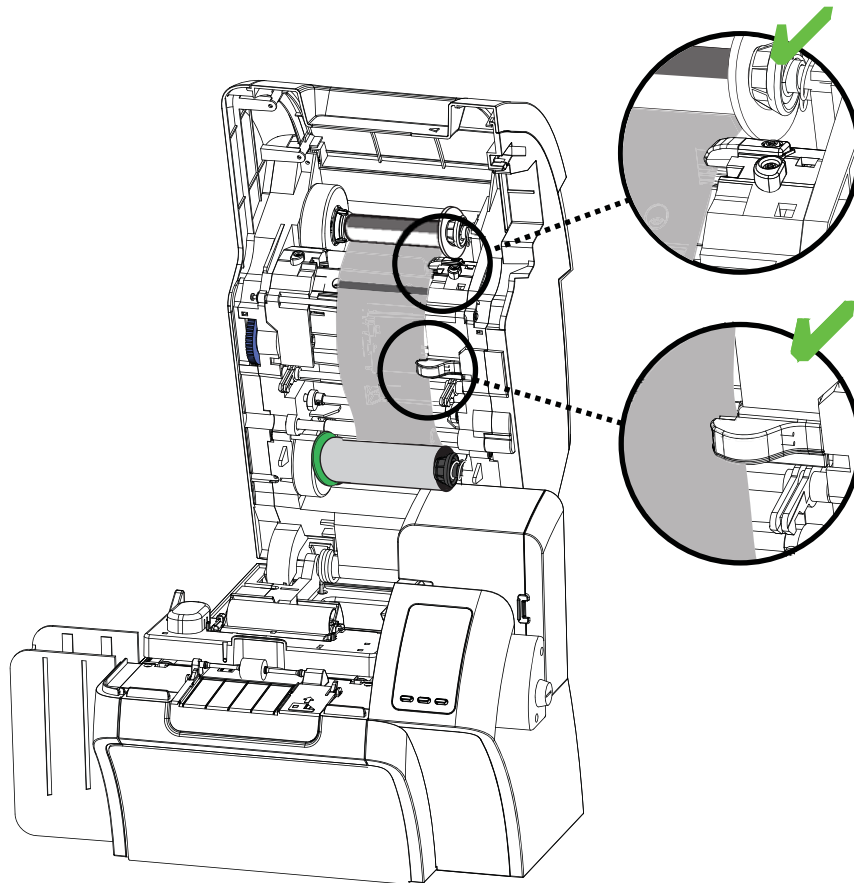
- Step 1.** Locate the transfer film supply spindles and the transfer film take-up spindles.
- Step 2.** Unroll about one foot from the full roll of transfer film (supply spool), and wind it (2 wraps) onto the empty take-up spool.



## Installation and Setup

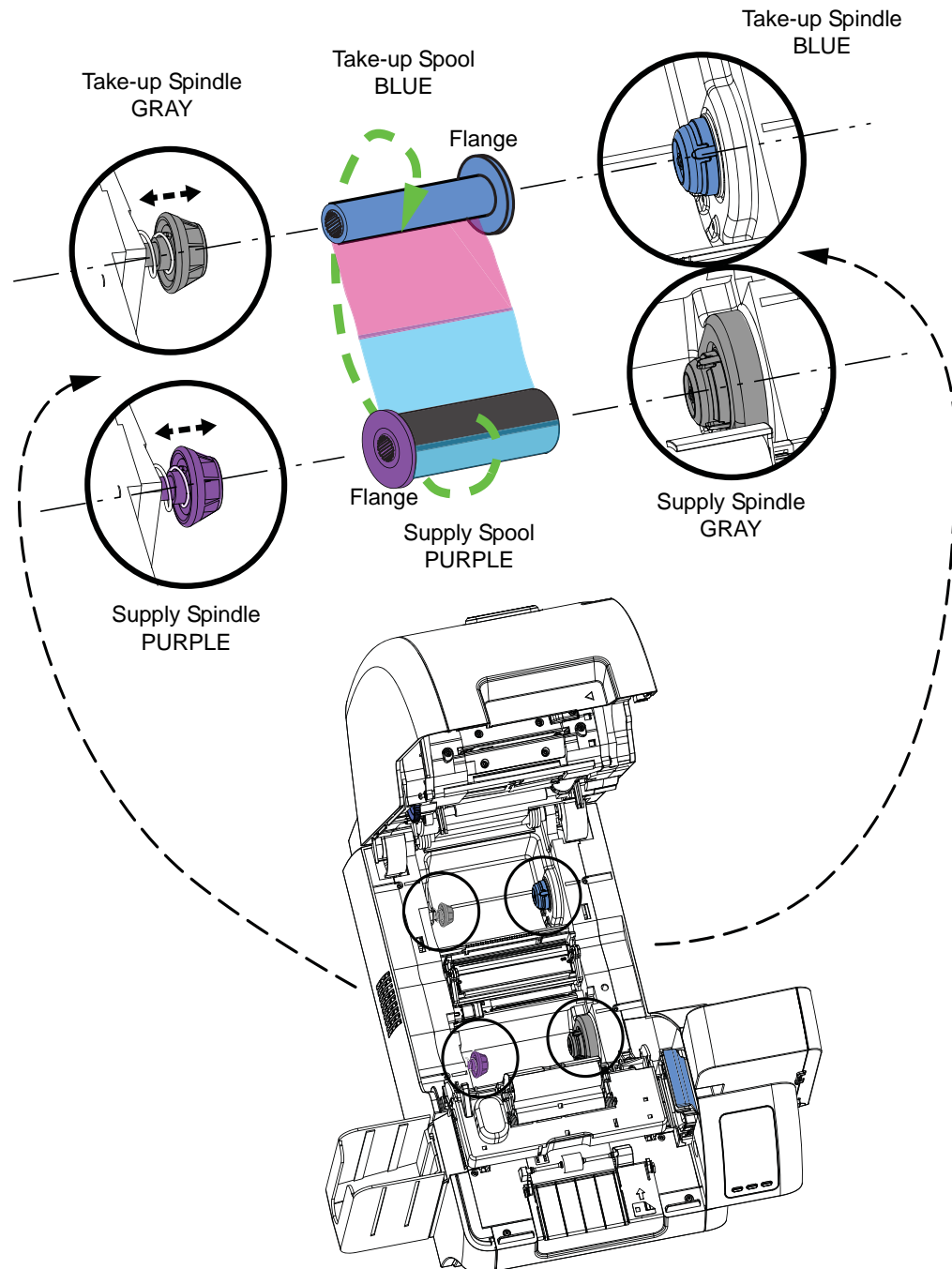
### Loading the Transfer Film

- Step 3.** Load transfer film supply spool onto the supply spindles, **green flange side to the left**.
- Step 4.** Load the empty take-up spool onto the take-up spindles, **white flange side to the right**.
- Step 5.** Make sure the transfer film comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.
- Step 6.** The figure below shows the proper installation of the transfer film.



The ZXP Series 8 printer is designed to work only with Zebra True Colours® i Series™ Ribbons in order to achieve rich, vibrant, image production over the full-color spectrum.

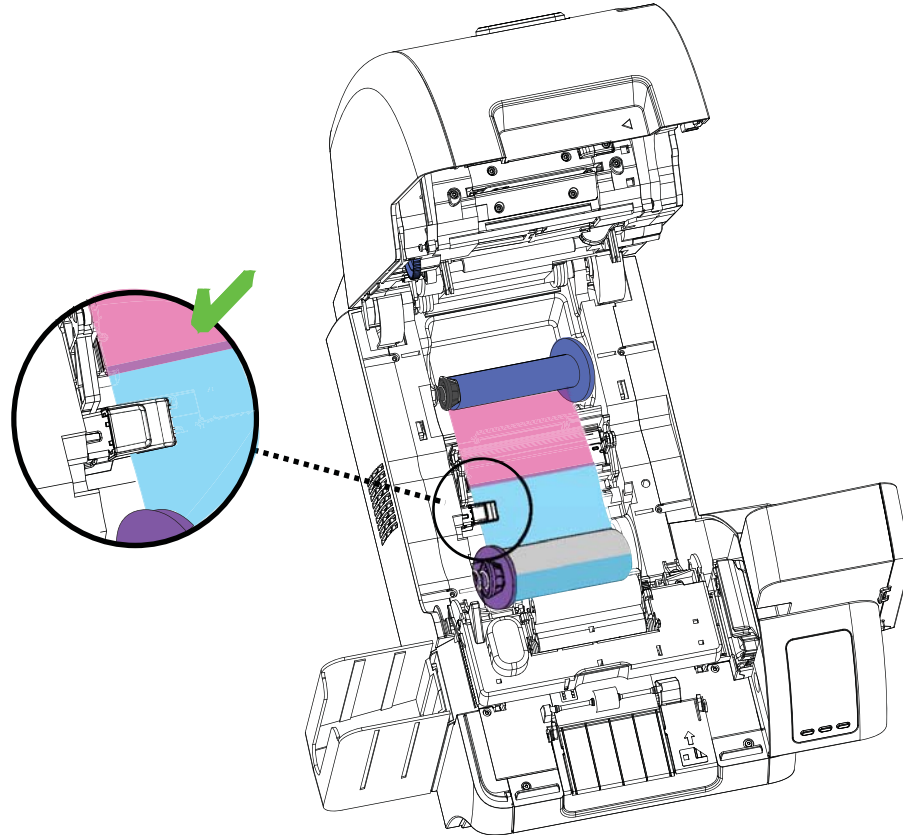
Take-up Spindle  
BLUE



## Installation and Setup

### Loading a Print Ribbon

- Step 2.** Load the print ribbon supply spool onto the supply spindles, **purple flange side to the left**.
- Step 3.** Load the empty take-up spool onto the take-up spindle, **blue flange side to the right**.
- Step 4.** Make sure the print ribbon comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.
- Step 5.** The figure below shows the proper installation of the print ribbon.



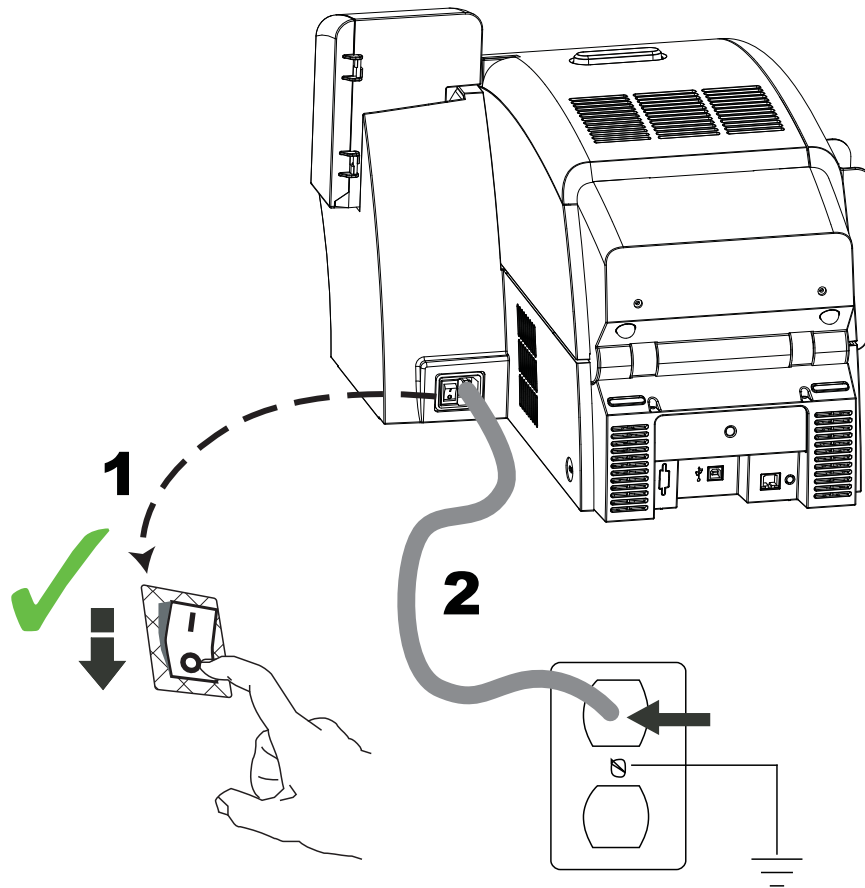


## Connecting Power



**Electric Shock Caution** • Limit AC power supplied to the Printer to 100 – 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.



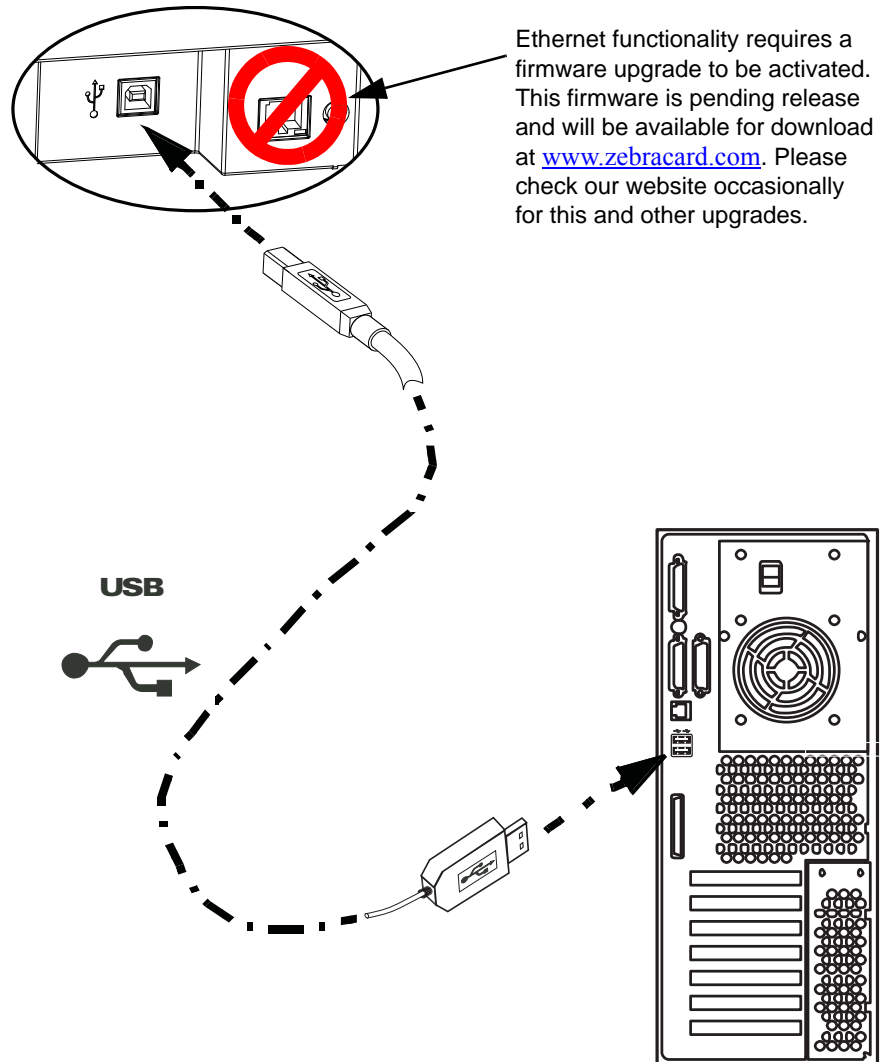
**Step 1.** Place the Printer's power switch in the OFF ( ○ ) position.

**Step 2.** Depending on your local AC voltage, plug the appropriate power cord into the Printer's power connector and a grounded AC power source connection.

DO NOT SWITCH THE PRINTER ON.

## Connecting the Printer to your Computer


Connect the USB cable to the printer and the computer.



# Installing the Windows Printer Driver

## Overview

Each computer that will use the printer must have the Printer Driver installed.

If not already done, connect power to the printer; ensure that the printer's power switch in the OFF (  ) position, and connect the printer to the computer.

To install the Printer Driver, insert the **User Documentation and Drivers CD**, included with your printer, into the host computer and the InstallShield Wizard will walk you through the required installation steps. The InstallShield Wizard will:

- Automatically install the User Interface when the driver CD is inserted. (Autorun must be enabled for your CD).


If Autorun is disabled:

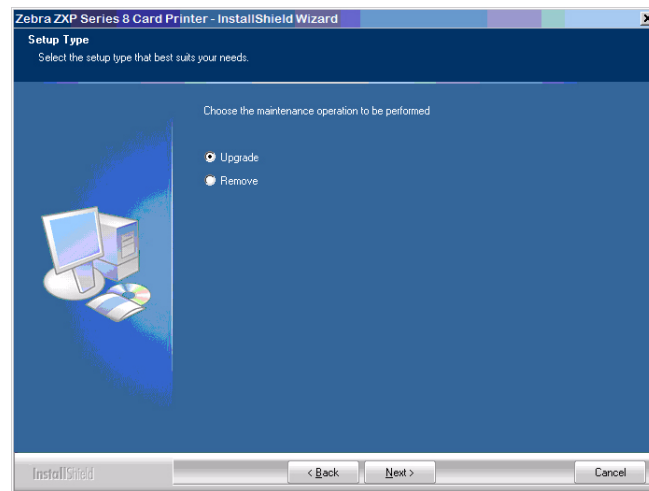
- a. Insert the Driver CD into the CD-ROM drive.
  - b. At the root (top) level of the CD, double-click on the RunCD.exe file.
- Start the installation process when the **Install Printer Driver** menu item is selected from the Main Menu.



- Detect previous versions of the driver. If a previous version is detected, you will be prompted to remove it, reboot, and then restart the install process.
- Install the new driver files.

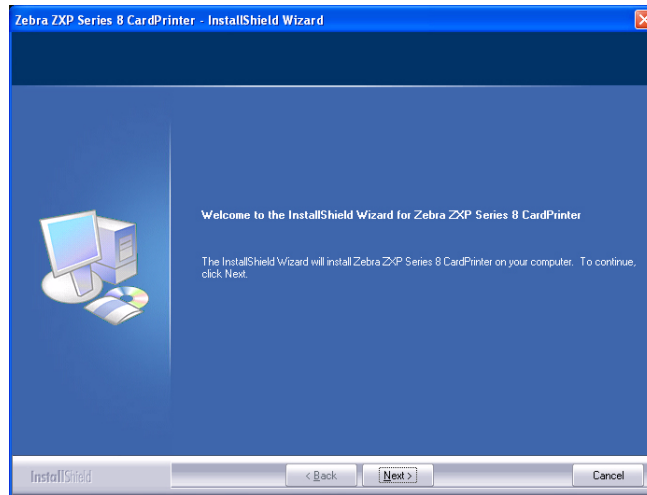
## Installing the USB Printer Driver

- Step 1.** If not already done, connect power to the printer. Do not turn power ON.
- Step 2.** Connect the USB port on the rear of the printer to the computer's USB port.
- Step 3.** Ensure that the Printer's power switch in the OFF (  ) position.
- Step 4.** Insert the **User Documentation and Drivers CD** into the CD drive of the host computer. The **Main Menu** will open.
- Step 5.** From the drop-down menu in the upper-right corner of the **Main Menu**, choose the appropriate language for your system.
- Step 6.** From the **Main Menu**, click **Install Printer Driver**.
- Step 7.** If an older Printer and Driver is installed on your computer, the **Setup Type** window will be displayed; otherwise go to [Step 9](#).

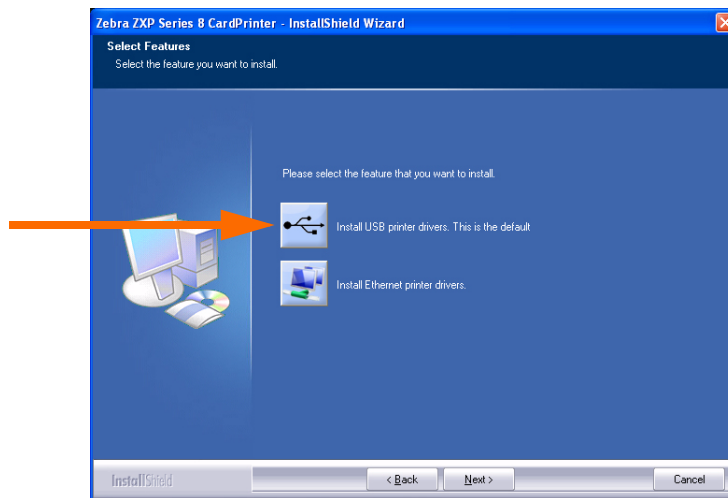



- Step 8.** In the **Setup Type** window, choose the maintenance operation to be performed:
  - a.** Select **Upgrade** to upgrade the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the upgrade process, you will be asked to re-boot your computer. Re-boot your computer. The upgrade is complete.
  - b.** Select **Remove** to remove the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the uninstall process, you will be asked to re-boot your computer. Re-boot your computer, and start over with [Step 1](#).

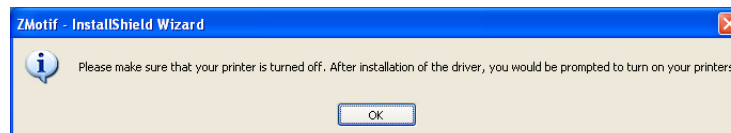
**Step 9.** The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



**Step 10.** Select **Install USB printer drivers**, and click the **Next** button.



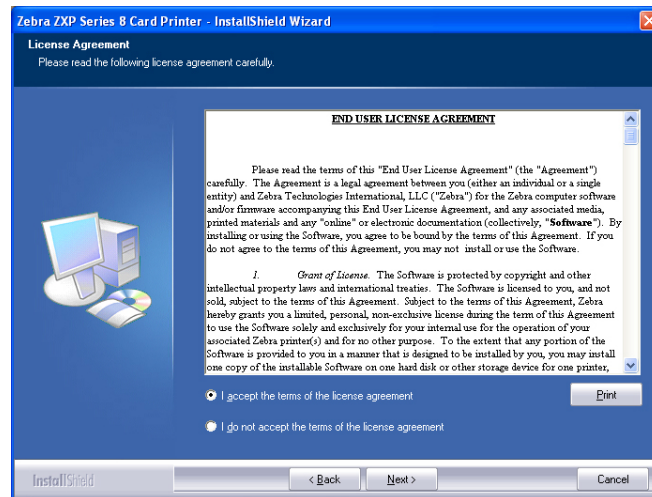
**Step 11.** Ensure that the Printer's power switch in the OFF (  ) position; and then click the **OK** button.



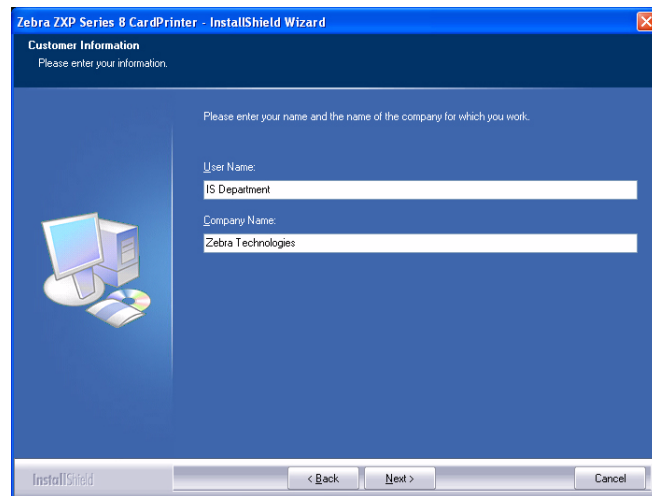
## Installation and Setup

### Installing the Windows Printer Driver

**Step 12.** This will bring up the **License Agreement** window. To proceed with the installation, select the *I accept the terms of the license agreement* option, and then click the **Next** button.



**Step 13.** This will bring up the **Customer Information** window. Enter User Name and Company Name; and then click the **Next** button.

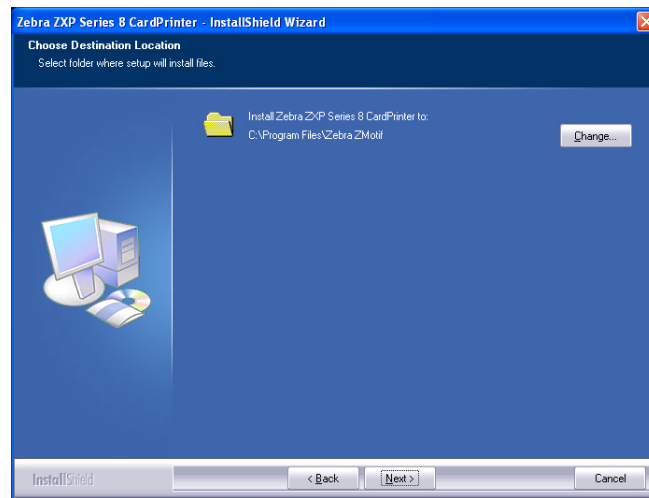


**Step 14.** This will bring up the **Choose Destination Location** window.

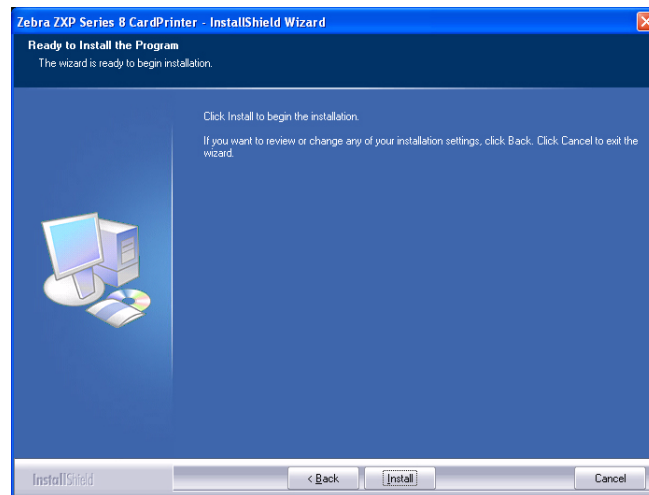
- To accept the default destination location where setup will install the files, click the **Next** button.

- OR -

- Select a folder where setup will install the files, and click the **Next** button.

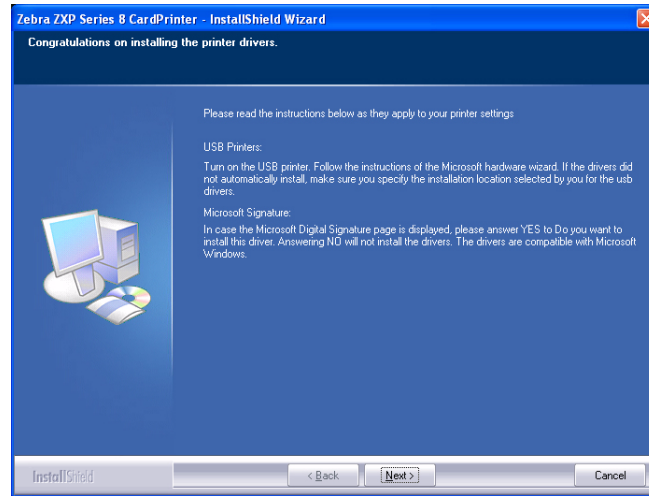


**Step 15.** This will bring up the **Ready to Install the Program** window. To continue, click the **Install** button.



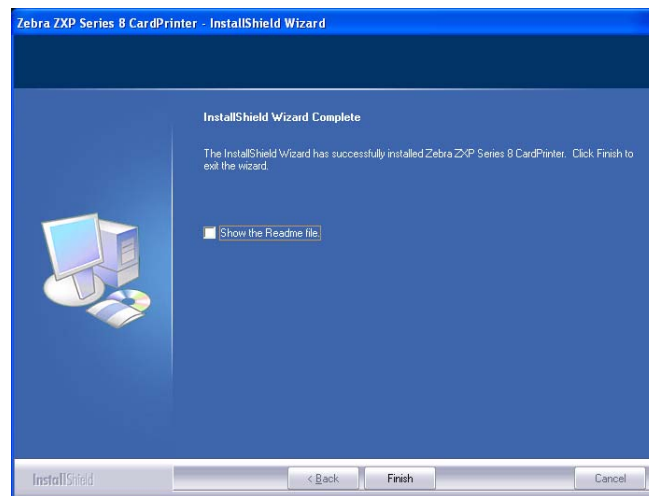
**Step 16.** Observe the **Setup Status** window.

**Step 17.** The **Congratulations** window will appear.



**Step 18.** At this point, **turn on your printer**; and then click the **Next** button.

**Step 19.** When the **InstallShield Wizard Complete** window appears, click the **Finish** button.



**Step 20.** This completes USB driver installation. To use the Printer, you would select it just like you would any other printer connected to a Windows system.





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# Operation

## Introduction

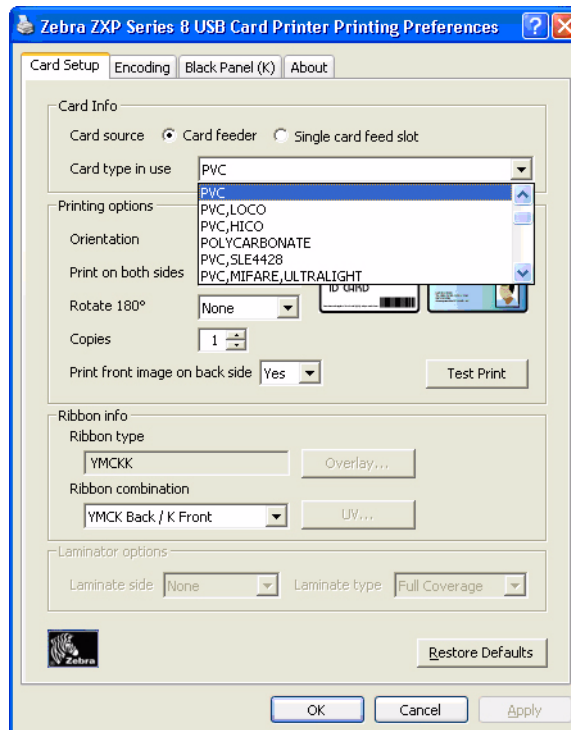
Printing with the Card Printer is similar to printing with any other printer in a Windows environment.

- The Printer Driver Software is installed on your computer (see [Section 2](#)).
- The Printer is connected to the power source and the computer (see [Section 2](#)).
- The Printer is selected by either the Operating System or the appropriate application software program.
- Printer Properties are set (the factory default values will be appropriate for many applications).
- Set the Card Type.
- Print a Test Card.
- Card printing is directed by the appropriate application software program.

## Card Type Selection

The **Card Setup** tab allows you to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality. If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.

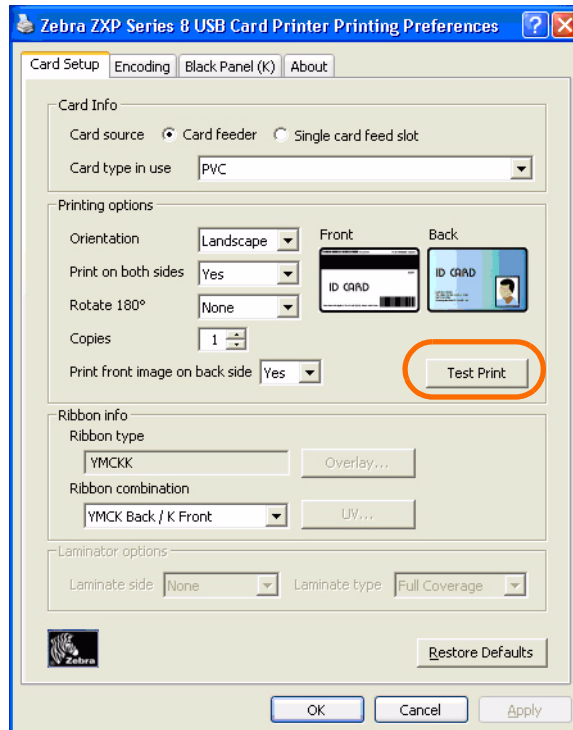


- Make the appropriate Card Type selection. Note that *PVC* is the default.

## Printing a Sample Card

Sample card designs are installed with the printer driver. To print a sample card:

1. Access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.

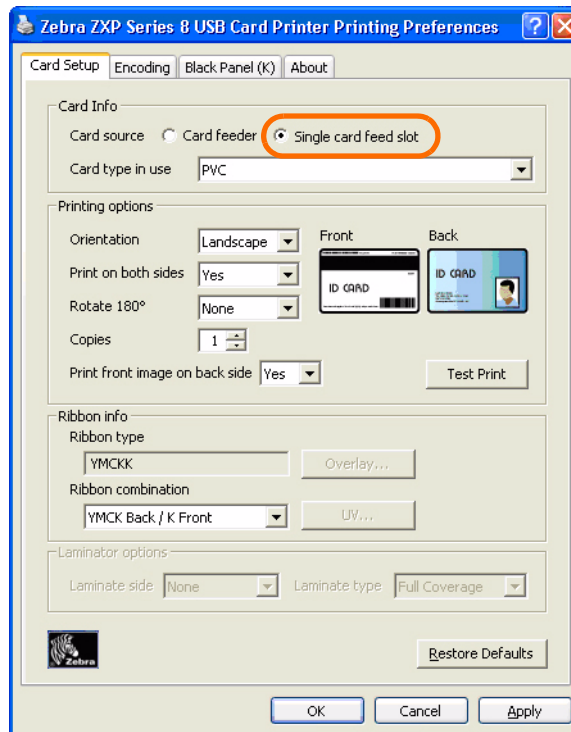


2. Ensure that cards are in the Input Hopper.
3. Click of the **Test Print** button (circled above).
4. The printer will feed in a card and start printing.
5. Once the printing job is complete, the card is ejected from the printer into the Output Hopper.

## Manual Card Feed

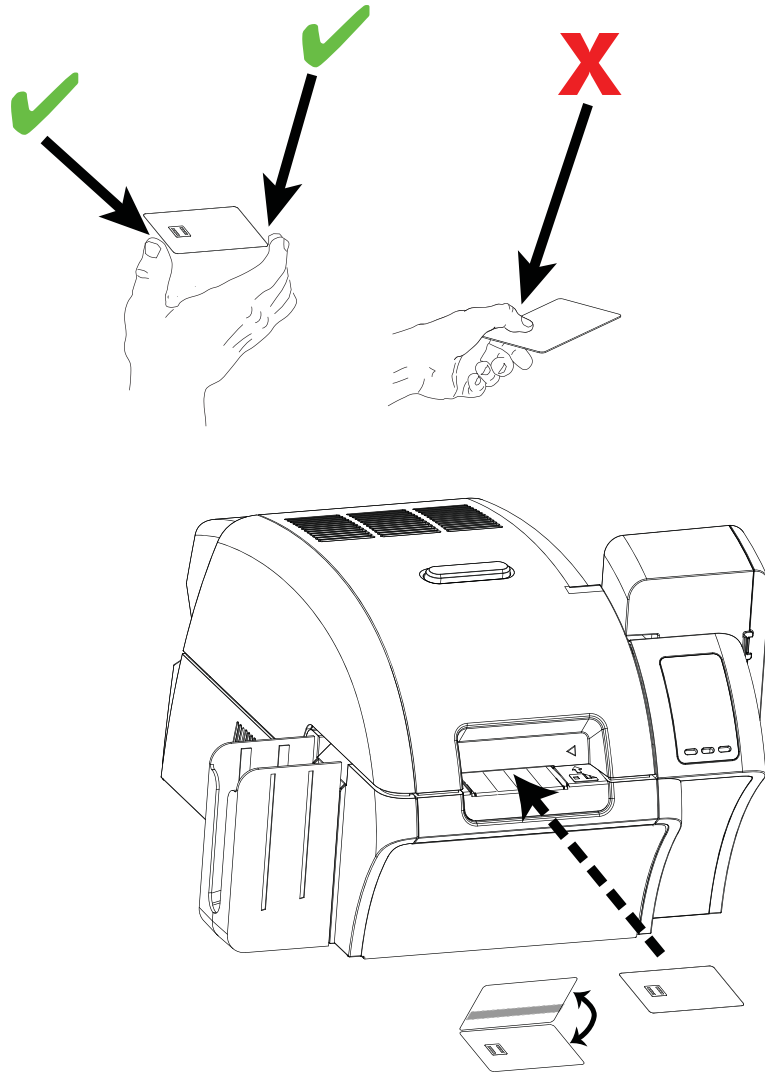
A Manual Feed Slot is available for feeding single cards. The Input Hopper must be empty for single-card feeding to work properly.

1. Access the Card Setup Tab: Select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



2. In the Card Setup tab, select the *Single card feed slot* radio button (circled above).
3. Click on the **Apply** button, and then click on the **OK** button.
4. Ensure that there are no cards in the Input Hopper.

5. Insert a single card into the slot in the correct orientation. Do not feed more than one card at a time.



## Operator Control Panel (OCP)

The printer is equipped with an OCP Display and three OCP Buttons which give access to the printer menus. The menus can be accessed when the printer status shows **READY**.



- Press the **MENU** button, to access the Main Menu.
- Press the **INFO** button, to access and view the Printer Settings Menu.
- Press the **CANCEL** button, to cancel the current print job in the printer.

## Messages

Your printer is equipped with an OCP Display to provide printer status information. The readout is controlled by three OCP Buttons directly below the OCP Display. The messages displayed fall into three categories: Operational, Warnings, and Errors.

### Operational

Operational Messages are displayed during the Printer's normal operation.

MESSAGE	DESCRIPTION
WAIT INITIALIZING	Performing a self test on start up.
WARMING	Ready to accept a print job, roller heating.
READY	Ready and at temperature.
STANDBY	Printer is in "sleep" mode; i.e., power save mode.
PRINTING	Print job received, printing in process.
WARMING PRINT JOB WAITING	Print job received, warming rollers to temperature.
OFFLINE	Status toggled (offline/online) via the OCP Advanced Settings Menu.
WARNING	Indicates that additional OCP instructions need to be performed; e.g., PRINT RIBBON LOW, etc.
ALARM	Indicates error messages need to be cleared before normal operations can resume.
CANCELING	Cancel button was pressed, and the current operation is being terminated.
COOLING PRINT JOB WAITING	Print job received, cooling rollers to temperature.
MANUALLY INSERT CARD FROM FRONT	Waiting for manual card feed (this function is set via the <a href="#">Card Setup Tab</a> ; see page 46).

## Warning Messages

Warnings alert the operator to action that should be taken; the printer will generally continue operation.

<b>WARNING (Printer will still operate)</b>	<b>DESCRIPTION</b>
PRINT RIBBON LOW	Indicates that the Print Ribbon is low; see <a href="#">Loading a Print Ribbon, Section 2</a> .
TRANSFER FILM LOW	Indicates that the Transfer Film is low; see <a href="#">Loading the Transfer Film, Section 2</a> .
CLEAN PRINTER SIDE	Indicates that the Side Card Path (X-Drive Rollers) needs cleaning; see <a href="#">Cleaning the Rollers, Section 6</a> .
CLEAN PRINTER FRONT	Indicates that the Front Card Path (Y-Drive Rollers) needs cleaning; see <a href="#">Cleaning the Rollers, Section 6</a> .
CLEAN PRINTER ROLLERS	Indicates that the Heated Roller Path (Heated Rollers) needs cleaning; see <a href="#">Cleaning the Rollers, Section 6</a> .

## Error Messages

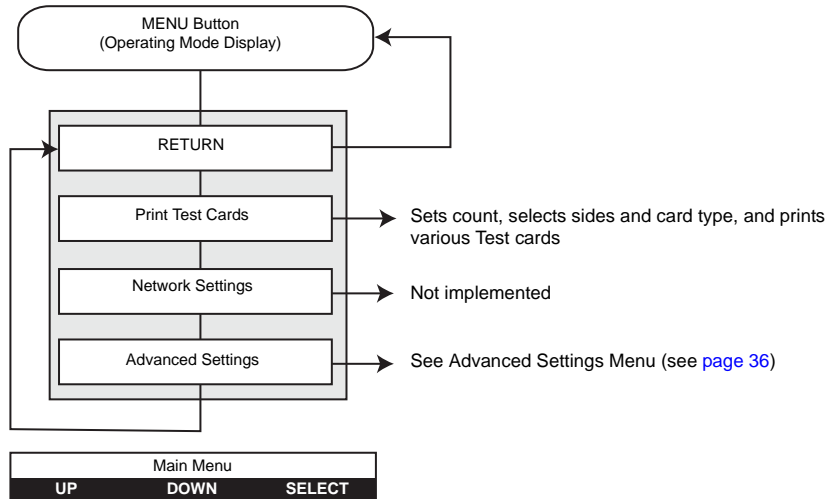
Errors are displayed when a situation causes the printer to stop operating. Depending on the cause of the error message, restarting the printer or clearing the displayed error may return the printer to operational status; or the printer may require troubleshooting and repair.

Refer to [Section 7, Troubleshooting](#), for a list of the error messages, possible causes, and possible solutions.



## Printer Menu Information

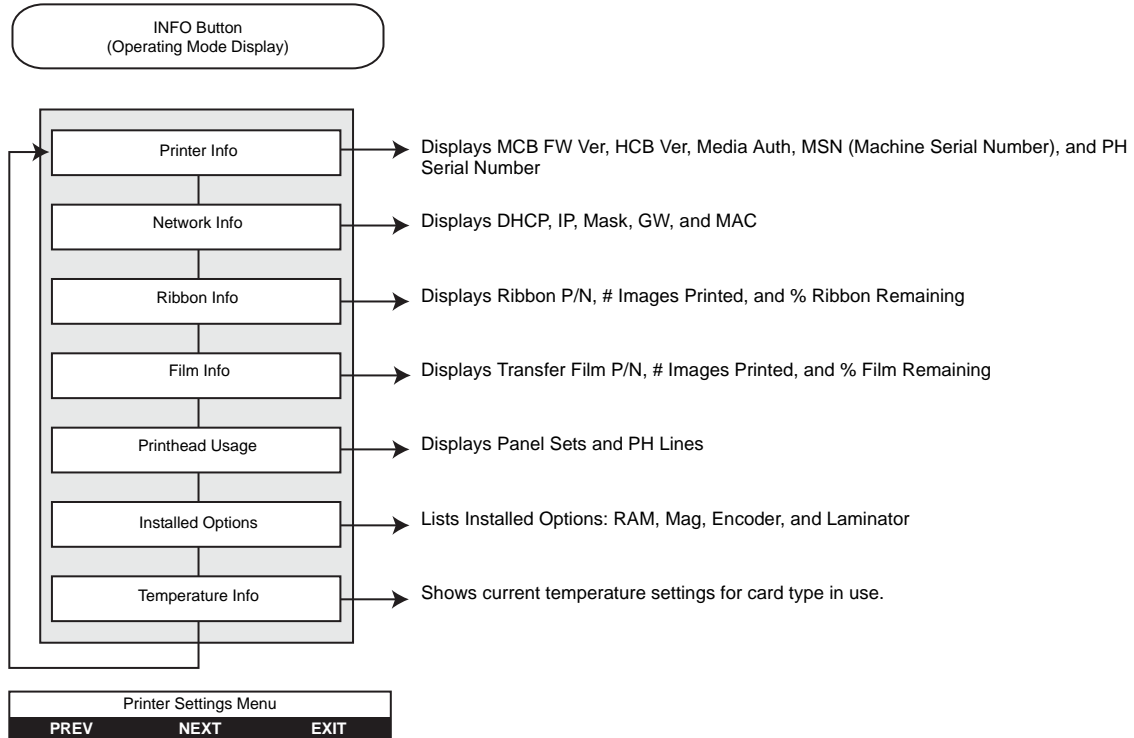
### Main Menu



- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.

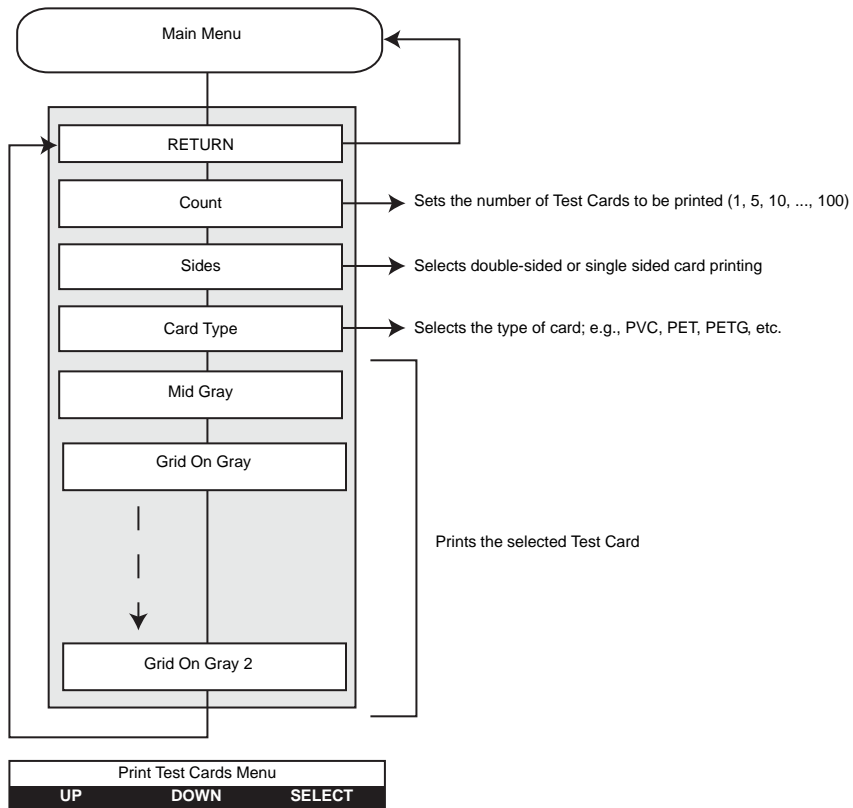
## Info Menu

The Info Menu allows the user to quickly view the operating settings and configuration of the printer.



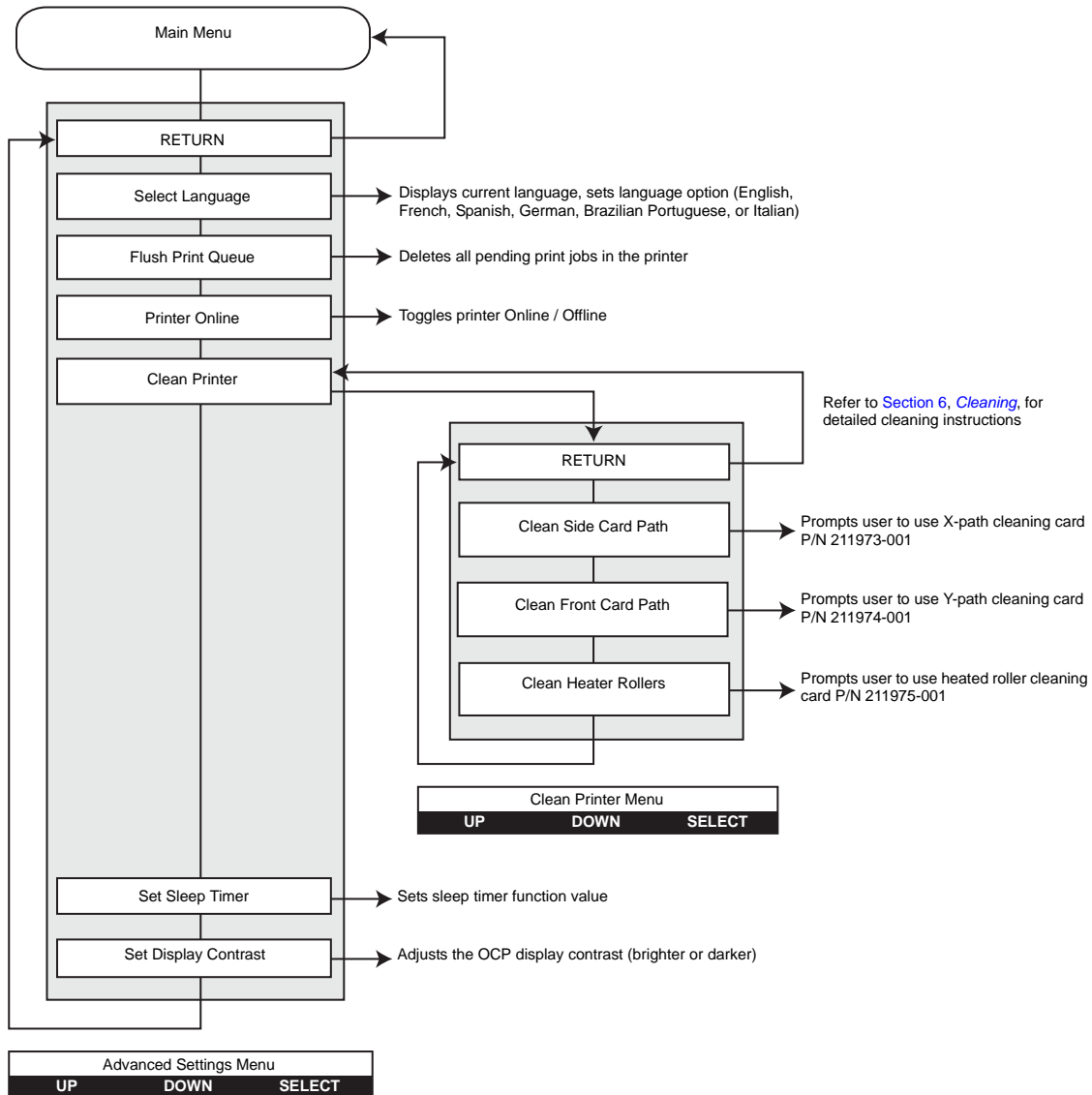
- Press the **PREV** button to move up the menu list.
- Press the **NEXT** button to move down the menu list.
- Press the **EXIT** button to return to the Operating Mode Display

## Print Test Cards Menu



- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.

## Advanced Settings Menu



- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.



---

# Printer Settings and Adjustments

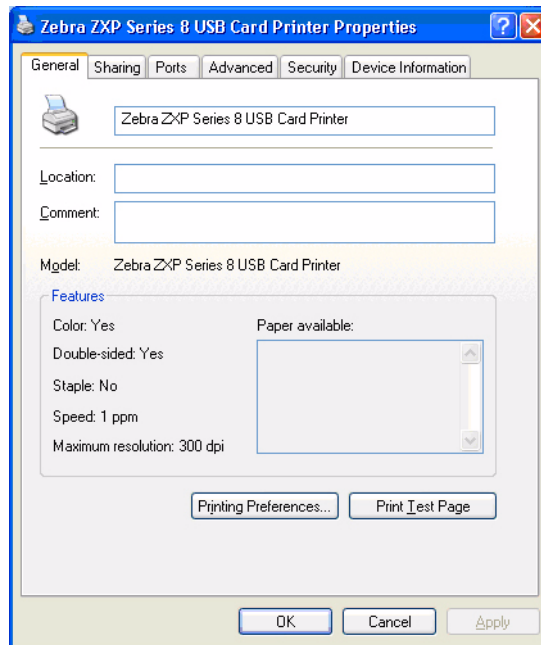
## Introduction

This section describes settings and adjustments that can be made to your Windows Driver. This consists of two major topics:

Properties . . . . .	38
Printing Preferences . . . . .	45

## Properties

To access Properties, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing, then select *Properties*

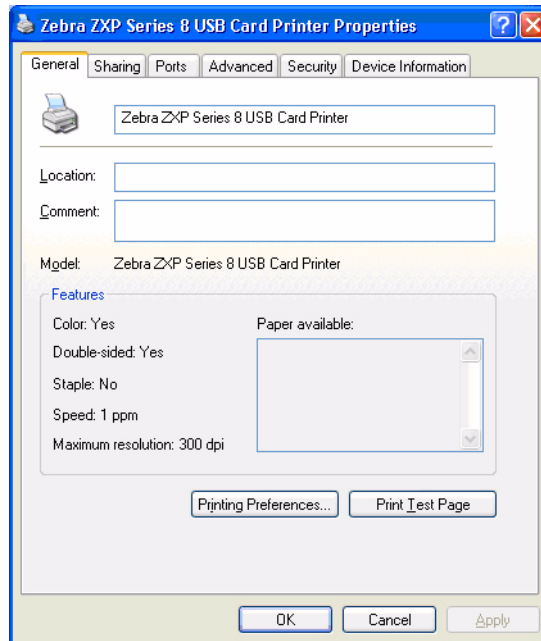


- **General Tab** - Displays printer information of a general nature, includes selection for Printing Preferences and Print Test Page (i.e., the standard Windows test page).
- **Sharing Tab** - Operating System (OS) feature where the printer can be shared with other clients on a network.
- **Ports Tab** - OS feature displays available communication ports.
- **Advanced Tab** - OS feature to select printer availability and spooling options.
- **Security Tab** - OS feature where permissions to printers can be defined.
- **Device Information Tab** - Allows user to make basic printer adjustments and access advanced printer controls.

## General Tab

The General tab shows the printer model and lists the features of the printer.

To access the General tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > General*.



- **Location** - Lets you specify where the printer is located.
- **Comment** - Lets you specify general information about the printer, such as the type of print device and who is responsible for it. Once set, these fields can be displayed by applications.
- **Model** - Specifies the name of the printer driver installed.
- **Features** - Specifies whether various options are available on the printer.

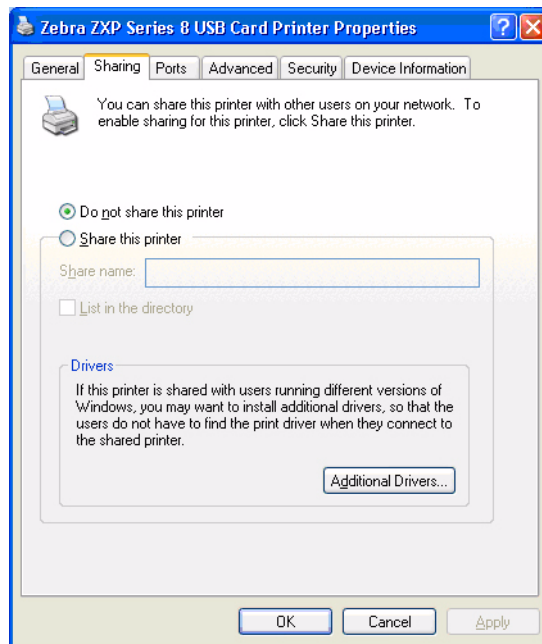
The **Printing Preferences** button takes you to Printing Preferences used to set selected configuration parameters; see [Printing Preferences](#) on page 45.

The **Print Test Page** button sends the standard Windows test page to the printer.

## Sharing Tab

On the Sharing tab (Sharing Property Page), you can choose to share the printer over the network and install additional drivers to accommodate different operating systems.

To access the Sharing tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Sharing*.



Printer sharing tasks that you can perform include:

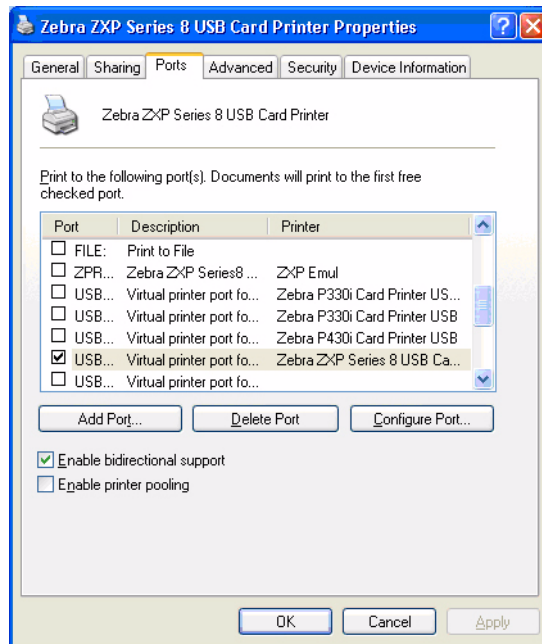
- To share a printer, select the *Share this printer* radio button; and specify a name for the shared resource. Click OK when you're finished.
- To change the shared name, simply enter a new name in the *Share name* field; and click OK.
- To quit sharing a printer, select the *Do not share this printer* radio button. Click OK when you're finished.



## Ports Tab

Use the Ports tab to specify the computer port to which the printer is connected. This will have been established at the initial installation of the printer, and will not normally require attention.

To access the Ports tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Ports*.



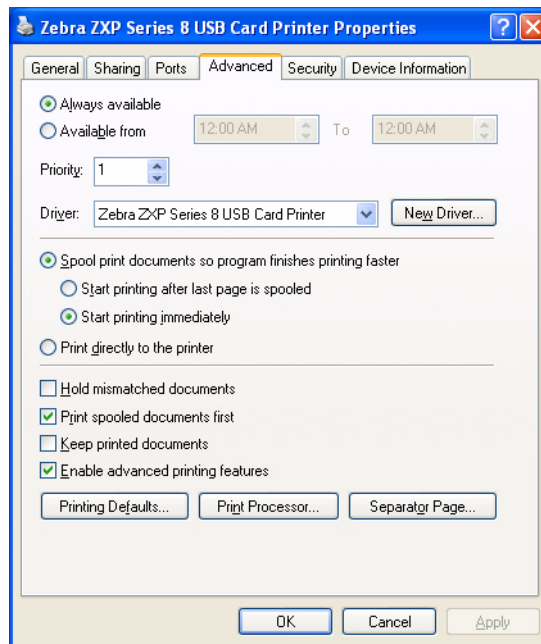
An exception to this is if you wish to use *printer pooling*, the ability to distribute print jobs to multiple printers. To enable printer pooling, check the “Enable printer pooling” box, then check the additional ports boxes. Each port should have a single Zebra printer installed on it. All the pooled printers must be identical models with the same configuration (e.g., all with YMC front, K back).

Now, when you print to the “main printer” (that is, whichever printer you right-clicked in Printers and Faxes to get to this screen), this printer will get print jobs until it has buffered as many jobs as it can take. Remaining jobs will then “spill over” to other printers until all printers in the pool are busy.

## Advanced Tab

The Advanced tab determines the spooling (queuing) of print jobs and determines how spooled jobs are handled relative to the most recent job.

To access the Advanced tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Advanced*.



**To enable spooling:** Select the radio button labeled *Spool print documents so program finishes printing faster*.

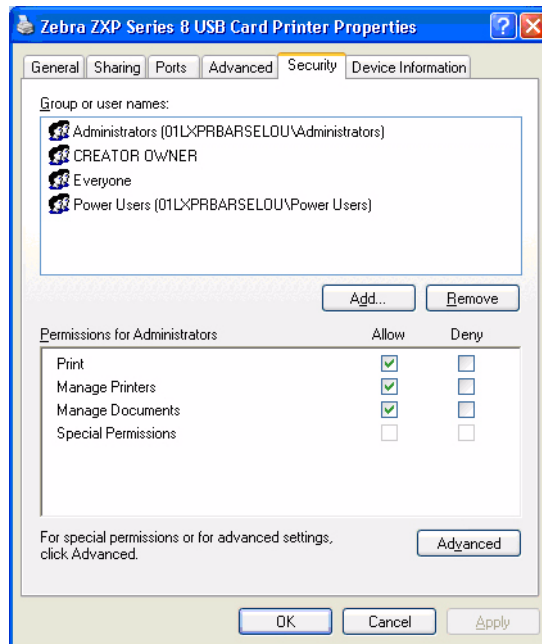
- Select *Start printing after last page is spooled* if you want the entire document to be spooled before printing begins. This option ensures that the entire document is sent to the print queue before printing. If for some reason printing is canceled or not completed, the job will not be printed.
- Select *Start printing immediately* if you want printing to begin immediately when the print device is not already in use. This option is preferable when you want print jobs to be completed faster or when you want to ensure that the application returns control to users as soon as possible.

**To disable spooling:** Select the radio button labeled *Print directly to the printer* radio button.

## Security Tab

This is the standard Windows security screen, showing user access to various printer control options. Both Print and Manage Printers *must* be checked for full functionality of the printer.

To access the Security tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Security*.



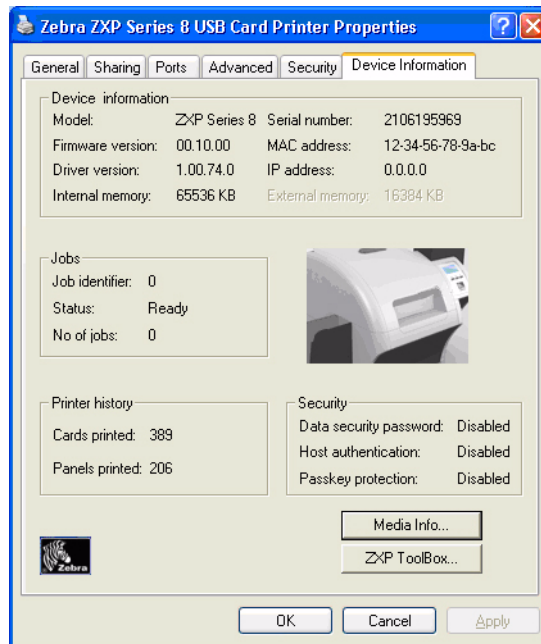
The Security tab allows you to assign the actual permissions that apply to the print queue. You can apply permissions to both users and to groups. It is usually considered a better practice to only apply security to groups.

The Advanced Security Settings properties sheet allows you to assign a more comprehensive set of permissions than the basic Security tab found on the printer's properties sheet does.

## Device Information Tab

The Device Information tab provides printer information, job condition, printer history, and security status. Access to Media Info and ZXP ToolBox is included.

To access the Device Settings tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Device Information*.

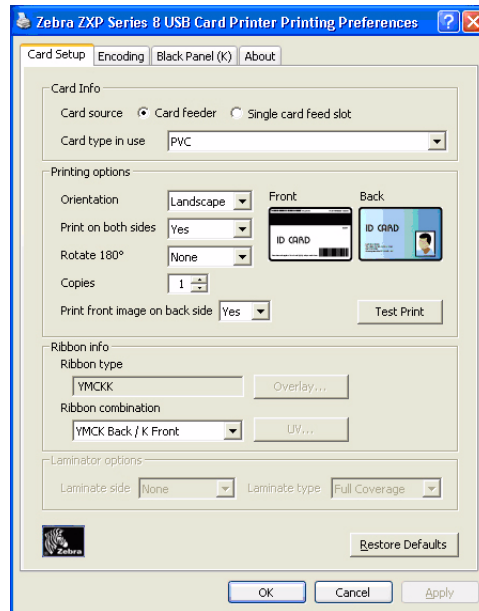


- The **Media Info** button takes you to the Media Info screen which shows:
  - The color ribbon type installed and the number of color ribbon sets remaining
  - The transfer film type installed and transfer film panels remaining
- The **ZXP Toolbox** button takes you to the ZXP Toolbox which provides advanced configuration capabilities and tools to manage the operation of your printer; see [Section 5](#) for details.

Note that the ZXP Toolbox is a separate application that works independently from the printer driver.

## Printing Preferences

To access the Printing Preferences, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences*.

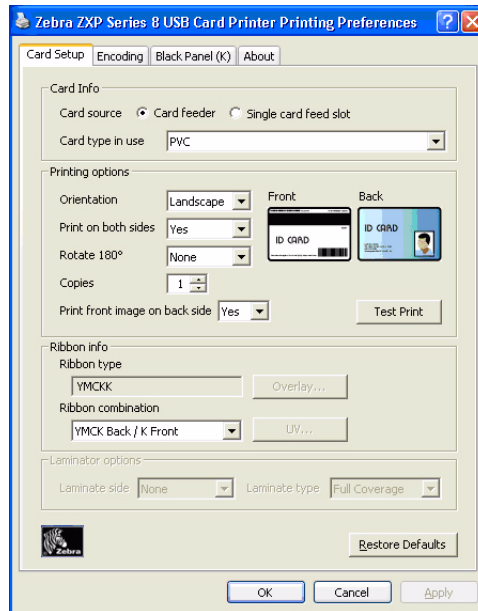


- **Card Setup Tab** - Allows user to adjust selected card and print job parameters.
- **Encoding Tab** - Allows the user to set various magnetic encoding options.
- **Black Panel (K) Tab** - Displays available options for Black Extraction.
- **About Tab** - Displays copyright and driver version information about the printer driver.

## Card Setup Tab

Card Setup tab allows the user to adjust selected card and print job parameters.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



- **Card info:**

- **Card source** allows the user to feed cards into the printer from the card feeder or via the single card feed slot.
- **Card type in use** allows the user to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality.



- **Printing options** allows the user to select the card orientation, to print on both sides of the card, to rotate the card 180°, and to specify the number of copies to print. The **Test Print** button prints a test card.

- **Ribbon info:**

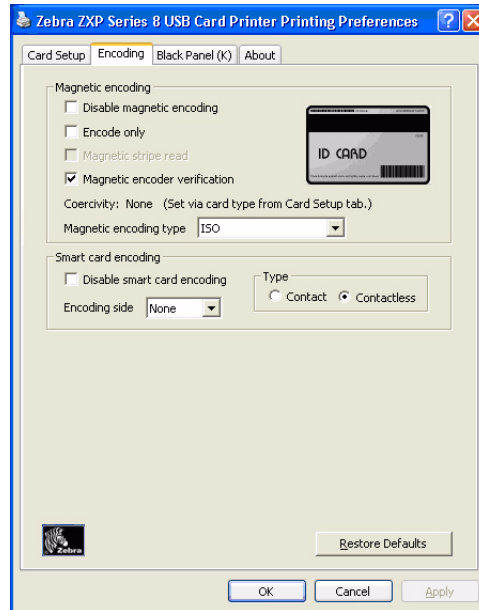
- **Ribbon type** is the color ribbon installed in the printer. This is not user selectable.
- **Ribbon combination** allows you to apply color or black, or both, to either side of the card.

The **Restore Defaults** button restores Card Setup default values.

## Encoding Tab

The Encoding screen allows the user to set various magnetic and smart card encoding options.

To access the Encoding Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Encoding*.



Although these options are user-selectable, they are set automatically when the Card Type is selected in the [Card Setup Tab](#) on page 46.

The **Restore Defaults** button restores Encoding default values.



**Note** • For advanced settings, see [Section 5, ZXP ToolBox](#).

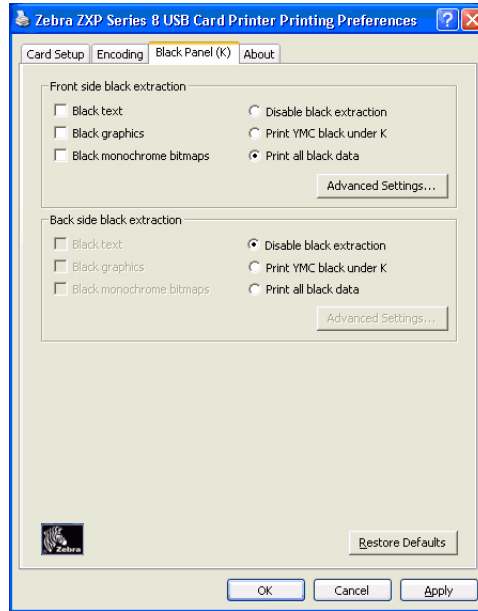
## Black Panel (K) Tab

The Black Panel (K) Tab allows for special handling of black.



**Note** • The Black Panel (K) Tab applies only to surfaces of the card on which both YMC (color) and K (black) are to be printed.

To access the Black Panel (K) Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Black Panel (K)*.



### Overview

Printing equal amounts of Y, M, and C dyes, at maximum intensity, deliver a near-black image, but one that may not be machine readable. For example, a bar code, printed from YMC, will be visible to the eye but will not be detectable by most bar code readers.

The remedy for this is to extract the black; which means printing the same bar code using the K panel on top of the YMC bar code. You can also choose to print only in K, omitting YMC from that region. The K panel is not a dye. It is more of a resin containing carbon black, which is highly visible to infrared-type readers and renders a pure black image.

### Black Extraction

When *Disable Black Extraction* is not selected (i.e., either *Print YMC black under K* or *Print all black data* is selected), Black Extraction is enabled.

With either *Print YMC black under K* or *Print all black data* selected, you can identify which elements are to be selected for black extraction: black text, black graphics, and/or black monochrome bitmaps.

The **Restore Defaults** button restores Black Panel default values.

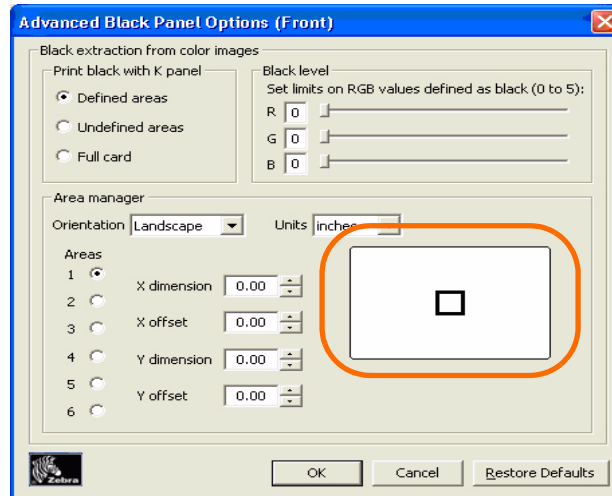


## Advanced Settings (Black Extraction)

The Advanced Settings tab allows you to manage Black Extraction.

To access the Advanced Settings Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Black Panel (K) > Advanced Settings*.

The figure below shows settings for the front side of the card; settings for the back side of the card are identical.



- **Print black with K panel:** Specify the zones as either *Defined areas*, *Undefined areas*, or *Full card*.
- **Black level:** Set the limits (0 to 5) on the RGB values defined as black.
- **Area manager:** Note that this option is enabled when either the *Defined areas* or the *Undefined areas* is radio button is selected.

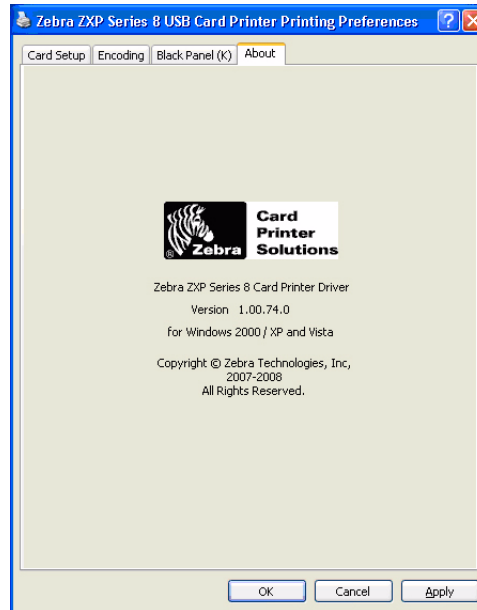
Select an Area radio button (1 to 6), and then “drag” the cursor diagonally across the card outline (circled above) to identify location of the Zone. All dimensions are referenced to the upper-left corner of the card outline.

The **Restore Defaults** button restores Advanced Settings default values.

## About Tab

The About Tab shows the copyright and the driver version for the *Zebra ZXP Series 8 Card Printer*.

To access the About Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > About*.





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# ZXP ToolBox

## Introduction

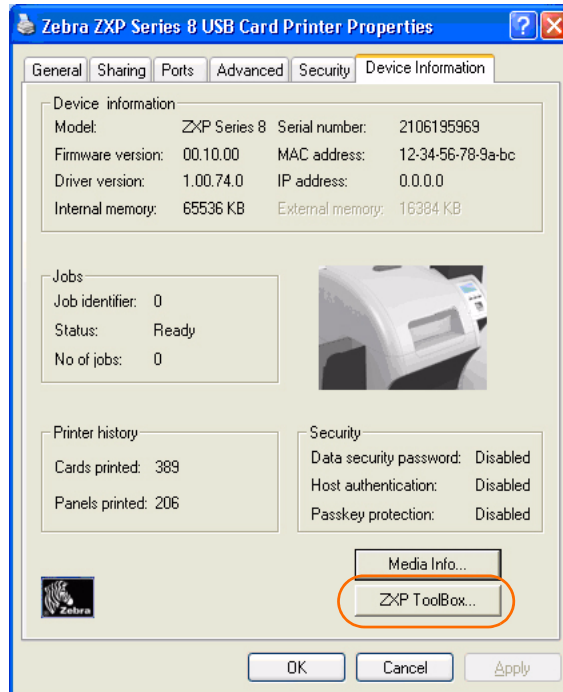


**Important** • Use of the ZXP Toolbox is intended only for advanced users and system administrators.

The ZXP Toolbox provides advanced configuration capabilities and tools to manage the operation of your printer. Note that the ZXP Toolbox is a separate application that works independently from the printer driver.

## ZXP Toolbox Access

To access the ZXP Toolbox from the printer driver, select *Start > Printers and Faxes*. Then right-click on the *Zebra ZXP Series 8 Card Printer* listing, and select *Properties > Device Information > ZXP Toolbox*.



The ZXP ToolBox can also be accessed via *Start > All Programs > Zebra ZXP Series 8 Card Printer*.

## Printer Configuration

The Printer Configuration section provides information on the printer, media information, mechanical and power adjustments, motor and sensor information, a save and restore configuration capability, a print job log, image controls, and firmware downloads.

### Printer Information

- Version details include Firmware version and Driver version.

**ZXP Toolbox - Zebra ZXP Series 8 USB Card Printer**

**Printer Configuration**

- Printer Information
- Media Information
- Motor and Sensor Information
- Save/Restore
- Job Log
- Image Control
- Firmware Download

**Print Test Card**

- Print Sample Card

**Technology**

- Magnetic Encoding
- Smart Card

**Advanced Security**

- Configure Security
- Security Roles

**Print Viewer**

- Print PRN File

**Printer Information**

**Version Details**

Firmware version	00.10.00
Driver version	1.00.74.0

**Memory Information**

RAM	65536
Flash	16384

**Other Information**

Interface	USB	Print system	Retransfer
Magnetic encoding	ISO	Ribbon type	YMCKK
OCF language	English	LCD contrast	35
Laminator type	None	Contactless smartcard	None
Contact smartcard	None		
Printer status	Ready		

**Image Size**

Logical length	1024	Physical length	1012
Logical width	648	Physical width	638
Print resolution	300		

**Network Configuration**

☒ Enable DHCP

IP address	0.0.0.0	Gateway	0.0.0.0
Subnet mask	0.0.0.0	MAC address	12-34-56-78-9a-bc

**Restore Defaults** **Apply**

- Memory information includes RAM and Flash sizes (KB).
- Other information includes interface, print system, magnetic encoding, ribbon type, laminator type, printer status, contact smartcard, and contactless smartcard. Also included are a user-selectable OCP Language option (English, French, Spanish, German, Brazilian Portuguese, and Italian) and an Printer Panel LCD contrast adjustment capability.
- Image size details include logical length, physical length, logical width, and physical width in pixels; and print resolution in pixels per inch.
- Network configuration information includes an Enable DHCP checkbox, IP address, Gateway, Subnet mask, and MAC address.

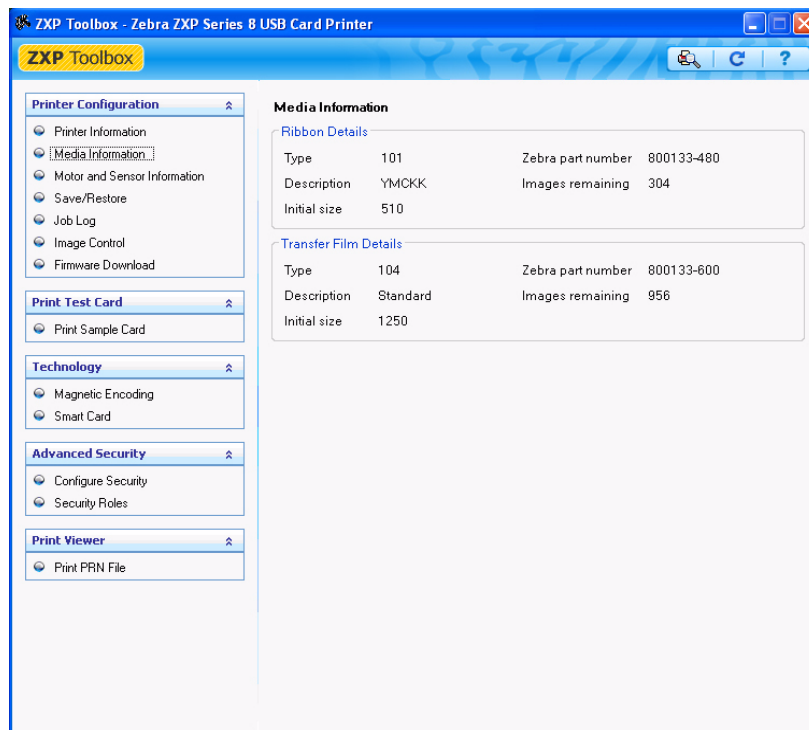
The **Restore Defaults** button restores default values.

The **Apply** button applies changed values.

## Media Information

This screen displays ribbon and transfer film details. This data is automatically read and updated from the installed media in the printer.

- Ribbon details include type, Zebra part number, description, initial size (total image count), and images remaining.



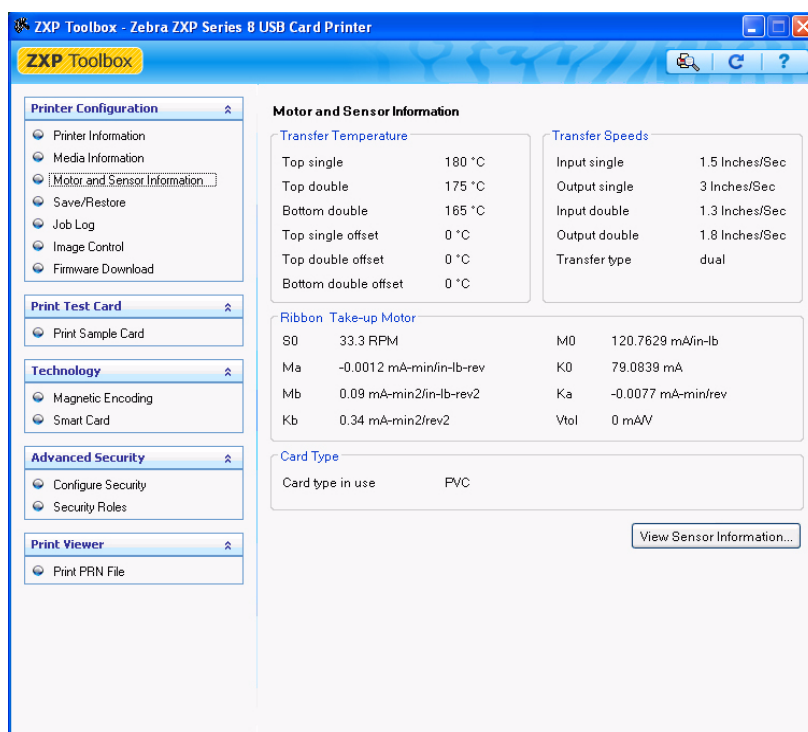
- Transfer film details include type, Zebra part number, description, initial size (total image count), and images remaining.

## Motor and Sensor Information

This screen displays the current status of the printer and provides standard printer information and sensor data.

This information cannot be edited or changed by the user; however, this information may be useful for Zebra trained and certified personnel in diagnosing or evaluating the status of the printer.

- *Transfer Temperature* details include top single, top double, bottom double, top single offset, top double offset, bottom double offset.

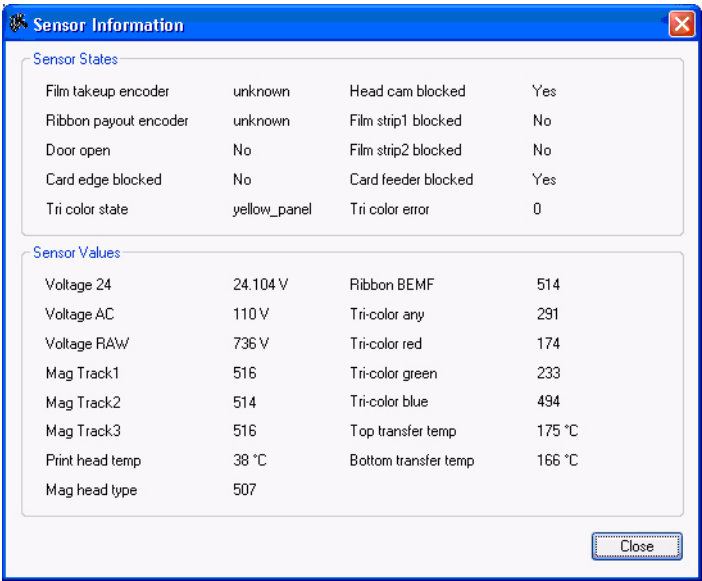


- *Transfer Speeds* details include input single, output single, input double, output double, and transfer type.
- *Ribbon Take-up Motor* lists various electrical characteristics of the motor. These characteristics are fixed settings/values.
- *Card Type* displays the card type in use.

The **View Sensor Information** button displays the Sensor Information screen; see next page.

## View Sensor Information

This screen displays “live” Sensor States and Sensor Values.



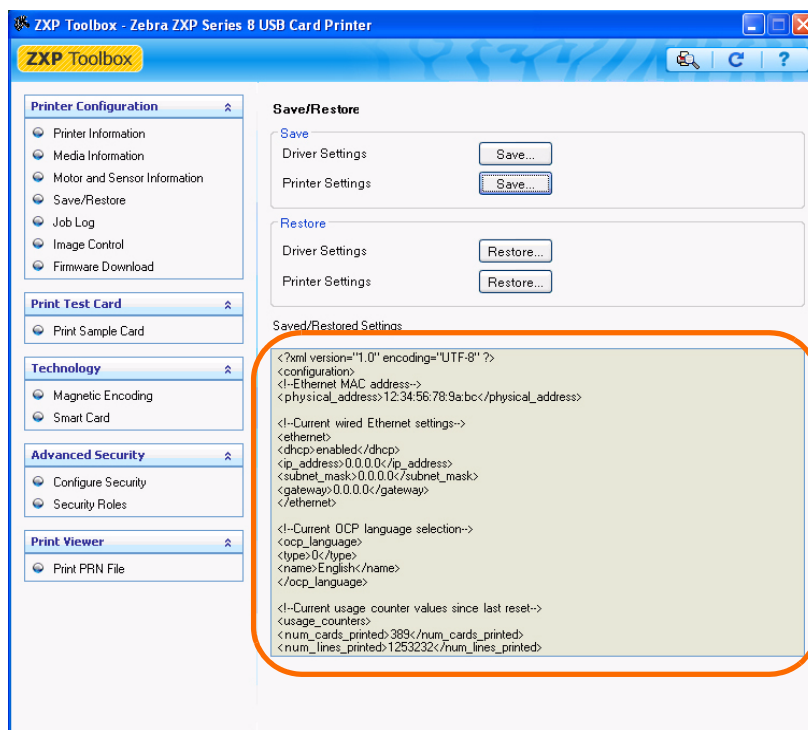
Click on the **Close** button to close this screen.



## Save/Restore

When you set up a printer, you can save the printer and driver configuration settings; then, when you restore or add additional printers, you can use the saved configuration to ensure configuration consistency.

Note that the Saved/Restored Settings (circled below) are for the Printer.



**Note** • The configuration files are stored in an XML format in the following default location:  
*C:\Documents and Settings\All Users\ZMotif\Config*

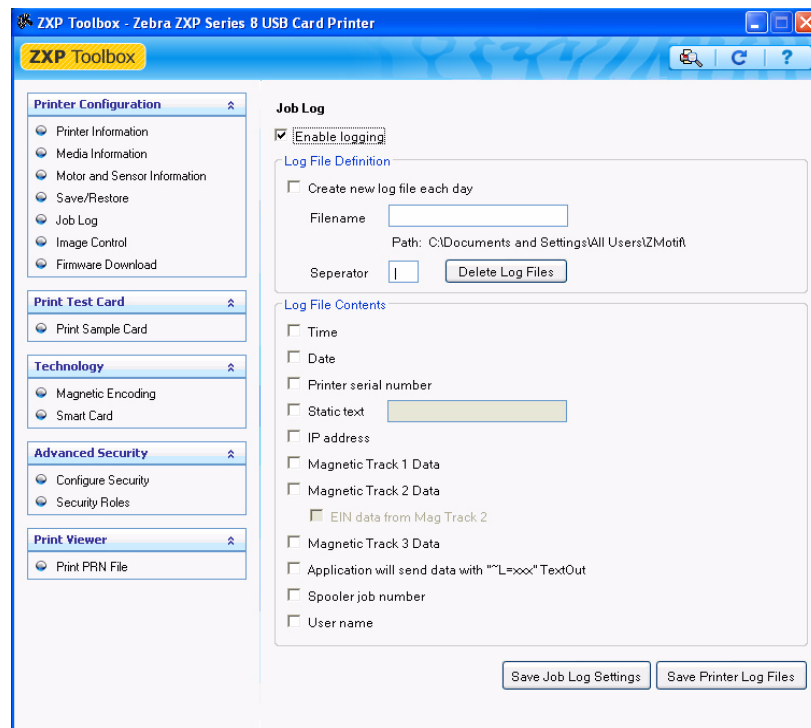
- The **Save** button saves the Driver Settings and/or Printer Settings in an XML file format.
  - The printer configuration settings are stored as P\_<filename>
  - The driver configuration settings are stored as D\_<filename>

The **Restore** button restores the Driver Settings and/or Printer Settings.

## Job Log

The Job Log is a utility that builds a database of card transactions in the printer's host computer. Job Log records data encoded on the card's magnetic stripe, together with date, time, and the printer's serial number.

The data set can be uploaded at any time to a central archive, thus providing a means for security officers to validate the card by comparing it with tamper-proof *real data*.



- **Enable Logging** - If this box is checked, the logging feature is enabled.
- **Logfile Definition** - Choose one of the following options:
  - If the “Create new log file each day” box is unchecked, the data is saved to a log file of your choice (Filename).
  - If the box is checked, the data is saved to log file *ZXPLog* with the day's date; e.g., *ZXPLog\_2009\_3\_4*.
  - In addition to the Filename, you may wish to enter a special field Separator Character. The default field Separator Character is “|”.

- **Log File Contents** - The Log File Contents group selects the data to be logged in the file you specified above.

The data will be logged in the order displayed on the screen, each field being separated by the character specified in the Logfile Definition, Separator.

Log File Contents selections include:

- **Time:** Logs the time a which the card was sent to the printer in the HH:MM:SS format. The 24-hour clock is used, so 13:00:00 = 1:00 pm, and 05:00:00 = 5:00 am.
- **Date:** Logs the date the card was sent to the printer in the MM/DD/YYYY format.
- **Printer serial number:** Logs the serial number of the printer that printed the card.
- **Static text:** Adds to the record text in the box at right, 16 characters maximum.
- **IP address:** Logs the IP address of the PC that sent the card to the printer.
- **Magnetic Track 1, 2, 3 Data:** Logs the data sent to the printer to be encoded on the card's magnetic stripe.
- **EIN data from Mag Track 2:** Not implemented.
- **Application will send data with “~L=xxx” TextOut:** Allows third-party applications to send data to be logged in much the same way as they would send magnetic data.
- **Spooler job number:** Logs the number which the card print job was assigned in the Windows print spooler.
- **User name:** Logs the username of the person submitting the card print job.



**Note** • Job Logs and Printer Logs are stored in the following default location:  
*C:\Documents and Settings\All Users\ZMotif*

The **Save** button saves the Job Log settings.

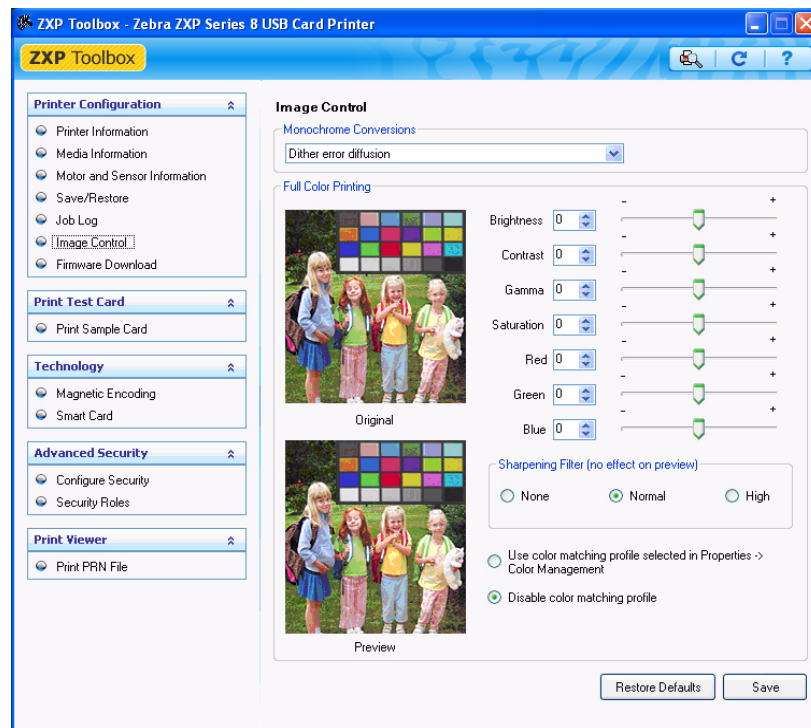
The **Save Printer Log** button creates the following XML Log Files:

- GetLogCleanHistory.xml
- GetLogErrors.xml
- GetLogEventHistory.xml
- GetLogServiceHistory.xml

## Image Control

The Image Control window lets you make color adjustments to compensate for camera or lighting conditions.

Keep in mind that these color adjustments modify how the pictures *print*. The adjustments do not affect the image files. (That type of adjustment would be made in an image processing application program.)



- The **Monochrome conversions** dropdown menu lets you select Dither error diffusion, dither halftoning, or Dither pure black on white.
- **Full color printing adjustments** (-25 to +25 range) include Brightness, Contrast, Gamma, Saturation, Red, Green, and Blue.
- **Sharpening filter** options are None, Normal, and High. Note that these adjustments have no effect on the preview image.

Depending on the radio button selected, you can use the color matching profile selected in Properties > Color Management or you can disable the color matching profile.

The **Save** button saves your image control settings.

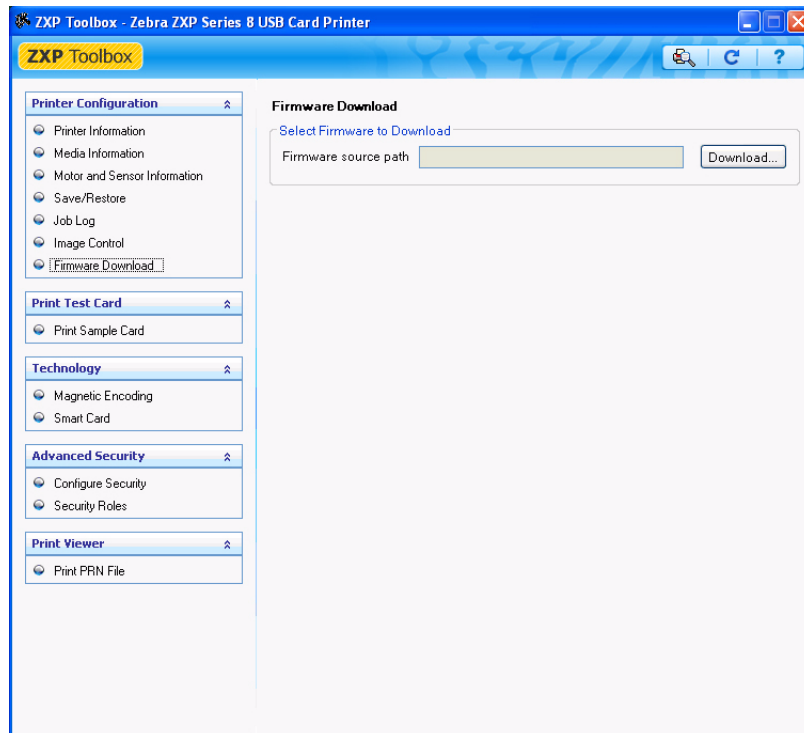
The **Restore Defaults** button restores the image control default values.

## Firmware Download

The Firmware Download screen allows you to download firmware and firmware updates. Note that firmware updates can be found at <http://zebracard.com> under *Drivers & Downloads*.



**Caution** • Do not turn power OFF while the printer is downloading and configuring the new firmware.



## Print Test Card

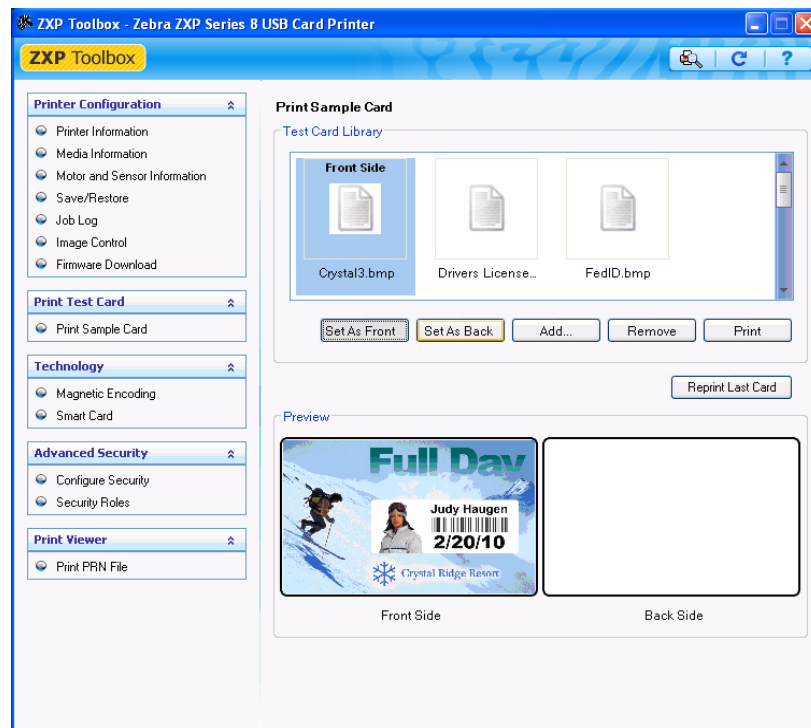
### Print Sample Card



**Note** • The sample cards in the Test Card Library are .bmp images stored in the following default location:

*C:\Documents and Settings\All Users\ZMotif\Library*

1. View the Test Card Library. Use the scrollbar to view all the selections.



2. Set the front side:
  - a. Select (click on) a card from the Test Card Library.
  - b. Click on the **Set As Front** button.
  - c. View the selected card in the Preview. Note that to remove the selected card from the Preview, click on the **Set As Front** button.
  - d. To change your selection, repeat steps **a** through **c**.
3. Set the back side: same as step 2, except click on the **Set As Back** button.
4. When satisfied with your selection, click on the **Print** button to print the sample card.

The **Reprint last card** button sends a command to the printer to print the last card.

## Technology



**Note** • Magnetic Encoding and Smart Card default values are set via the *Card type in use* option in the Card Setup tab, [see page 46](#))

### Magnetic Encoding

The Magnetic Encoding screen allows the user to test various magnetic encoding options. For more information on magnetic encoding, refer to [Appendix B](#).

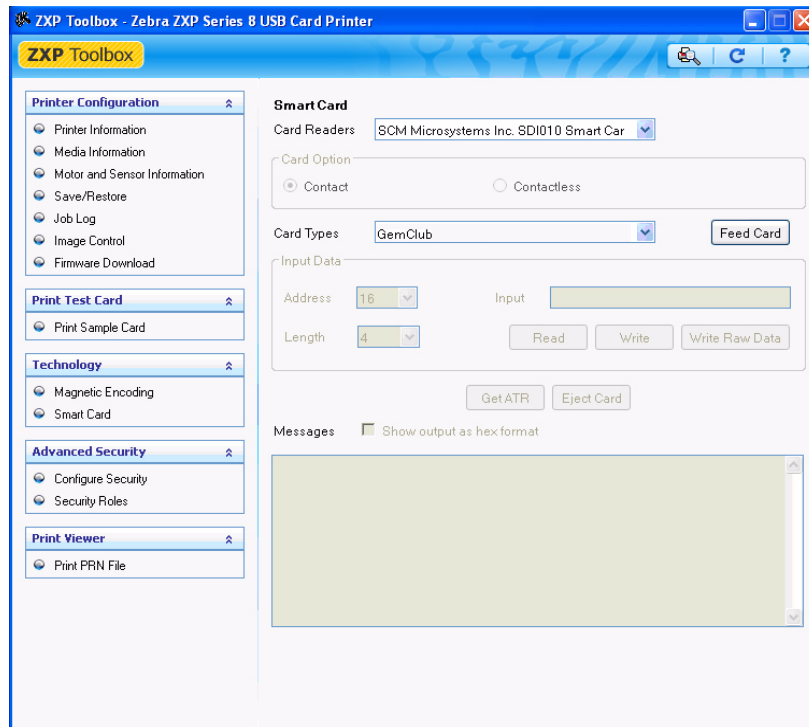
Settings: EIN options not implemented.

Read Data:

- Coercivity: Select either *High* or *Low*.
- Track selection:
  - For encoding: Click on the checkboxes to select *Track 1*, *Track 2*, and/or *Track 3*; enter the data to be written; and click on the **Encode** button.
  - For reading: Click on the checkboxes to select *Track 1*, *Track 2*, and/or *Track 3*; click on the **Read** button, and validate the data read.

## Smart Card

The Smart Card screen allows the user to test various smart card encoding options. For more information on smart card encoding, refer to [Appendix C](#).



- Card Readers: Select the card reader from the drop-down menu.
  - Card Option: Select either Contact or Contactless.
- Card Types: Select the card type from the drop-down menu.
  - The **Feed Card** button feeds the card into the printer.
  - Input Data includes address, length, and input.
    - Click on the **Read** button to read data from the card.
    - Click on the **Write** button to write data to the card.
    - Click on the **Write Raw Data** button to write “raw data” to a card.
- The **Get ATR** button returns the ATR (Answer To Reset) result from the card reader. This is useful to identifying the type of smart card inserted into the printer.

The **Eject Card** button ejects the card.

Click on the Messages checkbox to show the output in hex format.



## Advanced Security



**Important** • To manage this Advanced Security section, you are required to be the administrator of the computer or have administrative privileges.

### Configure Security

Enabling driver password protection prevents unauthorized persons from changing the printer configuration settings. Access to various printer screens can be selectively disabled based on the Windows User Login.

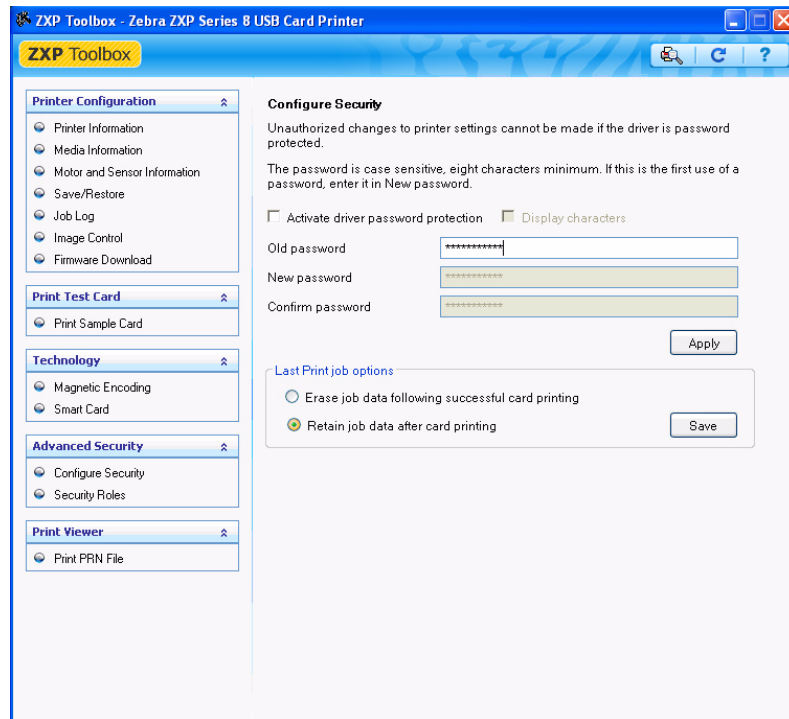
To activate Driver Password Protection:

1. Click on the *Activate driver password protection* checkbox.

2. Enter the new password on the *New password* field. The password is case sensitive, eight characters minimum.
3. Repeat the password in the *Confirm password* field.
4. Click on the **Apply** button.

To deactivate Driver Password Protection:

1. Click on the *Activate driver password protection* checkbox to remove the checkmark.



2. Enter your password in the *Old password* field.
3. Leave the *New password* and the *Confirm password* fields blank.
4. Click on the **Apply** button. This will bring up a ZXP Toolbox pop-up screen. To deactivate the the printer driver password, click on *Yes*. This will bring up another ZXP Toolbox pop-up screen. Click on *OK*.

**Last Print job option:**

- The *Erase job data following successful card printing* option erases the print job after successful card printing.
- The *Retain job data after card printing* option allows the print job to remain in memory for multiple prints via the OCP.

The **Save** button saves your selection.

## Security Roles

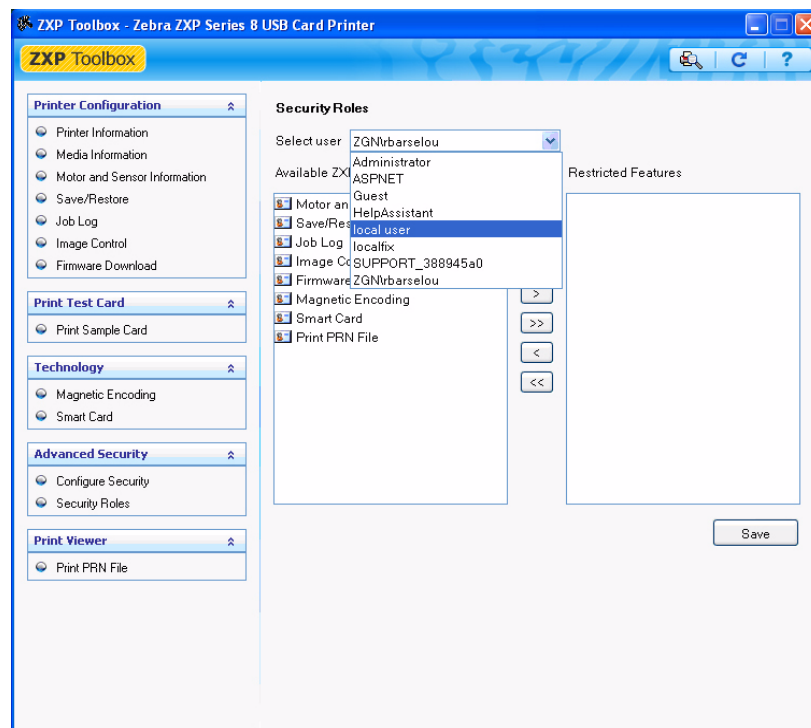
Use this section used to establish security roles; i.e., grant and restrict access to various ZXP ToolBox screens.



**Note** • The list of users in the drop-down menu (e.g., Guest, HelpAssistant, Local User, localfix, etc.) is derived from the list of users on the system.

To set security access roles:

1. Select a user from the drop-down menu.



2. Use the arrow buttons (>, >>, <, and <<) to make specific features available to or restrict specific features from the selected user role.
3. When satisfied with the selection, click on the **Save** button.

At the next log in, the user will only see or have access to the features previously granted.

## Print Viewer

When you print a PRN file, you print directly to the printer, bypassing computer applications and associated printer drivers. This utility can be used to ensure that your printer is working properly by isolating it from driver-related and communication-related issues.

### Print PRN file



**Note** • Sample PRN files are stored in the following default directory/folder:  
*C:\Documents and Settings\All Users\ZMotif\Library*

To send a PRN file to the printer:

1. Click on the **Browse** button.



2. From the Browse window, locate and select a PRN file.
3. Click on the **Open** button.
4. View the PRN file.
5. When satisfied with the selection, click on the **Print** button.

Successfully printing the PRN file indicates that the printer and data communications to the printer are set up and configured properly.



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# Cleaning

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**Caution • PROTECT YOUR FACTORY WARRANTY!**



The recommended cleaning procedures must be performed to maintain your factory warranty. Other than the recommended cleaning procedures described in this manual, allow only Zebra authorized technicians to service the Printer.

**NEVER** loosen, tighten, adjust, bend, etc., any part or cable inside the printer.

**NEVER** use a high pressure air compressor to remove particles in the printer.

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## Cleaning the Printer

Clean your Printer using the Cleaning Cards provided. The regular use of these cards will clean and maintain important parts of your printer that cannot be reached, including the Printhead, Transport Rollers, and optional Magnetic Encoder Station.

### When to Clean

- X-Roller and Y-Roller cleaning should occur every 5,000 cards.
- Heated Roller cleaning should occur every 20,000 cards. Note that a Heated Roller Cleaning Card is not supplied with the printer; order Zebra Cleaning Card Kit P/N 105999-001.

## Cleaning the Rollers



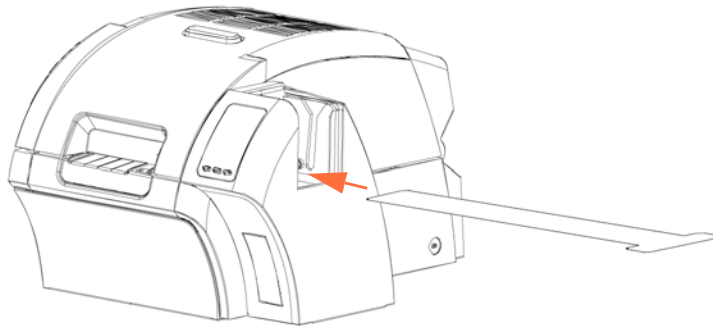
**Note** • Do not use previously used cleaning cards.

**Step 1.** Initiate the cleaning process.

- a. Press the MENU button on the Operator Control Panel (OCP). The OCP will display the Main Menu.
- b. Scroll through the Main Menu, and select Advanced Settings. The OCP will display the Advanced Settings Menu.
- c. Scroll through the Advanced Settings Menu, and select Clean Printer. The OCP will display the Clean Printer Menu.

**Step 2.** Clean the X-Drive Rollers.

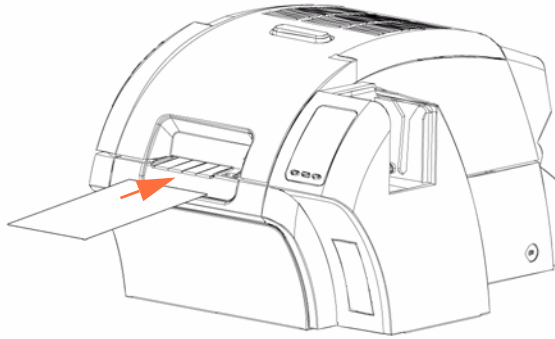
- a. Select *Clean Card Side Path* to run the X-Roller Cleaning Routine.
- b. Use X-Path Cleaning Card P/N 211973-001.
- c. Follow the OCP instructions.



- d. When complete, the OCP will return to the Clean Printer Menu.

**Step 3.** Clean the Y-Drive Rollers.

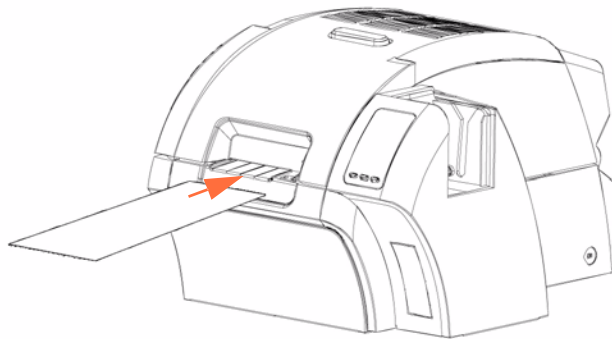
- a. Select *Clean Card Front Path* to run the Y-Roller Cleaning Routine.
- b. Use Y-Path Cleaning Card P/N 211974-001.
- c. Follow the OCP instructions.



- d. When complete, the OCP will return to the Clean Printer Menu.

**Step 4.** Clean the Heated Rollers.

- a. Select *Clean Heated Roller Path* to run the Heated Roller Cleaning Routine.
- b. Use Heated Roller Cleaning Card P/N 211975-001.
- c. Peel the protective film from the card.
- d. Follow the OCP instructions.



- e. When complete, the OCP will return to the Clean Printer Menu.
- f. Then use the Heated Roller Cleaning Card to clean the Platen; see [page 72](#).

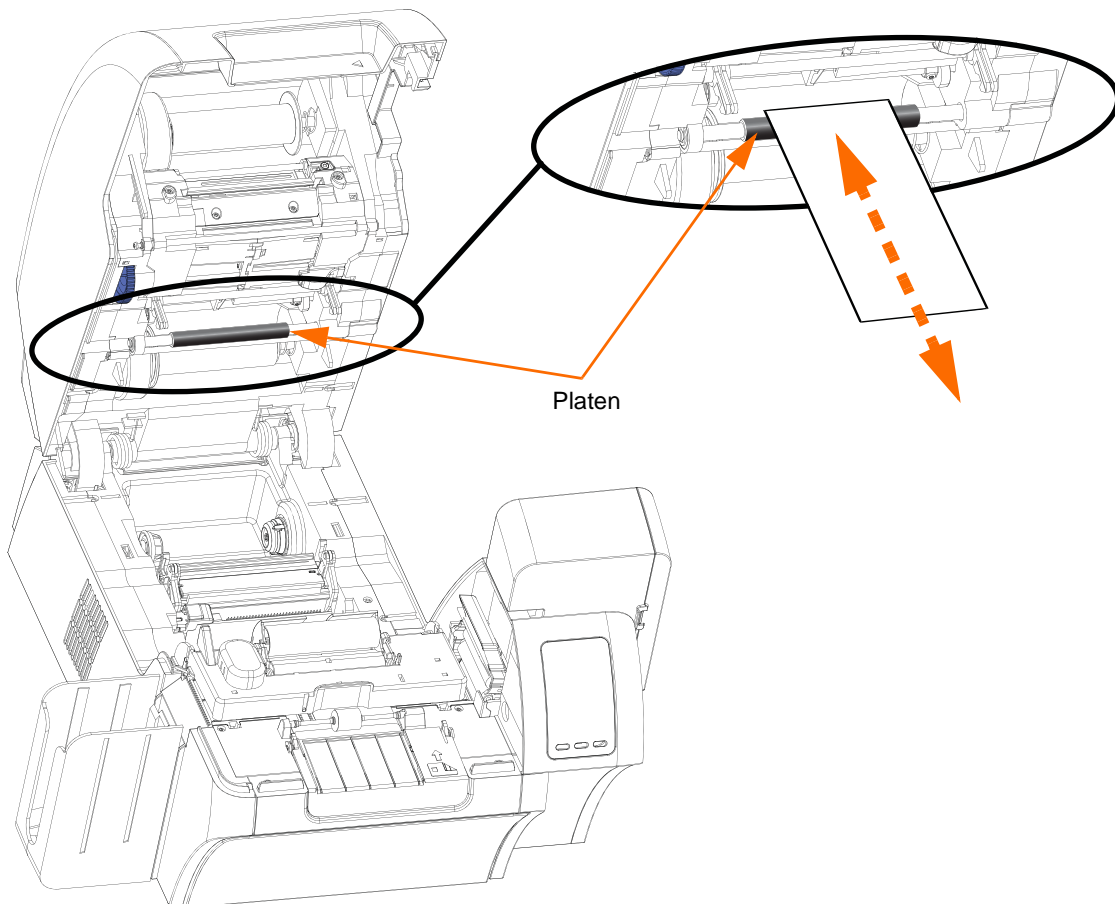
Exit the Printer Menus by selecting RETURN at each menu level (Clean Printer Menu, Advanced Settings Menu, and Main Menu).

## Cleaning the Platen

**Step 1.** Open the printer Door.

**Step 2.** Remove the Transfer Film.

**Step 3.** Manually run the Heated Roller Cleaning Card (P/N 211975-001) over the Platen.



**Step 4.** Re-install the Transfer Film.

**Step 5.** Close the printer Door.



## Cleaning the Printhead

Printhead cleaning removes deposits when print anomalies persist. To clean, only use foam-tipped swabs.



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**Caution** • Never use a sharp object or any abrasive to scrape deposits from the Printhead. Permanent damage to the Printhead will result.



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

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- Step 1.** Place the printer power switch in the OFF (  ) position.
- Step 2.** Open the Door, and remove the print ribbon.
- Step 3.** Bend the Cleaning Swab to release the cleaning fluid.
- Step 4.** Clean Printhead by moving Cleaning Swab tip side-to-side across the Printhead elements. Only use moderate force. To re-order Cleaning Swabs, see the Media List on the **User Documentation and Drivers CD** supplied with this printer.
- Step 5.** Reinstall the print ribbon, and close the Door.
- Step 6.** Place the printer power switch in the ON (  ) position.

## Card Cleaning Cartridge

The Card Cleaning Cartridge cleans the cards entering the printer through the card feeder. To ensure print quality, the card cleaning roller requires periodic replacement. New card cleaning rollers are included with each print ribbon or may be purchased separately. (To reorder, refer to the Media List on the **User Documentation and Drivers CD** supplied with this printer.)

Installation of the Card Cleaning Cartridge is described in [Section 2](#) and is not repeated in detail here.



**Note** • Before replacing the Card Cleaning Cartridge or its adhesive roller, clean the Printer using the Cleaning Cards as described earlier in this chapter.

## Card Cleaning Roller

The Card Cleaning Roller cleans the cards entering and exiting the Transfer Station. To ensure print quality, the card cleaning roller requires periodic replacement. A new card cleaning roller is included with each print ribbon or may be purchased separately. (To reorder, refer to the Media List on the **User Documentation and Drivers CD** supplied with this printer.)

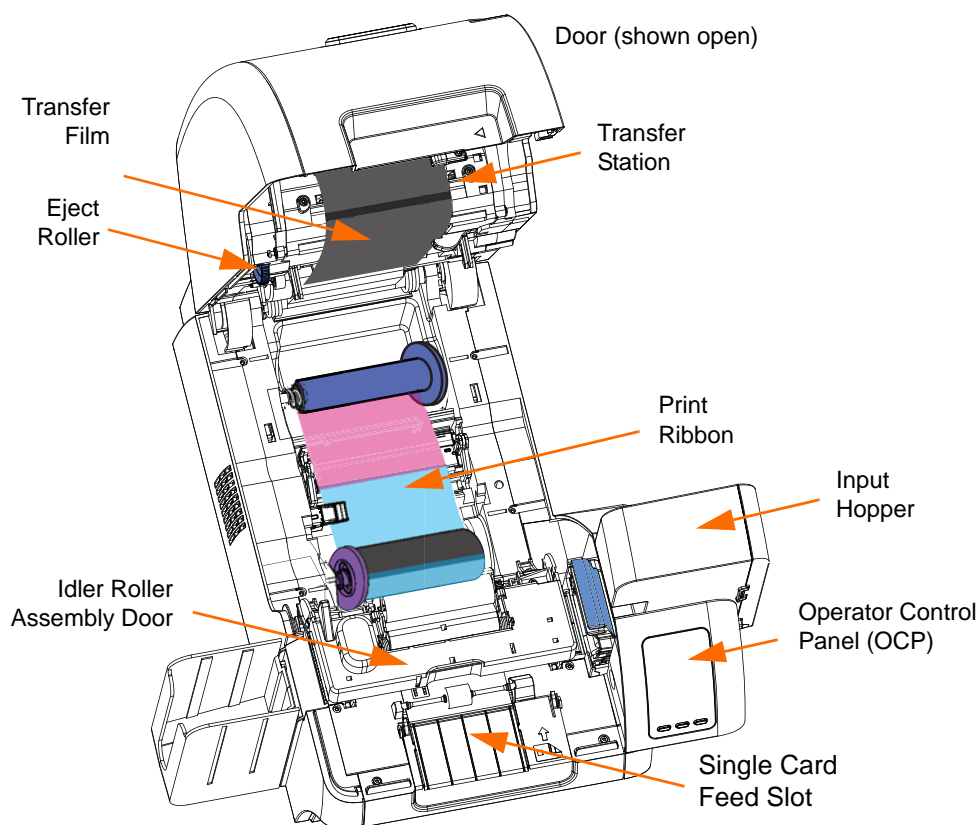
Installation of the Card Cleaning Roller is described in [Section 2](#) and is not repeated in detail here.



# Troubleshooting

The table on the next page offers causes and solutions to symptoms related to improper operation. Check the table when experiencing any loss of operation or print quality.

Use the following figure in conjunction with the table to help locate the possible cause and effect a solution.



## OCP Error Messages




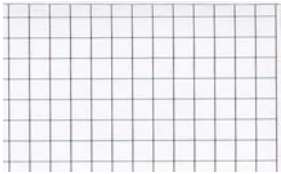



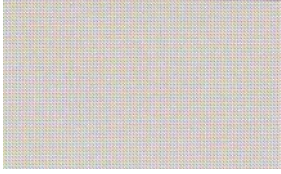








ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
CARD CLEAN ERROR	Faulty Card Cleaning Roller (if error during single card feed) or Card Cleaning Cartridge (if cards fed from Input Hopper)	Replace the Card Cleaning Roller or Card Cleaning Cartridge, as appropriate
CARD FEED ERROR	Card is jammed in Input Hopper	a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper b. Ensure that cards are not stuck together and that they are the correct thickness (30 - 40 mil)
CARD JAM	Card is jammed in Card Transport or Transfer Station	Check the card path: a. Idler Roller Assembly (open door) b. Transfer Station (rotate the eject roller CCW)
CARD NOT DETECTED	Card did not reach card sensor or is jammed in Input Hopper or Card Transport	a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper b. Ensure that cards are not stuck together and that they are the correct thickness c. Check Idler Roller Assembly (open door)
CARD NOT INSERTED	Card was not fed into Single Card Feed Slot within nominal 30-second period	Retry and feed card into the Single Card Feed Slot, or cancel the operation
COVER OPEN	Door is ajar	Verify the Door is completely closed
EP SCRIPT ERROR	Internal logic error	a. Power cycle the printer b. Contact Zebra Technical Support
FILM JAM	The Transfer Film is jammed	a. Check the Transfer Film b. Reinstall the Transfer Film c. Repair the break in the Transfer Film and reinstall
FILM MOTION ERROR	Transfer Film not correctly responding to motion commands	a. Check the Transfer Film b. Reinstall the Transfer Film c. Power cycle the printer d. Contact Zebra Technical Support
FW UPGRADE ERROR	Invalid firmware version selected	Verify the version, and retry updating the firmware
GENERAL MEMORY ERROR	There is a problem when accessing memory	a. Power cycle the printer b. Contact Zebra Technical Support
HCB BULB ERROR	The Heater Controller Board (HCB) is unable to pulse the upper and lower heaters to bring the upper and lower rollers to the proper temperature	Contact Zebra Technical Support
HCB SENSOR ERROR	The Heater Controller Board (HCB) is unable to detect temperature of the upper or lower rollers	Contact Zebra Technical Support

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
INVALID CARD TYPE	Encoding error	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. In the Encoding tab of the driver Printing Preferences, check that the settings are correct for the cards you are using</li> <li>c. Ensure that the data conforms to ISO Specifications</li> <li>d. Retry writing and reading</li> </ul>
INVALID FILM	Transfer Film does not match the printer	<ul style="list-style-type: none"> <li>a. Verify the part number of the Transfer Film is correct on OCP</li> <li>b. Power cycle the printer</li> </ul>
INVALID RIBBON	Print ribbon does not match the printer	<ul style="list-style-type: none"> <li>a. Verify the part number of the print ribbon is correct on OCP</li> <li>b. Power cycle the printer</li> </ul>
MAG MOTION ERROR	Mag card positioning error encountered	Retry writing and reading
MAG READ ERROR	<ul style="list-style-type: none"> <li>• Encoding error</li> <li>• Defective magnetic stripe</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally this will be with the stripe down and toward the rear of the printer)</li> <li>c. Ensure that the cards are set-up correctly in the printer driver (coercivity setting)</li> <li>d. Ensure that the data conforms to ISO Specifications</li> <li>e. Retry reading</li> </ul>
MAG WRITE ERROR	<ul style="list-style-type: none"> <li>• Encoding error</li> <li>• Defective magnetic stripe</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally this will be with the stripe down and toward the rear of the printer)</li> <li>c. Ensure that the cards are set-up correctly in the printer driver (coercivity setting)</li> <li>d. Ensure that the data conforms to ISO Specifications</li> <li>e. Retry writing</li> </ul>
MISSING HCB ERROR	There is a problem with the Heater Controller Board (HCB)	<ul style="list-style-type: none"> <li>a. Power cycle the printer</li> <li>b. Contact Zebra Technical Support</li> </ul>
MISSING MAB	An error occurred when reading the RFID Tag by the MAB (Media Authentication Board)	<ul style="list-style-type: none"> <li>a. Check print ribbon orientation</li> <li>b. Verify part number of the print ribbon</li> <li>c. Power cycle the printer</li> <li>d. Contact Zebra Technical Support</li> </ul>

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
MOTOR VOLTAGE ERROR	Incorrect voltage detected at one or several motors in the unit	a. Power cycle the printer b. Contact Zebra Technical Support
NO MAG STRIPE	Mag stripe not detected	a. Ensure that you are using the correct card type b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally stripe down and toward the rear of the printer)
OUT OF CARDS	<ul style="list-style-type: none"> <li>The Input Hopper is empty</li> <li>Card is stuck in Input Hopper</li> </ul>	a. Load cards in the Input Hopper b. Re-seat the Input Hopper
OUT OF FILM	The Transfer Film has run out	Load new roll of Transfer Film
OUT OF RIBBON	The print ribbon has run out	Load a new roll of print ribbon
PRINthead MOTION ERR	Printhead did not move to proper position during initialization	a. Power cycle the printer b. Contact Zebra Technical Support
PRINthead TOO COLD	Printhead temperature out of proper range (COLD)	Contact Zebra Technical Support
PRINthead TOO HOT	Printhead temperature out of proper range (HOT)	Contact Zebra Technical Support
REJECT ERROR	A problem during the reject process	Contact Zebra Technical Support
RIB COLOR DETECT ERR	Print ribbon is not installed correctly	Reinstall the print ribbon
RIBBON ADC ERROR	Possible hardware issue	Contact Zebra Technical Support
RIBBON BEMF ERROR	Problem with the Back EMF (BEMF) of the ribbon motors	Contact Zebra Technical Support
RIBBON JAM	The print ribbon is jammed	a. Check the print ribbon b. Reinstall the print ribbon c. Repair the break in the print ribbon and reinstall
RIBBON MOTION ERROR	Ribbon not correctly responding to motion commands	a. Check the print ribbon b. Reinstall the print ribbon c. Repair the break in the print ribbon and reinstall
ROLLERS OVER TEMP	Heated Rollers (used to transfer the image from the Transfer Film to the Card) are too hot for proper operation	Turn off power, and contact Zebra Technical Support
ROLLERS UNDER TEMP	Heated Rollers (used to transfer the image from Transfer Film to Card) are not hot enough for proper operation	Turn off power, and contact Zebra Technical Support
SYSTEM ERROR	Internal logic error	a. Power cycle the printer b. Contact Zebra Technical Support
SYSTEM NOT READY	A problem was detected during printer start-up	a. Power cycle the printer b. Contact Zebra Technical Support
TRANSFER ERROR	A problem was detected during the transfer process (print ribbon to film)	Contact Zebra Technical Support

## OCP Test Card Images

See detailed Test Card descriptions on the following page.

		
Mid Gray	Grid On Gray	Cyan Stripes
		
2 Pixel Grid	Mid +	Dark Cyan
		
Max Gray	Offset Dots	Smear
		
Min Magenta	White Max-Gray	Max-Gray White
		
Motion & Registration	Gradient Boxes	Density Setup
		
Grid On Gray 2		

## Test Card Descriptions

Image	Description	Print artifacts to look for with this image
Mid Gray	Flat uniform gray	Motion artifacts, banding, platen defects, transfer artifacts, dirt, overall density level
Grid On Gray	Solid black on top, gray grid underneath	Colored ribbon wrinkles in the black area, or clear/white transfer film wrinkles in the gray area
Cyan Stripes	Horizontal cyan stripes alongside vertical lighter cyan box	Non-uniformity or horizontal banding within cyan box on right of card
2 Pixel Grid	2 pixel wide grid lines on white	Mis-registration between color planes
Mid Magenta	Flat uniform mid-density magenta	Motion artifacts, banding, platen defects, density level, uniformity
Dark Cyan	Maximum cyan only density image	Motion artifacts, transfer artifacts, scratches, dirt
Max Gray	Maximum CMY (black) density image	Wrinkles, snapping noise during printing, ribbon / transfer-film tears or breaks, flash, card positioning
Offset Dots	Individual C, M, and Y dots spaced at regular intervals	Motion artifacts on specific color planes, mis-registration
Smear	Gray with full density YMCK blocks near top	Color smear artifacts
Min Magenta	Flat uniform low-density magenta	Motion artifacts, banding, platen defects, density level, uniformity, bead position
White Max-Gray	Max-density areas on sides with tilted white center	Ribbon wrinkle
Max-Gray White	Same as above with slant direction changed	Ribbon wrinkle
Motion & Registration	Uniform cyan with registration marks on sides	Banding, mis-registrations, motion artifacts
Gradient Boxes	3 sets of light-to-dark grayscale ramps	Used to create color calibration look-up table
Density Setup	Used to measure mid and max densities	Density level of mid-gray and black
Grid On Gray 2	Less stressful version of the grid-on-gray target	Colored ribbon wrinkles in the black area, or clear/white transfer film wrinkles in the gray area





# Technical Specifications

## Standard Features

- Thermal transfer and dye diffusion to transfer film
- Full color or monochrome reverse transfer printing
- Single- and dual-sided printing
- Maximum print speed (batch mode; i.e., the same image repeatedly)
  - Single-sided (Front Only)
 

YMC	190 cph
YMCK 16	0 cph
  - Dual-sided (Front and Back)
 

YMCK (YMC Front, K Back)	170 cph
YMCKK (YMCK Front, K Back)	150 cph
- Photo quality image
- Over-the-edge printing on standard CR80 media
- Microsoft Windows Certified drivers
- Single-card feed capability
- 150 card capacity feeder (30 mil)
- 15 card reject hopper (30 mil)
- 100 card output hopper (30 mil)
- i Series™ intelligent media technology
- Auto calibration of media
- 21-character soft menu LCD text operator display
- 304 dpi (12.0 dots/mm) print resolution
- 64MB memory standard
- 2-year unlimited warranty on printer, lifetime limited warranty on printhead with Genuine Zebra Supplies

## Specifications

### Encoding Options

- Smart card contact encoder – ISO 7816, PC/SC Compliant
- Magnetic stripe encoder – ISO 7811 and JIS-II (new and re-encoded; tracks 1, 2, and 3; high and low coercivity; stripe down; 30 - 40 mil card thickness)
- Contact smart card encoder – EMV level 1 certified
- ISO 14443 MIFARE (13.56 MHz) and ISO 7816 contact encoder combo

### Communications Interfaces

- USB V2.0 / 1.1 protocol
- USB supports plug-n-play printer identification
- USB and internal 10/100 Ethernet (Standard) \*

\* The 10/100 Ethernet functionality requires a firmware upgrade to be activated. This firmware is pending release and will be available for download at [www.zebracard.com](http://www.zebracard.com). Check our website occasionally for this and other upgrades.

## Software

### Microsoft Windows Certified Printer Drivers Supported

- Windows XP\*, Windows Vista\*, Windows Server 2003\*

\*32-bit and 64-bit certified

### Driver Features

- Graphical card orientation setting to visualize card printing setup and configuration
- Card type setting eliminates unnecessary setup and configuration settings
- Complete graphical control over area and element selection of black extraction parameters insures true black and color printing exactly where you want it on the card
- Auto sensing of print ribbon type
- Optional driver password protection setting to prevent accidental or unauthorized printer configuration changes

### ZXP Toolbox

- Printer configuration tools and utilities for complete control over all printer functions and features
- User role-based features enables true security printer operations
- Complete technology card management enables setup and testing of all printer and encoder features and functionality
- Printer test cards and diagnostics utilities ensure error free printing and fast troubleshooting capabilities

## Card Compatibility

- Card Thickness: 30 – 40 mil
- Card Size: ISO 7810 format, Type ID-1, CR-80
- Card Material: ABS; PVC, Composite; TESLIN, Composite; PET; PETG; Polycarbonate; PVC

## Agency Approvals

Zebra ZXP Series 8 Card Printer complies with following applicable directives and standards for the ITE: Residential, Commercial and Light Industry environments

- For US/Canada/Mexico/Australia and New Zealand
  - FCC Class A, cfr47, Part 15 Subpart J
  - FCC 15.257 2008, Part15 Subpart C
  - Canadian STD RSS-210
  - NOM-ETL (Mexico)
  - EN60950: 2000 Safety Standard (TUV & RTL)
  - C-Tick (Australia) Electromagnetic Radiation Standard
- For Europe:
  - Applicable Directives and Supporting Standards:  
2004/108/EC EMC Directive, EN55022:2006 Class A,  
EN55024:1998+AD1:2001+AD2:2003,  
EN61000-3-2:2006, EN61000-3-3:1995+AD1:2001,  
2006/95/EC LVD Directive, EN60950-1:2001, CB Scheme
  - WLAN Enabled  
Applicable Directives and Supporting Standards:  
  
99/5/EC R&TTE Directive, EN 301 489-17 V1.2.1 (2002-08),  
EN 300 328 V1.7.1 (2006-10)
  - RFID Enabled  
Applicable Directives and Supporting Standards:  
  
99/5/EC R&TTE Directive, EN 301 489-3 V1.4.1 (2002-08),  
EN 300 220-2 V2.1.2 (2007-06)

## Electrical

- Auto-switching Single-phase AC power
- 90V~264V AC RMS and 47-63 HZ (50-60 Hz nominal)
- Power consumption:

Idle	100 W
Printing	150 W
Initializing / Warm-up	300 W
Sleep	20 W

## Physical

- Height (printer only) 11.9" (303 mm)
- Height (with card feeder) 13.2" (334 mm)
- Width 14" (356 mm)
- Width (with card feeder) 14.9" (379 mm)
- Depth 20.4" (519 mm)
- Weight (printer only) 27.5 lbs (12.5 kg)

## Environmental

- Operating Temperature 59° to 77°F (15° to 25°C)
- Storage Temperature 23° to 131°F (-5° to 55°C)
- Operating Humidity 20% to 80% non-condensing
- Storage Humidity 10% to 90% non-condensing
- Shipping Temperature -40° to 140°F (-40° to 60°C)
- Shipping Humidity 10 to 90% non-condensing

## Declarations of Conformity



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### ZEBRA TECHNOLOGIES CORPORATION

Declares that the following Information Technology Equipment

#### Zebra ZXP Series 8 Card Printer

complies with following applicable directives and standards for the  
ITE: Residential, Commercial & Light Industry environments

#### Applicable Directives and Supporting Standards:

2004/108/EC EMC Directive, EN55022:2006 Class A,  
EN55024:1998+AD1:2001+AD2:2003 EN61000-3-2:2006, EN61000-3-3:1995+AD1:2001,  
2006/95/EC LVD Directive, EN60950-1:2001, CB Scheme

#### RFID Enabled

Applicable Directives and Supporting Standards:  
99/5/EC R&TTE Directive, EN 301 489-3 V1.4.1 (2002-08), EN 300 220-2 V2.1.2 (2007-06)

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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"

## FCC Regulations

The Zebra ZXP Series 8 Card Printer 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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and operated in accordance with the Zebra ZXP Series 8 Card Printer User's Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

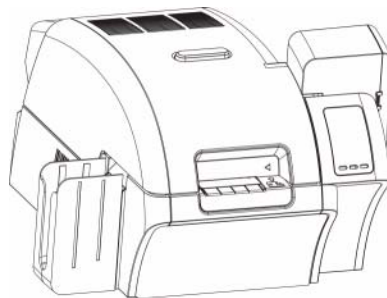
Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Zebra may cause harmful interference and void the FCC authorization to operate this equipment.

### FCC Radiation Exposure Statement (applicable to 15.247 device only)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum 20 cm between the radiator and your body. This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC.

## Industry Canada Notice

This device complies with Industry Canada ICES-003 class A requirements.  
Cet équipement est conforme à l'ICES-003 classe A de la Norme Industrielle Canadienne.



# *APPENDIX A*

---

## Printer Configurations



### **Introduction**

The Part Number of a particular printer is shown on a label affixed to the bottom of the printer; that Part Number identifies the specific configuration for that printer. The chart on the following page shows the configurations that are available.

## Part Numbers

PART NUMBER		DESCRIPTION
Z 8 _		<b>Base Unit</b>
_ _ 1	-	Single-Sided Printing
_ _ 2	-	Dual-Sided Printing
_ _ _	-	<b>Smart Card Options</b>
_ _ _	-	None
_ _ _	-	Contact Encoder + Contactless MIFARE
_ _ _	-	Contact Station
_ _ _	-	<b>Mag Encoders</b>
_ _ _	-	None
_ _ _	-	ISO HiCo/LoCo Mag S/W Selectable
_ _ _	-	<b>Security Options</b>
_ _ _	-	None
_ _ _	-	Enclosure Lock
_ _ _	-	<b>Interface</b>
_ _ _	-	USB and 10/100 Ethernet *
		* The 10/100 Ethernet functionality requires a firmware upgrade to be activated. This firmware is pending release and will be available for download at <a href="http://www.zebracard.com">www.zebracard.com</a> . Please check our website occasionally for this and other upgrades.
_ _ _	-	<b>Software/Kit</b>
_ _ _	-	None
_ _ _	-	Media Starter Kit (includes: 1 YMCK ribbon kit, 1 roll of InTM, 200 PVC cards)
_ _ _	-	<b>Miscellaneous</b>
_ _ _	-	None
_ _ _	-	<b>Country Code</b>
_ _ _	-	Country Code
_ _ _	-	<b>Custom Code</b>
_ _ _	-	Reserved for future options



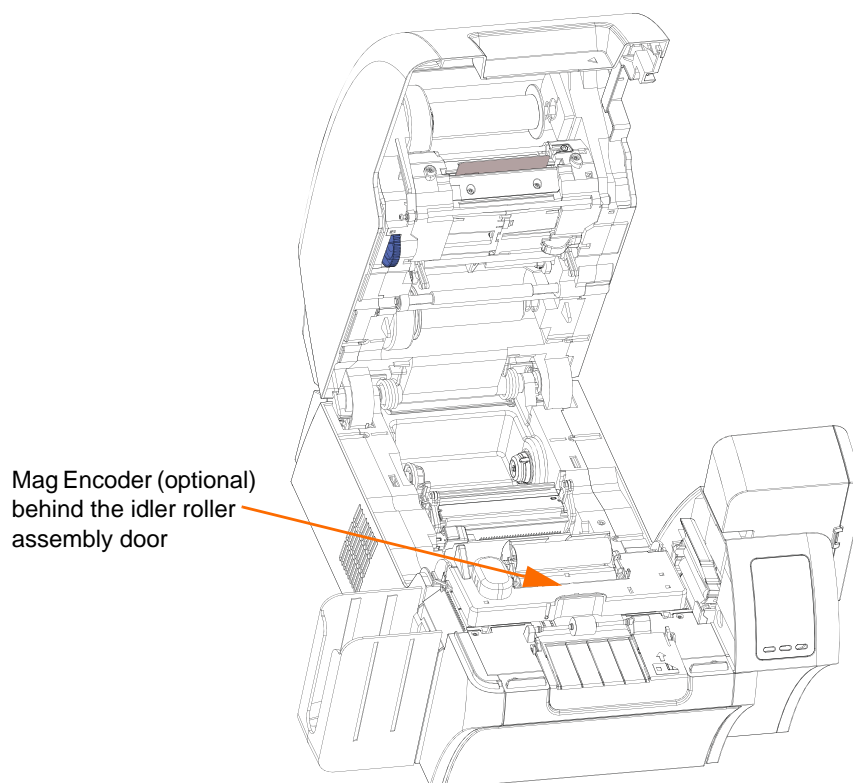
# Appendix B

## Magnetic Card Encoder



### Introduction

This Appendix includes operation and maintenance requirements for Printers with the optional magnetic card stripe encoder.



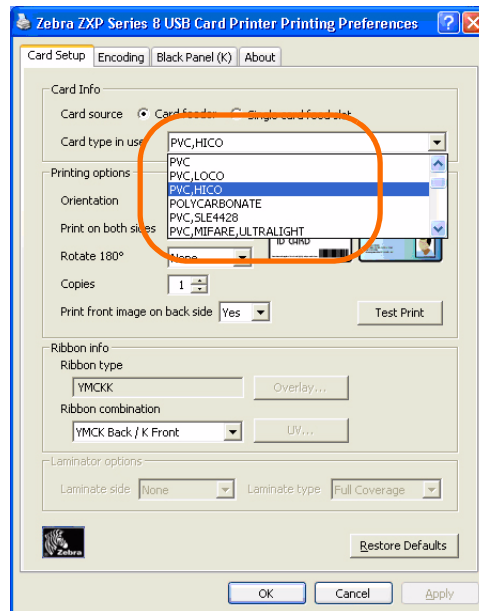
The magnetic encoder can be set for either high or low coercivity. Use the printer driver to change the encoder setting.

## Driver Setting

The **Card Setup** tab allows the user to specify the Magnetic Encoder Card Type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum performance.

If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



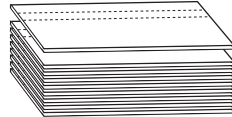
- Make the appropriate Magnetic Encoder Card Type selection.

## Media Loading Orientation



**Note** • ONLY USE cards that comply with ISO 7810 and 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.

When loading cards with magnetic stripes into the card feeder, ensure that the magnetic stripe is down and to the rear of the printer.



## Magnetic Encoder Cleaning

The Magnetic Encoder is cleaned as part of the printer cleaning process; see [Section 6](#). If the frequency of encoding errors increases, the head may need additional cleaning. To cleans, only use foam-tipped swabs.

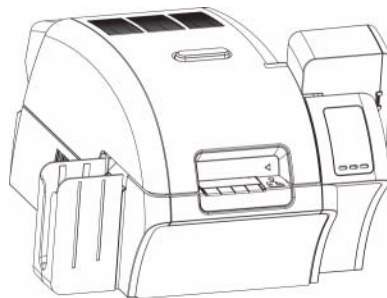


---

**Caution** • Never use a sharp object or any abrasive to scrape deposits from the Magnetic Encoder. Permanent damage to the Magnetic Head will result.

---

- Step 1.** Open the Door.
- Step 2.** Open the idler roller assembly door.
- Step 3.** Bend the Cleaning Swab to release the cleaning fluid.
- Step 4.** Clean the Magnetic Encoder by moving Cleaning Swab tip side-to-side across the head elements. To re-order Cleaning Swabs, see the Media List on the **User Documentation and Drivers CD** supplied with this printer.
- Step 5.** Close the idler roller assembly door.
- Step 6.** Close the Door.



# *APPENDIX C*

---

## Smart Card Options



### **Introduction**

This section contains information on the additional operations of a Printer equipped with one or more of the available Smart Card options.

Smart Cards can have a built-in microcomputer and/or memory to store fingerprints, voice recognition patterns, medical records, and other such data. All other printer operations remain the same as the standard models.

## Encoding and Reading Smart Cards

Encoding data onto Smart Cards and reading the data previously encoded on them is totally under control of the application software; no operator action is required.

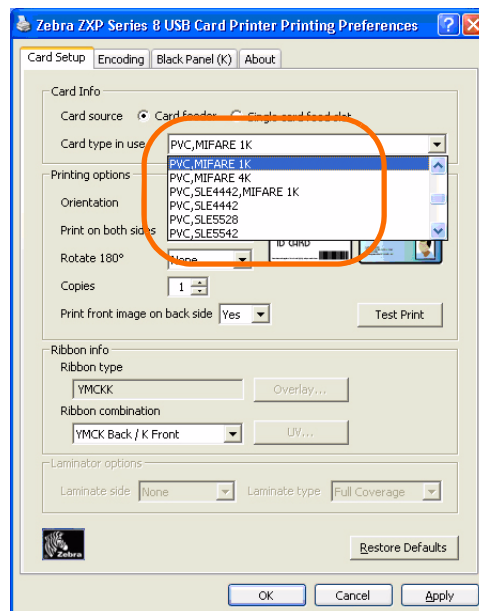
If you experience any problems with encoding or reading data, refer to the users manual or other documentation for the application software.

## Driver Setting

The **Card Setup** tab allows the user to specify the Smart Card Type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum printer performance.

If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



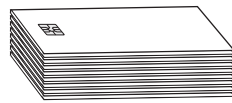
- Make the appropriate Smart Card Type selection.

## Contact Smart Cards

Contact Smart Cards have a pad of contacts on the surface of the card that connect to the circuitry embedded into the card. The printer responds to commands that position the card at the contact location, where the printer connects to the contacts on the Smart Card. Data to be encoded onto the Smart Card, and data read from the Smart Card, can interface via a connector on the printer's rear panel ("Contact Station"), or encoding/decoding can be performed by logic on the printer's Main PCBA ("Contact Encoder"). All other printer operations remain the same as the standard models.

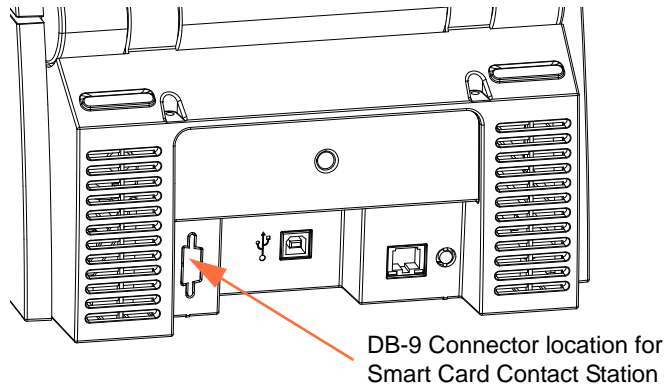
### Media Loading Orientation for Contact Smart Cards

Orient the cards with the gold-plated Smart Card contacts at the top surface of the card and facing to the left.



### Contact Station Smart Card Interface

When a command to the printer interface sends a card to the Smart Card Contact Station, the printer connects the Smart Card Contact Station to the female DB-9 connector on the rear of the printer.



An attached external Smart Card Programmer can be used to program Smart Card chips. The following table shows the Smart Card Contact Points.

Pin	Smart Card Contact Points	DB-9	Smart Card Contact Points
1	C1 (VCC)	6	C6 (Vpp)
2	C2 (Reset)	7	C7 (I/O)
3	C3 (Clock)	8	C8 (RFU)
4	C4 (RFU)	9	(GND when chip is at station)
5	C5 (GND)		

## **Contactless Smart Cards**

Rather than using a contact pad, Contactless Smart Cards use various short-range radio technologies to “connect” to the printer. The printer moves the card to an antenna location on the card path, and the encoding or decoding occurs. All other printer operations remain the same.

### **Media Loading Orientation for Contactless Smart Cards**

For Contactless Smart Cards, orientation is not a consideration.

### **Printing on Contactless Smart Cards**

With reverse transfer printing technology, there are no restrictions when designing material to be printed on Contactless Smart Cards.



# Appendix D



---

## Packing the Printer for Shipment

### Introduction


If the printer is to be shipped, it is important to use the original packing and shipping material to prevent damage to the Printer.

If the original material is lost, a replacement Shipping Kit can be ordered from Zebra; refer to the Media List on the **User Documentation and Drivers CD** supplied with this printer.

### Procedure



**Note** • The specifics of the shipment and the printer's condition may influence which of the following steps are followed; common sense should prevail.

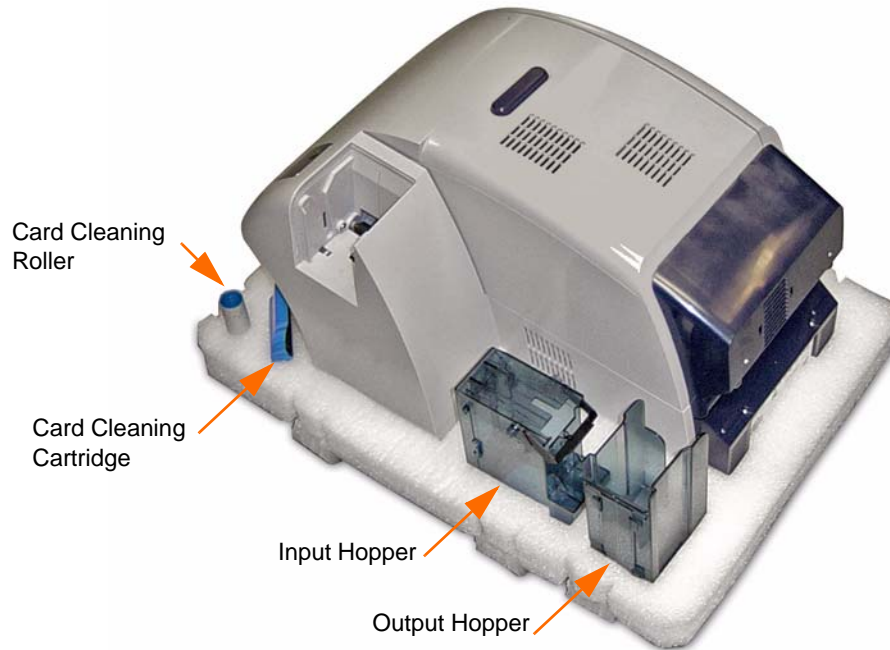
- Step 1.** Remove any cards from the Input and Output Hoppers.
- Step 2.** If the printer still has power applied and is turned on and is still connected to the host computer, set the printer's power switch (on the back of the printer) to the OFF (  ) position; and disconnect the interface and power cables to the printer.
- Step 3.** Open the printer Door.
- Step 4.** Remove the Print Ribbon and Transfer Film. (If you wish to save the print ribbon and film for future use, you may want to put them in a plastic bag for storage.)
- Step 5.** Remove the Card Cleaning Cartridge and Card Cleaning Roller, and place them in the foam insert.
- Step 6.** Close the printer Door.

## Packing the Printer for Shipment

**Step 7.** Remove the Input and Output Hopper, and place them in the foam insert.



**Note •** In the figure below, the printer and accessories are shown in the bottom foam insert, out of the shipping carton for clarity.



**Step 8.** Place the Printer in its protective plastic bag.

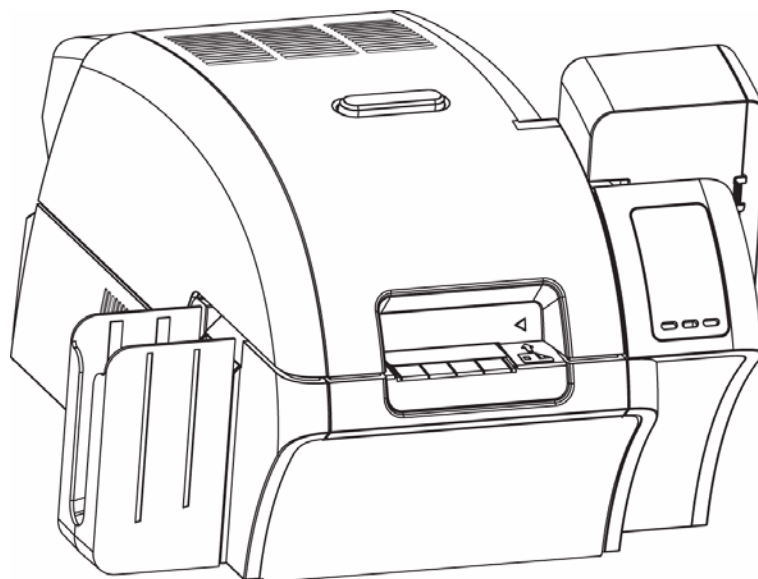
**Step 9.** Place the lower foam insert in the Shipping Carton.

**Step 10.** Use both hands to carefully place the Printer into the recess in the lower foam insert.

**Step 11.** Place the upper foam insert onto the Printer, and gently press it down so it makes a snug fit on the Printer -- the top of the upper foam insert should be even with the upper edge of the Shipping Carton.

**Step 12.** Close the Shipping Carton.

**Step 13.** Tape the Shipping Carton securely.



# **Zebra® ZXP Series 8™ Card Printer**

## **User's Manual**



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<http://www.zebra.com/environment>

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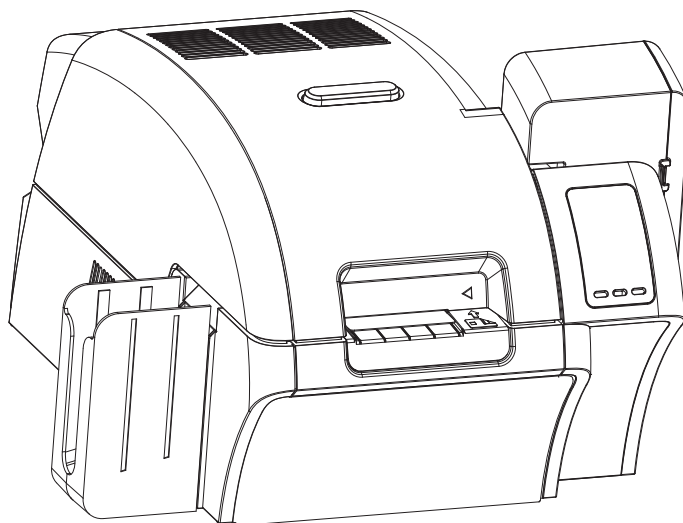
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# Introduction

This manual contains installation and operation information for the Zebra ZXP Series 8 Card Printer manufactured by Zebra Technologies Corporation.

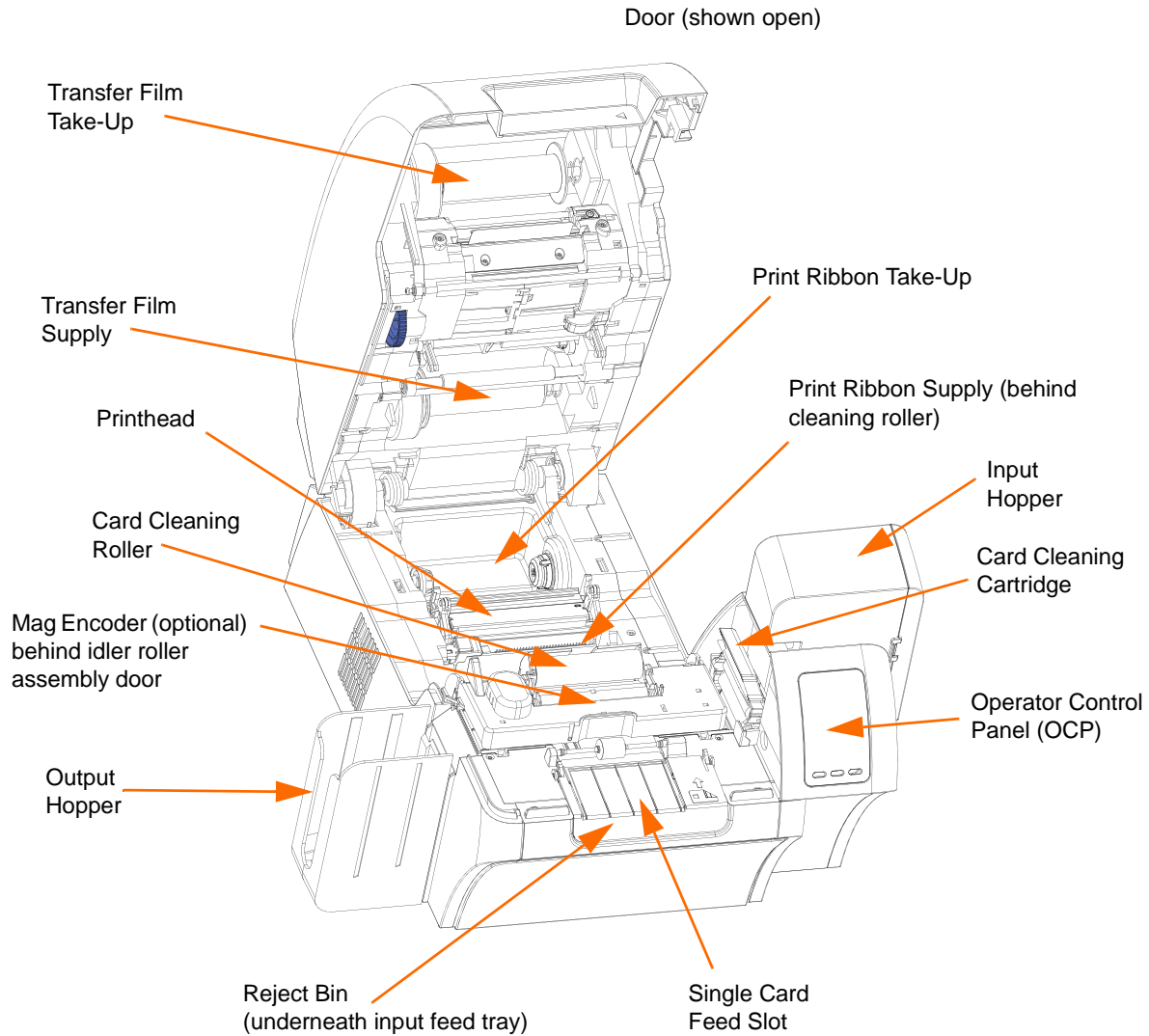


The Zebra ZXP Series 8 card printers use reverse transfer printing technology to create photo-quality and edge-to-edge images on plastic identification cards.

Zebra's reverse transfer printers provide fast throughput and a range of encoding options for a variety of markets and applications.

## Printer Features

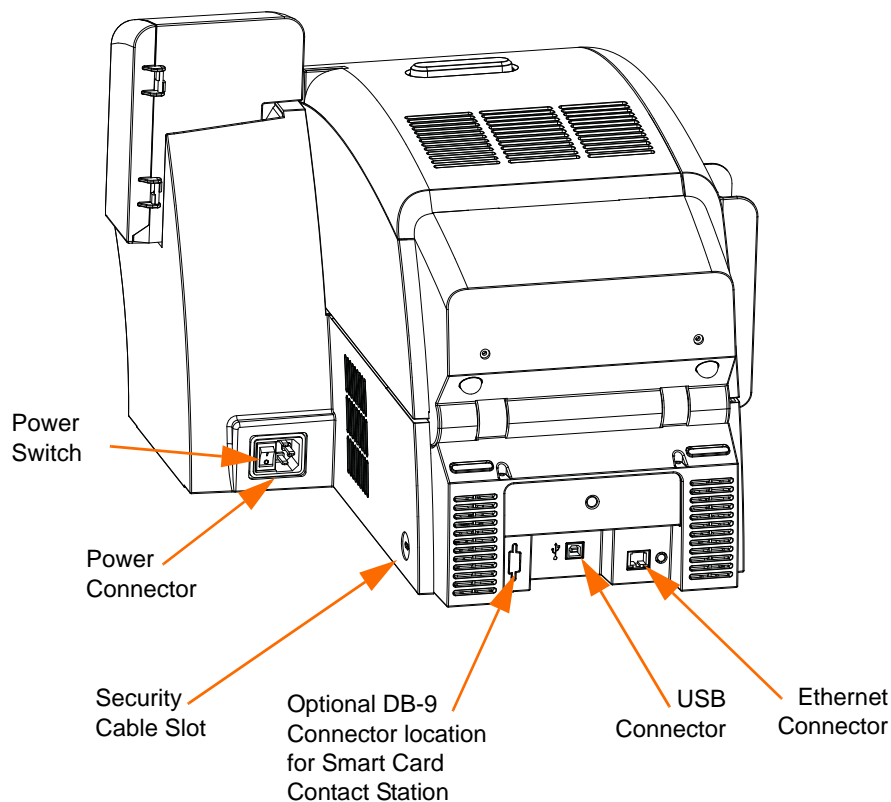
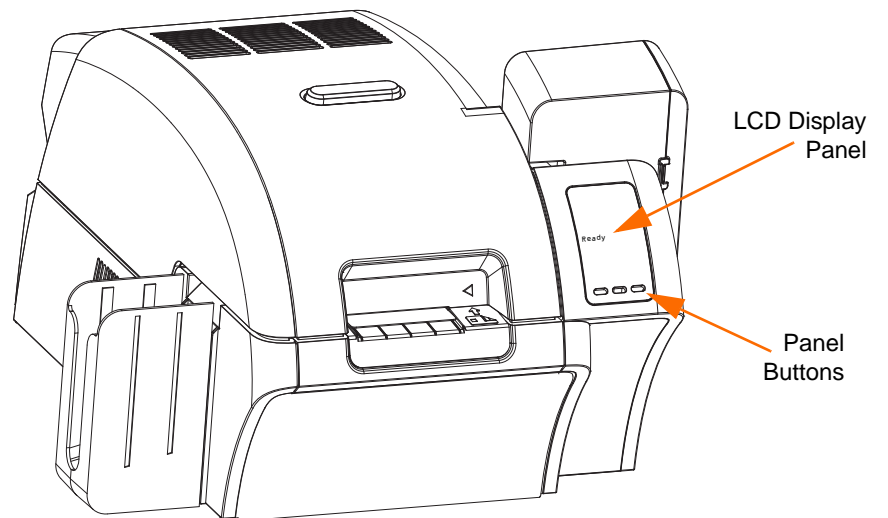
The following figure shows features of the printer.





## Controls, Connectors, and Indicators

Your printer has an LCD Display Panel and three Panel Buttons on the front and a power connector, power switch, and interface connector(s) on the rear panel.



## 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.

---



---

**Hot Surface** • 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.

---



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# Installation and Setup

## General Information

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

- Unpacking the Printer ..... 6
- Installing the Card Hoppers ..... 8
- Loading Cards ..... 9
- Opening the Printer Door ..... 10
- Installing the Cleaning Cartridge ..... 11
- Installing the Cleaning Roller ..... 12
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- Connecting the Printer to your Computer ..... 18
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The procedure to be followed for Packing the Printer for Shipment is given at the end of this section.

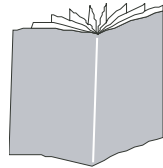
## Unpacking the Printer

- Step 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.
- Step 2.** Open the shipping container.
- Step 3.** Remove the packing material and accessories from around the top of the Printer.

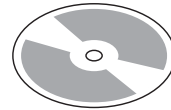


**Important •** Save all the packing material and the shipping carton in case the Printer needs to be moved or shipped. If the original material is lost or damaged, a replacement Shipping Kit can be ordered from Zebra.

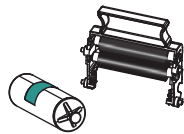
- Step 4.** Make sure the following items are included with your Printer:



Quick Start Guide



CD-ROM with InstallWizard



Cleaning Cartridge

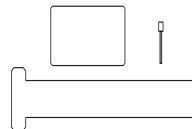


Cleaning Roller

USB



USB Cable



Cleaning Kit



Power Cable

If any items are missing, please contact your dealer. To reorder, please refer to [Appendix E](#) of this manual.

**Step 5.** Lift the Printer out of the carton by holding it with both hands.



---

**Caution** • The Printer weighs approximately 27.5 lbs (12.5 kg).

---

**Step 6.** Place the Printer in a location that meets the following requirements:

- A reasonably dust- and dirt-free environment.
- Flat surface at least 27 in (686 mm) x 28 in (711 mm) that can support the weight of the Printer; additional space preferred. Allow a 4-inch clearance, minimum, on all sides.
- Vertical clearance at least 32 in (813 mm).
- Temperature within the range of 59° to 95°F (15° to 35°C).
- Relative Humidity 20 to 80% inclusive, non-condensing.
- AC power accessible.

**Step 7.** Remove the protective plastic bag from the Printer.

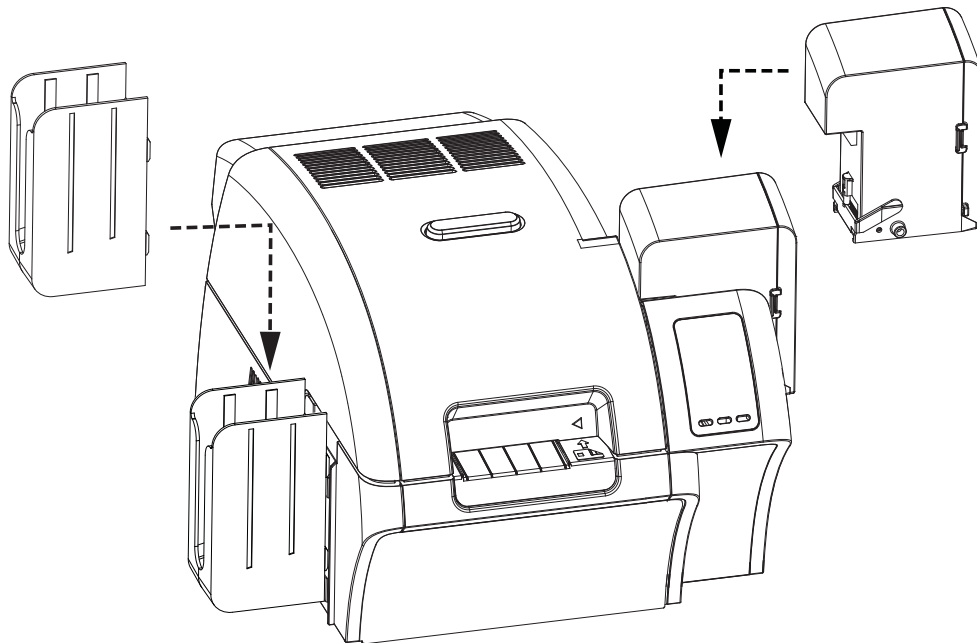
## Installing the Card Hoppers

### Input Hopper

The Input Hopper is positioned on the right side of the Printer and holds the cards to be printed.

**Step 1.** Install the Input Hopper by sliding the hopper into the receptacle on the right side of the Printer.

**Step 2.** Ensure that the Input Hopper locks securely in place.



### Output Hopper

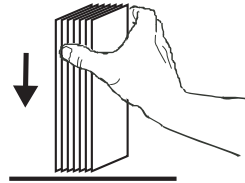
The Output Hopper is positioned on the left side of the Printer and receives the printed cards.

**Step 1.** Install the Output Hopper by inserting the four tabs on the right side of the hopper into the four slots on the left side of the Printer.

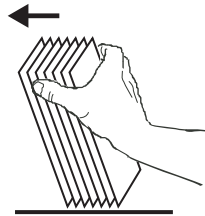
**Step 2.** Ensure that the Output Hopper locks securely in place.

## Loading Cards

- Step 1.** Open the Input Hopper Door.
- Step 2.** Remove the wrapping from the card deck.
- Step 3.** Holding the card deck by the sides, hold it vertically against a flat surface such as a desktop. If the deck is too thick for your hand to hold it comfortably, use about half a deck at a time.

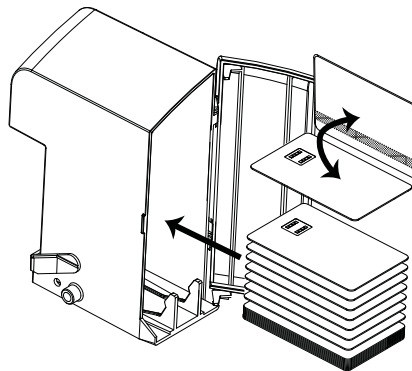


- Step 4.** Push the stack back and forth to an angle of about 45° from vertical, so as to separate all of the cards.



**Note •** Static charges and edge burrs from the card die-cutting process can render individual cards stuck together with significant adhesion force. These cards *must be* physically separated from each other before inserting into the feeder; if not separated, feeding or printing problems may occur.

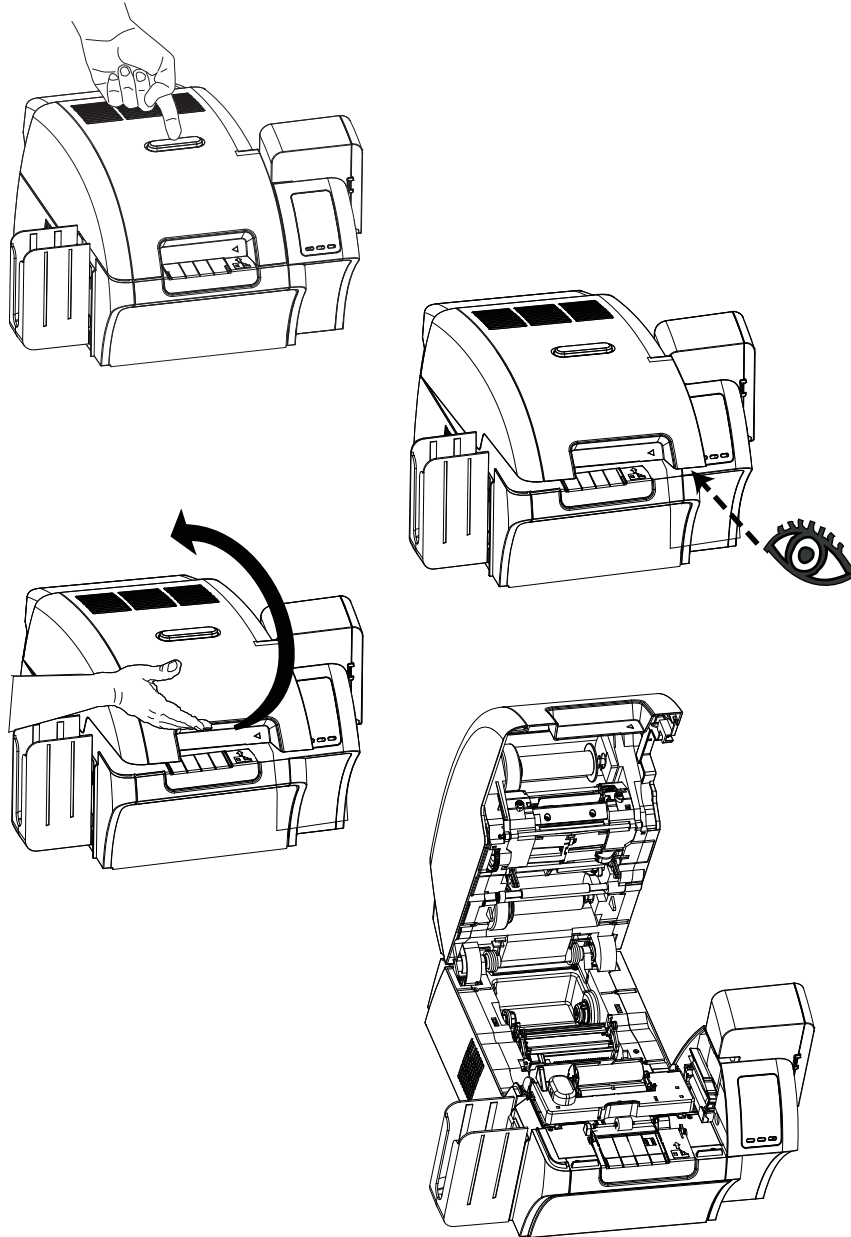
- Step 5.** Restore the card stack to its original squared-off condition.
- Step 6.** Place the cards in the Input Hopper in the correct orientation as shown. Ensure that the cards are seated flat on the bottom of the hopper.



- Step 7.** Close the Input Hopper Door.

## Opening the Printer Door

**Step 1.** Press the Door Release button on the top of the Printer.



**Step 2.** Observe that the Door releases and pops up approximately half an inch.

**Step 3.** Grasp the Door at the bottom front.

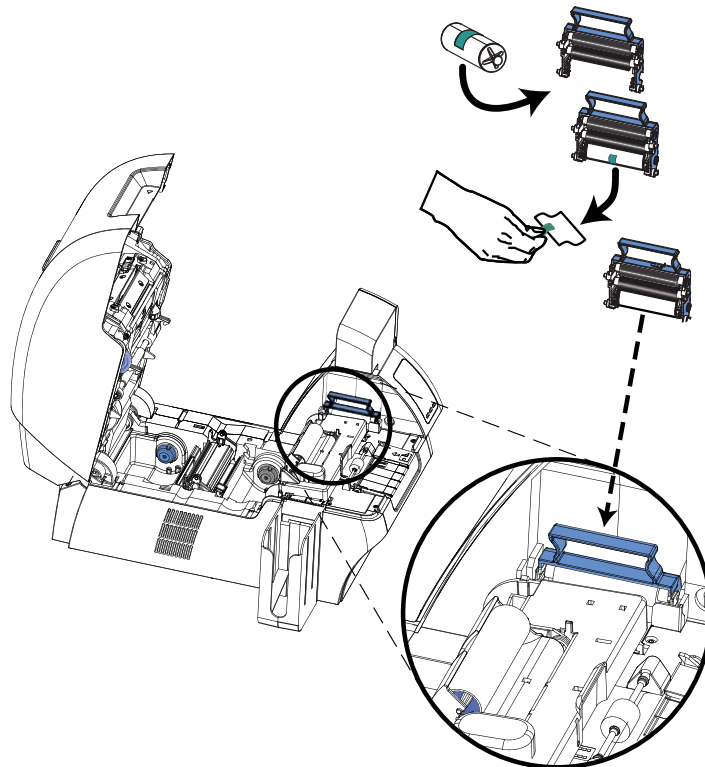
**Step 4.** Lift the Door to its upright position. It will remain in that position.



## Installing the Cleaning Cartridge

The Cleaning Cartridge cleans the cards entering the Printer from the Input Hopper. The Cleaning Cartridge consists of a Cartridge Frame and an Adhesive Roller, which are packed together.

- Step 1.** Remove the Cartridge Frame and the Adhesive Roller from their packaging.
- Step 2.** Insert the Adhesive Roller into the Cartridge Frame. To avoid contamination, always hold the frame and the roller by the ends.
- Step 3.** Peel the protective wrapper from the Adhesive Roller.
- Step 4.** Open the Printer Door by pressing the Door Release button on the top of the Printer.
- Step 5.** Locate the area where the Cleaning Cartridge will be installed (adjacent to the Input Hopper); circled below.

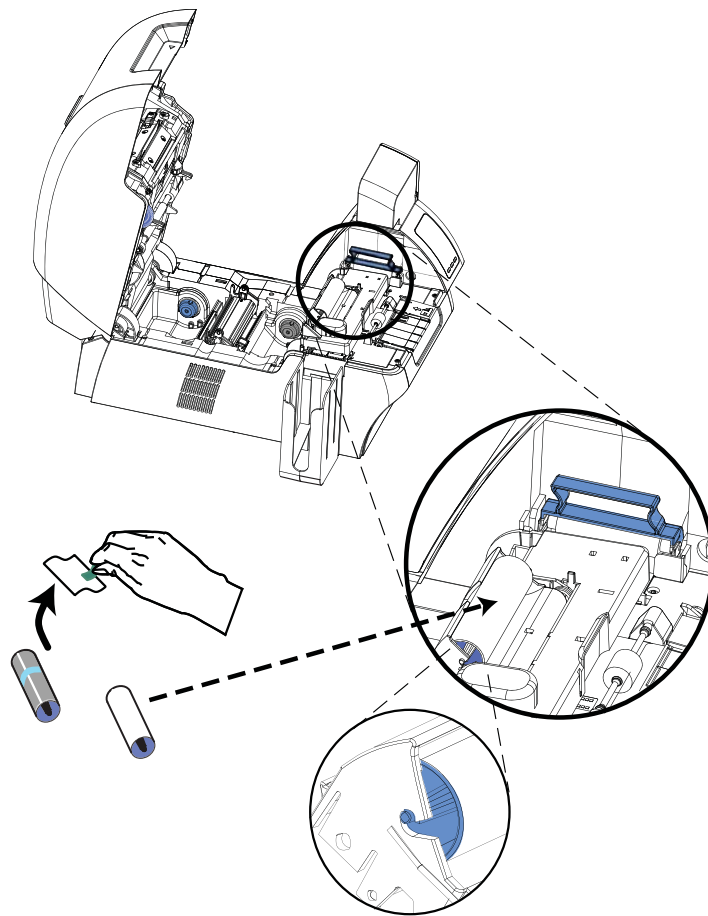


- Step 6.** Hold the Cleaning Cartridge by the extended handle.
- Step 7.** With the cartridge at about a 30° angle (pointing downward), insert the lip of the cartridge into the slot, until the cartridge seats against the back wall.
- Step 8.** Press the front of the cartridge down until it seats all the way down and latches with an audible click.
- Step 9.** Close the Printer's Door.

## Installing the Cleaning Roller

The Cleaning Roller cleans the cards entering the Printer from either the Input Hopper or the Single-Feed Input.

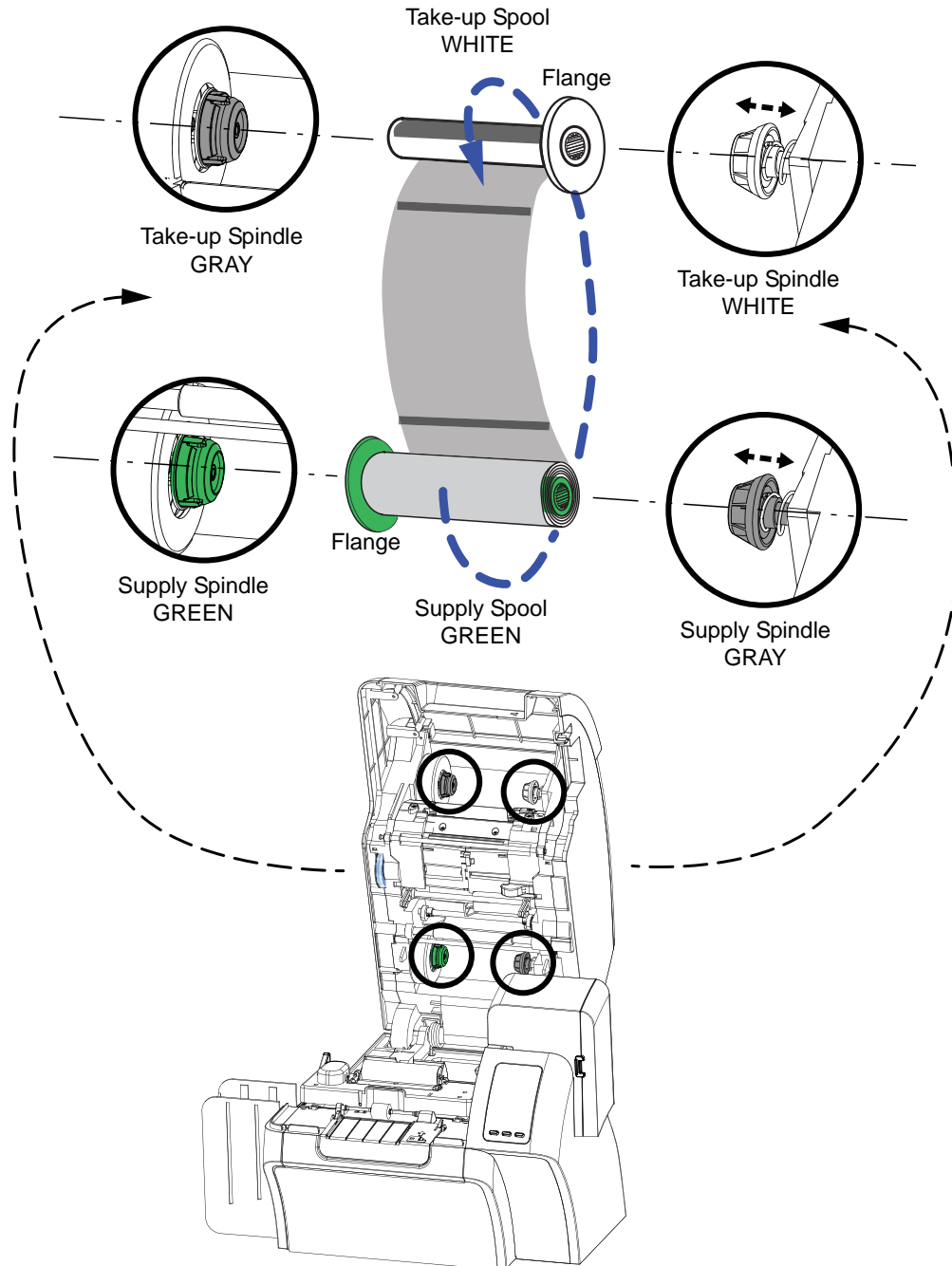
- Step 1.** Remove the Cleaning Roller from its packaging. To avoid contamination, always hold the roller by the ends.
- Step 2.** Peel the protective wrapper from the Cleaning Roller.
- Step 3.** Open the Printer Door by pressing the Door Release button on the top of the Printer.
- Step 4.** Locate the area where the Cleaning Roller will be installed; circled below.



- Step 5.** Hold the Cleaning Roller by the ends.
- Step 6.** Position the ends of the Cleaning Roller in the slots. Push down until the roller fully seats and latches.
- Step 7.** Close the Printer's Door.

## Loading the Transfer Film

- Step 1.** Locate the transfer film supply spindles and the transfer film take-up spindles.
- Step 2.** Unroll about one foot from the full roll of transfer film (supply spool), and wind it (2 wraps) onto the empty take-up spool.

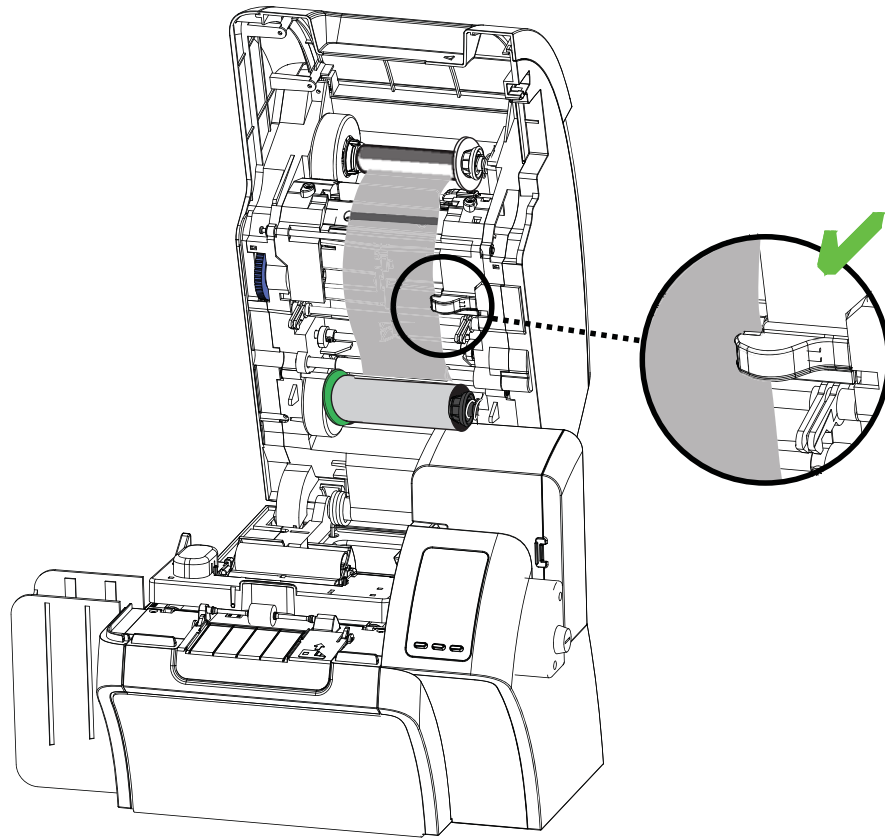


- Step 3.** Load transfer film supply spool onto the supply spindles, **green flange side to the left**.

## Installation and Setup

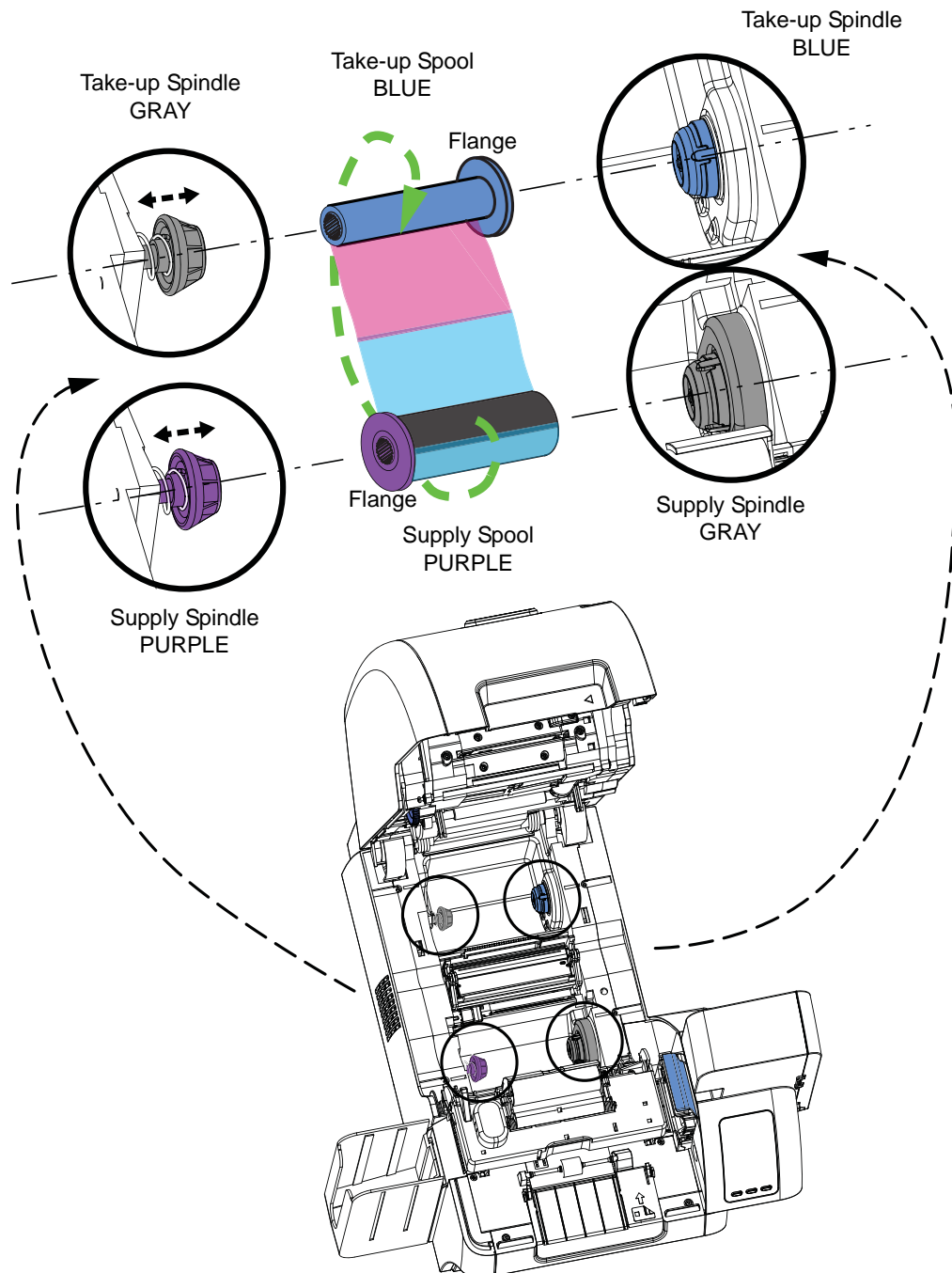
### Loading the Transfer Film

- Step 4.** Load the empty take-up spool onto the take-up spindles, **white flange side to the right**.
- Step 5.** Make sure the transfer film comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.
- Step 6.** The figure below shows the proper installation of the transfer film.



## Loading a Print Ribbon

**Step 1.** Locate the print ribbon supply spindles and the print ribbon take-up spindles.



**Step 2.** Load the print ribbon supply spool onto the supply spindles, **purple flange side to the left**.

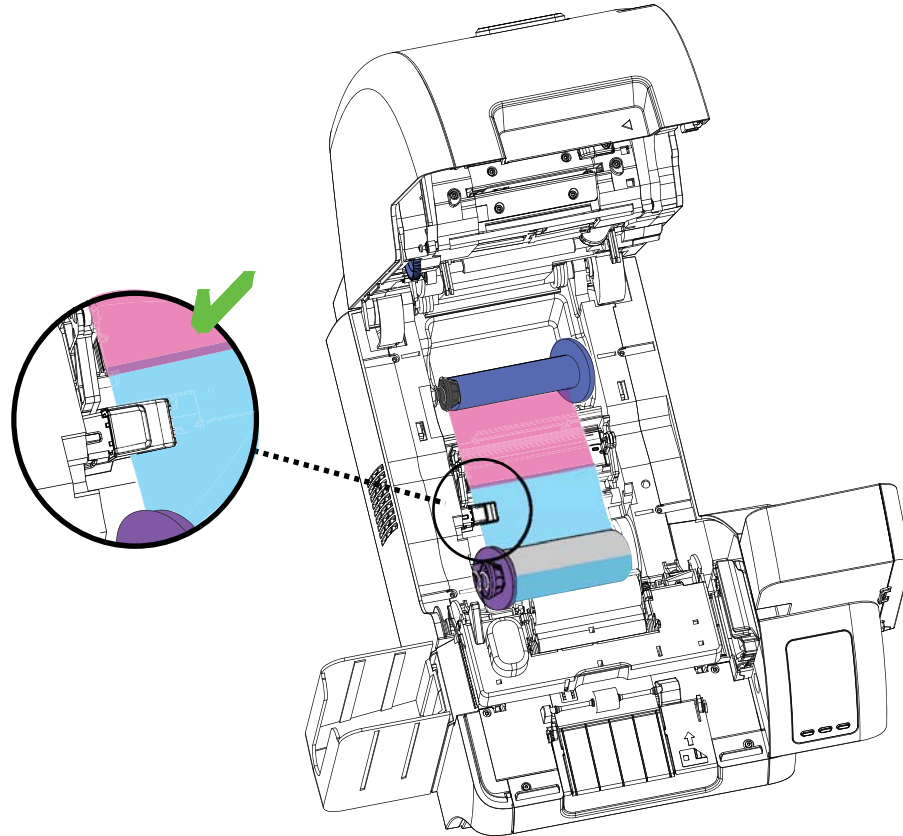
**Step 3.** Load the empty take-up spool onto the take-up spindle, **blue flange side to the right**.

## Installation and Setup

### Loading a Print Ribbon

**Step 4.** Make sure the print ribbon comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.

**Step 5.** The figure below shows the proper installation of the print ribbon.

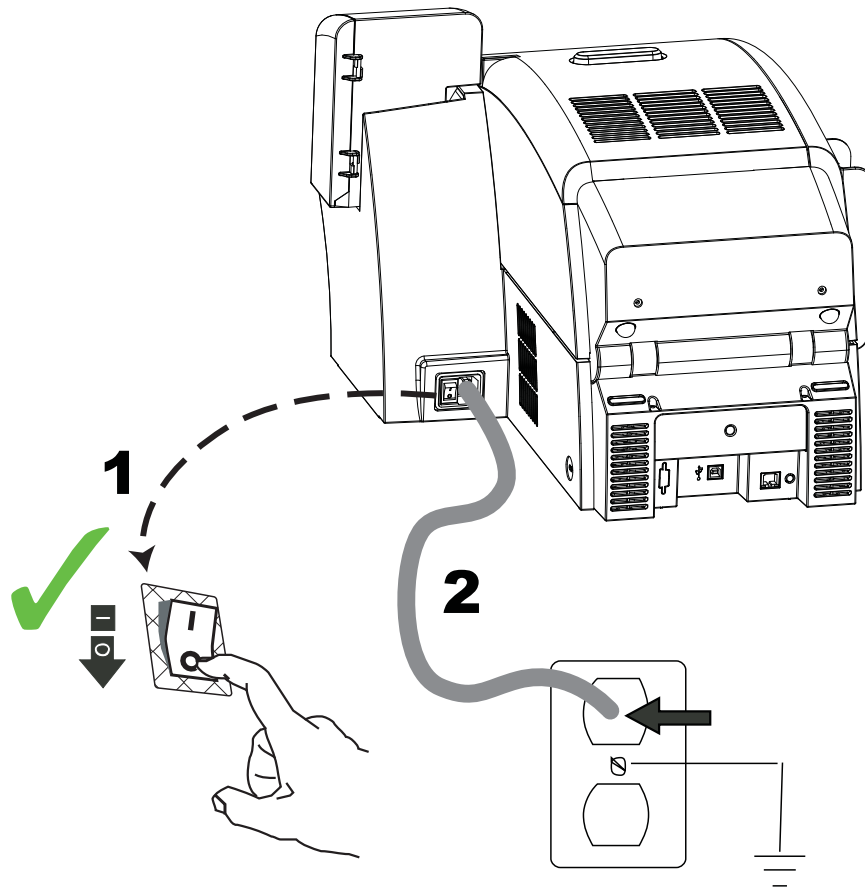


## Connecting Power



**Electric Shock Caution** • Limit AC power supplied to the Printer to 100 – 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.

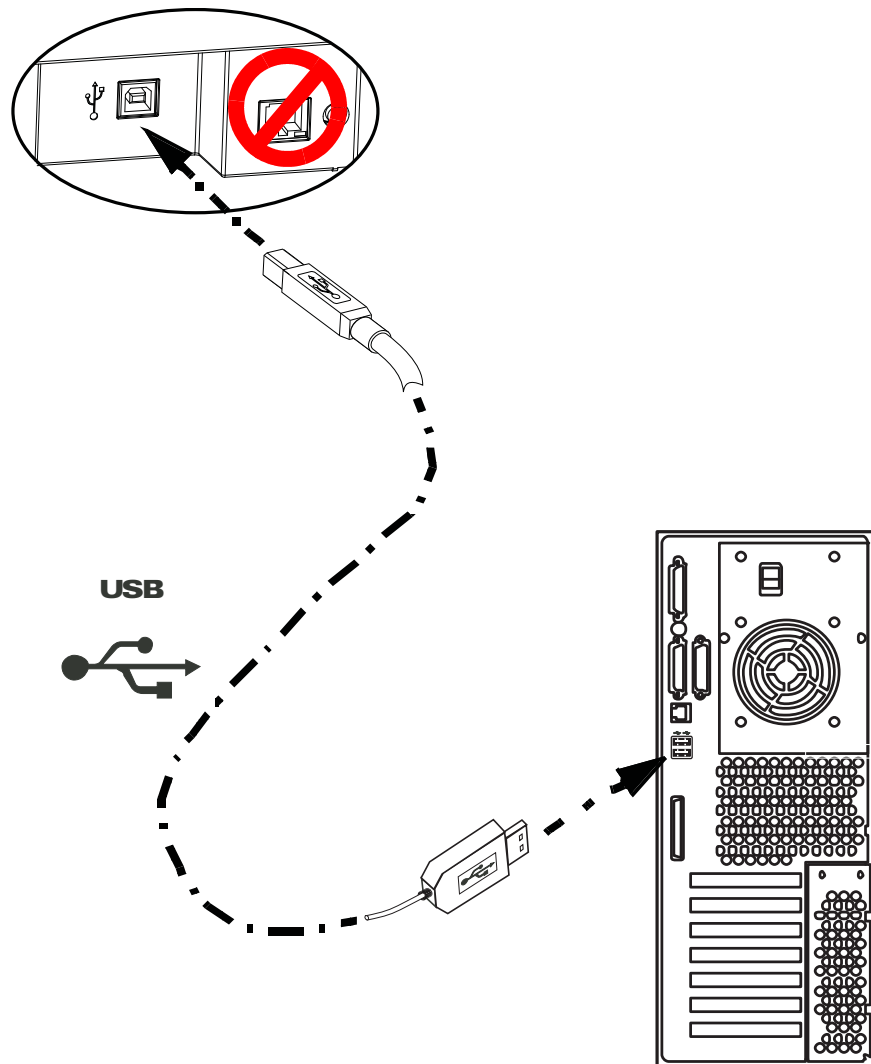


**Step 1.** Place the Printer's power switch in the OFF ( O ) position.

**Step 2.** Depending on your local AC voltage, plug the appropriate power cord into the Printer's power connector and a grounded AC power source connection.

## Connecting the Printer to your Computer

Connect the USB cable to the printer and the computer.





# Installing the Windows Printer Driver

## Overview

Each computer that will use the printer must have the Printer Driver installed.

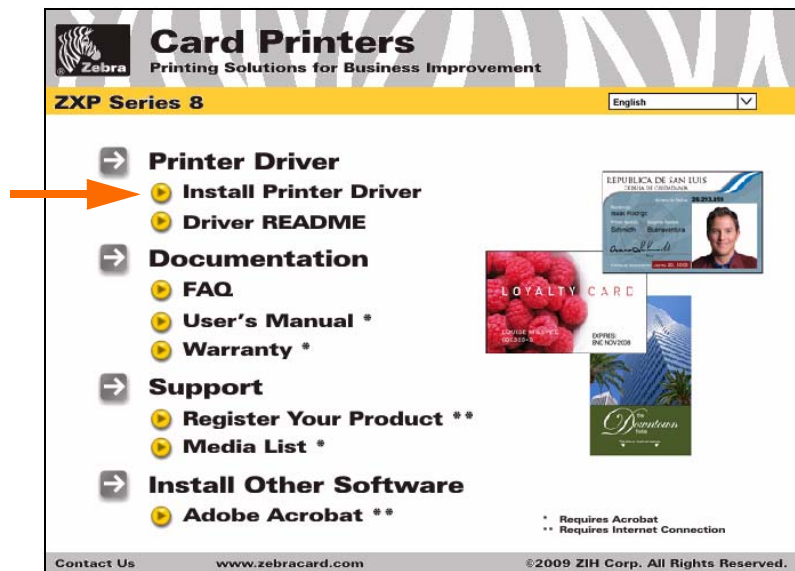
If not already done, connect power to the printer; ensure that the printer's power switch in the OFF ( **O** ) position, and connect the printer to the computer.

To install the Printer Driver, insert the **User Documentation, Drivers, and Training CD**, included with your printer, into the host computer and the InstallShield Wizard will walk you through the required installation steps. The InstallShield Wizard will:

- Automatically install the User Interface when the driver CD is inserted. (Autorun must be enabled for your CD).

If Autorun is disabled:

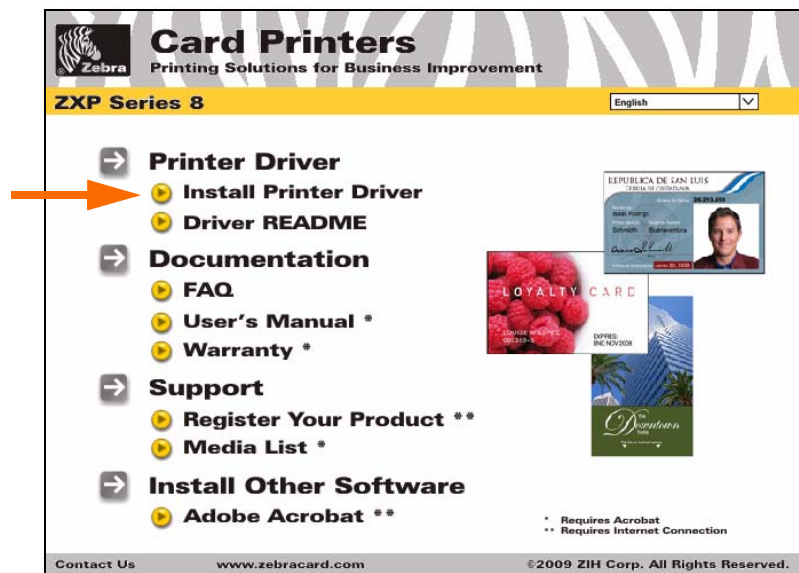
- a. Insert the Driver CD into the CD-ROM drive.
  - b. Launch your Web Browser.
  - c. From within the Web Browser, open the index.htm file at the root (top) level of the CD.
- Start the installation process when the **Install Printer Driver** menu item is selected from the Main Menu.



- Detect previous versions of the driver. If a previous version is detected, you will be prompted to remove it, reboot, and then restart the install process.
- Install the new driver files.

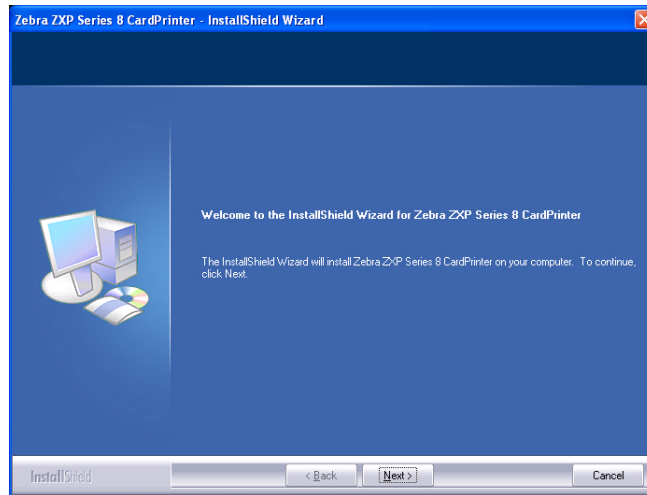
## Installing the USB Printer Driver

- Step 1.** If not already done, connect power to the printer. Do not turn power ON.
- Step 2.** Connect the USB port on the rear of the printer to the computer's USB port.
- Step 3.** Ensure that the Printer's power switch in the OFF ( **O** ) position.
- Step 4.** Insert the **User Documentation, Drivers, and Training CD** into the CD drive of the host computer. The **Main Menu** will open.

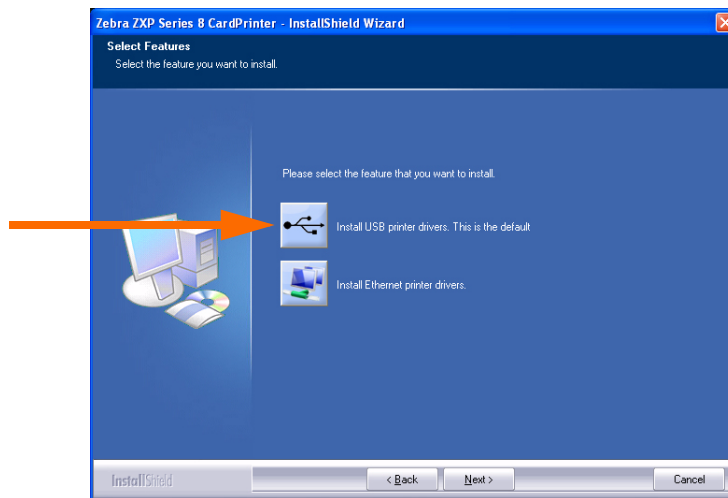


- Step 5.** From the drop-down menu in the upper-right corner of the **Main Menu**, choose the appropriate language for your system.
- Step 6.** From the **Main Menu**, click **Install Printer Driver** (arrow above).
- Step 7.** If an older Printer and Driver is installed on your computer, the **Welcome - Modify, repair, or remove the program** window will be displayed; otherwise go to [Step 9](#).
- Step 8.** Select *Remove*, click the **Next** button, and follow the screen prompts. At the end of the uninstall process, you will be asked to re-boot your computer. Re-boot your computer, and start over with [Step 1](#).

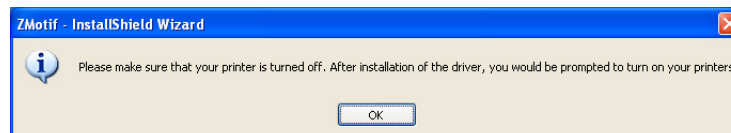
**Step 9.** The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



**Step 10.** Select **Install USB printer drivers**, and click the **Next** button.



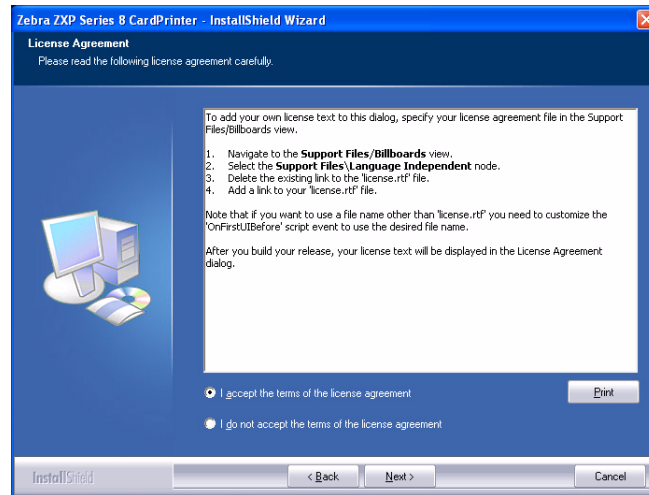
**Step 11.** Ensure that the Printer's power switch in the OFF ( O ) position; and then click the **OK** button.



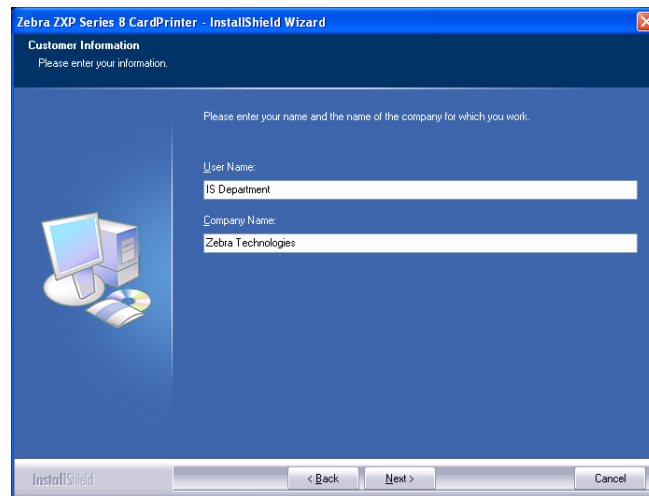
## Installation and Setup

### Installing the Windows Printer Driver

**Step 12.** This will bring up the **License Agreement** window. To proceed with the installation, select the *I accept the terms of the license agreement* option, and then click the **Next** button.



**Step 13.** This will bring up the **Customer Information** window. Enter User Name and Company Name; and then click the **Next** button.

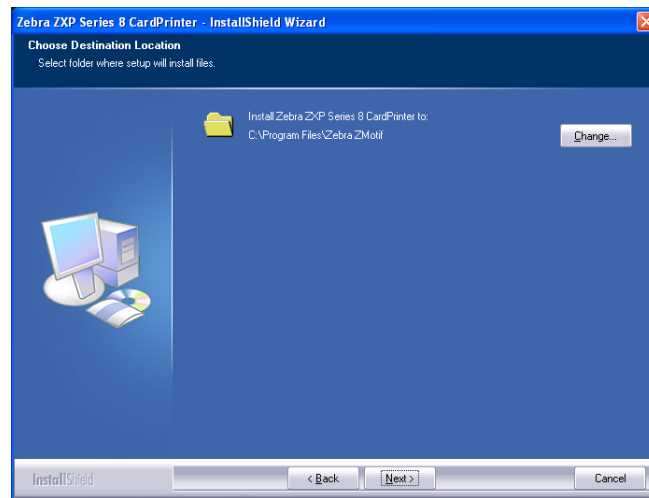


**Step 14.** This will bring up the **Choose Destination Location** window.

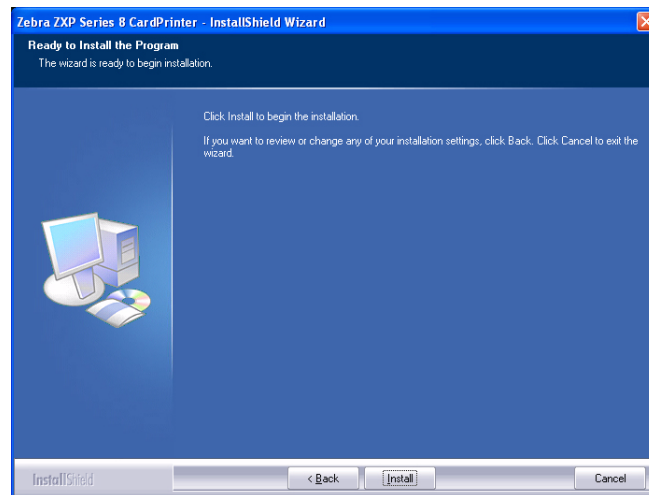
- To accept the default destination location where setup will install the files, click the **Next** button.

- OR -

- Select a folder where setup will install the files, and click the **Next** button.

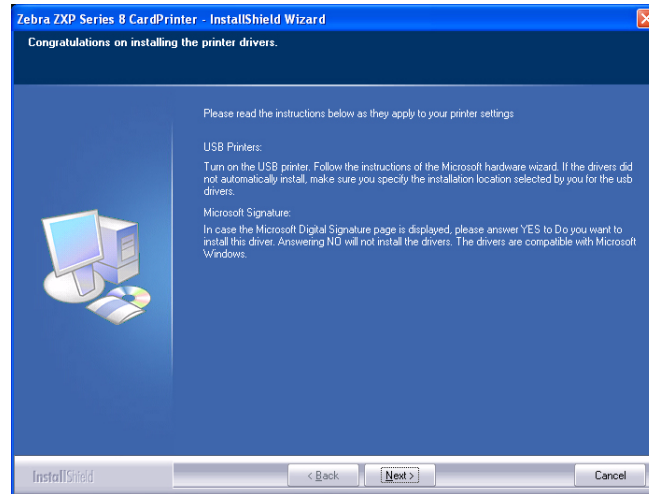


**Step 15.** This will bring up the **Ready to Install the Program** window. To continue, click the **Install** button.



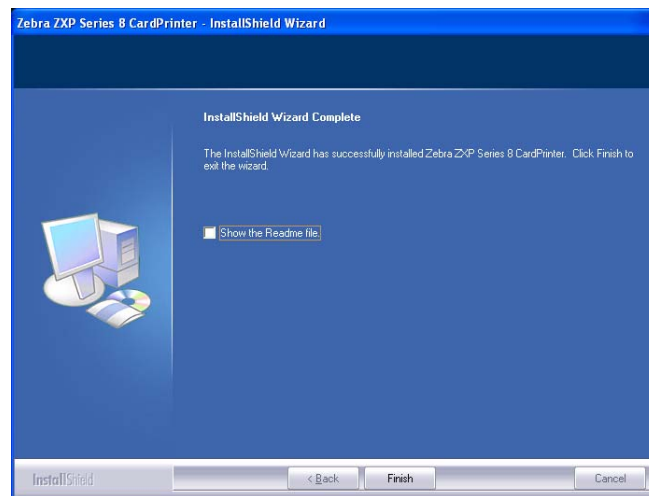
**Step 16.** Observe the **Setup Status** window.

**Step 17.** The **Congratulations** window will appear.



**Step 18.** At this point, **turn on your printer**; and then click the **Next** button.

**Step 19.** When the **InstallShield Wizard Complete** window appears, click the **Finish** button.



**Step 20.** This completes USB driver installation. To use the Printer, you would select it just like you would any other printer connected to a Windows system.



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# Operation

## Introduction

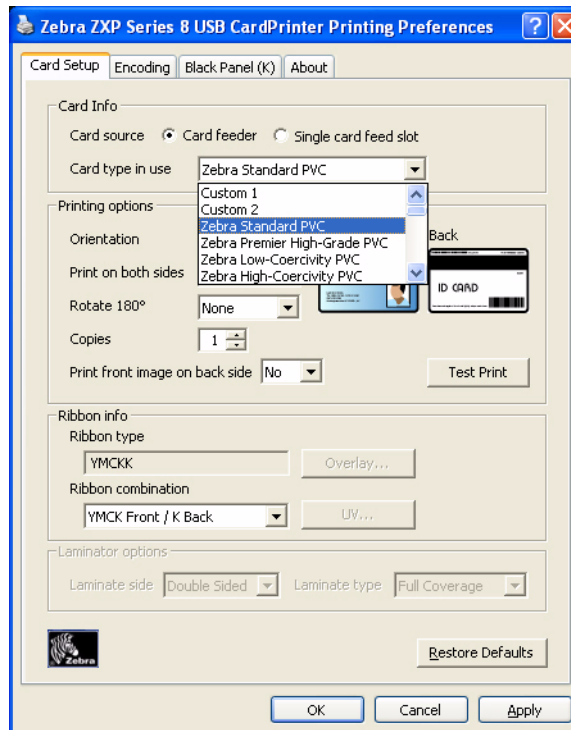
Printing with the Card Printer is similar to printing with any other printer in a Windows environment.

- The Printer Driver Software is installed on your computer (see [Section 2](#)).
- The Printer is connected to the power source and the computer (see [Section 2](#)).
- The Printer is selected by either the Operating System or the appropriate application software program.
- Printer Properties are set (the factory default values will be appropriate for many applications).
- Set the Card Type.
- Print a Test Card.
- Card printing is directed by the appropriate application software program.

## Card Type Selection

The **Card Setup** tab allows you to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality. If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



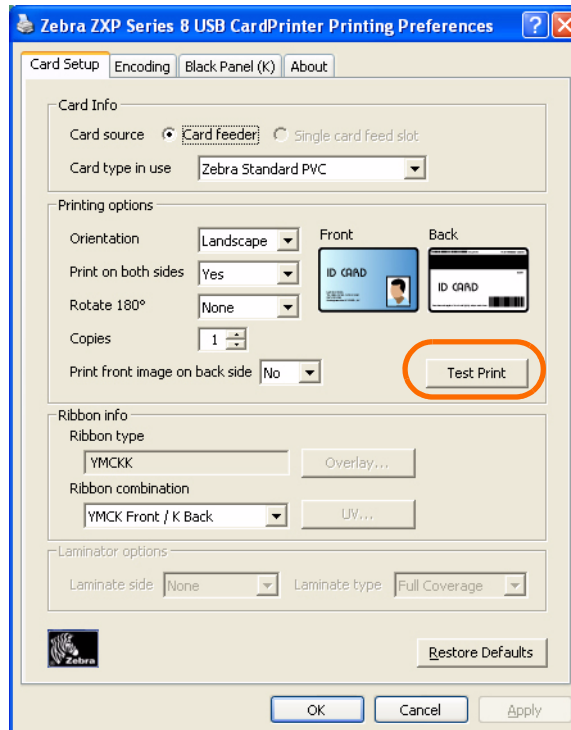
- Make the appropriate Card Type selection. Note that *Zebra Standard PVC* is the default.



## Printing a Sample Card

Sample card designs are installed with the printer driver. To print a sample card:

1. Access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.

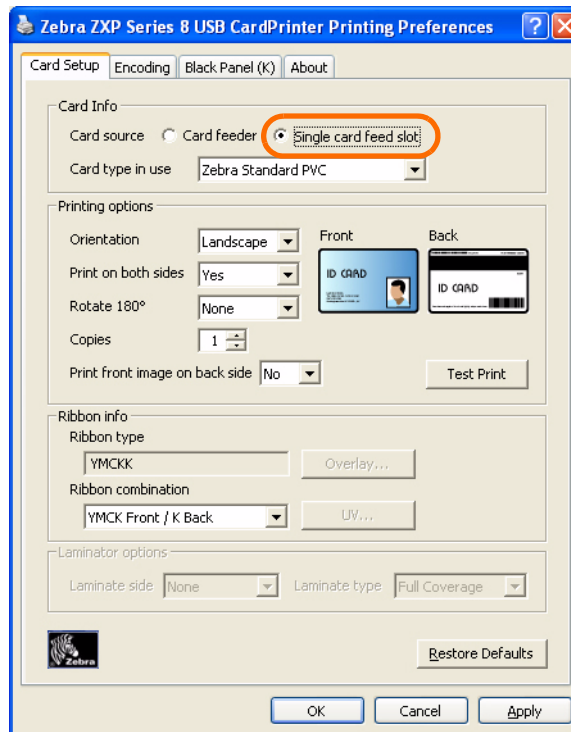


2. Ensure that cards are in the Input Hopper.
3. Click of the **Test Print** button (circled above).
4. The printer will feed in a card and start printing (download time will vary depending on the complexity of the card design and the processing speed of your computer).
5. Once the printing job is complete, the card is ejected from the printer into the Output Hopper.

## Manual Card Feed

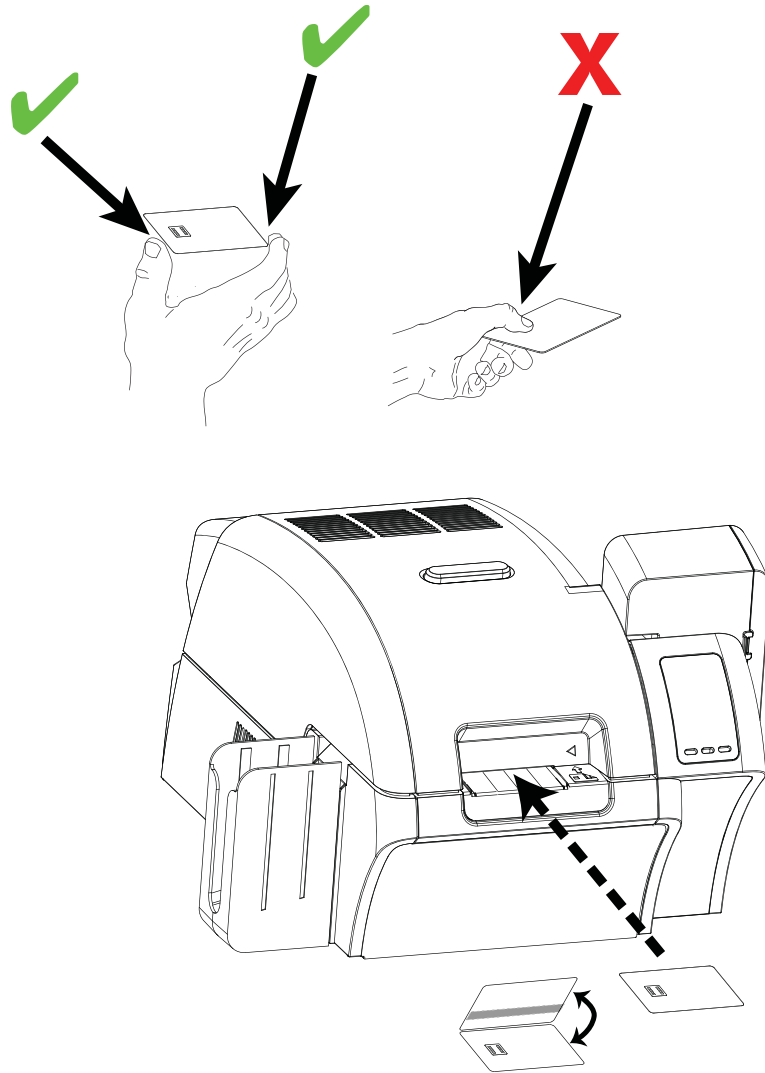
A Manual Feed Slot is available for feeding single cards. The Input Hopper must be empty for single-card feeding to work properly.

1. Access the Card Setup Tab: Select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



2. In the Card Setup tab, select the *Single card feed slot* radio button (circled above).
3. Click on the **Apply** button, and then click on the **OK** button.
4. Ensure that there are no cards in the Input Hopper.

5. Insert a single card into the slot in the correct orientation. Do not feed more than one card at a time.



## Multi-Function LCD Panel

Your printer is equipped with a Multi-Function LCD Panel to provide printer status information. The readout is controlled by Multi-Function Control Buttons directly below the viewing window. Multi-Function LCD Panel messages fall into three categories (Operational, Warnings, and Errors).

### Operational Messages

Operational Messages are displayed during the Printer's normal operation.

MESSAGE	DESCRIPTION
Initializing	Performing a self test on start up
Ready - Warming	Ready to accept a print job, roller heating
Ready	Ready and at temperature
Printing - Warming	Print job received, warming lower roller to temperature on double-sided print job
Printing - Cooling	Print job received, cooling lower roller to temperature on single-sided print job
Printing	Print job received, printing in process
Single Card Feed	Waiting for manual card feed (this function is set via the <a href="#">Card Setup Tab</a> ; see page 45)
Standby	Printer is in "sleep" mode; i.e., powersave mode
Printer Offline	Status toggled (offline/online) via the OCP Advanced Settings Menu
Alarm	Indicates error messages need to be cleared before normal operations can resume

### Warning Messages

Warnings alert the operator to action that should be taken; the printer will generally continue operation.

WARNING (Printer will still operate)
Clean Printer
Print Ribbon Low
Transfer Film Low

### Error Messages

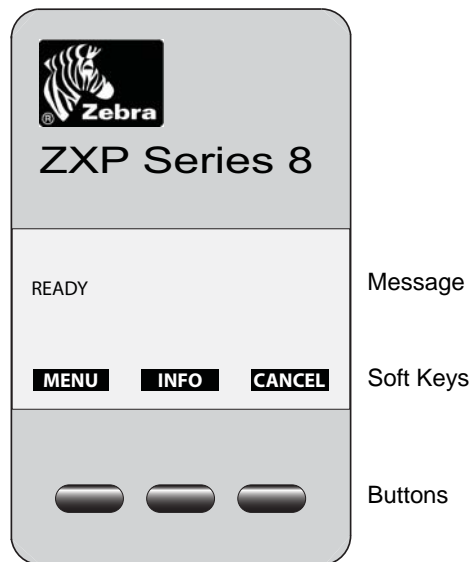
Errors are displayed when a situation causes the printer to stop operating. Depending on the cause of the error message, restarting the printer or curing the displayed Error may return the printer to operational status; or the printer may require troubleshooting and repair.

Refer to [Section 7, Troubleshooting](#), for a list of the error messages, possible causes, and possible solutions.

## Operator Control Panel (OCP)

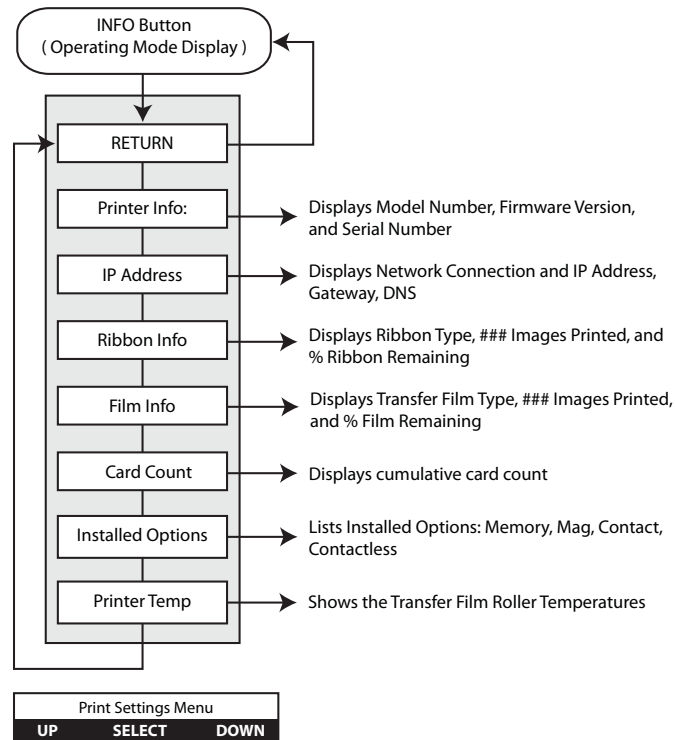
### Printer Menu Information

The printer is equipped with an LCD Display and three key buttons which give access to the printer menus. The menus can be accessed when the printer status shows READY.



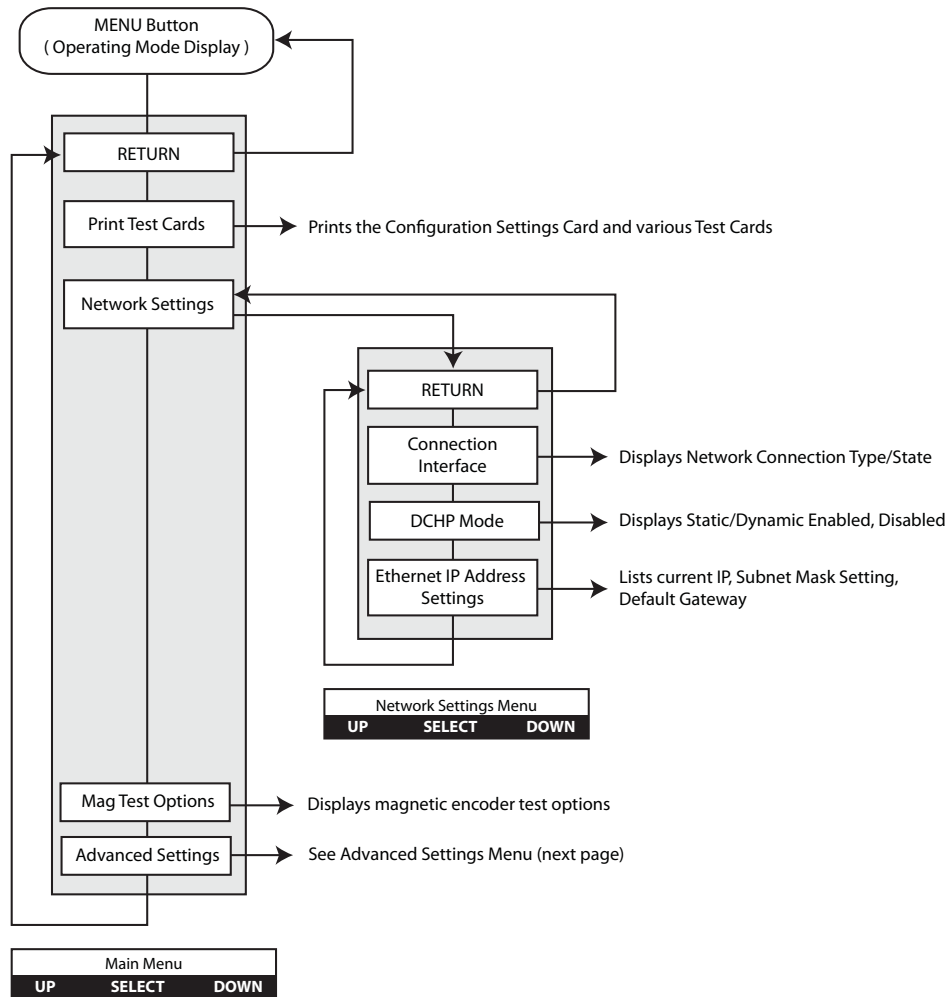
- Press the **INFO** button, to access the Printer Settings Menu.
- Press the **MENU** button, to access the Main Menu.
- Press the **CANCEL** button, to cancel the current print job in the printer.

## Printer Settings Menu



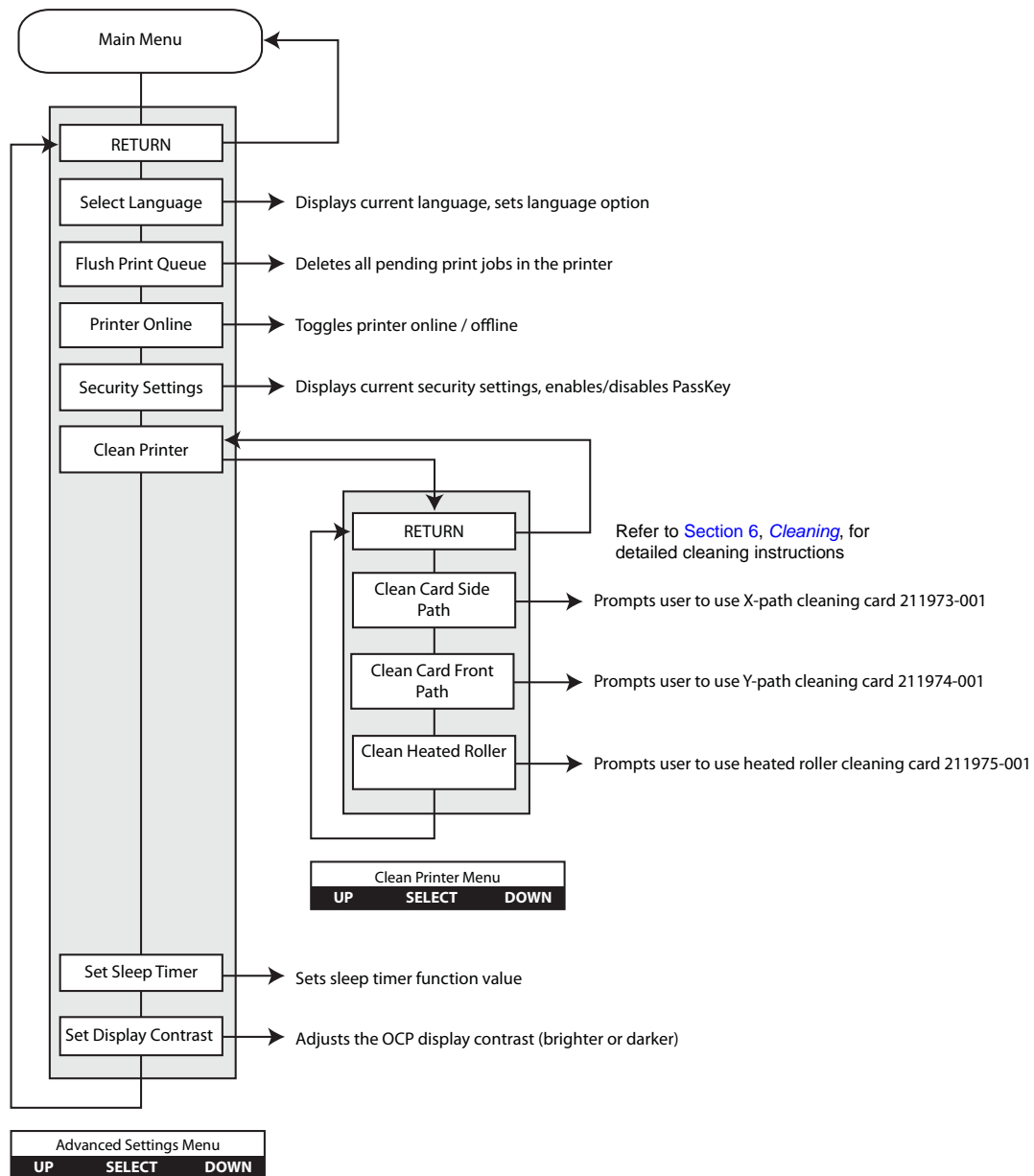
- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.

## Main Menu



- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.

## Advanced Settings Menu



- Press the **UP** button to move up the menu list.
- Press the **DOWN** button to move down the menu list.
- Press the **SELECT** button to select the item from the list.





---

# Printer Settings and Adjustments

## Introduction

Printer Properties can be set either at the Operating System level or within the application software program used for printing cards.

Preferences settings can configure the Card Printer for Landscape (wide) or Portrait (tall) printing orientation, and allow the user to verify that the desired print ribbon is installed in the printer.

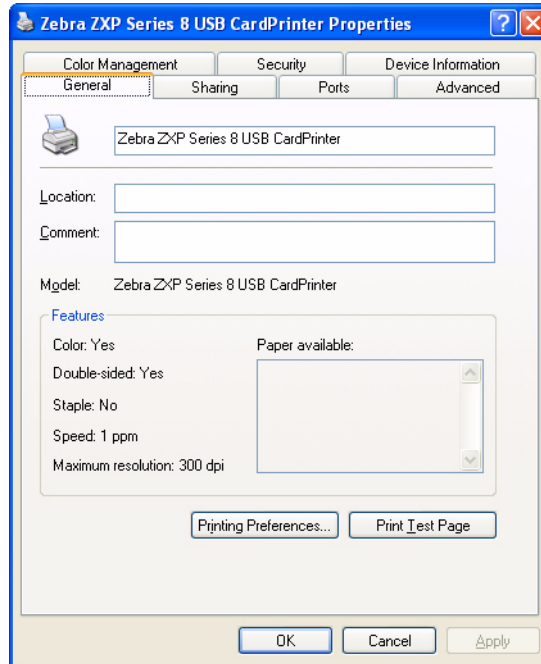
If the Printer includes the optional magnetic card stripe encoder, encoding parameters and coercivity can be set.

This section describes settings and adjustments that can be made to your printer. This consists of two major topics:

Printer Properties . . . . .	36
Printing Preferences . . . . .	44

## Printer Properties

To access Printer Properties, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing, then select *Properties*

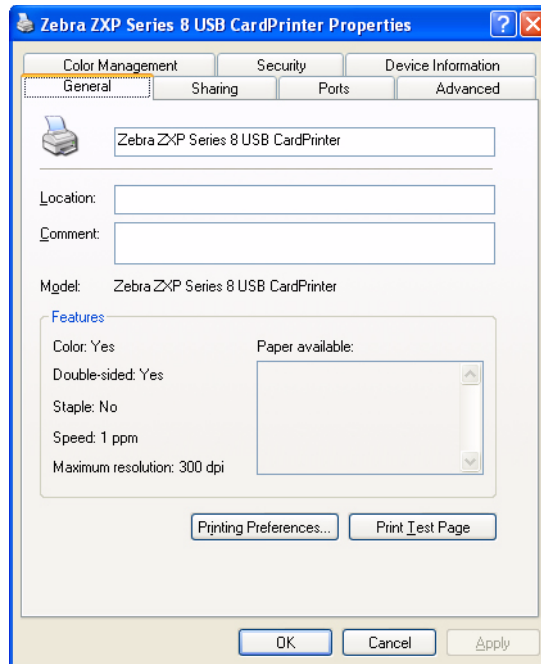


- **General Tab** - Displays printer information of a general nature, includes selection for Printing Preferences and Print Test Page (i.e., the standard Windows test page).
- **Sharing Tab** - Operating System (OS) feature where the printer can be shared with other clients on a network.
- **Ports Tab** - OS feature displays available communication ports.
- **Advanced Tab** - OS feature to select printer availability and spooling options.
- **Color Management Tab** - Allows user to define color profile(s) with color printers.
- **Security Tab** - OS feature where permissions to printers can be defined.
- **Device Information Tab** - Allows user to make basic printer adjustments and access advanced printer controls.

## General Tab

The General tab shows the printer model and lists the features of the printer.

To access the General tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > General*.



- **Location** - Lets you specify where the printer is located.
- **Comment** - Lets you specify general information about the printer, such as the type of print device and who is responsible for it. Once set, these fields can be displayed by applications.
- **Model** - Specifies the name of the printer driver installed.
- **Features** - Specifies whether various options are available on the printer.

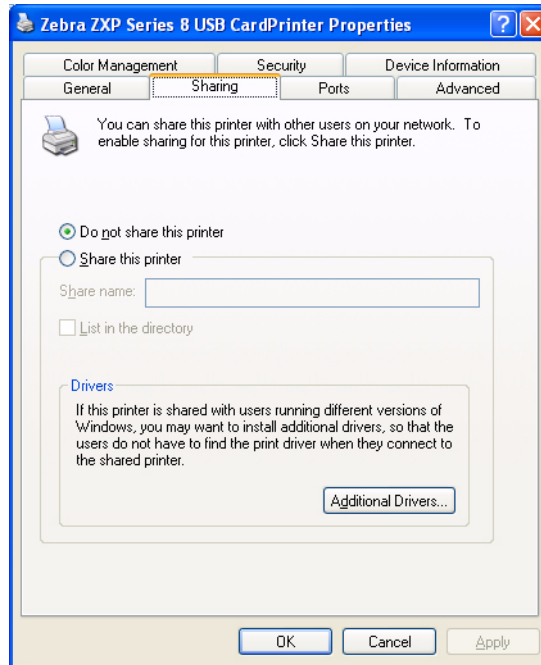
The **Printing Preferences** button takes you to Printing Preferences used to set selected configuration parameters; see [Printing Preferences](#) on page 44.

The **Print Test Page** button sends the standard Windows test page to the printer.

## Sharing Tab

On the Sharing tab (Sharing Property Page), you can choose to share the printer over the network and install additional drivers to accommodate different operating systems.

To access the Sharing tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Sharing*.



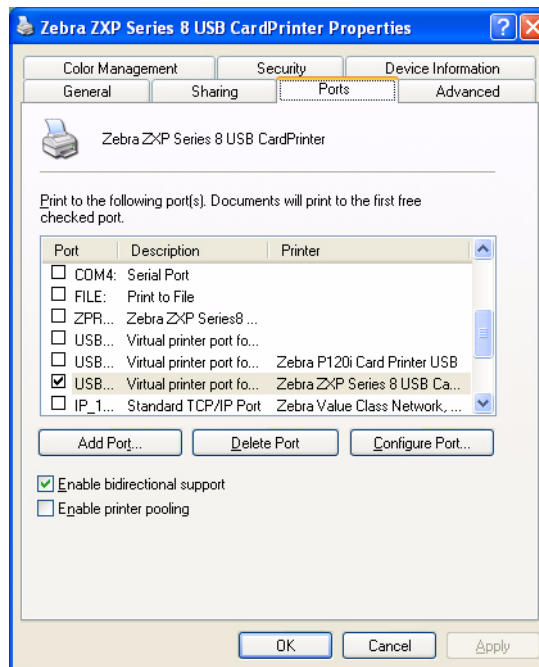
Printer sharing tasks that you can perform include:

- To share a printer, select the *Share this printer* radio button; and specify a name for the shared resource. Click OK when you're finished.
- To change the shared name, simply enter a new name in the *Share name* field; and click OK.
- To quit sharing a printer, select the *Do not share this printer* radio button. Click OK when you're finished.

## Ports Tab

Use the Ports tab to specify the computer port to which the printer is connected. This will have been established at the initial installation of the printer, and will not normally require attention.

To access the Ports tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Ports*.



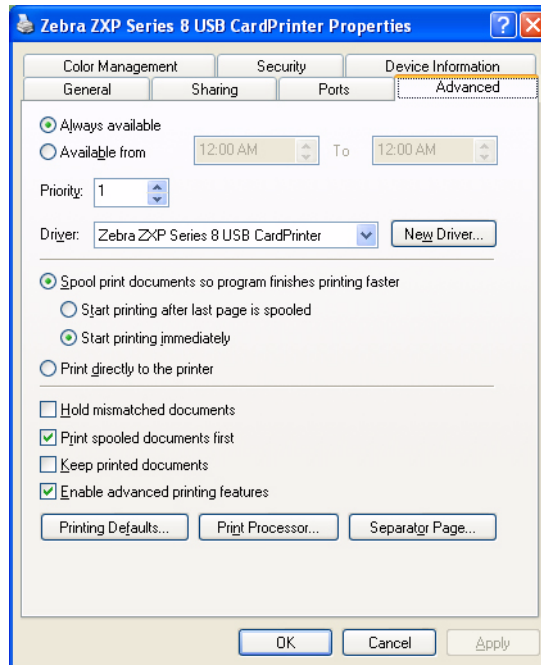
An exception to this is if you wish to use *printer pooling*, the ability to distribute print jobs to multiple printers. To enable printer pooling, check the “Enable printer pooling” box, then check the additional ports boxes. Each port should have a single Zebra printer installed on it. All the pooled printers must be identical models with the same configuration (e.g., all with YMC front, K back).

Now, when you print to the “main printer” (that is, whichever printer you right-clicked in Printers and Faxes to get to this screen), this printer will get print jobs until it has buffered as many jobs as it can take. Remaining jobs will then “spill over” to other printers until all printers in the pool are busy.

## Advanced Tab

The Advanced tab determines the spooling (queuing) of print jobs and determines how spooled jobs are handled relative to the most recent job.

To access the Advanced tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Advanced*.



**To enable spooling:** Select the radio button labeled *Spool print documents so program finishes printing faster*.

- Select *Start printing after last page is spooled* if you want the entire document to be spooled before printing begins. This option ensures that the entire document is sent to the print queue before printing. If for some reason printing is canceled or not completed, the job will not be printed.
- Select *Start printing immediately* if you want printing to begin immediately when the print device is not already in use. This option is preferable when you want print jobs to be completed faster or when you want to ensure that the application returns control to users as soon as possible.

**To disable spooling:** Select the radio button labeled *Print directly to the printer* radio button.

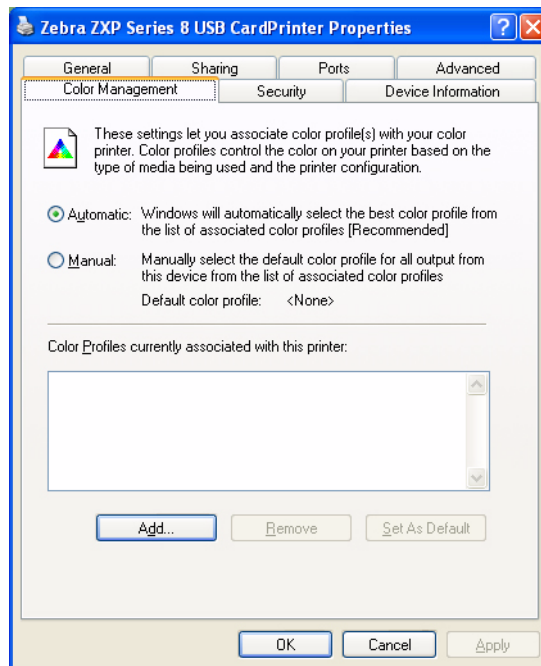
## Color Management Tab



**Important** • The optimal color profile is automatically selected when the card type is selected; see the Printing Preferences, [Card Setup Tab](#).

Color Management settings allow you to associate color profiles on the printer based on the type of media being used and printer configuration. The **Add** button allows the operator to add additional profiles to the color profile list.

To access the Color Management tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Color Management*.



The following settings let you associate color profiles with your printer:

- The **Automatic** radio button lets Windows select the best color profile from the list of associated profiles (default).
- The **Manual** radio button lets you select the appropriate profile from the list shown in the Color Profile window.

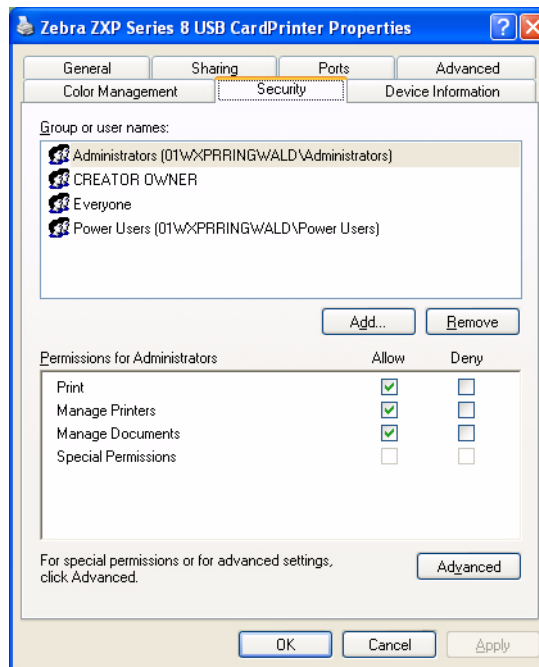
You can manage Color Profiles currently associated with your printer as follows:

- The **Add** button allows you to add additional profiles to the color profile list.
- The **Remove** button allows you to remove profiles from the color profile list.
- The **Set As Default** button allows you to set the selected profile as the default profile.

## Security Tab

This is the standard Windows security screen, showing user access to various printer control options. Both Print and Manage Printers *must* be checked for full functionality of the printer.

To access the Security tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Security*.



The Security tab allows you to assign the actual permissions that apply to the print queue. You can apply permissions to both users and to groups. It is usually considered a better practice to only apply security to groups.

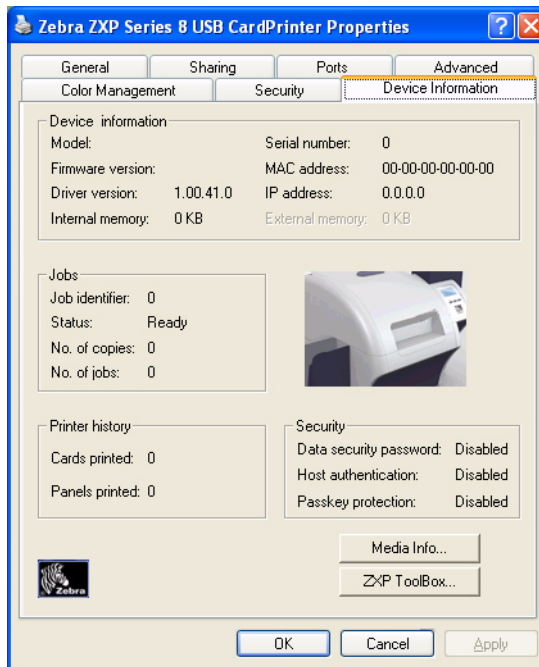
The Advanced Security Settings properties sheet allows you to assign a more comprehensive set of permissions than the basic Security tab found on the printer's properties sheet does.



## Device Information Tab

The Device Information tab provides printer information, job condition, printer history, and security status. Access to Media Info and ZXP ToolBox is included.

To access the Device Settings tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Device Information*.

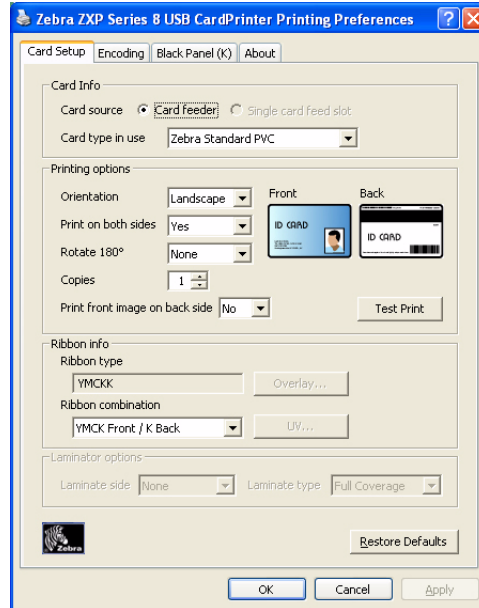


- The **Media Info** button takes you to the Media Info screen which shows:
  - The color ribbon type installed and the number of color ribbon sets remaining
  - The transfer film type installed and transfer film panels remaining
- The **ZXP Toolbox** button takes you to the ZXP Toolbox which provides advanced configuration capabilities and tools to manage the operation of your printer; see [Section 5](#) for details.

Note that the ZXP Toolbox is a separate application that works independently from the printer driver.

## Printing Preferences

To access the Printing Preferences, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences*.

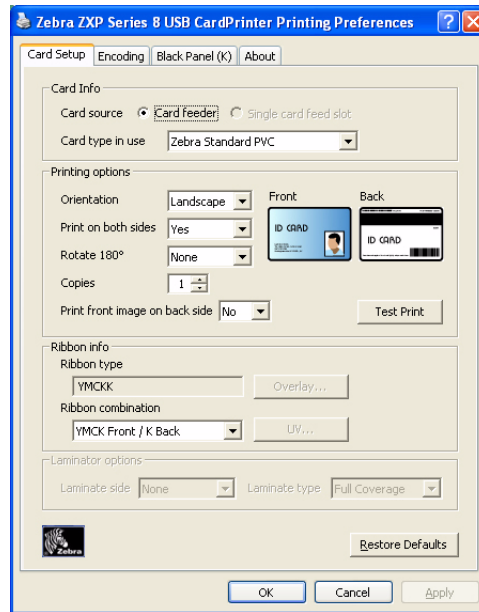


- **Card Setup Tab** - Allows user to adjust selected card parameters.
- **Encoding Tab** - Allows the user to set various magnetic encoding options.
- **Black Panel (K) Tab** - Displays available options for Black Extraction.
- **About Tab** - Displays copyright and driver version information about the printer driver.

## Card Setup Tab

Card Setup tab allows the user to adjust selected card parameters.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



- **Card info:**

- **Card source** allows the user to feed cards into the printer from the card feeder or via the single card feed slot.
- **Card type in use** allows the user to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality.



- **Printing options** allows the user to select the card orientation, to print on both sides of the card, to rotate the card 180°, and to specify the number of copies to print. The **Test Print** button prints a test card.

- **Ribbon info:**

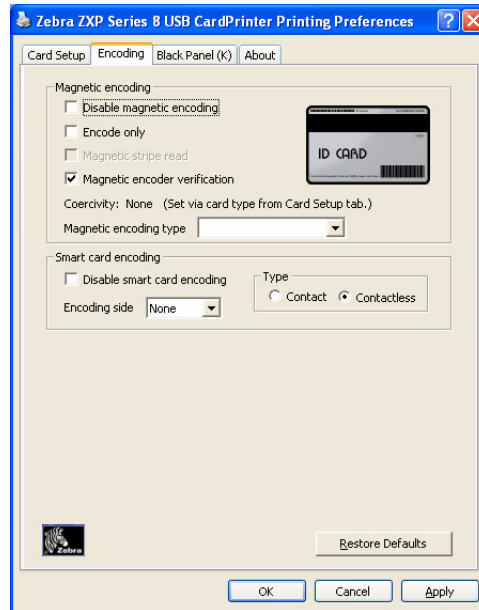
- **Ribbon type** is the color ribbon installed in the printer. This is not user selectable.
- **Ribbon combination** allows you to apply color or black, or both, to either side of the card.

The **Restore Defaults** button restores Card Setup default values.

## Encoding Tab

The Encoding screen allows the user to set various magnetic and smart card encoding options.

To access the Encoding Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Encoding*.



Although these options are user-selectable, they are set automatically when the Card Type is selected in the [Card Setup Tab](#) on page 45.

The **Restore Defaults** button restores Encoding default values.



**Note** • For advanced settings, see [Section 5, ZXP ToolBox](#).

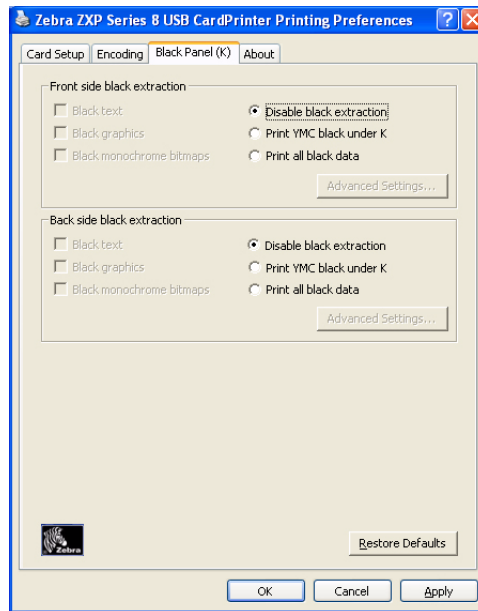
## Black Panel (K) Tab



**Note** • The Black Panel (K) Tab applies only to surfaces of the card on which both YMC (color) and K (black) are to be printed.

The Black Panel (K) Tab allows for special handling of black.

To access the Black Panel (K) Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Black Panel (K)*.



### Black Extraction

When *Disable Black Extraction* is not selected (i.e., either *Print YMC black under K* or *Print all black data* is selected), Black Extraction is enabled.

With either *Print YMC black under K* or *Print all black data* selected, you can identify which elements are to be selected for black extraction: black text, black graphics, and/or black monochrome bitmaps.

Equal amounts of Y, M, and C dyes, at maximum intensity, deliver a near-black image, but one that is not machine readable. A bar code printed from YMC will be visible to the eye, but will not be detectable by most bar code readers.

The remedy for this is to extract the black; which means printing the same bar code, using the K panel, on top of the YMC bar code. You can also choose to print only in K, omitting YMC from that region. The K panel is not a dye. It is more of a paint containing carbon black, which is highly visible to infrared-type readers.

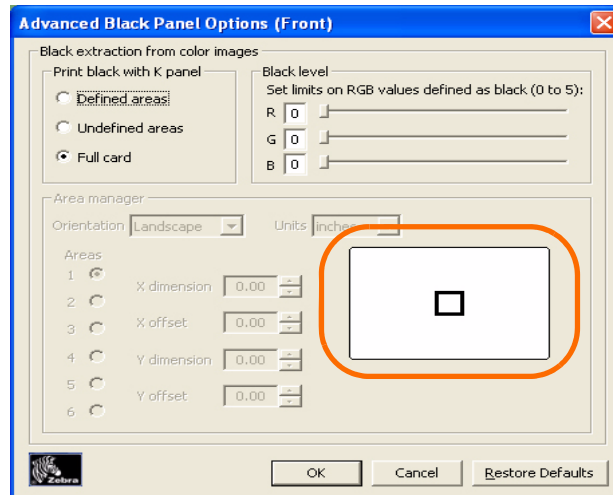
The **Restore Defaults** button restores Black Panel default values.

## Advanced Settings

The Advanced Settings tab allows you to manage Black Extraction.

To access the Advanced Settings Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Black Panel (K) > Advanced Settings*.

The figure below shows settings for the front side of the card; settings for the back side of the card are identical.



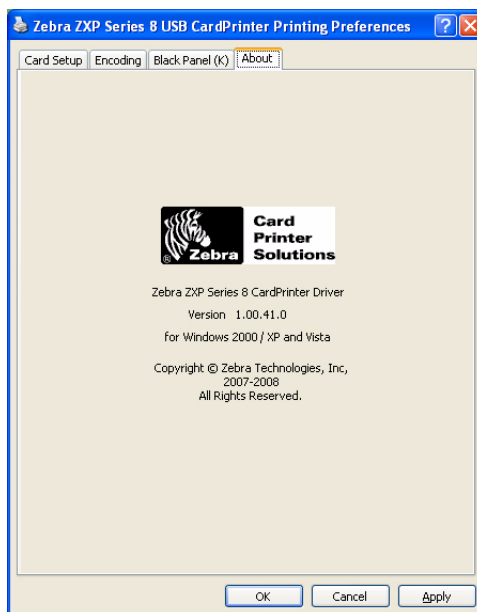
- **Print black with K panel:** Specify the zones as either Defined or Undefined areas.
- **Black level:** Set the limits (1 to 5) on the RGB values defined as black.
- **Area manager:** Select the Area radio button (1 to 6), and then “drag” the cursor diagonally across the card outline (circled above) to identify location of the Zone.

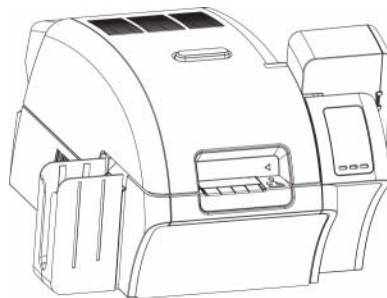
The **Restore Defaults** button restores Advanced Settings default values.

## About Tab

The About Tab shows the copyright and the driver version for the *Zebra ZXP Series 8 Card Printer*.

To access the About Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > About*.









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# ZXP ToolBox

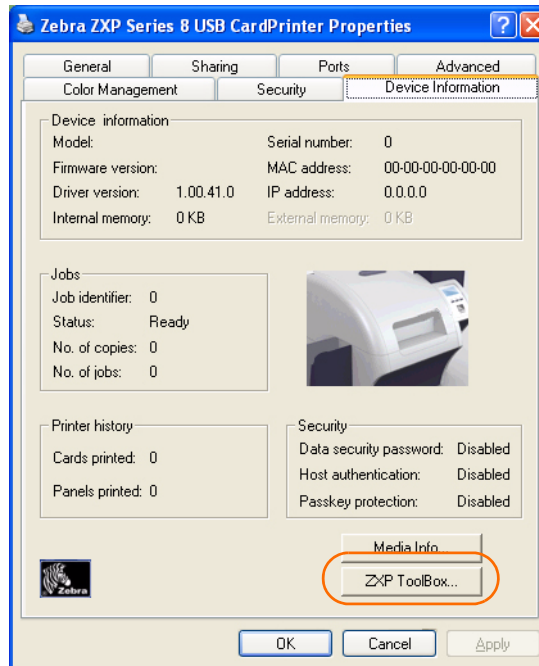
## Introduction



**Important** • Use of the ZXP Toolbox is intended only for advanced users and system administrators.

The ZXP Toolbox provides advanced configuration capabilities and tools to manage the operation of your printer. Note that the ZXP Toolbox is a separate application that works independently from the printer driver.

To access the ToolBox from the printer driver, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties > Device Information > ZXP ToolBox*.



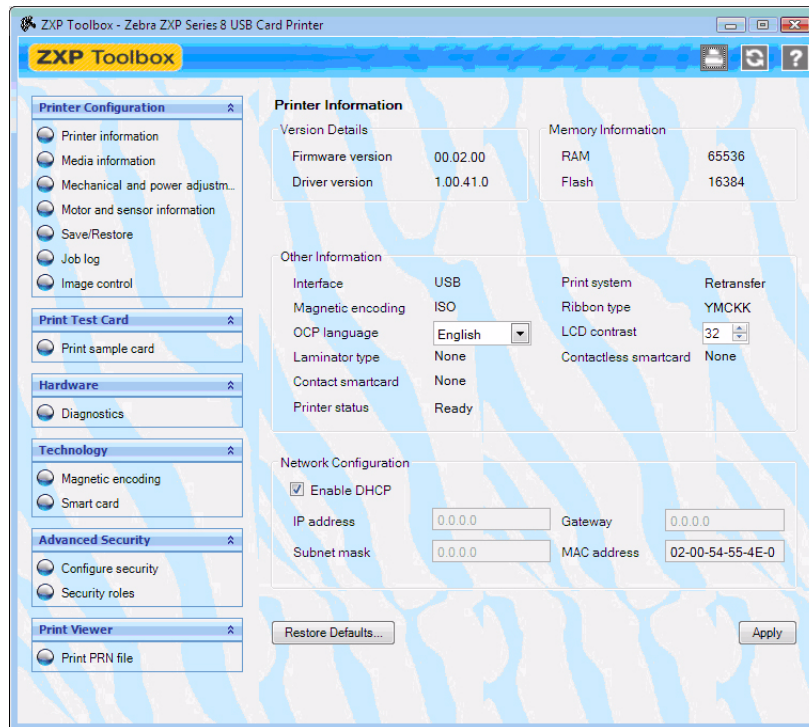
The ToolBox can also be accessed via *Start > All Programs > Zebra ZXP Series 8 Card Printer*.

## Printer Configuration

The Printer Configuration section provides information on the printer, media information, mechanical and power adjustments, motor and sensor information, a save and restore configuration capability, and a print job log.

### Printer information

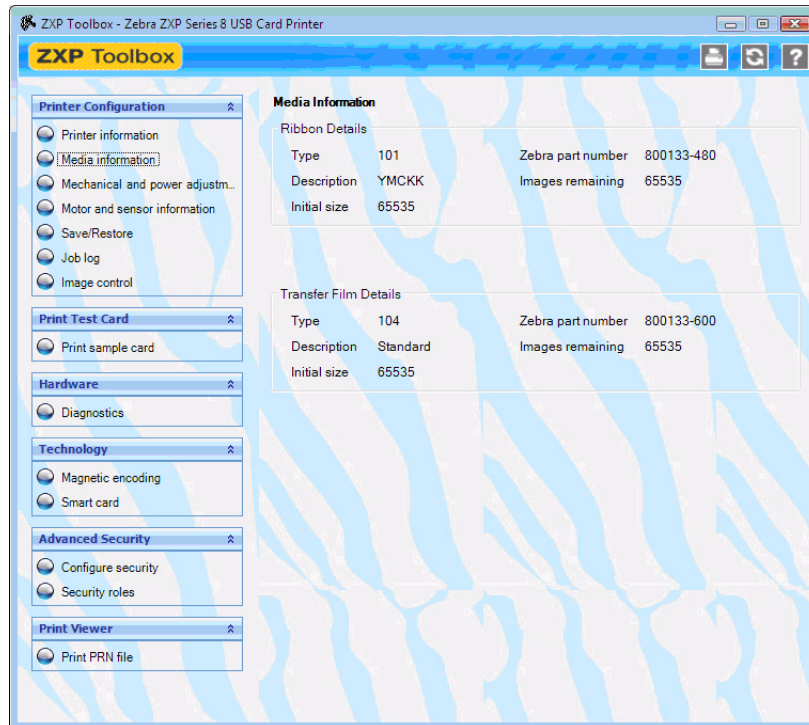
- Version details include Firmware version and Driver version.
- Memory information includes RAM and Flash sizes (KB).
- Other information includes interface, print system, magnetic encoding, ribbon type, laminator type, printer status, contact smartcard, and contactless smartcard. Also included are a user-selectable OCP Language option (English, French, Spanish, German, Portuguese, and Italian) and an Printer Panel LCD contrast adjustment capability.
- Network configuration information includes an Enable DHCP checkbox, IP address, Gateway, Subnet mask, and MAC address.



- The **Restore Defaults** button restores default values.
- The **Apply** button applies changed values.

## Media information

- Ribbon details include type, Zebra part number, description, initial size (total image count), and images remaining.

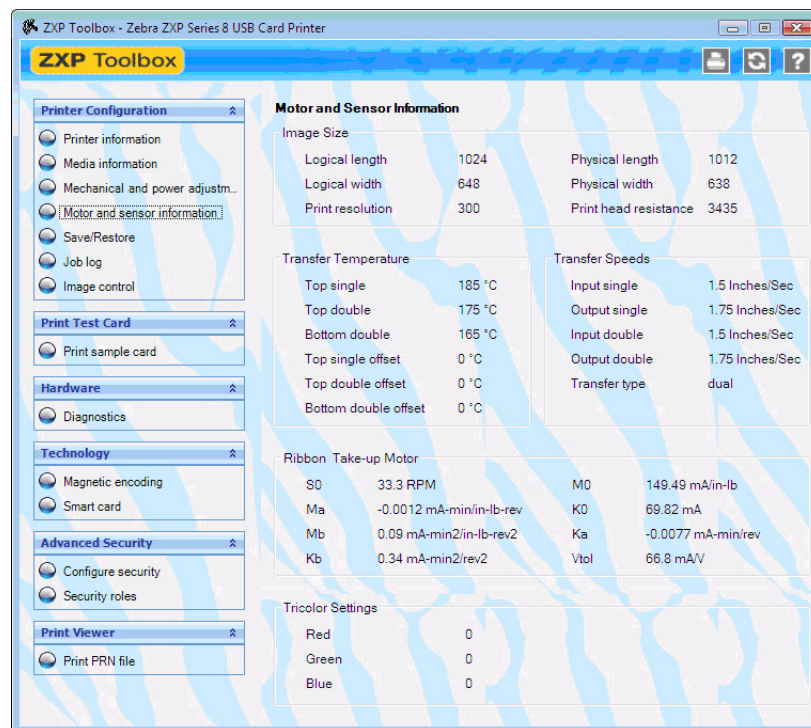


Transfer film details include type, Zebra part number, description, initial size (total image count), and images remaining.

## Motor and sensor information

This screen displays the current status of the printer and provides standard printer information and sensor data.

- Image size details include logical length, physical length, logical width, and physical width all in pixels; print resolution in pixels per inch; and print head resistance in ohms.

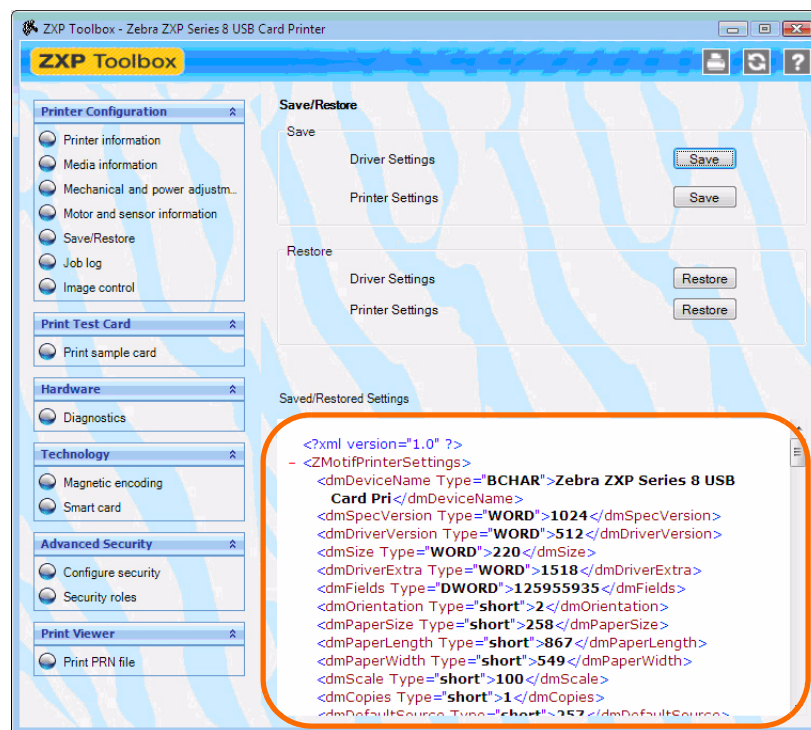


- Transfer temperature details include top single, top double, bottom double, top single offset, top double offset, bottom double offset.
- Transfer speeds details include input single, output single, input double, output double, and transfer type.
- Ribbon take-up motor details include SO, MO, Ma, KO, Mb, Ka, Kb, and Vtol.
- Ribbon tricolor settings details include red, green, and blue values.

## Save/Restore

When you set up a printer, you can save the printer and driver configuration settings; then, when you restore or add additional printers, you can use the saved configuration to ensure configuration consistency.

Note that the Saved/Restored Settings (circled below) are for the Driver.



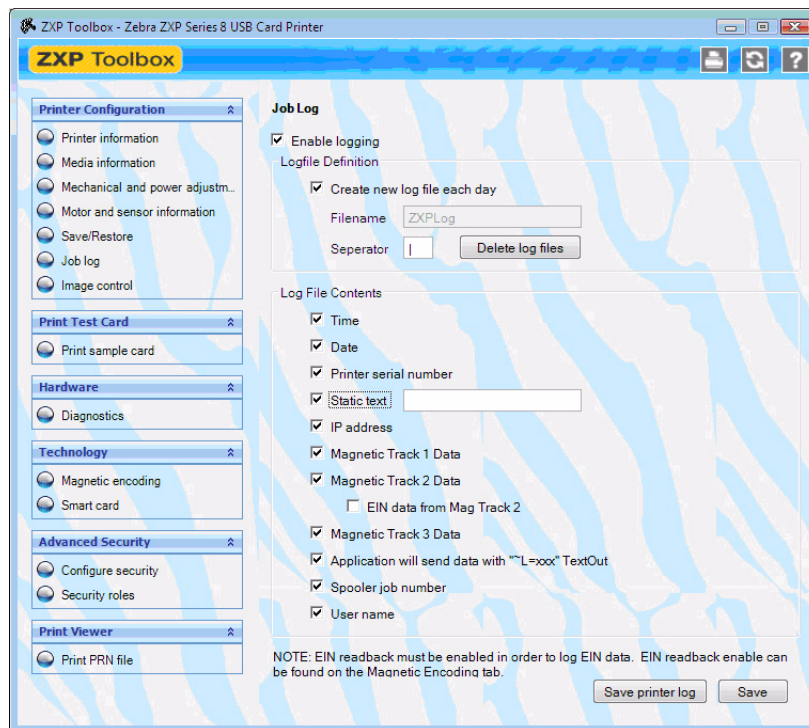
**Note** • The configuration files are stored in an XML format in the following default directory:  
*C:\Documents and Settings\All Users\ZMotif\Librar*

- The **Save** button saves the Driver Settings and/or Printer Settings in an XML file format.
  - The printer configuration settings are stored as P\_<filename>
  - The driver configuration settings are stored as D\_<filename>
- The **Restore** button restores the Driver Settings and/or Printer Settings.

## Job log

The Job Log is a utility that builds a database of card transactions in the printer's host computer. Job Log records data encoded on the card's magnetic stripe, together with date, time, and the printer's serial number.

The data set can be uploaded at any time to a central archive, thus providing a means for security officers to validate the card by comparing it with tamper-proof *real data*.



**Important** • In order to log either Magnetic Stripe data or Barcode EIN data, EIN Readback must be enabled. **Enable EIN Readback** can be found in the [Magnetic encoding](#) section on page 61.

1. **Enable Logging** - If this box is checked, the logging feature is enabled.
2. **Logfile Definition** - Choose one of the following options:
  - If the “Create new log file each day” box is unchecked, the data is saved to a log file of your choice (Filename).
  - If the box is checked, the data is saved to log file *ZXPLog* with the day's date; e.g., *ZXPLog\_2009\_3\_4*.
  - In addition to the Filename, you may wish to enter a special field Separator Character. The default field Separator Character is “|”.

3. **Log File Contents** - The Log File Contents group selects the data to be logged in the file you specified above.

The data will be logged in the order displayed on the screen, each field being separated by the character specified in the Logfile Definition, Separator.

Log File Contents selections include:

- **Time:** Logs the time at which the card was sent to the printer in the HH:MM:SS format. The 24-hour clock is used, so 13:00:00 = 1:00 pm, and 05:00:00 = 5:00 am.
- **Date:** Logs the date the card was sent to the printer in the MM/DD/YYYY format.
- **Printer serial number:** Logs the serial number of the printer that printed the card.
- **Static text:** Adds to the record text in the box at right, 16 characters maximum.
- **IP address:** Logs the IP address of the PC that sent the card to the printer.
- **Magnetic Track 1, 2, 3 Data:** Logs the data sent to the printer to be encoded on the card's magnetic stripe.
- **EIN data from Mag Track 2:** Logs the Embedded Inventory Number pre-encoded on Track 2.

Note that EIN Readback must be enabled. **Enable EIN Readback** can be found in the [Magnetic encoding](#) section on page 61.

- **Application will send data with “~L=xxx” TextOut:** Allows third-party applications to send data to be logged in much the same way as they would send magnetic data.
- **Spooler job number:** Logs the number which the card print job was assigned in the Windows print spooler.
- **User name:** Logs the username of the person submitting the card print job.



**Note** • Job Logs and Printer Logs are stored in the following location:

*C:\Documents and Settings\All Users\ZMotif*

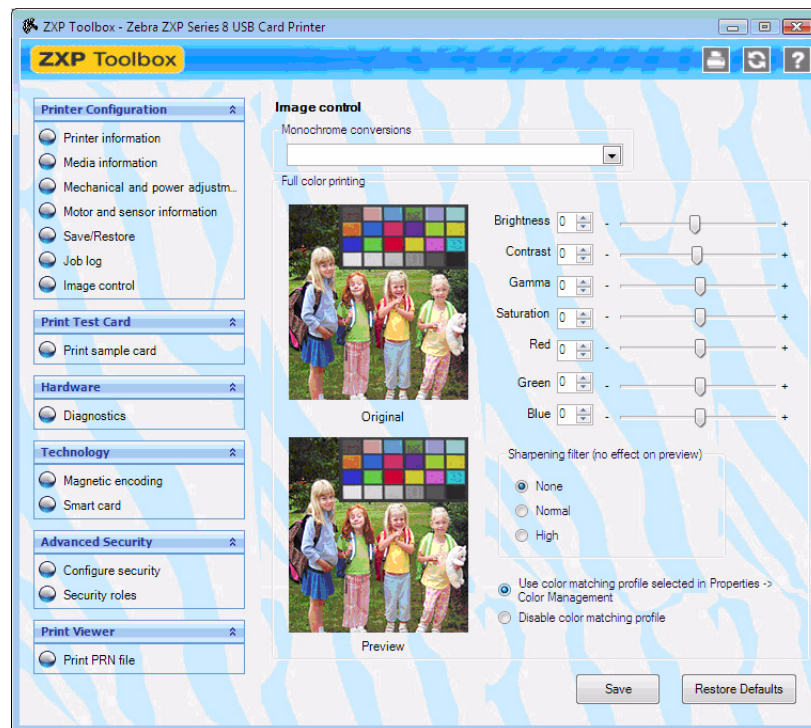
- The **Save** button saves the Job Log.
- The **Save printer log** button saves the Printer Log.



## Image control

The Image Control window lets you make color adjustments to compensate for camera or lighting conditions.

Keep in mind that these color adjustments modify how the pictures *print*. The adjustments do not affect the image files. (That type of adjustment would be made in an image processing application program.)



- The **Monochrome conversions** dropdown menu lets you select Dither error diffusion, dither halftoning, or Dither pure black on white.
- **Full color printing adjustments** (-25 to +25 range) include Brightness, Contrast, Gamma, Saturation, Red, Green, and Blue.
- **Sharpening filter** options are None, Normal, and High. Note that these adjustments have no effect on the preview image.

Depending on the radio button selected, you can use the color matching profile selected in Properties > Color Management or you can disable the color matching profile.

The **Save** button saves your image control settings.

The **Restore Defaults** button restores the image control default values.

## Print Test Card

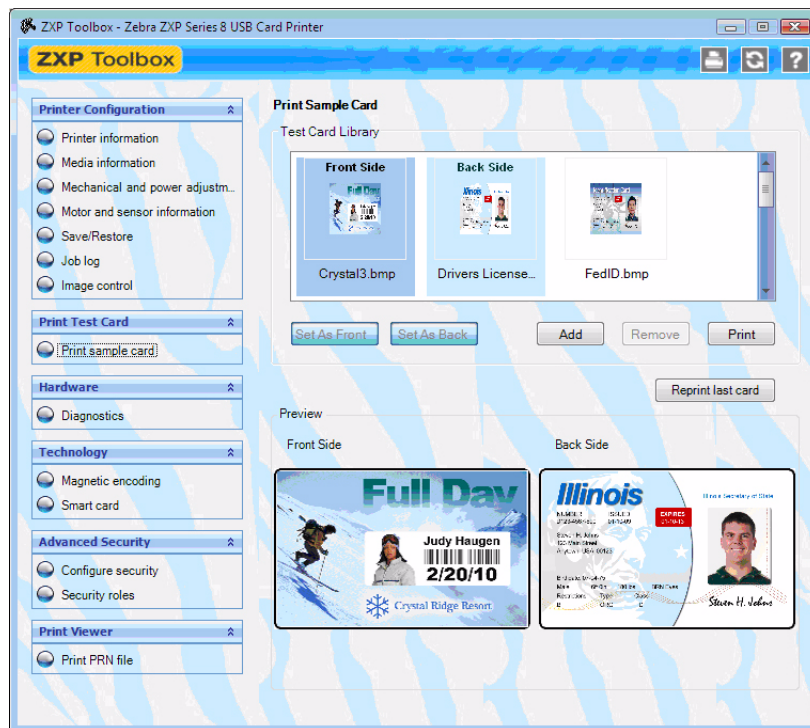
### Print sample card



**Note** • The sample cards in the Test Card Library are .bmp images stored in the following default directory/folder:

*C:\Documents and Settings\All Users\ZMotif\Library*

1. View the Test Card Library. Use the scrollbar to view all the selections.



2. Set the front side:
  - a. Select (click on) a card from the Test Card Library.
  - b. Click on the **Set As Front** button.
  - c. View the selected card in the Preview.
  - d. To change your selection, repeat steps **a** through **c**.
3. Set the back side: same as step 2, except click on the **Set As Back** button.
4. When satisfied with your selection, click on the **Print** button to print the sample card.

The **Reprint last card** button sends a command to the printer to print the last card.

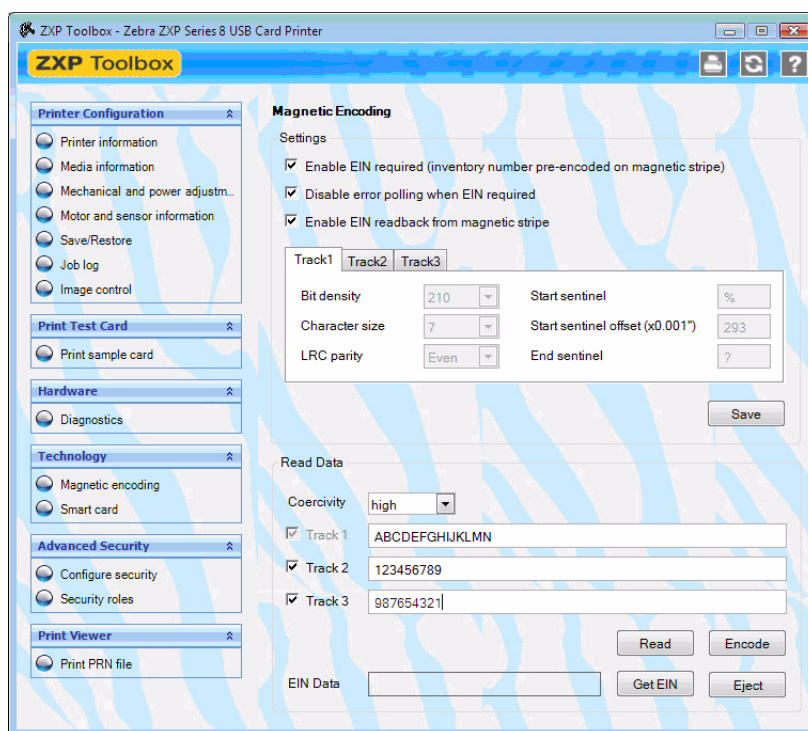
## Technology



**Note** • Magnetic Encoding and Smart Card default values are set via the *Card type in use* option in the Card Setup tab, [see page 45](#))

### Magnetic encoding

The Magnetic Encoding screen allows the user to test various magnetic encoding options. For more information on magnetic encoding, refer to [Appendix B](#).



Settings: Click on the appropriate checkboxes to enable/disable EIN options.

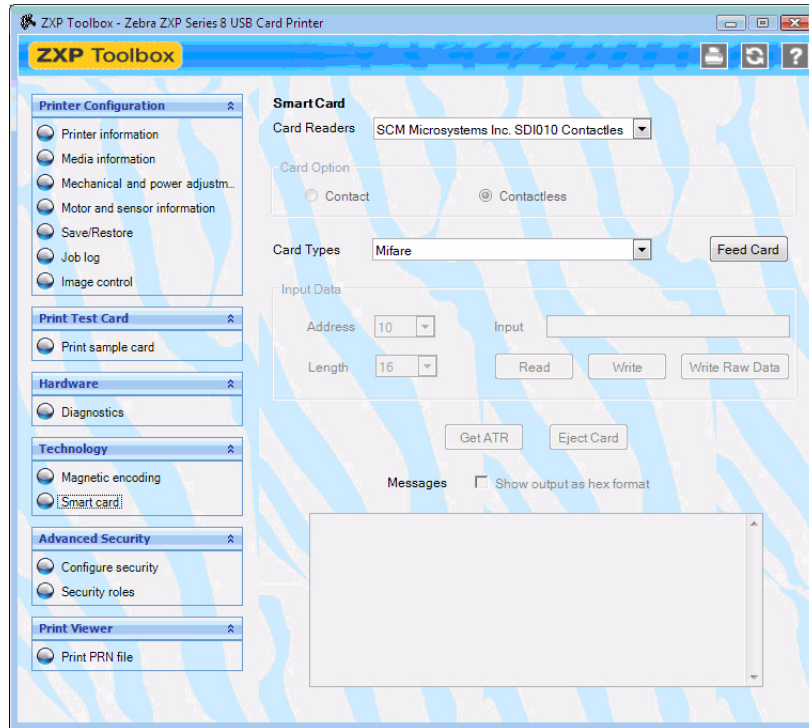
- Enable EIN required (inventory number pre-recorded on magnetic tape)
- Disable error polling when EIN required
- Enable EIN Readback from magnetic stripe

Read Data:

- Coercivity: Select either high or low.
- For encoding: Click on the checkboxes to select Track 1, Track 2, and/or Track 3; enter the data to be written; and click on the **Encode** button.
- For reading: Click on the checkboxes to select **Track 1**, **Track 2**, and/or **Track 3**; click on the **Read** button, and validate the data read.

## Smart card

The Smart Card screen allows the user to test various smart card encoding options. For more information on smart card encoding, refer to [Appendix C](#).



- Card Readers: Select the card reader from the drop-down menu.
  - Card Option: Select either Contact or Contactless.
- Card Types: Select the card type from the drop-down menu.
  - The **Feed Card** button feeds the card into the printer.
  - Input Data includes address, length, and input.
    - Click on the **Read** button to read data from the card.
    - Click on the **Write** button to write data to the card.
    - Click on the **Write Raw Data** button to write “raw data” to a card.
- The **Get ATR** button returns the ATR (Answer To Reset) result from the card reader. This is useful to identifying the type of smart card inserted into the printer.
- The **Eject Card** button ejects the card.
- Click on the Messages checkbox to show the output in hex format.

## Advanced Security



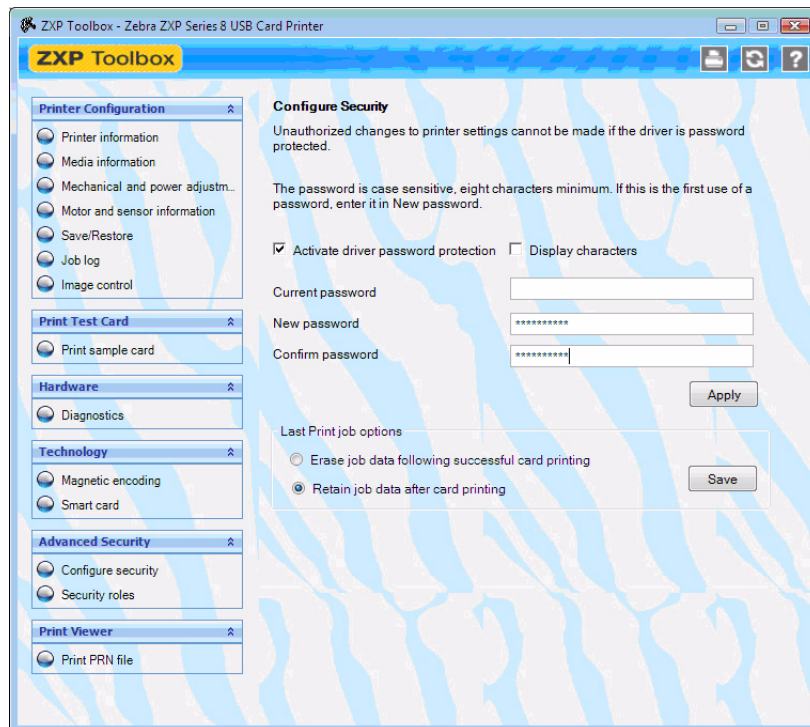
**Important** • To manage this Advanced Security section, you are required to be the administrator of the computer or have administrative privileges.

### Configure security

Enabling driver password protection prevents unauthorized persons from changing the printer driver settings. Access to various driver adjustment screens can be selectively disabled based on the Windows User Login.

To activate Driver Password Protection:

1. Click on the *Activate driver password protection* checkbox.



2. Enter the old password in the *Current password* field (leave blank if this is the first use of a password).
3. Enter the new password on the *New password* field.
4. Repeat the password in the *Confirm password* field.
5. Click on the **Apply** button.

Last Print Option: The *Retain job data after card printing* option allows the print job to remain in memory for multiple prints via the OCP.

## Security roles

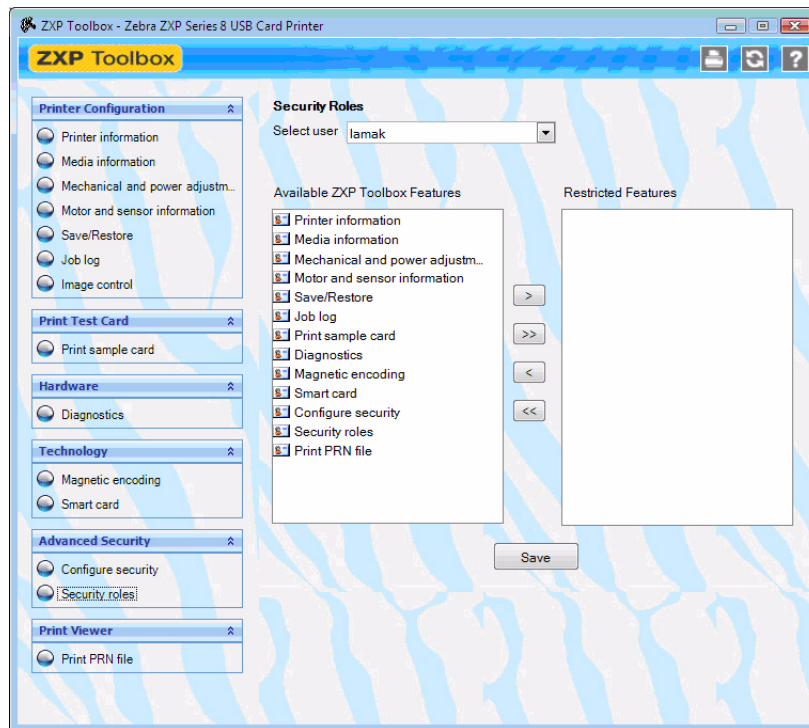
Use this section to establish security roles; i.e., grant and restrict access to various printer ToolBox screens.



**Note •** The list of users in the drop-down menu (e.g., Guest, HelpAssistant, Local User, localfix, etc.) is derived from the list of users on the system.

To set security access roles:

1. Select a user from the drop-down menu.



2. Use the arrow buttons (>, >>, <, and << ) to make specific features available to or restrict specific features from the selected user role.
3. When satisfied with the selection, click on the **Save** button.

At the next log in, the user will only see or have access to the features previously granted.



## Print Viewer

When you print a PRN file, you print directly to the printer, bypassing computer applications and associated printer drivers. This utility can be used to ensure that your printer is working properly by isolating it from driver-related and communication-related issues.

### Print PRN file



**Note** • Sample PRN files are stored in the following default directory/folder:  
*C:\Documents and Settings\All Users\ZMotif\Library*

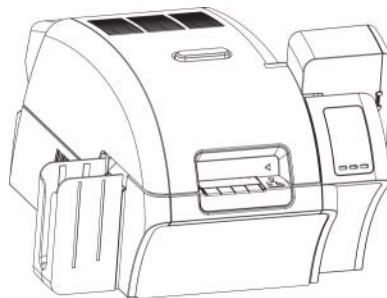
To send a PRN file to the printer:

1. Click on the **Browse** button.



2. From the Browse window, locate and select a PRN file.
3. Click on the **Open** button.
4. View the PRN file.
5. When satisfied with the selection, click on the **Print** button.

Successfully printing the PRN file indicates that the printer and data communications to the printer are set up and configured properly.







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# Cleaning

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**Caution • PROTECT YOUR FACTORY WARRANTY!**



The recommended cleaning procedures must be performed to maintain your factory warranty. Other than the recommended cleaning procedures described in this manual, allow only Zebra authorized technicians to service the Printer.

**NEVER** loosen, tighten, adjust, bend, etc., any part or cable inside the printer.

**NEVER** use a high pressure air compressor to remove particles in the printer.

---

## Cleaning the Printer

Clean your Printer using the Cleaning Cards provided. The regular use of these cards will clean and maintain important parts of your printer that cannot be reached, including the Printhead, Transport Rollers, and optional Magnetic Encoder Station.

### When to Clean

- X-Roller and Y-Roller cleaning should occur every 5 thousand cards.
- Heated Roller cleaning should occur every 20 thousand cards.

## Cleaning the Rollers



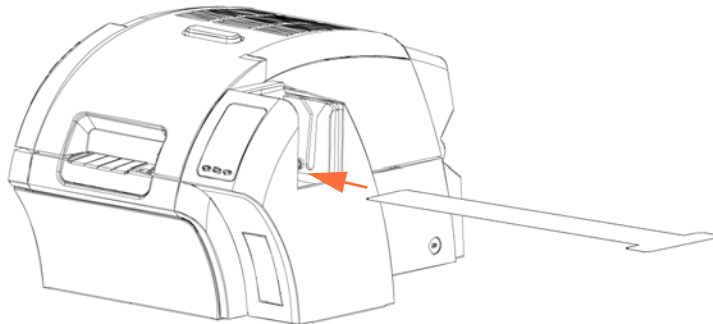
**Note** • Do not use previously used cleaning cards.

**Step 1.** Initiate the cleaning process.

- a. Press the MENU button on the Operator Control Panel (OCP). The OCP will display the Main Menu.
- b. Scroll through the Main Menu, and select Advanced Settings. The OCP will display the Advanced Settings Menu.
- c. Scroll through the Advanced Settings Menu, and select Clean Printer. The OCP will display the Clean Printer Menu.

**Step 2.** Clean the X-Drive Rollers.

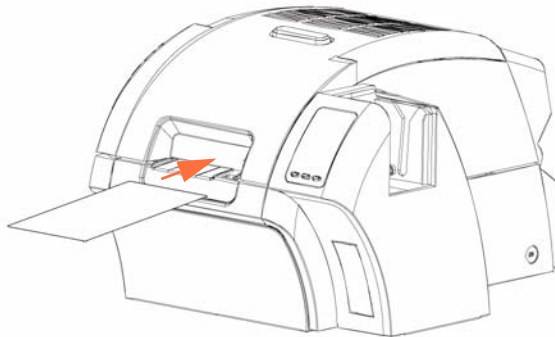
- a. Select *Clean Card Side Path* to run the X-Roller Cleaning Routine.
- b. Use X-Path Cleaning Card 211973-001.
- c. Follow the OCP instructions.



- d. When complete, the OCP will return to the Clean Printer Menu.

**Step 3.** Clean the Y-Drive Rollers.

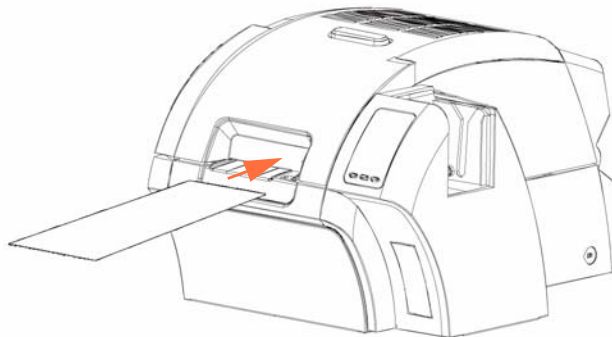
- a. Select *Clean Card Front Path* to run the Y-Roller Cleaning Routine.
- b. Use Y-Path Cleaning Card 211974-001.
- c. Follow the OCP instructions.



- d. When complete, the OCP will return to the Clean Printer Menu.

**Step 4.** Clean the Heated Rollers.

- a. Select *Clean Heated Roller Path* to run the Heated Roller Cleaning Routine.
- b. Use Heated Roller Cleaning Card 211975-001.
- c. Follow the OCP instructions.

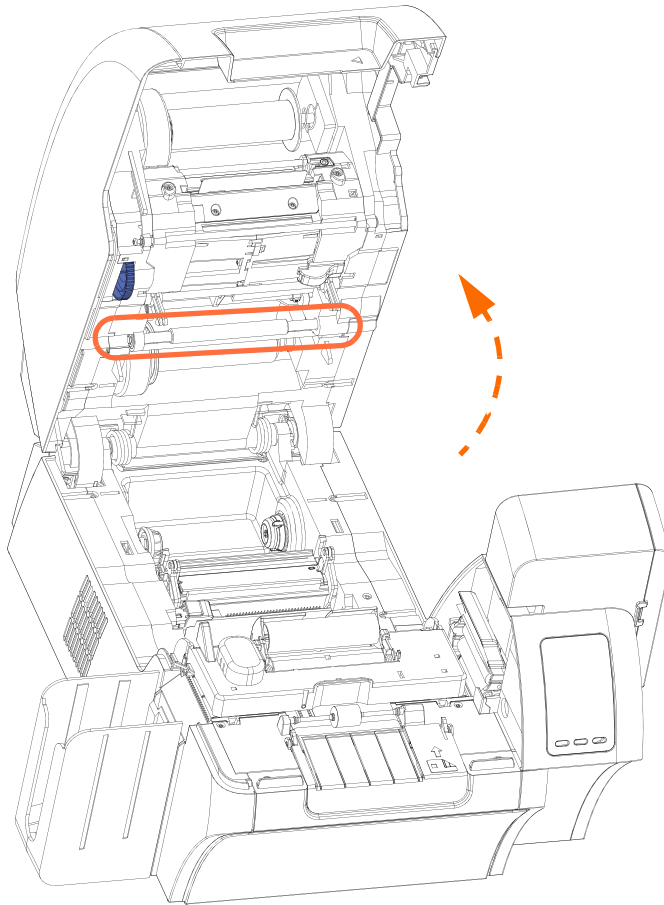


- d. When complete, the OCP will return to the Clean Printer Menu.

Exit the Printer Menus by selecting RETURN at each menu level (Clean Printer Menu, Advanced Settings Menu, and Main Menu).

## Cleaning the Platen

- Step 1.** Open the printer Door.
- Step 2.** Remove the Transfer Film.
- Step 3.** Manually run the Heated Roller Cleaning Card over the Platen (circled below).



- Step 4.** Install the Transfer Film.
- Step 5.** Close the printer Door.

## Cleaning the Printhead

A cleaning using the Cleaning Cards usually suffices; however, a separate Printhead cleaning can remove more stubborn deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs.




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**Caution** • Never use a sharp object or any abrasive to scrape deposits from the Printhead. Permanent damage to the Printhead will result.

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

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- Step 1.** Place the printer power switch in the OFF position.
- Step 2.** Open the Door, and remove the print ribbon.
- Step 3.** Bend the Cleaning Swab to release the cleaning fluid.
- Step 4.** Clean Printhead by moving Cleaning Swab tip side-to-side across the Printhead elements. Only use moderate force. To re-order Cleaning Swabs, see the Media List on the *User Documentation, Drivers, and Training CD* supplied with this printer.
- Step 5.** Reinstall the print ribbon, and close the Door.
- Step 6.** Place the printer power switch in the ON position.

## Card Cleaning Cartridge

The Card Cleaning Cartridge cleans the cards entering the printer through the card feeder. To ensure print quality, the cleaning roller requires periodic replacement. New cleaning rollers are included with each print ribbon or may be purchased separately. (To reorder, please refer to the Media List on the *User Documentation, Drivers, and Training CD* supplied with this printer.)

Installation of the Card Cleaning Cartridge is described in [Section 2](#) and is not repeated in detail here.



**Note** • Before replacing the Card Cleaning Cartridge or its adhesive roller, clean the Printer using the Cleaning Cards as described earlier in this chapter.

## Cleaning Roller

The Cleaning Roller cleans the cards entering the Printer from either the Input Hopper or the Single-Feed Input. To ensure print quality, the cleaning roller requires periodic replacement. A new cleaning roller is included with each print ribbon or may be purchased separately. (To reorder, please refer to the Media List on the *User Documentation, Drivers, and Training CD* supplied with this printer.)

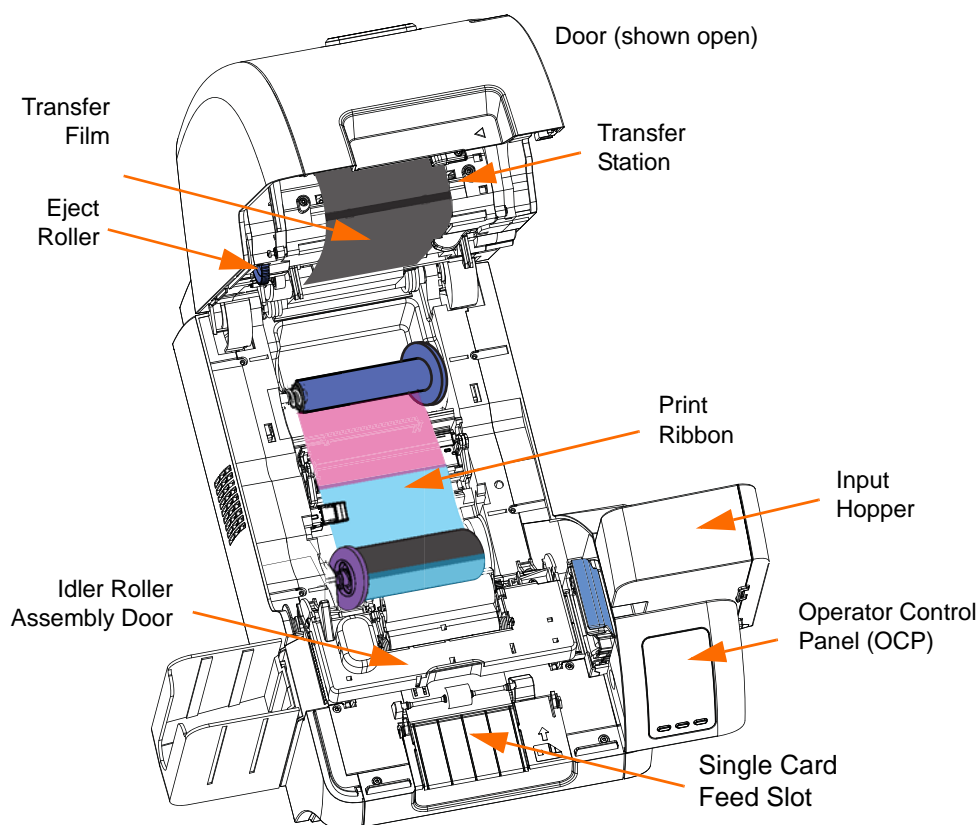
Installation of the Card Roller is described in [Section 2](#) and is not repeated in detail here



# Troubleshooting

The table on the next page offers causes and solutions to symptoms related to improper operation. Check the table when experiencing any loss of operation or print quality.

Use the following figure in conjunction with the table to help locate the possible cause and effect a solution.



## Operational Issues

The following table lists the Operator Control Panel (OCP) Error Messages, possible causes, and possible solutions.

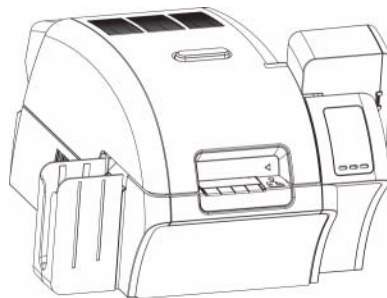
ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
CARD CLEAN ERROR	Faulty Card Cleaning Roller (if error during single card feed) or Card Cleaning Cartridge (if cards fed from Input Hopper)	Replace the Card Cleaning Roller or Card Cleaning Cartridge, as appropriate
CARD FEED ERROR	Card is jammed in Input Hopper	a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper b. Ensure that cards are not stuck together and that they are the correct thickness
CARD JAM	Card is jammed in Card Transport or Transfer Station	Check the card path: a. Idler Roller Assembly (open door) b. Transfer Station (rotate the eject roller CCW)
CARD NOT DETECTED	Card did not reach card sensor or is jammed in Input Hopper or Card Transport	a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper b. Ensure that cards are not stuck together and that they are the correct thickness c. Check Idler Roller Assembly (open door)
CARD NOT INSERTED	Card was not fed into Single Card Feed Slot within nominal 30-second period	Retry and feed card into the Single Card Feed Slot, or cancel the operation
COLOR DETECT ERROR	Print ribbon is not installed correctly	Reinstall the print ribbon
CONTACT READ ERROR	Data cannot be read from the Contact Smart Card	a. Ensure that you are using the correct card type b. Check that the cards are loaded in the correct orientation (normally this will be with the contact pad up and toward the left) c. In the Encoding tab of the driver Printing Preferences, check that Smart Card Encoding Type is set to Contact d. Ensure that the data conforms to ISO Specifications e. Retry reading



ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
CONTACT ENCODE ERROR	Data cannot be written to the Contact Smart Card	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. Check that the cards are loaded in the correct orientation (normally this will be with the contact pad up and toward the left)</li> <li>c. In the Encoding tab of the driver Printing Preferences, check that Smart Card Encoding Type is set to Contact</li> <li>d. Ensure that the data conforms to ISO Specifications</li> <li>e. Retry writing</li> </ul>
CONTACTLESS READ ERROR	Data cannot be read from the Contactless Smart Card	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. In the Encoding tab of the driver Printing Preferences, check that Smart Card Encoding Type is set to Contactless</li> <li>c. Ensure that the data conforms to ISO Specifications</li> <li>d. Retry reading</li> </ul>
CONTACTLESS ENCODE ERROR	Data cannot be written to the Contactless Smart Card	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. In the Encoding tab of the driver Printing Preferences, check that Smart Card Encoding Type is set to Contactless</li> <li>c. Ensure that the data conforms to ISO Specifications</li> <li>d. Retry writing</li> </ul>
DIAGNOSTIC ERROR	There is a problem with the Print Engine Processor	<ul style="list-style-type: none"> <li>a. Power cycle the printer</li> <li>b. Contact Zebra Technical Support</li> </ul>
DOOR OPEN	Door is ajar	Verify the Door is completely closed
EP SCRIPT ERROR	Internal logic error	<ul style="list-style-type: none"> <li>a. Power cycle the printer</li> <li>b. Contact Zebra Technical Support</li> </ul>
FIRMWARE UPGRADE ERROR	Invalid firmware version selected	Verify the version, and retry updating the firmware
GENERAL MEMORY ERROR	There is a problem when accessing memory	<ul style="list-style-type: none"> <li>a. Power cycle the printer</li> <li>b. Contact Zebra Technical Support</li> </ul>
GENERAL SYSTEM FAULT	Internal logic error	<ul style="list-style-type: none"> <li>a. Power cycle the printer</li> <li>b. Contact Zebra Technical Support</li> </ul>
HCB BULB ERROR	The Heater Controller Board (HCB) is unable to pulse the upper and lower heaters to bring the upper and lower rollers to the proper temperature	Contact Zebra Technical Support

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
HCB SENSOR ERROR	The Heater Controller Board (HCB) is unable to detect temperature of the upper or lower rollers	Contact Zebra Technical Support
HEAD TEMP ERROR	Printhead temperature out of proper range	Contact Zebra Technical Support
INVALID CARD TYPE	Encoding error	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. In the Encoding tab of the driver Printing Preferences, check that the settings are correct for the cards you are using</li> <li>c. Ensure that the data conforms to ISO Specifications</li> <li>d. Retry writing and reading</li> </ul>
INVALID RIBBON	Print ribbon does not match the printer	Verify the part number of the print ribbon is correct
INVALID TRANSFER FILM	Transfer Film does not match the printer	Verify the part number of the Transfer Film is correct
MAG READ ERROR	<ul style="list-style-type: none"> <li>• Encoding error</li> <li>• Defective magnetic stripe</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally this will be with the stripe down and toward the rear of the printer)</li> <li>c. Ensure that the cards are set-up correctly in the printer driver (coercivity setting)</li> <li>d. Ensure that the data conforms to ISO Specifications</li> <li>e. Retry reading</li> </ul>
MAG ENCODE ERROR	<ul style="list-style-type: none"> <li>• Encoding error</li> <li>• Defective magnetic stripe</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure that you are using the correct card type</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally this will be with the stripe down and toward the rear of the printer)</li> <li>c. Ensure that the cards are set-up correctly in the printer driver (coercivity setting)</li> <li>d. Ensure that the data conforms to ISO Specifications</li> <li>e. Retry writing</li> </ul>
MISSING HCB ERROR	There is a problem with the Heater Controller Board (HCB)	Contact Zebra Technical Support

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
MISSING MAB ERROR	An error occurred when reading the RFID Tag by the MAB (Media Authentication Board)	a. Check the print ribbon orientation b. Verify the part number of the print ribbon
MOTOR VOLTAGE ERROR	Incorrect voltage detected at one or several motors in the unit	a. Power cycle the printer b. Contact Zebra Technical Support
NO MAG STRIPE	Mag stripe not detected	a. Ensure that you are using the correct card type b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally this will be with the stripe down and toward the rear of the printer)
OUT OF CARDS	<ul style="list-style-type: none"> <li>The Input Hopper is empty</li> <li>Card is stuck in Input Hopper</li> </ul>	a. Load cards in the Input Hopper b. Re-seat the Input Hopper
OUT OF RIBBON	The print ribbon has run out	Load a new roll of print ribbon
OUT OF TRANSFER FILM	The Transfer Film has run out	Load new roll of Transfer Film
PRINT HEAD MOTION ERROR	Printhead did not move to proper position during initialization	a. Power cycle the printer b. Contact Zebra Technical Support
RIBBON JAM	The print ribbon is jammed	a. Check the print ribbon b. Reinstall the print ribbon c. Repair the break in the print ribbon and reinstall
RIBBON MOTION ERROR	Ribbon not correctly responding to motion commands	a. Check the print ribbon b. Reinstall the print ribbon c. Repair the break in the print ribbon and reinstall
ROLLERS OVER TEMP	Heated Rollers (used to transfer the image from the Transfer Film to the Card) are too hot for proper operation	Turn off power, and contact Zebra Technical Support
ROLLERS UNDER TEMP	Heated Rollers (used to transfer the image from the Transfer Film to the Card) are not hot enough for proper operation	Turn off power, and contact Zebra Technical Support
SYSTEM ERROR	Internal logic error	a. Power cycle the printer b. Contact Zebra Technical Support
SYSTEM NOT READY	A problem was detected during printer start-up	a. Power cycle the printer b. Contact Zebra Technical Support
TRANSFER FILM MOTION ERROR	Transfer Film not correctly responding to motion commands	a. Check the Transfer Film b. Reinstall the Transfer Film
TRANSFER FILM JAM	The Transfer Film is jammed	a. Check the Transfer Film b. Reinstall the Transfer Film c. Repair the break in the Transfer Film and reinstall





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# Technical Specifications

## Standard Features

- Thermal transfer and dye diffusion to transfer film
- Full color or monochrome reverse transfer printing
- Single- and dual-sided printing
- Max print speed single-side 150 cph
- Max print speed dual-sided 120 cph
- Photo quality image
- Over-the-edge printing on standard CR80 media
- Microsoft Windows Certified drivers
- Single-card feed capability
- 150 card capacity feeder (30 mil)
- 15 card reject hopper (30 mil)
- 100 card output hopper (30 mil)
- i Series™ intelligent media technology
- Auto calibration of media
- 21-character soft menu LCD text operator display
- 304 dpi (12.0 dots/mm) print resolution
- 64MB memory standard
- 2-year unlimited warranty on printer, lifetime limited warranty on printhead with Genuine Zebra Supplies

## Specifications

### Encoding Options

- Smart card contact encoder – ISO 7816, PC/SC Compliant
- Magnetic stripe encoder – ISO 7811 and JIS-II (new and re-encoded; tracks 1, 2, and 3; high and low coercivity; stripe down; 30 - 40 mil card thickness)
- Contact smart card encoder – EMV level 1 certified
- ISO 14443 MIFARE (13.56 MHz) and ISO 7816 contact encoder combo

### Communications Interfaces

- USB V2.0 / 1.1 protocol
- USB supports plug-n-play printer identification
- USB and internal 10/100 Ethernet (Standard)

### Software

#### Microsoft Windows Certified Printer Drivers Supported

- Windows 2000, Windows XP\*, Windows Vista\*, Windows Server 2003\*
- \*32-bit and 64-bit certified

#### Driver Features

- Graphical card orientation setting to visualize card printing setup and configuration
- Card type setting eliminates unnecessary setup and configuration settings
- Complete graphical control over area and element selection of black extraction parameters insures true black and color printing exactly where you want it on the card
- Auto sensing of print ribbon type
- Optional driver password protection setting to prevent accidental or unauthorized driver configuration changes

#### ZXP Toolbox

- Printer configuration tools and utilities for complete control over all printer functions and features
- User role-based features enables true security printer operations
- Complete technology card management enables setup and testing of all printer and encoder features and functionality
- Printer test cards and diagnostics utilities ensure error free printing and fast troubleshooting capabilities

## Card Compatibility

- Card Thickness: 30 – 40 mil
- Card Size: ISO 7810 format, Type ID-1, CR-80
- Card Material: PVC, Composite

## Agency Approvals

Zebra ZXP Series 8 Card Printer complies with following applicable directives and standards for the ITE: Residential, Commercial & Light Industry environments

- For US/Canada/Mexico/Australia&NZ:
  - FCC Class A, cfr47, Part 15 Subpart J
  - FCC 15.257 2008, Part15 Subpart C
  - Canadian STD RSS-210
  - NOM-ETL (Mexico)
  - EN60950: 2000 Safety Standard (TUV & RTL)
  - C-Tick (Australia) Electromagnetic Radiation Standard
- For Europe:
  - Applicable Directives and Supporting Standards:
 

2004/108/EC EMC Directive, EN55022:2006 Class A, EN55024:1998+AD1:2001+AD2:2003, EN61000-3-2:2006, EN61000-3-3:1995+AD1:2001, 2006/95/EC LVD Directive, EN60950-1:2001, CB Scheme
  - WLAN Enabled
 

Applicable Directives and Supporting Standards:

99/5/EC R&TTE Directive, EN 301 489-17 V1.2.1 (2002-08), EN 300 328 V1.7.1 (2006-10)
  - RFID Enabled
 

Applicable Directives and Supporting Standards:

99/5/EC R&TTE Directive, EN 301 489-3 V1.4.1 (2002-08), EN 300 220-2 V2.1.2 (2007-06)

## Electrical

- Auto-switching Single-phase AC power
- 90V~264V AC RMS and 47-63 HZ (50-60 Hz nominal)
- Power consumption:

Idle	100 W
Printing	150 W
Initializing / Warm-up	300 W
Sleep	20 W

## Physical

- Height (printer only) 11.9" (303 mm)
- Height (with card feeder) 13.2" (334 mm)
- Width 14" (356 mm)
- Width (with card feeder) 14.9" (379 mm)
- Depth 20.4" (519 mm)
- Weight (printer only) 27.5 lbs (12.5 kg)

## Environmental

- Operating Temperature 59° to 95°F (15° to 35°C)
- Storage Temperature 23° to 131° F (-5° to 55°C)
- Operating Humidity 20% to 80% non-condensing
- Storage Humidity 10% to 90% non-condensing
- Shipping Temperature -40° to 140°F (-40° to 60°C)
- Shipping Humidity 10 to 90% non-condensing



## Declarations of Conformity



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### ZEBRA TECHNOLOGIES CORPORATION

Declares that the following Information Technology Equipment

#### Zebra ZXP Series 8 Card Printer

complies with following applicable directives and standards for the  
ITE: Residential, Commercial & Light Industry environments

#### Applicable Directives and Supporting Standards:

2004/108/EC EMC Directive, EN55022:2006 Class A,  
EN55024:1998+AD1:2001+AD2:2003EN61000-3-2:2006, EN61000-3-3:1995+AD1:2001,  
2006/95/EC LVD Directive, EN60950-1:2001, CB Scheme

#### RFID Enabled

Applicable Directives and Supporting Standards:  
99/5/EC R&TTE Directive, EN 301 489-3 V1.4.1 (2002-08), EN 300 220-2 V2.1.2 (2007-06)

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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"

## FCC Regulations

The Zebra ZXP Series 8 Card Printer 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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and operated in accordance with the Zebra ZXP Series 8 Card Printer User's Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

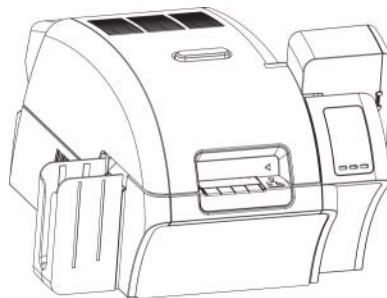
Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Zebra may cause harmful interference and void the FCC authorization to operate this equipment.

### FCC Radiation Exposure Statement (applicable to 15.247 device only)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum 20 cm between the radiator and your body. This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC.

## Industry Canada Notice

This device complies with Industry Canada ICES-003 class A requirements.  
Cet équipement est conforme à l'ICES-003 classe A de la Norme Industrielle Canadienne.



# *APPENDIX A*

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## Printer Configurations



### **Introduction**

The Part Number of a particular printer is shown on a label affixed to the bottom of the printer; that Part Number identifies the specific configuration for that printer. The chart on the following page shows the configurations that are available.

## Part Numbers

PART NUMBER		DESCRIPTION
Z 8 _		<b>Base Unit</b>
_ _ 1	-	Single-Sided Printing
_ _ 2	-	Dual-Sided Printing
_ _ _	-	<b>Smart Card Options</b>
_ _ _	-	None
_ _ _	-	Contact Encoder + Contactless MIFARE
_ _ _	-	Contact Station
_ _ _	-	<b>Mag Encoders</b>
_ _ _	-	None
_ _ _	-	ISO HiCo/LoCo Mag S/W Selectable
_ _ _	-	<b>Security Options</b>
_ _ _	-	None
_ _ _	-	Enclosure Lock
_ _ _	-	<b>Interface</b>
_ _ _	-	USB and 10/100 Ethernet
_ _ _	-	<b>Software/Kit</b>
_ _ _	-	None
_ _ _	-	Media Starter Kit (includes: 1 YMCK ribbon kit, 1 roll of InTM, 200 PVC cards)
_ _ _	-	<b>Miscellaneous</b>
_ _ _	-	None
_ _ _	-	<b>Country Code</b>
_ _ _	-	Country Code
_ _ _	-	<b>Custom Code</b>
_ _ _	-	Reserved for future options

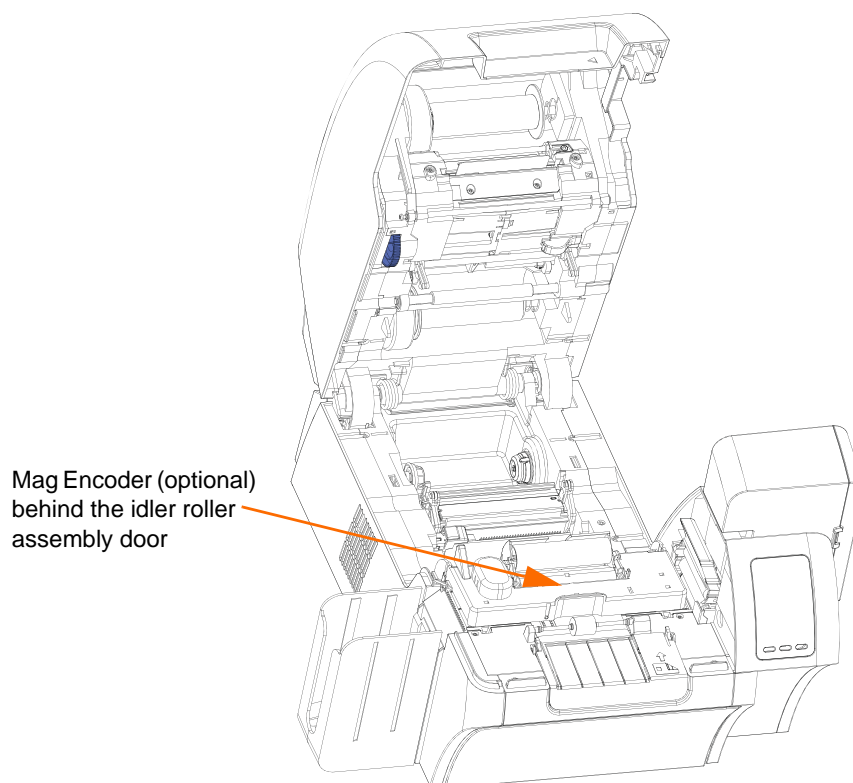
# Appendix B

## Magnetic Card Encoder



### Introduction

This Appendix includes operation and maintenance requirements for Printers with the optional magnetic card stripe encoder.



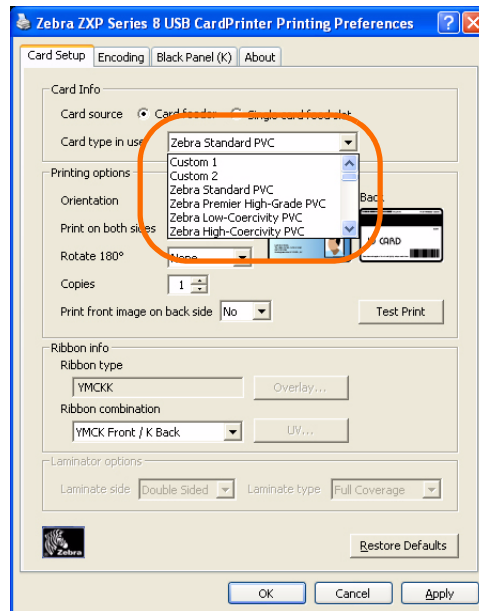
The magnetic encoder can be set for either high or low coercivity. Use the printer driver to change the encoder setting.

## Driver Setting

The **Card Setup** tab allows the user to specify the Magnetic Encoder Card Type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum performance.

If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



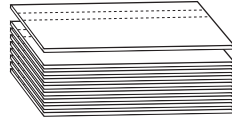
- Make the appropriate Magnetic Encoder Card Type selection.

## Media Loading Orientation



**Note** • ONLY USE cards that comply with ISO 7810 and 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.

When loading cards with magnetic stripes into the card feeder, ensure that the magnetic stripe is down and to the rear of the printer.



## Magnetic Encoder Cleaning

The Magnetic Encoder is cleaned as part of the printer cleaning process; see [Section 6](#). If the frequency of encoding errors increases, the head may need cleaning. To avoid deposits, only use foam-tipped swabs.

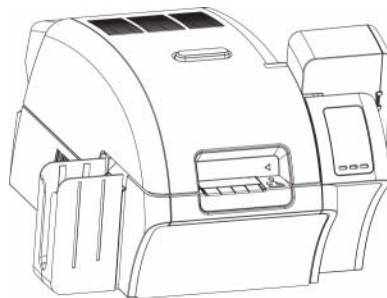


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**Caution** • Never use a sharp object or any abrasive to scrape deposits from the Magnetic Encoder. Permanent damage to the Magnetic Head will result.

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- Step 1.** Open the Door.
- Step 2.** Open the idler roller assembly door.
- Step 3.** Bend the Cleaning Swab to release the cleaning fluid.
- Step 4.** Clean the Magnetic Encoder by moving Cleaning Swab tip side-to-side across the head elements. To re-order Cleaning Swabs, see the Media List on the *User Documentation, Drivers, and Training CD* supplied with this printer.
- Step 5.** Close the idler roller assembly door.
- Step 6.** Close the Door.





# *APPENDIX C*

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## Smart Card Options



### **Introduction**

This section contains information on the additional operations of a Printer equipped with one or more of the available Smart Card options.

Smart Cards can have a built-in microcomputer and/or memory to store fingerprints, voice recognition patterns, medical records, and other such data. All other printer operations remain the same as the standard models.

## Encoding and Reading Smart Cards

Encoding data onto Smart Cards and reading the data previously encoded on them is totally under control of the application software; no operator action is required.

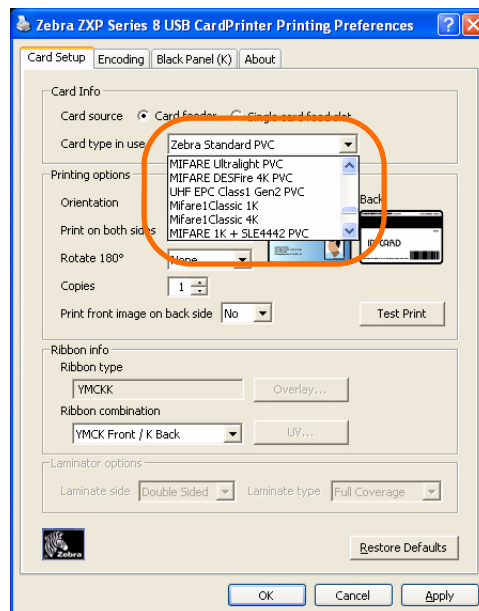
If you experience any problems with encoding or reading data, refer to the users manual or other documentation for the application software.

## Driver Setting

The **Card Setup** tab allows the user to specify the Smart Card Type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum printer performance.

If your card type is not listed in the drop-down menu, select *Custom* and fill out the Card Specifications pop-up screen.

To access the Card Setup Tab, select *Start > Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences > Card Setup*.



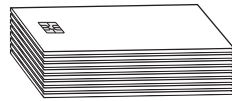
- Make the appropriate Smart Card Type selection.

## Contact Smart Cards

Contact Smart Cards have a pad of contacts on the surface of the card that connect to the circuitry embedded into the card. The printer responds to commands that position the card at the contact location, where the printer connects to the contacts on the Smart Card. Data to be encoded onto the Smart Card, and data read from the Smart Card, can interface via a connector on the printer's rear panel ("Contact Station"), or encoding/decoding can be performed by logic on the printer's Main PCBA ("Contact Encoder"). All other printer operations remain the same as the standard models.

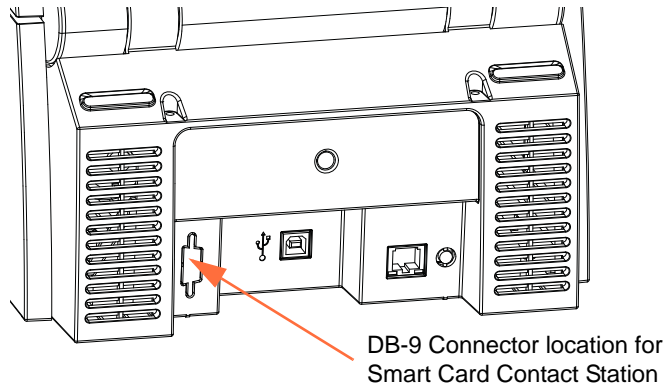
### Media Loading Orientation for Contact Smart Cards

Orient the cards with the gold-plated Smart Card contacts at the top surface of the card and facing to the left.



### Contact Station Smart Card Interface

When a command to the printer interface sends a card to the Smart Card Contact Station, the printer connects the Smart Card Contact Station to the female DB-9 connector on the rear of the printer.



An attached external Smart Card Programmer can be used to program Smart Card chips. The following table shows the Smart Card Contact Points.

Pin	Smart Card Contact Points	DB-9	Smart Card Contact Points
1	C1 (VCC)	6	C6 (Vpp)
2	C2 (Reset)	7	C7 (I/O)
3	C3 (Clock)	8	C8 (RFU)
4	C4 (RFU)	9	(GND when chip is at station)
5	C5 (GND)		

## Contactless Smart Cards

Rather than using a contact pad, Contactless Smart Cards use various short-range radio technologies to “connect” to the printer. The printer moves the card to an antenna location on the card path, and the encoding or decoding occurs. All other printer operations remain the same.

### Media Loading Orientation for Contactless Smart Cards

For Contactless Smart Cards, orientation is not a consideration.

### Printing on Contactless Smart Cards

With reverse transfer printing technology, there are no restrictions when designing material to be printed on Contactless Smart Cards.

# Appendix D



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## Packing the Printer for Shipment

### Introduction

If the printer is to be shipped, it is important to use the original packing and shipping material to prevent damage to the Printer.

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.

### Procedure



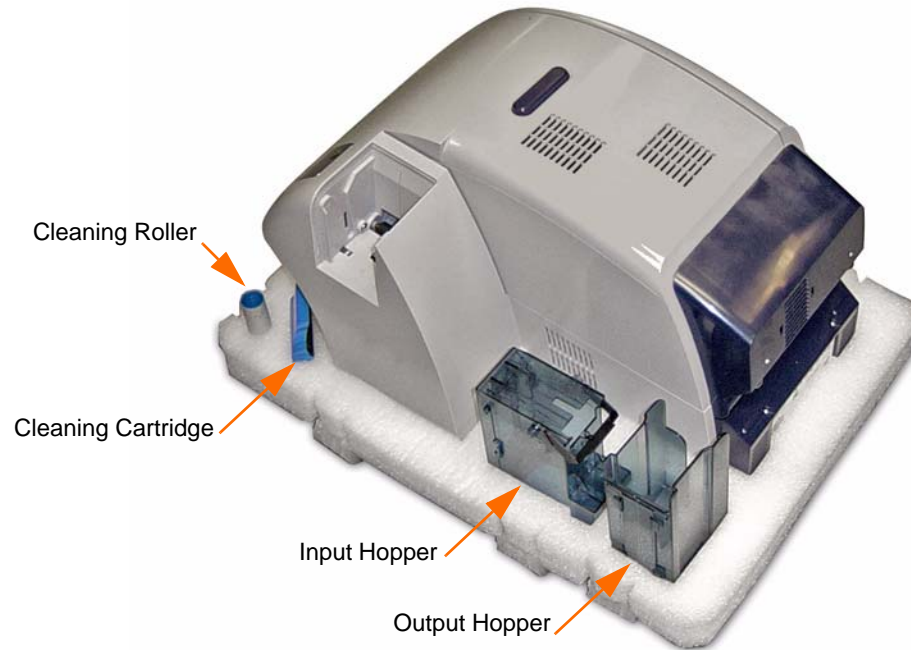
**Note** • The specifics of the shipment and the printer's condition may influence which of the following steps are followed; common sense should prevail.

- Step 1.** Remove any cards from the Input and Output Hoppers.
- Step 2.** If the printer still has power applied and is turned on and is still connected to the host computer, set the printer's power switch (on the back of the printer) to the OFF ( O ) position; and disconnect the interface and power cables to the printer.
- Step 3.** Open the printer Door.
- Step 4.** Remove the Print Ribbon and Transfer Film. (If you wish to save the print ribbon and film for future use, you may want to put them in a plastic bag for storage.)
- Step 5.** Remove the Cleaning Cartridge and Cleaning Roller, and place them in the foam insert.
- Step 6.** Close the printer Door.

**Step 7.** Remove the Input and Output Hopper, and place them in the foam insert.



**Note •** In the figure below, the printer and accessories are shown in the bottom foam insert, out of the shipping carton for clarity.



**Step 8.** Place the Printer in its protective plastic bag.

**Step 9.** Place the lower foam insert in the Shipping Carton.

**Step 10.** Use both hands to carefully place the Printer into the recess in the lower foam insert.

**Step 11.** Place the upper foam insert onto the Printer, and gently press it down so it makes a snug fit on the Printer -- the top of the upper foam insert should be even with the upper edge of the Shipping Carton.

**Step 12.** Close the Shipping Carton.

**Step 13.** Tape the Shipping Carton securely.

# Appendix E



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## Worldwide Support

For Technical Support or Repair Services, contact the appropriate facility listed below.

### North America and Latin America - Technical Support

Zebra Technologies Card Printer Solutions  
1001 Flynn Road  
Camarillo, CA 93012-8706 USA

Phone: +1 800 511 9909 (when calling from within the U.S.)  
+1 805 577-7002, option 1 (when calling from Latin America)  
email: techsupport@zebra.com

### North America and Latin America - Repair Services

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Services 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 either address listed below:

Zebra Technologies Card Printer Solutions  
1001 Flynn Road  
Camarillo, CA 93012-8706 USA

Phone: +1 800 452 4034  
+1 805 578 1201  
email: repair-ca@zebra.com

Zebra Technologies Card Printer Repair Services  
333 Corporate Woods Parkway  
Vernon Hills, IL 60061

Phone: 1-877-275-9327  
email: repair@zebra.com  
webform: [www.zebra.com/repair](http://www.zebra.com/repair)

## **Europe, Middle East, and Africa - Technical Support**

Zebra Technologies Card Printer Solutions  
Dukes Meadow  
Millboard Road, Bourne End  
Buckinghamshire SL8 5XF, UK

Phone: +44 (0) 1628 556 000  
FAX: +44 (0) 1628 556 001  
e-mail: [cardts@zebra.com](mailto:cardts@zebra.com)

## **Europe, Middle East, and Africa - Repair Services**

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Services 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:

Zebra Technologies Card Printer Solutions  
Pittman Way  
Fulwood, Preston  
Lancashire PR2 9ZD, UK

Phone: + 44 (0) 177 2 69 3069  
FAX: + 44 (0) 177 2 69 3046  
email: [ukrma@zebra.com](mailto:ukrma@zebra.com)

## **Asia Pacific - Technical Support and Repair Services**

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Services 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:

Zebra Technologies Card Printer Solutions  
120 Robinson Road  
#06-01 Parakou Building  
Singapore 068913

Phone: + 65 6885 0833  
e-mail: [esoh@zebra.com](mailto:esoh@zebra.com)

## **Website**

[www.zebracard.com](http://www.zebracard.com)