



EPCL



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# EPCL TROUBLESHOOTING COMMANDS



## **Escape commands**

**The Eltron Programmers Card Language is often referred to as “escape commands”, because all the ASCII printer commands are preceded by the “escape” (hex 1B) character. All commands must end with a Carriage Return character(hex 0D). These characters are automatically included when sending commands from the driver’s Printer Tools location.**



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# TEST CARDS

## **“A” – Standard Test Card**

Model, Serial Number, Firmware Version, Offsets (X, Y, and EC), Head Resistance, Printer Counter.

## **“A 1” – Printer Test Card**

Model Number, Serial Number Firmware Version, Offsets (X, Y), Head Resistance, Printer Counter, Printer errors, Black Cont/Speed, Varnish Cont/Speed, Black Compensation.

## **“A 2” – Magnetic Encoder Test Card**

Model, Serial Number, Firmware, Encoding Mode, Coercivity, Write Speed, Read Speed, Track Data Format



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# CARD MOVEMENT

## **“MI” – Input Card**

Moves card to pre-print position

## **“MIB” – Reverse Card to Print Position**

Returns card to pre-print position.

## **“MB” – Back Card Into Feeder**

Returns card to feeder.

## **“MO” – Exit Loaded Card to Output**

Moves loaded Card to the output hopper



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# CARD MOVEMENT

## **“MM value option” – Move Card**

Moves card forward number of steps specified by value. Option of “1” moves card backward number of steps specified by value.

## **“ME” – Exit Card to Output Hopper**

Moves a card from to output hopper

## **“MF” – Flip Card (P120i and P430i Only)**

Moves card to flipper and flips card. If card already in flipper then just flips card.

## **“MRB” – Move Card to Reject Box (P430i Only)**

Moves card to reject box.



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## RIBBON

### **“!CSA value” – Calibrates Ribbon sensors (P330i /P430i) only**

Value = “0” Baselines sensor without ribbon installed must be followed by

Value = “1” Calibrates sensor with ribbon installed

### **“BLACK” – Prints a black card (P110i /P120i) only**

Works with color ribbon only, used to check ribbon sensor

### **“!SAP 3” – Checks Ribbon sensor (P110i /P120i) only**

Requires color ribbon and a black card.

### **“!FF value” – Set Ribbon Color Sequence**

Value = “0” moves ribbon to Sync Position

Value = “1” moves ribbon to the next transparent panel, unless already there.

Value = “2” moves ribbon to next Non-transparent panel, unless already there

Value = “3” moves ribbon to beginning of Black (YMCK<sub>r</sub>O ribbons only)

### **“!FA value” – Move Ribbon**

Moves ribbon number of flags specified by value.



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# RIBBON RFID

**“!RIBBON” – Get Ribbon Type Installed**  
Returns value for installed ribbon type.

**“!RIBPN” – Get Ribbon Part Number**  
Returns Zebra ribbon part number.

**“!RIBLEN” – Get Number of remaining panels on ribbon**  
Returns an estimate of the number of unused panel sets remaining on the ribbon presently installed

TYPE	RIBBON		TYPE	RIBBON
0	No ribbon installed		16	K <sub>d</sub> O 500
1	Unknown (monochrome)		17	K <sub>R</sub> O 500
2	YMCKO 200		18	Scratch-off Gray 800
3	YMCK 250		19	Secure Hologram 350
4	YMCKK 200		20	PCard Hologram 350
5	YMCKOK 170		21	Clear 350
6	YMC 300		22	YMCKU
7	Monochrome		23	YMCUK
8	Monochrome		24	YMCUK
9	Monochrome		25	YMCKU
10	Monochrome		26	YMCUK
11	Monochrome		27	YMCUK
12	Monochrome		28	YMCKUK
13	Monochrome		29	Halfpanel YMC
14	YMCKO 330		30	Halfpanel YMC/Full KO
15	YMCK 400		31	UV Overlay 1000



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## PRINT QUALITY

### **“+CDOTS value option” – Image Print Quality Compensation**

Adjusts the density variations of color objects on the card.

Value = “range 1-50” compensation factor.

Option = “1” returns current compensation factor

### **“+V value” – Black Print Speed**

Adjusts the speed of monochrome printing

Value = “range 1-9” print speed where “9” is slowest

### **“+C value” – Adjust monochrome intensity**

Value = “range 1-9” Sets the intensity of monochrome printing.

### **“IMB” – Print Gray Test Card**

Prints an all gray card for use with printhead adjustment. Requires a monochrome ribbon

### **“IM” – Print Color Test Card**

Prints a color card for use with printhead adjustment. Requires a YMCKO ribbon





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## QUERYS

### **“!V value” – Return Operational Parameters**

Value = “0” returns black printing parameters (see programmers guide for more detail)

### **“\$V” – Return Color Operational Parameters**

Returns firmware values for color printing.

### **“%SERIE” – Get Printer Serial Number**

Returns the printers’ serial number.

### **“%HEAD” – Get Print Head Serial Number**

Returns the printhead serial number.

### **“V” – Check Printer Type / Version**

Returns printers’ model number and firmware version level

### **“!NL” – Get Printer Impression and Error Counters**

Returns total number of impressions printed and print errors encountered

### **“!CC” – Get Number of Cards Printed**

Returns total number of cards printed since entered service



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# ADJUSTMENTS

## **“+O value” – Print Offset X-Axis**

Sets start printing offset from left edge of card. The greater the value the further into the card.

## **“+OY value” – Print Offset Y-Axis**

Sets printing offset from top edge of card. The greater the value the further into the card.

## **“+EC value” – End of Print**

Specifies a point, beyond which, no card printing occurs. The greater the value the further into the card from the right edge of the card.

## **“!R value” – Print Head Resistance**

Sets the printhead resistance value, found on the printhead label, into the printers firmware. Increasing the printhead value will produce darker print.



# ADJUSTMENTS

## **“ATM value” – Set Card Feeding Mode**

Sets the card feeding mode and how printer reacts to an out-of-card condition.

Value = “0” Normal mode, card feeds in from hopper assembly.

Value = “1” ATM Mode, card feeds in from printers’ output

## **“+CLCD value” – Sets LCD Contrast**

Specifies the contrast of the LCD display range 0-9

## **“+LLCD value” – Sets LCD Intensity**

Specifies the intensity (brightness) of the LCD display range 0 or 1

## **“+CRB value” – Set Reject Box Card Count Warning Threshold (P430i only)**

Specifies the card count that produces the REJECTED BOX FULL message on the LCD



# CLEANING

## **“%CLN” – Check Due-for-Cleaning Parameters**

Returns 1) total number of head-down image passes 2) current setting for image passes that trigger a cleaning alert 3) current setting for passes performed using cleaning card.

## **“CLNCARD value1 value2” – Set Cleaning Parameters**

Sets the values for Time-to-Clean Alert and the cycling of cleaning card in card path

Value1 = Ribbon panel count to cleaning notification

Value 2 = Number of cleaning card passes through printer

## **“CLEAN value” – Set Cleaning Card Sequence**

Initiates cleaning cycle

Value = “1” Clean printer

Value = “2” Clean magnetic encoder head



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# SENSORS

## **“!SA value” – Self Adjust**

Initiates a printer self-adjust sequence or returns present adjustment settings

Value = none or “0” performs self adjustment sequence

Value = “1” returns present adjustment values

## **“!SAP value” – Self Adjust**

Initiates a self-adjust of a particular sensor or voltage

Value = “0” adjusts card sensor

Value = “1” adjusts ribbon color sensor

Value = “2” adjusts take up spindle power

Value = “3” adjusts magnetic encoder sensor



# SENSORS

## “VK 115” – Sensor Status

Returns current value of (P110i /P120i) sensors.

Values are in order of chart below from left to right

Position	SENSOR POSITION	STATUS
1	RD SENSOR	Numeric value with no meaning
2	MAG SYNCHRO	Returns “1” if encoder is present and card is present
3	FLIP CARD	Returns “1” when card is present in flipper
4	FLIP POS	
5	FEED DOOR	Returns “1” when closed
6	CARD PRINT	
7	ATM DOOR	Returns “1” when card is present
8	RIB COLOR	Returns “1” when on cyan or black
9	CAM A	
10	CAM_B	
11	MAIN DOOR	Returns “1” when closed



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# SENSORS

## “!L” – Check Status of Printer Sensors

Returns values of printer sensors

Values are in order of chart below from left to right

Position	Sensor	Returns
1	Head temperature in arbitrary units	
2	Ribbon present sensor	000 = No ribbon installed 255 = Ribbon installed and detected
3	Card in print position	No card < 32 card present > 224
4	Main power supply voltage	Between 22,0 and 24,2 (“,” equals decimal point)
5	Color ribbon Sensor	Yellow, magenta , or overlay panel < 32
6	Secondary print head position sensor	Always 000 unless printhead out of position
7	Primary print head position sensor	000 = printhead up 255 = printhead down
8	Head State	000 = printhead up 255 = printhead down
9	Magnetic encoder card position	000 = Card over sensor 255 = No card present
10	Card feed sensor (P330i / P430i only)	Card present < 32 No card > 192
11	Yellow ribbon color level	Below 100 indicates yellow or overlay panel is in print position.
12	Blue ribbon color level	Below 100 indicates cyan or overlay panel is in print position.
13	Smart card position level	Card present in smart card station < 32 No card > 192



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## MOTORS

### **“!D” – Move Print Head Down**

Moves the printhead down into the print position

### **“!M” – Move Print Head Up**

Moves the printhead up off of card or platen roller

### **“!F value” – Move Motor**

Activates motor specified by value

Value = “0” activates ribbon motor

Value = “1” activates printhead lift motor

Value = “2” activates feeder motor (P330i / P430i only)

### **“!A” – Stop Motor**

Stops motor activated by !F command





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# END