



ZEBRA® DESKTOP ZPL® PRINTERS OPERATING ESSENTIALS



Zebra is committed to offering its customers the highest-quality technical assistance in the industry, delivering outstanding customer service and providing a global network of quality support.

To ensure that your Zebra printer continues to work efficiently and effectively, you need to understand the various indicators and testing procedures incorporated into the TLP and LP series printers. This guide explains those indicators and procedures.



INTERPRETING INDICATORS

The printer's indicators display various printer functions and their statuses. Identify the indicator status using the table below, then refer to the relevant troubleshooting topic overleaf.

INDICATOR COLOUR	PRINTER STATUS	SOLUTION OR REASON
OFF	Off	THE PRINTER IS NOT RECEIVING POWER <ul style="list-style-type: none"> Have you turned on the printer power? Check power connections from the wall outlet to the power supply, and from the power supply to the printer
SOLID GREEN	On	THE PRINTER IS ON AND IN AN IDLE STATE <ul style="list-style-type: none"> No action necessary
FLASHING AMBER	Stopped	THE PRINTER HAS FAILED ITS POWER-ON SELF-TEST (POST) <ul style="list-style-type: none"> If this error occurs immediately after you turn on the printer, contact an authorised reseller or Zebra Authorised Service Provider (ZASP) for assistance THERE IS A SHORTAGE OF MEMORY <ul style="list-style-type: none"> If this error occurs after you have been printing, turn the printer power off and on, then resume printing
FLASHING GREEN	Normal operation	THE PRINTER IS RECEIVING DATA <ul style="list-style-type: none"> As soon as all of the data has been received, the status LED will turn green and the printer will automatically resume operation
FLASHING RED	Stopped	EITHER THE MEDIA OR RIBBON IS OUT <ul style="list-style-type: none"> Load a roll of media. Then press the Feed button to resume printing Load a roll of ribbon. Then press the Feed button to resume printing THE PRINthead IS OPEN <ul style="list-style-type: none"> Close the top cover. Then press the Feed button to resume printing
DOUBLE FLASHING GREEN	Paused	THE PRINTER IS PAUSED <ul style="list-style-type: none"> Press the Feed button to resume printing
SOLID AMBER	Various	THE PRINthead IS UNDER TEMPERATURE <ul style="list-style-type: none"> Continue printing while the printhead reaches the correct operating temperature THE PRINthead IS OVER TEMPERATURE <ul style="list-style-type: none"> Printing will stop until the printhead cools to an acceptable printing temperature. When it does, the printer will automatically resume operation
ALTERNATELY FLASHING GREEN AND RED	Needs service	FLASH MEMORY IS NOT PROGRAMMED <ol style="list-style-type: none"> Download latest firmware Return the printer to an authorised reseller (or authorised distributor, for Zebra resellers)



TROUBLESHOOTING TOPICS

PRINTER OPERATION

PROBLEM	SOLUTION OR REASON
MEDIA DOES NOT ADVANCE	<ol style="list-style-type: none"> 1. Check interface cable connections from computer to printer 2. Make sure top cover is locked closed 3. Check that labels are correct 4. Verify media has print surface up for printing 5. Check that transfer ribbon is correctly routed and has the ink-side out for thermal-transfer printing (if ribbon is being used) 6. Printer has a syntax or command error. Check program and resend print job
MEDIA MOVES BUT NOTHING IS PRINTED	<ol style="list-style-type: none"> 1. Verify that the labels are the correct type (thermal transfer or direct thermal) 2. Check that the roll is loaded with the thermal side facing up 3. Clean the printhead with cleaning pen 4. Ensure top cover is locked closed 5. Check darkness setting is correct
PRINTING IS FADED OR POOR	<ol style="list-style-type: none"> 1. Clean the printhead with cleaning pen 2. Adjust print speed/darkness in software 3. Check the media and verify that the print surface is facing up 4. Check that correct thermal media is in use 5. Check darkness setting is correct
PRINTS ONLY PARTIAL LABEL OR SKIPS A LABEL	<ol style="list-style-type: none"> 1. Perform media length-sensing 2. Label caught on printhead 3. Top cover is not properly latched 4. Possible software problem. Check the printer memory configuration. Refer to the programming manual
PRINTING STOPS AND INDICATOR LIGHTS AMBER OR RED	<ol style="list-style-type: none"> 1. Perform media length-sensing 2. Possible problem with label stock. Use only approved labels and tags 3. Possible label jam 4. Insufficient memory for label size. Check the printer memory configuration 5. Possible software problem. Refer to the programming manual

MEDIA HANDLING

PROBLEM	SOLUTION OR REASON
PRINTING CONTINUES BETWEEN LABELS	<ol style="list-style-type: none"> 1. Perform media length-sensing 2. Make sure label-taken sensor is on 3. The label-taken sensor is blocked or dirty. Remove any scraps or dust 4. Continuous media may be set. Verify form-length setting through programming command. See the programming guide
PRINTS ONE LABEL AND THEN STOPS	<ol style="list-style-type: none"> 1. Verify the quantity has been correctly set
BLADE CUTS THROUGH LABELS INSTEAD OF CUTTING LINER BETWEEN LABELS	<ol style="list-style-type: none"> 1. Verify form-length setting through programming
MEDIA JAMMED IN CUTTER	<ol style="list-style-type: none"> 1. Unplug power and interface cables. Use tweezers to remove scraps from cutter opening
BLADE FAILS TO CUT DIRECT-THERMAL PAPER OR LABEL LINER	<ol style="list-style-type: none"> 1. Ensure cutter is clean and printer is set to cutter mode (see programming guide) 2. Replace cutter



MANUAL CALIBRATION

Manual calibration is recommended whenever you are using pre-printed labels (or label backing) or if the printer will not correctly auto-calibrate.

Note: If printing in Direct Thermal Mode, default the printer first (four flashes).

- 1 Load the labels and ribbon (if used) and close the printer.
- 2 Turn on the printer power.
- 3 Allow the printer to feed or error out.
- 4 Press and hold the Feed button until the green status LED flashes once, then twice. Release the Feed button.
- 5 The printer will set the media sensor for the label backing being used and then automatically feed until a label is positioned at the printhead.

- 6 A profile of the media sensor settings (similar to the example below) will print. Upon completion, the printer will save the new settings in memory and the printer is ready for normal operation.
- 7 Press the Feed button. One entire blank label will feed. If this does not happen, try defaulting (hold the Feed button until it flashes four times).

NOTE: Performing a manual calibration disables the auto-calibration function. If you use varying label lengths, you can set the printer to measure the label length (using the Zebra Driver or the ^MF command) or return to auto-calibration by defaulting the printer. (To do this, hold the Feed button until it flashes four times).

TROUBLESHOOTING TESTS

Printing a configuration label

To print a listing of the printer's current configuration, follow these steps:

- 1 Make sure the media is properly loaded and the top cover of the printer is closed. Then, turn the printer power on if you have not already done so.
- 2 When the status light is solid green, press and hold the Feed button until the status light flashes once.
- 3 Release the Feed button. The printer prints configuration information on the available media.

Refer to Figure A for a sample configuration printout.

CONFIGURATION LABELS

A

PRINTER CONFIGURATION	
Zebra Technologies ZTC LP2844-Z-200dpi	
+10.....	DARKNESS
+000.....	TEAR OFF
TEAR OFF.....	PRINT MODE
NON-CONTINUOUS.....	MEDIA TYPE
WEB.....	SENSOR TYPE
DIRECT-THERMAL.....	PRINT METHOD
076 1/8 MM.....	PRINT WIDTH
1240.....	LABEL LENGTH
39.0IN 988MM.....	MAXIMUM LENGTH
NOT CONNECTED.....	USB COMM.
PARALLEL.....	PARALLEL COMM.
RS232.....	SERIAL COMM.
9600.....	BAUD
8 BITS.....	DATA BITS
NONE.....	PARITY
XON/XOFF.....	HOST HANDSHAKE
NONE.....	PROTOCOL
000.....	NETWORK ID
NORMAL MODE.....	COMMUNICATIONS
<> 7EH.....	CONTROL PREFIX
<> 5EH.....	FORMAT PREFIX
<> 2CH.....	DELIMITER CHAR
ZPL II.....	ZPL MODE
CALIBRATION.....	MEDIA POWER UP
CALIBRATION.....	HEAD CLOSE
DEFAULT.....	BACKFEED
+000.....	LABEL TOP
+0000.....	LEFT POSITION
080.....	WEB S.
092.....	MEDIA S.
050.....	MARK S.
000.....	MARK MED S.
072.....	MEDIA LED
050.....	RIBBON LED
089.....	MARK LED
CS.....	MODES ENABLED
.....	MODES DISABLED
832 8/MM FULL.....	RESOLUTION
V45.11.7Z.....	FIRMWARE
V21.0.0.42.....	HARDWARE ID
CUSTOMIZED.....	CONFIGURATION
8192.....	RAM
2048.....	ONBOARD FLASH
NONE.....	FORMAT CONVERT
.....	TWINAX/COAX ID
FW VERSION.....	IDLE DISPLAY
05/05/37.....	RTC DATE
00:00.....	RTC TIME
NONE.....	ZEBRA NET II
46A052900478.....	

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ZEBRA DESKTOP ZPL PRINTERS

OPERATING ESSENTIALS



FEED BUTTON MODES

POWER-OFF MODE (COMMUNICATIONS DIAGNOSTICS MODE)

With the printer power off, press and hold the Feed button while you turn on the power. The printer prints out a listing of its current configuration. 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. To exit the diagnostic mode and resume printing, turn the printer off and then on.

POWER ON MODES

With the printer power on and top cover closed, press and hold the Feed button for several seconds. The green status LED will flash a number of times in sequence. In the table below, the explanation in the right-hand column shows what happens when you release the key after the specific number of flashes.

FLASH SEQUENCE	ACTION
*	A configuration label prints.
* **	The media sensor calibrates and a media sensor profile prints (see "Manual Calibration").
* ** ***	To reset the communication parameters, press and release the Feed button while the LED rapidly flashes yellow and green. For autobaud synchronisation, Send a ZPL II® format to the printer while the LED rapidly flashes yellow and green. When the printer and host are synchronised, the LED changes to solid green. NOTE: No labels will print during autobaud synchronisation.
* ** *** ****	Resets the factory defaults, auto-calibrates and saves settings into memory.
* ** *** **** *****	The print width is calibrated. While the status LED alternately flashes green and yellow, a series of stacking rectangles prints on the label. When the rectangle prints to the outer edges of the label, press and release the Feed button. The label width and current communication parameters will be saved into memory.
* ** *** **** ***** *****	The print darkness is calibrated. A series of nine samples prints, starting with the lightest and ending with the darkest image. When the desired print darkness is achieved, press and release the Feed button. The print darkness will be saved into memory.

If the Feed button remains pressed after a seven-flash sequence, the printer will ignore the button when it is released.

FURTHER TECHNICAL SUPPORT OPTIONS

Zebra offers several online technical support resources for both end users and PartnersFirst™ partner programme members. So if your printer query could not be resolved by using this guide, you can take advantage of any of the following resources:

- Visit www.zebra.com/knowledgebase. Here you can access an extensive Knowledge Base of advanced troubleshooting techniques.
- Use Zebra's Technical Support Emailback system, by sending an e-mail to emb@zebra.com with the key printer-issue-related word in the subject line. For a complete list of Emailback topics, send an e-mail with "e-mail list" in the subject line.

- Visit www.zebra.com/techrequest. This is Zebra's Technical Request service. You need to request a login first. Once you have your login, you can create technical-support requests online. Your request is given a case number and passed to Zebra's qualified Technical Support representatives for resolution. You can follow progress of the case by logging in to the Technical Request service.

Visit www.zebra.com for general product information and market applications of Zebra printing solutions.



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