Command Reference

Advanced Direct Commands
for ZXP Series1 and ZXP Series 3 Card Printers

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Introduction

This guide documents the advanced direct command support for the ZXP Series 1 and ZXP Series 3 card printer products only and should not be used with any other model card printer.

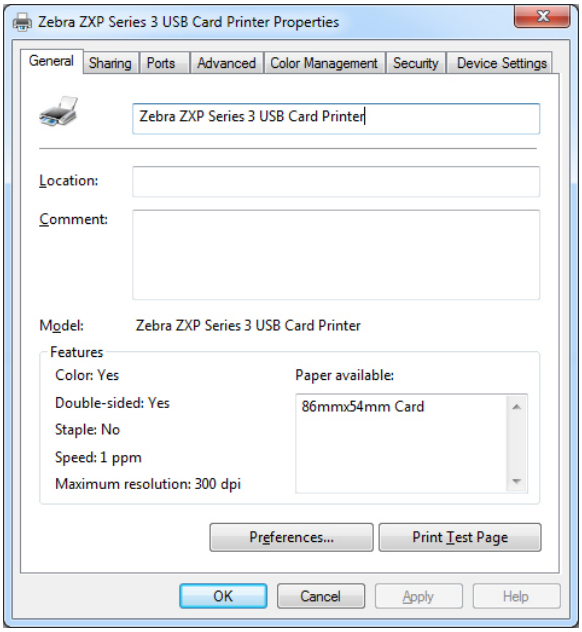
This information is intended for use by programmers or trained service personnel only and should not be used by the average user. Using any direct commands incorrectly can result in permanent damage to your card printer. Read each command carefully, including all NOTES and WARNINGS before attempting to use the command.

While every attempt has been made to insure the accuracy of the information in this guide, the commands may or may not function as documented with your card printer.

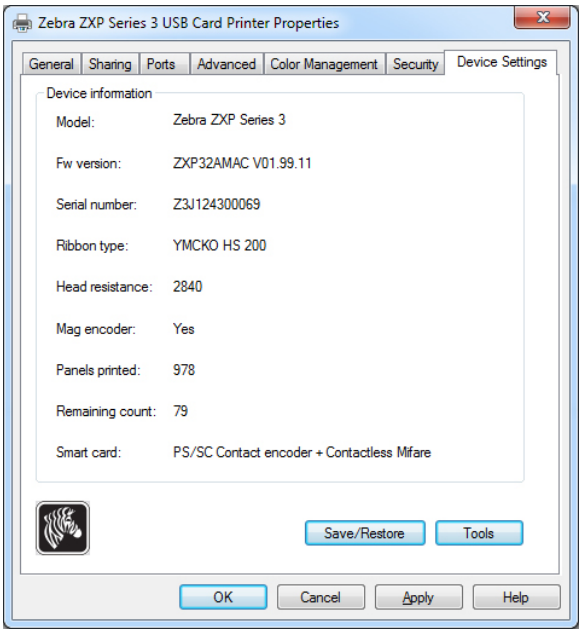
Sending Commands to the Printer

This section describes how to use the Zebra Printer Driver to send commands to the printer.

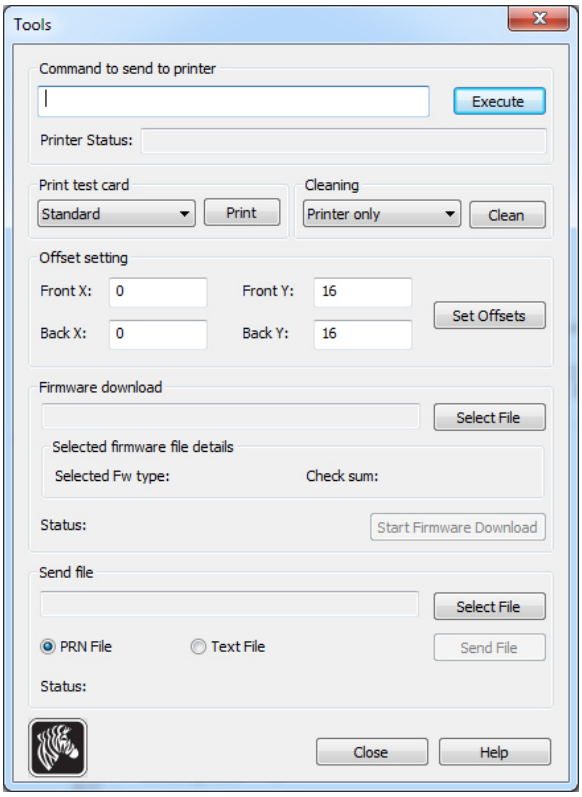
Access to Card Printer Properties varies depending on your Operating System (OS); e.g., for Windows 7, select Start > Devices and Printers. Right click on the Zebra ZXP Card Printer listing, then select Printer properties.



Select the **Device Settings** tab.



Click on the **Tools** button in the lower right corner of the dialog screen.



Command to send to printer - Enter a printer command in the top edit box; e.g., MI, which will pick one card and move it to the print ready position. Then click on the Execute button. Printer Status will show the status of the command.

A - Print Test Card

Model(s) Supported ZXP1, ZXP3

Description This command Prints a standard test card with printer parameters.

Syntax `A {p1}`

Parameters p1= Test Card Style
Where:

None (blank) = Standard Test Card
1 = Printer Test Card
2 = Magn***e***tic Encoder Test Card
3 = Parameter test card

ATM - Set Card Feeding Mode

Model(s) Supported ZXP1, ZXP3

Description Select card feeding mode and control how printer reacts to an out-of-card condition.

Syntax `ATM {p1}`

Parameters p1= Feed Mode
Where:

If p1 is left blank, the printer will respond with the current setting (0, 1, or 2).

0 = Normal mode. This mode will use the card feeder hopper. When the hopper is empty, the printer will signal that it is out of cards and wait for the user to add more. The printer will not enter a ready state (and resume printing) until the error state is cleared by adding cards and/or pressing the button on the front of the printer.

1 = Single Feed Mode. This mode will use the single-card feeding slot on the front of the printer. In this mode, if a print job is sent to the printer and a card is not present, the printer will signal that it is out of cards. It will automatically clear this error status when a card is fed far enough into in the front of the printer to trigger the single feed card sensor. The user does not have to press any buttons to clear the error.

2 = Auto Feed Mode. This mode will use either the card feed hopper and the single-card feeding slot on the front of the printer. When a print job is sent, the printer will first try to feed a card from the card feeder hopper indicating “Feeding Card” on the LCD. If no card is found after two attempts by the printer, the printer LCD will indicate “Insert Card” requesting that a card be fed in the single card feeding slot on the front of the printer. If the printer times out the error can be cleared by following the process outlined in the Normal Mode or Single feed mode options above.

&B - Load Magnetic Encoder Track Write Buffer

Model(s) Supported ZXP1, ZXP3

Description Load data into the write buffer for a single selected track of encoding. (The command is typically followed by an &E or &E*)

Syntax `&B p1 data`

Parameters `p1` = Track Number and data format
Where:

1 = Track 1 ASCII data
2 = Track 2 ASCII data
3 = Track 3 ASCII data
11= Track 1 hexadecimal data*
12= Track 2 hexadecimal data*
13= Track 3 hexadecimal data*

`data`
Where:

Each track has unique character and length limitations due to formatting, and each has its own data buffer. When <p1> = 1...3, <data> should be expressed as a simple string of ASCII characters. If <p1> = 11...13, <data> should be expressed as a variable length sequence of 2-digit ASCII hexadecimal numbers.
In hex mode, only digits 0...9 and upper case alpha characters A...F are allowed. No error checking is performed on the <data> field; the data loaded into the track write buffer will be in determinate if the <data> string contains invalid characters. The printer automatically inserts the required ISO Control Characters (start and stop sentinel, longitudinal redundancy check character, etc.) into the data. The actual data encoded onto the card is converted from ASCII to an ISO track-specified encoding format.

Track	Characters (Default ANSI/ISO)	Field Separator	Length
1	<Sp> $ ( ) - . / 0 through 9 A through Z (All Caps)	∧	76
2	0 through 9	=	37
3	0 through 9	=	104
11*	Hexadecimal	N/A	*
12*	Hexadecimal	N/A	*
13*	Hexadecimal	N/A	*

&C - Set Coercivity

Model(s) Supported ZXP1, ZXP3

Description This command sets the encoder for high- or low-coercivity magnetic stripe encoding.

Syntax `&C p1`

Parameters p1 = Coercivity
Where:
0 = Low
1 = High

&CARD - Check for Card Presence

Model(s) Supported ZXP1, ZXP3

Description Returns status to host indicating whether or not a card is present anywhere within the card path other than the input hopper.

Syntax `&CARD`

Parameters None

Example An example response would be:
0 = No Card present in the print path.
1 = Card present in the print path.

!CC - Get Number of Cards Printed

Model(s) Supported ZXP1, ZXP3

Description Every time the printer prints a card, the print counter is incremented by one. This counter is saved in non-volatile memory. This command will return the total number of cards that have been printed since the printer entered service. The value is reported to the host as an ASCII decimal number.

Syntax `!CC`

Parameters None

Example An example response would be:
00002440<ACK>

%CDER - Get Magnetic Encoder Read Settings

Model(s) Supported ZXP1, ZXP3

Description Returns the magnetic encoder read settings that are presently set in the printer using the &CDER command.

Syntax %CDER

Parameters None

Example An example response would be:
TRACK1:"Q" TRACK2:"R" TRACK3:"S" <ACK>

&CDER - Set Magnetic Encoder Track Read Encode Parameters

Model(s) Supported ZXP1, ZXP3

Description Returns the magnetic encoder read settings that are presently set in the printer using the &CDER command.

Syntax `&CDER p1 p2 p3`

Parameters p1 = Track Select: (values 1, 2, 3, or 0 (zero))
NOTE: Sending a zero for p1 and p2 will reset ALL of the tracks to ISO default configuration parameters. When sending Zero for p1 and p2, you will not have a value for p3; it will be left blank.

Where p2 = Custom Data to follow **ISO** format:

Value	**Description – *ISO* Data Format**
0	Resets ALL of the tracks to ISO default configuration parameters.
Default Format Select	
Q	ISO Track 1 Data Format to Track 1
R	ISO Track 2 Data Format to Track 2
S	ISO Track 3 Data Format to Track 3
Custom ISO Track Format Location	
qX	Track 1 with ISO Track “X” Format
rX	Track 2 with ISO Track “X” Format
sX	Track 3 with ISO Track “X” Format
X = 1, 2, or 3 as the ISO default track format applied to the selected track (e.g., Q=q1, R=r2, and S=s3).	

Where p2 = Custom Data to use **RAW** or Non ISO format:

Value	**Description – *RAW* Data Format**
Read Forward – “RAW” data	
U	Track 1
V	Track 2
W	Track 3

p3 = Data Block Size Select in Bits.
Where:
Acceptable values for *p3*= 3,4,5,6, and 7
A value for p3 is only sent when using Custom **Raw Data format.**

Example &CDER 1 q2
Sending this command would result in Track 1 being configured to read data with typical Track 2 ISO configuration.

%CDEW - Get Magnetic Encoder Write Settings

Model(s) Supported ZXP1, ZXP3

Description Returns the magnetic encoder write settings that are presently set in the printer using the &CDEW command.

Syntax `%CDEW`

Parameters None

Example An example response would be:
TRACK1:"A" TRACK2:"B" TRACK3:"C" <ACK>

&CDEW - Set Magnetic Encoder Track Write Encode Parameters

Model(s) Supported ZXP1, ZXP3

Description Set the magnetic encoder to write via a selected data format for any or all magnetic encoder tracks.

Syntax `&CDEW p1 p2 p3`

Parameters p1 = Track Select: (values 1, 2, 3, or 0 (zero))
NOTE: Sending a zero for p1 and p2 will reset ALL of the tracks to ISO default configuration parameters. When sending Zero for p1 and p2 you will not have a value for p3; it will be left blank.

Where p2 = Custom Data to follow **ISO** format:

Value	**Description – *ISO* Data Format**
0	Resets ALL of the tracks to ISO default configuration parameters.
Default Format Select	
A	ISO Track 1 Data Format to Track 1
B	ISO Track 2 Data Format to Track 2
C	ISO Track 3 Data Format to Track 3
Custom ISO Track Format Location	
aX	Track 1 with ISO Track “X” Format
bX	Track 2 with ISO Track “X” Format
cX	Track 3 with ISO Track “X” Format
X = 1, 2, or 3 as the ISO default track format applied to the selected track (e.g., Q=q1, R=r2, and S=s3).	

Where: p2 = Custom Data to use RAW or Non ISO format:

Value	**Description – *RAW* Data Format**
Write Forward – “RAW” data	
E	Track 1
E_	Track 1 write data with NULs in data string
F	Track 2
F_	Track 2 write data with NULs in data string
G	Track 3
G_	Track 3 write data with NULs in data string

p3 = Data Block Size Select in Bits.
Where:
Acceptable values for p3 = 3, 4, 5, 6, or 7.
A value for p3 is only sent, when using Custom Raw Data format.

Example &CDEW 2 b1
Sending this command would result in Track 2 being configured to write data with typical Track 1 ISO configuration.

CHECK - Return Checksum

Model(s) Supported ZXP1, ZXP3

Description Returns firmware checksum value.

Syntax `CHECK`

Parameters None

CLEAN – Start Cleaning Sequence

Model(s) Supported ZXP1, ZXP3

Description This command will initiate a cleaning cycle to clean the printer. The user will be prompted on the LCD to follow the steps to run cleaning cards through the printer to clean the print head, transport rollers and card feeder.

Syntax `CLEAN`

Parameters None

%CLN - Check Due-for-Cleaning Parameters

Model(s) Supported ZXP1, ZXP3

Description This command will show when the next cleaning request or cleaning prompt on the printer's LCD will occur. Cleaning requests are based off of the number of panels printed and not cards. A single side card printed with a 5 panel color ribbon (YMCKO) will increase the panel count by 5. A single side card printed with a monochrome single color ribbon will increase the panel count by 1.

Syntax `%CLN`

Parameters None

Example Upon sending the %CLN command the printer operator will receive a response on the line below the command line:

`cpt imp:00005687 next clean Prn:00015687<ACK>`

Where **cpt imp** = Current number of panels printed.
next clean Prn = Number of panels when the cleaning prompt will occur.

CLNCARD – Set Cleaning Parameters

Model(s) Supported ZXP1, ZXP3

Description This command will Set the number of panels between cleanings, before the printer operator is prompted on the LCD to clean the printer.

Syntax `CLNCARD {p1}`

Parameters p1 = represents a variable from 0 – 65535.
Where:

The default is 5000*.
Blank = returns the current value set in the printer.

*WARNING - Increasing the number of panels beyond 5,000 between cleanings may void the printer warranty.

CLNLOG – Get Cleaning Log

Model(s) Supported ZXP1, ZXP3

Description This command will return the number of panels that have been printed up to the time a cleaning was performed. The command provides a value for the last ten cleanings. The numbers will appear in the Printer Status: section of the Tools window.

Syntax `CLNLOG`

Parameters None

Example An example response for a printer with three cleanings since it was installed would be:
1000 2000 3000 0 0 0 0 0 0 0 <ACK>

!D – Move Print Head Down

Model(s) Supported ZXP1, ZXP3

Description Moves the Print Head assembly down onto a card (or the platen roller if no card is present).

Syntax ! D

Parameters None

&D – Change Track Density

Model(s) Supported ZXP1, ZXP3

Description Changes the data encoding and decoding density of an individual track.

Syntax `&D p1 p2`

Parameters `p1` = Track number(s) to adjust.
Where:

1 = Track 1
2 = Track 2
3 = Track 3

`p2` = Density value to select.
Where:

75 = 75 bpi
210 = 210 bpi

Model(s) Supported ZXP1, ZXP3

Description Encode, write and read (verify) a single track of data. The printer feeds a card (if a card is not loaded) and magnetically writes data to the selected ISO Track. The card automatically read-verifies the encoded data. The card then moves to the print-ready position.

Syntax `&E p1 data`

Parameters `p1` = Encoding Track Number
Where:
(1, 2, or 3 for ISO encoding and 11, 12, or 13 for Hexadecimal encoding)

`data` = ISO Track Data
Where:
Each track has unique character and length limitations due to formatting, and each has its own data buffer. When <p1> = 1...3, <data> should be expressed as a simple string of ASCII characters. If <p1> = 11...13, <data> should be expressed as a variable length sequence of 2-digit ASCII hexadecimal numbers.
In hex mode, only digits 0...9 and upper case alpha characters A...F are allowed. No error checking is performed on the <data> field; the data loaded into the track write buffer will be in determinate if the <data> string contains invalid characters. The printer automatically inserts the required ISO Control Characters (start and stop sentinel, longitudinal redundancy check character, etc.) into the data. The actual data encoded onto the card is converted from ASCII to an ISO track-specified encoding format.

Track	Characters (Default ANSI/ISO)	Field Separator	Length
1	<Sp> $ ( ) - . / 0 through 9 A through Z (All Caps)	^	76
2	0 through 9	=	37
3	0 through 9	=	104
11*	Hexadecimal	N/A	*
12*	Hexadecimal	N/A	*
13*	Hexadecimal	NA	*

* - <data> should be expressed as a variable length sequence of 2-digit ASCII hexadecimal numbers.

&E* - Write Track Buffers

Model(s) Supported ZXP1, ZXP3

Description Encodes, Writes, and Reads (verifies) for all tracks of data stored in printer memory.
The printer positions a card at the encoder station and magnetically writes data (previously entered in memory with the &B command) to the pre-selected track(s). If no card is present in the card path, a card is fed and moved into the mag encoding position. Following the encoder write operation, the card returns to the write-ready position, and a read-verification of encoded card data follows. The card then travels to the print-ready position, and an encoder data buffer clear occurs in preparation for the next operation.

Syntax &E*

Parameters None

+EC - End of Print

Model(s) Supported ZXP1, ZXP3

Description Specifies a point, beyond which, no card printing occurs. Print stations have storage for 1030 lines of imaging, which exceeds the x-axis image area on the cards. The parameter for end of print causes the print head to rise at the end-of-card point, not the end of data. If left down beyond the end of card, the print head can shear the ribbon as the print head abruptly drops below the surface of the card.

NOTE Higher values of p1 result in shortened line counts. For example an increase in the EC value shortens:

- The left side of the **front** of a landscape design card.
- The right side of the **back** of a landscape design card.

Syntax `+EC {p1}`

Parameters `p1` = line count for end-of-print
Where:

10 = Default
0~48 = Acceptable range
Blank = sending nothing in place of the `p1` value will return the current value set in the printer.

Example +EC 12
Sets the End of Print to 12

%HEAD - Get Print Head Serial Number

Model(s) Supported ZXP1, ZXP3

Description Both the printer as a whole and the print head sub assembly are assigned a unique serial number after passing post-manufacturing quality and functional tests. The serial number assigned to the print head mechanism is separate from that assigned to the printer as a whole. This command will display the serial number assigned to the print head in the *Printer Status:* section of the toolbox under the command line.

Syntax %HEAD

Parameters None

&I - Reset Magnetic Encoder Parameters

Model(s) Supported ZXP1, ZXP3

Description This command initializes the mag encoder. It will reset the magnetic encoder parameters back to default values and restore ISO values.

Syntax `&I`

Parameters None

&L - Read Single Track

Model(s) Supported ZXP1, ZXP3

Description Reads data for a single track from a magnetic card.

Syntax `&L p1`

Parameters p1 = Track Number
Where:

1 = Return Track 1 data as an ASCII string
2 = Return Track 2 data as an ASCII string
3 = Return Track 3 data as an ASCII string
11= Return Track 1 data in ASCII hex format
12= Return Track 2 data in ASCII hex format
13= Return Track 3 data in ASCII hex format

The data returned will conform to the values shown in the table below.

Track	Characters (Default)	Field Separator	Length
1	<Sp>$ ( ) - . / 0 through 9 A through Z (All Caps)	^	76
2	0 through 9	=	37
3	0 through 9	=	104
11	Hexadecimal	N/A	*
12	Hexadecimal	N/A	*
13	Hexadecimal	N/A	*

*** -** The actual data encoded onto the card is converted automatically from an ISO-track-specified encoding format to ASCII. If track data is returned in ASCII hex format, the value of each 2-digit hex number will have the same ordinal value that it would if the data read were returned in ASCII string format. For example, if the ASCII representation of the data read from the track is "01234", the hex version returned will be "3031323334".

!M - Move Print Head Up

Model(s) Supported ZXP1, ZXP3

Description Moves the Print Head Assembly up from the card (and platen roller).

Syntax `!M`

Parameters None

MC - Clear Media Path

Model(s) Supported ZXP1, ZXP3

Description Sends any card in the Flip-over module or print path to the output hopper.

NOTE: *The command will not feed cards from the input hopper.*

Syntax `MC`

Parameters None

ME - Exit Card to Output Hopper

Model(s) Supported ZXP1, ZXP3

Description Sends any card in the Flip-over module or print path to the output hopper.

NOTE: The command will not feed cards from the input hopper.

Syntax `ME`

Parameters None

MF - Flip Card

Model(s) Supported ZXP1, ZXP3

Description If a card is in the printer, it moves a card to the flip-over module, flips the card, and returns the card to the Print-Ready position.

If a card is not in the printer, the printer will feed a card, move the card to the flip-over module, flip the card, and return the card to the Print-Ready position.

NOTE: For user safety, a card flip requires a closed cover.

Syntax `MF`

Parameters None

MI - Move Card into Print Ready Position

Model(s) Supported ZXP1, ZXP3

Description Moves a card from the card input hopper to the print ready position.

NOTE: If a card is already in the Flip-over module or the print path, the printer will not eject the card currently loaded and feed a new card. The printer will simply respond with an <ACK> on the printer status line.

Syntax `MI`

Parameters None

MIB - Move Card Back to Print Ready Position

Model(s) Supported ZXP1, ZXP3

Description Moves a card from beyond the print position back to the print ready position or forward from the Flip-over module to the ready print position, just before the print head.

NOTE: The command will not feed cards from the input hopper.

Syntax `MIB`

Parameters None

MIS - Move Card to Print Ready Position

Model(s) Supported ZXP1, ZXP3

Description Moves a card from any location in the printer, including the input hopper, to the print ready position.

Syntax `MIS`

Parameters None

MO - Move Card to Output Hopper

Model(s) Supported ZXP1, ZXP3

Description Moves and exits a single card from any position within the card path, except the input hopper, to the output hopper.

Syntax `MO`

Parameters None

MM - Move Motors - Moves a Card Through Printer

Model(s) Supported ZXP1, ZXP3

Description Moves stepper motor for the platen roller, resulting in the remaining rollers in the card path to move as well. If a card is pre-fed into the card path, the command allows a card to be moved an arbitrary distance either forward or backward through the print path.

Syntax `MM p1 {p2}`

Parameters Where:

`p1` - Distance to move card through mechanism, measured in dot-line units. A value of 300 will move the card 1 inch (225.4 mm). (Range: 0 - 65535)

`p2` - Optional. (Values: blank, 0 or 1)
If left blank or 0 is used, the card is moved backward, toward the card feeder.
If 1 is used, the card is moved forward through the card path, towards the card exit.

This command is provided primarily for testing the integrity of the card transport mechanism. Unusual print errors or odd results might be seen on the next card printed following the use of this command.

M - Multiple Command

Model(s) Supported ZXP1, ZXP3

Description Groups and repeats a string of commands a specified number of times. Errors encountered during commands linked by “m” commands abort any remaining commands, while M-linked commands resume after an appropriate error response.

Syntax `M p1 p2`

Parameters `p1` = Number of times to repeat following command string
`p2` = The command or commands you wish to repeat `p1` number of times.

Example `M 3 MF`
This example will move a card to the Flip-over module and flip the card 3 times.

[- Link Multiple Commands

Model(s) Supported ZXP1, ZXP3

Description The left bracket (**[**) acts as a delimiter between commands to allow several commands to be linked, resulting in a series of steps for the printer to conduct.

NOTE: The [(left bracket) is always used with the M (multiple Command) and is never closed with a right bracket (**]**). If the bracket is used without the M command the printer will return a Command Error.

Syntax `M p1 p2[p3[p4[p5 … [pn`

Parameters `p1` = Number of times to repeat following command string
`p2 – pn` = The command or commands you wish to repeat `p1` number of times.

Example M 2 MI[MF[MO
This example will feed a card, move a card to the Flip-over module, flip the card and eject the card. This process will repeat twice based on the 2 used for *p1.* If a 7 were used for the *p1* value, seven cards would have been fed into the printer, flipped over, and ejected to the exit hopper.

MS - Move Card to Smart Card Programmer

Model(s) Supported ZXP3 only; requires Smart Card option.

Description Moves a card to the smart card docking station and engages the smart card programming contacts. The card remains in the smart card docking station until a card movement command is sent.

Syntax `MS {p1}`

Parameters `p1` = Type of movement.
Where:

Blank or 0 = Load contact smart card into contact station, engage the solenoid, and initialize the contact reader communication environment.
1 = Engage the contact station's solenoid.
2 = Disengage the contact station's solenoid.
4 = Load a card from feeder into contactless MiFare reader antenna area; also initialize the MiFare reader communication environment.

&N - Select Magnetic Encoding Standard

Model(s) Supported ZXP1, ZXP3

Description Selects the magnetic Encoding standard to use (ISO or JIS).

Syntax `&N p1`

Parameters p1 = Encoding standard.
Where:
0 = JIS(II)
1 = ISO

NOTE: *JIS Encoding, if selected, can only be done on track 1. Tracks 2 and 3 will always be written in ISO (or custom) format, regardless of the value set by this command.*

!NL - Get Printer Impression and Error Counter

Model(s) Supported ZXP1, ZXP3

Description This command will return the total number of panels that have been printed since the printer entered service. The number will be an eight character number with leading zeros. Following that number will be a space and another eight digit number (with leading zeros). The second eight digit value will be the number of errors encountered by the printer. Both values (number of printed cards and number of errors) will appear in the *Printer Status:* section of the Tools window.

Syntax `!NL`

Parameters None

Example An example response would be:
00009036 00000067<ACK>

+O - Print Offset X-Axis for Front of Card

Model(s) Supported ZXP1, ZXP3

Description This command alters the horizontal (X-axis) start print offset point, in dots for the front of the card. The command will adjust image placement along the horizontal X axis of a Landscape card or the vertical axis of a Portrait card. Increasing the value will move the image toward the trailing edge on the front of a Landscape design card.

Syntax `+O {p1}`

Parameters p1 = Horizontal (X-axis) start print offset, in dots
Where:

0 - 31 = Range
20 = Default
Blank = returns the current Front X offset value

+OB - Print Offset X-Axis for Back of Card

Model(s) Supported ZXP3

Description Alters the horizontal (X-axis) start print offset point, in dots for the back of the card. The command will adjust image placement along the horizontal X axis of a Landscape card or the vertical axis of a Portrait card. Increasing the value will move the image toward the trailing edge on the back of a Landscape design card.

Syntax `+OB {p1}`

Parameters p1 = Horizontal (X-axis) start print offset, in dots:
Where:

- 0 - 31 = Range
- 20 = Default
- Blank = returns the current Back X offset value

+OS - Smart Card X-Axis Offset

Model(s) Supported ZXP3 only; requires Smart Card option.

Description Offsets the horizontal (X-axis) smart card Programmer location in dots.

Syntax `+OS {p1}`

Parameters p1 = Horizontal start position (X) in dots
Where:
0~650 = Range
385 = Default
Blank = Returns the current value set in the printer.

+OY –Print Offset Y-Axis for Front of Card

Model(s) Supported ZXP1, ZXP3

Description Offsets the vertical (Y-axis) start print location in dots for the front side of a card. The command will adjust image placement along the vertical Y axis of a Landscape card or the horizontal axis of a Portrait card. Increasing the value will move the image down toward the bottom edge on the front of a Landscape design card.

Syntax `+OY {p1}`

Parameters p1 = Vertical (Y-axis) offset, in dots
Where:

0 - 31 = Range
18 = Default
Blank = returns the current Front Y offset value

+OYB - Print Offset Y-Axis for Back of Card

Model(s) Supported ZXP1, ZXP3

Description Offsets the vertical (Y-axis) start print location in dots for the back of a card. The command will adjust image placement along the vertical Y axis of a Landscape card or the horizontal axis of a Portrait card. Increasing the value will move the image up toward the top edge on the back of a Landscape design card.

Syntax `+OYB p1`

Parameters p1 = Vertical (Y-axis) offset, in dots
Where:

0 - 31 = Range
18 = Default
Blank = returns the current Back Y offset value

+PRF - Pre-Feed a Card Prior to the Next Print Job

Model(s) Supported ZXP1, ZXP3

Description This command enables or disables the Pre-Feed feature. If enabled, the printer will pre-feed a card to the Flip-over module:

- when power is cycled
- when the printer is initialized
- prior to the completion of a card that is being printed.

NOTE: Enabling pre-feed can reduce the amount of time to print a card.

Syntax `+PRF {p1}`

Parameters p1 = Enable / Disable Pre-Feed
Where:
0 = Disable Pre-Feed
1 = Enable Pre-Feed
Blank = will query the printer and provide the current setting (0 or 1)

R – Re-Initialize

Model(s) Supported ZXP1, ZXP3

Description This command re-initializes the printer, similar to power cycling the printer.

Syntax R

Parameters None

!R - Print Head Resistance

Model(s) Supported ZXP1, ZXP3

Description This command will specify the print head resistance which will affect density of color printing. It should be set to the manufacturer's resistance measurement that appears on the print head label.

NOTE: This command should be used when the print head is replaced. The !R value sent to the printer should be the value on the print head label.

Syntax `!R {p1}`

Parameters `p1` = Value to set for print head resistance.
Where:

If `p1` is left blank, the printer will return the current value set for print head resistance.

WARNING: Do not set a value more than 200 above or below the resistance value on the print head label or you will void the manufacturer warranty.

Example If the resistance value marked on the print head is 2700
!R 2700

&R - Reset Magnetic Encoder Buffers

Model(s) Supported ZXP1, ZXP3

Description Clears Magnetic Encoder Command and Data Buffers set by the &B command. This command does not return the track data format or density to default values. This command should be sent when reformatting the encoder parameters. Do not send this command for every card.

Syntax &R

Parameters None

!RIBPN - Get Ribbon Part Number

Model(s) Supported ZXP1, ZXP3

Description Returns the Zebra part/order number associated with the ribbon currently installed in the printer.

Syntax `!RIBPN`

Parameters None

Part numbers for printer supplies (including ribbons) are subject to change. Consult the most recent Card Printer Supplies List to ensure the part numbers for ribbons to be ordered is correct.

Example If the command were sent to a ZXP 3 printer with a YMCO ribbon installed, the response would be:
800033-340<ACK>

!RIBLEN - Get Number of Remaining Panels on Ribbon

Model(s) Supported ZXP1, ZXP3

Description Returns the number of unused panel sets remaining on the ribbon presently installed. This value indicates how many cards can be printed with the present ribbon before it will need to be replaced.

Syntax `!RIBLEN`

Parameters None

NOTE: If the ribbon has been manually advanced or rewound, the printer will not be able to provide the exact remaining image count.

Example If the command were sent to a printer with a ribbon installed containing 249 panels, the response would be:
249<ACK>

+RIBSAV – Enable or Disable Ribbon Synchronization

Model(s) Supported ZXP1, ZXP3

Description Enables or disables the ribbon synchronization of a ribbon, upon power up.

Syntax `+RIBSAV {p1}`

Parameters p 1 = Enable or Disable Ribbon Synchronization.
Where:

Blank = Returns a 0 or 1 to indicate whether RIBSAV is enabled or disabled.
0 = Disable RIBSAV
1 = Enable RIBSAV

NOTE: To immediately store the feature in the printer's memory, send the SDATA command after setting the +RIBSAV value.

WARNING: If the +RIBSAV mode is enabled and a color ribbon is installed while the printer power is off, be sure to synchronize the ribbon manually. While the power is on, open and close the printer's lid to manually synchronize the color ribbon.

SDATA - Force Immediate Save of Parameters

Model(s) Supported ZXP1, ZXP3

Description When printer parameters are changed (e.g., Pre-feed mode), this command will save the values to non-volatile memory.

NOTE: It is not necessary to send this command after every command sent to the printer. The printer is designed with an auto save feature to save the current configuration if the printer sits idle – 5 seconds. The printer will automatically save the current configuration every 10 minutes.

However, if parameters are changed and the printer is powered down before the auto-save cycle has started, the new values will not be saved, and the printer will power up using the older settings. This command is best used following a sequence of parameter setting commands. Multiple parameter changes can be saved in one write operation with the SDATA command. To prevent the number of entries to non-volatile memory the command should be used only when necessary.

Syntax SDATA

Parameters None

%SERIE - Get Printer Serial Number

Model(s) Supported ZXP1, ZXP3

Description Every printer manufactured by Zebra Technologies is assigned a unique serial number after passing post-manufacturing quality and functional tests. This command can be used to retrieve the serial number that has been assigned to the printer unit as a whole.

Syntax `%SERIE`

Parameters None

&SVM - Disable/Enable Magnetic Encoding Verifications

Model(s) Supported ZXP1, ZXP3

Description This command will enable or disable the read/verify after write function for the magnetic encoder. If the command is sent to shut off the magnetic data verification the printer will not attempt to read or verify that any information has been encoded on the card.

Syntax `&SVM {p1}`

Parameters `p1` = Disable/Enable Magnetic Encoding Verification
Where:

0 = Disable
1 = Enable (Default)
Blank = Returns the current value set in the printer.

NOTE: Power cycling the printer will not reset the encoder back to the default value. To re-enable magnetic encoding verification, the `&SVM 1` command must be sent to the printer.

V- Check Printer Type/Version

Model(s) Supported ZXP1, ZXP3

Description This command will provide the printer model, printer options, and firmware version of a printer.

Syntax V

Parameters None

The response provided in the Printer Status window will have two parts. The first part will be the printer model and options. There will be a space and a second value representing the firmware version.

Example The printer model and options will follow a format similar to printer part number in the Zebra Printer Price list. For example, a ZXP 3 dual side printer with a magnetic encoder and Ethernet with firmware version 2.03 will respond with:
ZXP320M0C V02.03.00

!V - Return Operational Parameter

Model(s) Supported ZXP1, ZXP3

Description Returns value for a selected parameter

Syntax `!V {p1}`

Parameters p1 = Requested parameter

Where for printer module:

- Blank/0 = Black Printing Parameters
- 1 = Front X Offset
- 2 = Front Y Offset
- 15 = Print Head Resistance
- 18 = p1 setting for +EC Command
- 19 = Smart Card Offset
- 20 = Magnetic Encoder:
  - Where:
    - 0 = Not Connected
    - 1 = Connected
- 21 = Coercivity Setting:
  - Where:
    - 0 = LOCO
    - 1 = HICO
- 22 = Magnetic Encoding Format:
  - Where:
    - 0 = JIS2
    - 1 = ISO

. - Clear Error Status Lines

Model(s) Supported ZXP1, ZXP3

Description This will clear most error messages on the LCD

Syntax . (The command is simply the period character. No spaces before or after the period.)

Parameters None