

P1011091-001 Rev. B



# Zebra<sup>®</sup> ZXP Series 8<sup>™</sup> Card Printer

**User's Manual** 



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# Contents



1 • Introduction
Components
Controls, Connectors, and Indicators
Icons
Zebra Supplies
2 • Installation and Setup
General Information
Unpacking the Printer
Installing the Card Hoppers10
Loading Cards
Opening the Printer Door12
Installing the Card Cleaning Cartridge13
Installing the Card Cleaning Roller14
Loading the Transfer Film 15
Loading a Print Ribbon
Connecting Power
Connecting the Printer to your Computer
Installing the Windows Printer Driver
3 • Operation
Introduction
Card Type Selection
Printing a Sample Card
Manual Card Feed
Operator Control Panel (OCP)40
Ethernet Indicators Detail

4 • Printer Settings and Adjustments	. 51
Introduction	
Properties	
Printing Preferences	60
5 • ZXP Series Toolbox	. 71
Introduction	
ZXP Series Toolbox Access	
Information	
Cleaning	
Print Test Card.	
Technology	
Advanced Security	
Print Viewer	
6 • Cleaning	
Cleaning the Printer.	
Cleaning the Printhead	
Card Cleaning Cartridge	
7 • Troubleshooting	
OCP Test Card Images	
Test Card Descriptions	
Ethernet Issues	. 109
8 • Technical Specifications	.111
Standard Features.	. 111
Specifications	
Declarations of Conformity	. 115
Appendix A • Printer Configurations	.117
Appendix B • Setting Custom Card Specifications	.119
Appendix C • Network Operations	161
Appendix D • Magnetic Card Encoder	171
Appendix E • Smart Card Options	
Appendix F • Packing the Printer for Shipment.	
Appendix G • Worldwide Support	

# Introduction



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



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

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

# Components

#### Front View, Covers Closed



#### Front View, Printer Cover Open

Door (shown open) Transfer Film Take-Up **Transfer Station Card Slot** Print Ribbon Take-Up Transfer Film Supply Print Ribbon Supply (behind card cleaning roller) Printhead Input Hopper Card Cleaning Roller \* Card Cleaning Cartridge Mag Encoder (optional) behind idler roller assembly door **Operator Control** Panel (OCP) 000 Output Hopper Smart Card Encoder (optional) Reject Bin Single Card (underneath input feed tray) Feed Slot

The following figure shows components of the printer.

# **Controls, Connectors, and Indicators**

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



#### lcons

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.

# **Zebra Supplies**

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



# 2 Installation and Setup



### **General Information**

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

•	Unpacking the Printer
•	Installing the Card Hoppers 10
•	Loading Cards 11
•	Opening the Printer Door
•	Installing the Card Cleaning Cartridge
•	Installing the Card Cleaning Roller
•	Loading the Transfer Film
•	Loading a Print Ribbon
•	Connecting Power
•	Connecting the Printer to your Computer
•	Installing the Windows Printer Driver

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

#### **Unpacking the Printer**

- **Step 1.** Inspect the shipping container to ensure that no damage has occurred during shipment. If any damage is apparent, file a claim with the shipper.
- Step 2. Open the shipping container.
- Step 3. Remove the packing material and accessories.



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

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







Quick Start Guide

CD-ROM with InstallWizard

USB

**USB** Cable

**Cleaning Cartridge** 



**Cleaning Roller** 



**B** 



Power Cable

**Cleaning Kit** 

Input Hopper



Output Hopper

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



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

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



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

- A reasonably dust- and dirt-free environment.
- Flat surface at least 27 in (686 mm) x 28 in (711 mm) that can support the weight of the Printer; additional space preferred. Allow a 4-inch clearance, minimum, on all sides.
- Vertical clearance at least 32 in (813 mm).
- Temperature within the range of  $59^{\circ}$  to  $77^{\circ}$ F ( $15^{\circ}$  to  $25^{\circ}$ C).
- Relative Humidity 20 to 80% inclusive, non-condensing.
- AC power accessible.
- **Step 7.** Remove the protective plastic bag from the Printer.

# **Installing the Card Hoppers**

#### **Input Hopper**

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

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



#### **Output Hopper**

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

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

### **Loading Cards**



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

- **Step 1.** Remove the wrapping from the card deck.
- **Step 2.** Holding the card deck by the sides (**do not touch the print surfaces**), hold it vertically against a flat surface such as a desktop. If the deck is too thick for your hand to hold it comfortably, use about half a deck at a time.



**Step 3.** Push the stack back and forth to an angle of about  $45^{\circ}$  from vertical, so as to separate all of the cards.



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

Step 4. Restore the card stack to its original squared-off condition.

Step 5. Open the Input Hopper Door.



- **Step 6.** Place the cards in the Input Hopper in the orientation as shown (smartcard contacts, if present, up and toward the body of the printer; mag stripe, if present, down and to the rear). Ensure that the cards are seated flat on the bottom of the hopper.
- Step 7. Close the Input Hopper Door.

# **Opening the Printer Door**

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



- Step 2. Observe that the Door releases and pops up approximately half an inch.
- **Step 3.** Grasp the Door at the bottom front.
- Step 4. Lift the Door to its upright position. It will remain in that position.

#### Installing the Card Cleaning Cartridge

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

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



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

#### Installing the Card Cleaning Roller

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

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



- **Step 5.** Hold the Card Cleaning Roller by the ends.
- Step 6. Position the ends of the Card Cleaning Roller in the slots.

#### Step 7. Push until the roller fully seats and latches.

Step 8. Close the Printer's Door.

# Loading the Transfer Film

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

**Step 1.** Locate the transfer film supply spindles and the transfer film take-up spindles. Note that the Flanges and Spindles are color coded (white-to-white, green-to-green).



- **Step 2.** Unroll about one foot from the full roll of transfer film (supply spool), and wind it (2 wraps) onto the empty take-up spool.
- Step 3. Load transfer film supply spool onto the supply spindles, green flange side to the left.
- Step 4. Load the empty take-up spool onto the take-up spindles, white flange side to the right.
- **Step 5.** Make sure the transfer film comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.
- Step 6. The figure below shows the proper installation of the transfer film.



# Loading a Print Ribbon

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

**Step 1.** Locate the print ribbon supply spindles and the print ribbon take-up spindles. Note that the Flanges and Spindles are color coded (blue-to-blue, purple-to-purple).



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



#### **Connecting Power**

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

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

Electric Shock Caution • Limit AC power supplied to the Printer to 100 – 230 volts,



- **Step 1.** Place the Printer's power switch in the OFF  $(\bigcirc)$  position.
- **Step 2.** Depending on your local AC voltage, plug the appropriate power cord into the Printer's power connector and a grounded AC power source connection.

DO NOT SWITCH THE PRINTER ON.

# **Connecting the Printer to your Computer**

#### **USB** Connection

- **Step 1.** Connect the USB cable to the printer and the computer.
- **Step 2.** Ensure that the printer's power switch in the OFF ( ) position.



#### **Ethernet Connection**

- Step 1. Connect the Ethernet Port on the rear of the printer to an Ethernet Network Port.
- **Step 2.** Turn the printer's power switch to the ON ( | ) position.



### **Installing the Windows Printer Driver**

#### **Initial Steps**

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

If not already done, connect power to the printer; and connect the printer to the computer.

- For USB Driver installation, turn the printer OFF ( ( ).
- For Ethernet Driver installation, turn the printer ON ( | ).

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

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

If Autorun is disabled:

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



- Detect previous versions of the driver. If a previous version is detected, you will be prompted to remove it, reboot, and then restart the install process.
- Install the new driver files; see USB (on Page 23) and/or Ethernet (on Page 28).

#### Installing the USB Printer Driver

- **Note** To install the Ethernet driver, see Page 28.
  - Step 1. If not already done, connect power to the printer. Do not turn power ON.
  - Step 2. Connect the USB port on the rear of the printer to the computer's USB port.
  - **Step 3.** Ensure that the Printer's power switch 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 drop-down menu in the upper-right corner of the **Main Menu**, choose the appropriate language for your system.
  - Step 6. From the Main Menu, click Install Printer Driver.
  - **Step 7.** If an older Printer and Driver is installed on your computer, the **Welcome** window will be displayed; otherwise go to Step 9.

Zebra ZXP Series 8 Card Print	er - InstallShield Wizard	×
Welcome Modify, repair, or remove the progra	an.	
	Welcome to the Zebra ZXP Series 8 Card Printer Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.	
	Modily     Select new program features to add or select currently installed features to remove.     Eenove     Remove all installed features.	
InstallShield	Cancel	

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

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

ebra 7XP Series 8 Card Pr	Inter - InstallShield Wizard  Welcome to the InstallShield Wizard for Zebra ZXP Series 8 Card Printer  The InstallShield Wizard will install Zebra ZXP Series 8 Card Printer on your computer. To continue, click Next.
InstallShield	< Back Cancel

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

Select Features Select the feature you want to in:	Aal	
	Please select the feature that you want to install.  Install USB printer drivers. This is the default  Install Ethernet printer drivers.	
InstallShield	< Back Next >	Cancel

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

ZMotif -	InstallShield Wizard
(į)	Please make sure that your printer is turned off. After installation of the driver, you would be prompted to turn on your printers
	ок

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



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

Zebra ZXP Series 8 Card Prin	nter - InstallShield Wizard	X
Customer Information Please enter your information.		
	Please enter your name and the name of the company for which you work.	
	User Name:	
	IS Department	
	Company Name:	
	Zebra Technologies	
InstallShield	< Back Next > Cancel	

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

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

- or -

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



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



Step 16. Observe the Setup Status window.

- Zebra ZXP Series 8 Card Printer InstallShield Wizard

   Congratulations on installing the printer drivers.

   Please read the instructions below as they apply to your printer settings

   USB Printer:

   Turn on the USB printer Follow the instructions of the Microsoft hardware wiead. If the drivers did drivers.

   Microsoft Signature

   Microsoft Signature

   Microsoft Signature

   Network Digital Signature page is displayed, please answer YES to Do you want to install this driver. Answering ND will not install the drivers are compable with Microsoft Windows.

   InstallSitied
   < Back</td>
   Excl
   Cancel
- Step 17. The Congratulations window will appear.

- **Step 18.** At this point, **turn on your printer**; and then click the **Next** button. The *Windows New Hardware Found* wizard will find the printer.
- **Step 19.** When the **InstallShield Wizard Complete** window appears, select the *Yes, I want to restart my computer now* radio button; and click the **Finish** button.

Zebra TXP Series B Card Pri	nter - InstallShield Wizard InstallShield Wizard Complete The InstallShield Wizard Complete The InstallShield Wizard Complete are use the program, you must restart your computer. Pres, I want to restart my computer now. No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.
InstallStield	< Back Finish Cancel

- Step 20. This completes USB driver installation.
- **Step 21.** To use the Printer, you would select it just like you would any other printer connected to a Windows system.

Note that you may need to change the card setup (card type, orientation, etc.), encoding, and/or black panel settings via the Printer Driver; see *Printing Preferences* on page 60.

#### Installing the Ethernet Printer Driver



Note • To install the USB driver, see Page 23.



**Important** • The Ethernet Network must be configured correctly, with the Printer and the host computer on the same subnet mask. Use the printer's default-configured DHCP address (there must be a DHCP server on the network) or set the Printer to a Static IP address; see *Network Settings Menu* on page 46. 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 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 drop-down menu in the upper-right corner of the **Main Menu**, choose the appropriate language for your system.
- Step 6. From the Main Menu, click Install Printer Driver.
- **Step 7.** If an older Printer and Driver is installed on your computer, the **Welcome** window will be displayed; otherwise go to Step 9.



- Step 8. In the Welcome window, choose the maintenance operation to be performed:
  - **a.** Select **Modify** to upgrade the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the upgrade process, you will be asked to re-boot your computer. Re-boot your computer. The upgrade is complete.
  - **b.** Select **Remove** to remove the older printer driver, click the **Next** button, and follow the screen prompts. At the end of the uninstall process, you will be asked to re-boot your computer. Re-boot your computer, and start over with Step 1.
- Step 9. The InstallShield Wizard window will open. To proceed with the installation, click the Next button.



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



Installing the Windows Printer Driver

**Step 11.** Ensure that you have powered ON ( | ) the network printer and it is reachable from the PC; and then click the **OK** button.

Zebra Z	XP Series 8 Card Printer - InstallShield Wizard 🛛 🛛 🔀
(į)	Ensure that you have powered on the network printer and it is reachable from the PC.
	ОК

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

Provide the second	icense Agreement Please read the following licer	ee ageement carefully. END USER LICENSE AGREEMENT	()
		coscilly. The Agreement is a legal agreement between tyon (either an individual for a sin entity) and Zeban Technologics International, LLC (Zeban') for the Zeban computers or and/or finnware accompanying this End User License Agreement, and any associated me printed materials and any "online" or electrotical documentation (collectively, "Softmar- installing or using the Software, you agree to be bound by the terms of this Agreement. do not agree to the terms of this Agreement, you may not install or use the Software is labeled and the software is protected by copyright and other intellatents and any "online" for according to the terms of this Agreement. Zo the software is the stress of this Agreement. Subject to the terms of this Agreement, Zo hereby grants you a limited, personal, non-sochaive license during the term of this Agree to use the Software software and exclusively for your internal use for this Agreement. Zo hereby grants you a limited, personal, non-sochaive license during the term of this Agree to use the Software software and an anamer that is designed to be statilded by yon, you may associated Zebas printer(s) and for no other purpose. To the extent that any portion of Software is provided to yon in a manner that is designed to be statilde by yon, you may one copy of the installable Software on one hand disk or other storage device for one pri-	gle ftware dia, e"). By if you if you if you ement r the install install install
			Link

**Step 13.** This will bring up the **Customer Information** window. Enter your name and the name of the company for which you work; and then click the **Next** button.

ora ZXP Series 8 Card P	rinter - InstallShield Wizard	
ustomer Information Please enter your information.		
	Please enter your name and the name of the company for which you work.	
	∐ser Name:	
	IS Department	
	Company Name:	
	Zebra Technologies	
nstallShield	<back next=""> Ca</back>	ncel

**Step 14.** Identify the printer:

• Click on the **Search** button (arrow below) to search for all the Ethernet printers on the network, select the desired printer, and then click the **Next** button.

- or -

• Enter the Printer IP Address directly (example circled below), and click the **Next** button.

Search Ethernet Printers Setup will search for the Ethernet prin printers so that setup will install driver	iters in the network and display s for it.	he available printers. You ca		e
	-Search and Select Printer	IP Address		
	IP Address	MAC Address	Serial No	
	-Select IP Search Rang Select Network Adopt Start IP 10.1		57∞ Gigabit Controller ✔ 10 . 1 . 5 .254 Search	
InstallShield	< Back	<u>N</u> ext >	_	Cancel

**Step 15.** Enter the location of the printer, and add any applicable comments; and then click the **Next** button.



Step 16. This will bring up the Choose Destination Location window.

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

- or -

• Click the **Change** button, select a folder where setup will install the files, and click the **Next** button.

Choose Destination Location	r - InstallShield Wizard	l.
Select folder where setup will install	iles.	
	Install Zebra ZXP Series 8 Card Printer to: C:\Program Files\Zebra ZMotif	<u>C</u> hange

Step 17. This will bring up the Ready to Install the Program window. To continue, click the Install button.



Step 18. Observe the Setup Status window.


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

- Step 20. This completes Ethernet driver installation.
- **Step 21.** 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 type, orientation, etc.), encoding, and/or black panel settings via the Printer Driver; see *Printing Preferences* on page 60.



# **3** Operation



# Introduction

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

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

# **Card Type Selection**

The **Card Setup** tab allows you to to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality.

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



**Important** • If your card type is not listed in the drop-down menu, select *Custom;* and fill out the Card Specifications pop-up screen; see Appendix B for details.

🍓 Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 🛜 🔀
Card Setup Encoding E	Black Panel (K) Optimization About
	Nack and (A) Optimization Poole
Card info	
Card source	Card feeder
Card Destination	Output hopper
Card type in use	PVC 💌
Printing options	Custom 1 Custom 2
Orientation	PVC PVC,LOCO
Print on both sides	PVC,HICO PVC,SLE4428
Rotate 180°	PVC,MIFARE,ULTRALIGHT
Copies	PVC, MIFARE 4K
Print front image or	PVC,SLE4442 PVC,SLE5528 PVC,SLE5542
Ribbon info	PVC,COMPOSITE
Ribbon type	PVC,COMPOSITE,HICO
YMCKI	PVC,COMPOSITE,Z6,HICO
Ribbon combination	IPET
YMC Front / KI B	alPETG
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
W.Zebra	Image Control Restore Defaults
	OK Cancel Apply Help

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

# **Printing a Sample Card**

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

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

💩 Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 🛜 🔀
Card Setup Encoding E	Black Panel (K) Optimization About
Card info	Card feeder
Card Destination	Output hopper
Card type in use	PVC 👻
Printing options	
Orientation	Landscape V Front Back
Print on both sides	Yes Vice Carbon Vi
Rotate 180°	None 🖌
Copies	1 🗘
Print front image or	n back side No 💌 🛛 Test Print
Ribbon info Ribbon type	
YMCK	
Ribbon combination	
YMC Front / K Ba	ack 🕑
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
(Jebra	Image Control Restore Defaults
	OK Cancel Apply Help

- 2. Ensure that cards are in the Input Hopper.
- **3.** Click of the **Test Print** button (circled above).



Note • It is normal for the Printer to warm up to operating temperature before printing.

- **4.** The printer will feed in a card and start printing.
- **5.** Once the printing job is complete, the card is ejected from the printer into the Output Hopper.

# **Manual Card Feed**

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

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

Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 🕐
Card Setup Encoding E	Black Panel (K) Optimization About
Card info Card source	
	Single card feed slot
Card Destination	Output hopper
Card type in use	PVC 👻
Printing options	
Orientation	Landscape V Front Back
Print on both sides	Yes V ID GAD
Rotate 180°	None
Copies	1 🗘
Print front image on	n back side No 🗸 Test Print
Ribbon type YMCK	
Ribbon combination	
YMC Front / K Ba	ack 💌
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
Zobra	Image Control Restore Defaults
	OK Cancel Apply Help

- 2. From the Card Info > Card source dropdown menu, select the *Single card feed slot* (circled above).
- 3. Click on the Apply button, and then click on the OK button.
- 4. Ensure that there are no cards in the Input Hopper.

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



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



# **Operator Control Panel (OCP)**

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



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

### Messages

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

- Operational, see page 41.
- Warning, see page 42.
- Error, see page 42.

### **Operational Messages**

MESSAGE	DESCRIPTION
ALARM	An error message needs to be cleared before normal operations can resume.
CANCELING	The Cancel button was pressed, and the current operation is being terminated.
CONFIG DATA	Configuration data is being transferred from the computer to the printer.
CONTACT OPERATION	Contact Smart Card is being encoded; i.e., the card is in position and data is being transferred.
CONTACTLESS OPERATION	Contactless Smart Card is being encoded; i.e., the card is in position and data is being transferred.
COOLING	Ready to accept a print job, rollers cooling; e.g., when switching from 2-sided printing to 1-sided printing.
COOLING PRINT JOB WAITING	Print job received, cooling rollers to temperature.
COOLING PRINTHEAD TEMPERATURE	Cooling printhead to temperature.
COOLING WAITING TO LAMINATE *	Ready to accept a print job, laminator cooling; e.g., when switching from 2-sided to 1-sided laminating.
DIAGNOSTIC	Diagnostic testing in progress.
JOB DATA	Data is being transferred from the computer to the printer.
LAMINATING *	Print job received, laminating in process.
MAG OPERATION	A Magnetic Stripe Card is being encoded; i.e., card is in position and data is being transferred.
MANUALLY INSERT CARD FROM FRONT	Waiting for manual card feed (this function is set via the <i>Card Setup Tab</i> on page 61).
OFFLINE	Status toggled (offline/online) via the OCP Advanced Settings Menu.
PRINTING	Print job received, printing in process.
READY	Ready and at temperature.
STANDBY	Printer is in "sleep" mode; i.e., power save mode.
WAIT INITIALIZING	Performing a self test on startup.
WARMING	Ready to accept a print job, rollers heating; e.g., at startup or when switching from 1-sided printing to 2-sided printing.
WARMING PRINT JOB WAITING	Print job received, warming rollers to temperature.
WARMING WAITING TO LAMINATE *	Ready to accept a print job, laminator warming; e.g., when switching from 1-sided to 2-sided laminating.
WARMING PRINTHEAD TEMPERATURE	Warming printhead to temperature.
WARNING	Indicates that additional OCP instructions need to be performed; e.g., PRINT RIBBON LOW, etc.

\* Message only applies to Printers with a Laminator.

### Warning Messages

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

WARNING (Printer will still operate)	DESCRIPTION
BOTTOM LAMINATE LOW *	Indicates that the Bottom Laminate cassette is low.
CLEAN FRONT CARD PATH	Indicates that the Front Card Path (Y-Drive Rollers) needs cleaning; see <i>Cleaning the Printer</i> , Section 6.
CLEAN LAMINATOR *	Indicates that the Laminator Path needs cleaning.
CLEAN LAM ROLLERS *	Indicates that the Laminator Media Feed Rollers need cleaning.
CLEAN LAM OVEN *	Indicates that the Laminator Transfer Path (Heated Rollers) needs cleaning.
CLEAN SIDE CARD PATH	Indicates that the Side Card Path (X-Drive Rollers) needs cleaning; see <i>Cleaning the Printer</i> , Section 6.
CLEAN TRANSFER PATH	Indicates that thTransfer Path (Heated Rollers) needs cleaning; see <i>Cleaning the Printer</i> , Section 6.
PRINT RIBBON LOW	Indicates that the Print Ribbon spool is low; see <i>Loading a Print Ribbon</i> , Section 2.
TOP LAMINATE LOW *	Indicates that the Top Laminate cassette is low.
TRANSFER FILM LOW	Indicates that the Transfer Film spool is low; see <i>Loading the Transfer Film</i> , Section 2.

NOTE: Message only applies to Printers with a Laminator.

### **Error Messages**

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

Refer to Section 7, *Troubleshooting*, for a list of the error messages, possible causes, and possible solutions.

### **Printer Menu Information**

### Info Menu



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

### Main Menu



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

### **Print Test Cards Menu**



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

### Network Settings Menu



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

### **Advanced Settings Menu**



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

### **Clean Printer Menu**



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

# **Ethernet Indicators -- Detail**



### Link/Activity Indicator (Green)

Off	No link (disconnected)
On	Network link has been established
Blinking	Network activity has been detected

### Speed Indicator (Orange)

Off	No link (disconnected)
1 Blink	The LED blinks once (one blink, pause, one blink, etc.) when a 10Base link has been established.
2 Blinks	The LED blinks twice (two blinks, pause, two blinks, etc.) when a 100Base link has been established.



# Printer Settings and Adjustments



# Introduction

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

Properties	
Printing Preferences	

# **Properties**

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

Zebra ZXP Serie			<b>inter Pro</b> surity		; ?
Color Managem General	Sharin		Ports		Advanced
Zebra 2	ZXP Series 8	USB Ca	ard Printer		
Location:					
Comment:					
Features Color: Yes Double-sided: Yes		Pape	r available:		~
		гаре	r avaliable:		~
Staple: No					
Speed: 1 ppm					
Maximum resolutio	n: 300 dpi				×
	Printing	g Prefere	nces	Print <u>T</u>	est Page
[	OK		Cancel		oly Help

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

### **General Tab**

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

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

🌢 Zebra ZXP Seri	es 8 USB Card F	Printer Prope	rties ? 🛿
Color Manager	nent Se	ecurity	Device Information
General	Sharing	Ports	Advanced
Zebra	ZXP Series 8 USB (	Card Printer	
Location:			
Comment:			
Model: Zebra Z	ZXP Series 8 USB C Pap	ard Printer	
Double-sided: Ye			~
Staple: No			
Speed: 1 ppm			
Maximum resoluti	on: 300 dpi		~
	Printing Prefe	rences) F	Yrint <u>I</u> est Page
(	ОК	Cancel	Apply Help

- 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 **t**akes you to Printing Preferences used to set selected configuration parameters; see *Printing Preferences* on page 60

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

# **Sharing Tab**

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

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

🍓 Zebra ZXP Seri	es 8 USB Ca	rd Printer Pr	operties	? 🛛		
Color Managen	nent	Security	Devic	e Information		
General	Sharing	Por	s	Advanced		
You can share this printer with other users on your network. To enable sharing for this printer, click Share this printer.						
⊙ Do <u>n</u> ot share	this printer					
<u> </u>	nter					
Share name:						
List in the dir						
	ectory					
- Drivers						
If this printer i Windows, you	u may want to in have to find the	ers running differ Istall additional dr print driver when	ivers, so that t	he		
		Ado	litional Drivers			
L,						
l	OK	Cancel	Apply	Help		

Printer sharing tasks that you can perform include:

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

### **Ports Tab**

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

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

💩 Zebra ZXP Ser	ies 8 USB Ca	urd Printer P	roperties	?	X
Color Manager		Security		vice Information	
General	Sharing	Po	rts	Advanced	4
Zebra Z	<p 8="" series="" td="" usi<=""><td>B Card Printer</td><td></td><td></td><td></td></p>	B Card Printer			
Print to the followin checked port.	g port(s). Docur	ments will print to	the first free	e	
Port Des	cription	Printer		~	
COM2: Serial Port     COM3: Serial Port     COM4: Serial Port     FILE: Print to File     ZPR Zebra ZXP Series8     USB Virtual printer port fo Zebra ZXP Series 8 USB Ca     USB Virtual printer port fo Zebra P120i Card Printer USB     ✓					
Add Por <u>t</u>	onal support	elete Port	<u>C</u> onfigu	ire Port	
	OK	Cancel	Арр	ly Help	

An exception to this is if you wish to use *printer pooling*, the ability to distribute print jobs to multiple printers; see *Pooling* on page 169 for details.

To enable printer pooling, check the "Enable printer pooling" box, then check the additional ports boxes. Each port should have a single Zebra printer installed on it. All the pooled printers must be identical models with the same configuration (e.g., all with YMC front, K back); 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 Printers and Faxes to get to this screen), this printer will get print jobs until it has buffered as many jobs as it can take. Remaining jobs will then "spill over" to other printers until all printers in the pool are busy.

# **Advanced Tab**

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

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

💩 Zebra ZXP Seri	es 8 USB Card P	rinter Prope	erties	?×
Color Managen	nent Se	curity	Device Informatio	
General	Sharing	Ports	Advance	ed
<ul> <li>Always available</li> <li>Available from</li> </ul>	e 12:00 AM	to To	12:00 AM	
Priorit <u>y</u> : 1				
Dri <u>v</u> er: Zebra ZX	P Series 8 USB Card	Printer 💌	Ne <u>w</u> Driver	
			ster	
<ul> <li>☐ <u>H</u>old mismatche</li> <li>✓ P<u>r</u>int spooled do</li> <li>☐ <u>K</u>eep printed do</li> </ul>	icuments first cuments			
Enable advance     Printing Defaults		essor 9	eparat <u>o</u> r Page	
	ОК	Cancel	<u>Apply</u> H	lelp

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

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

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

### **Color Management Tab**

$\sim$	
l	

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

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

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

	eries 8 USB	Card P	rinter Pro	perties	?
General	Sha	ring	Ports		Advanced
Color Mana	igement	Sec	curity	De	vice Information
🛕 printer.	settings let you Color profiles ( media being u	control the	color on you	r printer b	ased on the
O Automatic:	Windows will the list of asso	automatica ociated col	ally select th or profiles [F	e best colo lecommen	r profile from ded]
() <u>M</u> anual:	Manually sele this device fro				
	Default color	profile:	<none></none>		
	currently associ				
					~
	A <u>d</u> d	<u>R</u> er	nove	<u>S</u> et As	Default

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

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

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

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

# **Security Tab**

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

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

🖢 Zebra ZXP Series 8 US	6B Card	Printer	Proper	ties	?
General Sł Color Management	haring	Security	Ports	Device	Advanced Information
Group or user names:			inistrators		
CREATOR OWNER     Second Content     Content	BINGW	ALD\Powe	r Users)		
			,		
			Ad	d	<u>R</u> emove
Permissions for Administrator	s			Allow	Deny
Print				<b>~</b>	
Manage Printers				<b>~</b>	
Manage Documents				✓	
Special Permissions					
, For special permissions or for click Advanced.	r advance	ed settings,		(	Adyanced
ОК		Cancel		Apply	Help

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

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

### **Device Information Tab**

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

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

General	Sharing	Ports	Advanced
Color Managem			Pevice Information
		uny	enco momadori
Device information			
Model:	ZXP Series 8	Printer Type :	Double_Sided
Main board Fw:	FZ8ME.01.05.10		No
HCB Fw:		Internal Memory:	65536 KB
MAB Fw:	FZ8RE.01.00.00		10.1.5.120
Laminator Fw:		External memory:	
Laminator MAB F		Printer status:	Ready
Driver version:	DZ8CG.01.01.37		00-07-4d-36-81f4
Printer S/N:	06C092700014	Laminator S/N:	*{**000000000
Security		-	
Host authentication	on: Disabled	1000	
Data security pas	sword: Disabled		1:
Passkey protectio	in: Disabled		
Printer usage			
	printed:	1	
Total no of cards			
Total no of cards Total no of cards	laminated:	0	
	laminated:	U	
		U dia Info	ZXP ToolBox

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

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

# **Printing Preferences**

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

💩 Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 🕐 🗙
Card Setup Encoding E	lack Panel (K) Optimization About
Card info	
Card source	Card feeder
Card Destination	Output hopper
Card type in use	PVC 👻
Printing options	
Orientation	Landscape V Front Back
Print on both sides	Yes V ID GAD
Rotate 180°	None
Copies	1
Print front image on	back side No 👻 Test Print
Ribbon info Ribbon type	
YMCKK	K Front
Ribbon combination	
YMCK Front / YM	CK Back V K Back
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
(Zabra	Image Control Restore Defaults
	OK Cancel Apply Help

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

The **OK** button saves your settings.

The Cancel button abandons changes made.

The **Apply** button applies your settings.

The **Help** button will enable 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* > *Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing; and select *Printing Preferences* > *Card Setup*.

💩 Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 💽
Card Setup Encoding E	Black Panel (K) Optimization About
Card info	
Card source	Card feeder
Card Destination	Output hopper
Card type in use	PVC
Printing options	
Orientation	Landscape V Front Back
Print on both sides	Yes V ID GAD
Rotate 180°	None
Copies	1 🗘
Print front image or	i back side No 💌 Test Print
Ribbon info Ribbon type	
YMCKK	K Front
Ribbon combination	
YMCK Front / YM	ICK Back 🗸 K Back
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
(Lebra	Image Control Restore Defaults
	OK Cancel <u>A</u> pply Help

- Card Info allows the user to select the Card Source, Card Destination, and Card Type.
  - **Card type in use** allows the user to specify the card type in use. Based on your selection, the printer automatically adjusts various printer properties for optimum print quality.
- **Printing options** allows the user to select the card orientation, to print on both sides of the card, to rotate the card 180°, and to specify the number of copies to print. The **Test Print** button prints a test card.
- Ribbon info:
  - **Ribbon type** is the color ribbon installed in the printer. This is not user selectable.
  - **Ribbon combination** allows you to apply color or black, or both, to either side of the card.

### **Advanced Black Panel Options Pop-Up**

The Advanced Black Panel Options pop-up window allows you to manage and configure Black Extraction. This window is available when using Black Panel (K-Panel) ribbons; e.g., YMCK, YMCKK, etc.

This window controls how the driver selects the text and/or graphics to be printed with the Black Panel.

To access the Advanced Black Panel Options pop-up window, select *Start* > *Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing, and select *Printing Preferences* > *Card Setup*. Select *Ribbon info* > *K Front* ... or *K Back*...

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

Disable black extraction	Black text	
Print YMC composite and K	lack 📃 Black grapi	nics
Print all black data	Black mono	ochrome bitmaps
ick extraction from color imag	es	
Print black with K panel	Black level	
<ul> <li>Defined areas</li> </ul>	Set limits on RGB values of	lerined as black (U to 5)
O Undefined areas	G D D	
O Full card	во	
Area manager		
Orientation Landscape	▼ #	
Units inches V		
X dimension 0.00	X	
X offset 0.00		
Y dimension 0.00		
Y offset 0.00		

- Set black panel extraction type:
  - *Disable black extraction* treats all non-black specified elements as composite black (YMC).
  - *Print YMC black under K* is used to print composite black (YMC) under the K panel. When selected, the operator can choose to do this by selecting certain areas or types of data (e.g., text, graphics, etc) via the **Area manager**.
  - *Print all black data* specifies all black data to be printed with K.
- Apply black extraction on: Specify *Black text*, *Black graphics*, or *Black monochrome bitmaps*. The driver will automatically determine the best K-Panel setting based on the card design elements.

• Black extraction from color images:



- **Print black with K panel**: Specify the zones as *Defined areas*, *Undefined areas*, or *Full card*.
- **Black level**: The driver evaluates the RGB values of the card design and looks for an RGB value of 000 in order to determine what should be printed in Black.

Using the Black Panel Options, specify what text or graphics, within your card design, are to be printed via composite (YMC) black, K-Resin black, or both.

Then use Black Level to select RGB values higher than the default of 000, to print with the K-resin panel. This allows the range to be expanded up to 555.

- **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. Note that a defined area is a zone.

This option is used when a particular area of the card has text or other elements that you want treated as **Print black with K panel**.

- Orientation: Set the card orientation to either Portrait or Landscape.
- Units: Set the units to either inches or mm (millimeters)
- Area: Use I to define, select, move, or resize a zone; use I to draw a zone; and use I to delete a selected zone.

To create a zone, "drag" the cursor diagonally across the card area (dashed outline) to define the location of the zone. Note that multiple zones can be defined. Dimensions are referenced to the upper-left corner of the card.

The Restore Defaults button restores Advanced Black Panel Options default values.

### **Uv Panel Pop-Up**

A Uv Panel is a resin-based coating similar to a "K" panel and is used to print invisible images (text or graphics) that will glow in the visible spectrum when exposed to a Black Light.

The Uv Panel pop-up window allows you to manage and configure printing with a Uv Panel. This window is only available when using Uv ribbons (e.g., YMCUvK) and is automatically enabled in the driver when a recognized YMCUvK ribbon is installed.

To access the Uv Panel pop-up window, select *Start* > *Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing, and select *Printing Preferences* > *Card Setup*. Select *Ribbon info* > *Front Uv...* or *Back Uv...* 

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

UV Back Panel	X
Select the Uv type Bitmap based Uv varnish	
Uv printing options Rotate 180° Double	e pass Grayscale V Halftone
Bitmap-based Uv varnish	
File Name	Browse
Area manager	
Orientation Landscape	✓ <i>オ</i>
Units inches 👻	
X dimension 0.00	X
X offset 0.00	
Y dimension 0.00	
Y offset 0.00	
	Ok Cancel Restore Defaults

• Select the Uv type:

- *Disable Uv:* Default, no Uv panel will be applied.
- Full Uv varnish: Prints the entire card with full Uv panel.
- *Selected area blank*: Using the Area Manager (described on next page) allows you to create one or more rectangles to exclude from Uv print.
- *Selected area Uv varnish*: Using the Area Manager (described on next page) allows you to create one or more rectangles to print.
- *Bitmap based Uv varnish*: Allows you to import a bitmap image to print on the Uv panel; e.g., import a security seal.

- Uv printing options: Note that Rotate 180°, Grayscale, and Halftone are enabled when *Bitmap based Uv varnish* (see above) is selected.
  - Rotate 180°
  - Grayscale
  - Halftone
- **Double pass**: Use this option to optimize the quality of the Uv image. This is a two-step process: 1) print and transfer the card without the Uv image, 2) print and transfer the card a second time with the Uv image only, on top of the existing print image. Note that this option uses an additional transfer panel.
- **Bitmap-based Uv varnish**: This option is enabled when *Bitmap based Uv varnish* (see above) is selected. To locate the bitmap, click on the **Browse** button to bring up a dialog for choosing the file.
- Area manager: Note that this option is enabled when either the *Defined areas* or the *Undefined areas* radio button is selected. A defined area is a zone.

Select the Uv type			
Selected Area Uv varnis	h	*	
Uv printing options	ouble pass 🔲 Grays	cale V Halftone	
Bitmap-based Uv varnish			
File Name		Browse	
Area manager Orientation Landscape Units inches X dimension 0.56 X offset 2.66	▼ ▼ ▼ □ ⊠		
Y dimension 1.62	L		
Y offset 0.16			

- Orientation: Set the card orientation to either Portrait or Landscape.
- Units: Set the units to either inches or mm (millimeters)
- Area: Use I to define, select, move, or resize a zone; use I to draw a zone; and use I to delete a selected zone.

To create a zone, "drag" the cursor diagonally across the card area (dashed outline) to define the location of the zone. Note that multiple zones can be defined. Dimensions are referenced to the upper-left corner of the card.

The Restore Defaults button restores Advanced Black Panel Options default values.

### **Inhibit Pop-Up**

The Inhibit pop-up window allows you to select the inhibit panel area for mag stripe, signature panel, or other non-printing areas of a card. This window is available only when using ribbons with an inhibitor panel; e.g., YMCKi.

To access the Inhibit pop-up window, select *Start* > *Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing, and select *Printing Preferences* > *Card Setup*. Select *Ribbon info* > *Front Inhibit...* or *Back Inhibit...* 

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

Front Inhibit
Select the inhibit panel area
Custom file based inhibit area 💌
Bitmap based inhibit panel area Browse
OK Cancel

#### • Select the inhibit panel area:

- Disable Inhibit: Default.
- *Inhibit printing on magnetic stripe*: Places a no-print zone arounnd the mag stripe area.
- *Inhibit printing on smartcard contact*: Places a no-print zone arounnd the smartcard chip area.
- Custom file based inhibit area: See below.
- **Bitmap based inhibit panel area**: This option is enabled when *Custom file based inhibit area* (see above) is selected. To locate the bitmap, click on the **Browse** button to bring up a dialog for choosing the file.

### **Image Control Option**

The **Image Control** button brings up the Image Control window, which lets you make color adjustments to compensate for camera or lighting conditions.

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

Image Control							X
Multi-tone printing with one-color ribbon Dither error diffusion							
Ful color printing Brightness Contrast Gamma (mid- range darkness); Saturation (vividness) Red Green Blue		* * * * * * * *	-25 - - - -		000000		+25 + + + + + + +
Original			-		V		+
<ul> <li>Nor</li> <li>Nor</li></ul>	ne mal h	matcl	ning p	effect on preview) rofile selected in Prop ng profile	perties	Restore Defaults	
Preview					٢	OK Can	zel

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

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

The **OK** button saves your settings.

The Cancel button returns you to the Setup Tab. Changes made are abandoned.

# **Encoding Tab**

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

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

🚴 Zebra ZXP Series 8 USB Card Printer Printing Preferences 🛛 💽 🔀
Card Setup Encoding Black Panel (K) Optimization About
Magnetic encoding
Encode only
Magnetic stripe read ID CARD
Magnetic encoder verification
Coercivity: None (Set via card type from Card Setup tab.)
Magnetic encoding type ISO 👻
Smart card encoding
Disable smart card encoding Contact  Contactless
Encoding side None
Restore Defaults
OK Cancel Apply Help

Although these options are user-selectable, they are set automatically when the Card Type is selected in the *Card Setup Tab* on page 61.

- **Magnetic encoder verification**: When selected, the protocol is (1) Write mag data; (2) Verify mag data; (3) If this fails, verify again; (4) If the second verify fails, rewrite and verify; (5) If this cycle fails, eject the card.
- **Magnetic encoding type**: Selections are ISO, AAMVA, CUSTOM, and BINARY; for details see Magnetic Encoding Type on page 175.

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



Note • For advanced settings, see Section 5, ZXP Series Toolbox.
# Black Panel (K) Tab

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



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

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

Zebra ZXP Ser	ies 8 USB Card P	inter Printing I	Preferences ?	X
Card Setup Encod	ing Black Panel (K) C	ptimization About		
Front side black	panel Optimize for —			
O Text	O Barcode	Pictures	💽 Mixed	
Back side black	panel Optimize for —			
🔿 Text	O Barcode	Pictures	💽 Mixed	
			Restore Defaults	)
Zebra				
	ОК	Cancel	Apply Help	_

Select the appropriate radio button (Text, Barcode, Pictures, or Mixed) for optimized print quality.

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

# **About Tab**

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

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



# **ZXP Series Toolbox**



# Introduction



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

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



# **ZXP Series Toolbox Access**

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

ebra ZXP Serie	es 8 USB Card P	rinter Propert	ies ?	
General	Sharing	Ports	Advanced	
Color Manageme	ent Sec	urity D	evice Information	
Device information	n			
Model:	ZXP Series 8	Printer Type :	Double_Sided	
Main board Fw:	FZ8ME.01.05.10	Laminator:	No	
HCB Fw:	FZ8HE.01.00.00	Internal Memory:	65536 KB	
MAB Fw:	FZ8RE.01.00.00	IP address:	10.1.5.120	
Laminator Fw:		External memory:	16384 KB	
Laminator MAB Fv	v:	Printer status:	Ready	
Driver version:	DZ8CG.01.01.37	MAC address:	00-07-4d-36-81-f4	
Printer S/N:	06C092700014	Laminator S/N:	*{**000000000	
Security		-		
Host authenticatio	n: Disabled	and the second se	E	
Data security pass	sword: Disabled		1:	
Passkey protection: Disabled				
Printer usage				
Total no of cards r	printed:	1		
Total no of cards laminated: 0				
		(		
Zebra	Ме	dia Info	ZXP ToolBox	
	OK Ca	ancel Ap	ply Help	

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

# Information

#### **Printer**

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

• **Firmware and Driver** lists the versions of the Firmware (Firmware, HCB, and MAB) and the version of the Driver.

ZXP Toolbox - Zebra ZXP S	eries 8 USB Card Printer			
ZXP Toolbox		783		C ?
Information	* Printer			
<ul> <li>Printer</li> <li>Printer Sensors</li> <li>Media</li> </ul>	Firmware and Driver Firmware version HCB version	FZ8ME.01.05.09 FZ8HE.01.02.00	Laminator version Laminator MAB version	FZ8LE.00.90.00 FZ8RE.01.00.00
Configuration	A MAB version	FZ8RE.01.00.00	Driver version	DZ8CG.01.01.36
<ul> <li>Image Control</li> <li>Job Log</li> <li>Save/Restore</li> <li>Firmware and Settings</li> </ul>	Other Interface Printer serial no Card type in use	USB 06C093500053 PVC	Transfer type RAM	Double sided 30720 KB
Cleaning © Clean Printer	Options     Magnetic encoding	None	Contact smartcard	No
Print Test Card	Contactless smartcard	None	Laminator type	None
Print Sample Card	Status			
Technology       Image: Image and the second se	A Warnings Faults Status	None 0 Ready	Input double Output double Top transfer temp Bottom transfer temp	1.3 Inches/Sec 1.8 Inches/Sec 170 *C 160 *C
Advanced Security	Network Configuration			
<ul> <li>Configure Security</li> <li>Security Roles</li> </ul>	IP address Subnet mask	10.1.5.71 255.255.255.0	Gateway MAC address	10.1.5.1 00-07-4d-36-82-93
Print Viewer	* _ OCP		⊂ Odometer	
Print PRN File	Language LCD contrast	English 35	Card printed Printhead lines printe	460 d 364176

- **Other** shows the Interface, the Transfer type, and the Card type in use, RAM, and Printer serial no.
- **Options** shows the options installed -- Magnetic encoding, Contact smartcard, and Contactless smartcard.
- **Status** displays Warnings, Faults, and Status; Input and Output speeds (single and double); Top and Bottom transfer temperatures.
- Network Configuration lists the IP address, Gateway, Subnet mask, and MAC address.
- **OCP** shows the Language displayed in the Operator Control Panel and the LCD contrast level selected.
- Odometer shows the number of Cards printed and the number of Printhead lines printed.

# Sensors

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

• Sensor States details the state of each printer sensor.

ZXP Toolbox			289	KI		C C	?
Information	Ser	sors					
Printer	Sen	sor States					
Sensors	Filt	m takeup encoder	unknown	Head c	am blocked	Yes	
Media	Rit	bon payout encoder	moving	Film str	p1 blocked	No	
Configuration	â Do	oropen	No	Film str	p2 blocked	No	
Image Control		rd edge blocked	No	Card fe	eder blocked	Yes	
<ul> <li>Job Log</li> </ul>	Tri	color state	yellow	Tri colo	rerror	0	
Save/Restore							
<ul> <li>Firmware and Settings</li> </ul>		sor Values					
		tage 24	24.242 V	Ribbon		514 V	
Cleaning	~	tage AC	110 V	Tri-colo	-	385	
Clean Printer	Vol	tage RAW	744 V	Tri-colo	r red	269	
		ig Track1	517	Tri-colo	r green	285	
Print Test Card	🔺 Ma	ig Track2	516	Tri-colo	rblue	546	
Print Sample Card	Ma	ig Track3	515	Top tran	nsfer temp	170 °C	
Technology	Pri	nt head temp	38 °C	Bottom	transfer temp	160 °C	
Magnetic Encoding		ig head type	507				
<ul> <li>Magnetic Encouring</li> <li>Smart Card</li> </ul>	CBib	bon Take-up Motor					
- Smarcara	50			м	128 mA(in-	lh	
Advanced Security	* Ma		o2(in-lb-rev2	ко	69 mA	-	
Configure Security				Ka			
Security Roles	ME				-0.0077 m/	-minz/rev2	
Print Viewer	КЬ	0.34 mA-min/re	v	Vtol	66.8 mA/V		
	*						
Print PRN File							

- Sensor Values details the value of each printer sensor.
- **Ribbon Take-up Motor** lists various electrical characteristics of the motor.

# Media

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

• **Ribbon Details** include Type, Description, Zebra part number, Initial size, Images remaining.

ZXP Toolbox - Zebra ZXP Se	ries 8 USB Card Printer			
ZXP Toolbox		YS	24	C C
Information	* Media			
Printer	Ribbon Details			
Sensors	Туре	101	Initial size	65535 Panels
Media	Description	YMCKK	Images remaining	250 Panels
Configuration	Zebra part number	800133-480		
Image Control	Transfer Film Details			
Job Log	Туре	104	Initial size	65535 Panels
Save/Restore	Description	Standard	Images remaining	250 Panels
Firmware and Settings	Zebra part number	800133-600		
Cleaning	Top Laminate Detail	s		
Clean Printer	Туре	1	Initial Size:	0
Print Test Card	✿ Description	Standard	Images Remaining:	0
Print Sample Card	Zebra part number	800133-600		
Technology	Rottom Laminate De	tails		
Magnetic Encoding	Туре	1	Initial Size:	0
<ul> <li>Smart Card</li> </ul>	Description	Standard	Images Remaining:	0
Advanced Security	Zebra part number	800133-600		
Configure Security	*			
<ul> <li>Configure Security</li> <li>Security Roles</li> </ul>				
- occarly noise				
Print Viewer	*			
Print PRN File				

• **Transfer Film Details** include Type, Description, Zebra part number, Initial size, Images remaining.

# Configuration

# **Image Control**

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

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

👫 ZXP Toolbox - Zebra ZXP	Series	8 USB Card Printer	
ZXP Toolbox			< <u> </u>
Information	*	Image Control	
Printer		Monochrome Conversions	
Sensors		Dither error diffusion	×
👄 Media		- Full Color Printing	
Configuration	*		Brightness 0
Image Control			Contrast 0
Job Log			- +
Save/Restore			Gamma 0 📚 🕂 🗸
Firmware and Settings			Saturation 0 🗢
Cleaning	*		
Clean Printer			- +
Print Test Card	*	Original	Green 0 😂 - +
Print Sample Card		Uliginal	Blue 0 😂 🗸 🗸 🗸
Technology	*		Sharpening Filter (no effect on preview)
Magnetic Encoding			🔘 None 💿 Normal 🔵 High
Smart Card			
Advanced Security	\$		Use color matching profile selected in Properties -> Color Management
Configure Security			
Security Roles			<ul> <li>Disable color matching profile</li> </ul>
Print Viewer	*	Preview	
Print PRN File			
			Restore Defaults Save

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

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

The Save button saves your image control settings.

The Restore Defaults button restores the image control default values.

# Job Log

<b>1</b>
K.A

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

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*.

ZXP Toolbox	
Information	* Job Log
Printer	✓ Enable logging
Printer Sensors	CLog File Definition
Media	Create new log file each day
Configuration	♠ Filename
Image Control	Separator   Delete Log Files
Job Log	
Save/Restore	Log File Contents
Firmware and Settings	Time
Cleaning	Date
<ul> <li>Clean Printer</li> </ul>	Printer serial number
	Static text
Print Test Card	IP address
Print Sample Card	Magnetic Track 1 Data
Technology	▲ Magnetic Track 2 Data EIN data from Mag Track 2
Magnetic Encoding	Magnetic Track 3 Data
Smart Card	Application will send data with "~L=xxx" TextOut
	Spooler job number
Advanced Security	
Configure Security	
Security Roles	
Print Viewer	The various log files will be stored at C:\Documents and Settings\All Users\ZMotif\ directory.
Print PRN File	
	Save Job Log Settings Save Printer Log Files

- 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\_2009\_3\_4*.
  - In addition to the Filename, you may wish to enter a special field Separator Character. The default field Separator Character is "|".

• Log File Contents - The Log File Contents group selects the data to be logged in the file you specified above. The data will be logged in the order displayed on the screen, each field being separated by the character specified in the Logfile Definition, Separator.

Log File Contents selections include:

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



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

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

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

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

## Save/Restore

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

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

🗱 ZXP Toolbox - Zebra ZXP	Series	8 USB Card Printer
ZXP Toolbox		
Information	^	Save/Restore
Printer		Save
Printer Sensors		Driver Settings Save
Se Media		Printer Settings Save
Configuration	\$	The default location where the configuration files are saved is C:\Documents and Settings\All Users\ZMotiftConfig.
Image Control		
Job Log		Restore Driver Settings Restore
Save/Restore		
Firmware and Settings		Printer Settings Restore
Cleaning	\$	
Clean Printer		5aved/Restored Settings xml version="1.0" encoding="UTF-8"?
		<pre><configuration><physical address="">00:00:00:00:00</physical><ethernet><ip address<="" pre=""></ip></ethernet></configuration></pre>
Print Test Card	*	s>10.1_97.191 <gateway>10.1.0.2</gateway> subnet_mask>255.255.0.0_mask> <dhcp>disabled</dhcp> <ocp_language><type>0</type><name>English</name></ocp_language>
Print Sample Card		me> <error_control>high</error_control> <usage_counters><num_cards_printed &gt;47<num_lines_printed>86184</num_lines_printed></num_cards_printed </usage_counters> <
Technology	*	standby_timeout>60t/standby_timeout>cimaging_parameters> <printhead_resistance min="2975" max="4025"&gt;3500t/pinthead_resistance resistance resistance resistance resistance resistance</printhead_resistance 
Magnetic Encoding		min="50" max="150">100 <kresin_font max="150" min="50">100</kresin_font> <k- resin_back_min="50" max="150"&gt;100100</k-  resin_back_min="50" max="150">100
Smart Card		dye> <overlay max="150" min="50">100</overlay> <uv_front <="" min="50" th=""></uv_front>
		max="150">100 <uv_back <br="" min="50">max="150"&gt;100</uv_back> <user_power_adjustments><yellow< th=""></yellow<></user_power_adjustments>
Advanced Security	*	min="80" max="120">100 <magenta max="120" min="80">100</magenta> <cyan min="80" max="120"&gt;100<k-resin_front max="120" min="80">100</k-resin_front><k-< th=""></k-<></cyan 
Configure Security		resin_back_min="80" max="120">100 <k-dye_min="80" max="120">100dye&gt;<overlay_min="80" max="120">100<uy_front_min="80"< th=""></uy_front_min="80"<></overlay_min="80"></k-dye_min="80">
Security Roles		max="120">100 <uv_back.min="80" max="120"&gt;100<ribbon_motor_< th=""></ribbon_motor_<></uv_back.min="80" 
Print Viewer	\$	parameters> <takeup_motor><s0_min="5.0000" 33.3000<="" max="50.0000" s0.50.500<br="">min="30.0000" max="150.0000"56.00004/X0&gt;<kb 33.3000<="" min="3.000" s0.500<br="">max="1500"&gt;&gt;0.3400(Xb)<ka max="10100" min="0.1000">&gt;0.0077</ka><m0 <="" min="50.0000" th=""></m0></kb></s0_min="5.0000"></takeup_motor>
Print PRN File		1 max= 1.5000 >0.3400 <ka max="0.1000" min="-0.1000">-0.0077</ka> <m0 min="50.0000&lt;/td"></m0>



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

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

# **Firmware and Settings**

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

ZXP Toolbox - Zebra ZXP Se	ries 8 USB Card Printer			
XP Toolbox		457	411	€, IC  ?
Information	* Firmware and Setting	\$		
Printer	Select Firmware to D	ownload		
<ul> <li>Printer Sensors</li> <li>Media</li> </ul>	Firmware source pa	ath		Download
Configuration	Check Firmware Upd	lates (Internet connections) ad file locally	on required )	
Image Control	Downloaded file pa	th: C:\Documents and S	ettings\All Users\ZM	otiftFirmware
Job Log	Check Updates	0.%	-	Download File
<ul> <li>Save/Restore</li> <li>Firmware and Settings</li> </ul>	Check opulies	0%		Download I lic
Cleaning	* Language	English 🔽	LCD Contrast	35 🗘
Clean Printer				
Print Test Card	Network Configuratio	n		
Print Sample Card	Enable DHCP			
	IP address	10.1.5.71	Gateway	10.1.5.1
Technology	Subnet mask	255.255.255.0	MAC address	00-07-4d-36-82-93
Magnetic Encoding	C Print Performance Se	atting		
Smart Card	Performance option	-	Hiah)	~
Advanced Security	*			
Configure Security	Transfer Temperatur			
Security Roles	Top single	0 °C	Bottom single	0 °C
Print Viewer	* Top double	0 *C	Bottom double	0 °C
Print PRN File	Print Position			
	Film print X offset	-10 dots	Film print Y offse	et 5 mils
		1		
			Save Settings	Advanced Settings

- Select Firmware to Download: Use this option to install the firmware downloaded from the Zebra web site to a directory on your computer.
  - **1.** Click on the **Download** button.
  - **2.** From the Browse window, "find" the downloaded firmware (BIN file type), and click on the **Open** button.
  - **3.** Read the *ZXP Toolbox* caution message. If you are satisfied with the download, click on the **OK** button to install the firmware; otherwise click on the **Cancel** button to abandon the firmware installation.

• Check Firmware Updates: To use this option, you must have an internet connection.

Configuration	Check Firmware Updates (Internet connection required)
Image Control	Keep downloaded file locally Downloaded files are available in C:\Documents and Settings\All Users\ZMotif\Firmware
<ul> <li>Job Log</li> <li>Save/Restore</li> </ul>	Check Updates 0% Download File
Firmware and Settings	

- 1. Click on the **Check Updates** button.
- **2.** Enter the Server name, User name, and Password in the *Ftp Login* pop-up, and click on the **OK** button.
- **3.** Observe the firmware update file(s) displayed in the Filename listing.
- 4. Select the desired update file from the list.
- 5. Click on the Download File button.
- 6. As the file is downloaded, observe the % complete bar. If you selected the the *Keep downloaded file locally* checkbox, the update file will also be saved to your computer at *C*:\*Documents and Settings*\*ZMotif*\*Firmware*.
- 7. Click the **OK** button when the *Download completed* pop-up appears.
- **8.** Read the *ZXP Toolbox* caution message. If you are satisfied with the download, click on the **OK** button to install the firmware; otherwise click on the **Cancel** button to abandon the firmware installation.
- OCP: This section allows you to change the Language displayed in the Operator Control Panel (English, French, Spanish, German, Brazilian Portuguese, or Italian) and adjust the LCD Contrast level selected (the level ranges from 20 to 50).
- **Network Configuration**: This section allows you to change the various network configuration parameters (DHCP, IP address, Gateway, Subnet mask, and MAC address).
- Print Performance Setting: Performance options from the dropdown menu include:
  - Standard performance and error handling
  - Optimized for performance
  - Optimized for error recovery

#### • Temperature and Position Settings



- Transfer Temperature Offset:



**Note** • While you will not see a change in card parameters for a given card type when using the *Transfer Temperature Offsets*, you will see the change in the OCP Info screen that shows the temperature set-points and current temperatures.

Transfer Temperature Offset is provided to globally change the temperature of the heated rollers. If you have a single card type that you want to change the roller temperatures, you would use custom card type. If the printer seems to be running too cold or too hot for every card type, you would use this adjustment to raise or lower the heated roller temperature for all cards. This will not affect what you see in the card parameters for a given defined card type; see Note above. The adjustment range is: Minimum -10, Maximum 10.

- Print Position:

Film print X offset (dots): This is the number of dots (300 dpi /  $\sim$ 3 mils/dot.) to shift the image to align it on the media. Increasing these values move the image right while decreasing them moves the image left. This parameter can be used to center the image on the card, or to align it with an edge. The adjustment range is: Minimum -50, Maximum 50.

Film print Y offset (mils): This is the number of mils to shift the image to align it on the media. Increasing these values moves the image up while decreasing them moves the image down. This parameter can be used to center the image on the card, or to align it with an edge. The adjustment range is: Minimum -100, Maximum 100.

The Save Settings button saves any changes you have made to this screen.

The **Advanced Setting** button provides access to service-related tests and adjustments. Use is password protected and limited to Zebra-authorized service personnel.

# Cleaning

# **Clean Printer**

The Clean Printer screen gives you the option to clean the printer via the Toolbox; refer to Section 6, for cleaning via the OCP.

🗱 ZXP Toolbox - Zebra ZX	P Series	8 Network Card Printer
ZXP Toolbox		
Information Printer Sensors	*	Clean Printer Side Card path
Media		Cards since last cleaning 0 Cards since last cleaning 1 Cleaning Interval 5000 Cleaning Interval 5000
Configuration          Image Control         Job Log         Save/Restore         Firmware and Settings	*	Save     Clean       Heater Rollers       Cards since last cleaning       3789       Cleaning Interval
Cleaning Clean Printer	\$	Save Clean
Print Test Card  Print Sample Card	*	
Technology <ul> <li>Magnetic Encoding</li> <li>Smart Card</li> </ul>	*	
Advanced Security  Configure Security  Security Roles	\$	
Print Viewer  Print PRN File	*	

#### • Side Card Path

When you click on the **Clean** button, instructions will appear in the following sequence:

- **1.** Remove the card hopper, and click Ok.
- **2.** Insert the X Roller Cleaning Card in the side slot where the card hopper was located. Click Ok after inserting the cleaning card.
- 3. Wait until the cleaning process completes. The card will eject through the side slot.
- 4. Flip the cleaning card. Insert the card through the side slot. Click Ok.
- 5. Wait until the cleaning process completes. The card will eject through the side slot.
- 6. Observe the message, *Side card path cleaning successful*.
- 7. This concludes the side card path cleaning process.

#### • Front Card Path

When you click on the **Clean** button, instructions will appear in the following sequence:

- **1.** Insert the Y Roller Cleaning Card in the front feed slot. Click Ok after inserting the card.
- **2.** Wait until the cleaning process completes. The card will eject through the front feed slot.
- **3.** Flip the cleaning card. Insert the card through front feed slot. Click Ok.
- **4.** Wait until the cleaning process completes. The card will eject through the front feed slot.
- 5. Observe the message, *Front card path cleaning successful*.
- 6. This concludes the front card path cleaning process.

#### Heater Rollers

When you click on the **Clean** button, instructions will appear in the following sequence:

- 1. Open the printer cover, remove the transfer film, and close the cover. Then, click Ok.
- **2.** Observe the top and bottom transfer temperatures cool. Wait until the transfer temperatures fall below 70°C before proceeding to the next step.
- **3.** Remove the backing from the Hot Roller Cleaning Card. Insert the card in the front feed slot. Click Ok.
- **4.** Wait until the cleaning process is completed. The card will eject through the front feed slot.
- 5. Flip the cleaning card. Insert card in the front feed slot. Click Ok.
- **6.** Wait until cleaning process is completed. The card will eject through the front feed slot.
- 7. Replace the transfer film.
- 8. Observe the message, *Transfer roller cleaning successful*.
- 9. This concludes the heater roller cleaning process.

# **Print Test Card**

# **Print Sample Card**



**Note** • The sample cards in the Test Card Library are .bmp images stored in the following default location: *C:\Documents and Settings\All Users\ZMotif\Library* 

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

🗱 ZXP Toolbox - Zebra ZXP Series	8 USB Card Printer	
ZXP Toolbox	98441	E. C ?
Information     R       Image: Printer     Printer       Image: Sensors     Printer       Image: Media     Printer	Print Sample Card Test Card Libray Back Side	
Configuration     ♠       ●     Image Control       ●     Job Log       ●     Save/Restore       ●     Firmware and Settings	bc39.bmp bc_128_C.bmp Crystal3	
Cleaning * Clean Printer  Print Test Card * Print Sample Card	Set As Front Set As Back Add Remove	
Finit Variable Card      Technology      A     Magnetic Encoding     Smart Card      Advanced Security      A	MetroRail John Smith Bet 334.687 Vaid 899-840	CODE 39 1 Code 39
Configure Security     Security Roles	Front Side	Back Side
Print Viewer		

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

The **Printing Preferences** button takes you to the Printer Preferences, Card Setup Tab.

The Print Configuration Test Card button provides printer configuration data on a card.

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

# Technology



**Note** • Magnetic Encoding and Smart Card default values are set via the *Card type in use* option in the Card Setup tab, see page 61)

# **Magnetic Encoding**

The Magnetic Encoding screen allows the user to test various magnetic encoding options. For more information on magnetic encoding, refer to Appendix D.

ZXP Toolbox - Zebra ZXP Ser	ies 8 USB Card Printer
Information  Printer Sensors Media Configuration Image Control Job Log Save/Restore Firmware and Settings	<ul> <li>Magnetic Encoding</li> <li>Settings</li> <li>Enable EIN required (inventory number pre-encoded on magnetic stripe)</li> <li>Disable error polling when EIN required</li> <li>Enable EIN readback from magnetic stripe</li> <li>Track 1 Track 2 Track 3</li> <li>Bit density (bp) 210 Start sentinel</li> <li>Character size 7 Start sentinel offset (x0.001") 293</li> </ul>
Cleaning Clean Printer Print Test Card Print Sample Card	LRC parity Even Conditional 2
Magnetic Encoding     Smart Card	
Advanced Security Configure Security Security Roles	Read Encode GetEIN
Print Viewer Print PRN File	References

Settings: EIN options not implemented.

Read Data:

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

# **Smart Card**

The Smart Card screen allows the user to test various smart card encoding options. For more	•
information on smart card encoding, refer to Appendix E.	

🗱 ZXP Toolbox - Zebra ZXI	Series (	3 USB Card Printer			
ZXP Toolbox			484		C ?
Information	\$	Smart Card			
<ul> <li>Printer</li> <li>Printer Sensors</li> <li>Media</li> </ul>		Card Readers Card Option	⊖ Cor	<b>v</b> itactless	
Configuration	*	Card Types		V Feed Ca	rd
<ul> <li>Image Control</li> <li>Job Log</li> <li>Save/Restore</li> <li>Firmware and Settings</li> </ul>		Input Data Address 10 Length 16	Input PIN		Hex
Cleaning	\$		Set PIN Read	Write Write Raw D	Data
Clean Printer				white White Naw L	
Print Test Card	\$			Get ATR Eject C	ard
Print Sample Card		Messages 🔲 S	how output as hex format		
Technology <ul> <li>Magnetic Encoding</li> <li>Smart Card</li> </ul>	*				
Advanced Security	\$				
<ul> <li>Configure Security</li> <li>Security Roles</li> </ul>					×
Print Viewer	\$				
Print PRN File					

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

# **Advanced Security**



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

# **Configure Security**

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

#### **Textbox Password:**

To enter a new password:

1. Enter the new password on the *New password* field. The password is case sensitive, eight characters minimum.

	eries 8 USB Card Printer	
ZXP Toolbox	396	K K / / & C ?
Information	☆ Configure Security	
<ul> <li>Printer</li> <li>Sensors</li> <li>Media</li> </ul>	password protected.	gs cannot be made if the ZXPToolbox is
Configuration	password, enter it in New password.	haracters minimum. If this is the first use of a
<ul> <li>Image Control</li> <li>Job Log</li> <li>Save/Restore</li> <li>Firmware and Settings</li> </ul>	Old password New password	lay characters
Cleaning Clean Printer	Confirm password	Apply
Print Test Card Print Sample Card	Advanced Password Advanced printer settings are protected access advanced printer settings.	by a separate password. Enter it here to
Cechnology     Magnetic Encoding	Password	Apply
Smart Card	Last Print job options © Erase job data following successful	card printing
Advanced Security  Configure Security  Security Roles	Retain job data after card printing	Save
Print Viewer	*	
Print PRN File		

- 2. Repeat the password in the *Confirm password* field.
- 3. Click on the Apply button.

To change the Password:

1. Enter your password in the *Old password* field.

🗱 ZXP Toolbox - Zebra ZXP Sei	s 8 USB Card Printer	
ZXP Toolbox		?
Information	Configure Security	
<ul> <li>Printer</li> <li>Sensors</li> <li>Media</li> </ul>	Toolbox Password Unauthorized changes to printer settings cannot be made if the ZXPToolbox is password protected.	
Configuration  Configuration  Job Log  Save/Restore  Firmware and Settings	The password is case sensitive, eight characters minimum. If this is the first use of a password, enter it in New password.  Display characters  Old password  New password	]
Cleaning Clean Printer	Confirm password Apply	]
Print Test Card <ul> <li>Print Sample Card</li> </ul>	Advanced Password Advanced printer settings are protected by a separate password. Enter it here to access advanced printer settings.	
Technology <ul> <li>Magnetic Encoding</li> <li>Smart Card</li> </ul>	Password Apply Last Print job options	]
Advanced Security Configure Security Security Roles	C Erase job data following successful card printing     Setain job data after card printing     Save	]
Print Viewer     Print PRN File		

- 2. Enter the new password in the *New password* and the *Confirm password* fields.
- 3. Click on the Apply button.

#### **Advanced Password:**

This password provides access to service-related tests and adjustments via the **Advanced Setting** button; see *Firmware and Settings* on page 80. Use is limited to Zebra-authorized service personnel.

#### Last Print job option:

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

The Save button saves your selection.

# **Establish Security Roles**



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

Use this section used to establish security roles; i.e., grant and restrict access to various ZXP Series Toolbox screens. The list of users in the drop-down menu (e.g., Guest, HelpAssistant, Local User, localfix, etc.) is derived from the list of users on the system.

To set security access roles:

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

ZXP Toolbox     Security Roles       Information     *       Printer     Security Roles	👫 ZXP Toolbox - Zebra ZXP Series	8 USB Card Printer	
	ZXP Toolbox		C ?
<ul> <li>Sensors</li> <li>Media</li> </ul> Select user ZONTringwald AsPNET Available ZX Guest Save/Restore Firmware and Settings Clean Printer Print Sample Card Firmware Example Card Firmware Example Card Advanced Security Security Roles Print Viewer Print Viewer Print Viewer Print Viewer Print PRN File Security Roles Restricted Features Restricted Feature	Information       2         Printer       Sensors         Media          Configuration       2         Image Control       Job Log         Job Log       Save/Restore         Firmware and Settings          Clean Printer          Print Test Card       2         Print Test Card       2         Magnetic Encoding       2         Smart Card          Advanced Security       2         Configure Security       2         Security Roles          Print Viewer       2	Security Roles Select user ZGNUrringwald Available ZA Guest HelpAssistant Local User Save/Re Local User Signmare SUPPORT_388945a0 ZGNUrringwald Signmare SUPPORT_388945a0 Signmare Sign	

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

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

# **Print Viewer**

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

# **Print PRN file**



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

To send a PRN file to the printer:

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

ZXP Toolbox - Zebra ZXF	P Series 8 US	iB Card Printer			
ZXP Toolbox			483	C C	?
Information	*	Print PRN file			
<ul> <li>Printer</li> <li>Printer Sensors</li> <li>Media</li> </ul>		Zebra® ZXP Series 81 Card Printer		ZXP 58 Zebra Technologies Corporation Printed en	
Configuration Image Control Job Log Save/Restore Firmware and Settings	*			Printed and Specific Reference of the set www.astracend.com/superiors www.astracend.com/superiors www.astracent.com/ wwww.astracent.com/ www.astra	
Cleaning	*	CPRN file Settings Card Type: PVC	Copies : 1 EIN Requir	red: no Delete : no Thickness : 30	
Print Test Card  Print Sample Card	*	Front Side: Orientation : Land	scape Rotation : no	Back Side: Orientation : Landscape Rotat	ion : no
Technology	*	Sharpness : norm	al Print Type : YMC	Sharpness : normal Print Type :	к
<ul> <li>Magnetic Encoding</li> <li>Smart Card</li> </ul>		Select a File to View Select a PRN file	C:\Documents and Se	ttings\All Users\Z Browse	Print
Advanced Security	*				
<ul> <li>Configure Security</li> <li>Security Roles</li> </ul>					
Print Viewer	\$				
Print PRN File					

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

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



# 6 Cleaning

Caution • PROTECT YOUR FACTORY WARRANTY!

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

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

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

# **Cleaning the Printer**

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

### When to Clean

- X-Roller and Y-Roller cleaning should occur every 5,000 cards.
- Heated Roller cleaning should occur every 20,000 cards. Note that a Heated Roller Cleaning Card is not supplied with the printer; order Zebra Cleaning Card Kit P/N 105999-801.

# **Cleaning the Rollers**



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

- Step 1. Initiate the cleaning process.
  - **a.** Press the MENU button on the Operator Control Panel (OCP). The OCP will display the Main Menu.
  - **b.** Scroll through the Main Menu, and select Advanced Settings. The OCP will display the Advanced Settings Menu.
  - **c.** Scroll through the Advanced Settings Menu, and select Clean Printer. The OCP will display the Clean Printer Menu.
- Step 2. Clean the X-Drive Rollers.
  - a. Select *Clean Side Card Path* to run the X-Roller Cleaning Routine.
  - **b.** Use the X-Roller Cleaning Card.
  - **c.** Follow the OCP instructions.



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

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

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



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

Step 4. Clean the Heated Rollers.

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



- d. When complete, the OCP will return to the Clean Printer Menu.
- e. Then use the Heated Roller Cleaning Card to clean the Platen; see page 96.

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

# **Cleaning the Platen**

- **Step 1.** Open the printer Door.
- **Step 2.** Remove the Transfer Film.
- Step 3. Manually run the Hot Roller Cleaning Card over the Platen.





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

# **Cleaning the Printhead**

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



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



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

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

# **Card Cleaning Cartridge**

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

Installation of the Card Cleaning Cartridge is described in Section 2 and is not repeated in detail here.



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

# **Card Cleaning Roller**

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

Installation of the Card Cleaning Roller is described in Section 2 and is not repeated in detail here.

# Troubleshooting



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

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



# **OCP Error Messages**

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
BOTTOM LAMINATE FEED *	<ul> <li>Bottom laminate cartridge is not installed properly.</li> <li>Cartridge is not removed when that side of the card is not being laminated.</li> </ul>	<ul> <li>Remove, reposition, and re-install the bottom laminate cartridge.</li> <li>Remove the bottom laminate cartridge.</li> </ul>
BOTTOM LAMINATE OUT *	The bottom laminate has run out.	Load new roll of laminate.
BOTTOM LAMINATE REGISTRATION *	<ul> <li>Improperly prepared registered laminate.</li> <li>Media misfeed.</li> <li>Patch length improperly set.</li> <li>Unexpected end of laminate roll detected.</li> </ul>	Remove and recut laminate in the center of the index notch, re-install, and retry.
CARD CLEAN ERROR	<ul> <li>Faulty Card Cleaning Roller (if error during single card feed.</li> <li>Faulty Card Cleaning Cartridge (if cards fed from Input Hopper).</li> </ul>	Replace the Card Cleaning Roller or Card Cleaning Cartridge, as appropriate.
CARD EJECT ERROR	Card from previous job is stuck in the exit area.	Remove the card from the exit area.
CARD FEED ERROR	Card is jammed in Input Hopper.	a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper.
		<ul> <li>Ensure that cards are not stuck together and that they are the correct thickness (30 - 40 mil).</li> </ul>
CARD JAM	Card is jammed in Card Transport or Transfer Station.	<ul> <li>Check the card path:</li> <li>a. Idler Roller Assembly (open door).</li> <li>b. Transfer Station (rotate the eject roller CCW).</li> <li>c. Check printer-to-laminator area for a jammed card. *</li> </ul>
CARD NOT DETECTED	Card did not reach card sensor or is jammed in Input Hopper or Card Transport.	<ul> <li>a. Clear the card jam in the Input Hopper, and re-seat the Input Hopper.</li> <li>b. Ensure that cards are not stuck together and that they are the correct thickness.</li> <li>c. Check Idler Roller Assembly (open door).</li> </ul>
CARD NOT INSERTED	Card was not fed into Single Card Feed Slot within nominal 30-second period.	Retry and feed card into the Single Card Feed Slot, or cancel the operation.

#### Troubleshooting OCP Error Messages

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
CONTACT READ ERROR	<ul> <li>Faulty card.</li> <li>Incorrect card orientation.</li> <li>Incorrect Mode or Protocol setting.</li> <li>Faulty reader.</li> </ul>	<ul> <li>Try another card.</li> <li>Try another card (check orientation).</li> <li>Correct the Mode or Protocol setting.</li> <li>Contact Zebra Technical Support.</li> </ul>
CONTACT WRITE ERROR	<ul> <li>Faulty card.</li> <li>Incorrect card orientation.</li> <li>Incorrect Mode or Protocol setting.</li> <li>Faulty writer.</li> </ul>	<ul> <li>Try another card.</li> <li>Try another card (check orientation).</li> <li>Correct the Mode or Protocol setting.</li> <li>Contact Zebra Technical Support.</li> </ul>
CONTACTLESS READ ERR	<ul><li>Faulty card.</li><li>Incorrect Mode or Protocol setting.</li><li>Faulty reader.</li></ul>	<ul><li>Try another card.</li><li>Correct the Mode or Protocol setting.</li><li>Contact Zebra Technical Support.</li></ul>
CONTACTLESS WRITE ERR	<ul><li>Faulty card.</li><li>Incorrect Mode or Protocol setting.</li><li>Faulty writer.</li></ul>	<ul><li>Try another card.</li><li>Correct the Mode or Protocol setting.</li><li>Contact Zebra Technical Support.</li></ul>
COVER OPEN	Door is ajar.	Verify the Door is completely closed.
EP SCRIPT ERROR	Internal logic error.	a. Power cycle the printer. b. Contact Zebra Technical Support.
ETHERNET COMM ERROR	Ethernet communication problem.	<ul><li>a. Disconnect and reconnect the network cable.</li><li>b. Power cycle the printer.</li><li>c. Contact Zebra Technical Support.</li></ul>
FILM JAM	The transfer film is jammed.	<ul><li>a. Check the transfer film.</li><li>b. Reinstall the transfer film.</li><li>c. Repair the break in the transfer film and reinstall.</li></ul>
FILM MOTION ERROR	Transfer film not correctly responding to motion commands.	<ul><li>a. Check the transfer film.</li><li>b. Reinstall the transfer film.</li><li>c. Power cycle the printer.</li><li>d. Contact Zebra Technical Support.</li></ul>
FW UPGRADE ERROR	Invalid firmware version selected.	Verify the version, and retry updating the firmware.
GENERAL MEMORY ERROR	There is a problem when accessing memory.	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
HCB BULB ERROR	The Halogen Controller Board (HCB) is unable to pulse the upper and lower heaters to bring the upper and lower rollers to the proper temperature.	Contact Zebra Technical Support.
HCB SENSOR ERROR	The Halogen Controller Board (HCB) is unable to detect temperature of the upper or lower rollers.	Contact Zebra Technical Support.

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
INVALID BOTTOM LAMINATE *	Laminate does not match the type allowed in the laminator or top and/or bottom has been swapped.	a. Verify that the top and bottom laminate cassettes are installed in the correct locations.
		b. Verify the part number of the laminate is correct on OCP.
		c. Power cycle the printer.
INVALID CARD TYPE	Encoding error.	a. Ensure that you are using the correct card type.
		b. Ensure that the card orientation is correct for the card type.
		c. In the Encoding tab of the driver, check that the settings are correct for the cards you are using.
		d. Ensure that the data conforms to ISO Specifications.
		e. Retry writing and reading.
INVALID FILM	Transfer film does not match the printer.	a. Verify the part number of the transfer film is correct on OCP.
		b. Power cycle the printer.
INVALID RIBBON	Print ribbon does not match the printer.	a. Verify the part number of the print ribbon is correct on OCP.
		b. Power cycle the printer.
INVALID TOP LAMINATE *	Laminate does not match the printer.	a. Verify the part number of the laminate is correct on OCP.
		b. Power cycle the printer.
LAMINATOR BOTTOM CUTTER FAIL *	Bottom cutter has failed.	Contact Zebra Technical Support.
LAMINATOR BOTTOM CUTTER STALL *	Bottom cutter blade is obstructed, or bottom cutter mechanism is damaged.	Contact Zebra Technical Support.
LAMINATOR BOTTOM HEATER FAIL *	Bottom heater did not turn on after being instructed to do so. When the heater is enabled, the controller will wait a certain specified amount of time for it to attain the set target temperature. If the heater fails to reach the target in the specified time, the BotHeaterFail fault will be set.	a. Replace the bottom halogen bulb. b. Contact Zebra Technical Support.
LAMINATOR BOTTOM TEMP SENSOR FAIL *	The bottom temperature (thermopile) sensor has failed.	Contact Zebra Technical Support.
LAMINATOR BOTTOM TEMPERATURE HIGH *	If the bottom roller temperature ever exceeds a fixed temperature threshold, the over temp error occurs.	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
LAMINATOR CARD FEED *	Printer has not fed the card far enough into laminator mechanism for infeed rollers to grab it.	Open the Laminator and printer doors to check for jammed/stuck cards
LAMINATOR COVER OPEN *	This warning will be displayed if the cover protecting the laminator is opened.	This warning will be cleared when the laminator cover is closed.

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
LAMINATOR EARLY CARD JAM *	Card did not make it to the staging rollers.	Remove the card and/or laminate that is stuck in the laminator staging/ cutting area.
LAMINATOR EEPROM DEFAULT *	The parameters stored in EEPROM have been reset to their default values. This will not normally happen, but could be seen with certain FW upgrades when new parameters have been added by Engineering. It could also indicate a problem with the Laminator's EEPROM.	<ul><li>a. Press RETRY on the OCP when this error occurs</li><li>b. Power cycle the unit.</li></ul>
LAMINATOR FAILED INIT *	A Laminator was detected by the printer, but was unable to communicate to it.	Contact Zebra Technical Support.
LAMINATOR FAN FAIL *	This should only happen if one or both cooling fans fail or the cooling vents near the heated roller assembly are blocked or the fan(s) have failed.	a. Check for blocked vents. b. Contact Zebra Technical Support.
LAMINATOR INITIALIZING *	This warning will be displayed after the laminator door is closed and laminate spools are re-read/detected.	No action needed.
LAMINATOR LATE CARD JAM *	Card did not unblock the exit sensor in the specified time.	<ul><li>a. Check for card jammed in the exit area.</li><li>b. Assure that the sliding exit door is not partially blocking the exit path.</li></ul>
LAMINATOR MIDDLE CARD JAM *	Card and laminate have jammed inside heater assembly, often due to mis- positioned laminate patch sticking to heated rollers.	Remove the oven, and inspect for stuck cards.
LAMINATOR POLL TIMEOUT *	The laminator expects the printer to periodically send commands to it within a specified time period. If it fails to do so, it assumes that something is wrong with the communication link or that the printer is down. Activation of the PollTimeout fault also results in the laminator being forced into Powersave mode, and operations in progress will be halted. This error may occur if the printer-to- laminator communications is having intermittent problems.	a. Power cycle the printer. b. Contact Zebra Technical Support.
LAMINATOR TOP CUTTER FAIL *	Top cutter has failed.	Contact Zebra Technical Support.
LAMINATOR TOP CUTTER STALL *	Top cutter blade is obstructed, or top cutter mechanism is damaged.	Contact Zebra Technical Support.
LAMINATOR TOP HEATER FAIL *	Top heater did not turn on after being instructed to do so. When the heater is enabled, the controller will wait a certain specified amount of time for it to attain the set target temperature. If the heater fails to reach the target in the specified time, the TopHeaterFail fault will be set.	<ul> <li>a. Replace the top halogen bulb.</li> <li>b. Contact Zebra Technical Support.</li> </ul>

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
LAMINATOR TOP TEMP SENSOR FAIL *	The top temperature (thermopile) sensor has failed.	Contact Zebra Technical Support.
LAMINATOR TOP TEMPERATURE HIGH *	If the top roller temperature ever exceeds a fixed temperature threshold, the over temp error occurs.	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
LAMINATOR UNKNOWN ERROR *	An unknown error has occurred – this is an indication of a FW problem and should not occur.	Press RETRY on the OCP.
LAMINATOR WARMING *	This warning will be cleared when the heaters attain their temperature targets.	No action necessary.
MAG MOTION ERROR	Mag card positioning error encountered.	Retry writing and reading.
MAG READ ERROR	<ul> <li>Encoding error.</li> <li>Defective magnetic stripe.</li> </ul>	<ul> <li>a. Ensure that you are using the correct card type.</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally stripe down and toward the rear of the printer).</li> <li>c. Ensure that the cards are set-up correctly in the printer driver</li> </ul>
		<ul><li>(coercivity setting).</li><li>d. Ensure that the data conforms to ISO Specifications.</li><li>e. Retry reading.</li></ul>
MAG WRITE ERROR	<ul> <li>Encoding error.</li> <li>Defective magnetic stripe.</li> </ul>	<ul> <li>a. Ensure that you are using the correct card type.</li> <li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally stripe down and toward the rear of the printer).</li> <li>c. Ensure that the cards are set-up correctly in the printer driver (coercivity setting).</li> <li>d. Ensure that the data conforms to ISO Specifications.</li> <li>e. Retry writing.</li> </ul>
MISSING HCB	There is a problem with the HCB (Halogen Controller Board).	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
MISSING LAMINATOR MAG *	An error occurred when trying to communicate to the Laminator MAB (Media Authentication Board).	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
MISSING MAB	An error occurred when reading the RFID Tag by the MAB (Media Authentication Board).	<ul><li>a. Check print ribbon orientation.</li><li>b. Verify part number of the print ribbon.</li><li>c. Power cycle the printer.</li><li>d. Contact Zebra Technical Support.</li></ul>
#### Troubleshooting OCP Error Messages

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
MOTOR VOLTAGE ERROR	Incorrect voltage detected at one or several motors in the unit.	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
NO MAG STRIPE	Mag stripe not detected.	<ul><li>a. Ensure that you are using the correct card type.</li><li>b. Check that the cards are loaded with the magnetic stripe in the correct orientation (normally stripe down and toward the rear of the printer).</li></ul>
OUT OF CARDS	<ul><li>The Input Hopper is empty.</li><li>Card is stuck in Input Hopper.</li></ul>	<ul><li>a. Load cards into the Input Hopper.</li><li>b. Re-seat the Input Hopper.</li></ul>
OUT OF FILM	The transfer film has run out.	Load new roll of transfer film.
OUT OF RIBBON	The print ribbon has run out.	Load a new roll of print ribbon.
PRINTHEAD MOTION ERR	Printhead did not move to proper position during initialization.	<ul><li>a. Power cycle the printer.</li><li>b. Contact Zebra Technical Support.</li></ul>
PRINTHEAD TOO COLD	Printhead temperature out of proper range (COLD).	Turn off power, and contact Zebra Technical Support.
PRINTHEAD TOO HOT	Printhead temperature out of proper range (HOT).	Turn off power, and contact Zebra Technical Support.
REJECT ERROR	A problem during the reject process.	Contact Zebra Technical Support.
RIB COLOR DETECT ERR	Print ribbon is not installed correctly.	Reinstall the print ribbon.
RIBBON ADC ERROR	Possible hardware issue.	Contact Zebra Technical Support.
RIBBON BEMF ERROR	Problem with the Back EMF (BEMF) of the ribbon motors.	Contact Zebra Technical Support.
RIBBON JAM	The print ribbon is jammed.	<ul><li>a. Check the print ribbon.</li><li>b. Reinstall the print ribbon.</li><li>c. Repair the break in the print ribbon and reinstall.</li></ul>
RIBBON MOTION ERROR	Ribbon not correctly responding to motion commands.	<ul><li>a. Check the print ribbon.</li><li>b. Reinstall the print ribbon.</li><li>c. Repair the break in the print ribbon and reinstall.</li></ul>
ROLLERS OVER TEMP	Heated Rollers (used to transfer the image from the transfer film to the Card) are too hot for proper operation.	Turn off power, and contact Zebra Technical Support.
ROLLERS UNDER TEMP	Heated Rollers (used to transfer the image from transfer film to Card) are not hot enough for proper operation.	Turn off power, and contact Zebra Technical Support.

ERROR MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
SMARTCARD POS ERROR	Faulty card.	Try another card.
	Incorrect card orientation.	• Try another card (check orientation).
	Card feed error.	Check card path.
	Mechanical alignment issue.	Contact Zebra Technical Support.
SYSTEM ERROR	Internal logic error.	a. Power cycle the printer.
		b. Contact Zebra Technical Support.
SYSTEM NOT READY	A problem was detected during printer	a. Power cycle the printer.
	start-up.	b. Contact Zebra Technical Support.
TOP LAMINATE FEED *	<ul> <li>Top laminate cartridge is not installed properly.</li> </ul>	Remove, reposition, and re-install the top laminate cartridge.
	• Cartridge is not removed when that side of the card is not being laminated.	Remove the top laminate cartridge.
	<ul> <li>A mis-cut piece of laminate (rare) is obscuring the media sensor.</li> </ul>	<ul> <li>Remove the mis-cut piece of laminate.</li> </ul>
TOP LAMINATE OUT *	The top laminate has run out.	Load new roll of laminate.
TOP LAMINATE REGISTRATION *	<ul> <li>Improperly prepared registered laminate.</li> <li>Media misfeed.</li> </ul>	Remove and recut laminate in the center of the index notch, re-install, and retry.
	Patch length improperly set.	
	Unexpected end of laminate roll detected.	
TRANSFER ERROR	A problem was detected during the transfer process (print ribbon to film).	Contact Zebra Technical Support.

\* Message only applies to Printers with a Laminator.

## **OCP Test Card Images**

Mid Gray Grid On Gray **Cyan Stripes** Dark Cyan 2 Pixel Grid Mid Magenta -. Max Gray Offset Dots Smear 255 255 Min Magenta White Max-Gray Max-Gray White Motion & Registration **Gradient Boxes Density Setup** Grid On Gray 2

See detailed Test Card descriptions on the following page.

## **Test Card Descriptions**

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

## **Ethernet Issues**



If both LEDs are off, the printer has not detected the presence of a network cable. To solve the problem:

- Verify that the network cable is appropriate and has an RJ-45 connector.
- Remove the network cable from the printer. Plug the network cable back in until you hear a positive click. Check the other end of the cable in the same manner. If the printer still does not detect a cable, then continue.
- Connect the printer to a known good network. If the printer is still unable to detect the network cable, contact Technical Support for assistance.



# **Technical Specifications**



## **Standard Features**

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

•	Single-sided (Front Only)	
	YMC	190 cph
	YMCK	160 cph

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

## **Specifications**

## **Encoding Options**

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

#### **Communications Interfaces**

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

#### Software

#### **Microsoft Windows Certified Printer Drivers Supported**

Windows XP\*, Windows Vista\*, Windows 7\*, Windows Server 2003\*
 \*32-bit and 64-bit certified

#### **Driver Features**

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

#### **ZXP** Toolbox

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

#### Card Compatibility

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

#### **Agency Approvals**

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

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

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

WLAN Enabled

Applicable Directives and Supporting Standards:

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

RFID Enabled

Applicable Directives and Supporting Standards:

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

Specifications

## Electrical

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

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

## Physical

•	Height (printer only)	11.9" (303 mm)
•	Height (with card feeder)	13.2" (336 mm)
•	Width	14" (356 mm)
•	Width (with card feeder)	14.9" (379 mm)
•	Depth	20.4" (519 mm)
•	Weight (printer only)	27.5 lbs (12.5 kg)

### **Environmental**

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

## **Declarations of Conformity**

ZEBRA TECHNOLOGIES CORPORATION

Declares that the following Information Technology Equipment

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

Applicable Directives and Supporting Standards: 2004/108/EC EMC Directive, EN55022:2006 Class A, EN55024:1998+AD1:2001+AD2:2003EN, 61000-3-2:2006, EN61000-3-3:1995+AD1:2001, 2006/95/EC LVD Directive, EN60950-1:2001, CB Scheme

#### **RFID Enabled**

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

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

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

FI: "Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan"

SE: "Apparaten skall anslutas till jordat uttag"

NO: "Apparatet må tilkoples jordet stikkontakt"

#### **FCC Regulations**

The Zebra ZXP Series 8 Card Printer has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and operated in accordance with the Zebra ZXP Series 8 Card Printer User's Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

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

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

#### Industry Canada Notice

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

#### Japan: Ministry of Internal Affairs and Communications (MIC) Certification

This product has received MIC approval.

Approval number is No. AC-xxxxx

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 or medical instruments such as a pacemaker.

# APPENDIX A

## **Printer Configurations**



## Introduction

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

## **Part Numbers**

PART NUMBER	2	DESCRIPTION
z 8 _		Base Unit
1 2		Single-Sided Printing Dual-Sided Printing
A		Smart Card Options None Contact Encoder + Contactless MIFARE Contact Station
	0	Mag Encoders None ISO HiCo/LoCo Mag S/W Selectable
	_ 0	Security Options None Enclosure Lock
	C	Interface USB and 10/100 Ethernet
	0	Software/Kit None Media Starter Kit (includes: 1 YMCK ribbon kit, 1 roll of InTM, 200 PVC cards)
	0 0 0	<b>Miscellaneous</b> None Made in America
	0 0	Custom Code Reserved for future options
	0 0	Custom Code Reserved for future options

# Appendix B

# Setting Custom Card Specifications



## **B.1** Introduction

This document is to be used for setting the specifications for cards not listed in the **Card type in use** dropdown menu; circled below. Setting the specifications for a non-listed card type is a three-step process that uses the Card Setup Tab:



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

Card info	
Card source	Card feeder 🗸
Card Destination	Output hopper
Card type in use	PVC 🗸
Printing options	
Orientation	Landscape V Front Back
Print on both sides	Yes V ID GAAD
Rotate 180°	None
Copies	1 🗘
Print front image o	n back side No 👻 Test Print
Ribbon info	
Ribbon type	
YMCKK	K Front
YMCKK Ribbon combination	
YMCKK	
YMCKK Ribbon combination	
YMCKK Ribbon combination YMCK Front / YM	
YMCKK Ribbon combination YMCK Front / YMCK Front / YMCK	MCK Back
YMCKK Ribbon combination YMCK Front / Yf Laminator info Top Laminate	MCK Back V K Back

Setting Custom Card Specifications Process Flowchart

## **B.2 Process Flowchart**



## **B.3 3-Step Process**

### Step 1: Select the Card Type

From the **Card type in use** dropdown menu, select *Custom 1* or *Custom 2*; and click OK. Note that *Custom 1* or *Custom 2* have adjustable transfer temperature and transfer speed tables; the other card types do not.

💩 Zebra ZXP Series 8	USB Card Printer Printing Preferences 🛛 💽 🔀
Card Setup Encoding B	lack Panel (K) Optimization About
Card info	
Card source	Card feeder
Card Destination	Output hopper
Card type in use	Custom 1
Printing options	Custom 1
Orientation	PVC PVC,LOCO
Print on both sides	PVC,HICO
Rotate 180°	PVC,MIFARE,ULTRALIGHT PVC,MIFARE,DESFIRE
Copies	PVC,MIFARE 1K PVC,MIFARE 4K
Print front image on	PVC,SLE4442 PVC,SLE5528 est Print
Ribbon info	PVC,SLE5542 PVC,COMPOSITE
Ribbon type	PVC,COMPOSITE,HICO PVC,COMPOSITE,Z6
YMCKK	PVC,COMPOSITE,Z6,HICO
Ribbon combination	TESLIN,COMPOSITE PET
YMCK Front / K B	PETG
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
(Zebra	Image Control Restore Defaults
	OK Cancel Apply Help

## Step 2: Make adjustments



**Note** • Before making any adjustments, print and examine a test card (Step 3:). The quality of the test card will determine whether or not to continue the process.

After selecting *Custom 1* or *Custom 2*, the Card Specifications window will appear. Make the recommended transfer temperature and/or transfer speed adjustment (Section B.4), and click OK.

Card Specif	ications
Card type	Custom 1
Part number	Custom 1
Thickness	30.00 O inches O mils
Coercivity	None V Mag stripe
Cal table	1 Contact encode
Single sid printing Front 1 Transfer sp Sir Input 1.50	printing 70 Back 75 Front 170 Back 160
Temperatur Top	e adjustments Bottom Speed adjustment
	OK Cancel

The Card Specifications window will close.

## Step 3: Print and examine Test Card

	Black Panel (K) Optimization About
Card info	
Card source	Card feeder 🗸
Card Destination	Output hopper
Card type in use	Custom 1
Printing options	
Orientation	Landscape V Front Back
Print on both side	
Rotate 180°	
Copies	
Print front image	on back side No 💌 Test Print
Ribbon info	
Ribbon info Ribbon type YMCKK	K Front
Ribbon type	
Ribbon type YMCKK	
Ribbon type YMCKK Ribbon combinatio	
Ribbon type YMCKK Ribbon combinatio YMCK Front / K	
Ribbon type YMCKK Ribbon combinatic YMCK Front / K	on K Back V K Back
Ribbon type YMCKK Ribbon combination YMCK Front / K Laminator info Top Laminate	None
Ribbon type YMCKK Ribbon combinatio YMCK Front / K Laminator info Top Laminate Bottom Laminate	None
Ribbon type YMCKK Ribbon combinatio YMCK Front / K Laminator info Top Laminate Bottom Laminate	None

From the Card Setup tab, print (click on the **Test Print** button circled below) and examine a test card.

The quality of the test card will determine whether or not to continue the process.

## **B.4 Adjustments**

Problems addressed in this section include:

B.4.2	Partial Transfer12Front of card12Back of card12	26
B.4.3	Warpage13Edges curled down13Edges curled up13Irregular Warpage13	32 35
B.4.4	Card Indentation 14	12
B.4.5	Flash       14         Side Edge       14         Leading Edge       14	<b>16</b>
B.4.6	Special Cases15Flash on Smart Card Chip15Flash on Magnetic Stripe15Excess Leading-Edge Flash on Mag Cards15	51 55

#### **B.4.1 Adjustment Overview**

When making adjustments, be aware that interdependencies exist between parameters; e.g., to fix the upward warpage, the first step is to decrease the front side transfer temperatures; but this could affect the partial transfer and possibly the flash.

To compensate for interdependency issues, adjust the parameters in the following order:

- **Step 1.** Start by correcting any partial transfer issues using the same procedure outlined in Section B.4.2.
- **Step 2.** Then attempt to improve warpage (Section B.4.3) and indentations (Section B.4.4). Start with the acceptable settings from Step 1. While adjusting parameters, ensure that the transfer quality remains acceptable. Do not continue reducing temperatures or increasing speeds if the transfer quality becomes unacceptable.
- **Step 3.** Then attempt to improve flash (Section B.4.5). Start with the acceptable settings from Step 2. While adjusting parameters, ensure transfer *and* warpage remain acceptable.

## **B.4.2 Partial Transfer**



Light or missing transfer on the sides



Spotty transfer anywhere on the card



Light transfer on entire card

#### Front of card

Partial transfer is usually caused by lack of energy being transferred to the card, i.e. the temperatures are too low or the speeds are too fast.

**Step 1.** Increase Front Transfer Temperature:

- **a.** From the Card Specifications window, make a note of the default front transfer temperature settings; see Section B.3.
- **b.** Increase the appropriate (single or double side) front transfer temperature by 5.
- **c.** Click on the **OK** button.

Transfer temperature(C)						
Single side printing		Double side printing				
Front 175	Back 75	Front 170 Back 160				

- **d.** Print a test card; see Section B.3.
- **e.** Examine the test card.
  - If there is noticeable improvement, continue increasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

#### **Step 2.** Decrease Transfer Input Speed

- **a.** From the Card Specifications window, make a note of the default transfer input speed settings.
- **b.** Decrease the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Single     Double       Input     Output     Input     Output       1.30     1.30     1.30     1.30
1.30 1.30 1.30 1.30

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue decreasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the speed to its default setting; and go to Step 3.

**Step 3.** Decrease Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Decrease the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer sp	beed			_
Si	ngle	Do	uble	
Input	Output	Input	Outp	ut
1.30	1.30	1.30	1.30	)

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue decreasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and contact Zebra Technical Support.

#### **Back of card**

Partial transfer is usually caused by lack of energy being transferred to the card, i.e. the temperatures are too low or the speeds are too fast.

Step 1. Increase Back Transfer Temperature:

- **a.** From the Card Specifications window, make a note of the default back transfer temperature settings; see Section B.3.
- **b.** Increase the appropriate (single or double side) back transfer temperature by 5.
- c. Click on the OK button.

Transfer temperature(C) Single side printing	Double side printing
Front 175 Back 75	Front 170 Back 160

- **d.** Print a test card; see Section B.3.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Transfer Input Speed

- **a.** From the Card Specifications window, make a note of the default transfer input speed settings.
- **b.** Decrease the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Tran	fer s			Ļ	
	S	ingle		Do	uble
Inp	but	Output	Inp	but	Output
1.	.30	1.30	1	.30	1.30

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue decreasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the speed to its default setting; and go to Step 3.

#### **Step 3.** Decrease Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Decrease the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Si Input			ouble	
Inout	Output			
mpac	Output	Input	Outp	ut
1.30	1.30	1.30	1.3	0
	· · · · · ·			

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue decreasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and contact Zebra Technical Support.

## B.4.3 Warpage

#### Edges curled down

Warpage is usually caused by too much energy being transferred to the card; i.e., the temperatures are too hot or the speeds are too slow.



Step 1. Decrease Back Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- d. Click on the OK button.

Transfer temperature(C) Single side printing	Double side	+
Front 175 Back 7	5 Front 170	Back 160

- e. Print a test card; see Section B.3.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

- **Step 2.** Increase Front Transfer Temperature:
  - **a.** From the Card Specifications window, make a note of the default front transfer temperature settings.
  - **b.** Increase the appropriate (single or double side) front transfer temperature by 5.
  - c. Click on the OK button.

Transfer temperature(C)						
Single side printing		Double side printing				
Front 175	Back 75	Front 170 Back 160				

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

Step 3. Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer sp Sir	ngle		Double	
Input	Output	Inpul	t Out	put
1.30	1.30	1.3	0 1.3	30

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and contact Zebra Technical Support.

#### Edges curled up

Warpage is usually caused by too much energy being transferred to the card, i.e. the temperatures are too hot or the speeds are too slow.



**Step 1.** Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- c. Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the **OK** button.

Transfer temperature(C)						
Single side printing		Double side printing	1			
Front 175	Back 75	Front 170	Back	160		

- e. Print a test card; see Section B.3.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Increase Back Transfer Temperature:

- **a.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- **b.** Increase the appropriate (single or double side) back transfer temperature by 5.
- **c.** Click on the **OK** button.

<ul> <li>Transfer temperature(C) -</li> <li>Single side</li> <li>printing</li> </ul>	Double side	•
	75 Front 170	Back 160

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

#### **Step 3.** Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfe	r speed	L			_
Single 🗸			Do	uble	
Input	Outp	out	Input	Outp	ut
1.30	1.3	:0	1.30	1.30	)

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and contact Zebra Technical Support.

#### **Irregular Warpage**



Note • Irregular warpage is more common with Smart Cards.

Warpage is usually caused by too much energy being transferred to the card, i.e. the temperatures are too hot or the speeds are too slow.



Step 1. Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- c. Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the OK button.

Single side	ture(C)	Double side printing
Front 175	Back 75	Front 170 Back 160

- e. Print a test card; see Section B.3.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Back Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- **d.** Click on the **OK** button.

<ul> <li>Transfer temperature(C)</li> <li>Single side</li> <li>printing</li> </ul>	•	Double side printing	•
Front 175 Back	75	Front 170	Back 160

- e. Print a test card.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

Step 3. Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer speed						
Single		Double				
	Input	Output	Inp	out	Outpu	it
	1.30	1.30	1.	.30	1.30	

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 4.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and go to Step 4.
#### **Step 4.** Increase Transfer Input Speed

- **a.** From the Card Specifications window, make a note of the default transfer input speed settings.
- **b.** Increase the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Input         Output         Input         Output           1.30         1.30         1.30         1.30
1.30 1.30 1.30 1.30

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer input speed to its default setting; and contact Zebra Technical Support.

#### **B.4.4 Card Indentation**

Indentations are usually caused by too much energy being transferred to the card, i.e. the temperatures are too hot or the speeds are too slow.



Step 1. Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- **c.** Decrease the appropriate (single or double side) front transfer temperature by 5.
- **d.** Click on the **OK** button.

Single side printing		Double side	
	ack 75	Front 170	Back 160

- e. Print a test card; see Section B.3.
- **f.** Examine the test card.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Back Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- **d.** Click on the **OK** button.

Transfer temperature(C)							
Single side printing	Double side printing	♦					
Front 175 Back	75 Front 170	Back 160					

- e. Print a test card.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

Step 3. Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer s	peed			1	
Si	ngle		Dou	ible 🔰	/
Input	Output	Inp	ut	Outpu	ıt
1.30	1.30	1.	.30	1.30	

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 4.
  - If there is no noticeable improvement, return the speed to its default setting; and go to Step 4.

#### **Step 4.** Increase Transfer Input Speed

- **a.** From the Card Specifications window, make a note of the default transfer input speed settings.
- **b.** Increase the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Input         Output         Input         Output           1.30         1.30         1.30         1.30
1.30 1.30 1.30 1.30

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer input speed to its default setting; and contact Zebra Technical Support.

#### B.4.5 Flash

Flash is usually caused by too much energy being transferred to the card (i.e., temperatures are too high or input speed is too slow) and not allowing enough time for the cards to cool while exiting the transfer station (i.e., exit speed is too fast).



#### Side Edge

Step 1. Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- **c.** Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the OK button.

Transfer temperature(C)							
Single side printing		Double side printing					
Front 175	Back 75	Front 170 Back 160					

- e. Print a test card; see Section B.3.
- **f.** Examine the test card.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Back Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- **d.** Click on the **OK** button.

Transfer temperature(C)							
Single side printing	Double side printing	♦					
Front 175 Back	75 Front 170	Back 160					

- e. Print a test card.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

**Step 3.** Decrease Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Decrease the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer sp	beed			_
Si	ngle	Do	uble	
Input	Output	Input	Outp	ut
1.30	1.30	1.30	1.30	)

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue decreasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and contact Zebra Technical Support.

#### Leading Edge

#### Step 1. Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- c. Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the OK button.

Transfer temperature(C)							
Single side printing	Double side printing						
Front 175	Back 75 Front 170 Back 160						

- e. Print a test card.
- f. Examine the test card; see Section B.3.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Back Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- d. Click on the OK button.

Transfer temperature(C) Single side printing	Double side printing
Front 175 Back 75	Front 170 Back 160

- e. Print a test card.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the back transfer temperature to its default setting; and contact Zebra Technical Support.

#### **B.4.6 Special Cases**

#### **Flash on Smart Card Chip**

Step 1. Decrease Front Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default front transfer temperature settings.
- **c.** Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the OK button.

Transfer te	mperal	ture(C)							
Single sid printing	le 🕇			Double printing					
Front 1	175	Back	75	Front	170	Back	160	]	

- e. Print a test card.
- f. Examine the test card; see Section B.3.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

Step 2. Decrease Back Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default back transfer temperature settings.
- **c.** Decrease the appropriate (single or double side) back transfer temperature by 5.
- **d.** Click on the **OK** button.

Transfer temperature(C)						
Single side printing	Double side printing					
Front 175 Back 75	Front 170 Back 160					

- e. Print a test card.
- f. Examine the test card.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 3.

#### **Step 3.** Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer sp	beed					
Si	ngle			Do	uble	
Input	Outpu	ut	I	nput	Outp	out
1.30	1.30	)		1.30	1.3	0

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 4.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and go to Step 4.

Step 4. Increase Transfer Input Speed

- **a.** From the Card Specifications window, mnake a note of the default transfer input speed settings.
- **b.** Increase the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Input         Output         Input         Output           1.30         1.30         1.30         1.30	Transf		ngle		Do	uble
1.30 1.30 1.30 1.30	Inpu	ut	Output	Inp	put	Output
	1.3	30	1.30	1.	.30	1.30

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the transfer input speed to its default setting; and contact Zebra Technical Support.

#### **Flash on Magnetic Stripe**

**Step 1.** Decrease Back Transfer Temperature:

- **a.** Go to the Card Specifications window; see Section B.3.
- **b.** Make a note of the default back transfer temperature settings.
- c. Decrease the appropriate (single or double side) back transfer temperature by 5.
- d. Click on the OK button.

Transfer temperature(C)	
Single side printing	Double side printing
Front 175 Back 75	Front 170 Back 160

- e. Print a test card.
- f. Examine the test card; see Section B.3.
  - If there is noticeable improvement, continue decreasing the back transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 2.
  - If there is no noticeable improvement, return the temperature to its default setting; and go to Step 2.

**Step 2.** Increase Transfer Output Speed

- **a.** From the Card Specifications window, make a note of the default transfer output speed settings.
- **b.** Increase the appropriate (single or double) transfer output speed by 0.2.
- c. Click on the OK button.

Transfer s	beed -					
Si	ngle			Do	uble	
Input	Outpu	ut	1	Input	Outp	out
1.30	1.30	)		1.30	1.3	0

- d. Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer output speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required; otherwise go to Step 3.
  - If there is no noticeable improvement, return the transfer output speed to its default setting; and go to Step 3.

#### **Step 3.** Increase Transfer Input Speed

- **a.** From the Card Specifications window, mnake a note of the default transfer input speed settings.
- **b.** Increase the appropriate (single or double) transfer input speed by 0.2.
- c. Click on the OK button.

Tran	fer s	peed		L	
	s	ingle		Do	uble
Inp	out	Output	Inp	but	Output
1	.30	1.30	1	.30	1.30

- **d.** Print a test card.
- e. Examine the test card.
  - If there is noticeable improvement, continue increasing the transfer input speed by 0.2, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem is corrected, no more adjustment is required; otherwise go to Step 4.
  - If there is no noticeable improvement, return the transfer input speed to its default setting; and go to Step 4.

Step 4. Decrease Front Transfer Temperature:

- a. Go to the Card Specifications window.
- **b.** Make a note of the default front transfer temperature settings.
- **c.** Decrease the appropriate (single or double side) front transfer temperature by 5.
- d. Click on the OK button.

Transfer tempe	rature(C)	
Single side printing		Double side printing
Front 175	Back 75	Front 170 Back 160

- e. Print a test card.
- f. Examine the test card; see Section B.3.
  - If there is noticeable improvement, continue decreasing the front transfer temperature by 5, printing a test card, and examining the resulting card. Stop when the problem is corrected or there is no more improvement. If the problem is corrected, no more adjustment is required. If the problem persists, contact Zebra Technical Support.
  - If there is no noticeable improvement, return the front transfer temperature to its default setting; and contact Zebra Technical Support.

#### **Excess Leading-Edge Flash on Mag Cards**

Use image with black printed line or text above the mag stripe (arrows below).



To assist with this issue, you can use the Inhibit pop-up window, which allows you to select the inhibit panel area for the mag stripe, signature panel, or other non-printing areas of a card; see *Inhibit Pop-Up* on page 66 for details.



# Appendix C

### **Network Operations**



This section covers:

Setting Up a Network Printer	162
Pooling	169

#### 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, select *Control Panel > Printers and Faxes> Add a printer*.
- Step 2. Observe the Add Printer Wizard window open.

Add Printer Wizard	
	Welcome to the Add Printer Wizard
	This wizard helps you install a printer or make printer connections.
	If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you. To continue, click Next.
	< Back Next > Cancel

Step 3. Click on the Next button, and observe the Local or Network Printer window.



- **Step 4.** Select *Local printer attached to this computer*. Ensure *Automatically detect and install my Plug and Play printer* is **NOT** checked.
- Step 5. Click on the Next button

- Add Printer Wizard

   Select a Printer Port Computers communicate with printers through ports.

   Select the port you want your printer to use. If the port is not listed, you can create a new port.

   Use the following port

   Use the following port

   Use the following port

   Disc Most computers use the LPT1: port to communicate with a local printer. The connector for this port should look something like this:

   Of the port you

   Of the port port

   Adobe PDF Port Monitor

   Adobe PDF Port Monitor

   Adobe PDF Port Monitor

   Adobe PDF Port Monitor

   Standard TCP/IP Port
   Lancel
- **Step 6.** Observe the *Select a Printer Port* window.

- Step 7. Click on the *Create a new port* radio button.
- Step 8. From the dropdown menu, select *Standard TCP/IP Port*.
- **Step 9.** Click on the **Next** button, and observe the *Add Standard TCP/IP Port Wizard* window.



Step 10. Be sure that your printer is turned on and the network is connected and configured.Step 11. Click on the Next button.

Step 12. Observe a second Add Standard TCP/IP Port Wizard window.



Note • You can get the IP Address via the OCP: INFO button > NETWORK INFO > IP.

Add Standard TCP/IP Printer P	ort Wizard 🛛 🔀
Add Port For which device do you want I	to add a port?
Enter the Printer Name or IP ad	dress, and a port name for the desired device.
Printer Name or IP Address:	10.1.2.154
Port Name:	IP_10.1.2.154
	< <u>Back</u> Next > Cancel

- **Step 13.** Enter the IP Address of your printer. Note that the Port Name will automatically be filled in when you enter the IP Address. **Do not change the Port Name**.
- **Step 14.** Click on the **Next** button, and observe the *Additional Port Information Required* window.

Add Standard T	CP/IP Printer Port Wizard
	t Information Required could not be identified.
<ol> <li>The device is</li> <li>The network</li> <li>The device is</li> <li>The device is</li> <li>The address</li> <li>If you think the a</li> </ol>	is connected. s properly configured. on the previous page is correct. ddress is not correct, click Back to return to the previous page. Then correct perform another search on the network. If you are sure the address is correct,
Device Type-	
O Standard	Generic Network Card 💌
O <u>C</u> ustom	Settings
	< <u>₿</u> ack <u>N</u> ext > Cancel

- **Step 15.** Click on the *Standard* radio button; and from the dropdown menu, select *Generic Network Card*.
- Step 16. Click on the Next button.



**Step 17.** Observe the *Completing the Add Standard TCP/IP Printer Port Wizard* window.

Step 18. Click on the Finish button, and observe the Install Printer Software window.

Install Printer Software The manufacturer and model	determine which printer software to use.
	d model of your printer. If your printer came with an installation ur printer is not listed, consult your printer documentation for
Manufacturer	Printers
Xante Xerox	Zebra ZXP Series 8 USB Card Printer
Zebra	Zebra ZXP Series 8 Network Card Printer
Zebra Technologies Zebra Technologies Inc.	
This driver is not digitally a     Tell me why driver signing is imp	

- **Step 19.** Select the Manufacturer (Zebra Technologies Inc) and the Printers (Zebra ZXP Series 8 Network Card Printer).
- Step 20. Click on the Next button.





Step 22. Select the Keep existing driver radio button.

Step 23. Click the Next button, and observe the Name Your Printer window.

	e Your Printer You must assign a name to this printer.
n	ype a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as ossible.
	Printer name:
	Mike's Printer
D	Do you want to use this printer as the default printer?
	O⊻es
	O Yes ⊙ No

- **Step 24.** Enter the printer name, use the default name, or add more information to indicate the printer location; e.g., Mike's Office, Hallway, Room 33, etc.
- **Step 25.** Select the appripriate radio button in answer to the question *Do you want to use this printer as the default printer*?
- Step 26. Click the Next button.

Step 27.	Observe	the	Printer	Sharing	window.
----------	---------	-----	---------	---------	---------

Printer Sharing You can share this	s printer with other network users.
	e this printer, you must provide a share name. You can use the r type a new one. The share name will be visible to other network
⊙ Do not share th	is printer
O Share name:	
	< <u>B</u> ack <u>N</u> ext> C

- **Step 28.** Select the appripriate radio button in answer to the question *Do you want to share this printer...*? Enter the *Share name* if applicable.
- Step 29. Click the Next button, and observe the *Print Test Page* window.

Print Test Page To confirm that the prin	er is installed properly, you can print a test page.	
Do you want to print a t		
⊙ Yes		
O N <u>o</u>		
	< <u>B</u> ack <u>N</u> ext > Can	

**Step 30.** Select the appripriate radio button in answer to the question *Do you want to print a test page?* 

#### Step 31. Click the Next button.



Step 32. Observe the *Completing the Add Printer Wizard* window.

Step 33. Click on the Finish button to complete the *Add Printer Wizard*.

You have successfully installed the network printer.

#### **Pooling**

#### **Setting Up the Printer Pool**

Printer Pooling is a standard feature of Windows, which lets you spread your 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* > *Printers and Faxes*. Right click on the *Zebra ZXP Series 8 Card Printer* listing. Select *Properties* > *Ports*.

General       Sharing       Ports       Advance         Weight of the following port(s). Documents will print to the first free checked port.       Port       Description       Print to the first free checked port.         Port       Description       Print to File       USB001       Virtual printe         USB001       Virtual printe       Standard TC       R-Quest Flashlet serie         P_10.1.2.100       Standard TC       Zebra ZXP Series 8         P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Methods       File       Virtual printe         Add Port       Delete Port       Configure Port         Enable bidirectional support       Enable printer pooling	Color Manageme	nt Sec	urity E	evice Informatio
Print to the following port(s). Documents will print to the first free checked port.         Port       Description       Printer         □ FILE:       Print to File         □ USB001       Virtual printe         □ 10.1.2.100       Standard TC       Zebra ZXP Series 8         ▶ P_10.1.2.154       Standard TC       Zebra ZXP Series 8         ▶ P_10.1.4.91       Transaction of the print of	General	Sharing	Ports	Advance
Port       Description       Printer         □       FILE:       Print to File         □       USB001       Virtual printe         □       10.1.5.45       Standard TC         P_10.1.2100       Standard TC       Zebra ZXP Series 8         P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Add Port       Delete Port       Configure Port         Enable bidirectional support				free
□ FILE:       Print to File         □ USB001       Virtual printe         □ 10.1.5.45       Standard TC         P_101.2.100       Standard TC         Zebra ZXP Series 8         P_10.1.2.154         Standard TC         Zebra ZXP Series 8         P_10.1.4.91         Standard TC         Zebra ZXP Series 8         P_10.1.4.91         Standard TC         Zebra ZXP Series 8         P_10.1.4.91         Standard TC         Zebra ZXP Series 8	•			
USB001       Virtual printe         10.1.5.45       Standard TC       R-Quest FlashJet serie         P_10.1.2100       Standard TC       Zebra ZXP Series 8         P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Add Port       Delete Port       Configure Port         Enable bidirectional support				<u>^</u>
10.1.545       Standard TC       R-Quest FlashJet serie         P_10.1.2.100       Standard TC       Zebra ZXP Series 8         P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Add Port       Delete Port       Configure Port         Enable bidirectional support				
P_101.2.100       Standard TC       Zebra ZXP Series 8         P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Add Port       Delete Port       Configure Port         Enable bidirectional support       Enable bidirectional support	=			
P_10.1.2.154       Standard TC       Zebra ZXP Series 8         P_10.1.4.91       Standard TC       Zebra ZXP Series 8         Add Port       Delete Port       Configure Port         Enable bidirectional support				
Add Port     Delete Port     Configure Port       Enable bidirectional support				
Add Port     Delete Port     Configure Port       Enable bidirectional support				
Enable bidirectional support	P_10.1.4.91		d I.L Zebra Zz	
	<u>Enable bidirection</u>	al support	ort <u>C</u> or	nfigure Port
		-		

**Step 3.** Select the *Enable printer pooling* checkbox (arrow above).

Step 4. Select the three printers by clicking on the associated checkbox (circle above).

#### **Using the Printer Pool**



Note • Send print jobs to the 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 D

## **Magnetic Card Encoder**



#### Introduction

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



he magnetic encoder can be set for either high or low coercivity, which must match the cards being used. Use the printer driver to change the encoder setting.

#### **Driver Setting**

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

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

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

💩 Zebra ZXP Series 🕯	8 USB Card Printer Printing Preferences ?
Card Setup Encoding	Black Panel (K) Optimization About
Card info	
Card source	Card feeder 🖌
Card Destination	Output hopper
Card type in use	Sustom 1
Printing options Orientation Print on both side Rotate 180° Copies Print front image Ribbon info Ribbon type YMCKK Ribbon combinatió	PVC, SLESS20 PVC, SLESS42 PVC, COMPOSITE, HICO PVC, COMPOSITE, Z6 PVC, COMPOSITE, Z6, HICO TESLIN, COMPOSITE, Z6, HICO TESLIN, COMPOSITE, Z6, HICO
YMCK Front / K	PETG
Laminator info	
Top Laminate	None
Bottom Laminate	None
Laminate sides	None
(Labra	Image Control Restore Defaults
	OK Cancel <u>Apply</u> Help

• Make the appropriate Magnetic Encoder Card Type selection.

#### **Media Loading Orientation**



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

Place the cards in the Input Hopper in the correct orientation as shown (with the magnetic stripe down and facing to the rear). Ensure that the cards are seated properly the hopper.



#### **Magnetic Encoder Cleaning**

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



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

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

#### 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 (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	76	Even	%	?	0.293" (7.4)
2	75	5	Odd	37	Even	;	?	0.293" (7.4)
3	210	5	Odd	104	Even	;	?	0.293" (7.4)

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.).

#### AAMVA

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)

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

#### 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.
## **Encoder Macro Commands**

With ZXP Series 8 printers, we provide support for pass-through mag encoding commands.

The application developer or user can use a preamble or Macro to indicate to the driver that the data following the Preamble or Macro is to be mag encoded.

The user can have encoding and printing data on the same card, and the driver will filter out the encoding data from the printing data. The user does not have to know job control syntax or ZMotif commands to send mag encoding commands to the printer.

Supported Macro commands are:

- 1. C01<Track1 Data> C02<Track2 Data> C03<Track3 Data>
- 2. \${1<Track1 data>}\$
   \${2<Track2 data>}\$
   \${3<Track3 data>}\$
- **3.** ~1=<Track1 data> ~2=<Track2 data> ~3=<Track3 data>





## **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.

## **Encoding and Reading Smart Cards**

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

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

#### **Driver Setting**

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

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

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

💩 Zebra ZXP Series 8 USB Card Printer Printing Preferences 🛛 💽 🗙		
Card Setup Encoding Black Panel (K) Optimization About		
Card info		
Card source	Card feeder	
Card Destination	Output hopper	
Card type in use	rustom 1	
Printing options Orientation Print on both side Rotate 180° Copies Print front image Ribbon type YMCKK Ribbon combinatik YMCK Front / K	Custom 1 Custom 2 PVC PVC,LOCO PVC,SLE428 PVC,MIFARE,ULTRALIGHT PVC,MIFARE,DESFIRE PVC,MIFARE 1K PVC,SLE542 PVC,SLE5532 PVC,SLE5532 PVC,COMPOSITE,AC PVC,SLE5532 PVC,COMPOSITE,Z6,HICO TESLIN,COMPOSITE PE	
Laminator info		
Top Laminate	None	
Bottom Laminate	None	
Laminate sides	None	
Zebra	Image Control Restore Defaults	
	OK Cancel Apply Help	

• Make the appropriate Smart Card Type selection.

## **Contact Smart Cards**

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

The printer responds to commands that position the card at the contact location, where the printer connects to the contacts on the Smart Card. Data to be encoded onto the Smart Card, and data read from the Smart Card, can interface via a connector on the printer's rear panel (*Contact Station*), or encoding/decoding can be performed by logic on the printer's Main PCBA (*Contact Encoder*).

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

#### Media Loading Orientation for Contact Smart Cards

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



### **Contact Station Smart Card Interface**

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



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

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

## **Contactless Smart Cards**

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

## Media Loading Orientation for Contactless Smart Cards

For Contactless Smart Cards, orientation is not a consideration.

## **Printing on Contactless Smart Cards**

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



# Appendix F

## Packing the Printer for Shipment



## Introduction

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

If the original material is lost, a replacement Shipping Kit can be ordered from Zebra; see the Spare Part Kits listing in the Service Manual or check the *Partner Zone* on <u>www.zebracard.com</u>.

## **Procedure**



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

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



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



- Step 8. Place the Printer in its protective plastic bag.
- Step 9. Place the lower foam insert in the Shipping Carton.
- Step 10. Use both hands to carefully place the Printer into the recess in the lower foam insert.
- **Step 11.** Place the upper foam insert onto the Printer, and gently press it down so it makes a snug fit on the Printer -- the top of the upper foam insert should be even with the upper edge of the Shipping Carton.
- Step 12. Close the Shipping Carton.
- Step 13. Tape the Shipping Carton securely.

# APPENDIX G

## **Worldwide Support**



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

## North America and Latin America - Technical Support

Phone:	+1 877 ASK ZEBRA (877 275 9327)
	+1 847 913 2259
email:	ts1@zebra.com

#### North America and Latin America - Repair Services

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-ofwarranty 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/repairPhone:1-877-275-9327email: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

Phone:	+44 (0) 1628 556 025
FAX:	+44 (0) 1628 556 001
e-mail:	cardts@zebra.com

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

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-ofwarranty repair, contact your supplier for a Return Materials Authorization (RMA) number, or contact one ot 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:

Phone: + 44 (0) 177 2 69 3069 email: ukrma@zebra.com

### **Asia Pacific - Technical Support**

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

Phone:	$+65\ 6858\ 0722$
Fax:	$+65\ 6885\ 0838$
Email:	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

 Phone:
 +65 6546 2670 ext 3203 and 3204

 Fax:
 +65 6546 5328

 Email:
 APACRepair@zebra.com

#### Zebra Website

www.zebracard.com

