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Zebra A300

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User's Guide

Zebra®

Zebra® *A*300

User's Guide

Customer order # 55530L
Manufacturer part # 55530LB Rev. 4

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Product Improvements

Continuous improvement of products is a policy of Zebra Technologies Corporation. All specifications and signs are subject to change without notice.

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Note: This equipment 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 used in accordance with the instructions 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.

In order to insure compliance, this printer must be used with Shielded Communication Cables.

"The user is cautioned that any changes or modifications not expressly approved by Zebra Technologies Corporation could void the user's authority to operate the equipment."

Canadian DOC Compliance Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

CE Compliance

If the accompanying printer displays the CE mark, it also meets EMC directive 89/336/EEC, with ammendments effective at the time of manufacture.

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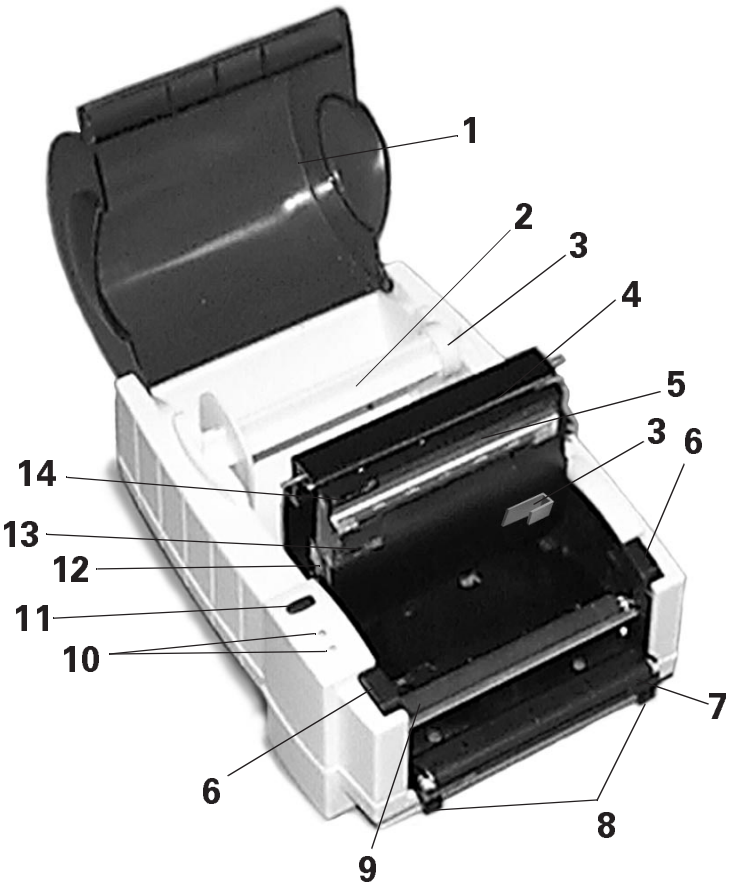

1 Media cover
2 Media holder
3 Media guides
4 Tear bar
5 Printhead
6 Print mechanism latches
7 Peel-off roller
8 Peel-off door latches
9 Platen roller
10 Power/fault lights
11 Feed button
12 Printhead open sensor
13 Paper out sensor
14 Label presentation sensor

Figure 1: Printer Overview

Introduction

This manual provides all of the information you will need to operate your printer on a daily basis. To print labels, tags, or tickets with the *A*300 printer, refer to the *ZPL II Programming Guide* (part # 46469L) or to the on-line instructions with the BAR-ONE software. To obtain a copy of the *ZPL II Programming Guide*, mail or fax in the card at the back of this book.

Unpacking and Inspection

Save the carton and all packing materials in case shipping is ever required. Inspect the printer for possible damage incurred during shipment. If you discover shipping damage upon inspection:

- Immediately notify the shipping company of the damage.
- Retain all packaging material for shipping company inspection.
- File a damage report with the shipping company and notify your local distributor and Zebra Technologies Corporation of the damage.

Zebra Technologies Corporation is not responsible for any damage incurred during shipment of the equipment and will not repair this damage under warranty. Immediate notification of damage to the shipping company or its insuring agency will generally result in ensuring any damage claim validity and ultimate monetary compensation.

Additional Requirements

- Shielded data cable—serial or parallel, depending on which method you prefer to use.
- Power cord—for 230 VAC operation only (120 VAC units come with a power cord)
- *ZPL II Programming Guide*, if you are going to use ZPL II to design label formats for the *A*300 printer. To obtain a copy, mail or fax in the card at the back of this book.

Setting Up the Zebra *A*300 Printer

Tear-Off Mode of Operation

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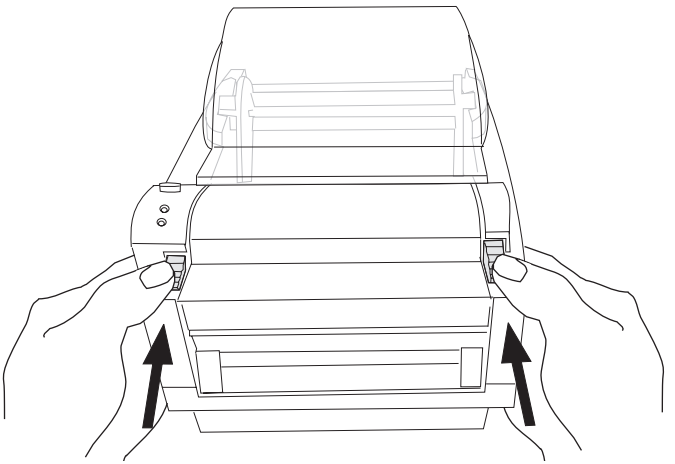

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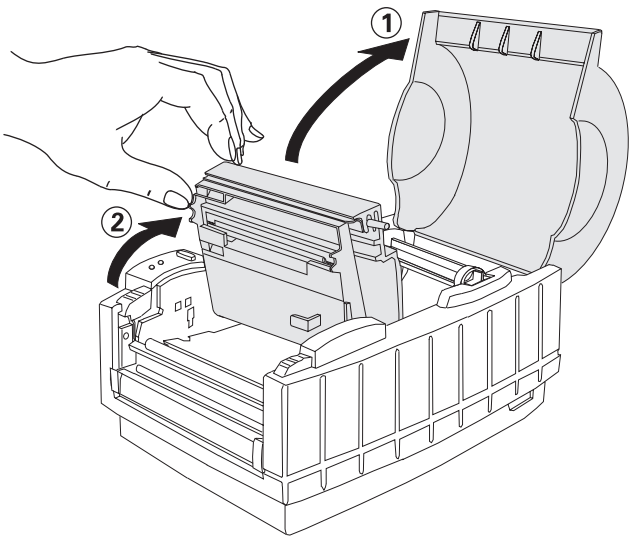

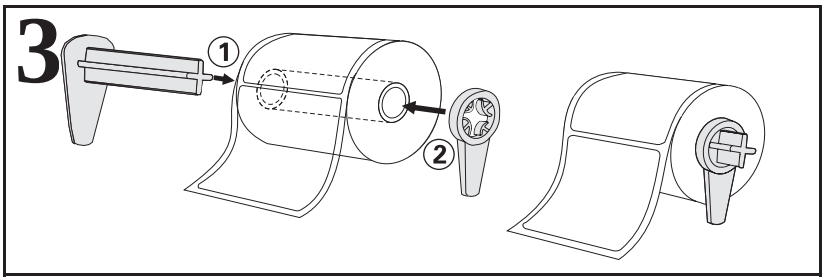
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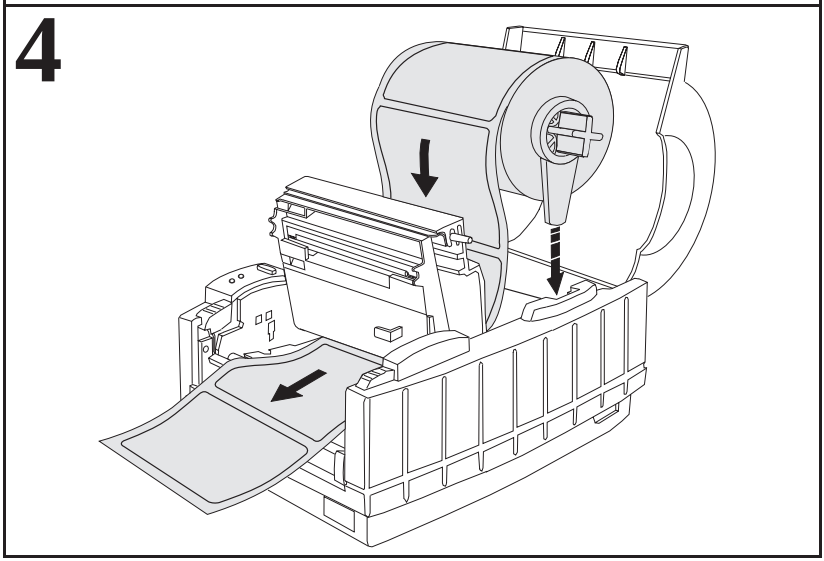
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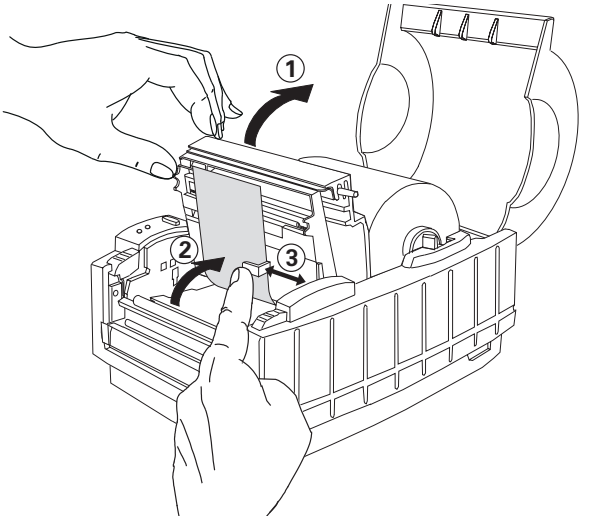

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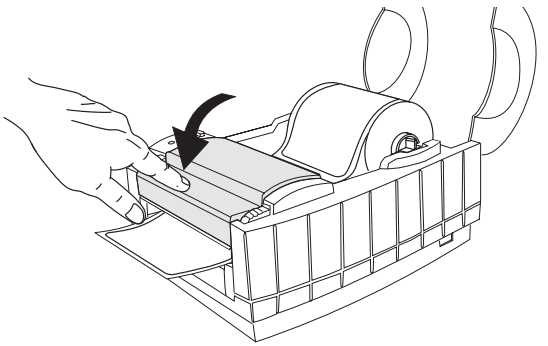

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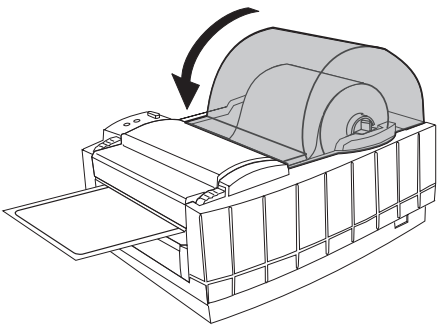

Peel-Off Mode of Operation

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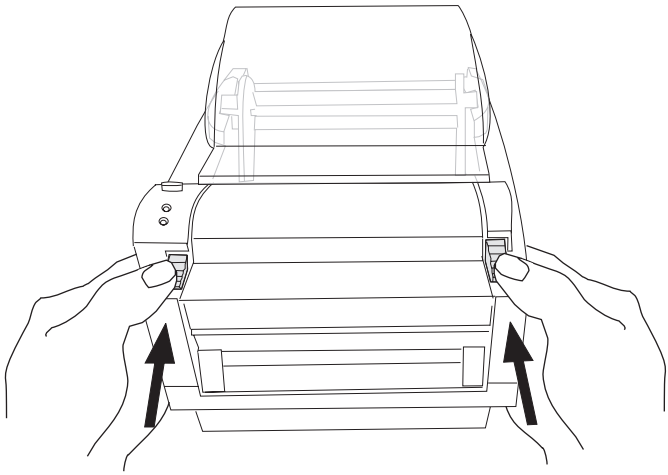

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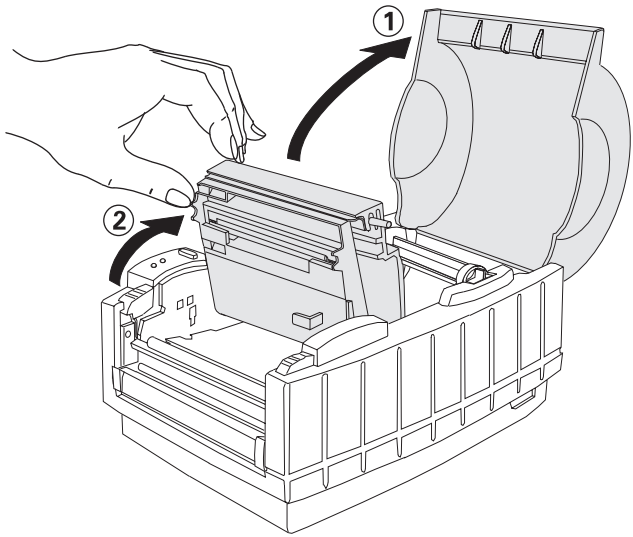

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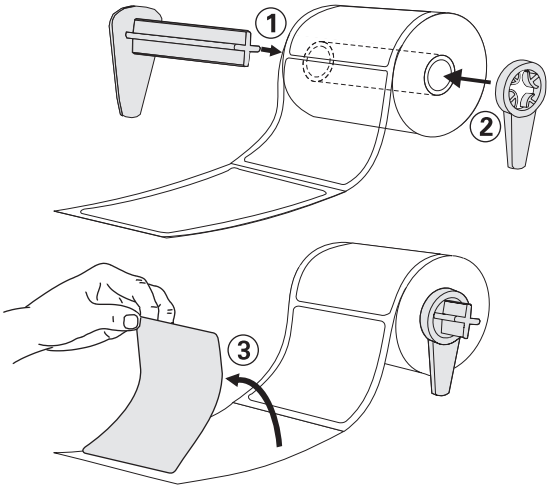

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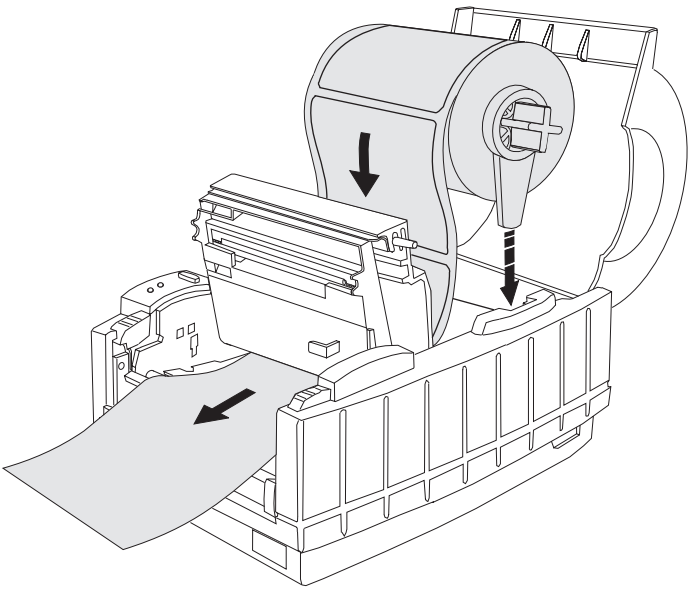

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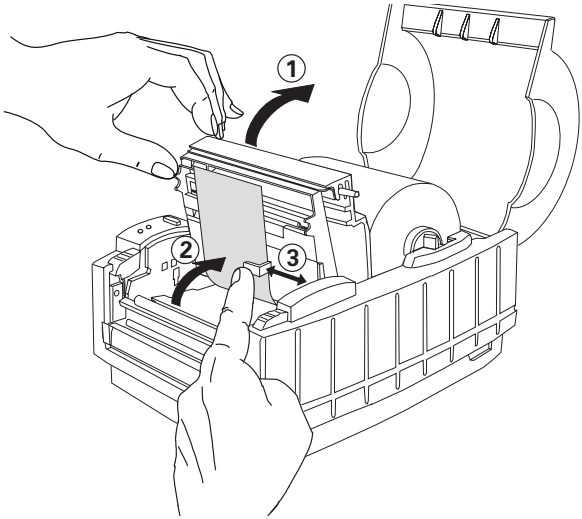
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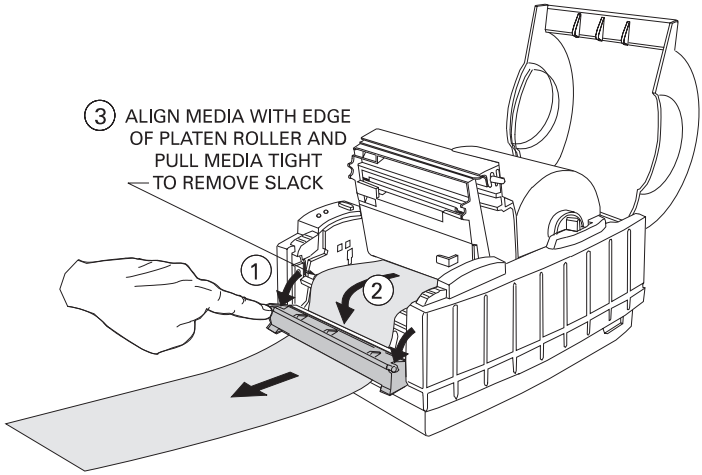
3 ALIGN MEDIA WITH EDGE OF PLATEN ROLLER AND PULL MEDIA TIGHT TO REMOVE SLACK
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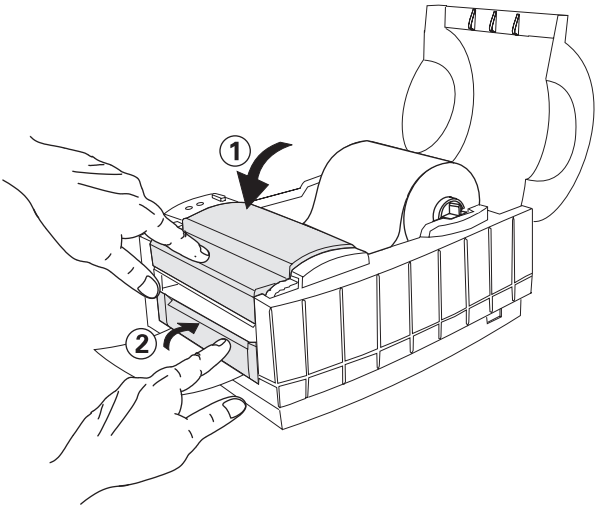

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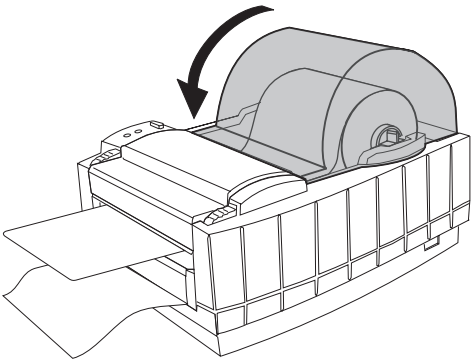
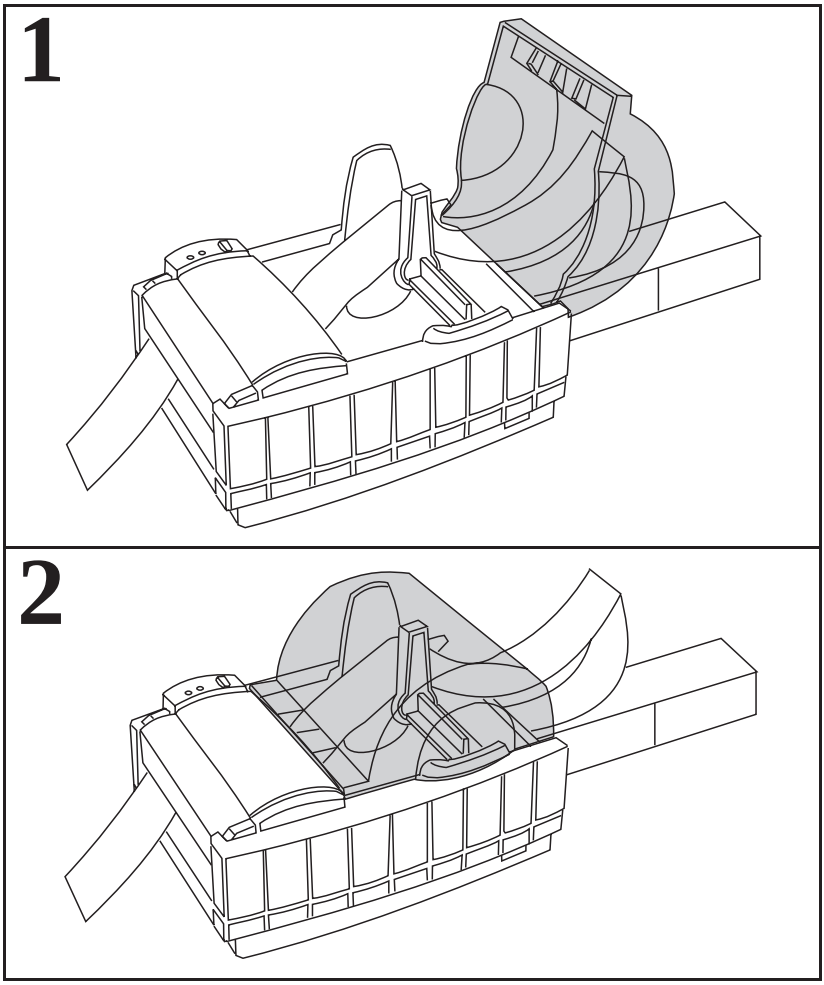


Fanfold Media Loading



Connecting the Zebra *A*300 Printer to the Computer

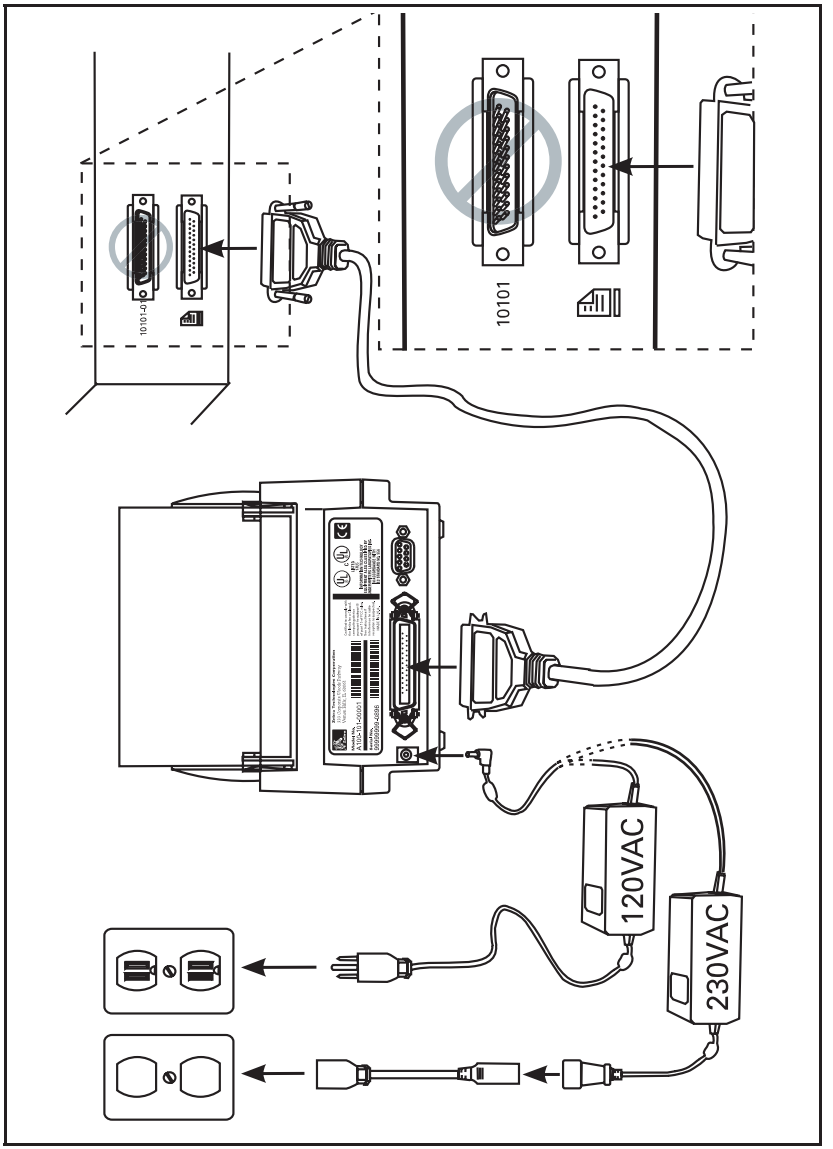


Figure 2: Parallel Connection

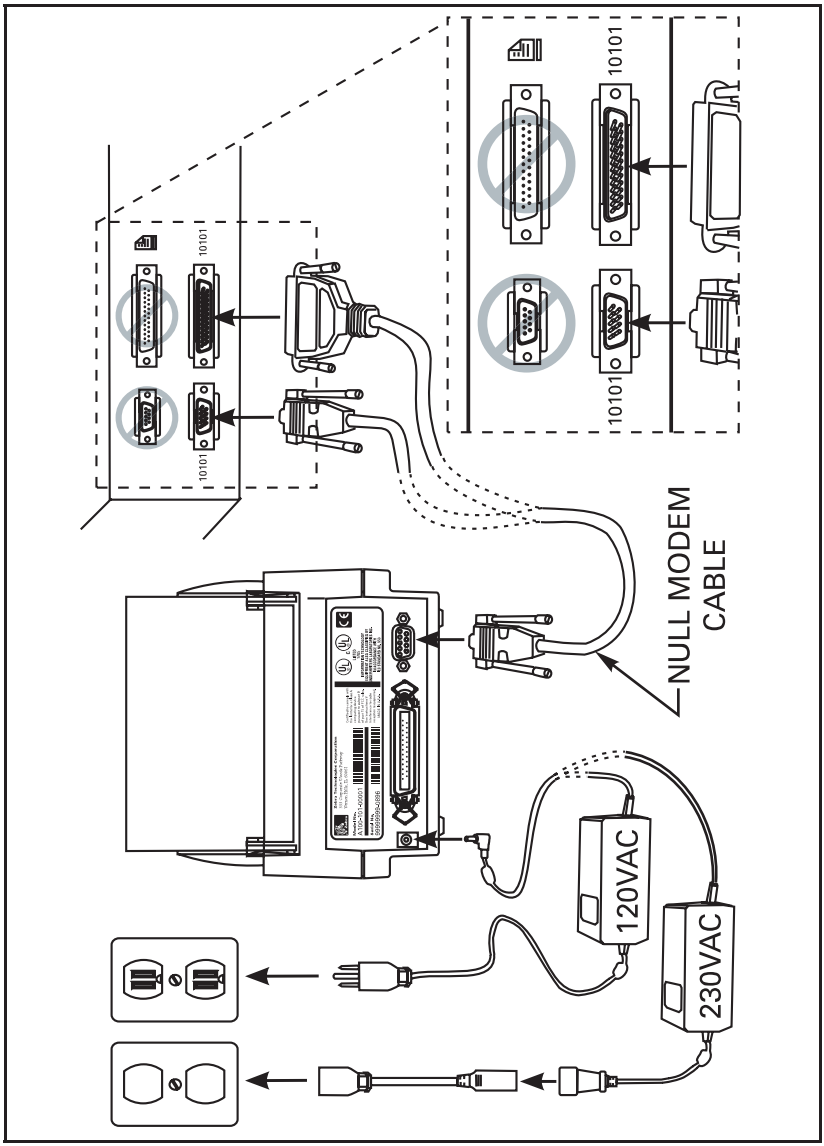


Figure 3: Serial Connection

Setting Up the Software

Note: If you plan to use BAR-ONE software to create your labels, you will need to install the software on your computer before you can operate your printer.

You will not need to use BAR-ONE software if you are printing label formats created in ZPL II. To print ZPL II, you may use virtually any text program on any computer—including Apple® computers—that will send ASCII text to the printer via either the serial or parallel port. For more information, refer to the *ZPL II Programming Guide* (available by sending in the mail-in/fax-in postcard at the back of this book).

BAR-ONE System Requirements

BAR-ONE software works with most IBM®-compatible personal computers available today. The software may be installed and up-and-running within a few minutes. Refer to the on-line help system and to the Read-Me file for further information and/or last-minute updates. The BAR-ONE software may be installed on any computer that meets the following system requirements:

System Requirements	BAR-ONE	
	Minimum	Recommended
Processor	486SX	486SX
Hard disk	3 MB	10 MB
Memory	4 MB RAM	8 MB RAM
Interface	RS-232	Parallel
Display	VGA	SVGA
Floppy drive	3½"	
Operating system	Windows™ 3.1 or higher, NT, 95; OS/2	
Mouse	RS-232 or PS/2	

BAR-ONE Installation

The *A*300 printer uses BAR-ONE software or ZPL II Programming Language sent from any Windows™ or DOS application.

1. Start Windows.
2. Insert disk 1 of the BAR-ONE software in your floppy disk drive (**A:** or **B:**).
3. In Program Manager, click on the **File** menu. Select **Run**. (Windows 95 users: select **Run** from the **Start** menu.)
4. Type **A:\SETUP** (or **B:\SETUP**) and then press **OK**.
5. Follow the on-screen instructions to complete the installation.

Operating the System

To create a label for the *A*300, you may either use the BAR-ONE software to create the label format or write one in ZPL II, which is Zebra's programming language for creating labels. If you are using BAR-ONE software, refer to the on-line BAR-ONE instructions. If you are using, or plan to use, the ZPL II programming language to format your labels, make sure you have a copy of the *ZPL II Programming Guide*. Refer to the mail-in/fax-in card included with the *A*300 printer to obtain a copy, if desired.

Printer Operating Modes

Tear-Off Mode. The operator tears off each label (or a strip of labels) as it is printed.

Peel-Off Mode. The backing material is peeled away from the label as it is printed, the printer waits until the operator removes the label, then the next label prints.

Operator Controls

Power Switch. Located on the right-hand side of the printer near the back. The power switch should be turned off before connecting or disconnecting any cables.

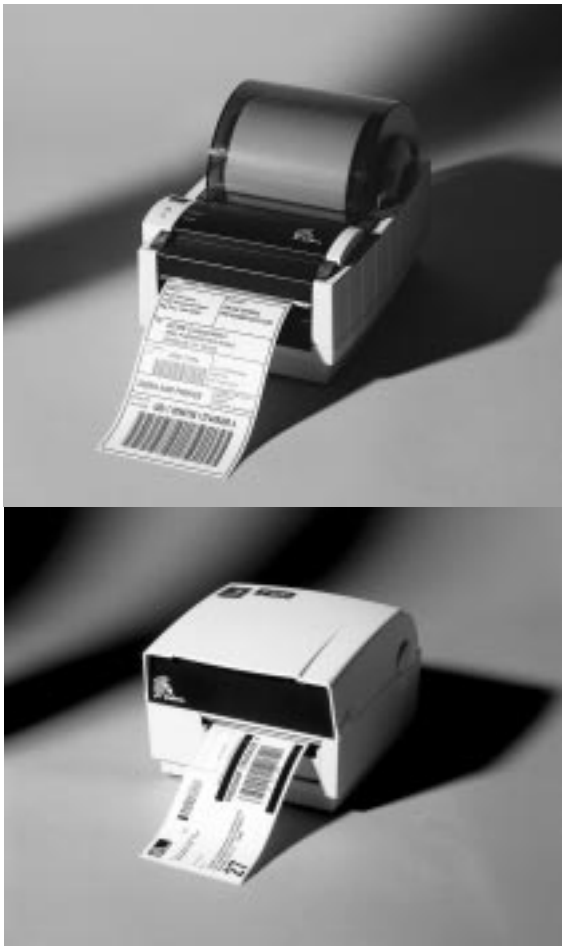
Feed Key. In normal use, pressing the Feed Key once when the printer is idle (not printing) will cause the printer to feed a blank label. The Feed Key also activates a number of specialized functions which are described in Table 1.

Table 1: Feed Key Troubleshooting Modes

Power Off Mode (Communications Diagnostics Mode)	
With the printer power off, press and hold the Feed key while you turn the power on. The printer prints out a listing of its current configuration (configuration label). See Figure 5 on page 20. For best results, use media that is at least 4" wide by 4" long. After printing the label, the printer will automatically enter a diagnostic mode in which the printer prints out a literal representation of all data subsequently received (hex dump mode). To exit this mode, turn the printer power off.	
Power On Modes	
With the printer power on, printhead closed, and Fault light off, press and hold the Feed key for several seconds and the Fault Light will flash the following numer of times in sequence. The explanation at the right shows what happens when you release the key after the specific number of flashes.	
*	The label showing the current configuration of the printer prints. For best results, use media that is at least 4" wide by 4" long. See Figure 5 on page 20.
**	The media sensor calibration process is entered. See "Calibration" on page 15.
***	The serial communication parameters are reset to 9600 baud, 8 bit word length, no parity, and 1 stop bit.
****	Reset factory defaults. Once this mode is entered, the Fault light will flash rapidly. If the Feed key is pressed and released at this time, the factory default settings will be saved into memory.
If the feed key is held down past 4 flashes, the printer will ignore the key when it is released.	

Zebra *A*300 & *T*300

User's Guide Addendum



Scope

This addendum contains information about the new Calibration features added to the Zebra *A*300 and Zebra *T*300 printers when upgraded with the 25.8.1 and 23.8.1 versions of firmware respectively.

Calibration

Auto-Calibration

The printer only auto-calibrates when using non-continuous media (a gap, notch, or black mark separates each label). During this process, the printer sets the sensor levels for, and determines the length of, the labels being used. (*To calibrate the printer for media with pre-printed labels or pre-printed backing, see "Manual Calibration.")*

The first time the printer is turned ON, auto-calibration senses if continuous media is loaded. If this media is used, the label length must be set through the label preparation software being used.

> ***NOTE:*** *If continuous media is sensed, non-continuous media can not be used until you either (a) reset the factory defaults (see "Feed Key Troubleshooting Modes" in the "Operating the System" section of the printer user's guide), or (b) refer to your label preparation software user's manual.*

To auto-calibrate:

1. Load the media according to the instructions in "Setting Up the Zebra Printer" in the printer user's guide.
2. Turn the printer power ON.
3. Some blank labels will feed, completing the auto-calibration process.
4. If the Fault LED (*A*300) or Power LED (*T*300) begins flashing, refer to the "Manual Calibration" process.

Remember:

- Auto-calibration is performed when the printer is turned ON and whenever an error condition is cleared.
- Single flashing of the *A*300 Fault LED indicates a PRINTHEAD OPEN condition. Single flashing of the *T*300 Power LED indicates an Error condition.
- Double flashing of the LED (*A*300 Fault LED - *T*300 Power LED) indicates a printer PAUSED mode. Press the FEED Button and the printer will auto-calibrate.

Manual Calibration

Manual calibration should be performed whenever you are using preprinted labels or preprinted label backing, or if the printer will not auto calibrate.

NOTE: *Before performing a manual calibration, refer to your label preparation software user's manual and set the printer for the media type (web or black mark).*

To manually calibrate:

1. Turn the printer power ON.
2. Remove several labels from a section of backing material. Load the media so that only the backing material is threaded through the printer and under the printhead, then close the printhead.
3. Press and hold the FEED button until the LED (*A*300 Fault LED - *T*300 Power LED) flashes once, then twice; then release the button.
4. The printer sets the media sensor for the label backing you are using. *(Once this process is completed, the media automatically feeds forward until a label is positioned at the printhead.)*
5. A profile of the media sensor settings is printed on the label. (See the examples in Figures 1 and 2). The printer then saves the new settings in memory and is ready for normal operation.
6. Press the Feed button. One entire blank label should feed. If this does not happen, try resetting the factory defaults for the printer (see "Feed Key Troubleshooting Modes" in the "Operating the System" section of the printer user's guide).

NOTE: *Performing a manual calibration disables the auto-calibration function. To return to auto-calibration, either default the printer (see "Feed Key Troubleshooting Modes" in the "Operating the System" section of the printer user's guide) or refer to your label preparation software user's manual.*

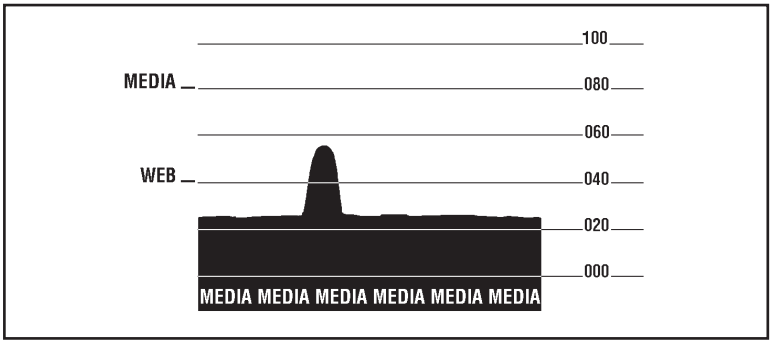


Figure 1. *A*300 Sample Media Sensor Profile

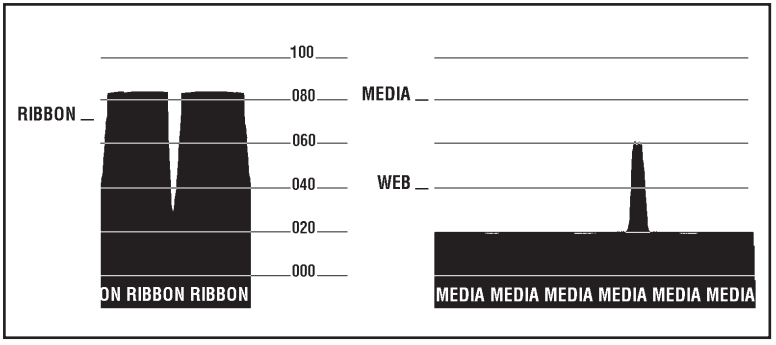


Figure 2. *T*300 Sample Media Sensor Profile

Printer Indicator Lights.

Table 2: Printer Indicator Lights

Printer Condition	Power Light		Fault Light		
	On	Off	On	Flashing	Off
Power is off or printer not receiving power		•			•
Power is on	•				•
Paper out or not sensed or Printhead is open	•			•	
Printhead is over temperature	•		•		

Initial Printer Power-Up

Turn the printer on by pressing the Power Switch on the right side of the printer. The Power and Fault lights will turn on. The printer performs a set of internal diagnostics, and after the diagnostics have been completed (within 1 - 10 seconds) the Fault light will turn off. If you are using non-continuous media, the printer will then advance the media to position the gap over the tear bar so that it is ready for use.

If loading the printer with media for the first time, or changing the type of media, perform the Calibration below.

Calibration

This calibration procedure should be performed the first time you use the printer and any time you change the type of media in the printer.

1. Remove several labels from a section of backing material so that only the backing material is under the printhead mechanism.
2. Turn the printer power on if it is not already on.
3. Press and hold the Feed Key until the Fault light flashes twice in a row. (First it will flash once, then twice in a row at which point you release the key.)
4. The printer will adjust the media sensor level for the media backing you are using. After it is done making this adjustment, the Fault light will flash rapidly.
5. Reload the media so that a label is under the printhead.

6. Press and release the Feed Key. A profile of the media sensor settings will print. When complete, the printer will save the new settings in memory and the printer is ready for normal operation.

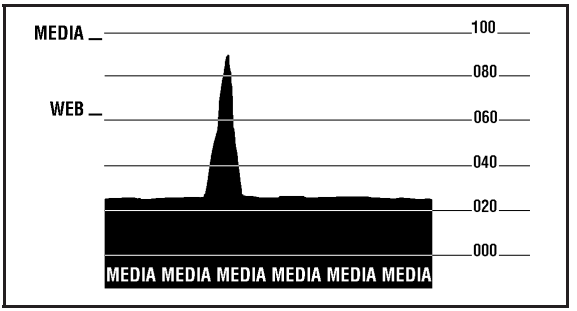


Figure 4: Sample Media Sensor Profile

Setting the Communication Parameters

If you are using the printer's serial port to transfer data, you will need to make sure that the printer and the computer have identical communication parameter settings. To initialize the communication parameters for the printer:

- Press and hold the Feed key until the Fault light blinks three (3) times in a row. Release the key. The baud rate for the printer will be reset to 9600 baud, 8 bit word length, no parity, and 1 stop bit. Then, set the communications parameters on your computer to match this.
- If you need to use different settings than the defaults (for example, if you are using a modem with certain requirements) you have two options for setting the communications parameters. Send the ^SC "Set Communications" ZPL command (described below) at 9600 baud via the serial port set up as shown above, then reset the computer to the new values. Or, send the ^SC command via the parallel port, then reconnect for serial port operation as needed.

Here is the command description for the Set Communications command (refer to your *ZPL II Programming Guide* for additional programming information):

^SCa,b,c,d,e,f

where

a = baud rate (**110 - 19200** baud)

b = word length (**7** or **8** data bits)

c = parity (**N** = none, **E** = even, **O** = odd)

d = stop bits (**1** or **2**)

e = handshake (**X** = XON/XOFF, **D** = DTR/DSR)

f = Zebra protocol (**Y** = yes, **N** = no)

If you do not specify a new setting for a parameter, it remains unchanged (it does not change to the default value).

Adjusting the Darkness of the Printing

If you are using BAR-ONE or other software, adjust the relative darkness setting as indicated in that software. Or, if you are using ZPL II, send the **^MD** (Media Darkness) ZPL II command.

ZebraNet Option

You may choose to network your Zebra *A*300 printer. Contact your distributor for information about ZebraNet™ micro print server—ethernet connectivity for your Zebra *A*300 printer.

Preventive Maintenance

Cleaning

CAUTION: Use only the cleaning agents indicated in the following table. Zebra Technologies Corporation will not be responsible for any other fluids being used on this printer.

Inconsistent print quality, such as voids in the bar code or graphics, may indicate a dirty printhead. For best results, perform the cleaning procedures in Table 4. For the location of these printer parts, refer to Figure 1 on page ii.

Table 3. Cleaning Schedule

Area	Method	Interval
Printhead	**Note:** You do not need to turn the printer off before cleaning the printhead. Use solvent* on a cotton swab to clean the print elements from end to end. (The print elements are the thin gray line on the printhead.)	After every roll of media (or 500 ft of fanfold media)
Platen Roller	Rotate the platen roller and clean it thoroughly with solvent* and a cotton swab.	
Peel-Off Roller	Rotate the peel-off roller and clean it thoroughly with solvent* and a cotton swab.	
Transmissive Media Sensor	Air blow	
Media Path	Solvent*	
Peel/Tear Bar	Solvent*	As needed.
Label Available Sensor	Air blow	Monthly.
Printhead Open Sensor	Air blow	As needed.
Exterior	Mild detergent or desktop cleaner.	As needed.
Interior	Brush/vacuum cleaner	As needed.
* Zebra recommends using solvent containing 70% isopropyl alcohol.		

Lubrication

CAUTION! No lubricating agents of any kind should be used on this printer! If used, some commercially available lubricants will damage the finish and mechanical parts.

Troubleshooting

Table 4. Troubleshooting

Symptom	Diagnosis	Action
Power light does not turn on when Power switch is turned on.	Printer is not receiving power.	Make sure that the power supply is plugged into the printer and into a wall outlet, power strip, or other source of power.
When printer is first powered on, the Fault light remains on.	Printer failed an internal diagnostic test.	Turn the printer power off and then back on. If the symptom persists, call a service technician.
Fault light is flashing.	Printhead is open.	Close printhead.
	Out of media or media incorrectly loaded.	Load media correctly. Make sure that the media is placed on the inside edge of the platen roller and that it feeds straight through the printhead otherwise it may not be detected by the media sensor.
	Printhead is overheated.	Allow printer to cool. Printing resumes automatically when the printhead element cools to operating temperature.
Long tracks of missing print (blank vertical lines) on several labels.	Printhead is dirty.	Clean the printhead. See Table 3 on page 18.
	Print element is damaged.	Call a service technician to replace the printhead.
Misregistration (printing does not start at the top of the label) and misprint of 1 to 3 labels.	Printer needs to be calibrated.	Recalibrate the printer. See "Calibration" on page 15.
A label format was sent to the printer but not recognized.	Communications parameters are incorrect.	For serial communication, make sure that the baud rates of the printer and the computer match. Also, make sure that the correct com ports on the PC are selected.
	Data cable not correct or not connected correctly.	Make sure the data cable is installed correctly if serially connected. For serial operation, make sure you are using a "null modem" cable.
Printer appears to operate, but nothing prints.	Non-thermally sensitive material.	Make sure that you are using direct thermal label, ticket, or tag stock. Zebra recommends using genuine Zebra media in your printer for best results.

Troubleshooting Modes

Printing a Configuration Label. To print out a listing of the printer's current configuration (configuration label), refer to Table 1, "Feed Key Troubleshooting Modes," on page 14.

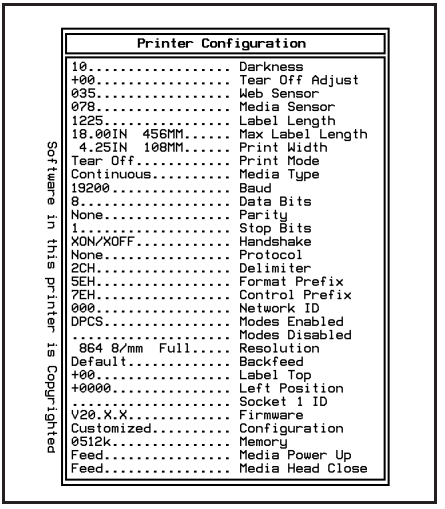


Figure 5: Configuration Label (Sample)

Calibration. If the printer is exhibiting unusual symptoms, such as skipping a label, you may need to recalibrate the printer. See "Calibration" on page 15.

Resetting to Factory Default Values. Resetting the printer to the factory defaults might solve some problems. For instructions, refer to Table 1, "Feed Key Troubleshooting Modes," on page 14.

Communications Diagnostics. If you suspect problems in transferring data between the computer and printer, you may want to put the printer in the Communications Diagnostics mode. In this mode, the printer prints the ASCII characters and their corresponding hexadecimal values for any data received from the host computer. For instructions, refer to Table 1, "Feed Key Troubleshooting Modes," on page 14. A typical printout is shown in Figure 6.

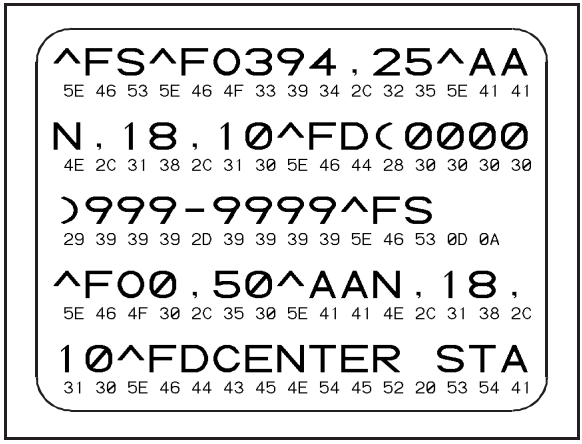


Figure 6: Communications Diagnostics Printout (Sample)

Specifications

Table 5: Specifications

Print density		203 dots/inch	8 dots/mm
Print width		1″ to 4.125″	25.6 to 105.0 mm
Print speed		2″/sec	51 mm/sec
Label width (including backing material, if any)		1″ to 4.25″	25 to 108 mm
Label length		0.5″ to 18″	12.7 to 457 mm
Interlabel gap		0.08″ to 0.16″	2 to 4 mm
Label thickness (including backing material, if any)		0.003″ to 0.010″	0.076 to 0.254 mm
Label roll size	Maximum outer diameter	5.0″	127 mm
	Minimum inner core diameter	1.0″	25.4 mm
Registration tolerance	Horizontal	± 0.059″	± 1.5 mm
	Vertical	± 0.0393″	± 1.0 mm
First dot location (from outer media edge)		0.125″ to 0.140″	3.17 to 3.56 mm
Fonts available		• CG Triumvirate Bold Condensed (6, 8, 10, 12, 14, 18 pt.) • Zebra fonts A, B, C, D, E, H, GS, IBM Code Page 850 International Characters, Graphics symbols	
Bar codes available		• 2-digit and 5-digit supplemental code • Codabar (Supports ratios of 2:1 to 3:1) • Code 11 • Code 128 (Supports serialization in all subsets and UCC Case Codes) • Code 39 (Supports ratios of 2:1 to 3:1) • Code 93 • EAN Versions 8 and 13, EAN Extensions • Industrial 2 of 5, Standard 2 of 5 • Interleaved 2 of 5 (Supports ratios of 2:1 to 3:1, Modulus 10 Check Digit) • LOGMARS • MaxiCode • MSI • PDF 417 • Plessey • POSTNET • UPC Versions A and E, UPC Extensions	

Table 5: Specifications (Continued)

Media requirements		Zebra recommends use of Zebra brand media. All media must be direct thermal media. Media may be continuous, die-cut, or notched. Notched media must have a notch which is 1/4″ wide × 3/32″ long located on the left side of the label as it feeds through the printer.	
Physical size (L × W × H)		9.7″ × 7.0″ × 6.0″	249 mm × 179 mm × 154 mm
Weight (without media)		3.35 lb	1.52 kg
Temperature range	Operating	50° to 104° F	10° to 40° C
	Storage	-4° to 140° F	-20° to 60° C
Relative humidity, operation and storage		10 to 90% R.H.	
Electrical		External 120 or 230 VAC power supply, depending on which model you ordered. Additional custom line cords may also be available.	
Communications		36-pin Centronics®-compatible parallel port and RS-232 serial port; contact your distributor for information about ZebraNet™—ethernet connectivity for the *A*300.	
Agency approvals		• UL 544 Medical Equipment Standard Part 42.5 • CSA 22.2 No. 950 Canadian Safety Standard • Carries the CE mark of compliance. • IEC 950/EN 60950 International Safety Standard • FCC Part 15 Subpart B level A Electromagnetic Radiation Standard • AAME 4.3.2 Medical Standard • UL 1950 Domestic Safety Standard • SOR/88-475 Canadian Electromagnetic Radiation Standard • EN50082-1 International Immunity Standard • C.I.S.P.R.-22 Class B European Electromagnetic Radiation Standard	
Processor/memory		32-bit microcontroller, 512 kB DRAM	
Power line cord		• The overall length must be less than 12.5 ft (3.8 meters) • It must be rated for at least 3 A, 250 V. • The chassis ground (earth) MUST be connected to assure safety and reduce electromagnetic interference. The ground connection is handled by the third wire (earth) in the power line cord. See Figure 7. The AC power plug and IEC 320 connector must bear the certification mark of at least one international safety organization (some examples are shown in Figure 2.)	
Parallel data cable		For maximum reliability, use a parallel data cable no longer than 6 ft (1.8 m).	

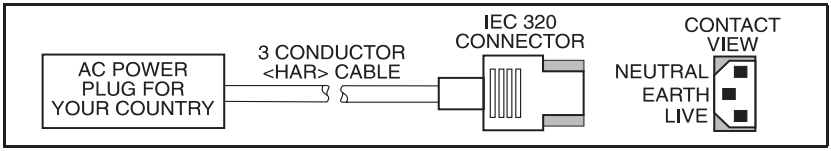


Figure 7. 230 VAC Power Line Cord

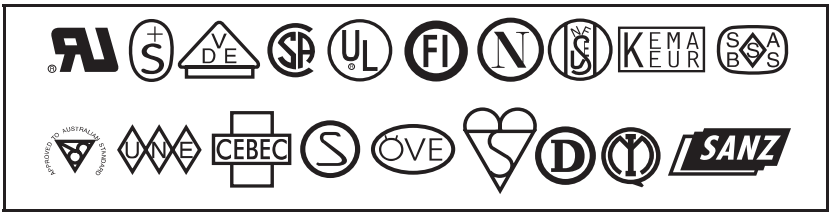


Figure 8. Examples of International Safety Organizations

Table 6. Parallel Pinouts

Pin No.	Description
1	Strobe
2-9	Data Bits 0-7
10	Acknowledge
11	Busy
12	Paper end
13	Select
14-17	Not used
18	+5 V @ 0.75 A
19-30	Ground
31	Not used
32	Error/fault
33	Ground
34	Not used
35	+5 V through 3.3 K
36	Select

Table 7. RS-232 Pinouts

Pin No.	Description
1	Unused
2	RXD (receive data) input to printer
3	TXD (transmit data) output from printer
4	DTR (data terminal ready) output from printer
5	Ground
6	DSR (data set ready) input to printer
7	RTS (request to send) output from printer
8	Unused
9	Unused
To connect your serial port to a 9-pin connector on your PC, use a 9-pin to 9-pin null modem (crossover) cable. If your PC has a 25-pin connector, use a standard (straight-through) 9-pin to 25-pin cable.	

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Warranty

1. Printer Warranty

ZEBRA printers, excluding thermal printheads which are warranted separately below, are warranted against defects in material or workmanship for twelve (12) months from the date of purchase by the end user. This warranty does not cover normal wear and tear and shall be null and void if the equipment is modified, improperly installed or used, damaged by accident or neglect, or in the event any parts are improperly installed or replaced by the 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.

Since printhead wear is part of normal operations, the original printhead and replacement printheads are covered by a limited warranty of six (6) months/180 days from the date of purchase by the end user. To qualify for this warranty, the printer must be returned to the factory or other authorized service center. Although the user is not required to purchase ZEBRA brand supplies (media), to the extent it is determined that the use of other supplies (media) shall have caused any defect to the thermal printhead for which a warranty claim is made, the user shall be responsible for ZEBRA Technologies' customary charges for labor and materials to repair such defect. To the extent that it is determined that failure to follow the preventive maintenance schedule and procedures listed in the User's Guide shall have caused any defect to the thermal printhead for which a warranty claim is made, this limited warranty shall be void.

ZEBRA TECHNOLOGIES' SOLE OBLIGATION UNDER THIS WARRANTY SHALL BE TO FURNISH PARTS AND LABOR FOR THE REPAIR OR REPLACEMENT OF PRODUCTS FOUND TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP DURING THE WARRANTY PERIOD.

As a condition of this warranty, the user must: (a) obtain a ZEBRA Return Authorization for the printer, or subassembly(s); (b) ship the printer or subassembly(s), transportation prepaid to the authorized service location; and (c) include with the Product or subassembly(s) a written description of the claimed defect. Unless ZEBRA Technologies authorizes return of the entire Product, the user shall return only the subassembly(s). Products returned shall be packaged in the original packing and shipping container or comparable container. In the event equipment is not so packaged or if shipping damage is evident, it will not be accepted for service under warranty. Surface transportation charges for the return of the printer to the customer shall be paid by ZEBRA Technologies within the 48 contiguous states and the District of Columbia. Customer shall pay shipping costs, customs clearance, and other related charges outside the designated area. If ZEBRA Technologies determines that the Product returned to it for warranty service or replacement is not defective as herein defined, BUYER shall pay all costs of handling and transportation.

2. Supplies Warranty

ZEBRA supplies are warranted to be free from defects in materials or workmanship for a period of either the stated material shelf life or six (6) months/180 days from date of shipment, whichever occurs first, provided that the BUYER has complied with ZEBRA Technologies' guidelines on storage, handling, and usage of the labeling supplies in ZEBRA printers. ZEBRA Technologies does not warrant the performance of ZEBRA labeling supplies on non-ZEBRA printers.

Any supplies product shown to the satisfaction of ZEBRA Technologies, within the time provided, to be so defective shall be replaced without charge, or ZEBRA Technologies may issue a credit in such an amount as it deems reasonable.

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