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TROUBLESHOOTING GUIDE

Zebra ZQ511 troubleshooting guide: errors, faults and fixes

Updated 21 October 2026 · By TIMCOD maintenance technicians · Source: official Zebra documentation, ZQ511/ZQ521 Mobile Printers user guide (list at the end of the page)

TIMCOD PRODUCT PAGE (IN FRENCH)

See the Zebra ZQ511 and ZQ521 Series product page →

In brief. The Zebra ZQ511 is a Link-OS direct thermal mobile printer from the ZQ500 series, with a 72 mm print width, a PowerPrecision+ smart battery, a colour display, NFC Print Touch and either a Bluetooth radio or a dual 802.11ac Wi-Fi and Bluetooth radio; this guide also covers the ZQ511 RFID and the ZQ521 (104 mm), which are described in the same manual. The Zebra documentation traces most incidents back to a few causes: no media or a cover not properly latched, a printhead that needs cleaning, a worn battery or one charged outside the 0 to 40 °C range, or a Bluetooth or Wi-Fi link that needs to be re-established. The guide covers the alerts in the official table, label detection, cleaning, the battery and charging, connections, firmware and RFID encoding. Click a question to open its entry.

- **A message is displayed** (Charging Temp Fault, Battery Diminished, Wireless Error...): find it in the [lookup table](#) and open the matching entry.

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- **No message, but the print quality is poor:** start with [printhead cleaning](#), then check [label detection](#) and [media loading](#).
- **The printer will not connect or does not hold its charge:** see the [connection](#) and [battery and charging](#) sections.
- **The problem keeps coming back:** the [preventive maintenance](#) section explains how it reduces this type of fault.

Which error is my Zebra ZQ511 showing? Lookup by message, icon and light

The ZQ511 reports its problems through two-line alert messages displayed above the status icons, through flashing icons and through the light around the Power button, which gives information on the battery and sleep mode. The table links each documented message or state to its cause and to the matching entry.

Message or state	Light (Zebra guide)	Likely cause	Entry
Media icon flashing (Out of media)	—	Out of media	Media icon
Cover Open icon flashing	—	Media cover open or not properly latched	Media icon
Alert above the icons, Error icon	—	Acknowledged alert, temporary alert or error alert: read the message	Alerts
PRINTER PAUSED, ALL JOBS CLEARED, ONE JOB CLEARED	—	Information messages: pause, jobs cancelled	Alerts

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Message or state	Light (Zebra guide)	Likely cause	Entry
OUT OF MEMORY STORING GRAPHIC / FONT / FORMAT / BITMAP	—	Insufficient memory to save the item; cause not detailed in the guide	Memory and USB
TOO MANY MASS STORAGE DEVICES, UNSUPPORTED USB HOST DEVICE, UNSUPPORTED USB HOST FILESYSTEM	—	USB host mode alerts; cause not detailed in the guide	Memory and USB
HEAD MAINTEN. NEEDED / PRINTING HALTED	—	Printhead maintenance requested, printing stopped	Printhead maintenance
PRINT HEAD OVERTEMP / PRINTING HALTED	—	Printhead at 65 °C: printing suspended until 60 °C	Printhead overheating
WIRELESS ERROR / INVALID CHANNEL	—	Invalid wireless channel	Wi-Fi
WIRELESS ERROR / INVALID SECURITY	—	Invalid wireless security mode	Wi-Fi
BATTERY DIMINISHED / CONSIDER REPLACING	—	Battery between 300 and 549 charge cycles, one long beep	Worn battery
WARNING - BATTERY IS PAST USEFUL LIFE	—	Battery between 550 and 599 charge cycles	Worn battery

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Message or state	Light (Zebra guide)	Likely cause	Entry
BATTERY DIMINISHED / SHUTTING DOWN	—	Battery at 600 cycles or more: one beep per second, shutdown after 30 seconds	<u>Shutdown due to battery</u>
BATTERY FAILED / REPLACE BATTERY	—	Battery authentication failure (genuine PowerPrecision+ battery required)	<u>Faulty battery</u>
CHARGING FAULT / REPLACE BATTERY	● Battery charger: fast flashing red	Charge fault	<u>Faulty battery</u>
Solid red light	● Solid red	Battery fault	<u>Faulty battery</u>
CHARGING TEMP FAULT / MUST BE 0-40°C	—	Battery too hot or too cold to charge	<u>Charging Temp Fault</u>
Solid orange light	● Solid orange	Battery charging: normal operation	<u>Battery charging</u>
Flashing green light	● Flashing green	Sleep mode	<u>Going to sleep</u>
Flashing orange light	● Flashing orange	Sleep mode while charging	<u>Going to sleep</u>
Blank LCD display	—	Printer switched off or in sleep mode, or application missing or corrupted	<u>Will not switch on</u>
DOWNLOAD FAILED / PLEASE REBOOT	—	Firmware download failed	<u>Firmware</u>

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Message or state	Light (Zebra guide)	Likely cause	Entry
RECEIVING FIRMWARE / DO NOT POWER OFF!	—	Firmware being received: do not switch off	<u>Firmware</u>
VOID (printed on the label)	—	RFID tag cannot be encoded (ZQ511 RFID)	<u>RFID VOID</u>

The messages come from the “Alert Messages” list in the Zebra ZQ511/ZQ521 user guide, which gives them on two lines (separated here by a slash); the icons and light colours come from the “Printer Status Indicators” and “LEDs” pages of the same guide, and the charger ones from its battery charger table. The light only gives information on the battery and sleep mode: a dash means that the page consulted does not specify the state of the light.

Zebra ZQ511 alert messages: causes and solutions

The Zebra guide lists the ZQ511 alerts on two lines and describes the status icons. For each one: the short answer, the cause, the steps to follow and, where Zebra provides for it, the point at which you need to hand over.

Why is the Media icon on my Zebra ZQ511 flashing when a roll is loaded?

Display: Media icon flashing (Out of media) or Cover Open icon flashing (Media cover open).

Short answer: According to Zebra, the Media icon flashes when the media runs out and the Cover Open icon flashes when the media cover is open. Check that media is loaded, then close the cover until it clicks so that it is properly latched.

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LIKELY CAUSE

For the Media icon, the ZQ511/ZQ521 guide gives: flashing, out of media; solid, media present. The Cover Open icon flashes when the media cover is open. The troubleshooting topic “Media or Cover Open icons flashing” says to check that media is loaded and that the cover is closed and securely latched.

Caution: Switch the printer off before cleaning it, never insert sharp or pointed objects into it, and take care with the very sharp edges of the tear bar.

WHAT TO DO

1. Press the cover release button on the side of the printer: the cover opens.
2. Check that the roll is held firmly between the media support discs and that it turns freely.
3. Close the cover until it clicks: the media feeds.
4. Gently brush the inside: the windows of the bar sensor and of the gap sensor must be free of dust.
5. With black mark or gap labels, also check the position of the marks ([label detection entry](#)).

In energy saving mode or draft mode, an out-of-media condition is also shown by the flashing Media icon.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

How do I clear an alert shown on the display of my Zebra ZQ511?

Display: alert message shown above the status icons, Error icon.

Short answer: It depends on the type of alert. An acknowledged alert is cleared with the Select button; an unacknowledged alert disappears on its own after 5 seconds; an error alert stays displayed until its cause is corrected.

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LIKELY CAUSE

The Zebra guide distinguishes three types of alert, all displayed above the status icons: acknowledged alerts, which wait for an action from the user; unacknowledged alerts, which clear after five seconds; and error alerts, which require no action on the panel but stay displayed until the error is cleared by some other means.

WHAT TO DO

1. Read the message and look it up in the [lookup table](#).
2. Acknowledged alert: press Select.
3. Error alert: correct the cause described in the matching entry; the alert then disappears.
4. “PRINTER PAUSED”, “ALL JOBS CLEARED” and “ONE JOB CLEARED” are information messages: printer paused, all print jobs cancelled or one job cancelled.
5. A flashing Data icon is normal while data is being received: no action is needed.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

What does “OUT OF MEMORY STORING GRAPHIC” mean on my Zebra ZQ511?

Messages: OUT OF MEMORY STORING GRAPHIC , OUT OF MEMORY STORING FONT , OUT OF MEMORY STORING FORMAT , OUT OF MEMORY STORING BITMAP ; USB messages: TOO MANY MASS STORAGE DEVICES , UNSUPPORTED USB HOST DEVICE , UNSUPPORTED USB HOST FILESYSTEM .

Short answer: The message means there is not enough memory to store a graphic, a font, a format or an image. The Zebra guide lists these alerts without detailing their cause or what to do: print a configuration report, which shows the memory and the stored files, and send it to Zebra support if the message comes back.

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LIKELY CAUSE

These messages appear in the alert list of the ZQ511/ZQ521 guide, without explanation. The ZQ511 has 512 MB of flash memory and 256 MB of RAM. The wording of the three USB messages refers to the printer's USB host mode: too many mass storage devices, unsupported USB device or unsupported file system.

WHAT TO DO

1. Note the exact message.
2. Print a [configuration report](#): it shows the flash and RAM memory and the list of stored files.
3. If the message comes back, contact Zebra support with the model, the serial number, the 15-digit PCC code and the firmware version shown on the report.

When to call a technician: if a memory or USB message comes back, the guide offers no solution: contact Zebra support with the configuration report.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Label detection: my Zebra ZQ511 skips labels or cannot find the black mark

The ZQ511 locates the start of labels with a black mark sensor and a gap sensor. This entry sets out Zebra's requirements for the position of the marks and the areas to keep clear.

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Why is my Zebra ZQ511 not detecting black marks or skipping labels?

Symptoms: skipped labels, offset printing, black mark not detected.

Short answer: Check the position of the black marks: they must be centred on the roll, and on the back of the media unless the printer is set for marks on the front (`media.bar_location` set to front). Keep the 15 mm central strip free of any dark pre-printed graphics, and clean the sensor windows.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, the ZQ511 detects the black mark and the gap between labels with two sensors (Black bar sensor and Gap sensor). The bar sensor reads the mark on the central strip of the media: dark pre-printed graphics in this path prevent it from reading the mark. By default, the mark is expected on the back of the document. The data sheet states that the sensors are in a fixed central position and that the RFID models do not detect the gap between labels: they require RFID media with a black mark.

Caution: Switch the printer off before cleaning it and never insert sharp or pointed objects inside.

WHAT TO DO

1. Check the black marks: at least 12.7 mm wide and 2.4 to 11 mm long, centred on the roll, according to the label specifications. For pre-printed receipts, the guide gives at least 15 mm wide and 4.8 to 6.0 mm long.
2. If the mark is printed on the front, set `media.bar_location` to `front` (back by default).
3. Keep the 15 mm central strip clear, as well as a margin of at least 1.59 mm along the edges of the roll and of the black marks.
4. On a ZQ511 RFID, use RFID media with a black mark: gap detection is not supported.
5. Clean the inside by gentle brushing: the bar and gap sensor windows must be free of dust.

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6. Print a configuration report: it shows the black bar and gap sensor values. Pressing Feed should advance a single blank label.

The ZQ511/ZQ521 guide does not describe a step-by-step calibration procedure. The media feed length is set with an SGD command, according to the Zebra programming guide.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [ZQ511 and ZQ521 mobile printers](#)  – Zebra ZQ511/ZQ521 data sheet · [ZQ511/ZQ521 RFID mobile printers](#)  – Zebra ZQ511/ZQ521 RFID data sheet (official documentation).

Media problems: my Zebra ZQ511 no longer feeds the roll or jams

The ZQ511 prints in direct thermal mode, without a ribbon: the incidents in this section concern the label or receipt roll, its loading, its feeding and labels that stick.

How do I load a roll of labels or receipts into a Zebra ZQ511?

Short answer: Press the cover button on the side of the printer, tilt the cover back, spread the media supports apart and place the roll between them in the direction shown. Close the cover until it clicks: the media feeds.

LOADING PROCEDURE (ZEBRA GUIDE)

1. Press the cover button on the side of the printer: the cover opens automatically.
2. Swing the cover fully back to expose the media compartment and the adjustable roll supports.
3. Spread the supports apart: moving one moves both.
4. Place the roll between the supports in the direction shown in the guide: the supports hold it, and it must turn freely.
5. Close the cover until it clicks: the media feeds.

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The ZQ511 accepts media from 35 to 80 mm wide and a roll with an outside diameter of 51 mm at most. The standard core is 19 mm; a 12.5 mm core requires the media support discs to be replaced. The media feed length is set with an SGD command.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Why is the roll in my Zebra ZQ511 not feeding?

Symptoms: the roll does not turn, no label comes out.

Short answer: Zebra lists three checks: the media cover must be closed and latched, the spindle carrying the roll must not bind, and the label sensor must not be blocked.

LIKELY CAUSE

The “Media does not feed” troubleshooting topic in the ZQ511/ZQ521 guide attributes this symptom to a cover that is not properly latched, a roll spindle that binds or a blocked label sensor.

Caution: Switch the printer off before cleaning the inside and never insert sharp or pointed objects into it.

WHAT TO DO

1. Close the media cover until it clicks.
2. Open the cover and check that the roll turns freely between its holders, without binding.
3. Check that nothing is blocking the label sensor; gently brush the inside to remove dust from the bar and gap sensor windows.
4. Close the cover and press Feed: the printer should advance one blank label, or a receipt length defined by the software.

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Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

How do I free labels that are stuck or jammed in my Zebra ZQ511?

Symptom: labels sticking or jamming in the printer (Label binding).

Short answer: Open the printhead release latch and the media cover, remove the media and then reinstall it. Close the cover until it clicks.

LIKELY CAUSE

The “Label binding” topic in the ZQ511/ZQ521 guide deals with sticking labels by opening the cover and reinstalling the media.

Caution: Never use a sharp or pointed object to free the labels, and take care with the very sharp edges of the tear bar.

WHAT TO DO

1. Open the printhead release latch and the media cover.
2. Remove the media, then reinstall it as for [normal loading](#).
3. Close the cover until it clicks.
4. With linerless media that sticks to the platen roller, follow the [linerless media](#) entry.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

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Why does linerless media stick to the platen roller of my Zebra ZQ511?

Symptom: the media no longer comes away from the platen roller.

Short answer: The platen roller on linerless models needs cleaning. Zebra provides an emergency cleaning method with soapy water; if the media still sticks after this cleaning and after feeding 1 to 2 metres of media, the platen roller must be replaced.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, on linerless models the platen roller is only cleaned when there is a print problem, for example when the media no longer comes away from the roller. The soap method is an emergency procedure that removes oils and dirt likely to damage the printhead; it shortens the life of the roller.

Caution: Switch the printer off before cleaning and do not insert any sharp or pointed object inside.

WHAT TO DO

1. Switch the printer off.
2. Rotate the platen roller and clean it with a fibre-free swab dipped in a mixture of one part liquid soap to 25 parts water, then rinse with clean water.
3. Clean the scraper with the adhesive side of the media, and the inside of the unit with a fibre-free swab moistened with 90% alcohol.
4. Feed 1 to 2 metres of media.
5. If the media still sticks, replace the platen roller.

When to call a technician: if the linerless media still sticks after cleaning and after feeding 1 to 2 metres of media, the Zebra guide says to replace the platen roller.

Zebra cites a liquid soap such as Palmolive or Dawn. On linerless models, a scraper replaces the tear bar; it is cleaned after five rolls, or more often if necessary.

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Source: [ZQ511/ZQ521 Mobile Printers User Guide](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Several of these faults involve the labels or paper used. TIMCOD, [Zebra reseller](#), supplies [labels and printheads](#) for thermal printers (pages in French).

Print quality: why is my Zebra ZQ511 printing faintly or with gaps?

For faded or partial print, the Zebra guide starts with printhead cleaning, media quality and cover latching.

Why is my Zebra ZQ511 printing faded labels or labels with missing parts?

Symptoms: faint or washed-out print, partial or missing print.

Short answer: Clean the printhead with a Zebra cleaning pen or a cotton swab moistened with 90% medical alcohol, then check the media quality. If the print is partial, also check the media alignment and the cover latching.

LIKELY CAUSE

The ZQ511/ZQ521 guide links faint or washed-out print to a dirty printhead or to media quality, and partial or missing print to incorrect media alignment, a dirty printhead or a cover that is not properly latched. In draft mode, intended for text only, optical density drops by 22%.

Caution: The printhead can become very hot after prolonged printing: let it cool down. Switch the printer off before any cleaning, use only the products specified by Zebra and do not insert any sharp or pointed object.

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OFFICIAL PRINTHEAD CLEANING PROCEDURE

1. Switch off the printer and let the printhead cool.
2. Open the media cover.
3. Rub the thin grey line of the printhead with a Zebra cleaning pen, or a cotton swab moistened with 90% medical alcohol, from the centre towards the edges.
4. On a model with liner, rotate the platen roller and clean it with a fibre-free swab or a lint-free cloth lightly moistened with at least 90% medical alcohol.
5. Reinstall the media, checking its alignment, then close the cover until it clicks.
6. Check the media quality and, if the print remains light, check that draft mode (`media.draft_mode` , off by default) is not turned on: its icon is then shown on the display.

Zebra recommends cleaning the printhead after five rolls, or more often if necessary, and after every roll with linerless media. Draft mode raises the maximum speed from 4 to 5 inches per second; it is suited to text-only receipts, without reverse images, solid black areas or barcodes.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Printhead: my Zebra ZQ511 asks for maintenance or stops due to overheating

Two alerts concern the ZQ511 printhead: the maintenance request and overheating. The guide also sets a cleaning schedule.

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What does “HEAD MAINTEN. NEEDED” mean on my Zebra ZQ511, and when should I clean the printhead?

Message: HEAD MAINTEN. NEEDED / PRINTING HALTED (identifier HeadMaintenanceNeeded).

Short answer: The message indicates that printhead maintenance is needed and that printing has stopped. The Zebra guide does not detail its cause; the printhead maintenance it describes is cleaning, recommended after five rolls, or after every roll with linerless media.

LIKELY CAUSE

The message appears in the alert list of the ZQ511/ZQ521 guide (HeadMaintenanceNeeded), without explanation. The same guide sets the cleaning schedule below.

Caution: Switch the printer off before any cleaning and let the printhead cool, as it can become very hot after prolonged printing. Never insert sharp or pointed objects, take care with the very sharp edges of the tear bar, and use only the products specified by Zebra.

CLEANING SCHEDULE (ZEBRA GUIDE)

1. Printhead: Zebra cleaning pen on the thin grey line, from the centre towards the edges; after five rolls, or more often if necessary, and after every roll with linerless media.
2. Platen roller (models with liner): fibre-free swab or lint-free cloth lightly moistened with at least 90% medical alcohol; after five rolls.
3. Platen roller (linerless models): only when there is a print problem, see the [linerless media](#) entry.
4. Tear bar: cotton swab moistened with 90% medical alcohol; as needed.
5. Exterior: cloth moistened with water or a wipe soaked in 90% medical alcohol; as needed.

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6. Interior: gentle brushing, making sure the bar and gap sensor windows are free of dust; as needed.

When to call a technician: if the message comes back after cleaning, the guide provides no other action: contact Zebra support with the serial number, the model and the firmware version.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Why is my Zebra ZQ511 showing “PRINT HEAD OVERTEMP PRINTING HALTED”?

Message: **PRINT HEAD OVERTEMP / PRINTING HALTED** (identifier HeadOverTemp).

Short answer: The printhead has reached 65 °C: the printer suspends printing to protect it. It resumes on its own once the printhead has cooled back down to 60 °C, with no loss of label data and no drop in quality: just wait.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, the thermal shutdown protects the printhead against overheating: printing stops at 65 °C (149 °F) and resumes at 60 °C (140 °F).

Caution: The printhead can become very hot after prolonged printing: let it cool before touching or cleaning it.

WHAT TO DO

1. Wait: printing resumes by itself once the printhead has cooled to 60 °C.
2. Do not touch the printhead during this pause.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

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TIMCOD supplies [printheads for thermal printers](#) (page in French).

Connection problems: my Zebra ZQ511 does not communicate over Bluetooth, NFC, Wi-Fi or USB

The ZQ511 connects via USB, via Bluetooth Classic and Low Energy, via NFC for pairing and, with the dual radio, via Wi-Fi. These entries cover the checks, the settings and the diagnostic mode described by Zebra.

Why is my Zebra ZQ511 printing nothing or printing garbled characters?

Symptoms: no printing, or garbled print ("Garbled print").

Short answer: Zebra gives the same checks in both cases: replace the battery, check the cable to the terminal and re-establish the radio link or the association with the wireless network. If nothing prints, also check the label format sent, using communications diagnostics mode.

LIKELY CAUSE

For garbled or missing print, the ZQ511/ZQ521 guide cites a battery that needs replacing, a faulty cable to the terminal, or a lost RF link or LAN association; for no print, it adds an invalid label format or command structure.

WHAT TO DO

1. Replace the battery with a charged battery.
2. Check the cable connected to the terminal.
3. Restore the radio link or the wireless network association: the Bluetooth icon is on when the link is established, and the Wi-Fi icon shows the antenna and two solid parentheses when the printer is associated and authenticated.
4. Check the label format or the command structure sent by the application.

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5. Switch to communications diagnostics mode (Hex Dump) to see the data received (communication error entry).

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

How do I diagnose a communication error between my Zebra ZQ511 and the computer?

Symptoms: the printer does not receive data, or receives it incorrectly.

Short answer: Check the cable to the computer and replace it if necessary. To see what the printer receives, print a configuration report and then switch to communications diagnostics mode (DUMP): the printer prints the data received in hexadecimal and as text.

LIKELY CAUSE

The “Communication error” topic in the ZQ511/ZQ521 guide points to the cable to the computer or laptop, which should be checked and replaced if necessary.

WHAT TO DO

1. Check the cable to the computer and replace it if necessary.
2. USB cable (type A to Micro B): switch the printer off before connecting or disconnecting it. The small 5-pin connector only fits one way: do not force it. Turn the locking cap clockwise to hold the cable in place.
3. The USB drivers are included in the Zebra Designer driver, which can be downloaded from zebra.com/drivers.
4. DUMP mode: print a configuration report. At the end, the printer prompts you to press Feed: press it within 3 seconds. Otherwise, it prints that DUMP mode is not activated and returns to normal operation.

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5. In DUMP mode, the printer prints the ASCII hexadecimal codes of the data received together with their text equivalent (a dot for non-printable characters), and saves a .dmp file that can be viewed with ZebraNet Bridge Enterprise.
6. To exit DUMP mode: switch the printer off, wait 5 seconds, then switch it back on.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Why does my Zebra ZQ511 not appear in my phone's Bluetooth list?

Display: Bluetooth icon greyed out (link inactive).

Short answer: Since firmware 6.0, the ZQ511 is no longer discoverable by default. Press and hold the Feed button for 5 seconds: the printer enters Limited Pairing Mode and accepts pairing for 2 minutes. Stay within about 10 metres.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, before firmware 6.0 the printer was discoverable by default; with 6.0, discoverability is set to off by default and a Limited Pairing Mode is added. From 6.1 onwards, if the minimum security mode is 1, pairing is always possible; for any other value, it is blocked as long as discoverability is off and the printer is not in Limited Pairing Mode. A device can only pair with a non-discoverable printer if it knows its Bluetooth address (BDADDR) or has paired with it before.

WHAT TO DO

1. Press and hold the Feed button for 5 seconds to open pairing for 2 minutes, then start the search on the phone.
2. Or make the printer discoverable with Zebra Setup Utilities: with the printer connected via USB, choose Configure Printer Connectivity, then Bluetooth, and set Discoverable to ON.
3. Check the firmware version and the discoverability status on the [configuration report](#) (Bluetooth section).

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4. Bring the phone within about 10 metres.
5. With an NFC phone, use Print Touch ([NFC entry](#)).
6. The Bluetooth address is on a label on the back of the printer; on the dual radio, this label shows the Wi-Fi MAC address.

Discoverability does not apply to Bluetooth Low Energy. The range of about 10 metres corresponds to class 2, the default setting; class 1, which is more powerful, is set with

```
bluetooth.power_class .
```

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#) [↗](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · Configure Printer Bluetooth Setup Using the Zebra Setup Utilities (ZSU) – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\)](#) > [Wireless Communications with Bluetooth](#) [↗](#) (official documentation).

Why does my Zebra ZQ511 not ask for a PIN code when pairing over Bluetooth?

Short answer: This is normal: between Bluetooth 2.1 or later devices, the ZQ511 uses Secure Simple Pairing (SSP), without a PIN code. Depending on the minimum security mode, pairing is done without a code (Just Works) or by confirming a six-digit number shown on both devices (numeric comparison).

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, when both devices use Bluetooth 2.1 or later, they use SSP at security level 4. Numeric comparison displays a six-digit number to be confirmed on both devices; Just Works is used for devices with no display or keyboard and does not protect against a man-in-the-middle attack. The `bluetooth_PIN` setting is not used with SSP.

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WHAT TO DO

1. Check the minimum security mode (`bluetooth.minimum_security_mode`): with values 1 and 2, the printer accepts Just Works or numeric comparison; with 3 and 4, only numeric comparison. The central device can always request a higher level.
2. With numeric comparison, confirm that the six-digit number is identical on both devices.
3. The authentication code is only used by Bluetooth 2.0 and earlier devices: set your own code with Zebra Setup Utilities if needed.
4. iPhone and iPad: the ZQ511 is MFi certified for iOS 10 or later. In Zebra Setup Utilities, the Enable Reconnect option is set to iOS Only for iOS devices.
5. The Bluetooth controller mode (Classic and Low Energy, Classic only or Low Energy only) is chosen in Zebra Setup Utilities: Zebra recommends Bluetooth Classic for printing, as Low Energy is slow and better suited to configuration.
6. On a smartphone or tablet, use the free Zebra Printer Setup Utility app (Android or Apple).

Bonding (`bluetooth.bonding`) is enabled by default: devices remain paired after a power cut or a disconnection.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · Configure Printer Bluetooth Setup Using the Zebra Setup Utilities (ZSU) – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\)](#) › [Wireless Communications with Bluetooth](#)  (official documentation).

Why does Windows show “Error printing” with my Zebra ZQ511 paired over Bluetooth?

Windows message: `Error printing` (system and Devices and Printers).

Short answer: First check that the printer is not in sleep mode: a job sent during sleep mode can cause a temporary “Error printing”, which disappears once the printer is switched back on. Also check that the ZDesigner driver is using the

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outgoing COM port created by Windows for the printer.

LIKELY CAUSE

According to the Zebra knowledge base, the error comes from a job sent during sleep mode, the wrong COM port chosen in the driver, or a missing Microsoft update on Windows 10. Zebra states that this last case is an operating system problem that affects all driver manufacturers.

ZEBRA PROCEDURE UNDER WINDOWS 10

1. Install the ZDesigner driver, connect the printer via USB and check that it communicates.
2. In Zebra Setup Utilities, choose Configure Printer Connectivity, then Bluetooth, and enter a name (Friendly name) and an authentication code of your choice.
3. Disconnect the USB cable, open the Windows Bluetooth settings, select the printer by its name, click Pair and enter the code you chose.
4. Open More Bluetooth options, COM Ports tab, and note the printer's Outgoing port.
5. Install the printer with the ZDesigner v5 or v10 driver on this COM port (Other Port option with the v10 driver), then print a test page.
6. Wake the printer up before sending a print job. If "Error printing" recurs while it is switched on, install the missing Windows 10 updates.

The Zebra article applies to Zebra printers paired over Bluetooth under Windows 10; it does not name the ZQ511 specifically and uses the ZQ510 as an example.

Sources: Windows 10 Bluetooth Setup with Zebra Printers – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\)](#) · [Wireless Communications with Bluetooth](#)  (official documentation).

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Why does my smartphone not pair with my Zebra ZQ511 via NFC (Print Touch)?

Short answer: Hold the smartphone 7.62 cm (3 inches) or less from the Print Touch icon on the side of the printer. The smartphone then reads the printer's NFC tag, which contains its Bluetooth address, and can pair automatically within the limits of the active security profile.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, the printer carries a passive NFC tag, factory-programmed in the Android Standard Tag format. NFC works at short range, generally within 7.62 cm. The tag can trigger Bluetooth pairing, launch an application or open a Zebra support page.

WHAT TO DO

1. Check that the smartphone is NFC-enabled.
2. Bring it within 7.62 cm of the Print Touch icon, on the side of the printer.
3. If pairing fails, check the printer's Bluetooth security mode ([Bluetooth pairing](#) entry).

The NFC tag contains the printer's Bluetooth address and serial number. More information at zebra.com/nfc.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

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Why is my Zebra ZQ511 showing “WIRELESS ERROR” and not connecting to Wi-Fi?

Messages: **WIRELESS ERROR** / **INVALID CHANNEL** or **INVALID SECURITY** · Wi-Fi icon: antenna flashing (searching for an access point).

Short answer: The Zebra guide lists these two alerts without detailing them: their wording refers to an invalid wireless channel or security mode. Reconfigure the network with Zebra Setup Utilities (band and country, ESSID, security type, Wi-Fi password); on a printer purchased in the EMEA region since 1 August 2025, the WLAN is disabled by default.

LIKELY CAUSE

The WlanInvalidChannels and WlanInvalidSecurityMode alerts appear in the list in the ZQ511/ZQ521 guide, without explanation. Wi-Fi printers carry the words “Wireless Network Printer” on the serial number label; the dual 802.11ac radio is an option. According to the guide, printers purchased in the EMEA region from 1 August 2025 (European RED directive) have the WLAN disabled by default, and you must configure Protected Mode and a control panel password or PIN before changing certain settings.

WHAT TO DO

1. Check for the words “Wireless Network Printer” on the serial number label.
2. Printer purchased in the EMEA region since 1 August 2025: first configure Protected Mode and your own control panel password, then enable the WLAN by following the Zebra Link-OS PrintSecure administration guide (zebra.com/asr).
3. Connect the printer via USB, open Zebra Setup Utilities, then Configure Printer Connectivity and the wireless configuration.
4. Enter the band and country, the ESSID and the security type, then your Wi-Fi network password (String option if it contains letters and numbers and is not in hexadecimal). The utility sends the settings and a soft reset to Link-OS printers.

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5. Check the Wi-Fi icon: antenna flashing, searching for an access point; antenna and one solid bracket, authentication in progress; antenna and two solid brackets, printer associated and authenticated.
6. You can get the IP address by sending `! U1 getvar "wlan.ip.addr"` from Zebra Setup Utilities.

The control panel password is not set on delivery: you must create it before you can use it. ZebraNet Bridge Enterprise (version 2.8 or later) and Zebra Mobile Setup Utility can also be used to configure the wireless network.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#) [↗](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [Configuring Printer Connectivity for Wired or Wireless Networks Using the Zebra Setup Utilities](#) – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) > WLAN Overview](#) [↗](#) (official documentation).

Battery and charging: my Zebra ZQ511 does not switch on, does not charge or runs down too quickly

The ZQ511 runs on a PowerPrecision+ smart battery that counts its charge cycles and monitors its charging temperature. These entries cover its messages, charging, battery life and sleep mode.

Why does my Zebra ZQ511 not switch on, or keep a blank display?

Symptoms: no response to the Power button, or blank LCD display.

Short answer: Check that the battery is properly installed and charged, or that the battery eliminator is connected to a live power source. A new battery must have its insulation removed and be charged for the first time; if the display is blank but the light is flashing green, the printer is in sleep mode.

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LIKELY CAUSE

For no power, the ZQ511/ZQ521 guide cites a battery that is incorrectly installed, flat or in need of replacement, or a battery eliminator that is incorrectly connected; for a blank display, a printer that is off or in sleep mode, or a missing or corrupted application.

Batteries are shipped in sleep mode to preserve their capacity: they must be charged once to wake them up.

Caution: Switch the printer off before removing the battery, to limit the risk of data corruption. Avoid any short circuit: terminals in contact with conductive material can cause burns, other injuries or a fire.

WHAT TO DO

1. New battery: pull the tab under the battery and remove the adhesive insulation from its top face, then charge it for the first time to bring it out of sleep mode.
2. Reinstall the battery: move the belt clip aside if it is fitted, insert the battery into the compartment under the printer (it cannot be fitted the wrong way round) and tilt it until it locks into place, flush with the housing.
3. Recharge or replace the battery if necessary.
4. With a battery eliminator, check that it is properly connected to a live power source.
5. Blank display: if the light is flashing green (orange while charging), the printer is in sleep mode; press Power or Select to wake it up.
6. If the application is missing or corrupted, reload it.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

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Why does my Zebra ZQ511 show “BATTERY DIMINISHED CONSIDER REPLACING” at start-up?

Message: BATTERY DIMINISHED / CONSIDER REPLACING (one long beep) or WARNING - BATTERY IS PAST USEFUL LIFE .

Short answer: The PowerPrecision+ battery has exceeded 300 charge cycles: Zebra then rates its condition as “Replace”. The printer still works, but plan for a new battery: at 600 cycles, it will switch itself off.

LIKELY CAUSE

The PowerPrecision+ battery records its total number of cycles and its state of health (Good, Replace or Poor). According to the ZQ511/ZQ521 guide: fewer than 300 cycles, Good state, no message; from 300 to fewer than 550 cycles, Replace state, “Battery Diminished Consider Replacing” message and one long beep; from 550 to fewer than 600 cycles, Replace state, “Warning-Battery Is Past Useful Life” message.

Caution: Do not burn, disassemble, crush, puncture or short-circuit the battery, and do not expose it to more than 65 °C: incorrect charging or high temperatures can cause it to explode, leak or catch fire. Charge it only on a Zebra-approved lithium-ion charger.

WHAT TO DO

1. Print a [configuration report](#): its power management section shows the battery's state of health and its number of cycles.
2. Plan for a new Zebra PowerPrecision+ battery.
3. Replace the battery with the printer switched off: move the belt clip aside, press the battery latch, tilt the battery forwards and lift it out, then install the new one until it locks into place.
4. Remove the adhesive insulation from the new battery and charge it before first use.
5. Dispose of the old battery in accordance with local regulations, with its terminals insulated with adhesive tape.

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The Zebra FAQ on mobile printer batteries generally recommends replacement after 300 to 500 charge cycles, or when a full battery only lasts half its original time.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [Zebra Mobile Printer Batteries \(Frequently Asked Questions\)](#)  – Zebra FAQ on mobile printer batteries (official documentation).

Why does my Zebra ZQ511 show “BATTERY DIMINISHED SHUTTING DOWN” and then switch off?

Flashing message: **BATTERY DIMINISHED** / **SHUTTING DOWN** (also worded “Replace Battery Shutting Down” in the guide) · One beep per second, shutdown after 30 seconds.

Short answer: The battery has reached 600 charge cycles: Zebra rates its condition as “Poor”. The warning flashes, the printer beeps once per second and then switches off after 30 seconds; only a new battery solves the problem.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, a battery at 600 charge cycles or more moves to the Poor state: the printer displays the warning flashing, beeps once per second and switches off after 30 seconds.

Caution: Do not burn, disassemble or short-circuit the battery, and do not expose it to more than 65 °C. Use only Zebra-approved chargers: any other charger can damage the battery or the printer and voids the warranty.

WHAT TO DO

1. Replace the battery with a new Zebra PowerPrecision+ battery, with the printer switched off.
2. Remove the adhesive insulation from the new battery and charge it before first use.
3. In a vehicle, the battery eliminator can power a ZQ511 without a battery.

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4. Dispose of the old battery in accordance with local regulations, with its terminals insulated with adhesive tape.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

What should I do when my Zebra ZQ511 shows “BATTERY FAILED” or “CHARGING FAULT”?

Messages: **BATTERY FAILED** / **REPLACE BATTERY** or **CHARGING FAULT** / **REPLACE BATTERY** · Printer light solid red = battery fault · Charger light fast flashing red = charging fault.

Short answer: Both messages ask you to replace the battery. “BATTERY FAILED” corresponds to a battery authentication failure: the ZQ511 only works correctly with genuine Zebra PowerPrecision+ batteries. “CHARGING FAULT” indicates a charging fault.

LIKELY CAUSE

The ZQ511/ZQ521 guide associates “BATTERY FAILED / REPLACE BATTERY” with the BatteryAuthenticationFail alert and “CHARGING FAULT / REPLACE BATTERY” with the BatteryChargeFault alert. The light around the Power button is solid red in the event of a battery fault. On the 1-slot and 3-slot chargers, a fast flashing red light indicates a charging fault, and a solid red light indicates a battery in poor condition, charging or charged.

Caution: Do not short-circuit, disassemble, crush or puncture the battery, do not throw it into fire or water, and do not expose it to more than 65 °C. Do not place the charger where liquids or metal objects could fall into the charging bays.

WHAT TO DO

1. Check that the battery is a genuine Zebra PowerPrecision+ battery.

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2. Remove the battery with the printer switched off, then reinstall it until it locks into place.
3. If the message comes back, or if the charger shows a red light, replace the battery.
4. Charge only with a Zebra-approved charger.

The Zebra battery FAQ advises against batteries from other manufacturers: if a third-party battery damages the printer, the warranty may be voided. Zebra mobile printer batteries are guaranteed for one year.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [Zebra Mobile Printer Batteries \(Frequently Asked Questions\)](#)  – Zebra FAQ on mobile printer batteries (official documentation).

Why does my Zebra ZQ511 show “CHARGING TEMP FAULT MUST BE 0-40°C” while charging?

Message: **CHARGING TEMP FAULT / MUST BE 0-40°C** · Light solid orange during normal charging.

Short answer: The battery is too hot or too cold to be charged. Bring the printer or the battery back to between 0 and 40 °C, ideally between 5 and 40 °C, out of direct sunlight, then restart charging.

LIKELY CAUSE

The ZQ511/ZQ521 guide associates this message with the BatteryOverTemp (battery too hot) and BatteryUnderTemp (battery too cold) alerts. The battery charges between 0 and 40 °C, ideally between 5 and 40 °C. At high temperatures, charging may stop and restart several times to keep the battery within its limits; at an abnormal temperature, the light and the display indicate that charging cannot start.

Caution: Do not expose the battery to more than 65 °C and charge it only with a Zebra-approved lithium-ion charger: incorrect charging or high temperatures can cause it to explode, leak or catch fire.

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WHAT TO DO

1. Bring the printer or the battery back into a room at between 0 and 40 °C, ideally between 5 and 40 °C.
2. Recharge it out of direct sunlight, never above 40 °C.
3. For faster charging, charge at room temperature with the printer switched off.
Charging also continues with the printer switched on, but more slowly.
4. Check the light: solid orange while charging, solid green once the battery is charged.

The Zebra battery FAQ gives the same charging range, from 0 to 40 °C, for Zebra lithium-ion batteries. The 1-slot and 3-slot chargers charge a 2-cell battery in less than 4 hours and a 4-cell battery in less than 6 hours.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [Zebra Mobile Printer Batteries \(Frequently Asked Questions\)](#)  – Zebra FAQ on mobile printer batteries (official documentation).

Why does the battery in my Zebra ZQ511 run down so quickly?

Symptom: reduced battery run time.

Short answer: According to Zebra, a battery that is more than a year old may normally last less long. Check its state of health on the configuration report and replace it if necessary; also adjust the darkness and print speed to suit the media.

LIKELY CAUSE

The “Reduced battery charge life” topic in the ZQ511/ZQ521 guide states that a reduced charge life may be due to the normal ageing of a battery that is more than a year old: a rechargeable battery loses capacity and can only withstand a limited number of recharges.

Caution: Use only a Zebra charger: another charger can damage the battery.

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ZEBRA ADVICE FOR EXTENDING BATTERY LIFE

1. Check the battery's state of health and number of cycles on the [configuration report](#), and replace it if necessary.
2. Never charge the battery in direct sunlight or above 40 °C, and use only a Zebra charger designed for lithium-ion batteries.
3. Choose suitable media, and consider pre-printed labels if the same text or graphic appears on every label.
4. Adjust the darkness and print speed to suit the media, and use XON/XOFF software flow control if possible.
5. Remove the battery if the printer is left unused for a day or more, unless it is on maintenance charge, and consider a spare battery.

Zebra offers an extended 4-cell smart battery with a higher capacity. The Zebra battery FAQ cites grinding noises, poor print quality and communication problems as signs of wear.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [Zebra Mobile Printer Batteries \(Frequently Asked Questions\)](#)  – Zebra FAQ on mobile printer batteries (official documentation).

Why does my Zebra ZQ511 print more slowly when the battery is low or when it is cold?

Symptoms: changes in print speed and noise.

Short answer: This is automatic performance adaptation (Adaptive Print Performance): when the ZQ511 detects a low charge, a battery in poor condition, extreme cold or very dense printing, it adjusts its performance to preserve the battery. The speed and noise may change, but print quality should not suffer.

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LIKELY CAUSE

According to the ZQ511/ZQ521 guide, the printer uses PSPT PrintSmart Gen 2 technology, which adapts performance to the battery charge and condition, the temperature and the print density, so that printing can continue.

WHAT TO DO

1. Check the charge on the battery icon: 0 bars indicates a low battery.
2. Recharge the battery between 0 and 40 °C, or use a charged battery.
3. If the battery is worn, replace it ([worn battery entry](#)).

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#) – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

How do I adjust or disable sleep mode on my Zebra ZQ511?

Display and backlight off · light flashing green (flashing orange while charging).

Short answer: By default, the ZQ511 goes into sleep mode after 2 minutes of inactivity. The delay is set with `power.sleep.timeout` (in seconds) and sleep mode is disabled by setting `power.sleep.enable` to off, using Zebra Setup Utilities.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, the printer goes into sleep mode after two minutes of inactivity: the display and backlight switch off and the light flashes green. It wakes up when the Power or Select button is pressed, or when it receives data over Bluetooth or Wi-Fi.

WHAT TO DO

1. To wake the printer up, press Power or Select for less than 3 seconds.
2. Pressing Power for less than 3 seconds puts the printer into sleep mode; pressing it for more than 3 seconds switches it off completely.

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3. With Zebra Setup Utilities, send `power.sleep.timeout` with the delay you want in seconds, or `power.sleep.enable` set to off to disable sleep mode (on by default).
4. Under Windows, a job sent during sleep mode can cause a temporary “Error printing”: see the [Error printing](#) entry.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · Windows 10 Bluetooth Setup with Zebra Printers – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\)](#) > [Wireless Communications with Bluetooth](#)  (official documentation).

Firmware: updating or recovering a Zebra ZQ511

The guide lists the firmware download and automatic update messages, and Zebra provides a forced download mode for a printer stuck at start-up.

What should I do when my Zebra ZQ511 shows “DOWNLOAD FAILED PLEASE REBOOT” or stays stuck at start-up?

Messages: `DOWNLOAD FAILED / PLEASE REBOOT` ; during an update: `DOWNLOADING FIRMWARE , FIRMWARE WRITING TO FLASH , RECEIVING FIRMWARE / DO NOT POWER OFF!` .

Short answer: The firmware download has failed: restart the printer, as the message asks. If it stays stuck at start-up or restarts in a loop, Zebra provides a forced download mode, started by holding Select and Feed while switching on, followed by sending the firmware with ZDownloader.

LIKELY CAUSE

The ZQ511/ZQ521 guide associates “DOWNLOAD FAILED / PLEASE REBOOT” with the BadFirmwareDownload alert. According to the Zebra knowledge base, a corrupted firmware file can cause a ZQ5, ZQ6 or QLn series printer to get stuck at start-up or



restart in a loop; the problem mainly affected early firmware versions.

Caution: Never switch the printer off while the firmware is being written, or when the display shows “RECEIVING FIRMWARE / DO NOT POWER OFF!”.

OFFICIAL FORCED DOWNLOAD PROCEDURE

1. Switch the printer off and remove the battery.
2. Load a roll of labels or receipts.
3. Connect the USB cable, with the battery still removed, then reinstall the battery.
4. Hold down Select and Feed, then switch the printer on. When the light comes on, release Power, then the other buttons: the display switches to forced download mode.
5. Open ZDownloader: Printer menu, Auto Detect, then select the printer whose port is USB.
6. File menu, Select Firmware File: choose the firmware file, then Printer menu, Download All.
7. Follow the installation on the display without switching the printer off; a message is displayed at the end.

The messages “LOOKING FOR UPDATES”, “MIRRORING COMMANDS”, “SENDING FEEDBACK” and “MIRROR PROCESSING FINISHED” accompany the automatic update (mirroring) and are for information only. The ZQ511/ZQ521 guide confirms the Select + Feed sequence at power-up for the forced download.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · Mobile Printer Firmware Download Failure and Force Download Mode – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) > Buttons \(Power Up Sequences\)](#)  (official documentation).

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RFID: why does my Zebra ZQ511 RFID print “VOID” or encode tags incorrectly?

The ZQ511 RFID encodes UHF EPC Gen 2 tags with an encoder built into the printhead assembly. These entries draw on Zebra's user guide, its RFID data sheet and its RFID programming guide, which names the ZQ511 specifically.

Why does my Zebra ZQ511 RFID print “VOID” on the labels?

Printed label: VOID .

Short answer: The ZQ511 RFID failed to encode the label's tag: it prints “VOID” on it and tries again on the following labels (3 times by default). Use RFID media with a black mark, calibrate the media and then run the RFID calibration.

LIKELY CAUSE

According to the ZQ511/ZQ521 guide, if a tag cannot be encoded, the printer prints “VOID” on the label and tries again, up to n labels, before moving on to the next format; the ^RS command sets n from 1 to 10 (3 by default). Once this number is reached, the default action discards the label format concerned. Repeated failures can come from the tags, the label formats or the position of the transponders. The Zebra RFID programming guide adds tags that are more sensitive than others and interference from other nearby radio sources.

WHAT TO DO

1. Check the media: the ZQ511 RFID does not detect the gap between labels and requires RFID media with a black mark.
2. Calibrate the printer for the media, then run the RFID calibration (SGD command `rfid.tag.calibrate` with the value run, or ZPL command ^HR).
3. Check the programming position and the other RFID settings, and check that the ZPL or SGD commands and the label software settings do not override those of the printer.



4. Check that `rfid.enable` is set to on; restart the printer if you have changed it.
5. Move the printer away from fixed RFID readers and other radio sources, and keep the cover closed during encoding.
6. Update the firmware.

When to call a technician: if all labels are voided and switching the printer off for 10 seconds does not solve anything, the RFID encoding module or its connection may be faulty: Zebra refers you to its technical support or an authorised technician.

The Zebra data sheet states that the ZQ511 RFID automatically calibrates the RFID media thanks to its adaptive encoding and encodes UHF EPC Gen 2 V2 and ISO/IEC 18000-63 tags. The length of the “VOID” printout is adjustable, but not its position.

Sources: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN · [ZQ511/ZQ521 RFID mobile printers](#)  – Zebra ZQ511/ZQ521 RFID data sheet · [RFID Programming Guide for Link-OS RFID printers](#)  – RFID Programming Guide 3, PDF P1062165-05EN (official documentation).

Why does my Zebra ZQ511 RFID encode the wrong tag or fail RFID calibration?

Symptoms: wrong tag encoded, RFID calibration failing, labels voided one after another.

Short answer: On the ZQ511, ZQ521 and ZQ630, Zebra points out that the RFID tags may be placed too close to each other. Manually adjust the programming position and the read and write power, check that the tags are correctly programmed, and use media with more widely spaced tags.

LIKELY CAUSE

The RFID problems table in the Zebra RFID programming guide states that, on the ZQ511, ZQ521 and ZQ630, the tags (inlays) are placed too close to each other. The ZQ511 has only one antenna: only the read and write power level can be adjusted, not the antenna selection.

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WHAT TO DO

1. Calibrate the printer for the media, then run the RFID calibration: with the printhead closed, feed at least one label, leave the tags before and after the target label in place, and leave some media protruding at the front for backfeed.
2. During calibration, the printer advances the media by about 1 mm at a time and records the programming position and the power levels. If it fails, it keeps its default values: try again with another label.
3. If the problem persists, manually adjust the programming position and the read and write power.
4. Check that the tags are programmed with the correct data.
5. Use media with more widely spaced tags; the minimum pitch supported by these printers is 16 mm.

Zebra's RFID Programming Guide 3 covers Link-OS RFID printers and names the ZQ511/ZQ521 specifically. Zebra recommends running an RFID calibration after every change of RFID media.

Sources: [RFID Programming Guide for Link-OS RFID printers](#)  – RFID Programming Guide 3, PDF P1062165-05EN · [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

Other problems: printing the Zebra ZQ511 configuration report

The configuration report checks the printhead and gathers the information to give to Zebra support.

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How do I print a configuration report on a Zebra ZQ511?

Short answer: Switch the printer off and load continuous (journal) media with no black bars on the back. Hold down Feed, press Power and release it, then release Feed when printing starts.

PROCEDURE (ZEBRA GUIDE)

1. Switch the printer off and load continuous media, with no black bars printed on the back.
2. Press and hold the Feed button.
3. Without releasing Feed, press Power and then release it.
4. Release Feed when printing starts: the printer prints a line of interlocking “x” characters to test the printhead, the software version, and then the report.
5. To get the network report as well, hold Select instead of Feed when switching the printer on.
6. The report shows, among other things, the model, the serial number, the PCC code, the firmware versions, the Bluetooth and Wi-Fi settings, the battery's state of health and number of cycles, the memory, the sensor values and the stored files.

To contact Zebra support, have ready the model, the serial number (large label on the back and configuration report), the 15-digit product configuration code (PCC) and the firmware version.

Source: [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN (official documentation).

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When should you call a technician for a Zebra ZQ511?

The entries above first suggest recharging, cleaning or adjusting a setting. In the following cases, the Zebra documentation refers you to its support, to an authorised technician or to the replacement of a part:

- **Recurring “OUT OF MEMORY...” or USB alert:** the guide gives no solution: Zebra support, with the configuration report.
- **Linerless media still sticking:** after cleaning and feeding 1 to 2 metres of media, Zebra says to replace the platen roller.
- **“HEAD MAINTEN. NEEDED” persisting after cleaning:** Zebra support, with the serial number, the model and the firmware version.
- **All RFID labels voided after a restart:** RFID encoding module or its connection possibly faulty: Zebra technical support or an authorised technician.

Avoiding recurring faults on the Zebra ZQ511: preventive maintenance

Several entries in this guide point to sensors that are badly positioned or dirty, a printhead or platen roller that needs cleaning, or unsuitable settings or consumables. These are exactly the points a preventive maintenance visit checks before they cause a breakdown.

TIMCOD preventive maintenance is part of the through-life maintenance (MCO). TIMCOD provides for your fleet (page in French): scheduled preventive visits by certified technicians, with a detailed report. What it brings to a ZQ511 fleet:

Fewer breakdowns, less downtime

Fewer production interruptions caused by label printers.

Worn parts detected in time

Printhead, platen roller, sensors: spotted before they cause a breakdown.

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Regular cleaning and checks

Printhead, rollers and sensors cleaned and checked at every visit.

Longer service life

A well-maintained, properly adjusted printer lasts longer.

Print quality maintained

Legible barcodes, with darkness and printhead pressure suited to your consumables.

Fewer emergency call-outs

Incidents are handled during scheduled visits rather than as emergency repairs.

Controlled maintenance costs

A predictable budget instead of unplanned repairs.

Specialist Zebra technicians

Support from teams who know your equipment.

In addition, TIMCOD corrective maintenance includes phone support (hotline), repair to working order, express exchange and, as an option, SWAP. Maintenance contracts come in three levels (Essentiel, Confort, Premium).

Zebra ZQ511 troubleshooting: frequently asked questions

Why is the Media icon flashing on a Zebra ZQ511?

According to Zebra, the Media icon flashes when the media runs out and the Cover Open icon flashes when the media cover is open. Check that media is loaded, then close the cover until it clicks so that it is properly latched. Also keep the bar and gap sensor windows free of dust. [See the detailed entry.](#)

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What does “CHARGING TEMP FAULT” mean on a Zebra ZQ511?

The battery is too hot or too cold to be charged. Bring the printer or the battery back to between 0 and 40 °C, ideally between 5 and 40 °C, out of direct sunlight, then restart charging. Charge only with a Zebra-approved charger. [See the detailed entry.](#)

How do I clean the printhead of a Zebra ZQ511?

Switch the printer off and let the printhead cool. Rub the thin grey line of the printhead with a Zebra cleaning pen, or a cotton swab moistened with 90% medical alcohol, from the centre towards the edges. Zebra recommends this cleaning after five rolls, or after every roll with linerless media. [See the detailed entry.](#)

How do I make a Zebra ZQ511 visible over Bluetooth?

Since firmware 6.0, the ZQ511 is no longer discoverable by default. Press and hold the Feed button for 5 seconds: the printer enters Limited Pairing Mode and accepts pairing for 2 minutes. You can also set Discoverable to ON with Zebra Setup Utilities. [See the detailed entry.](#)

When should I replace the battery in a Zebra ZQ511?

The PowerPrecision+ battery counts its charge cycles. From 300 to 549 cycles, the printer shows “Battery Diminished Consider Replacing” at start-up; from 550 to 599 cycles, “Warning-Battery Is Past Useful Life”. From 600 cycles onwards, it beeps every second and switches off after 30 seconds. [See the detailed entry.](#)

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Why does a Zebra ZQ511 RFID print “VOID”?

The printer failed to encode the label's RFID tag: it prints VOID on it and tries again on the following labels, 3 times by default. Use RFID media with a black mark, calibrate the media and then run the RFID calibration. Zebra also reports that on the ZQ511 the tags are sometimes too close together. [See the detailed entry.](#)

How do I print a configuration report on a Zebra ZQ511?

Switch the printer off and load continuous media with no black bars on the back. Hold down Feed, press Power and release it, then release Feed when printing starts. The report begins with a printhead test and shows, among other things, the battery's state of health. [See the detailed entry.](#)

How do I calibrate a Zebra ZQ511?

The Zebra guide for the ZQ511 does not describe a step-by-step calibration procedure. If labels are skipped, check that the black marks are centred and on the back of the media, or set media.bar_location to front for marks on the front. Keep the 15 mm central strip free of dark graphics and clean the sensor windows. [See the detailed entry.](#)

Sources consulted

All the causes, procedures and messages in this guide come from the pages of the official Zebra documentation listed below (ZQ511/ZQ521 user guide, ZQ511/ZQ521 and ZQ511/ZQ521 RFID data sheets, RFID programming guide, Zebra knowledge base articles and battery FAQ), consulted on 20 October 2026.

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- [ZQ511/ZQ521 Mobile Printers User Guide](#)  – Zebra ZQ511/ZQ521 user guide, PDF P1106523-07EN, 30/09/2025 **official**
- [ZQ511 and ZQ521 mobile printers](#)  – Zebra ZQ511/ZQ521 data sheet **official**
- [ZQ511/ZQ521 RFID mobile printers](#)  – Zebra ZQ511/ZQ521 RFID data sheet **official**
- [RFID Programming Guide for Link-OS RFID printers](#)  – RFID Programming Guide 3, PDF P1062165-05EN, 25/06/2020 **official**
- Mobile Printer Firmware Download Failure and Force Download Mode – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) **official**
- [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) › Buttons \(Power Up Sequences\)](#)  **official**
- Windows 10 Bluetooth Setup with Zebra Printers – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) **official**
- [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) › Wireless Communications with Bluetooth](#)  **official**
- Configure Printer Bluetooth Setup Using the Zebra Setup Utilities (ZSU) – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) **official**
- [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) › Wireless Communications with Bluetooth](#)  **official**
- Configuring Printer Connectivity for Wired or Wireless Networks Using the Zebra Setup Utilities – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) **official**
- [ZQ511/ZQ521 Mobile Printers User Guide \(PDF\) › WLAN Overview](#)  **official**
- [Zebra Mobile Printer Batteries \(Frequently Asked Questions\)](#)  – Zebra FAQ on mobile printer batteries, 13/07/2023 **official**

The following documents and pages were not consulted for this guide: the French version of the ZQ511/ZQ521 guide, the US version of the Zebra ZQ511 support page, Zebra knowledge base articles 000022033 (waking the ZQ511/ZQ521 with a Bluetooth job), 000026523 (charging the ZQ5X1 in the ZQ500 vehicle cradle) and 000029944 (calibration with gap labels on an RFID mobile printer), the Zebra Bluetooth guide (P1068791) and the SGD page “media.sense_mode” in the ZPL programming guide; nothing was taken from them. If the fault falls under these documents, refer to the manufacturer's documentation or ask the TIMCOD technicians.

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See also

- Product pages on timcod.fr (in French): [Zebra ZQ511 and ZQ521 Series](#), [Zebra ZQ511 and ZQ521 RFID Series](#)
- All Zebra printer troubleshooting guides ([ZT230](#), [ZT410](#), [ZT421](#), [ZT420](#), [ZT411](#), [S4M](#), [GK420](#), [ZD421](#), [GX420](#), [QLn420](#), [ZQ630](#), [ZQ610 Plus](#), [ZQ510](#), [ZC100](#) and [ZC300](#), [ZD410](#), [ZD411](#), [ZD420](#), [ZD500R](#), [ZD510-HC](#), [ZD611](#), [ZD620](#), [ZD621](#), [ZQ310 Plus](#), [ZQ320 Plus](#), [ZQ620 Plus](#), [ZT231](#), [ZT510](#), [ZT610](#) and [ZT620](#), [ZXP Series 7](#))
- [Maintenance and repair of Zebra printers](#)
- [All printer troubleshooting guides, all brands](#)
- [Through-life maintenance \(MCO\): preventive and corrective maintenance](#) (in French)
- [TIMCOD, Zebra reseller](#) (in French)
- [Zebra labels and consumables for thermal printers](#) (in French)
- [RFID labels and RFID printers](#) (in French)
- [Printer cleaning kits](#) (in French)

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PDF version of the page <https://www.timcod.fr/repairation/en/printer-troubleshooting/zebra/zq511>, updated on 21 October 2026.

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