

# *Orion<sup>TM</sup> Thermal Printer User's Manual*



# **Eltron**

User's Manual No. 980176-001

Rev. E

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## FOREWORD

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This manual provides installation and operation information for the Orion (LP2443) series printers, manufactured by Zebra Technologies Corporation, Camarillo, California.

## COPYRIGHT NOTICE

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## TRADEMARKS

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Orion is a trademark, LP2443 is a service mark and Eltron is a registered trademark of Zebra Technologies Corporation. Windows and MS-DOS are registered trademarks of Microsoft Corp. All other marks are trademarks or registered trademarks of their respective holders.

## Orion LP2443 Thermal Printers

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	European Council Directive		Compliance to Standards	
	89/336/EEC	EMC Directive	EN 55022-A, CISPR 22	RF Emissions control
	92/31/EE	EMC Directive	EN 500082-1 IEC 801	Immunity to Electro-magnetic Disturbances

## FCC - DECLARATION OF CONFORMITY:

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**Model: LP2443 conforms to the following specification:**

**FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a) Class B digital device**

### Supplemental Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following Two Conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## INDUSTRY CANADA NOTICE:

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This device complies with Industry Canada ICS-003 class B requirements.

Cet équipement est conforme à l'ICS-003 classe B de la norme Industrielle Canadian

## **WARRANTY INFORMATION**

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### **We Need To Hear From You!**

**To Establish Your Warranty Period And Provide Access To Technical Support,  
Send Us Your Product Registration Card Today!**

Zebra Technologies Corporation warrants the mechanism, control electronics and power supply, under normal use and service, to be free from defects in material and workmanship for a period of twelve (12) months from the date of purchase by the end user. Zebra Technologies Corporation warrants the print head, under normal use and service, to be free from defects in material and workmanship for a period of ninety (90) days or 30KM of printing (whichever occurs first) from the date of purchase by the end user. Proof of purchase or product registration is required. If proof of purchase or product registration cannot be established, shipment date to the original buyer (dealer or distributor) will be used to establish the warranty period.

Failure to exercise caution to protect the equipment from electrostatic discharge damage, adverse temperature and humidity conditions or physical abuse may void the warranty. Failure to use only Eltron brand approved media may void the warranty. Zebra Technologies Corporation will, at its option, repair or replace the equipment or any parts which are determined to be defective within this warranty period, and which are returned to Zebra Technologies Corporation F.O.B. factory of origin.

The warranty set forth above is exclusive and no other warranty, whether written or oral, is expressed or implied. Zebra Technologies Corporation specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

## **RETURN MATERIALS AUTHORIZATION**

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Before returning any equipment to Zebra for in warranty or out of warranty repair, contact Repair Administration for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to the address listed below:

**Zebra Eltron Repair Administration, USA  
1001 Flynn Road  
Camarillo, CA. 93012  
Phone: +1 (805) 579-1800  
FAX: +1 (805) 579-1808**

**Label Printers:  
Zebra Technologies, Europe  
Eltron House  
Molly Millars Lane  
Wokingham RG41 2QZ England  
Phone: +44 (0) 1189 770 300  
FAX: +44 (0) 1189 895 762**

**Card Printers:  
Zebra Technologies, Europe  
Zone Industrielle, Rue d'Amsterdam  
44370 Varades, France  
Phone: +33 (0) 240 097 070  
FAX: +33 (0) 240 834 745**



**SHOCK HAZARD WARNING:**

*The printer and power supply should never be operated in a location where either one can get wet. Personal injury could result.*

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**MEDIA WARNING:**

*Always use high quality Eltron approved labels, tags and transfer ribbons. If adhesive backed labels are used that DO NOT lay flat on the backing liner, the exposed edges may stick to the label guides and rollers inside the printer, causing the label to peel off from the liner and jam the printer. Eltron approved supplies can be ordered from your ELTRON dealer. For the name of a dealer in your area, call the nearest Eltron office (located on the back of this manual).*

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**RELOADING HINT:**

*If you should run out of labels while printing, DO NOT turn the power switch OFF (0) while reloading or data loss may result. The printer will automatically resume printing when a new label roll is loaded.*

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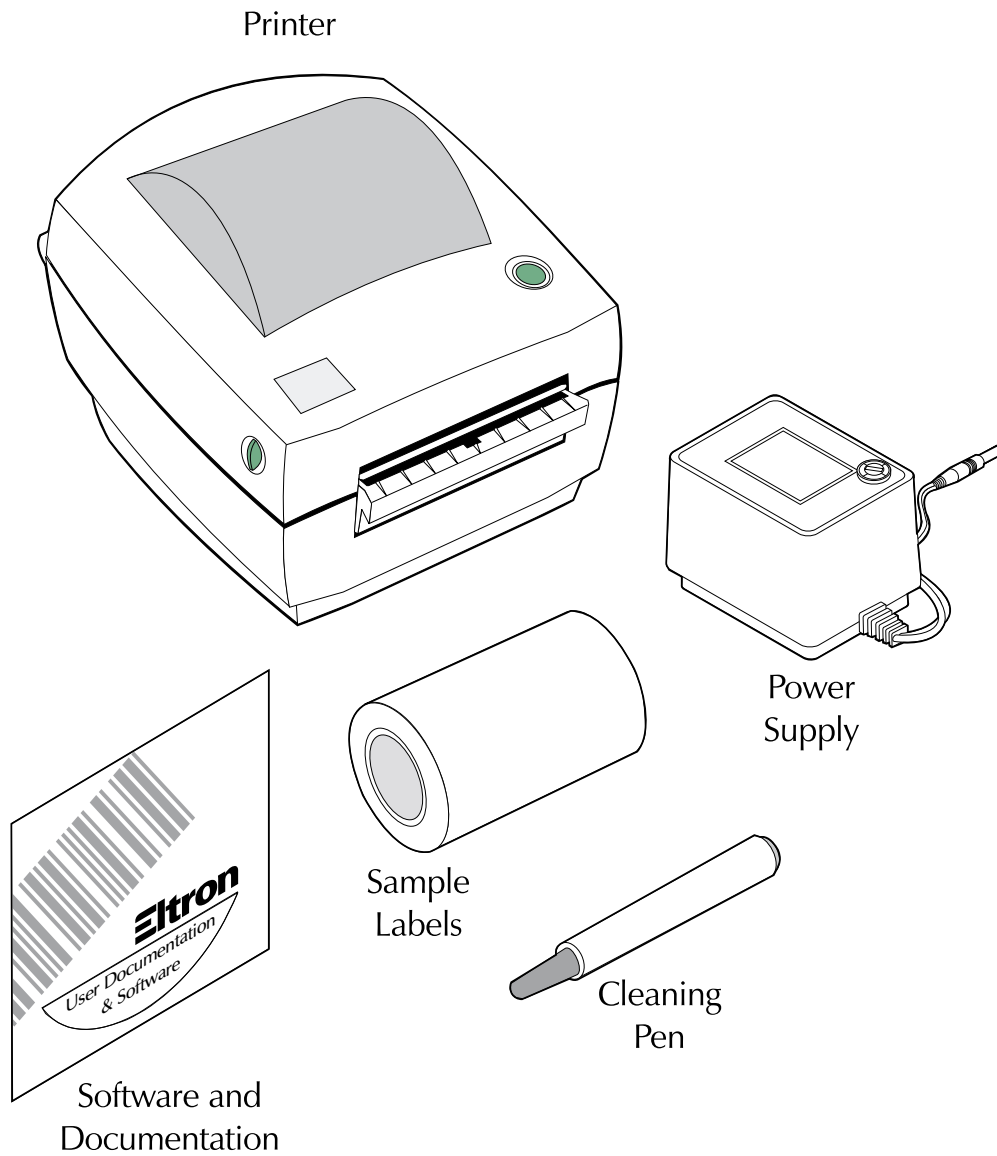


# **1** *Installation and Operation*

This section provides information on the installation and operation of the printer.

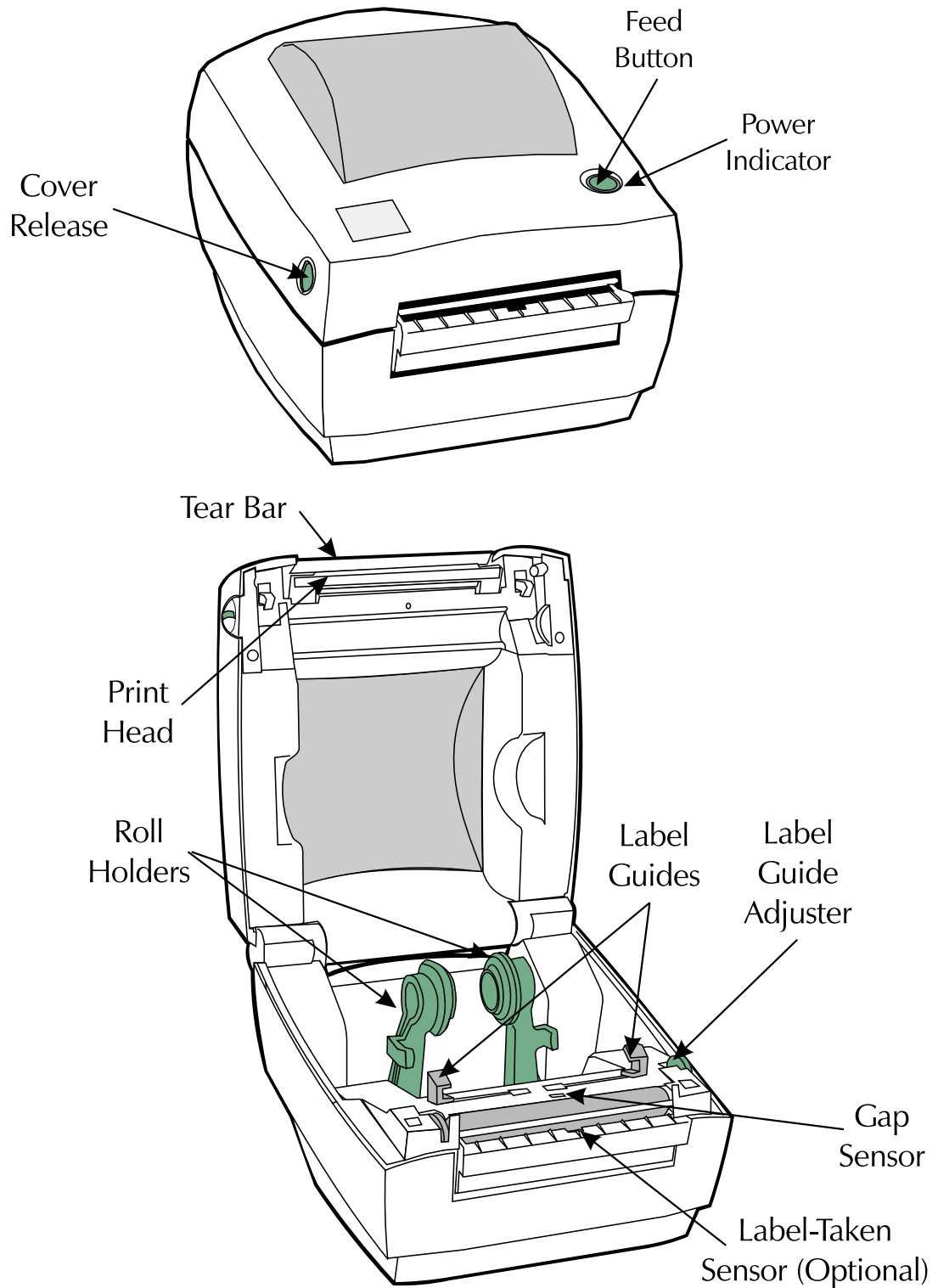
The Orion™ is a low cost, desktop direct thermal printer. This family of printers is specifically designed for printing labels, tags or continuous receipts (with or without bar codes) from any DOS™, Windows™ or ASCII-based compatible computer.

## Unpacking Your Printer



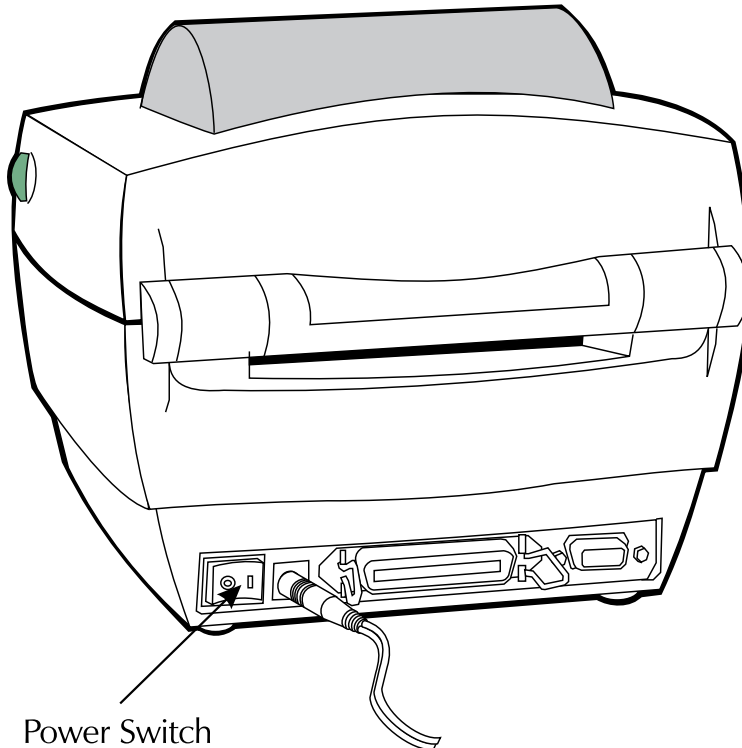


## Getting To Know Your Printer



**Installation** The following steps will guide you through the installation of the printer and software.

**Step 1 - Attach Power Supply To The Printer**



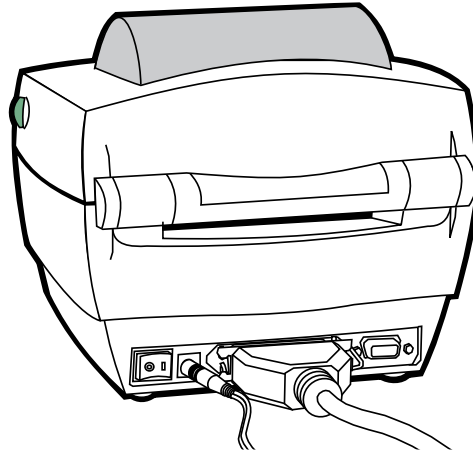
Attach the power supply to a suitable AC outlet.

See the SHOCK HAZARD WARNING on page iv.

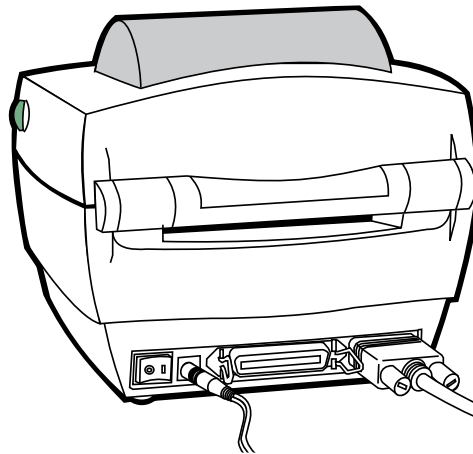
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## Step 2 Attach Interface Cable

### *Parallel Interface*



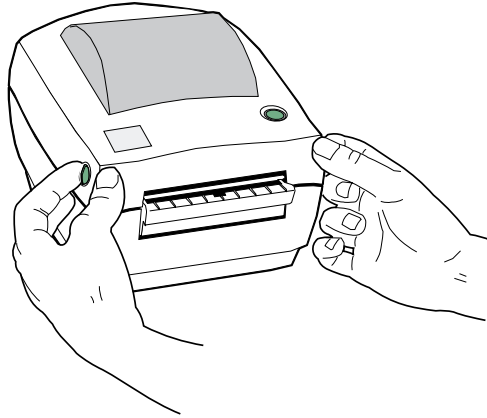
### *Serial Interface*



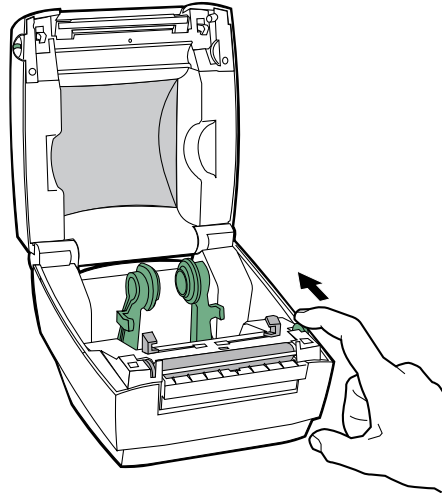
For additional information on serial cable wiring, refer to Appendix A.

## Step ③ Load Labels

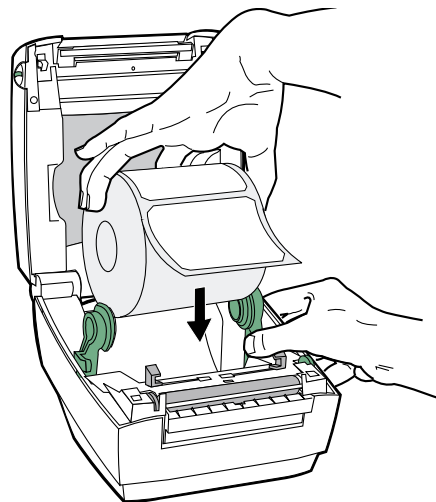
### Open Cover



### Open Guides



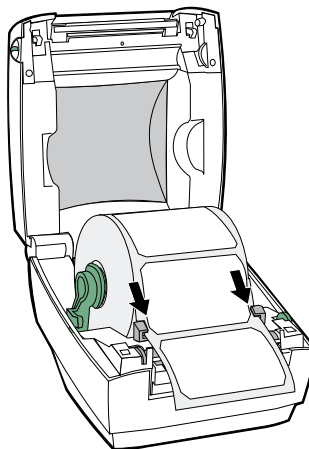
### Install Roll



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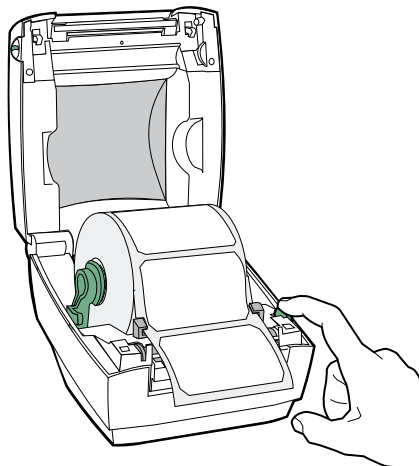
## Load Labels - continued

### Thread Through Guides

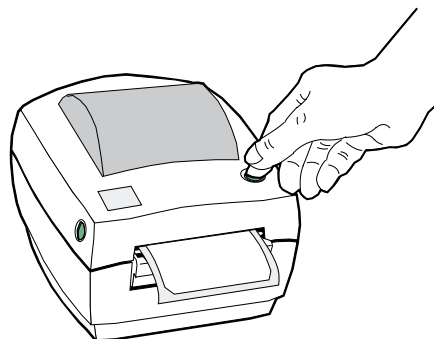


### Adjust Guides

**Note:** When using linerfree labels, adjust the guides to the widest position.



### Close Cover and Tap Feed Switch

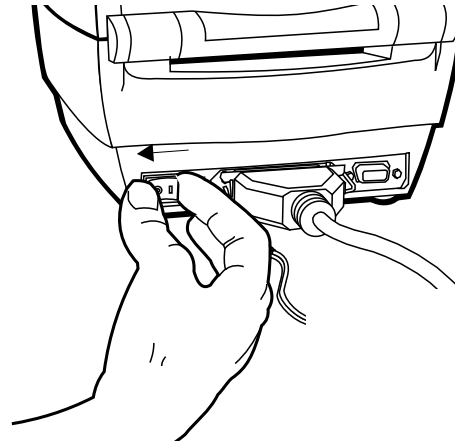


If the indicator fails to light, refer to Appendix A - Troubleshooting.

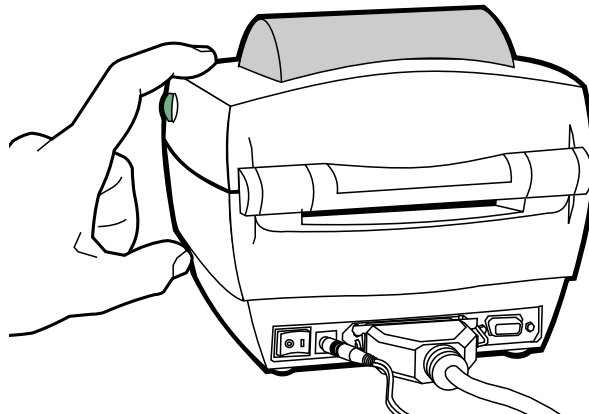
## Step 4 **AutoSense Gap Sensor Adjustment**

Perform this procedure when loading a new roll. You cannot perform this procedure if using the printer's label dispenser option.

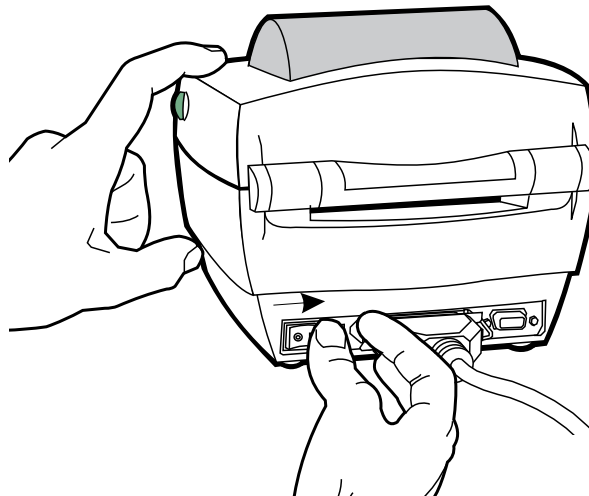
**Power OFF**



**Hold  
Feed Button**

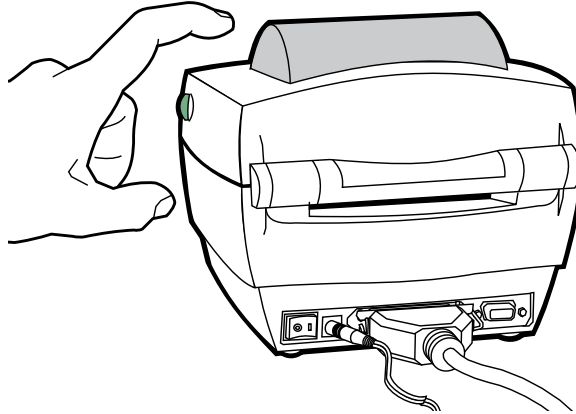


**Power ON**



## AutoSense Gap Sensor Adjustment - continued

**When Indicator  
Flashes, Release  
Feed Button**



**Printer Advances  
Media and Prints  
Status Summary**

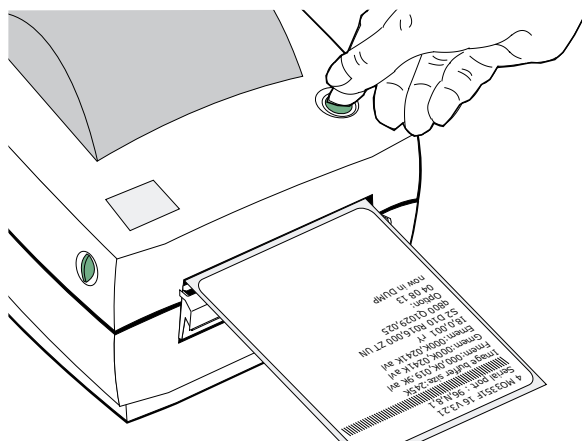
**Note: Printer is in  
diagnostic dump mode**

```

4 MO3351F 16 V3.21
Serial port : 96,N,8,1
////////////////////
Image buffer size:245K
Fmem:000,0K,019.9K avl
Gmem:000K,0241K avl
Emem:000K,0241K avl
I8,0,001 rY
S2 D10 R016,000 ZT UN
q800 Q1029,025
Option:
04 08 13
now in DUMP
    
```

**Tap Feed Button  
To Begin Normal  
Operation**

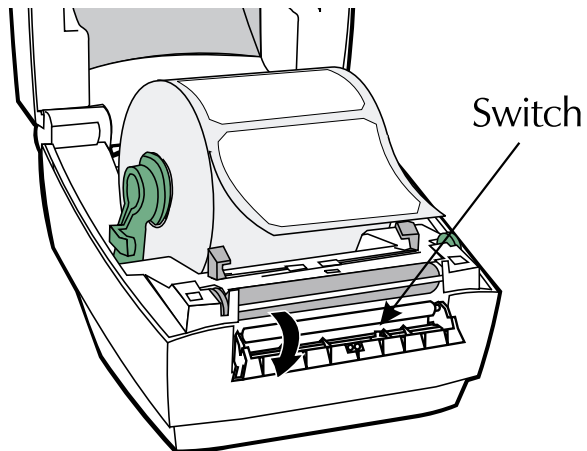
**Note: Printer prints  
"out of DUMP"**



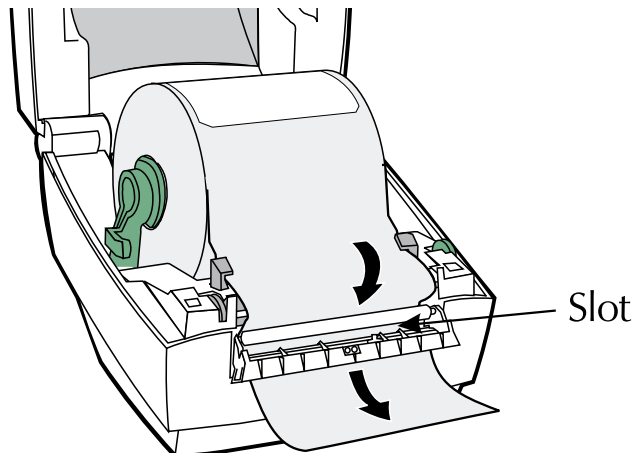
If the indicator remains orange or red, see the troubleshooting steps.

## ***Label Dispenser Option***

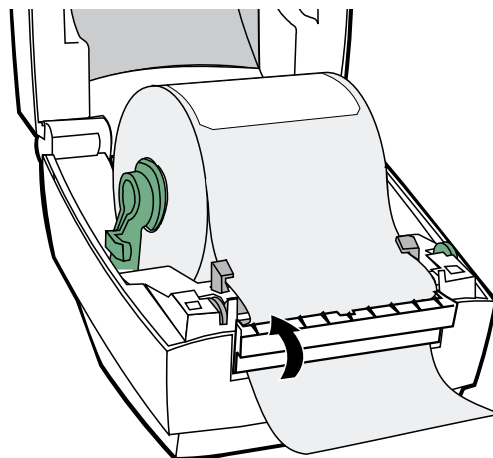
***Open Door and  
Push Switch  
1 = Dispense  
0 = Batch***



***Remove Several  
Labels and Push  
Liner Through Slot***



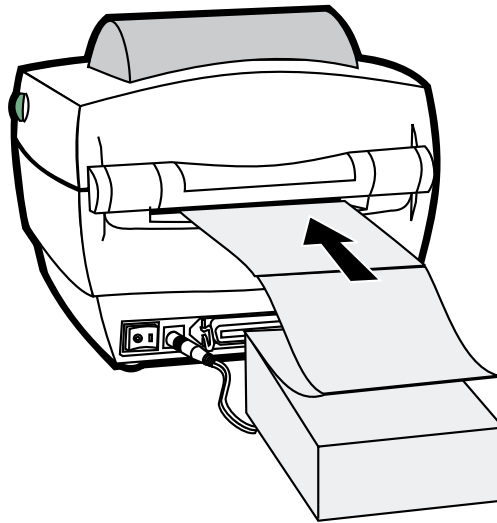
***Close Door***





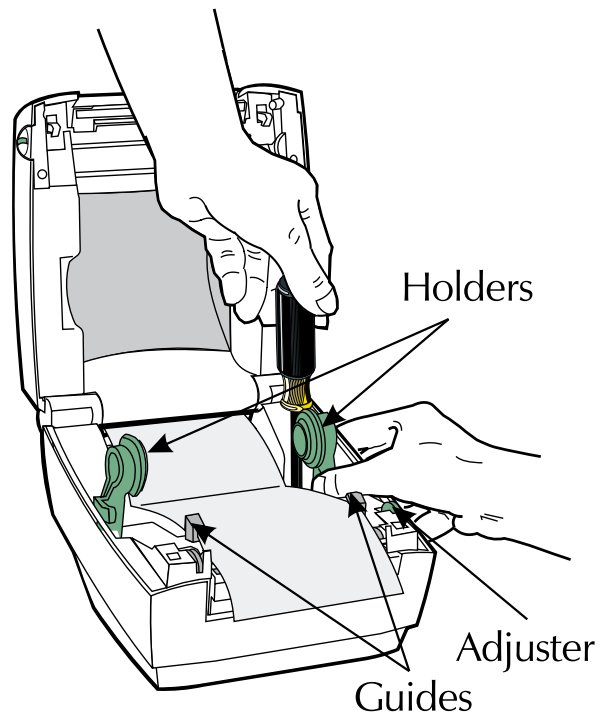
## Using Fan-Fold Media

### Insert Media

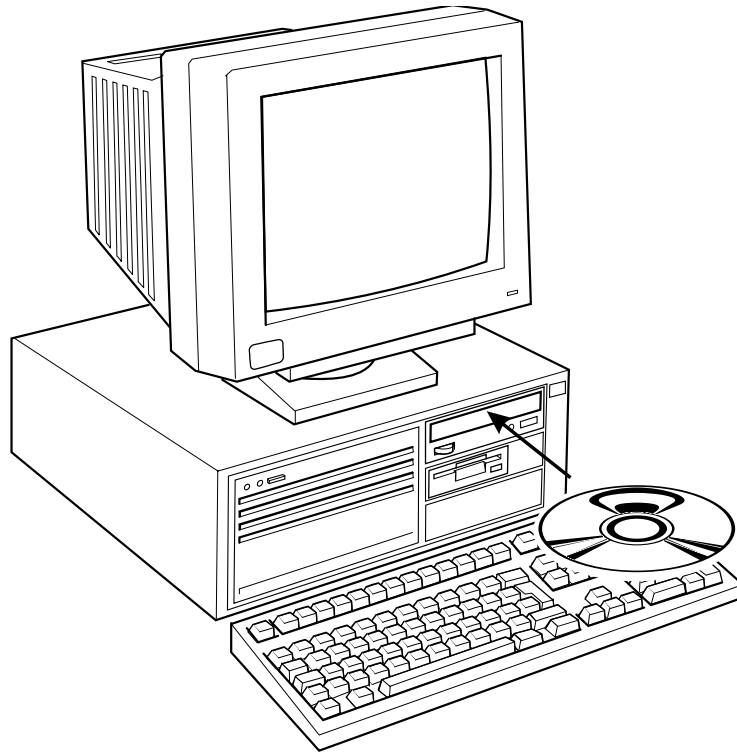


**Adjust Guides**  
**Adjust Holders**  
**Tighten Screw**

**Note: Use a small  
Phillips driver (#1)**



## Step ⑤ Install Software



Start your computer and follow the installation instructions on the compact disc (CD).

## Appendix A - Troubleshooting

Problem	Solution or Reason
POWER indicator does not light GREEN when power switch is turned to ON (1) position.	<ol style="list-style-type: none"> <li>1. Check power connections from A.C. outlet to power supply to printer.</li> </ol>
POWER indicator lights GREEN, but printer will not print.	<ol style="list-style-type: none"> <li>1. Check interface cable connections from computer to printer.</li> </ol>
Printer appears to be working (media is being fed out), but nothing is printed.	<ol style="list-style-type: none"> <li>1. Verify that the labels are the correct type (direct thermal).</li> <li>2. Check that the roll is loaded with the direct thermal side facing up.</li> <li>3. Clean the print head with cleaning pen.</li> </ol>
Printing is faded or poor quality.	<ol style="list-style-type: none"> <li>1. Clean the print head with cleaning pen.</li> <li>2. Adjust print speed/darkness in software.</li> </ol>
Prints only partial label or skips a label.	<ol style="list-style-type: none"> <li>1. Perform AutoSense gap sensor adjustment on page 8.</li> <li>2. Label caught on print head.</li> <li>3. Print head is not properly latched.</li> <li>4. Possible software problem. Check the printer memory configuration. Refer to the EPL2 Programming manual.</li> </ol>
Printing stops and POWER indicator lights ORANGE or RED.	<ol style="list-style-type: none"> <li>1. Perform AutoSense gap sensor adjustment on page 8.</li> <li>2. Possible problem with label stock. Use only Eltron approved labels and tags.</li> <li>3. Possible label jam.</li> <li>4. Insufficient memory for label size. Check the printer memory configuration.</li> <li>5. Possible software problem. Refer to the EPL2 Programming manual.</li> </ol>

**Other Support Resources** The first troubleshooting reference source is the table on the previous page. Next, contact the dealer where you purchased your printer.

Zebra Technologies also provides a variety of information and user support services:

- **Internet:**

*http://www.eltron.com*

*ftp://ftp.eltron.com*

- **e-mail:**

Label Printers: techsup@eltron.com

Card Printers: privsup@eltron.com

Europe: eurosup@eltron.com

Singapore: asiasup@eltron.com

Latin America: latinsup@eltron.com

- **CompuServe e-mail:** 102251,1164

- **Customer Service:** +1 (800) 344 4003

For the name of a dealer in your area.

- **Technical Support FAX:**

USA: +1 (805) 579 1808

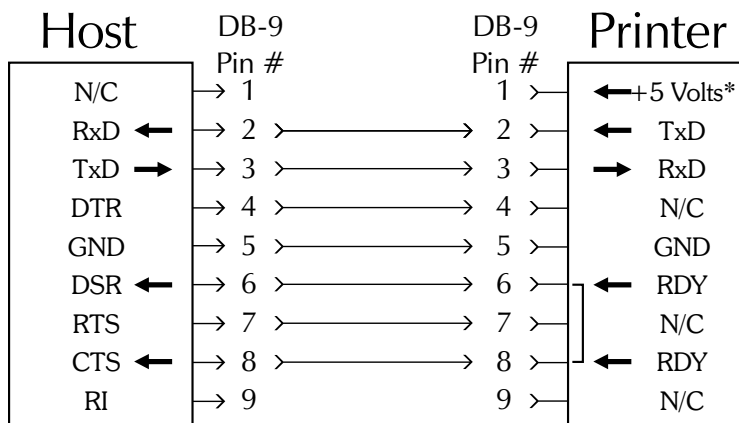
Asia: +65 84 20 366

Europe: +44 (0) 1189 895 762

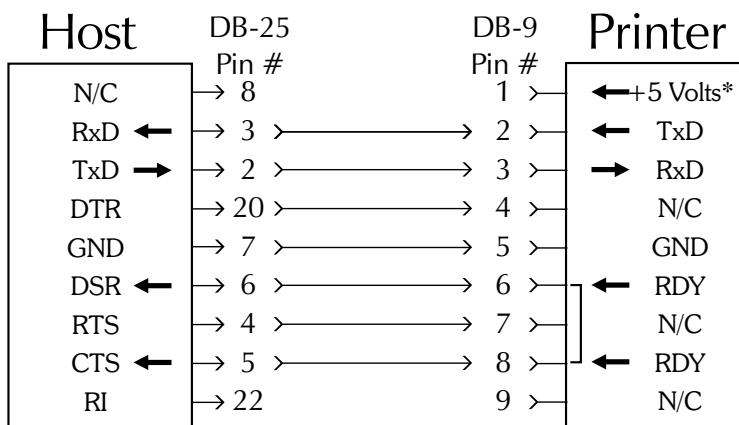
Latin America: +1 (847) 584 2725

For your assistance and support with Eltron printers and software.

**Serial Interface Cable Wiring** The figure below displays the cable wiring required to use the printer's RS-232 serial interface.



**Female DB-9 to Male DB-9**  
**Cable P/N 300017-006 (6') or 300017-010 (10')**



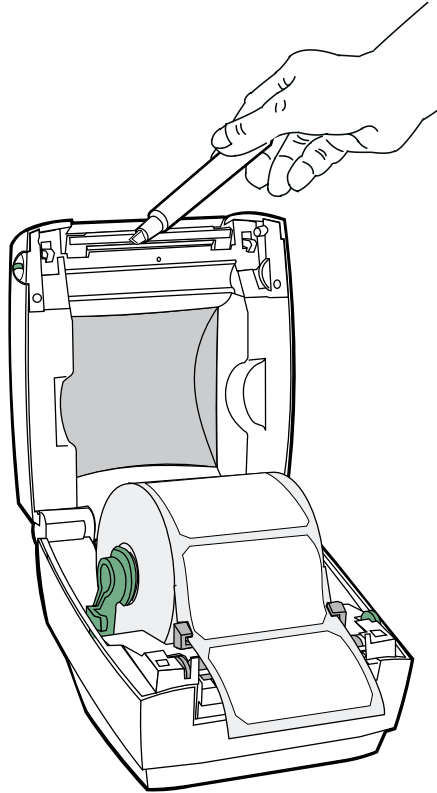
**Female DB-25 to Male DB-9**  
**Cable P/N 300018-006 (6')**

\*+5 volts at 150 mA for external device (e.g. KDU or scanner)

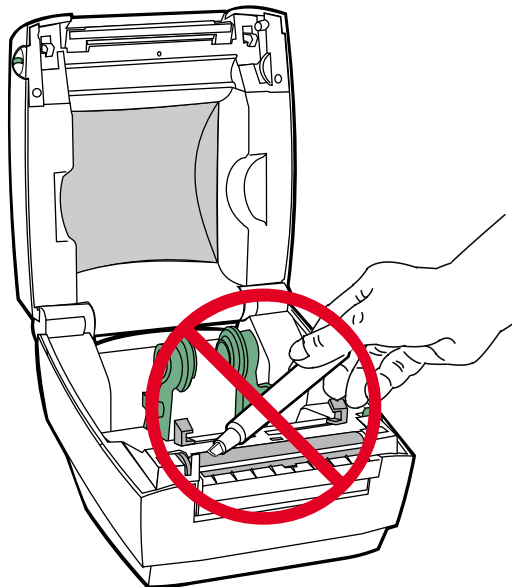
**Cleaning the Print Head** When you load new media, you can also clean the print head.

**Rub Cleaning Pen Across Dark Area of the Print Head**

**Wait One Minute Before Closing Printer**



**Do Not Clean Roller**



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## Appendix B - Accessories

Accessories available for the Orion™ printer are listed below. Always refer to the ELTRON part number when placing an order. For the name of an Eltron brand dealer in your area, call: **1(805) 579-1800** or the nearest Zebra Technologies office (located on the back of this manual).

Description	Part Number
Parallel Interface Cable, 6'	300016-006
Parallel Interface Cable, 10'	300016-010
Serial Interface Cable, 6' (DB-9 to DB-9)	300017-006
Serial Interface Cable, 10' (DB-9 to DB-9)	300017-010
Serial Interface Cable, 6' (DB-25 to DB-9)	300018-006
Power Rewinder, 120V	103284-001
Power Rewinder, 230V	103284-002
Create-A-Label 3 Software for DOS	105506-001
Create-A-Label 3 Software for Windows	105524-001
Keyboard Display Unit	120180-001
User's Manual (this manual)	980176-001
Programmer's Manual	980009-001
Software and Documentation CD	105551-001

## ***World Wide Offices:***

### **Zebra Technologies Corporation Eltron Products**

1001 Flynn Road  
Camarillo, CA 93012-8706 USA  
Phone: +1 (805) 579 1800  
FAX: +1 (805) 579 1808  
e-mail: sales@eltron.com

### **Zebra Technologies, Europe**

Eltron House  
Molly Millars Lane  
Wokingham, RG41 2QZ England  
Phone: +44 (0) 1189 770 300  
FAX: +44 (0) 1189 895 762  
e-mail: eurosales@eltron.com

### **Zebra Technologies, France**

50 rue Marcel Dassault  
92100 Boulogne-Billancourt  
France  
Phone: +33 1 55 20 93 93  
FAX: +33 1 55 20 93 99  
e-mail: eurosales@eltron.com

### **Zebra Technologies, Latin America**

836 Arlington Heights Rd. #357  
Elk Grove, IL 60007  
Phone: +1 (847) 584 2714  
FAX: +1 (847) 584 2725  
e-mail: latinsales@eltron.com

### **Zebra Technologies, Asia Pacific Headquarters**

1 Sims Lane #06-11  
Singapore 387355  
Phone: +65 84 20 322  
FAX: +65 84 20 366  
e-mail: asiasales@eltron.com



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**Eltron Products**