



Zebra® ZXP Series 3™ Card Printer

User's Manual

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Getting Started



This manual contains installation and operation information for the Zebra ZXP Series 3 Card Printer, manufactured by Zebra Technologies Corporation.

The printer provides full color dye sublimation or monochrome thermal transfer printing on standard 2.125 inch by 3.375 inch (54 mm by 86 mm) PVC or PVC Composite plastic cards. The integrated card feeder and flipper minimizes printer size while maximizing performance. Load-N-Go™ ribbon cartridges are used with an integrated card cleaning roller for easy ribbon changing or replacement.

A variety of options (some of which can be factory-installed or field-installed as upgrades) are available, making the printers configurable for varied application environments:

- Magnetic Encoder
- USB only or USB and 10/100 Ethernet
- Contact + Contactless MIFARE Smart Card
- Contact Station
- CardSense™ Single Card Feed Option
- Security (Enclosure Lock) Option

Its auto-switching 100 ~ 240 Volts AC, 50 ~ 60 Hz external power supply uses interchangeable power cords for maximum flexibility.

This manual describes single- and dual-sided ZXP Series 3 Card Printers. References to “the printer” in this document apply to either the single-sided or the dual-sided printers.

ZXP Series 3 Part Numbers

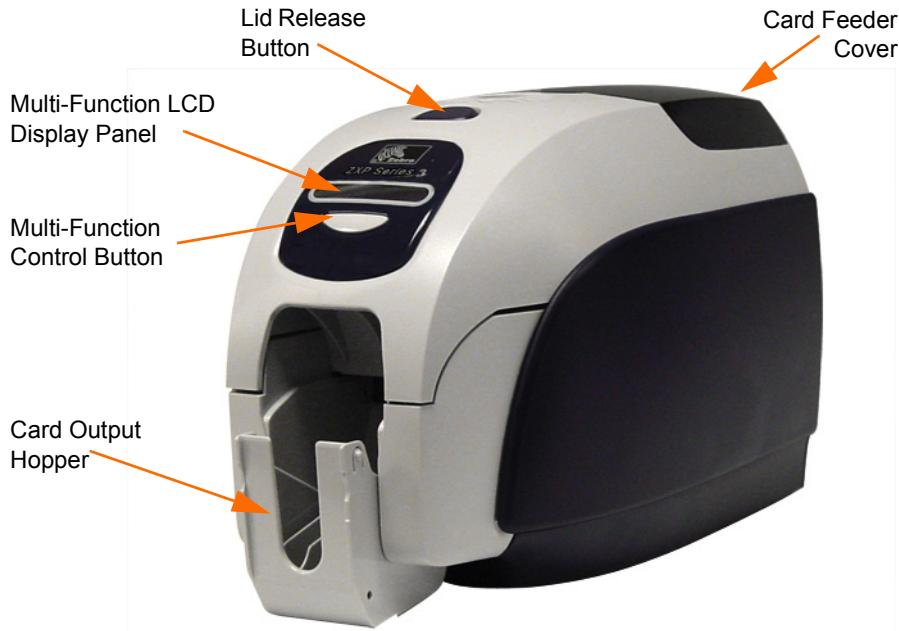
The Part Number of a particular Zebra ZXP Series 3 Card Printer is shown on a label affixed to the bottom of the printer; that Part Number identifies the specific configuration for that printer. This chart shows the configurations that are available:

PART NUMBER	DESCRIPTION
Z 3 - - - - -	BASE UNIT
- - 1 - - - - -	Single-Sided
- - 2 - - - - -	Dual-Sided
- - - - - 0 - - - - -	SMART CARD OPTIONS
- - - - - 0 - - - - -	None
- - - - - A - - - - -	PC/SC Contact Encoder + Contactless MIFARE, NOTE
- - - - - E - - - - -	Contact Station, NOTE
- - - - - 0 - - - - -	MAG ENCODER OPTIONS
- - - - - 0 - - - - -	None
- - - - - M - - - - -	ISO HiCo/LoCo Mag S/W-selectable, NOTE
- - - - - 0 - - - - -	SECURITY OPTIONS
- - - - - 0 - - - - -	None
- - - - - A - - - - -	Enclosure Lock, NOTE
- - - - - 0 - - - - -	INTERFACE OPTIONS
- - - - - 0 - - - - -	USB Only
- - - - - C - - - - -	USB & 10/100 Ethernet, NOTE
- - - - - 0 - - - - -	SOFTWARE / KIT
- - - - - 0 - - - - -	None
- - - - - G - - - - -	Starter Kit: Monochrome (Incl: 1 Monochrome Ribbon, 200 PVC Cards)
- - - - - H - - - - -	Starter Kit: Color (Incl: 1 YMCKO Ribbon, 200 PVC Cards)
- - - - - I - - - - -	Starter Kit: Dual-Sided Color (Incl: 1 YMCKOK Ribbon, 200 PVC Cards)
- - - - - 0 0 0 - - - - -	MISCELLANEOUS
- - - - - 0 0 0 - - - - -	None
- - - - - 0 0 A - - - - -	Made in America
- - - - - B R - - - - -	COUNTRY CODE
- - - - - U S - - - - -	Brazil Power Cord
- - - - - E M - - - - -	Americas Regional SKU Power Cord (Type B)
- - - - - A U - - - - -	EMEA Regional SKU Power Cords (Type C and Type G)
- - - - - C N - - - - -	Australian Power Cord (Type I)
- - - - - J P - - - - -	China Power Cord, 240 VAC
- - - - - 0 0 - - - - -	Japan Power Cord, 120 VAC Cord (PSC Compliant)
- - - - - 0 0 - - - - -	CUSTOM CODE
- - - - - 0 0 - - - - -	State / Province / Project / Other
ACCESSORIES	
105862-001	CardSense™ single card feed option
105999-301	Cleaning Kit: 4 printer-path and 4 feeder cleaning cards

NOTE: Field-Upgradeable Option

Features, Controls, and Indicators

The picture below points out some of the printer's external features; see [Section 3](#) for an interior view.

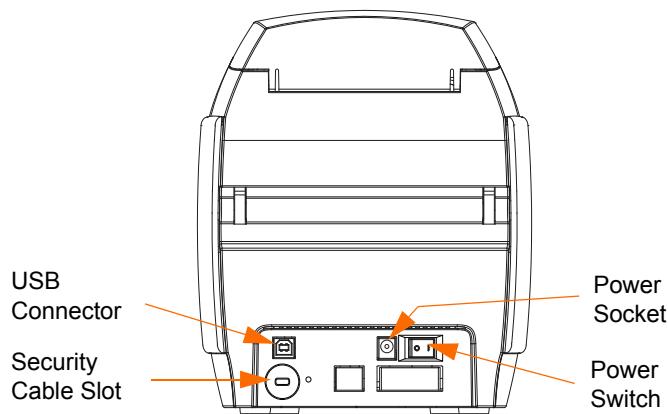


- **Card Feeder Cover** - Opening the Card Feeder Cover gives access to the automatic card feeder. The translucent cover allows you to see when the card supply is running low. The feeder has a 100-card capacity.
- **Lid Release Button** - Pressing the Lid Release Button allows the printer's lid to swing open. This gives internal access for changing the Ribbon Cartridge, changing Cleaning Rollers, and cleaning the printer.
- **Multi-Function LCD Display Panel** - The Multi-Function LCD Display Panel displays printer status information. Messages also alert the user of the need for action and indicate certain fault conditions.
- **Multi-Function Control Button** - The Multi-Function Control Button initiates several functions; these are described in the appropriate sections of this document.
- **Card Output Hopper** - Front-side Card Output Hopper has a 45-card capacity. Note that ZXP Series 3 Card Printers with a Smart Card Option have a different Card Output Hopper; see [Appendix C](#).

Rear Panel Connectors

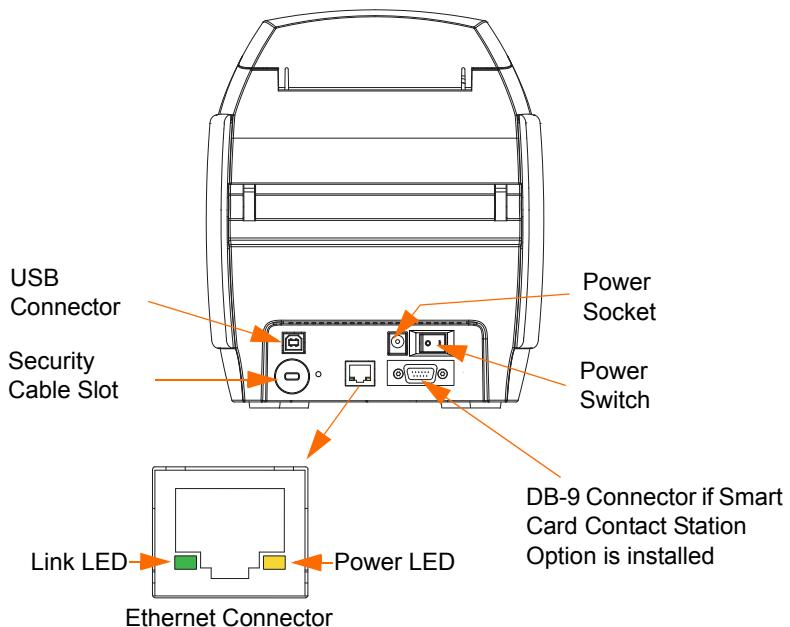
Standard USB Connection

The figure below shows the rear of the Printer with the USB interface.



Ethernet Connection

The figure below shows the rear of the printer with the standard USB interface with the Ethernet and DB-9 Smart Card Contact Station Options.



The Ethernet Connector has two LED status indicators:

- Power LED (amber): When illuminated, indicates power is on.
- Link LED (green): When illuminated, indicates valid Printer-Ethernet connectivity.

Multi-Function LCD Panel

Your printer is equipped with a Multi-Function LCD Panel to provide printer status information. The readout is controlled by the Multi-Function Control Button directly below the viewing window.

Multi-Function LCD Panel messages fall into three categories: Operational, Warning, and Error.

Operational Messages

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

OPERATIONAL
CARD READY
CLEANING PRINTER
CLOSE FEEDER DOOR
CONTACT ENCODING
CONTACTLESS ENCODING
DOWNLOADING DATA
DOWNLOADING FIRMWARE
EMPTY FEEDER THEN CLOSE COVER
FEED LONG CLEANING CARD IN EXIT
INITIALIZING
INSERT CARD
INSERT FEEDER CLEANING CARD
MAG ENCODING
PRINTING BLACK
PRINTING CYAN
PRINTING MAGENTA
PRINTING MONO
PRINTING OVERLAY
PRINTING YELLOW
PUSH BUTTON TO CONTINUE
READY
REMOVE FEEDER CLEANING CARD
REMOVE LONG CLEANING CARD
REMOVE RIBBON THEN CLOSE LID
SINGLE CARD READY-PRINT OR EJECT

Warning Messages

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

WARNINGS (Printer will still operate)
CHECKING RIBBON
CLEAN PRINTER
CLOSE LID
ENCODING ERROR
FLASH ERROR
INVALID MAGNETIC DATA
READING ERROR

Error Messages

Error messages 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.

ERRORS (Printer will not operate)
CHECK RIBBON
COMMAND ERROR
COVER OPEN
LID OPEN
MECHANICAL ERROR
OUT OF CARDS
OUT OF RIBBON
PARAMETERS ERROR

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



Printer Installation



Unpacking Your Card Printer

Your ZXP Series 3 Card Printer ships in a cardboard carton, protected by styrofoam inserts and a protective anti-static bag. Keep all packaging material in case you need to move or re-ship the printer.

- Step 1.** Before opening and unpacking the printer, inspect the carton to ensure that no damage occurred during shipment.
- Step 2.** Ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.
- Step 3.** Unlatch and remove the handle, open the carton, and remove the box containing the printer accessories from the shipping carton.
- Step 4.** Remove the styrofoam packing material from the top of the printer.
- Step 5.** Lift the printer out of the carton by holding it on both sides of the bottom and lifting the printer gently from the carton.
- Step 6.** Make sure the following accessories are included with your printer:
 - a. Software CD-ROM
 - b. Quick Start Guide
 - c. Cleaning Kit
 - d. Power Cords (one or two depending on the configuration)
 - e. Power Supply
 - f. USB Printer Cable

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

2: Printer Installation

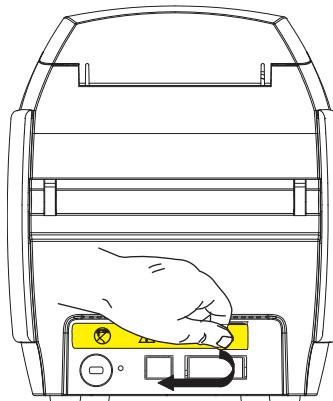
Installing the Printer

Installing the Printer

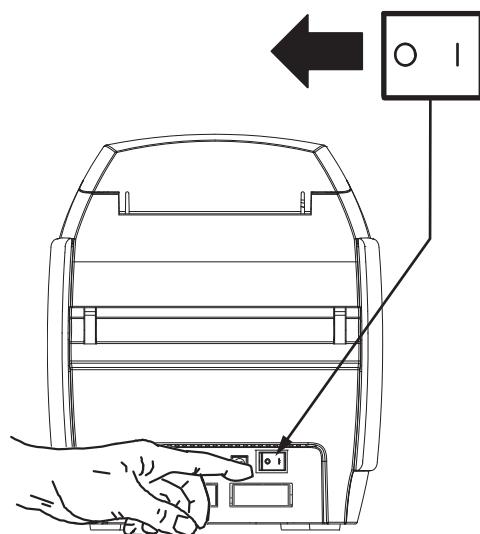
Setting up the Printer

Step 1. Place the printer in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.

Step 2. Remove the yellow CAUTION label from the back of the printer.



Step 3. Ensure that the printer's power switch is in the OFF (O) position.



Connecting Power

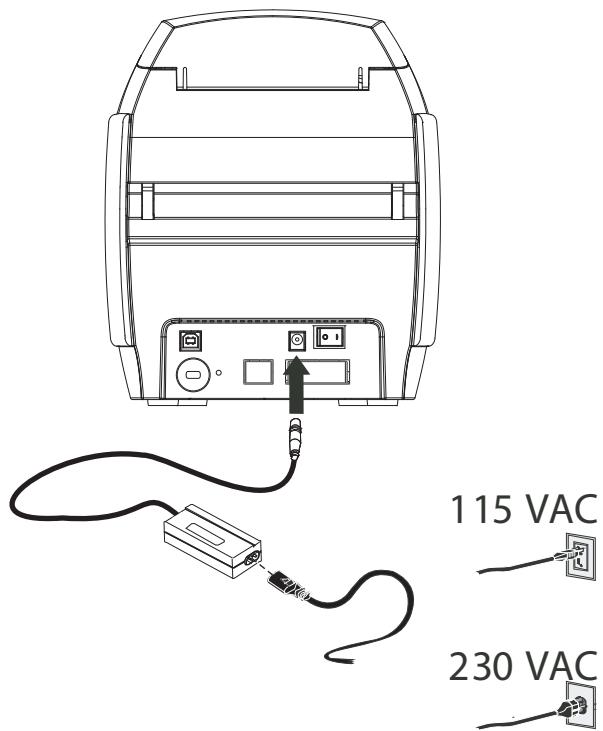


Caution • Limit electrical power supplied to the printer to 24 VDC. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power supply and properly protected against electrical surges and grounding faults. The power supply pack can only be replaced by the same product from the manufacturer.



Caution • Do not power the printer with USB attached to your computer at this time. THE DRIVER WILL PROMPT YOU WHEN IT IS TIME TO PLUG IN AND POWER UP YOUR PRINTER.

- Step 1.** Insert the power supply plug into the power socket, attach the power cord (120VAC or 230VAC) to the power supply, then plug the power cord in to a grounded electrical socket of the proper voltage and type.



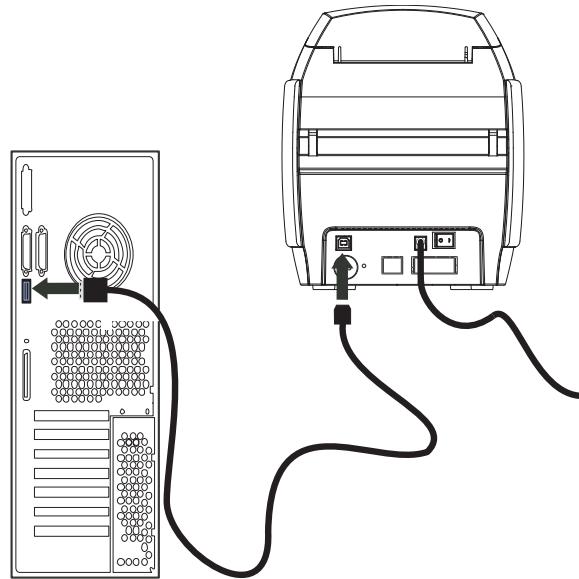
- Step 2.** Ensure that the printer's power switch is in the OFF (O) position.

2: Printer Installation

Installing the Printer

Connecting the Printer to your Computer

- Step 1.** If your printer has only the USB interface, attach the included USB cable to your computer and the printer.

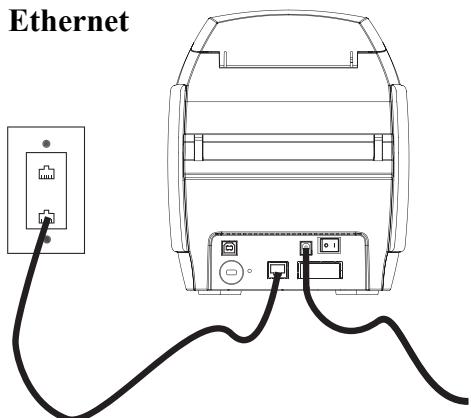


- Step 2.** If your printer has the optional Ethernet interface (as well as the USB interface), connect **either** the USB cable to printer and computer or the Ethernet cable to the printer and the Ethernet network.

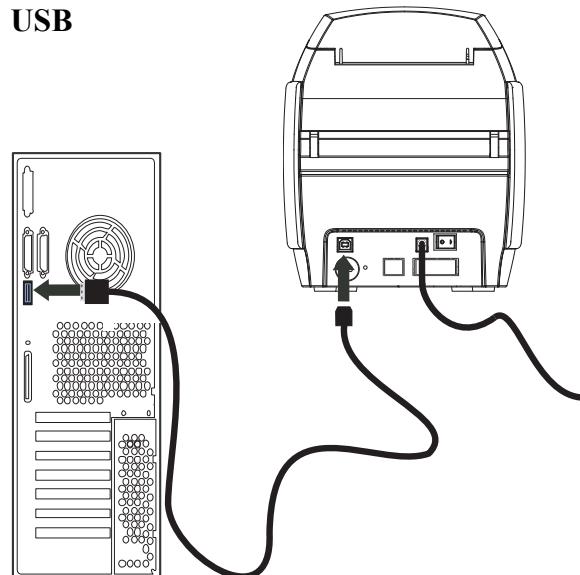


Important • Do not connect both the USB and the Ethernet interfaces at the same time!

Ethernet



USB



Viewing Printer Information

To check the configuration parameters of the printer without being connected to a computer:

- Step 1.** Ensure that the printer power switch is in the OFF (O) position.
- Step 2.** While holding down the Control Button, place the printer power switch in the ON (|) position. The LCD Display Panel will glow blue.



- Step 3.** Keep pressing the Control Button and observe the LCD Display Panel show Initializing, CHECKING RIBBON, and FEEDING CARD.
- Step 4.** When the PRINTER INFO message appears in the display panel, momentarily release and press the Control Button to display the first parameter: Model Name.
- Step 5.** Continue to tap the Control Button to advance through the parameters and cycle back to the beginning:
 - a. Model Name (Including the printer configuration)
 - b. Serial Number
 - c. Firmware Version
 - d. Head Resistance
 - e. X & Y Offset (front)
 - f. X & Y Offset (back)
 - g. EC Offset (front and back)
 - h. Ribbon Type
 - i. Smart Offset
 - j. IP Address
 - k. Mask
 - l. Gateway
 - m. DHCP (enabled or disabled)
- Step 6.** A long press of the Control Button (about 1 second) will escape the sequence. Idle time of 15 seconds will also escape the sequence.

2: Printer Installation

Installing the Windows Printer Driver

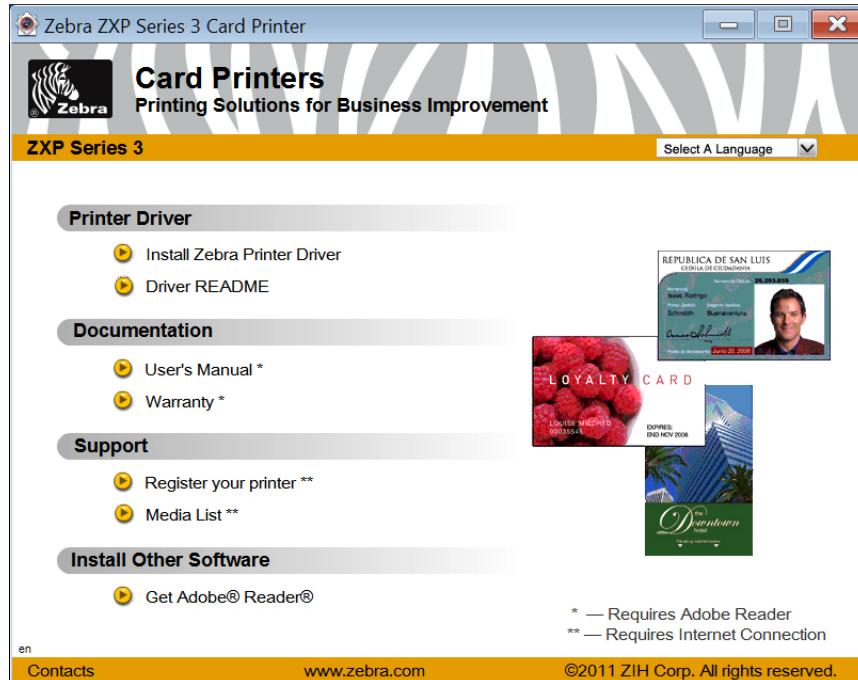
Installing the Windows Printer Driver

Installing the USB Printer Driver



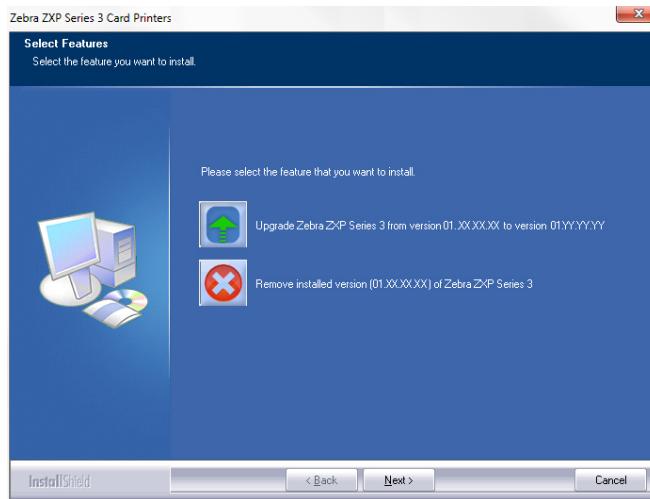
Note • To install the Ethernet driver, see [page 20](#).

- Step 1.** If not already done, connect power to the printer. Turn power OFF.
- 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 is in the OFF (O) 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 **Main Menu**, click **Install Zebra Printer Driver**.

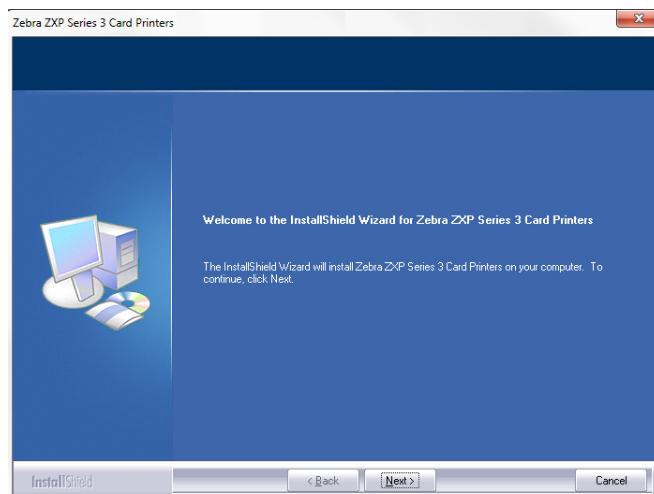
- Step 6.** If an older Printer Driver is installed on your computer, the **Select Features** window will be displayed; otherwise go to [Step 8](#).



- Step 7.** In the **Select Features** window, choose the maintenance operation to be performed:

- Select  to upgrade the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the process, you will be asked to re-boot your computer. Re-boot your computer. The upgrade is complete.
- Select  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](#).

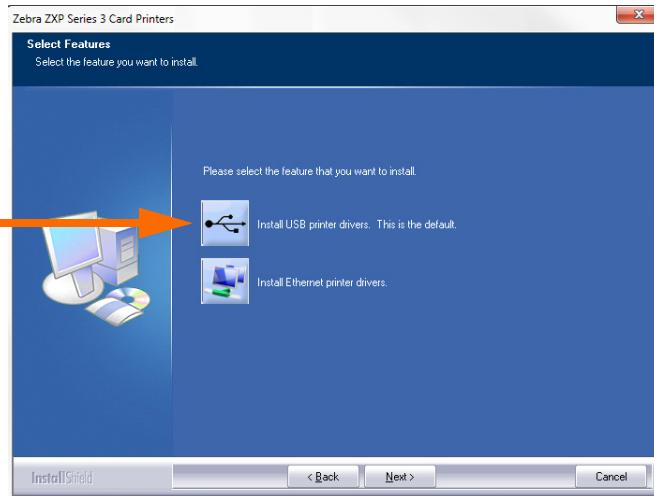
- Step 8.** The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



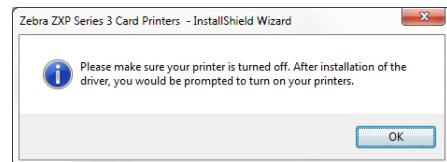
2: Printer Installation

Installing the Windows Printer Driver

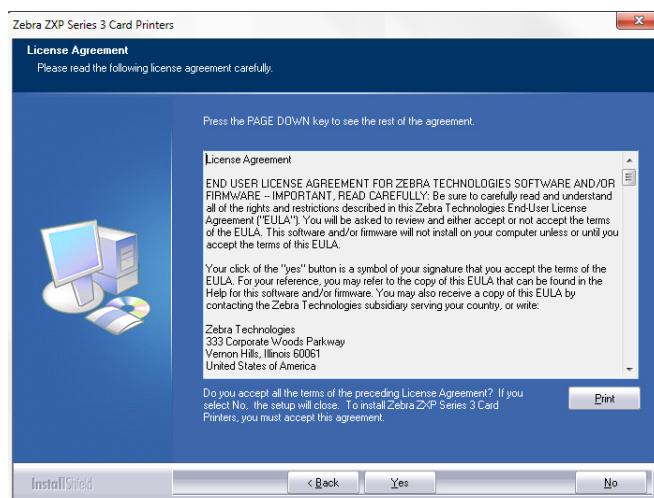
Step 9. Select **Install USB printer drivers**, and click the **Next** button.



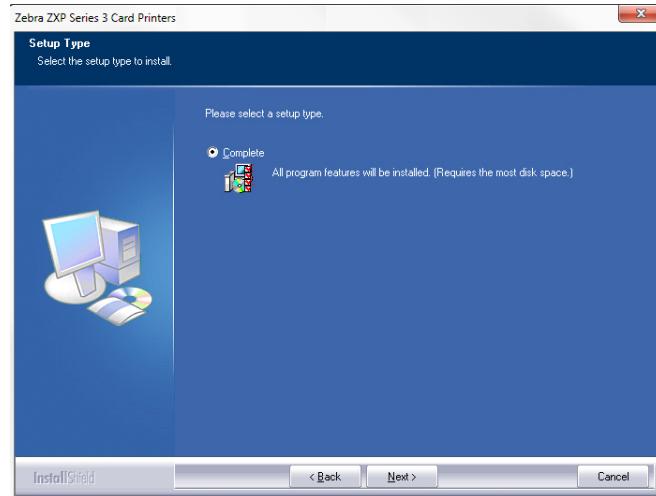
Step 10. Ensure that the Printer's power switch in the OFF (O) position; and then click the **OK** button.



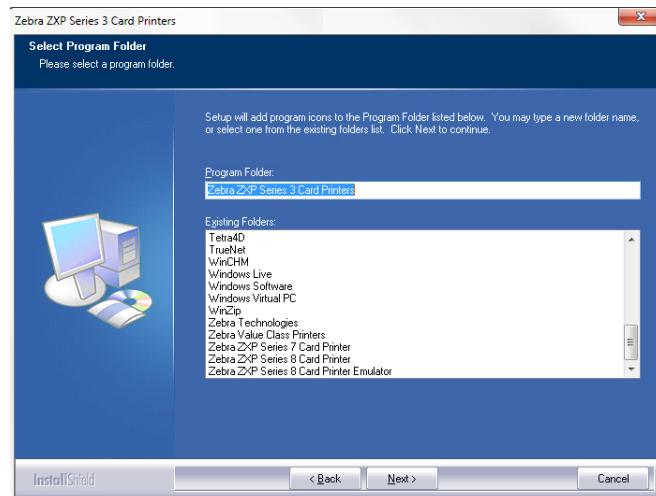
Step 11. This will bring up the **License Agreement** window. To proceed with the installation, click the **Yes** button.



Step 12. This will bring up the **Setup Type** window. Select *Complete* to install all program features, and click the **Next** button.



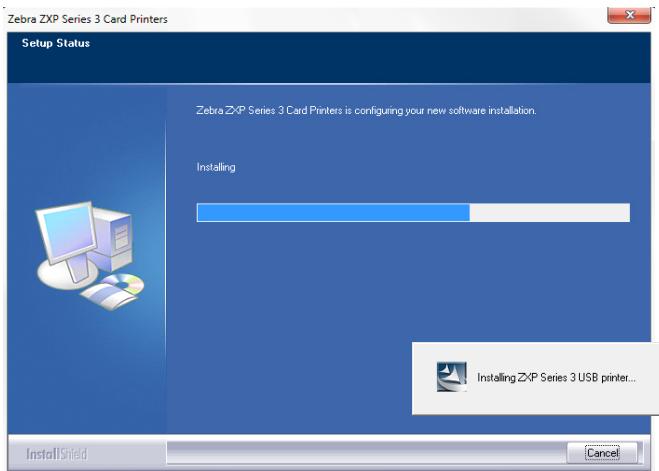
Step 13. This will bring up the **Select Program Folder** window. Type in a new folder name or select one from the existing folders list, and click the **Next** button.



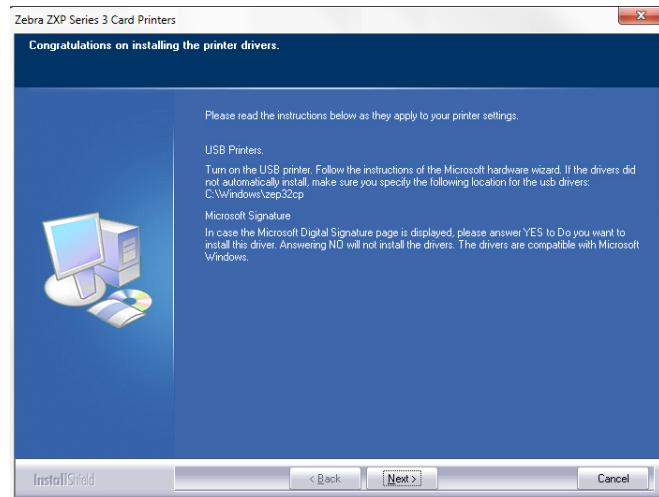
2: Printer Installation

Installing the Windows Printer Driver

Step 14. Observe the **Setup Status** window.

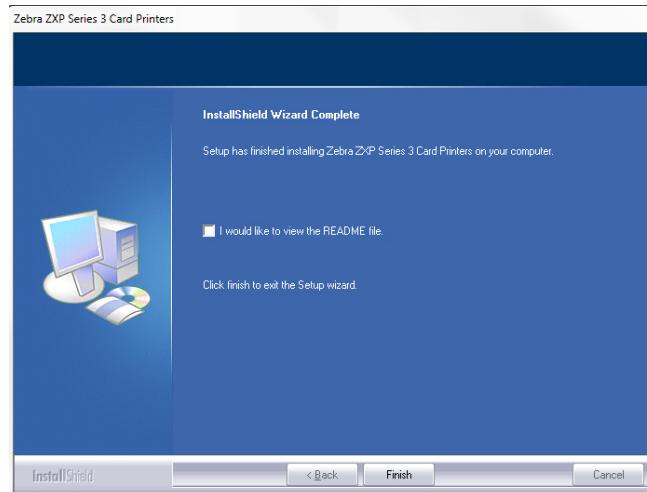


Step 15. The **Congratulations** window will appear.



Step 16. At this point, **turn on your printer**; and then click the **Next** button. The *Windows New Hardware Found* wizard will find the printer.

Step 17. When the **InstallShield Wizard Complete** window appears, click the **Finish** button.



Step 18. This completes USB driver installation.

Step 19. To use the Printer, you would select it like you would any other printer connected to a Windows system.



Note • You may need to change the card setup (card orientation, ribbon type, etc.), encoding, overlay, and/or black panel settings via the Printer Driver; see *Card Printer Printing Preferences* on page [50](#).

2: Printer Installation

Installing the Windows Printer Driver

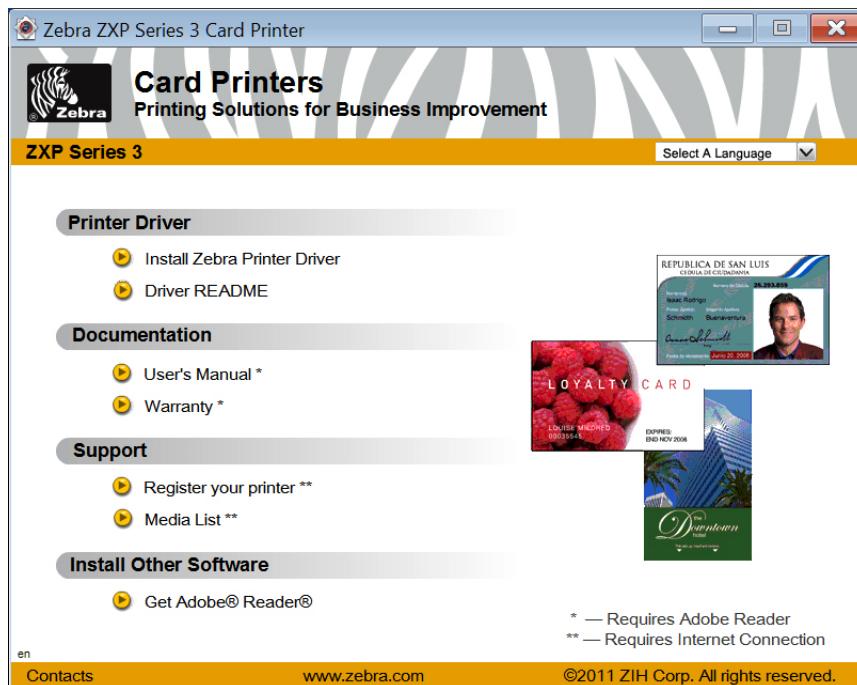


Note • To install the USB driver, see [page 14](#).



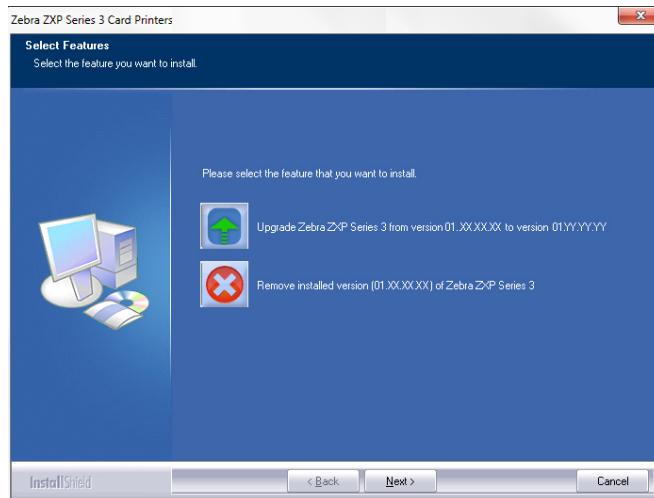
Important • The Ethernet Network must be configured correctly, with the Printer and the host computer on the same subnet mask. If you are not sure how to verify this or change the configuration, consult someone knowledgeable on Ethernet Networks.

- Step 1.** If not already done, connect power to the printer. Turn power ON.
- Step 2.** Connect the Ethernet port on the rear of the printer to the Ethernet network connection or directly to the computer's Ethernet port.
- Step 3.** Ensure that the Printer's power switch is in the ON (|) 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 **Main Menu**, click **Install Printer Driver**.

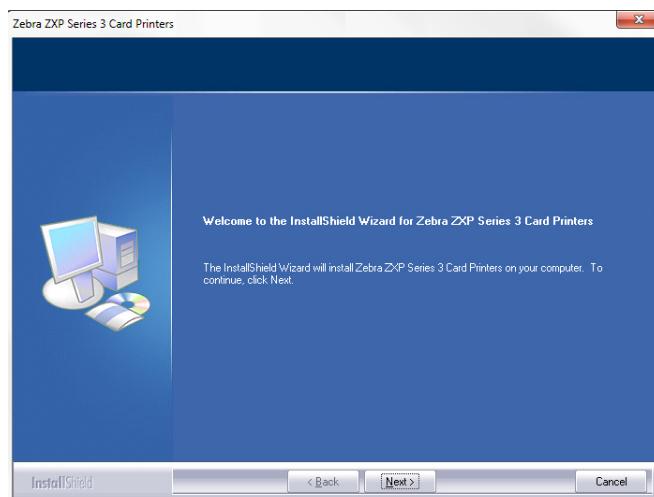
- Step 6.** If an older Printer Driver is installed on your computer, the **Select Features** window will be displayed; otherwise go to [Step 8](#).



- Step 7.** In the **Select Features** window, choose the maintenance operation to be performed:

- Select to upgrade the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the process, you will be asked to re-boot your computer. Re-boot your computer. The upgrade is complete.
- Select 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](#).

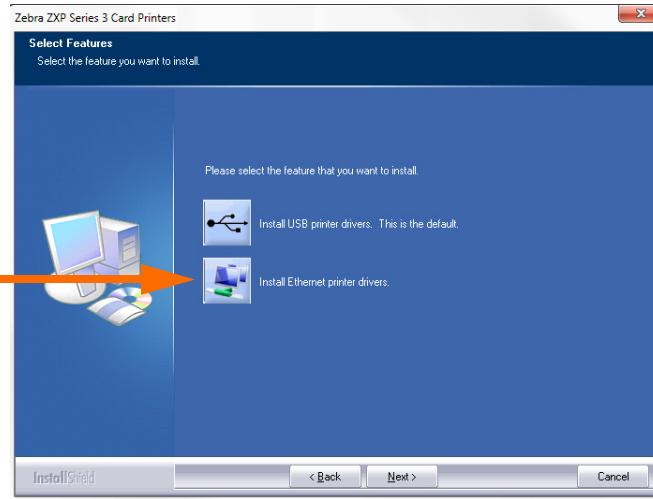
- Step 8.** The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



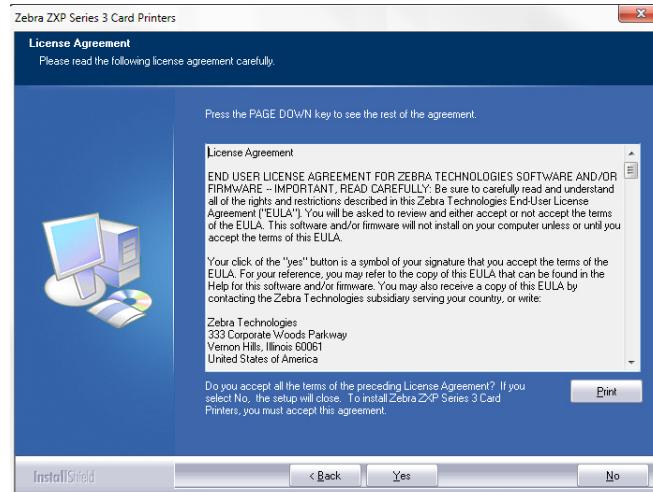
2: Printer Installation

Installing the Windows Printer Driver

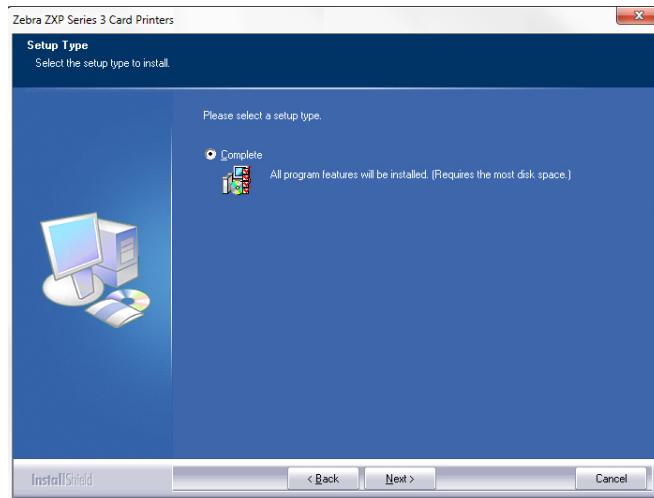
Step 9. Select **Install Ethernet printer drivers**, and click the **Next** button.



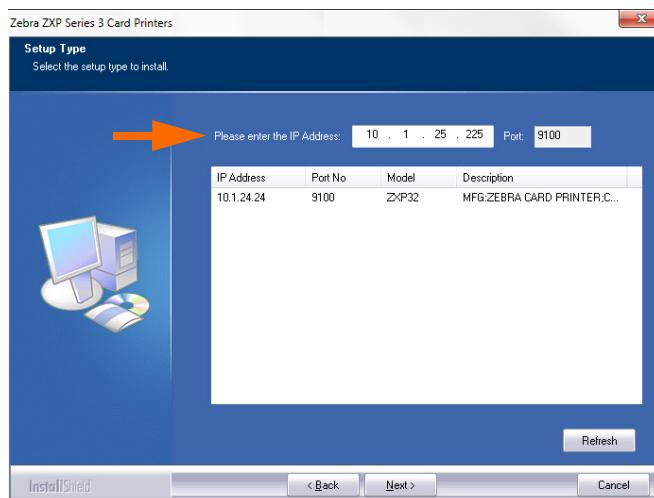
Step 10. This will bring up the **License Agreement** window. To proceed with the installation, select the *I accept the terms of the license agreement* option, and then click the **Next** button.



Step 11. This will bring up the **Setup Type** window. Select *Complete* to install all program features, and click the **Next** button.



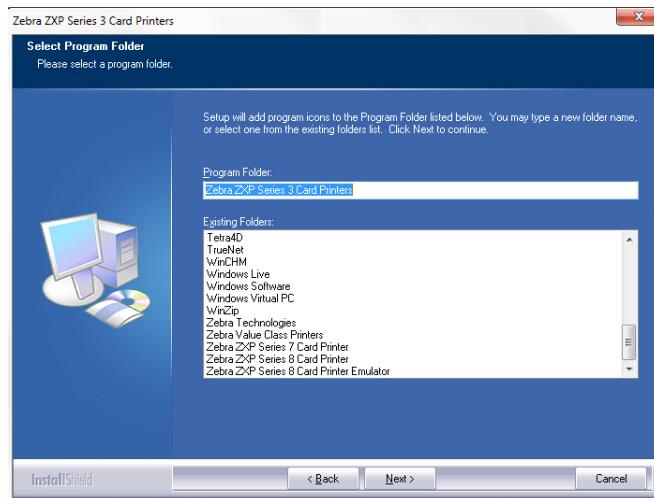
Step 12. Setup will find and list all Zebra ZXP Series 3 Printers on the network. Select the printer from the list (if listed), or enter the IP Address (example, arrow below); and click the **Next** button.



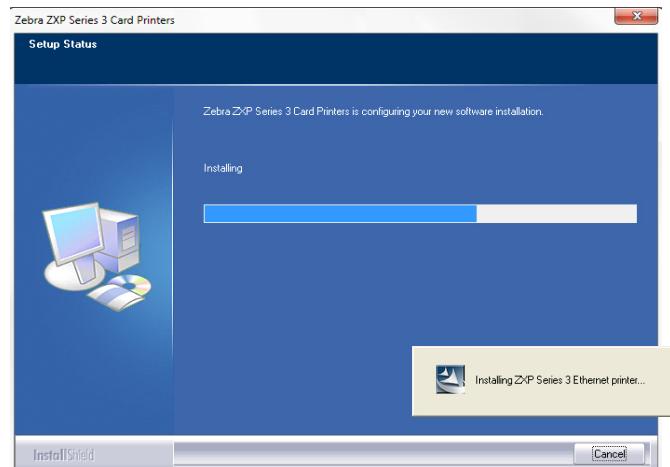
2: Printer Installation

Installing the Windows Printer Driver

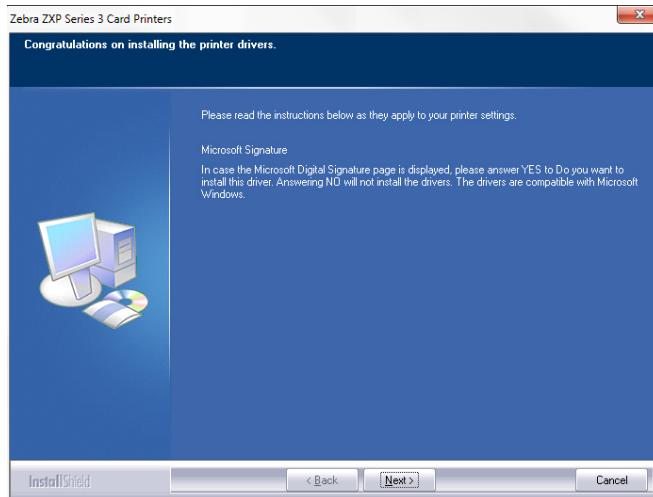
Step 13. This will bring up the **Select Program Folder** window. Type in a new folder name, or select one from the existing folders list; and click the **Next** button.



Step 14. Observe the **Setup Status** window.

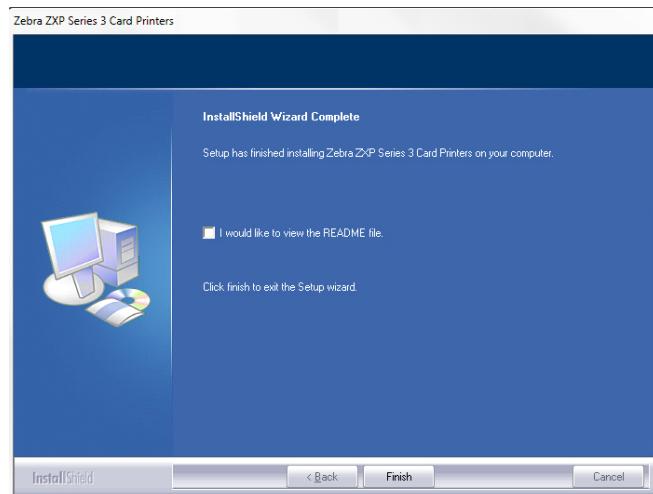


Step 15. The **Congratulations** window will appear.



Step 16. At this point, click the **Next** button.

Step 17. When the **InstallShield Wizard Complete** window appears, click the **Finish** button.



Step 18. This completes Ethernet driver installation.

Step 19. To use the Printer, you would select it just like you would any other printer connected to the Ethernet.



Note • You may need to change the card setup (card orientation, ribbon type, etc.), encoding, overlay, and/or black panel settings via the Printer Driver; see *Card Printer Printing Preferences* on page [50](#).

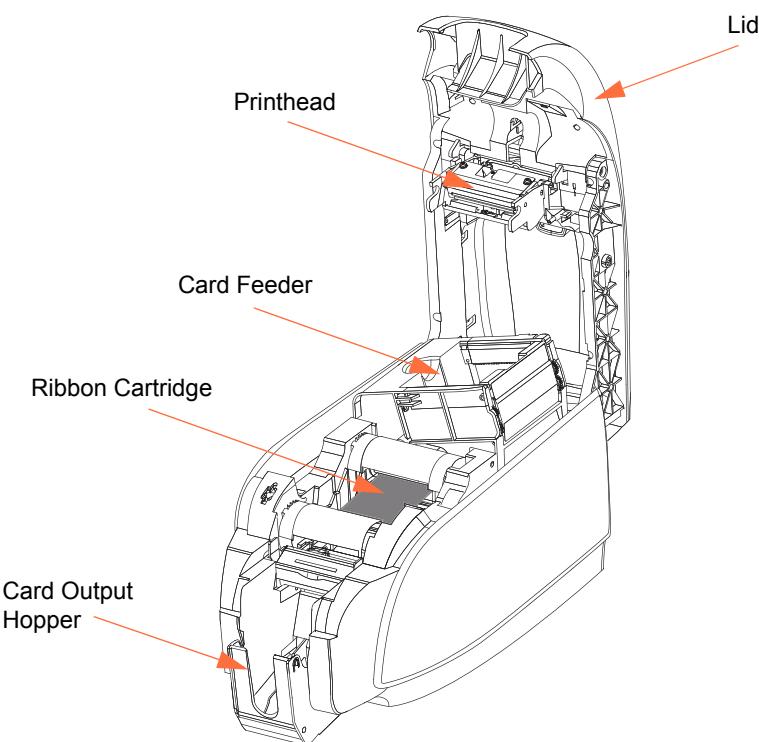


Printer Setup



Printer Features

The following shows an interior view of the ZXP Series 3 Card Printer.



3: Printer Setup

Loading Ribbon Cartridge

Loading Ribbon Cartridge

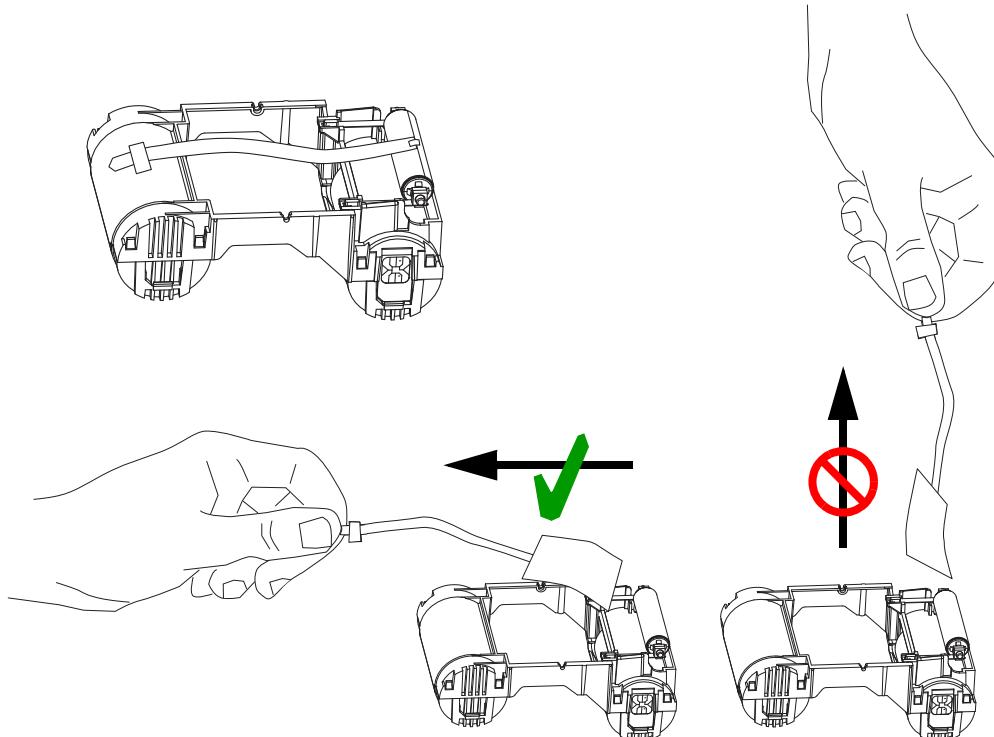
The Printer requires approved ribbon cartridges. The Resin Thermal Transfer and Dye Sublimation ribbons are specifically designed for your Printer.

- Only use Zebra *i* Series ribbons designed to work with ZXP Series 3 Card Printers.
- Each ribbon cartridge includes an integrated adhesive cleaning roller assembly that is used to clean the cards entering the printer. Improper cleaning will reduce printer life and degrade print quality
- When the ribbon is completely used, change the whole cartridge assembly.

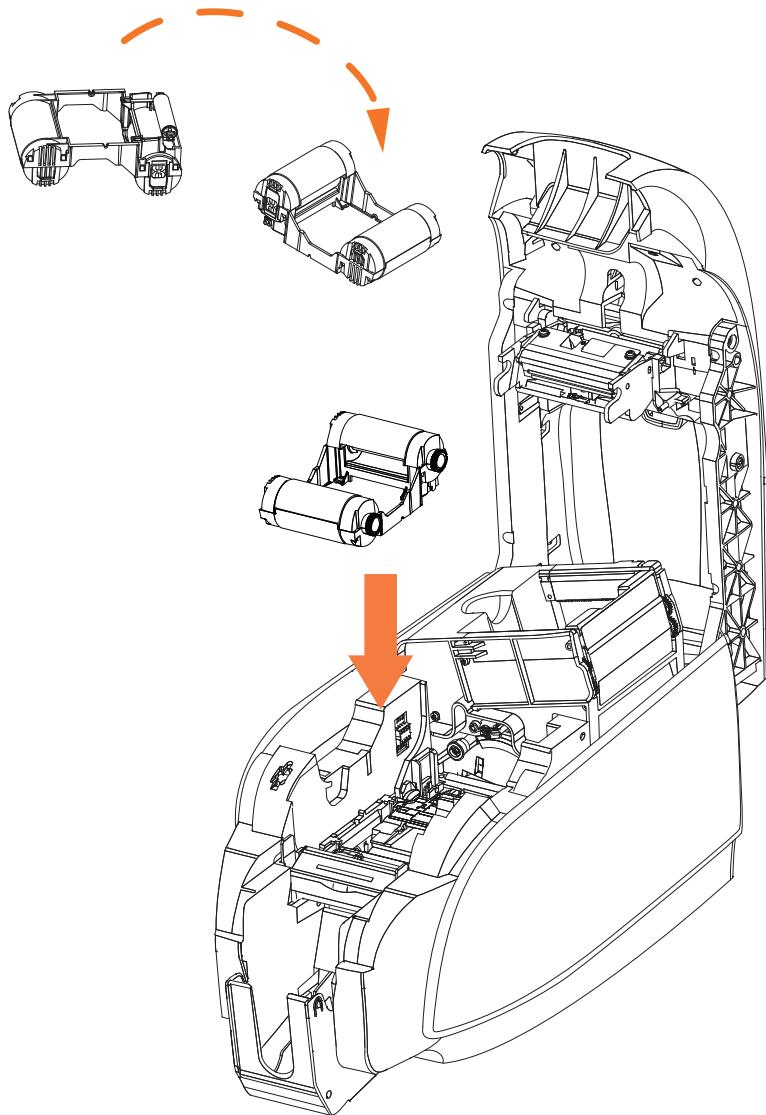


Electrostatic Discharge Caution • DO NOT TOUCH the printhead or the electronic components on the printhead. Discharge of electrostatic charge from the human body or other surfaces can damage the printhead or other electronic components

1. Open printer lid by pressing the Cover Release button on the top of your printer.
2. Peel protective wrapper from the adhesive cleaning roller by gently pulling on the tape. Discard the protective wrapper.



3. Insert the ribbon cartridge with the cleaning roller facing down, so the gears on the ends of the rollers fit into the appropriate slots.



4. Close the printer lid and push down until you hear an audible click.



Note • After the lid is closed, the ribbon automatically synchronizes when the printer power is on.

Loading Cards

To help you load, print, and collect cards, the printer has a card feeder and card output hopper.

Card Feeder

The card feeder is used for loading cards, it can hold up to 100 cards of 30 mils thickness. The card feeder is located under the card feeder cover of the Printer



Caution • DO NOT bend cards or touch print surfaces as this can reduce print quality.



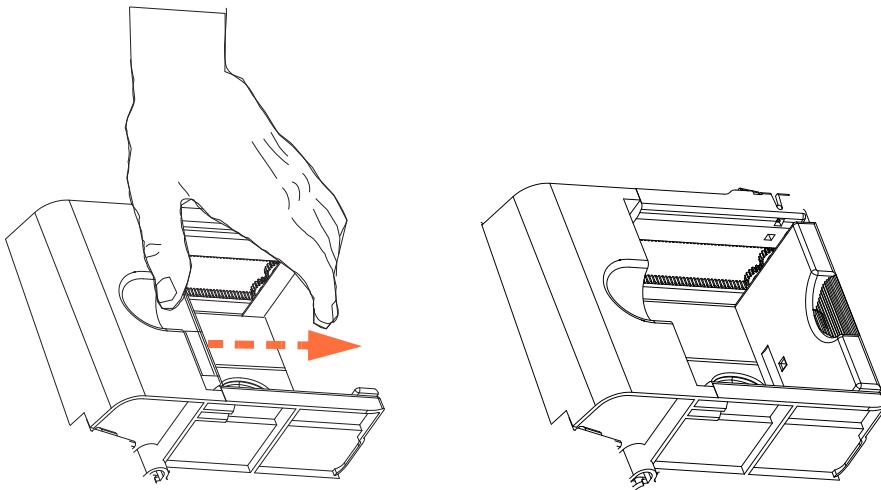
Note • The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible. If cards stick together, carefully fan or shuffle them.



Note • For Cards with magnetic stripe, refer to [Appendix B](#) for loading instructions.

Load cards into the card feeder as follows:

1. Open the card feeder cover.
2. Slide the card guide all the way to the right until it locks in place with an audible click.

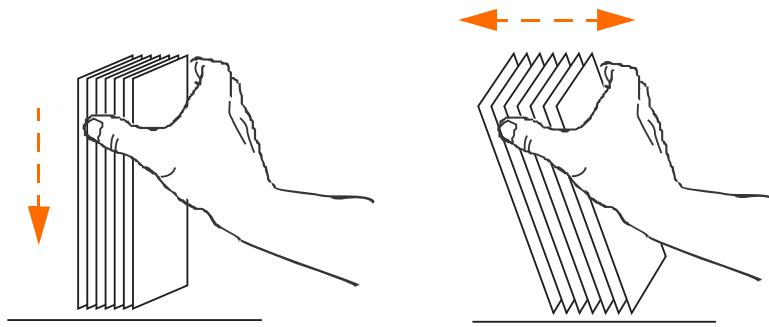


3. Remove the cellophane wrapper from the card stack.

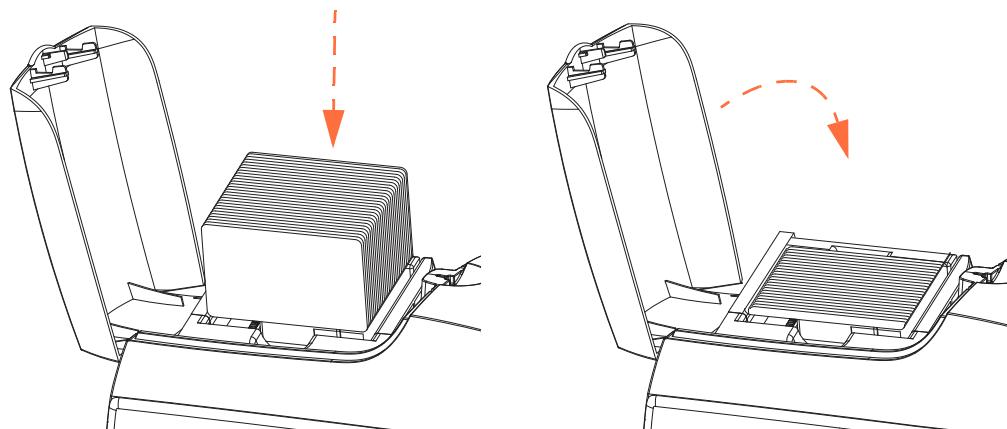


Note • Static charges and edge burrs from the card die-cutting process can render individual cards stuck together with significant adhesion force. These cards must be physically separated from each other before inserting into the feeder; if not separated, feeding or printing problems may occur.

4. Holding the card deck by the sides, hold it vertically against a flat surface such as a desktop; then push the stack back and forth to an angle of about 45° from vertical, so as to separate all of the cards.



5. Restore the card stack to its original squared-off condition.
6. Place stack of up to 100 cards into the card feeder.



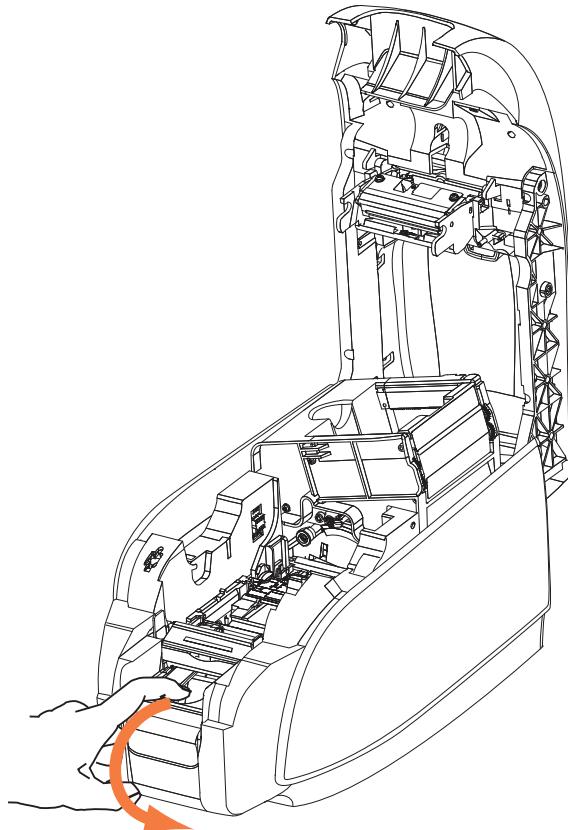
7. Close the card feeder cover. When card feeder cover is closed, the card guide locking mechanism will automatically be released.

3: Printer Setup

Loading Cards

Card Output Hopper

1. Raise the printer lid, and pull the output hopper down to place it in its functional position.

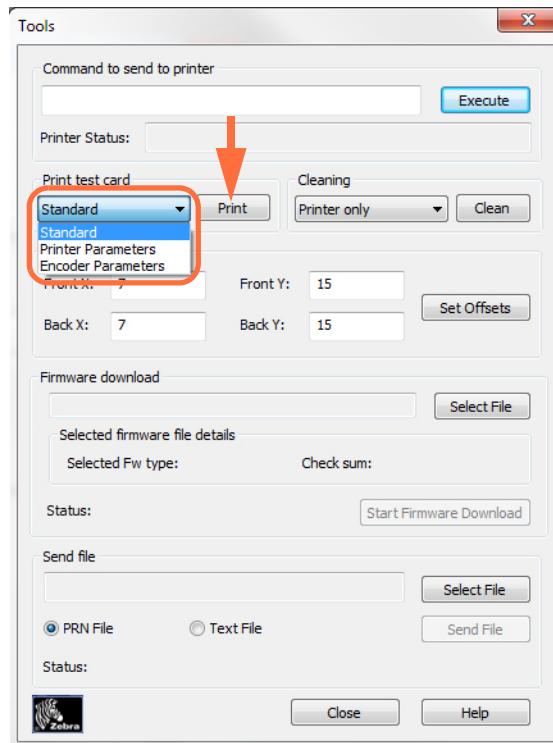


2. When not using the printer, place the card output hopper back in its closed position to protect the printer from dust.

Printing a Test Card

With ribbon cartridge and cards loaded, your printer is ready to print. To check the operation of the printer, you should print a test card.

1. Select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Device Settings*; and click on the **Tools** button.
2. Observe the **Tools** window.

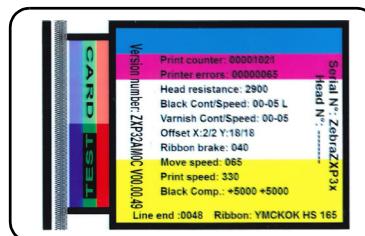


3. From the Print Test Card dropdown menu, select the desired test card (circled above).
4. Click on the **Print** button (arrow above); see sample test cards below.

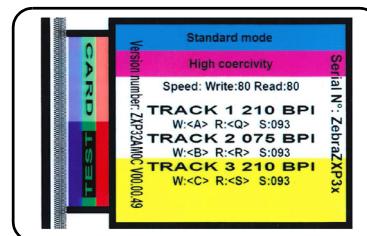
Standard:



Printer Parameters:



Encoder Parameters:



Typical Printer Operation

The ZXP Series 3 Card Printer can be used with your software application program, using the Drivers on the CD provided with your Printer; refer to [Installing the Windows Printer Driver](#) on page 14.

Creating a Sample Card

Before you begin a new printing session, print a sample card to ensure that the cards will be printed correctly. Follow the steps below to print your first card using the True Colours™ Card Printer Ribbon Cartridge.

1. Open a new Microsoft Word document.
2. If the Zebra Printer was not set as the default printer, select the ZXP Series 3 Card Printer as the default.
3. From the Microsoft Word document., set the Page Layout:
 - a. Size: 3.14 in x 2.13 in (86 mm x 54 mm) Card
 - b. Orientation: Portrait or Landscape
 - c. Margins: Top, Bottom, Left, and Right = 0 (zero).
4. The card appears as a Microsoft Word document.
5. Design a card with both black and colored text and with colored images similar to the sample card shown below.



Printing the Sample Card

Once you complete creating your sample card, you are ready to print. Ensure your printer has a True Colours™ Card Printer Ribbon Cartridge installed and there is card stock in the card feeder. See [Section 3](#) for instructions on installing the ribbon and loading the cards.

1. Print your sample card to the ZXP Series 3 Card Printer.
2. Once the printing is completed, remove the sample card from the card output hopper and check for any discrepancies. For quality issues, see [Troubleshooting](#) on page 69.
3. If the sample card is correct, your printer is ready to produce more cards.

Printer Settings and Adjustments



Introduction

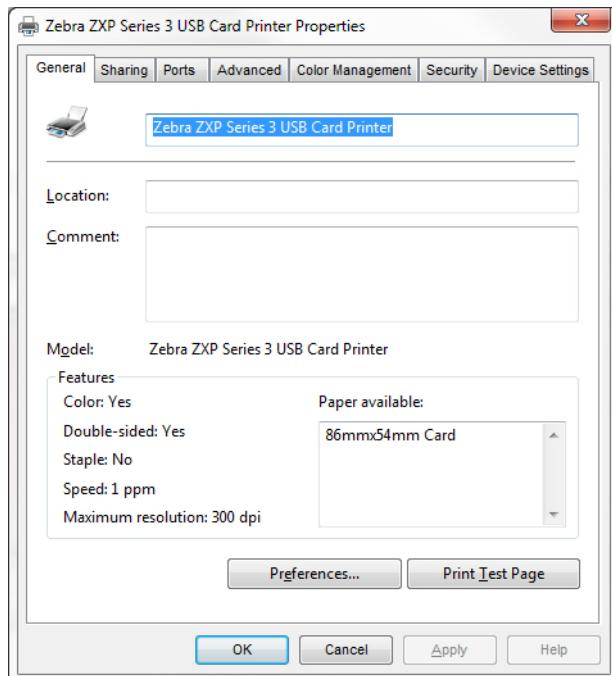
This section describes the settings and adjustments that can be made to your Windows ZXP Series 3 Printer Driver. This consists of two major topics: Card Printer Properties and Card Printer Printing Preferences.

Card Printer Properties



Note • The screen shots shown in this section are for the printer using the USB interface. If you are using the Ethernet interface, the screens will refer to the “Network Printer.”

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



General Tab	37
Sharing Tab.....	38
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Advanced Tab.....	40
Color Management Tab	41
Security Tab	45
Device Settings Tab	46

The **OK** button applies and saves the settings.

The **Cancel** button exits Printer Properties. Changes made are abandoned.

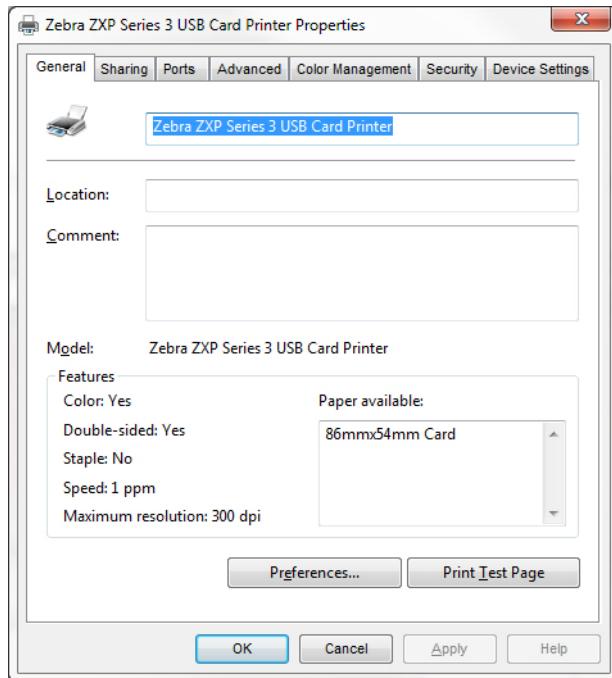
The **Apply** button applies, but does not save, the settings.

The **Help** button enables you to view a corresponding page of help information.

General Tab

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

To access the General tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer 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 [Card Printer Printing Preferences](#) on page 50.

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

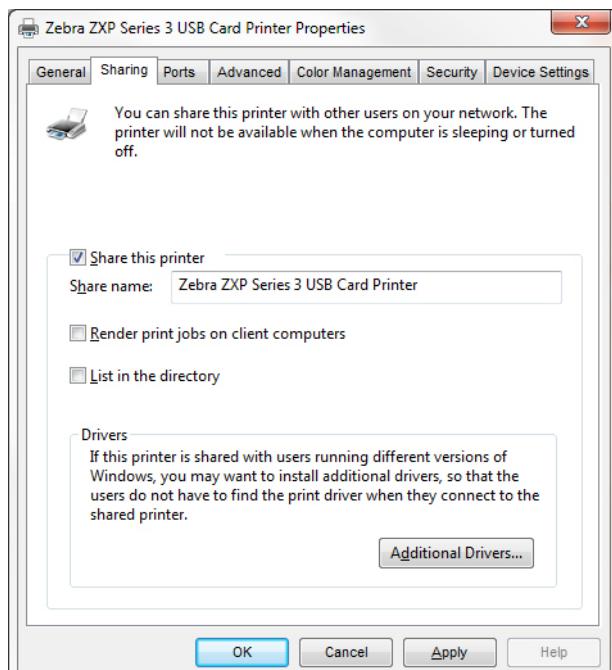
4: Printer Settings and Adjustments

Card Printer Properties

Sharing Tab

On the Sharing tab, 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 > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Sharing*. Click on the **Change Sharing Options** button to enable this tab.



Printer sharing tasks that you can perform include:

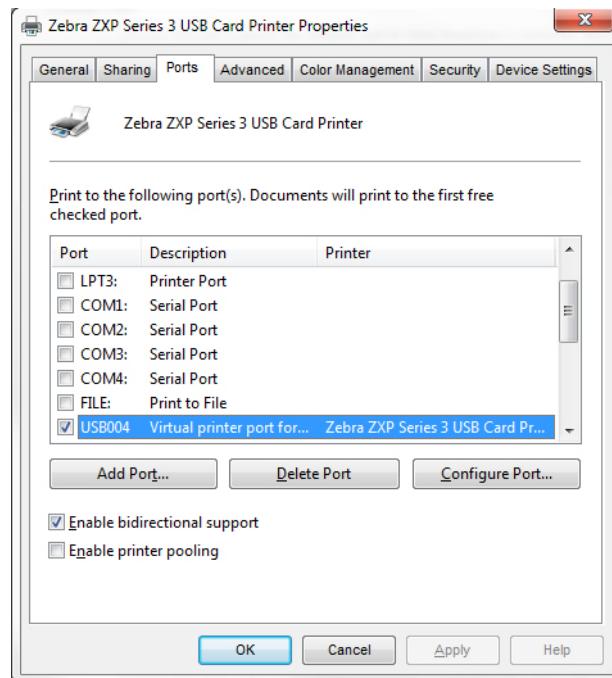
- To share a printer, select the *Share this printer* radio button; and specify a name for the shared resource. Click OK when you are finished.
- To change the shared name, simply enter a new name in the *Share name* field; and click OK.
- To quit sharing a printer, deselect the *Share this printer* radio button. Click OK when you are finished.

Drivers: If this printer is shared with users running different versions of Windows, you may want to install additional drivers, so that the users do not have to find the print driver when they connect to the shared printer. Click on the **Additional Drivers** button.

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 > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Ports*.



An exception to this is if you wish to use *printer pooling*, the ability to distribute print jobs to multiple printers; see [Printer Pooling](#) on page 92 for details.

To enable printer pooling, select the *Enable printer pooling* checkbox, 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); and each must have its own printer driver installed.

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

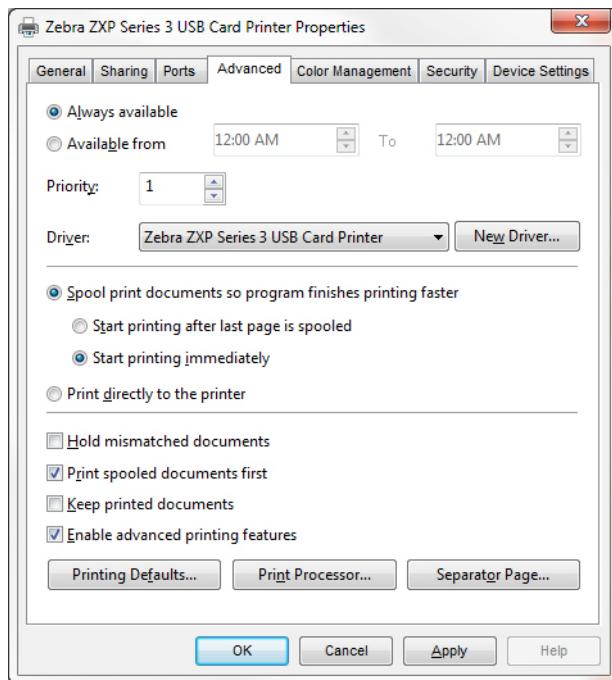
4: Printer Settings and Adjustments

Card Printer Properties

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 > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Advanced*.



You can make the printer always available by selecting the *Always available* radio button, or you can limit availability by selecting the *Available from* radio button and specifying the “Available from” and “To” times. Click the **Apply** button, and then the **OK** button.

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

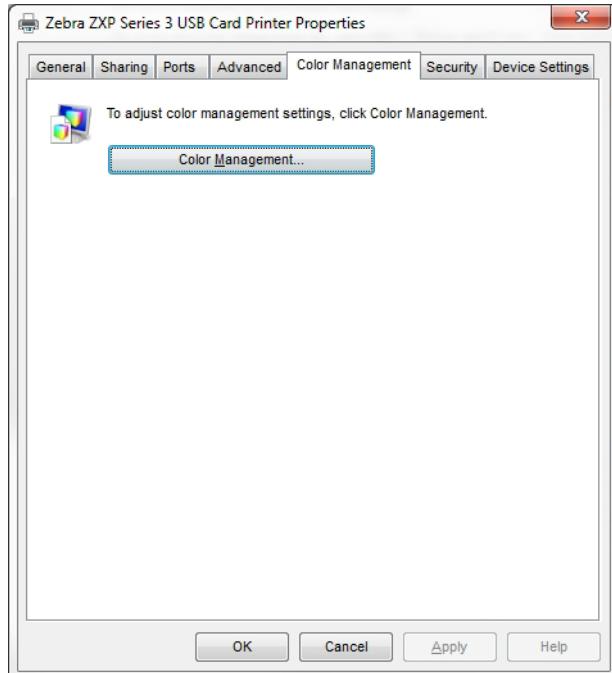
- Select *Start printing after last page is spooled* if you want the entire document to be spooled before printing begins. This option ensures that the entire document is sent to the print queue before printing. If for some reason printing is canceled or not completed, the job will not be printed.
- 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*.

Color Management Tab

You should not have to change your color management settings. Usually, the default settings will be fine. Change these settings only if you have specific color management requirements that are not being met by your current color settings.

To access the Color Management tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Color Management*. Click on the **Color Management** button to enable this tab.



When you click on the **Color Management** button, you will see the following three tabs:

Devices Tab	42
All Profiles Tab	43
Advanced Tab	44

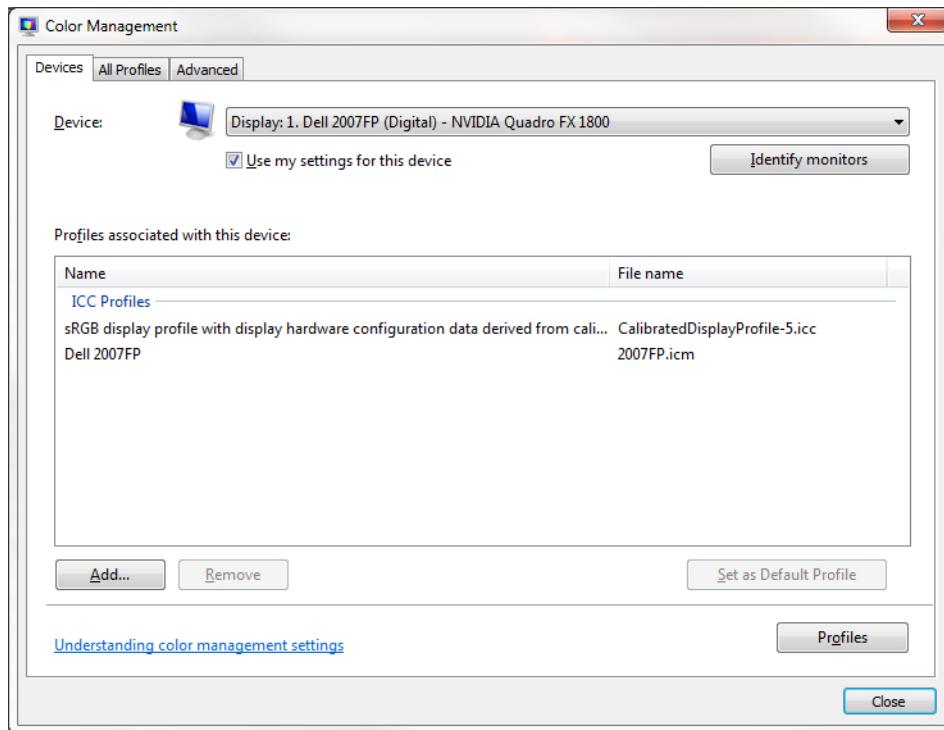
For details on color management, click on the *Understanding color management settings* link on the Color Management Devices tab.

4: Printer Settings and Adjustments

Card Printer Properties

Devices Tab

Use the Devices tab to set your display and printing devices.



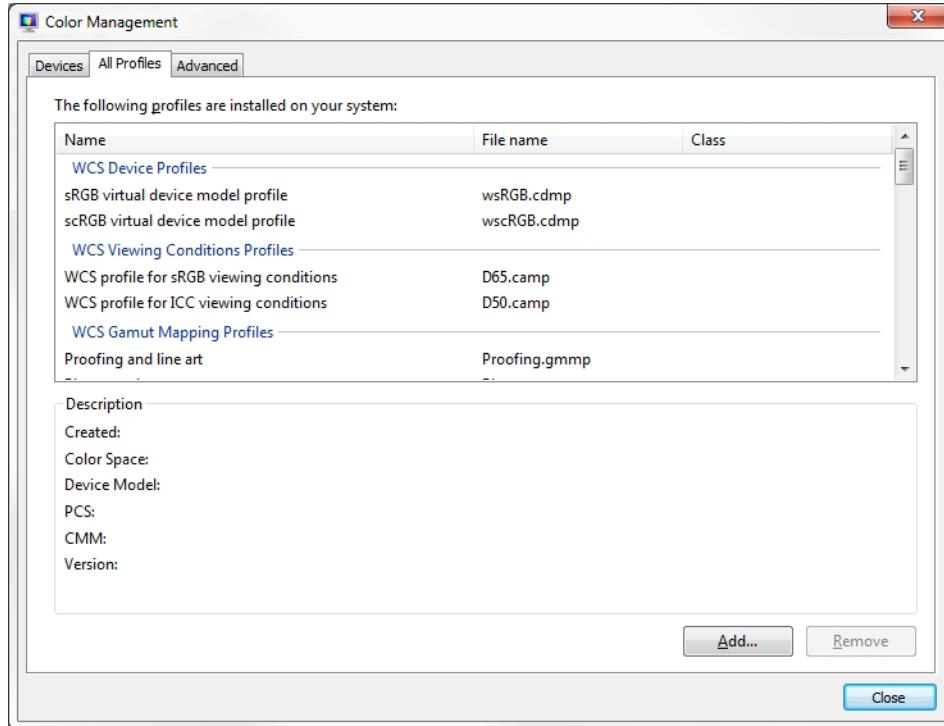
The *Use my settings for this device* checkbox must be selected to enable the following button functions:

- 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.

All Profiles Tab

Color profiles are usually added automatically during the installation of new devices.



If you need to install a new profile, follow these steps:

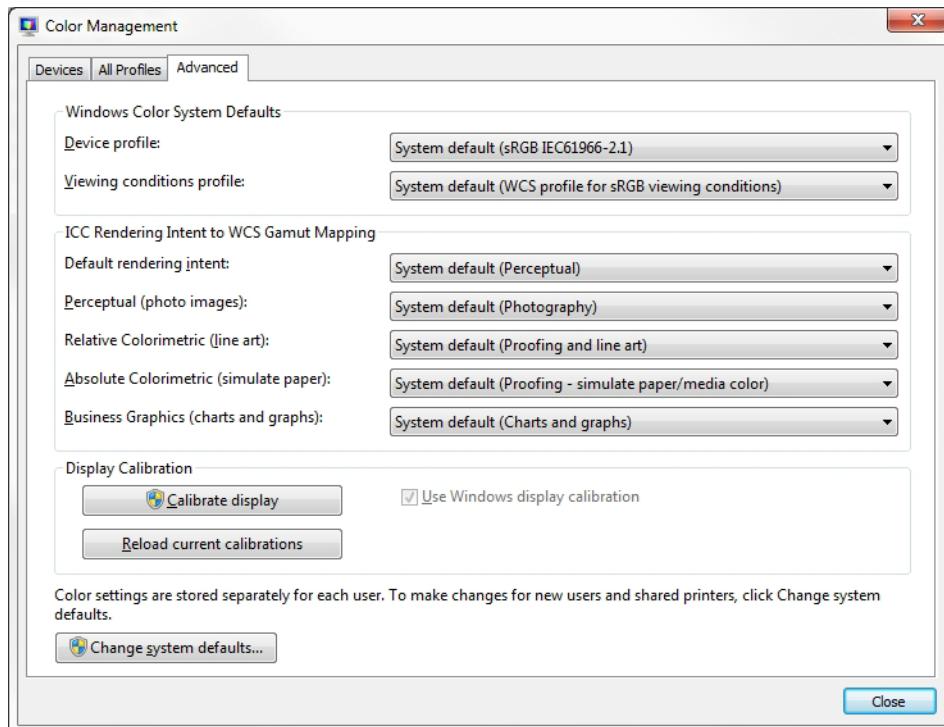
- Step 1.** Click on the **Add** button.
- Step 2.** Observe the Install Profile browse window.
- Step 3.** Locate the desired color profile.
- Step 4.** Click on the **Add** button (in the Install Profile browse window).

4: Printer Settings and Adjustments

Card Printer Properties

Advanced Tab

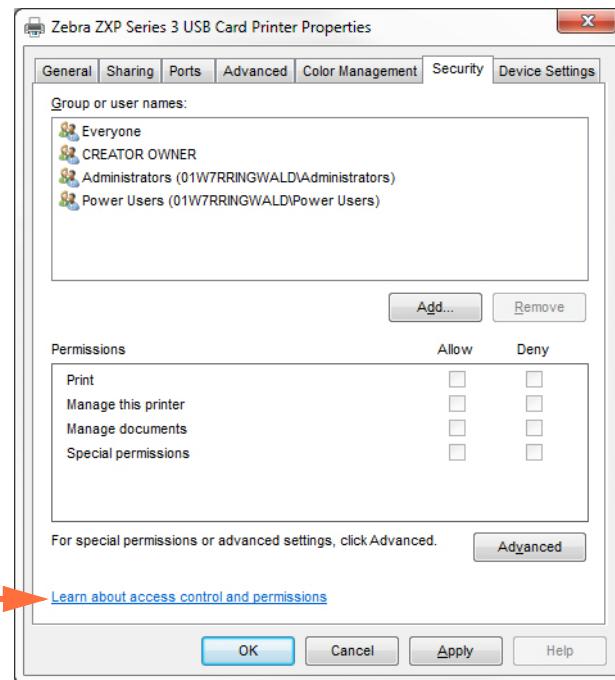
Use the Advanced tab to check your Windows Color System Defaults settings, verify ICC Rendering to WCS Gamut Mapping, and calibrate your display (Display Calibration).



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 > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer 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.

Both “Print” and “Manage this printer” *Allow* checkboxes must be selected to ensure full functionality of the printer.

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.

For details on security settings, click on the *Learn about access control and permissions* link (arrow above).

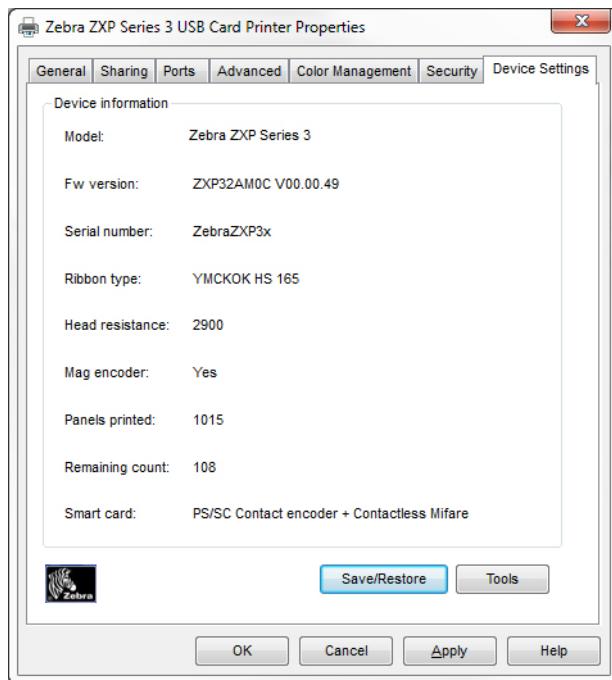
4: Printer Settings and Adjustments

Card Printer Properties

Device Settings Tab

The Device Settings tab provides device information, security status, and printer usage.

To access the Device Settings tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing. Select *Printer properties > Device Settings*.



Device Information

- **Model:** Specifies the printer model number.
- **Fw Version:** Specifies the installed firmware version.
- **Serial Number:** Specifies the printer serial number.
- **Ribbon Type:** Specifies the ribbon installed in the printer.
- **Head resistance:** Specifies the printhead resistance value.
- **Mag Encoder:** Specifies if this option is present.
- **Panels:** Shows the total number of panels printed for the lifetime of the printer.
- **Remaining Count:** Shows the remaining card count for the ribbon installed. For monochrome ribbons, this will display *Unknown*.
- **Smart card:** Specifies if a smart card encoder is present and type of encoder.

Click on the **Save/Restore** button to save your printer and/or driver settings. You can later restore those saved settings; see [page 47](#) for details.

Click on the **Tools** button to access a dialog box that allows you to test and communicate with the printer; see [page 48](#) for details.

Save/Restore

Dialog box for saving printer and driver settings or restoring previously saved settings.



To save settings:

- Step 1.** Click on the appropriate **Save** button (Printer Settings or Driver Settings).
- Step 2.** Observe a browse window showing the default location where the configuration files are saved: C:\Program Data\ZXPS3\config.
- Step 3.** Enter an appropriate file name, and click the **Save** button. Note: A prefix, P_ or D_, will be added to the file name for printer settings and driver settings respectively.
- Step 4.** Your selected settings will be saved.

To restore settings:

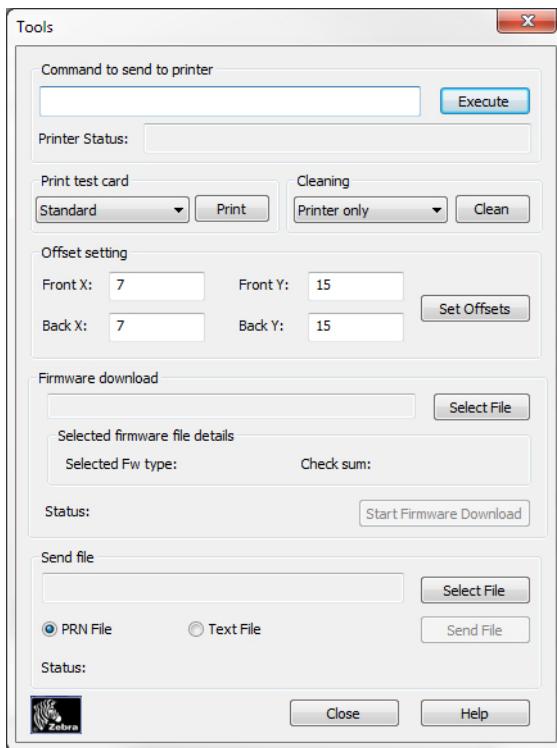
- Step 1.** Click on the appropriate **Restore** button (Printer Settings or Driver Settings).
- Step 2.** Observe a browse window showing the default location where the configuration files are saved: C:\Program Data\ZXPS3\config.
- Step 3.** Select the desired file, and click the **Open** button. Note that prefixes P_ and D_ indicate printer settings and driver settings respectively.
- Step 4.** Your selected settings will be restored.

4: Printer Settings and Adjustments

Card Printer Properties

Tools

Dialog box for testing and communicating with the printer.



- **Command to send to printer** - Enter a printer command (without leading escape character) in the top edit box, and click on the **Execute** button to send to the printer directly. The *Printer Status* will show the status of the printer. Contact Zebra Technical Support for a complete list of the printer commands.
- **Print Test Card** - Two test card types are available: Standard and Printer Parameters. Click on the **Print** button to print the selected test card.
- **Clean** - Click on the **Clean** button to clean the printer's printhead, cleaning rollers, and feeder rollers.
- **Offset Setting** - Enter the Front and Back X and Y direction offsets, and click on the **Set Offsets** button to set the offsets for printing the card.
- **Firmware Download:** See [page 49](#) for details.
- **Send File** - This command will allow a .prn or .txt file to print.
 - The .prn file must be created with a Zebra printer driver using the same ribbon as present in the printer.
 - The .txt file must contain firmware commands only with only one command per line. The first line must only contain *MASTER*; the last line must only contain *SLAVE*.

Firmware Download

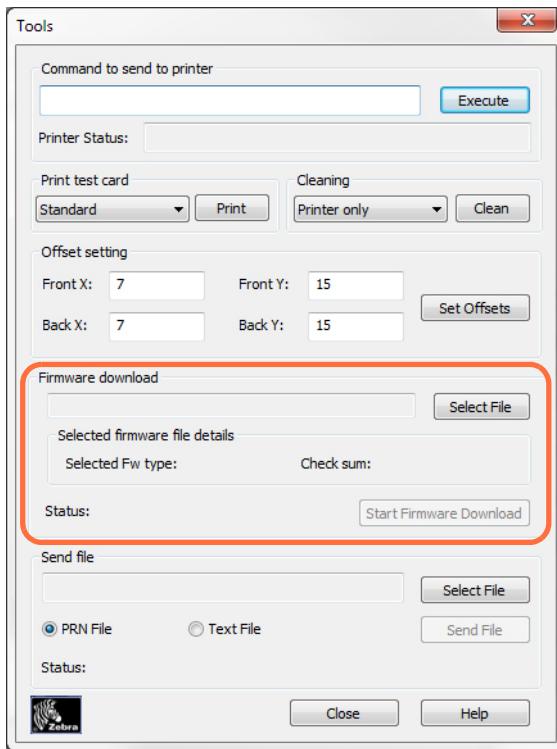
This option is used to install the firmware downloaded from the Zebra web site at <http://www.zebra.com> under *Drivers & Downloads*.



Important • Do not turn off the power to the printer until the process is done and the OCP displays *READY*. If the download process is interrupted, the printer will not operate.

Step 1. Download the firmware from Zebra web site (<http://www.zebra.com>), and save it to a location you can easily find.

Step 2. In the Tools window, click on the **Select File** button.



Step 3. From the Browse window, “find” the downloaded firmware (BIN file type), and click on the **Open** button.

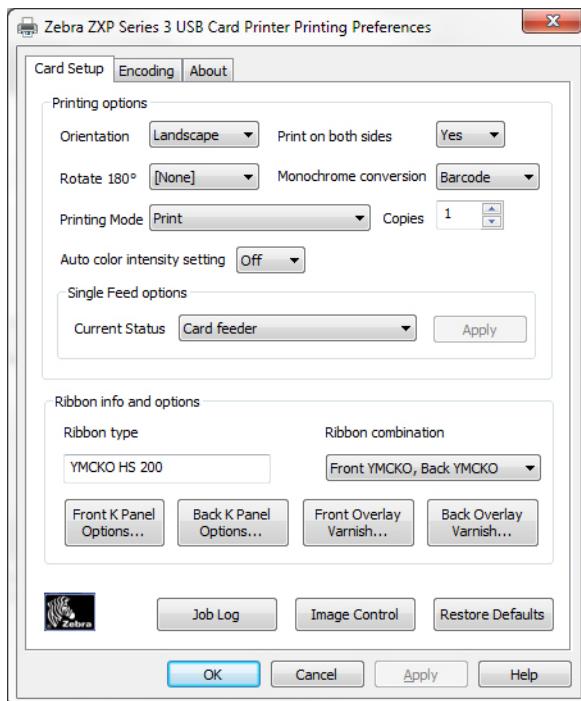
Step 4. Click on the **Start Firmware Download** button to install the firmware.

Card Printer Printing Preferences



Note • The screen shots shown in this section are for the printer using the USB interface. If you are using the Ethernet interface, the screens will refer to the “Network Printer.”

To access the Card Printer Preferences, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences*.



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The **OK** button applies and saves the settings.

The **Cancel** button exits Printer Properties. Changes made are abandoned.

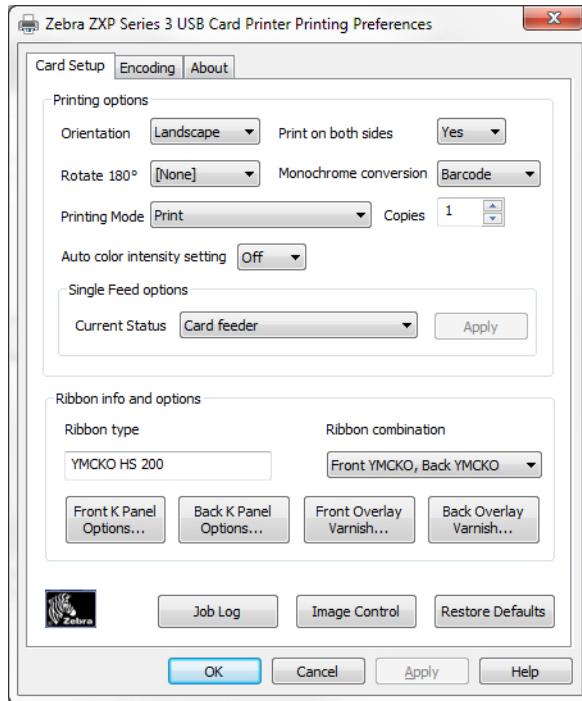
The **Apply** button applies, but does not save, the settings.

The **Help** button enables you to view a corresponding page of help information.

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 > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences > Card Setup*.



- **Printing options**

- **Orientation:** Selection for portrait or landscape printing.
- **Print on both sides:** Selection for single-sided or dual-sided printing.
- **Rotate 180°:** Selection for rotating the image 180°. The options are None, Front, Back, and Front & Back.
- **Monochrome Conversion:** Specifies the method of monochrome conversion used in printing. Different selections have different effects on the way the image is printed. The options are Barcode and Text Mode.

4: Printer Settings and Adjustments

Card Printer Printing Preferences

- **Printing options** (continued)

- **Printing Mode** - Sets the type of printing required:
 - Print.
 - Encode Only (use this when magnetic encoding is the only function desired, printing will not occur).
- **Copies** - Sets the number of copies of cards printed.
- **Auto Color Intensity Setting** - Off: Default. On: Reduces the intensity of dark images automatically. Should only be used if experiencing ribbon wrinkle.
- **Single Feed options**
 - Current Status displays the current card feed method; choices are Card feeder, Single feeder slot, and Auto feed.
 - Refer to [Appendix D](#) for details on the single card feed mode.

- **Ribbon info and options**

- **Ribbon type** displays type of ribbon installed in printer.
- **Ribbon combinations** are based on ribbon type; for example:

YMCKOK

- Front YMCKO, Back K.
- Front YMC, Back KO.
- Front YMCKO, Back YMCKO.
- Front YMCK, Back K.

Depending on the ribbon combination selected, the **K Panel Options** and **Overlay Varnish Options** buttons are enabled; see [page 53](#) and [page 56](#) respectively for details.

Click on the **Job Log** button to create and manage a database of card transactions; see [Job Log](#) on page [57](#) for details.

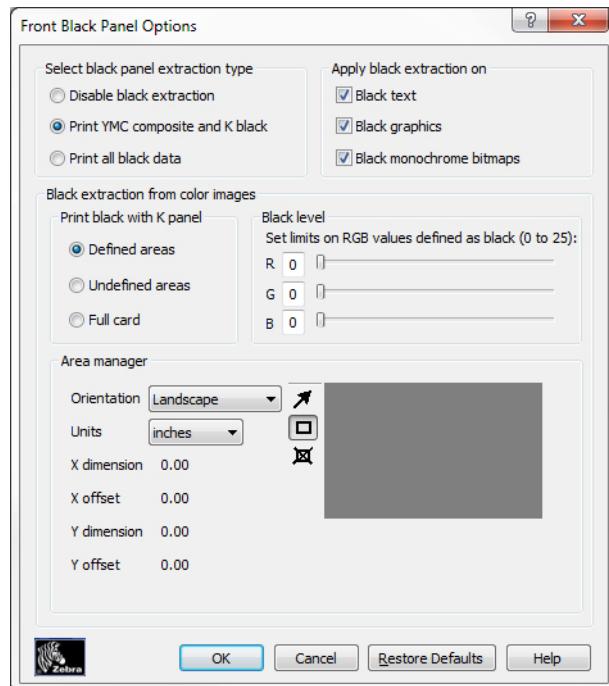
Click on the **Image Control** button to adjust the image colors; see [Image Control](#) on page [59](#) for details.

K (Black) Panel Options

The Advanced Black Panel Options pop-up window allows you to manage and configure the use of the Black Panel (K panel) when the selected Ribbon Combination shows the K panel on the same side as the Y, M, and C panels (e.g., YMCK Front / K Back).

Select a **Ribbon Combination** that has YMC and K all on the same side. The *Front K Extraction...* and/or *Back K Extraction...* buttons will become active. Press the appropriate button to open up the pop-up window.

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



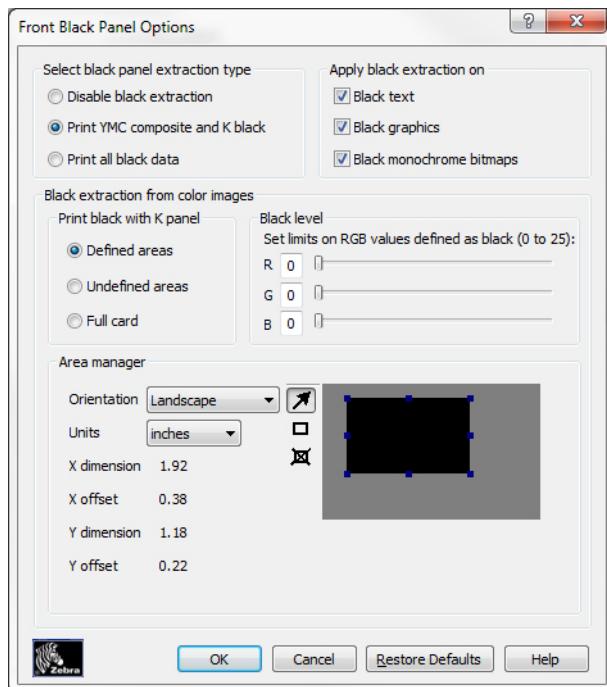
To set how the printer prints the black areas of color images, several selections must be made:

- **Select black panel extraction type:**
 - **Disable black extraction** (default) does not use the K panel for any part of the image.
 - **Print YMC composite and K black** uses both the K panel and the Y, M, and C panels to print black images.
 - **Print all black data** uses only the K panel to print black images.

4: Printer Settings and Adjustments

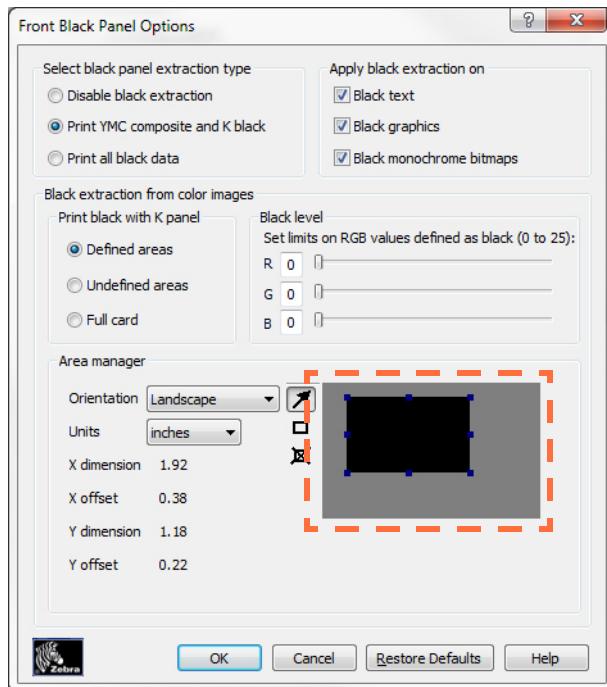
Card Printer Printing Preferences

- **Apply black extraction on:**
 - **Black text** applies black extraction to areas of the image identified as text.
 - **Black graphics** applies black extraction to areas of the image identified as graphics.
 - **Black monochrome bitmaps** applies black extraction to areas of the image identified as bitmaps.
- **Black extraction from color images:**



- **Print black with K panel:**
 - **Defined areas** applies black extraction to areas of the image inside of the zones specified in the Area manager.
 - **Undefined areas** applies black extraction to areas of the image outside of the zones specified in the Area manager.
 - **Full card** applies black extraction to the entire image.
- **Black level:** Every dot of a printed image has an RGB color value that ranges from 0, 0, 0 (pure black) to 255, 255, 255 (pure white). The black level setting allows the user to specify the threshold value for any given dot to be treated as black. The maximum setting is R25, G25, B25.

- Area manager:** This option is enabled when either the Defined areas (extract inside the zone) or the Undefined areas (extract outside the zone) radio button is selected.



- Orientation:** The Orientation selection sets the image orientation to either Portrait or Landscape.
- Units:** The Units selection sets the units to either inches or mm (millimeters). The X-dimension, X-offset, Y-dimension, and Y-offset reflect these units.

To create a zone: Select the rectangle icon , click on an area of the image to establish the first corner of the zone, drag the cursor until the zone is the desired size and shape, then release the mouse button. Note that multiple zones can be defined.

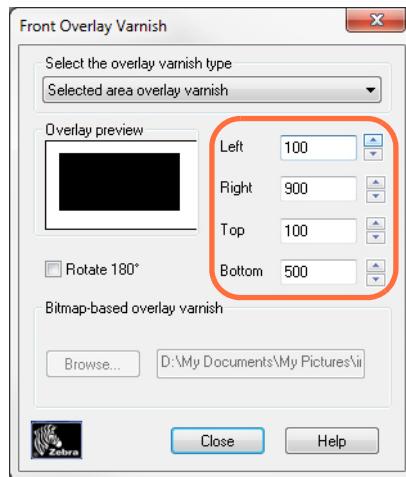
To select, move, or resize a zone: Select the arrow icon , click on a zone to select it, then drag it to move it, or drag on the edges to resize it.

To delete a zone: Select the rectangle icon with an "X" through it , then click on the zone that you want to delete.

Overlay Varnish Options

The Overlay Varnish Options window allows you to manage and configure the use of the Overlay when the selected Ribbon Combination shows the O panel (e.g. YMCKO).

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



Select the overlay varnish type - Option selection for applying overlay varnish ribbon to a card. Default setting is full edge-to-edge varnish.

There are various varnish options. A preview pane is shown for each selection.

- Full overlay varnish - Applies an edge-to-edge overlay.
- No overlay - Does not apply any overlay.
- Selected area overlay varnish - Applies the overlay *inside* the area specified by the user. When this option is selected, position the Left, Right, Top, and Bottom overlay edges via the  buttons (circled above).
- Selected area blank - Applies the overlay *outside* the area specified by the user. When this option is selected, position the Left, Right, Top, and Bottom overlay edges via the  buttons (circled above).
- Bitmap-based overlay varnish - Applies a user-defined bitmap in the overlay panel. When selected, click the **Browse** button; in the browse window, find the desired monochrome bitmap; and click the **Open** button.
- Smartcard ISO - Does not apply overlay in the area of the ISO standard Smart Card contacts.
- Smartcard AFNOR - Does not apply overlay in the area of the AFNOR standard Smart Card contacts.
- Magnetic Stripe - Does not apply overlay in the area of the ISO standard Magnetic Stripe.

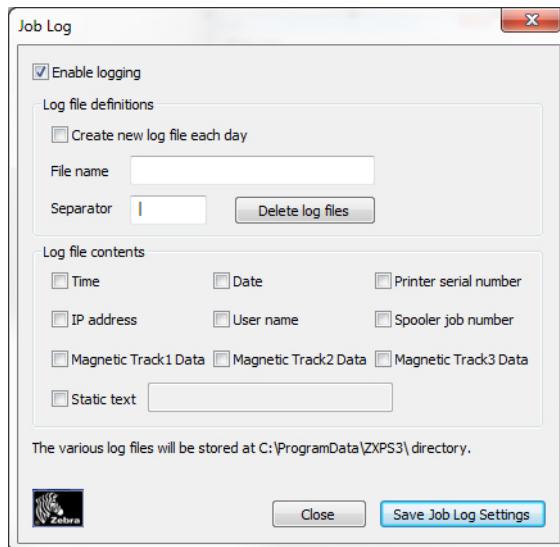
Job Log



Note • The various log files are stored at *C:\ProgramData\ZXP3* directory.

The Job Log is a utility that builds a database of card transactions in the printer's host computer. The Job Log records the 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 a card by comparing it with tamper-proof *real data*.



- **Enable logging** - If this box is checked, the logging feature is enabled.
- **Log File 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_2011_8_17*.
 - In addition to the Filename, you may wish to enter a special field Separator Character. The default field Separator Character is “|”.

4: Printer Settings and Adjustments

Card Printer Printing Preferences

- **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.
- **IP address**: Logs the IP address of the PC that sent the card to the printer.
- **User name**: Logs the username of the person submitting the card print job.
- **Spooler job number**: Logs the number which the card print job was assigned in the Windows print spooler.
- **Magnetic Track 1, 2, 3 Data**: Logs the data sent to the printer to be encoded on the card's magnetic stripe.
- **Static text**: Adds to the record text in the box at right, 16 characters maximum.



Note • The various log files are stored at *C:\ProgramData\ZXPS3\ directory*.

The **Delete log files** button deletes the log files.

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

Image Control



Note • Printed colors can appear different than displayed colors; the following controls allow you to optimize the printed results.

Allows you to adjust the image colors; these adjustments apply to the entire card, not just photographic image.



- **Intensity** - increase or decrease the image intensity by moving the Black, Yellow, Magenta, and Cyan slider bars left or right. This will change the overall lightness or darkness of the image. Move the slider to the right (0 to 100) to increase the intensity and to the left (0 to -100) to decrease the intensity. Note that color ribbon wrinkling can be eliminated by reducing the *intensity*.

Use the **Restore Defaults** button to reset the settings to the driver defaults.

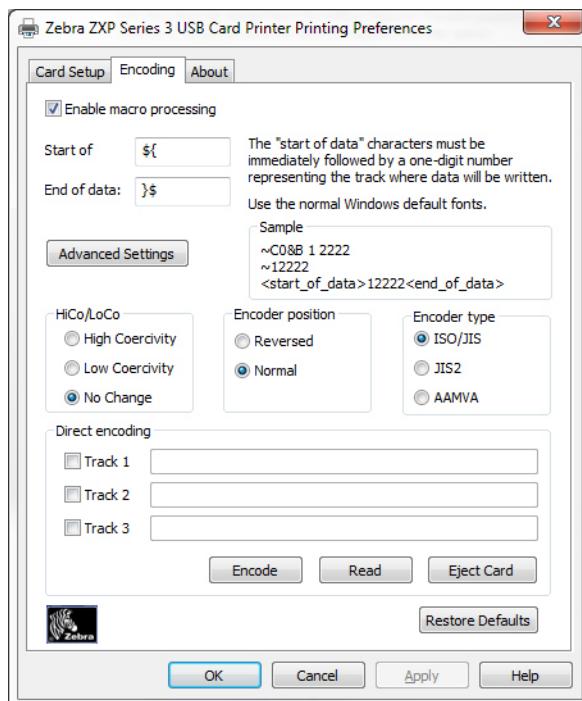
4: Printer Settings and Adjustments

Card Printer Printing Preferences

Encoding Tab

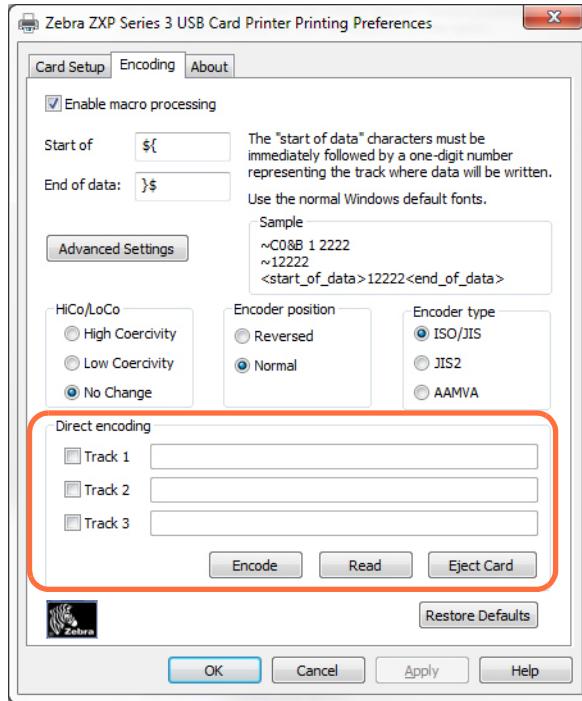
The Encoding tab dialog box is for setting Magnetic Encoder parameters. This feature is not enabled if the printer does not have the magnetic encoder option.

To access the Encoding tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences > Encoding*.



- **Enable macro processing** - This option is used to set the encoding preamble and other magnetic encoder parameters.
 - **Start of Data** - Beginning of the data string for the encoder. Note that Start of Data characters must be immediately followed by a one-digit number representing desired track where the data will be written. Use the normal Windows default fonts.
 - **End of Data** - Ending of the data string for the encoder.
- **Advanced Settings** - Click on the **Advanced Settings** button for additional encoding options; for details, see [Advanced Settings on page 62](#).
- **HiCo/LoCo** - Select the type of coercivity of magnetic stripe cards to be used.
- **Encoder Position** - Select the printer encoder position between Reversed and Normal. Reversed is not supported by this printer.
- **Encoder Type** - Select the type of encoder. JIS2 and AAMVA are not supported by this printer.

- **Direct Encoding** - For writing data and reading encoded data.



Track selection:

- To read encoded data: Click on the checkboxes to select *Track 1*, *Track 2*, and/or *Track 3*; click on the **Read** button, and validate the data read.
- To write data: 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.
- To eject the card: Click on the **Eject Card** button to eject the card.

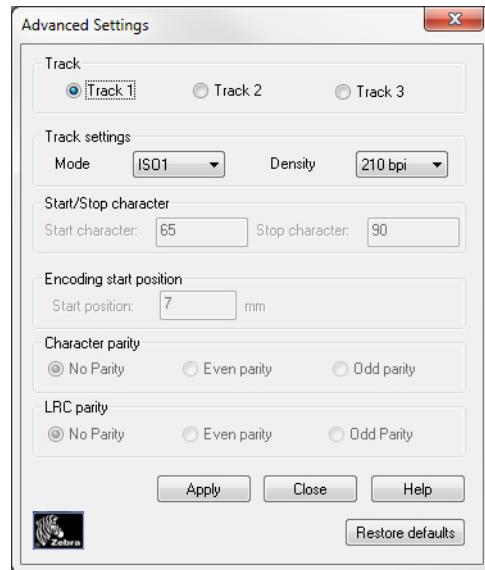
The **Restore Defaults** button to reset the settings to the original values.

4: Printer Settings and Adjustments

Card Printer Printing Preferences

Advanced Settings

Advanced Settings provides advanced configuration capabilities and tools to manage magnetic encoder operation. This option is primarily used for Non-ISO encoding.



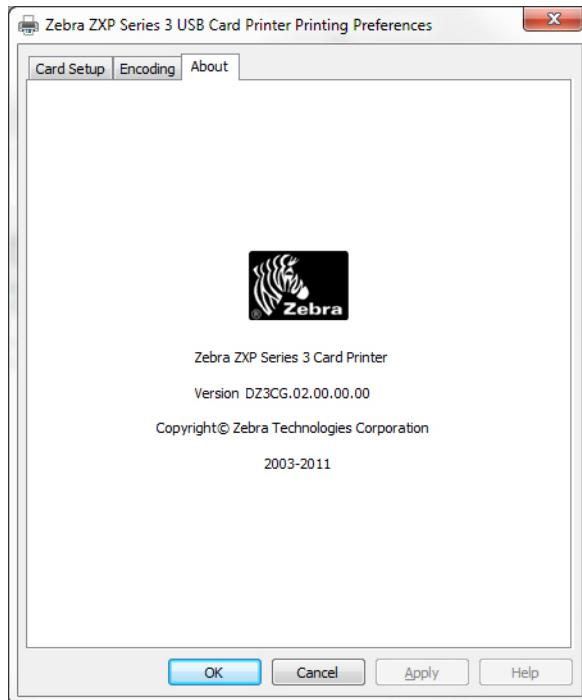
- **Track:** Select the track you want to configure.
- **Track Settings:** Select the *Mode* (ISO1, ISO2, ISO3, 3 bit, 4 bit, 5 bit, 6 bit, or 7 bit) and *Density* (75 bpi or 210 bpi) for the tracks.
- **Start/Stop Character** (For Non-ISO encoding only): Enter an ASCII value for the Start and Stop characters.
- **Encoding Start Position** (For Non-ISO encoding only): Enter the encoding start position in millimeters (mm).
- **Character Parity** (For Non-ISO encoding only): Choose the Character Parity you want to work with -- No parity, Even parity, or Odd parity.
- **LRC Parity** (For Non-ISO encoding only): Choose the LRC Parity you want to work with -- No parity, Even parity, or Odd parity.

Click the **Restore Defaults** button to reset the settings to the original values.

About Tab

This tab specifies the Printer Model, the Driver Version, and the Zebra Technologies Corporation Copyright.

To access the About tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences > About*.





Cleaning



Cleaning the System

Caution • PROTECT YOUR FACTORY WARRANTY!

The recommended maintenance 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 ZXP Series 3 Card Printer.



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

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

Your Printer includes a simple cleaning system using Pre-Saturated Cleaning Cards provided. The regular use of these cards will clean and maintain important parts of your printer that cannot be reached: including Printhead, the Transport Rollers, and the Magnetic Encoder Station (optional feature).

When to Clean

Clean the Printer when:

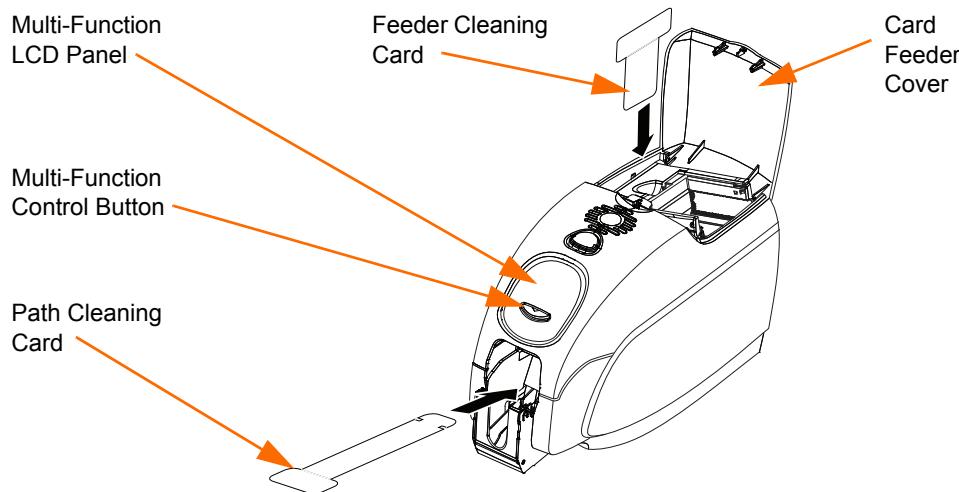
- Print quality has been degraded.
- The LCD panel displays the message **CLEAN PRINTER**.

5: Cleaning

Cleaning the System

How to Clean

- Step 1.** Place the printer power switch in the ON (|) position, and then press and hold the Multi-Function Control Button for 5 seconds.
- Step 2.** When the cleaning cycle is initiated, the LCD message **REMOVE RIBBON THEN CLOSE LID** will display.



- Step 3.** After the ribbon is removed and the lid is closed, the message **EMPTY FEEDER THEN CLOSE COVER** will display.
- Step 4.** If the lid is opened and closed without removing the ribbon, the **REMOVE RIBBON THEN CLOSE LID** message will remain.
- Step 5.** Once the ribbon is removed and the cover is closed, the firmware will eject any card inside the printer. The message **EJECTING CARD** will display.
- Step 6.** The LCD will display **FEED LONG CLEANING CARD**. When the presence of the cleaning card is sensed, the rollers will take the card into the printer.
- Step 7.** When the cleaning process is done, the printer will eject the cleaning card. If the card sensor still senses the cleaning card, the message **REMOVE LONG CLEANING CARD** will display.
- Step 8.** Once the long cleaning card is no longer sensed by the card exit sensor, the message **INSERT FEEDER CLEANING CARD** will display. Open the feeder cover, and insert the feeder cleaning card.
- Step 9.** When the feeder cleaning card has been sensed by the feeder card sensor, the message **CLOSE FEEDER COVER** will display.
- Step 10.** When feeder cleaning is complete, the message **REMOVE FEEDER CLEANING CARD** will display.
- Step 11.** After the card is removed, the LCD will display **READY**. You may now reload the ribbon and cards and continue printing.

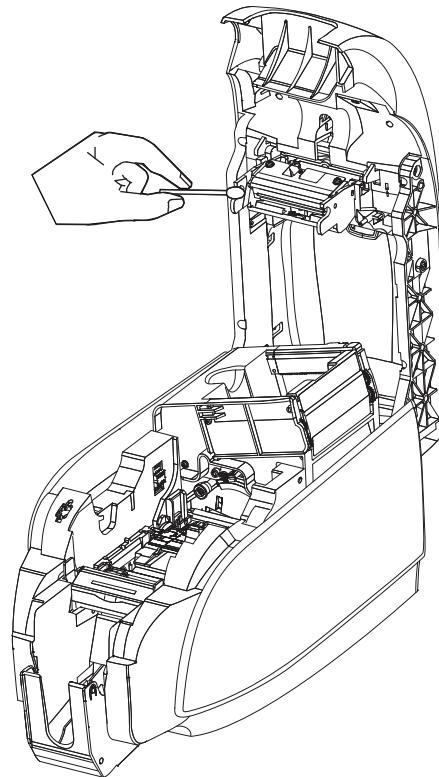
Cleaning the Printhead

Use of the cleaning cards will normally do an adequate job of cleaning the printer. However, a separate Printhead cleaning, using swabs, can remove more stubborn deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs.



Caution • Never use a sharp object to scrape deposits from the printhead. Permanent damage to the printhead will result

- Step 1.** Place the printer power switch in the OFF (O) position.
- Step 2.** Open the printer lid by pressing the cover release button, and open the cover fully to reveal the Printhead mounted on the inside of the cover.



- Step 3.** Clean the Printhead by moving an alcohol-moistened swab tip side-to-side across the Printhead elements. Only use moderate force.
- Step 4.** Allow two to three minutes for the printhead to dry before placing the printer power switch in the ON (|) position.
- Step 5.** To reorder swabs, refer to the Media List on the *Windows Drivers and User Documentation CD* supplied with this printer.



Troubleshooting



Introduction

The objective of troubleshooting is to relate a problem to an associated assembly or system function, in order to most efficiently isolate and repair the problem. Typically, this involves determining the failure symptom and then checking one or more possible causes of the failure.

In general, for a given failure symptom one or more possible causes are listed, with suggested corrective action to take. These causes should be checked and corrective actions taken in the order given; they are listed in order of likelihood and complexity.

Troubleshooting Procedures

LCD Panel Warnings and Error Messages

The following tables show causes and solutions to symptoms related to improper operation. Check the table when experiencing any loss of operation or print quality.

PANEL WARNINGS (printer will still operate)

Problem / Symptom	Description or Cause	Possible Solution
CHECKING RIBBON	Printer is determining type of ribbon installed.	No action required -- status message only.
CLEAN PRINTER	Printer cleaning required.	Refer to Cleaning the System on page 65.
CLOSE LID	The lid is open.	Make sure that the lid is completely and securely closed.
ENCODING ERROR	May be incorrect card type.	Check that you are using the correct magnetic card type (for low or high coercivity encoding).
FLASH ERROR	A flash error occurred.	Reset the Printer, and try printing the card again.
INVALID MAGNETIC DATA	The magnetic data may be invalid.	Check data format.
READING ERROR	A reading error occurred.	Reset the Printer, and try printing the card again.

Note: If the problem persists, contact Technical Support; see [Worldwide Support](#) on page 115.

ERROR MESSAGES (printer will not operate)

Problem / Symptom	Description or Cause	Possible Solution ^{Note}
CHECK RIBBON	Wrong type of ribbon may be installed. Ribbon for P1XX will not work. Ribbon may be improperly installed.	Install proper ribbon. Reload ribbon cartridge. Refer to Loading Ribbon Cartridge on page 28.
COMMAND ERROR	A command error occurred.	Reset the Printer, and try printing the card again.
COVER OPEN	The cover is open.	Make sure that the cover is completely and securely closed.
LID OPEN	The lid is open.	Make sure that the lid is completely and securely closed.
MECHANICAL ERROR	Check that you are using the correct card type. Check for card jam. Check that ribbon is loaded correctly.	See Technical Specifications on page 79. Open cover and remove Card Cleaning Cartridge, empty the Card Feeder, and remove the jammed cards. Refer to Loading Ribbon Cartridge on page 28 for details.
OUT OF CARDS	Check for cards in the card feeder.	If no cards present, load cards; then press the Panel Button for 1 second. The printing job will restart.
OUT OF RIBBON	Check ribbon. May be defective or entirely used.	Load a new ribbon cartridge. Refer to Loading Ribbon Cartridge on page 28 for details.
PARAMETERS ERROR	A parameter error occurred.	Reset the Printer, and try printing the card again.

Note: If the problem persists, contact Technical Support; see [Worldwide Support](#) on page 115.

Print Quality Issues

This section will help you resolve print quality problems.

The print quality is dependent on several factors. The two most important factors that will increase your print quality are cleanliness and card stock.

To diagnose and fix print quality problems, follow the troubleshooting procedures below:

Small spots	73
Non-printing horizontal lines (white)	74
Pale or inconsistent results	75
Blurry printed image	76
No printing	77

Example • Small spots

Small spots appear on the printed card with a non-printed area or a different color.



Possible Cause:

- Contamination on the card surface.

Solutions:

- Check that cards are stored in a dust free environment.
- Use a different supply of cards.

Possible Cause:

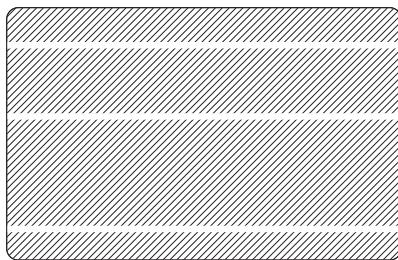
- Dust inside the printer and/or dirty Cleaning Roller.

Solutions:

- Clean the printer. Refer to [Cleaning the System](#) on page 65.
- Check that the protective cover was removed from the ribbon cartridge cleaning roller. Refer to [Loading Ribbon Cartridge](#) on page 28.

Example • Non-printing horizontal lines (white)

There are non-printing horizontal lines (white) on the card surfaces.



Possible Cause:

- Ribbon cartridge is not correctly positioned.

Solutions:

- Ensure that the ribbon is properly rolled onto the ribbon cores of the cartridge and that there are no wrinkles in the ribbon.
- Replace ribbon cartridge. Refer to [Loading Ribbon Cartridge](#) on page 28.

Possible Cause:

- Printhead is dirty.

Solutions:

- Clean the Printhead. Refer to [Cleaning the Printhead](#) on page 67.

Possible Cause:

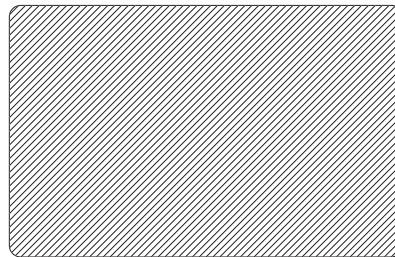
- Printhead elements are damaged (e.g., scratched or burnt).

Solutions:

- Call Zebra Customer Service for Printhead replacement information; see [Worldwide Support](#) on page 115.

Example • Pale or inconsistent results

Printing shows very pale or inconsistent results.



Possible Cause:

- Ribbon cartridge have been stored improperly or is damaged.

Solution:

- Change ribbon cartridge, and print again. Refer to *Loading Ribbon Cartridge* on page 28.

Possible Cause:

- Cards may not meet specifications. Refer to *Technical Specifications* on page 79.

Solution:

- Use a different supply of cards.

Possible Cause:

- Dust or embedded contamination on elements of the Printhead.

Solution:

- Clean the Printhead. Refer to *Cleaning the Printhead* on page 67.

Possible Cause:

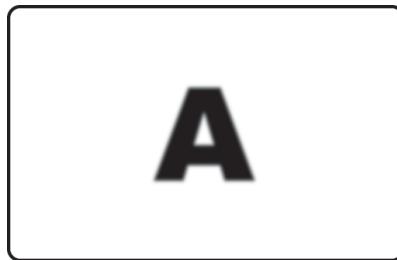
- Printing on wrong side of writable back cards.

Solution:

- Reverse direction of cards in feeder.

Example • Blurry printed image

Printing shows blurry printed image.



Possible Cause:

- Ribbon cartridge may not be correctly positioned.

Solution:

- Check that the ribbon is properly rolled onto the ribbon cores of the cartridge, with no wrinkles.
- Replace ribbon cartridge, making sure it locks in place, and print again. Refer to *Loading Ribbon Cartridge* on page 28.

Possible Cause:

- Ribbon may not be synchronized on the correct color panel position.

Solution:

- Open lid, then close lid to synchronize ribbon.

Possible Cause:

- Cards may not meet specifications. Refer to *Technical Specifications* on page 79.

Solution:

- Use a different supply of cards.

Possible Cause:

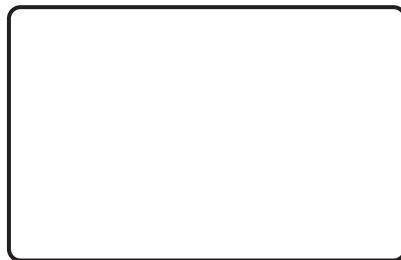
- Dust or embedded contamination inside the printer.

Solution:

- Clean the Rollers and the Printhead. Refer to *Cleaning the System* on page 65 and *Cleaning the Printhead* on page 67 respectively.

Example • No printing

No printing on the card.



Possible Cause:

- Ribbon cartridge may not be installed in the printer.

Solution:

- Check for ribbon cartridge in the printer. Refer to *Loading Ribbon Cartridge* on page 28.

Possible Cause:

- Cards may not meet specifications. Refer to *Technical Specifications* on page 79.

Solution:

- Use a different supply of cards.

Possible Cause:

- Cable on Printhead may be disconnected.
- Printhead elements may be scratched or burnt.

Solution:

- Call Service for Printhead repair or replacement information; see *Worldwide Support* on page 115.





Technical Specifications

Printer Specifications

General

- Single-sided and dual-sided printing
- Single card feed capable
- Load-N-Go drop-in ribbon cartridge
- 16-character LCD display
- Windows[©] Drivers: XP, Server 2003 and 2008, Vista, and Windows 7 (32/64 bits)
- 100-card covered feeder (30 mil card)
- 45-card output hopper (30 mil card)
- 32 MB memory standard

Communications Interfaces

- Standard: USB 2.0 (cable included)
- Optional: Built-in 10/100 Mbps Ethernet

Printing Specifications

- Color dye sublimation or monochrome thermal transfer printing
- 300 dpi (11.8 dots/mm) print resolution
- Single-Sided (Front only)
 - 750 card per hour monochrome
 - 180 cards per hour card full-color (YMCKO)
- Dual- Sided (Front and Back)
 - 140 cards per hour (YMCKO Front, K back)

7: Technical Specifications

Printer Specifications

Ribbon Specifications

- i Series™ intelligent media technology
- YMCKO: 200 cards/roll
- YMCKOK: 165 cards/roll
- Monochrome: 1000 cards/roll - black, blue, green, gold, red, or silver
850 cards/roll - white
- ½ Panel YMC Full KO: 250 cards/roll
- KdO: 500 cards/roll
- KrO: 500 cards/roll

Cards Compatibility

- Types: PVC, PVC Composite
- Card width/length: ISO CR-80-ISO 7810: 2.125" by 3.375" (54 mm by 86 mm)
- Card thickness: .015" to .040"; for optimum performance, use standard .030" cards
- Magnetic Stripe - ISO 7811
- Smart Card Contact - ISO 7816-1,2,3,4
- Smart Card Contactless MIFARE - ISO 14443A/B

Encoding Options

- Magnetic encoder (30 mil cards only), 3 track HiCo/LoCo: ISO 7811
- Combined PC/SC MIFARE - ISO 14443 (13.56 MHz) and ISO 7816 contact encoder
- Smart Card Contact Station ISO 7816

Optional Features

- CardSense™ single-card feed mode
- Extended product warranty programs

Bar Code

- Code 39, Code 128 B & C with and without check digit
- 2 of 5 and 2 of 5 Interleaved
- UPC-A, EAN 8, and EAN 13
- PDF-417 2D bar code and other symbologies can be printed via Windows drivers

Security

- Kensington security slot
- Optional: Lockable covers on feeder, and print engine compartment

Electrical

- Power Supply
 - Input: 100 ~ 240 Volts AC, 50 ~ 60 Hz (auto switching)
 - Output: 24V/4A
- FCC Class A

Dimensions (printer only)

- Height: 9.3 in (235.5 mm)
- Width: 7.9 in (200.7 mm)
- Depth: 14.5 in (367.6 mm)
- Weight: 12.2 lbs (5.53 kg)

Environmental

- Operating Temperature: 60°F to 86°F (15°C to 30°C)
- Operating Relative Humidity: 20% to 65% non-condensing
- Storage Temperature: 23°F to 158°F (-5°C to 70°C)
- Storage Relative Humidity: 20% to 70% non-condensing

Agency Approvals

Zebra ZXP Series 3 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, Part 15 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:

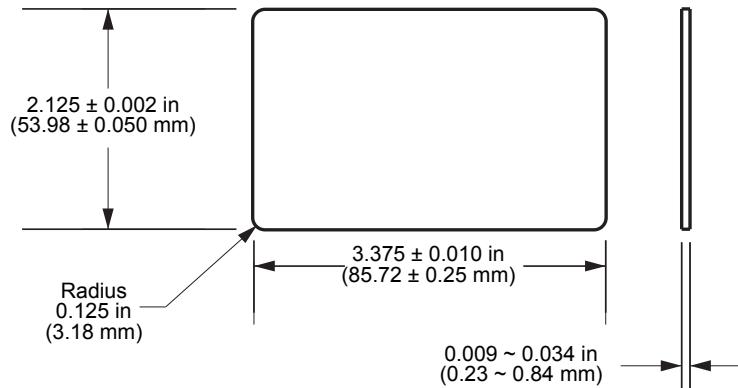
2004/108/EC EMC Directive, EN55022:2006 + AD:2007 Class A,
EN55024:1998 + AD1:2001 + AD2:2003,
EN61000-3-2:2006, EN61000-3-3:2008,
2006/95/EC LVD Directive, EN60950-1:2006 + A11, CB Scheme

 - RFID Enabled
 - Applicable Directives and Supporting Standards:

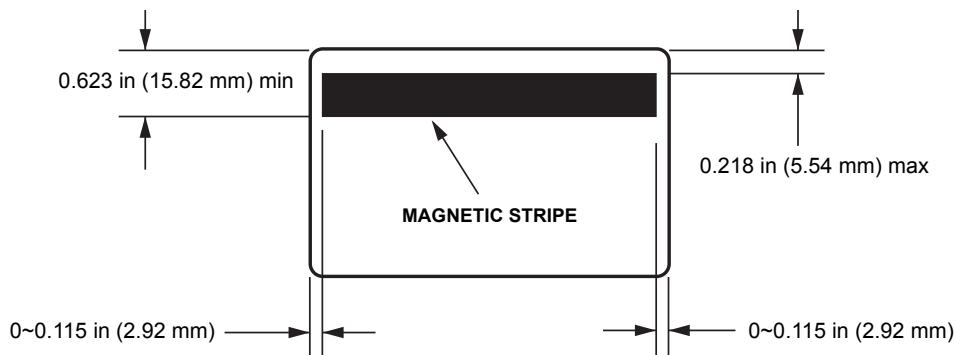
99/5/EC R&TTE Directive, EN 301 489-3 V1.4.1,
EN 300 330 V1.5.1

ISO Standard Card Dimensions

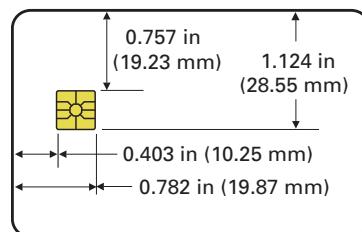
Dimensions for Plain Card ISO Standard 7810



Dimensions for Magnetic Stripe Card ISO Standard 7811



Contact Location for Smart Card ISO Standard 7816



Declarations of Conformity



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

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

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

FI: "Laite on liitettävä suojaamaodoitus koskettimilla varustettuun pistorasiaan"
 SE: "Apparaten skall anslutas till jordat uttag"
 NO: "Apparatet må tilkoples jordet stikkontakt"

FCC Regulations

The ZXP Series 3 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 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.

7: Technical Specifications

ISO Standard Card Dimensions

Japanese Notification

日本：総務省(MIC)認証マーク

本製品はMICの認証を受けています。

RFID認証番号はNo. FC-10003です。

この機器は、無線周波数エネルギーを生成および使用し、それらを放射する可能性があります。したがって、ユーザー・マニュアルに従って設置および使用しなかった場合、無線通信あるいはベースメーカーなどの医療機器に有害な干渉を引き起こすことがあります。

NCC Warning Message

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Appendix A

Network Operations



Introduction

This section covers:

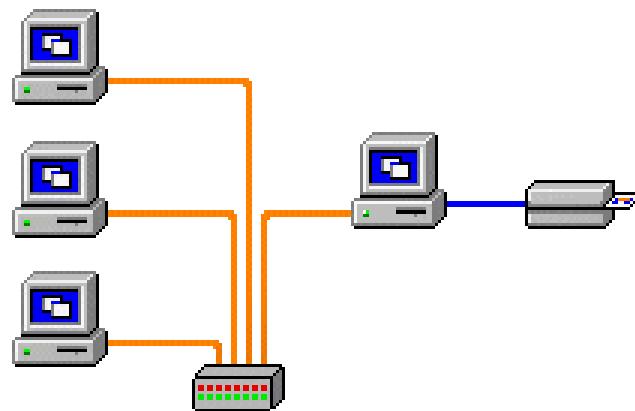
Network Configurations	86
Setting Up a Network Printer	88
Printer Pooling	92

Network Configurations

Printer Sharing

In printer sharing, the printer is connected locally to the host computer and configured to be shared to other client computers.

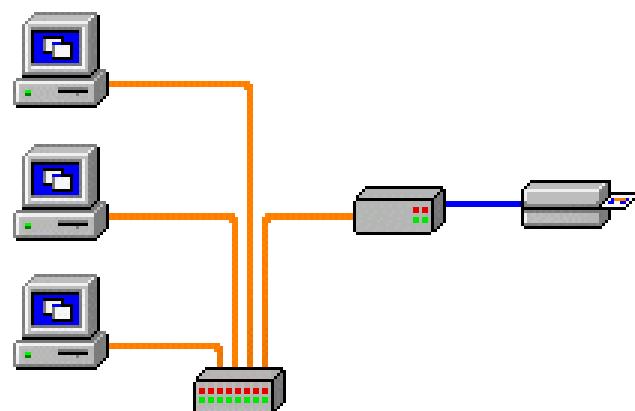
Client computers connect to the printer over the network through the host computer.



External Print Server

An external print server is a stand-alone device that acts as a server on the network specifically for receiving print jobs and passing them to the printer.

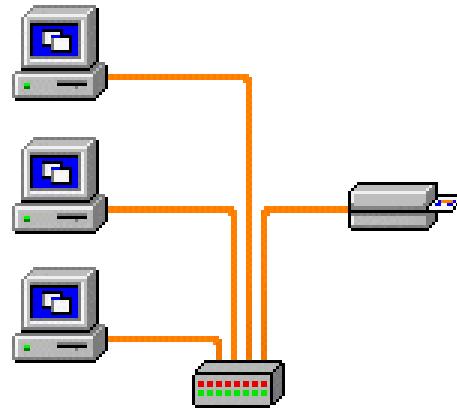
Client computers connect to the print server over a network.



Internal Print Server

An internal print server is similar to an external print server, except the print server is integrated into the printer. This removes the need for a separate power supply and separate device drivers.

This is the simplest way to network a printer.

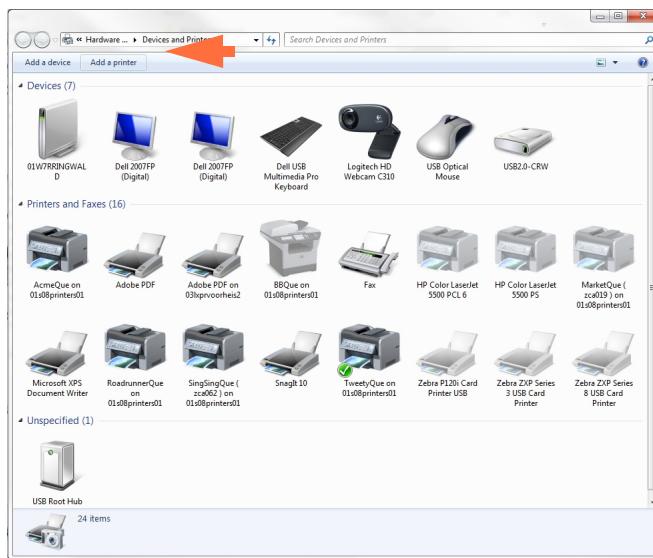


Setting Up a Network Printer

Use this procedure if you have already installed an Ethernet printer on your system (refer to [Section 2](#)), and you want to install a second Ethernet printer on the network via the Microsoft **Add Printer Wizard**.

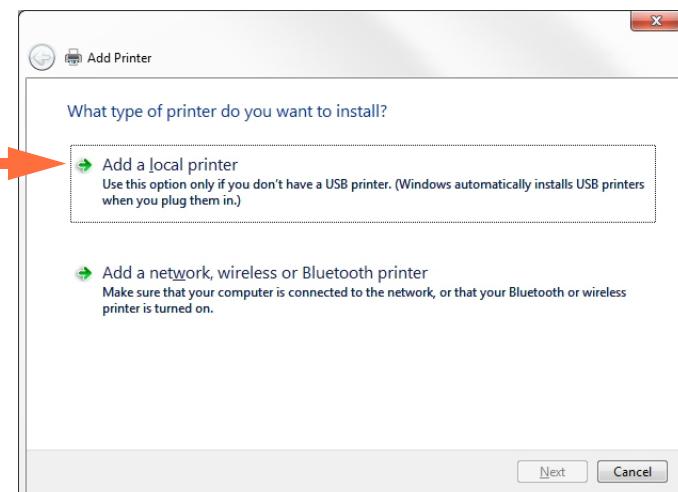
Step 1. Click on the **Start** button, then select **Devices and Printers**.

Step 2. Observe the **Devices and Printers** window.



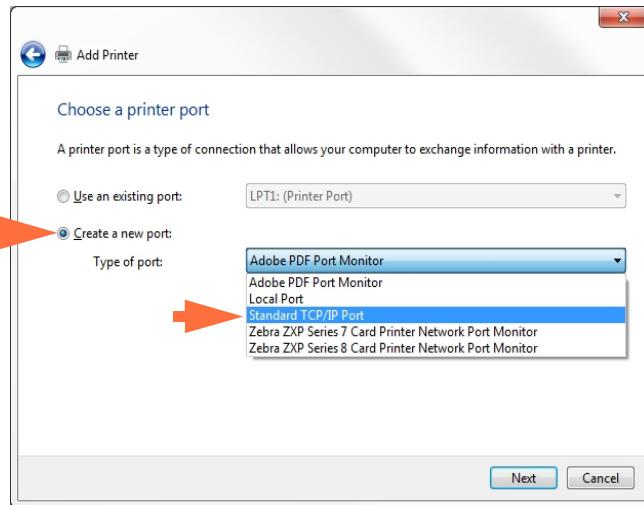
Step 3. Click on the *Add a printer* option in the Taskbar (arrow above).

Step 4. Observe the **What type of printer do you want to install** window.



Step 5. Select *Add a local printer* (arrow above), and click the **Next** button.

Step 6. Observe the **Choose a printer port** window.

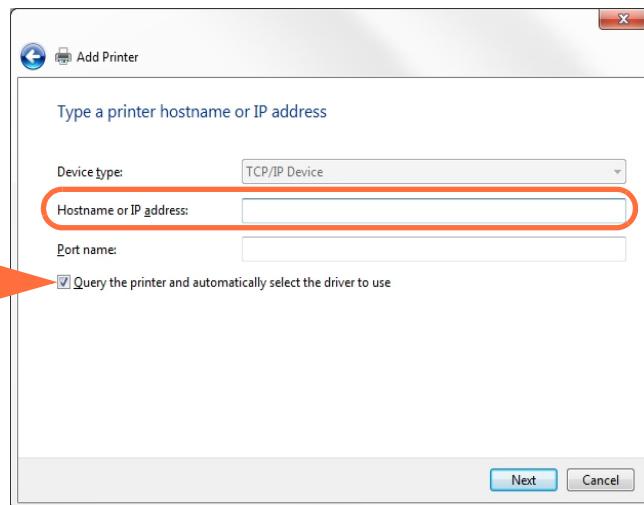


Step 7. Select the *Create a new port* radio button (1st arrow above).

Step 8. From the dropdown menu, select *Standard TCP/IP Port* (2nd arrow above).

Step 9. Click on the **Next** button.

Step 10. Observe the **Type a printer hostname or IP address** window.



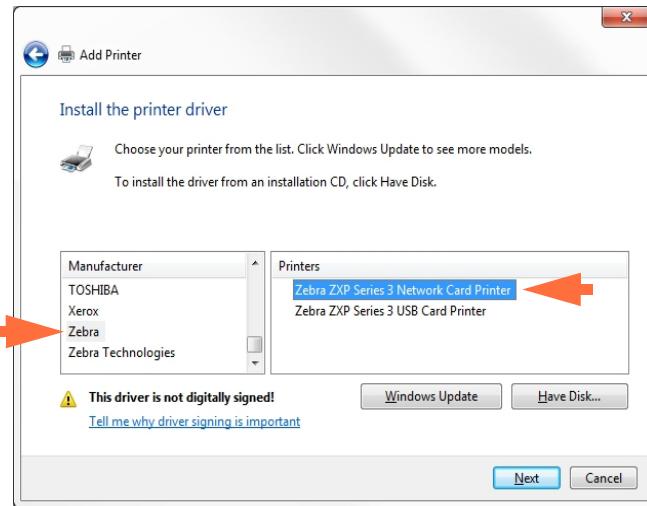
Step 11. Enter the IP address of your printer in the *Hostname or IP address* text box (circled above). Note that the Port name will automatically be filled in when you enter the IP Address. **Do not change the Port Name**.

Step 12. Ensure that the *Query the printer ...* checkbox is selected (arrow above).

Step 13. Click on the **Next** button.

A: Network Operations

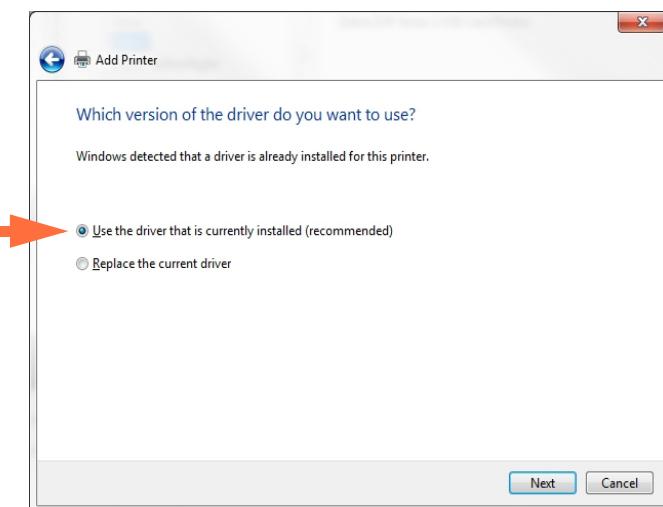
Step 14. Observe the **Install the printer driver** window.



Step 15. Select the Manufacturer and the Printer (arrows above).

Step 16. Click on the **Next** button.

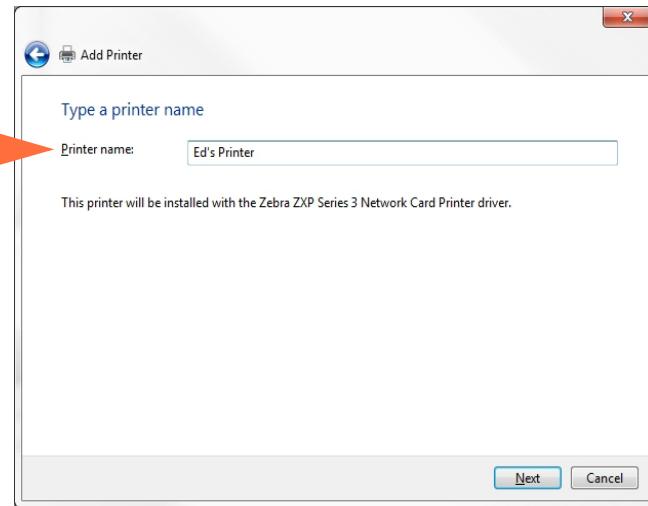
Step 17. Observe the **Which version of the driver do you want to use** window.



Step 18. Select the *Use the driver that is currently installed* radio button (arrow above).

Step 19. Click the **Next** button.

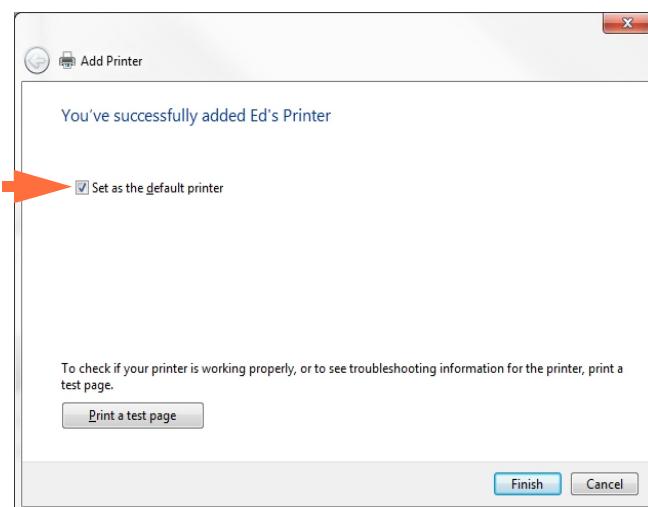
Step 20. Observe the **Type a printer name** window.



Step 21. Enter the printer name: use the default name, or add more information to indicate the printer location; e.g., Ed's Printer, Mike's Office, Room 33, etc.

Step 22. Click the **Next** button.

Step 23. Observe the **You've successfully added ...** window.



Step 24. If appropriate, select the *Set as the default printer* checkbox (arrow above).

Step 25. Click on the **Finish** button to complete the *Add Printer Wizard*.

You have successfully installed the network printer.

Printer Pooling

Setting Up Printer Pooling

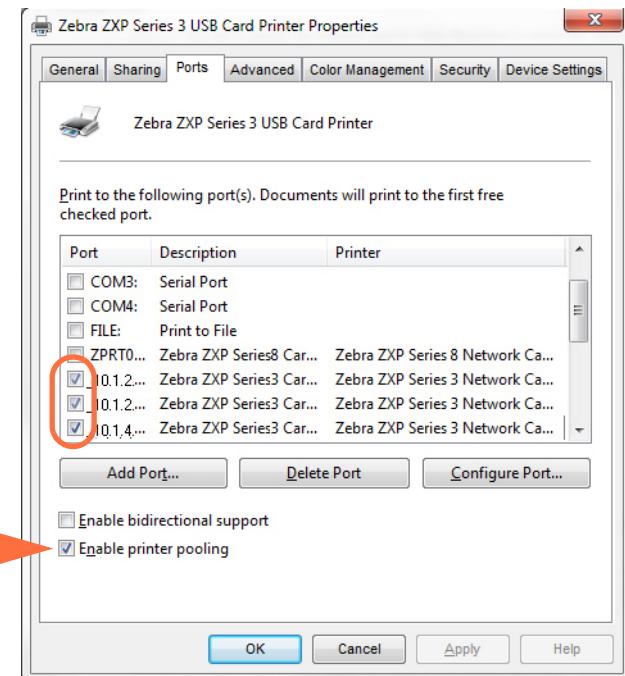
Printer Pooling is a standard feature of Windows, which lets you spread the printed output across a pool of several printers. In this example, we will install and setup the three network printers to be used for pooling.

Step 1. Before proceeding to pool the printers, test them individually, and be sure they are configured similarly. Specifically, check the following:

- Ribbon panel configuration (ribbon type, and what prints on which side of the card).
- Mag encoding configuration.
- Black extraction configuration (if applicable).

Step 2. Access the Ports Tab.

To access the Ports tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Series 3 USB Card Printer* listing. Select *Printer properties > Ports*.



Step 3. Select the three network printers by selecting the associated checkbox (circle above).

Step 4. Select the *Enable printer pooling* checkbox (arrow above).

Step 5. Click the **Apply** button, then click the **OK** button.

Using the Printer Pool



Important • Send print jobs to the printer pool, **not** to an individual printer.

When the first printer has taken as many jobs as it can handle (that being two jobs - one to be printed immediately, the other waiting), the following jobs “spill over” to the second printer, and then to the third printer.

Note that if you are only printing two jobs, they would both go to the first printer. Pooling is a spill-over methodology. It does not balance printer usage.

Once the pool has been set up, maintenance and configuration changes should be done through the menus for each individual printer, **not** through the pool (which can produce undesirable results).



Important • The effect of any maintenance and/or changes can (and should) be tested by sending print jobs **separately** to each printer, not to the pool.



Appendix B

Magnetic Encoder Option



Introduction

This section contains information on the additional operations of the ZXP Series 3 Card Printer with an optional Magnetic Encoder.

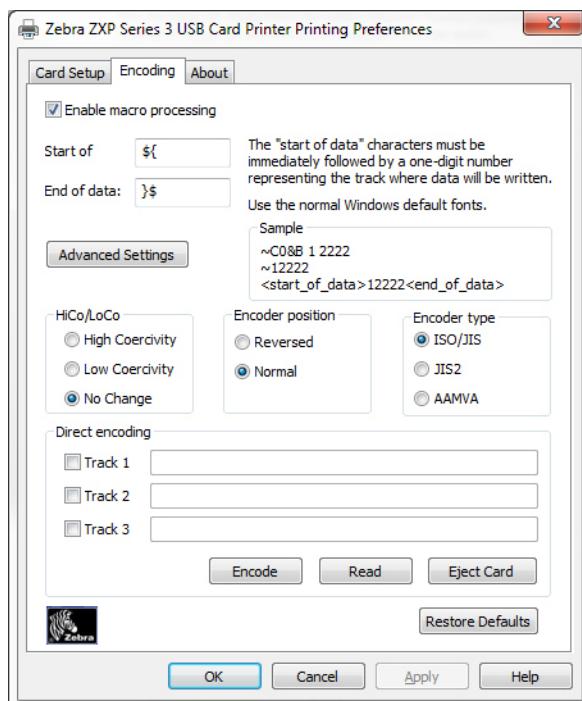
This section covers:

Encoder Settings (Driver)	96
Media Loading Orientation	98
Magnetic Encoder Cleaning	98
Magnetic Encoding Type	99

Encoder Settings (Driver)

The Encoder Settings dialog box is used for setting various Magnetic Encoder parameters. This feature is not enabled if the printer does not have the magnetic encoder option.

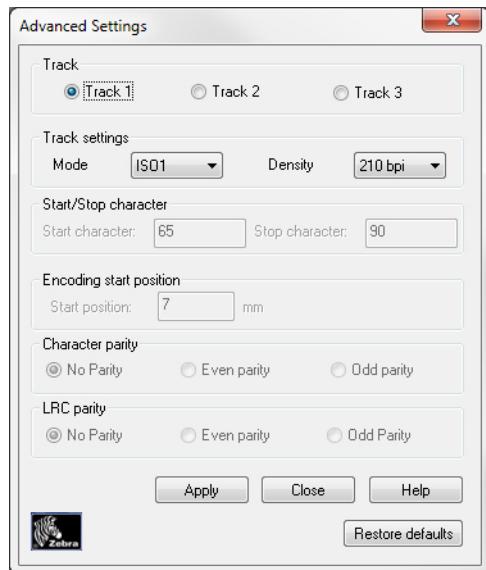
To access the Encoding tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences > Encoding*.



- **Enable macro processing** - This option will allow you to choose the encoding preamble.
- **Start of** - Beginning of the data string for the encoder. Note that Start of Data characters must be immediately followed by a one-digit number representing desired track where the data will be written. Use the normal Windows default fonts.
- **End of data** - Ending of the data string for the encoder.
- Click on the **Advanced Settings** button for additional encoding options; see [Advanced Settings](#) on page 97.
- **HiCo/LoCo** - Select the type of coercivity of magnetic stripe cards to be used. Coercivity is a measurement of a material's resistance to being magnetized. Low coercivity material magnetizes easier than high coercivity material.
- **Encoder position** - Select the printer encoder position between Reversed and Normal. Reversed is not supported by this printer.
- **Encoder type** - Select the type of encoder. JIS2 and AAMVA are not supported by this printer.

Advanced Settings

The Advanced Settings dialog box is used for primarily for Non-ISO encoding. You can make Track and Track Settings, but the other settings (Start/Stop Character, Encoding Start Position, Character Parity, and LRC Parity) are enabled only when a 3 bit, 4 bit, 5 bit, 6 bit, or 7 bit Track Setting is selected.



- Track:** Select the track you want to configure.
- Track Settings:** Select the Mode (ISO1, ISO2, ISO3, 3 bit, 4 bit, 5 bit, 6 bit, or 7 bit) and Density (75 bpi or 210 bpi) for the tracks.
- Start/Stop Character** (For Non-ISO encoding only): Enter an ASCII value for the Start and Stop characters.
- Encoding Start Position** (For Non-ISO encoding only): Enter the encoding start position in millimeters (mm).
- Character Parity** (For Non-ISO encoding only): Choose the Character Parity you want to work with -- No parity, Even parity, or Odd parity.
- LRC Parity** (For Non-ISO encoding only): Choose the LRC Parity you want to work with -- No parity, Even parity, or Odd parity.

Click the **Restore Defaults** button to reset the settings to the original values.

Media Loading Orientation

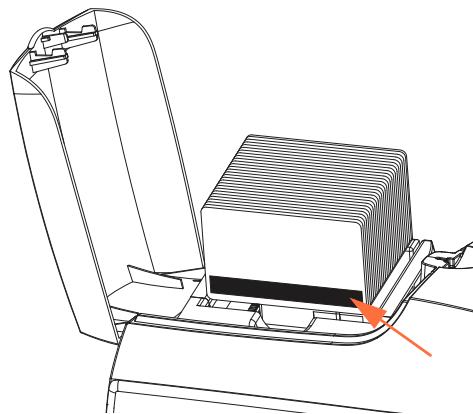


Caution • ONLY USE cards that comply with ISO 7810 & 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.



Note • Zebra-approved HiCo & LoCo PVC cards are available. (Reference ZXP Series 3 Card Printer Media List.)

When loading cards with magnetic stripes into the card feeder, please ensure that the magnetic stripe is facing the left side of the printer, and closest to the bottom edge of the card feeder.



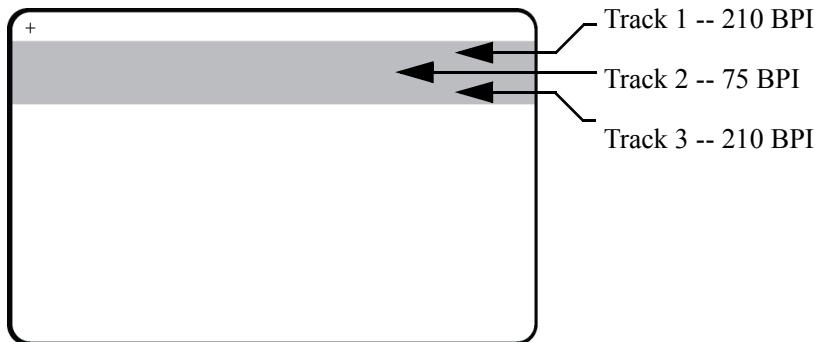
Magnetic Encoder Cleaning

Use the standard cleaning card process as described in [Section 5, Cleaning](#). This cleans the most important parts of the printer; including the Printhead, Transport Roller, and Magnetic Stripe Encoder.

Magnetic Encoding Type

ISO (Default)

The encoder reads and writes standard ISO track data formats in standard ISO track locations. The following shows the three standard ISO tracks.



Each track can be encoded and decoded with ASCII characters in the standard default ISO data formats:

Track	Density (BPI)	Bits per character	Character parity	Length (characters)	LRC parity	Start sentinel	End sentinel	Start sentinel offset
1	210	7	Odd	76	Even	%	?	0.293" (7.4 mm)
2	75	5	Odd	37	Even	;	?	0.293" (7.4 mm)
3	210	5	Odd	104	Even	;	?	0.293" (7.4 mm)

The magnetic encoder can read or encode up to 3 tracks of digital information onto CR-80 cards incorporating a HiCo or LoCo magnetic stripe in the ISO 7811 format.

Encoding for the three tracks uses the ISO 7811 format.

- Track 1 uses 210 BPI (bits per inch) encoding in the International Air Transport Association (IATA) format of 79 alphanumeric characters, at 7 bits per character.
- Track 2 uses 75 BPI encoding to store 40 numeric characters at 5 bits per character in American Banking Association (ABA) format.
- Track 3 uses 210 BPI encoding of 107 numeric characters at 5 bits per character in THRIFT format.

The ISO data formats include a preamble (all zeros), a start character, data (7-bit or 5-bit as specified by ISO), a stop character, and a longitudinal redundancy check (LRC) character. The 7-bit data format has 6 bits of encoded data and a parity bit. The 5-bit data format has 4 bits of encoded data and a parity bit.

The ISO data formats include a data field separator (or delimiter) that allows parsing of the encoded track data. An example of separate data fields would be the ABA data format (Track 2) that includes a Primary Account Number (PAN) field and an account information field (for expiration date, country code, etc.).

B: Magnetic Encoder Option

AAMVA

The data stored on magnetic stripes on American driver's licenses is specified by the American Association of Motor Vehicle Administrators (AAMVA).

Alpha-numeric characters on Tracks 1 and 3, numerals only on Track 2.

Track	Density (bits per inch)	Bits per character	Character parity	Length (characters)	LRC parity	Start sentinel	End sentinel	Start sentinel offset inches (mm)
1	210	7	Odd	79	Even	%	?	0.293" (7.4)
2	75	5	Odd	37	Even	;	?	0.293" (7.4)
3	210	7	Odd	79	Even	%	?	0.293" (7.4)

CUSTOM

If a custom format is desired, the ISO standard format may be used as a starting point. The standard format can then be modified by assigning different values to any or all of the **density**, **character**, and **sentinel** attributes. (If any of these attributes is missing, its corresponding value in the standard ISO format will be substituted.)

BINARY

The binary option allows the user to specify directly the value for each bit on the mag stripe:..

In this “direct binary” mode, it is the host’s responsibility to fully populate the magnetic stripe; i.e., the hex data provided by the host must include the leading zeroes, start sentinel, data, end sentinel, LRC, and trailing zeroes. Note that the magnetic stripe is encoded from the right-hand end as viewed from the “stripe” side, with the stripe uppermost. The least significant bit of the data is encoded first.

A sufficient number of leading zeroes should be prepended to offset the start sentinel by approximately 0.3" (7.5 mm) from the right-hand end, as in the ISO format. Care should be taken to ensure that the payload data does not exceed the capacity of the tracks at their specified recording densities. (In the **binary** mode, out-of-range data is not recorded, and no error condition will result.)

A CR-80 size card has a nominal capacity of 252 bits per track at 75 BPI, and 708 bits at 210 BPI. These capacities equate approximately to 31 hex bytes (248 binary bits) and 88 hex bytes respectively.

APPENDIX C

Smart Card Options



Introduction

This Appendix 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.

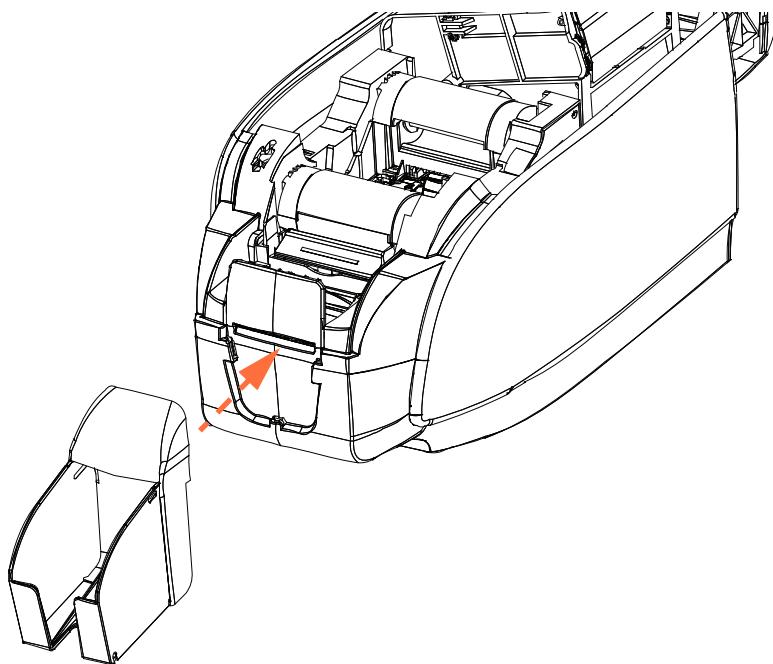
This section covers:

Output Hopper.....	102
Contact Smart Cards	103
Contactless Smart Cards	104
Contact Station	105

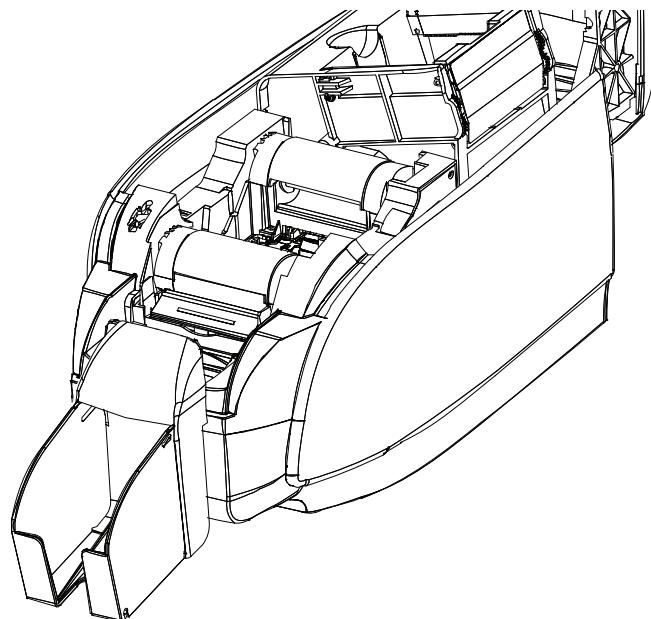
Output Hopper

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

- Step 1.** Install the Output Hopper by inserting the four tabs on the hopper into the four slots on the front of the Printer.



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



Contact Smart Cards

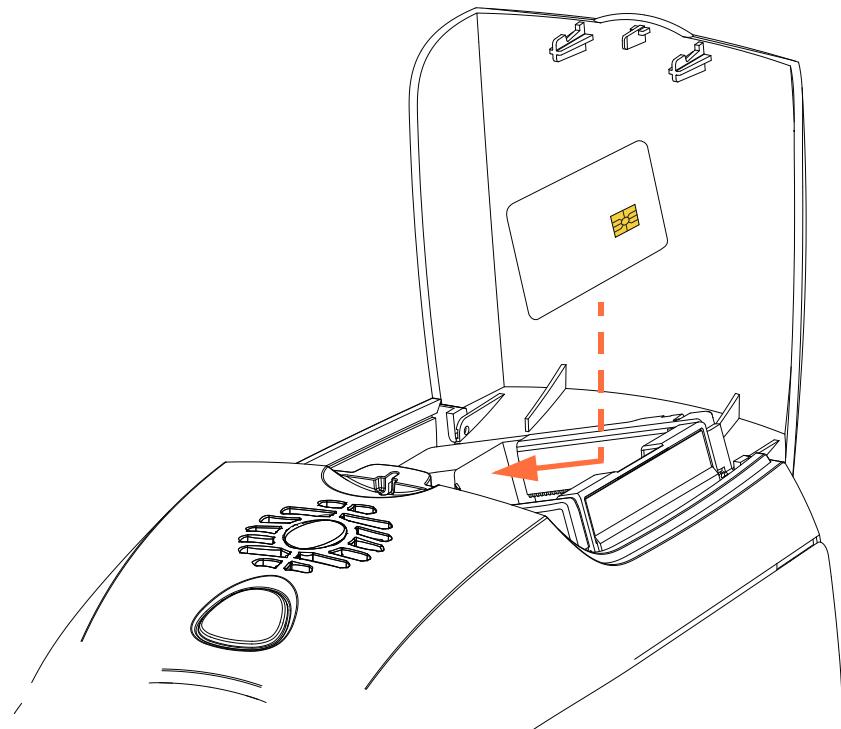
Contact Smart Cards have a pad of contacts on the surface of the card that connects to the circuitry embedded into the card.

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.

All other printer operations remain the same as the standard models.

Media Loading Orientation for Contact Smart Cards

Place the cards in the Input Hopper in the correct orientation with the gold-plated Smart Card contacts at the top surface of the cards as shown. Ensure that the cards are seated properly in the hopper.



Printing on Contact Smart Cards

When designing material to be printed on Contact Smart Cards, be sure the printing will not be on the contact area.

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.

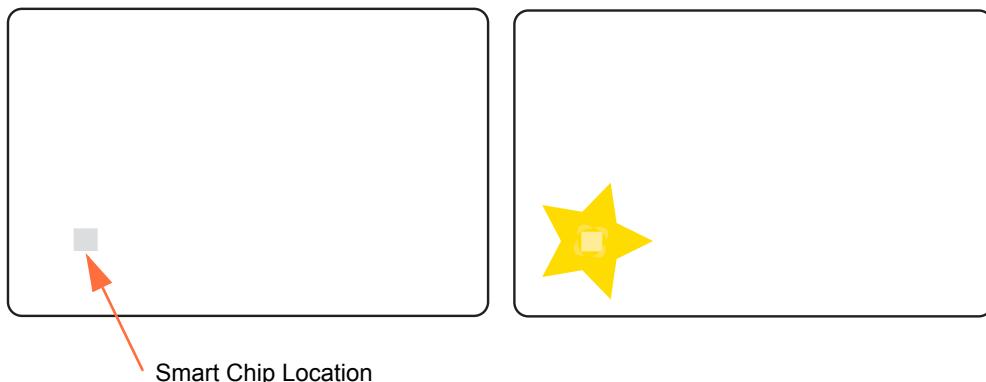
Media Loading Orientation for Contactless Smart Cards

For Contactless Smart Cards, orientation is not a consideration.

Printing on Contactless Smart Cards

When designing material to be printed on Contactless Smart Cards, be sure the printing will not be on the smart chip area; i.e., the printing on **either side of the card** must not be on top of or underneath the smart chip area.

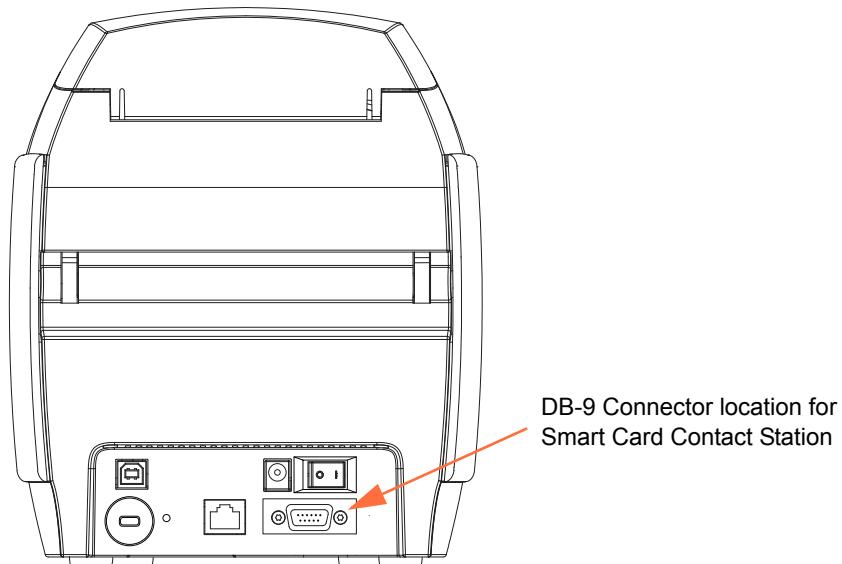
By looking at an un-printed card very carefully, it is possible to see the chip location (as in the figure on the left below). If you print in that area, results will be unsatisfactory (in the figure on the right, the “star” should have been a single solid color).



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.



DB-9 Connector (detail)

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)		



Appendix D

CardSense Single Card Feed Mode



Introduction

For operating the ZXP Series 3 Card Printer in single card feed mode, the printer requires that the operator install an optional CardSense Single Card Feed Kit.

In Single Card Feed Mode, the printer will only accept cards through the front slot, not from the card feeder.

Installing the CardSense Single Card Feed Kit

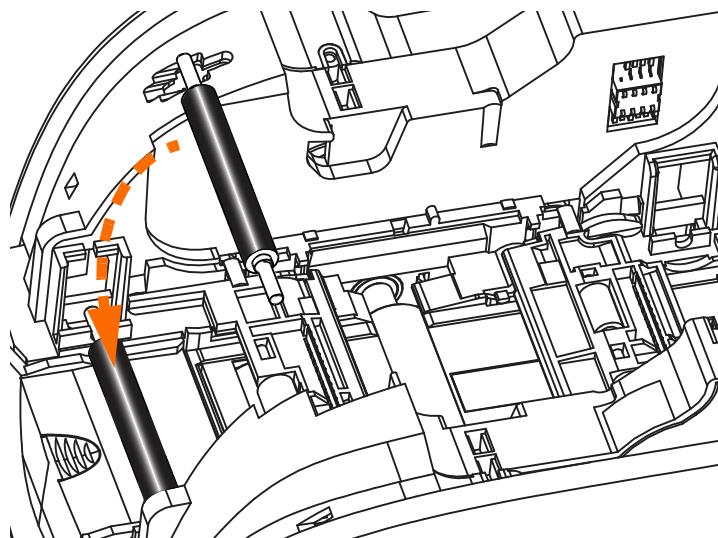
Step 1. Turn printer power OFF.

Step 2. Open the lid, and remove the ribbon cartridge.



Important • Make sure the output hopper remains closed.

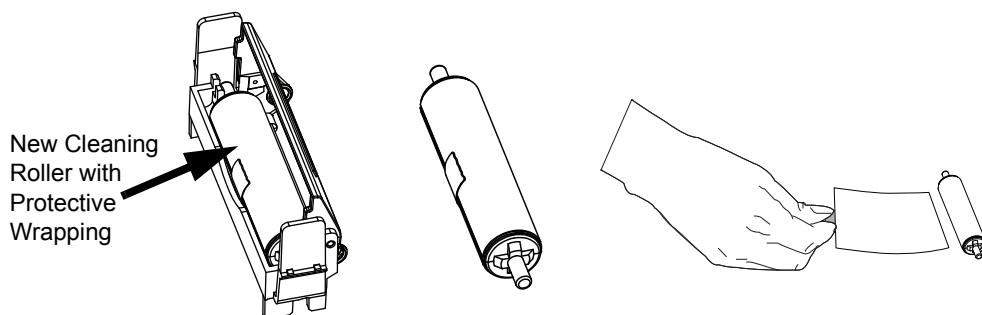
Step 3. Install the black roller. Place it between the blue clips just behind the card entry slot, and press the roller straight down so it is fully seated.



Step 4. While holding the roller down, turn power ON. You will hear a loud click as the clips secure the roller.

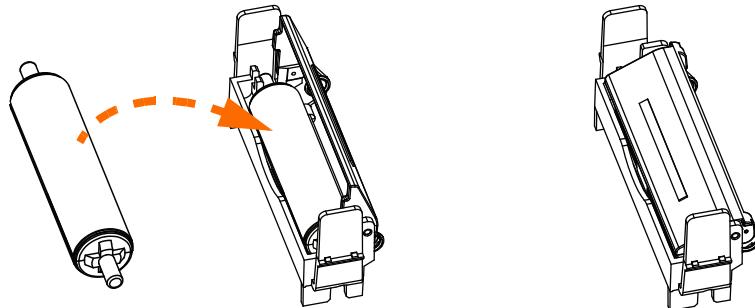
Step 5. At this point, let go of the roller, and then turn printer power OFF.

Step 6. Open the Cleaning Cartridge. The new Cleaning Cartridge will contain a Cleaning Roller with its protective wrapping.

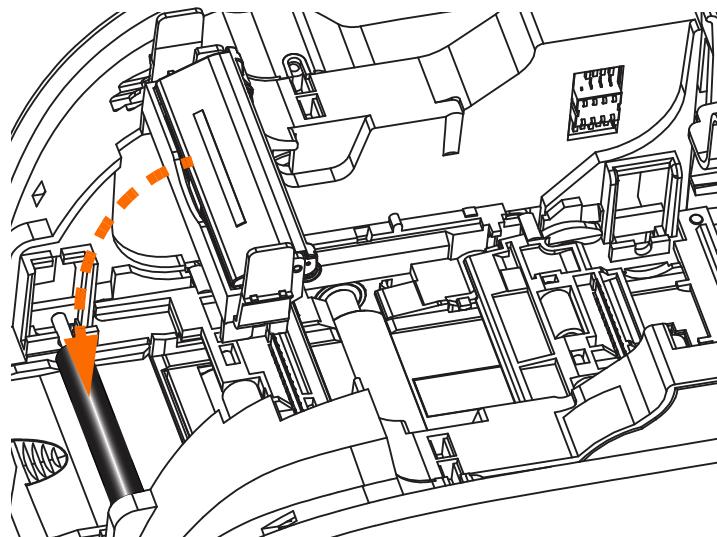


Step 7. Remove the Cleaning Roller from the Cleaning Cartridge, and then remove the protective wrapper from the Cleaning Roller,

Step 8. Place the Cleaning Roller in the Cartridge, and close the lid.



Step 9. The Cleaning Cartridge is held in place by two clips. While gently squeezing the clips inward, press the cartridge into place. It will seat with a click.



Step 10. Insert the Ribbon Cartridge with the cleaning roller facing down, so the gears on the ends of the rollers fit into the appropriate slots.

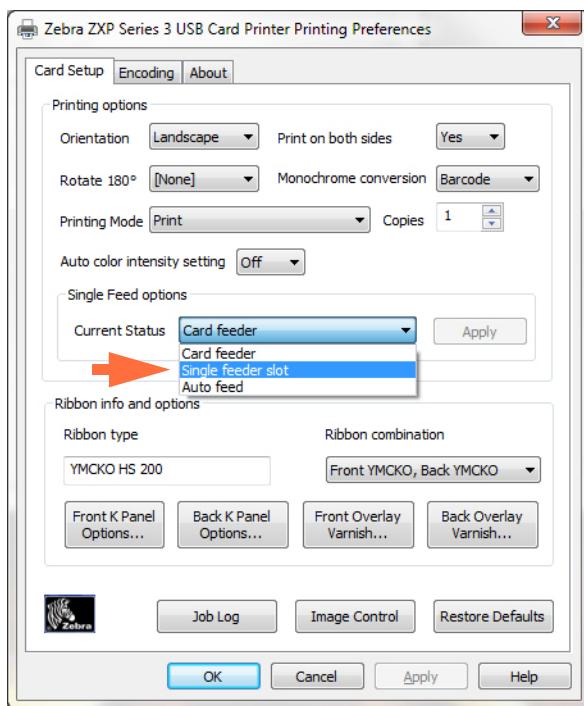
Step 11. Close the printer lid, and push down until you hear an audible click. If you can not close the lid, the cleaning cartridge or the ribbon cartridge may be installed wrong.

Step 12. Place the printer power switch in the ON (|) position.

Setting Up the Printer Driver

Card Setup tab allows the user to set the single card feed mode.

To access the Card Setup tab, select *Start > Devices and Printers*. Right click on the *Zebra ZXP Card Printer* listing, then select *Printing preferences > Card Setup*.



Step 1. Select the *Single feeder slot* from the Current Status dropdown menu (arrow above).

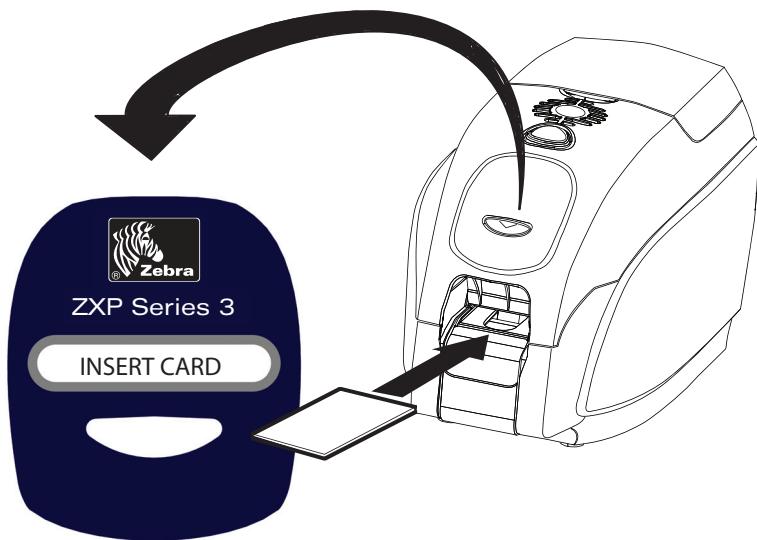
Step 2. Click the **Apply** button, then click the **OK** button.

Important • You can disable Single Feed Support and return to printing cards from the hopper. You do not have to remove the components of the Single Card Feed Kit in order to operate in normal mode.



Printing a Single Card

- Step 1.** Cards are inserted one at a time into the slot on the front of the printer. Do not feed more than one card at a time. Note that the card must be fully inserted before printer turns on and accepts the card.



Step 2. The card is printed.

Step 3. The printed card is ejected out through the same (input) slot.

Note • If single-card feeding will be the normal mode of operation, you may select that mode through the driver software. In single card feed mode, the card will not be printed until the print job has been sent to the printer and the card to be printed has been inserted into the single card feed slot





Appendix E

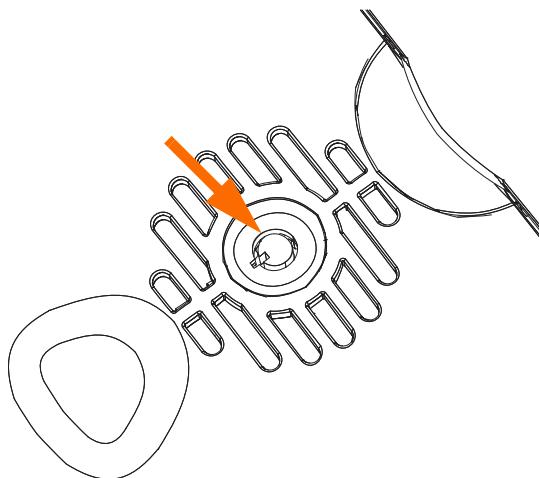
Enclosure Lock Option



Introduction

The Enclosure Lock Option can either be factory-installed or added as an upgrade.

This option ensures that only authorized personnel have physical access to the print media (ribbon and cards). When locked, neither the Lid nor the Card Feeder Cover can be opened.



- Turn the key clockwise to **unlock** the printer. Note that when unlocked, the key cannot be removed from the lock.
- Turn the key counter-clockwise to **lock** the printer, then remove the key.



Appendix F

Worldwide Support



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

North America and Latin America - Technical Support

T: +1 877 ASK ZEBRA (877 275 9327)
+1 847 913 2259
E: ts1@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 Repair Order (RO) number. Mark the RO number clearly on the outside of the box. Ship the equipment, freight prepaid, to the address listed below:

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

webform:www.zebra.com/repair
T: 1-877-275-9327
E: repair@zebra.com

Europe, Middle East, and Africa - Technical Support

Language	Phone	Email
German	+49 (0) 2159 676 870	zebratechDE@zebra.com
French	+33 (0) 1 53 48 12 74	zebratechFR@zebra.com
English	+44 (0) 1628 556 225	zebratechUK@zebra.com

For further assistance, contact:

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

T: +44 (0) 1628 556 025
F: +44 (0) 1628 556 001
E: 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 your supplier for a Return Materials Authorization (RMA) number, or contact one of the following repair centers for support and instructions:

Type of repair and location	Phone	Email
Depot Repair in Germany, Austria, Switzerland	+49 (0) 2159 676 870	zebracareDE@zebra.com
Depot Repair in France	+33 (0) 1 53 48 12 74	zebracareFR@zebra.com
Depot and On-Site Repair in UK and Ireland	+44 (0) 1628 556 225	zebracareUK@zebra.com
Depot Repair in South Africa	+27 (0) 11 201 7777	-
Depot Repair in the Middle East	+971 (0) 46058220	support_dxb@emitac.ae

For further assistance, contact:

For assistance anywhere in the EMEA, contact After Sales Customer Services at:

T: + 44 (0) 177 2 69 3069
E: ukrma@zebra.com

Asia Pacific - Technical Support

Zebra Technologies Asia Pacific Pte. Ltd.
120 Robinson Road
#06-01 Parakou Building
Singapore 068913

T: +65 6858 0722
F: +65 6885 0838
E: tsasiapacific@zebra.com

Asia Pacific - 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 Asia Pacific Pte. Ltd.
No.5 Changi North Way Level 3
Singapore 498771
Agility Building

T: +65 6546 2670 ext 3203 and 3204
F: +65 6546 5328
E: APACRepair@zebra.com

Zebra Website

<http://www.zebra.com>

