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TROUBLESHOOTING GUIDE

Zebra ZD421 troubleshooting guide: errors, faults and fixes

Updated 21 October 2026 · By TIMCOD maintenance technicians · Source: official Zebra documentation, ZD421 / ZD621 user guide (ZD421 and ZD621 Series Desktop Printers User Guide) (list at the end of the page)

TIMCOD PRODUCT PAGE (IN FRENCH)

[See the Zebra ZD421 product page →](#)

In brief. The Zebra ZD421 is a desktop thermal label printer, available in thermal transfer with a ribbon roll (ZD421t), direct thermal (ZD421d) or thermal transfer with a ribbon cartridge (ZD421c). Zebra documents it in a guide shared with the ZD621; this guide keeps what applies to the ZD421, which has five lights and four buttons. The causes most often cited by the manufacturer are running out of labels or ribbon, a cover that is not properly latched, the printhead temperature and a media sensor that is incorrectly set or not calibrated. Here you will find the alerts and lights, SmartCal calibration, the ribbon and the cartridge, cleaning the printhead and platen roller, connection, the battery and firmware. Click a question to open its entry.

- **A light turns red or amber** (Media Out, Ribbon Out, Printhead Open...): find it in the [lookup table](#) and open the matching entry.

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- **No alert, but the labels are misaligned or the print quality is poor:** start with [SmartCal calibration](#), then [printhead cleaning](#), [darkness](#) and the [platen roller](#).
- **The problem keeps coming back:** the [preventive maintenance](#) section explains how it reduces this type of fault.

Which error is my Zebra ZD421 showing? Lookup by message and by lights

The ZD421 signals its errors with five lights (STATUS, PAUSE, DATA, SUPPLIES, NETWORK) and with alerts that Zebra describes one by one in its guide. The table links each alert or light state to its cause and to the troubleshooting entry.

Message or state	Lights (Zebra guide)	Likely cause	Entry
Printhead Open	● STATUS solid red	Cover not properly closed or head-open switch needing repair	Printhead Open
Media Out	● ● SUPPLIES solid red, STATUS red	Out of media, label missing on the roll or continuous media loaded instead of labels	Media Out
Ribbon Out	● SUPPLIES flashing red	End of ribbon (thermal transfer) or cartridge missing on the ZD421 cartridge model	Ribbon Out
Ribbon In	● SUPPLIES flashing amber	Ribbon detected while the printer is in direct thermal mode	Ribbon In

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Message or state	Lights (Zebra guide)	Likely cause	Entry
Ribbon Low	● ● SUPPLIES alternating red and amber, STATUS solid amber	Ribbon cartridge nearly empty (10% remaining)	<u>Ribbon Low</u>
Cartridge Authentication Failed	—	Non-Zebra or modified cartridge, or dirty chip contacts	<u>Cartridge error</u>
Cutter Error	● STATUS solid red	Cutter blade jammed	<u>Cutter Error</u>
Printhead Over Temp	● STATUS solid orange	Printhead too hot: cooling pause	<u>Printhead Over Temp</u>
STATUS and PAUSE flashing red	● ● STATUS flashing red, PAUSE flashing red	Printhead overheating: let it cool down, then restart	<u>Printhead Shutdown</u>
Printhead Shutdown	—	Printhead over temperature: switch off, let it cool down, switch back on	<u>Printhead Shutdown</u>
Printhead Under Temp	● STATUS flashing orange	Printhead too cold (room too cold or faulty thermistor)	<u>Printhead Under Temp</u>
Out of Memory	● ● DATA flashing amber, STATUS solid amber	Not enough memory for a format, graphic or font	<u>Out of Memory</u>

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Message or state	Lights (Zebra guide)	Likely cause	Entry
STATUS solid orange	● STATUS solid orange	Printhead overheating or failure, memory full, USB host or serial power fault	<u>STATUS solid orange</u>
Unauthorized Printhead Error	—	Printhead that is not a genuine Zebra printhead	<u>Printhead not recognised</u>
Printhead Resolution Error	—	Printhead resolution unreadable: printhead incorrectly replaced or not a Zebra printhead	<u>Printhead not recognised</u>
DATA off after sending a job	○ DATA off	Incorrect communication settings	<u>No data received</u>
DATA flashing, nothing prints	● DATA flashing green	Format not recognised: incorrect prefix, communication or format	<u>Data received but nothing printed</u>
STATUS alternating green and amber	● ● STATUS alternating green and amber	Printer in communication diagnostics mode	<u>Communication diagnostics</u>
NETWORK off	○ NETWORK off	No Ethernet link detected	<u>Ethernet</u>
NETWORK solid red	● NETWORK solid red	Ethernet or Wi-Fi fault: printer not connected	<u>Ethernet</u>

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Message or state	Lights (Zebra guide)	Likely cause	Entry
NETWORK flashing	● ● ● NETWORK flashing red, amber or green	Wi-Fi associating or authenticating, or weak signal	Wi-Fi
Battery: health light red	● Battery health solid red or flashing red	Internal error or battery charging error	Battery light red
Battery: no charge bars	○ Charge bars off	Battery needs recharging: the printer cannot start	Discharge d battery
STATUS slowly pulsing green	● STATUS green slowly turning on and off	Printer in sleep mode (Energy Star)	Sleep mode

The light states come from the “Standard Interface Controls”, “Status – Typical Operating Conditions”, “Status – Wi-Fi (WLAN) Option”, “Status – Ethernet (LAN) Option” and “Battery Indicators and Controls” pages of the Zebra ZD421 / ZD621 user guide. The dash indicates that the pages consulted do not specify the state of the lights.

Zebra ZD421 error messages and lights: causes and solutions

The ZD421 alerts described in the Zebra user guide, including those specific to ribbon cartridge models, and how to read the lights. For each one: the short answer, the cause, the steps to follow and, where the guide provides for it, the point at which to hand over to a technician.

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Why does my Zebra ZD421 report “Printhead Open” when the cover is closed?

Alert: Printhead Open · Light: STATUS solid red.

Short answer: According to Zebra, the cover, which carries the printhead, is not fully closed, or the head-open switch needs servicing. Press both front corners of the cover until the latches click; if the alert persists, call in a technician.

LIKELY CAUSE

The Zebra guide describes this alert when the printer receives a print command or a FEED button press but cannot continue. Two causes are given: the cover (or the head) is open or not properly closed, or the head-open switch needs repairing.

WHAT TO DO

1. Press down on both front corners of the top of the printer cover.
2. You should hear and feel the latches click into place: the cover is then locked for printing.
3. If the alert remains displayed even though the cover is properly locked, do not persist: the head-open switch is at fault.

When to call a technician: if the alert persists with the cover latched, Zebra states that the head-open switch must be repaired by a technician.

Sources: [Alert: Printhead Open](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

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Why does my Zebra ZD421 report “Media Out” when labels are loaded?

Alert: **Media Out** · Lights: SUPPLIES solid red, STATUS red.

Short answer: The printer does not detect any media in the print path: empty roll, label missing on the roll, or printer set for labels while continuous media is loaded. Reload or reposition the media, then press FEED or PAUSE once to resume.

LIKELY CAUSE

Zebra gives four causes: no roll in the printer; a missing label detected on the roll (a marker the manufacturer places between two labels to signal the end of the roll); a printer set for non-continuous media (labels or black mark) while continuous media is loaded; and finally detection made impossible by corrupted data in memory or a faulty component.

Caution: When a missing label is detected on the roll, Zebra asks you not to switch the printer off: the print job would be lost.

WHAT TO DO

1. Out of media: load the roll, close the printer, then press FEED or PAUSE once to resume printing.
2. End of roll: remove the remaining media and the core, then install a new roll. Same media: press FEED once. Different media (size, length, supplier or batch): run a [SmartCal calibration](#).
3. Label missing in the middle of the roll: pull the media past the missing label until the next label is over the platen roller, close the printer and press FEED once: the printer resynchronises the label position.
4. Continuous media loaded while the printer expects labels or a black mark: check that the movable sensor is in the default centre position, then calibrate the printer for this media.
5. If the media is still not detected, reload the firmware (see [firmware update](#)).

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When to call a technician: if the media is still not detected after reloading the firmware, Zebra recommends contacting a technician.

The Zebra pages differ on the STATUS light: solid red according to “Standard Interface Controls”, flashing red according to “Detecting and Recovering from a Media-Out Condition”. In both cases, the SUPPLIES light is red.

Sources: [Alert: Media Out](#) · [Detecting and Recovering from a Media-Out Condition](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 report “Ribbon Out” with the SUPPLIES light flashing red?

Alert: **Ribbon Out** · Light: SUPPLIES flashing red (thermal transfer mode).

Short answer: The printer has detected the end of the ribbon: genuine Zebra ribbons end with a reflective leader that the printer recognises. Replace the ribbon roll (or the cartridge on a ZD421 cartridge model), close the printer and press FEED once.

LIKELY CAUSE

Zebra first cites the end of the ribbon, on all models: printing stops mid-job, or the alert appears as soon as a job is sent. On ZD421 ribbon cartridge models only, there are two other causes: no cartridge installed (a cartridge is mandatory when the printer is set to thermal transfer), or detection made impossible by dirty contacts on the cartridge chip or on the cartridge sensor, corrupted data in memory or faulty components.

WHAT TO DO

1. Open the printer: at the end of the ribbon, the reflective leader is visible under the roll or the cartridge, and the take-up roll is full.
2. Remove the used ribbon from the take-up spindles and discard it; keep the empty core to load the next roll.

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3. Install a new ribbon roll (see [loading the ribbon](#)) or, on a ZD421 cartridge model, a new cartridge (see [installing the cartridge](#)).
4. Close the printer and press FEED once; if printing does not resume, press PAUSE.
5. ZD421 cartridge model: if the alert appears while a cartridge is in place, see the [cartridge errors](#) entry.

Sources: [Alert: Ribbon Out](#) · [Detecting and Recovering from a Ribbon-Out Condition](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 report “Ribbon In” when I am printing in direct thermal mode?

Alert: **Ribbon In** (ZD421 ribbon cartridge model) · Light: SUPPLIES flashing amber (ribbon detected in direct thermal mode).

Short answer: The printer is set to direct thermal while a ribbon is installed. If you are printing on direct thermal labels, remove the cartridge without switching the printer off; if you are printing with a ribbon, switch the print method to thermal transfer.

LIKELY CAUSE

According to Zebra, the alert appears when a job is sent in direct thermal mode while a ribbon cartridge is in place: this mode does not use a ribbon. Second cause: the printer has been left in direct thermal mode while you are printing on thermal transfer media with a ribbon. For ribbon roll models, the guide also states that printing in direct thermal mode with a ribbon loaded causes a “ribbon-in” error.

WHAT TO DO

1. Direct thermal labels (ZD421 cartridge model): remove the cartridge without switching the printer off, then close it. If printing does not resume, press FEED or PAUSE once.



2. Thermal transfer labels with ribbon: switch the print method to thermal transfer (THERMAL TRANS) from the driver, the labelling software or the commands (see [thermal transfer mode](#)).
3. On an Ethernet or Wi-Fi printer, the setting is also available in the print server web pages: Print > Print Quality > Print Type.
4. Check that the label format sent does not contain the ^MTD command (direct thermal) instead of ^MTT (thermal transfer).

The printer has separate heat settings for direct thermal and thermal transfer, designed to give comparable darkness at the same setting level.

Sources: [Alert: Ribbon In – ZD421 Ribbon Cartridge Printer Only](#) · [Standard Interface Controls](#) · [Loading Zebra Transfer Roll Ribbon](#) – ZD421 / ZD621 user guide (official documentation).

Why is the SUPPLIES light on my Zebra ZD421 flashing red and amber?

Alert: **Ribbon Low** (ZD421 ribbon cartridge model) · Lights: SUPPLIES alternating red and amber, STATUS solid amber.

Short answer: On a ZD421 ribbon cartridge model, this signal indicates that the cartridge is nearly empty: the printer estimates that about 10% of the ribbon remains. Have a replacement cartridge ready.

LIKELY CAUSE

Alert specific to ZD421 ribbon cartridge models: the printer has calculated that about 10% of the ribbon remains in the cartridge, the default alert threshold.

WHAT TO DO

1. Check that you have replacement cartridges.
2. The alert threshold (10% by default) can be changed with programming commands: Zebra refers you to the “Ribbon Cartridge Programming Commands” section of the guide and to the ZPL programming guide.

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3. When the ribbon runs out, replace the cartridge (see [installing the cartridge](#)).

Sources: [Alert: Ribbon Low – ZD421 Ribbon Cartridge Printer Only](#) · [Status – Typical Operating Conditions](#) · [Standard Interface Controls](#) · ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 cartridge model show a cartridge error when a Zebra cartridge is installed?

Symptoms: **Ribbon Out** alert with a cartridge installed, or cartridge authentication error (**Cartridge Authentication Failed**).

Short answer: Zebra only supports genuine Zebra ribbon cartridges, neither refurbished nor modified. If a genuine cartridge is rejected, the contacts on its chip or the pins of the cartridge sensor are probably dirty: clean them, then try another cartridge.

LIKELY CAUSE

The “Status – Typical Operating Conditions” page describes the “Cartridge Authentication Failed” state: the cartridge cannot be authenticated or has been modified. When the error appears with an unmodified genuine cartridge, or when “Ribbon Out” is displayed with a cartridge in place, Zebra blames dirty contact pins on the cartridge sensor or dirty chip contacts, or a damaged chip.

WHAT TO DO

1. Check that it is a genuine Zebra cartridge, neither refurbished nor modified.
2. If the cartridge chip contacts look dirty, clean them with a cotton swab lightly moistened with medical-grade alcohol.
3. If the fault persists, try another cartridge.
4. Also clean the contact pins of the cartridge sensor, following the “Cleaning the Media Path – Upper Half of ZD421 Thermal Transfer Ribbon Cartridge Printers” procedure in the Zebra guide.

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Sources: [Issue: Erroneous Ribbon Cartridge Faults](#) · [Status – Typical Operating Conditions](#) · [Loading the Ribbon Cartridge – ZD421 Ribbon Cartridge Printers Only](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 stop mid-print with the “Printhead Over Temp” alert?

Alert: Printhead Over Temp · Light: STATUS solid amber.

Short answer: The printhead is too hot: the printer pauses to let it cool down, then resumes automatically. If the alert recurs often, move the printer out of direct sunlight or cool the room.

LIKELY CAUSE

Zebra gives two causes: a large print job (high volume), and an ambient temperature above the printer's operating range, for example when it is exposed to direct sunlight.

Caution: According to Zebra, a hot printhead can cause severe burns: do not touch it until it has cooled down.

WHAT TO DO

1. Wait: printing resumes by itself once the printhead has cooled down.
2. If the room is too hot or the printer is in full sun, move it to a cooler place or cool the room.

Sources: [Alert: Printhead Over Temp](#) · [Status – Printhead Operation](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).



Why does my Zebra ZD421 stop with “Printhead Shutdown” or with the STATUS and PAUSE lights flashing red?

Alert: **Printhead Shutdown** · Lights: STATUS and PAUSE flashing red, which Zebra also associates with printhead overheating.

Short answer: The printhead is overheating. Zebra asks you to switch the printer off, wait several minutes for it to cool down completely, then switch it back on.

LIKELY CAUSE

The “Status – Printhead Operation” page describes the “Printhead Shutdown” state: the printhead is over temperature. The “Standard Interface Controls” page associates the STATUS and PAUSE lights flashing red at the same time with printhead overheating, with the same instruction: let it cool down, then restart.

Caution: According to Zebra, a hot printhead can cause severe burns: do not touch it until it has cooled down.

WHAT TO DO

1. Switch the printer off.
2. Wait several minutes for it to cool down completely.
3. Switch the printer back on.
4. If this happens again, check the causes of overheating that Zebra gives for the Printhead Over Temp alert: large print jobs, room too hot, direct sunlight.

The dedicated alert page (“Alert: Printhead Shutdown”) could not be read: its content was empty when consulted. This entry is based on the pages explaining the lights in the same guide.

Sources: [Status – Printhead Operation](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

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Why does my Zebra ZD421 report “Printhead Under Temp” with the STATUS light flashing amber?

Alert: Printhead Under Temp · Light: STATUS flashing amber.

Short answer: The printhead is too cold to print properly, usually because the room is below the minimum operating temperature. Switch the printer off, move it to a warmer place and let it warm up naturally.

LIKELY CAUSE

Zebra gives two causes: an ambient temperature below the printer's operating range, or a faulty printhead thermistor.

Caution: According to Zebra, a temperature change that is too rapid can cause moisture to condense inside and outside the printer: let it warm up naturally.

WHAT TO DO

1. Room too cold: switch the printer off, move it to a warmer place and let it warm up naturally.
2. Room at the right temperature: switch the printer off by holding down the POWER button for five seconds, wait until it has shut down completely, then switch it back on.
3. If the error persists, the printhead thermistor is probably faulty.

When to call a technician: if the error persists after a restart in a room at the right temperature, Zebra recommends contacting a technician (faulty printhead thermistor).

Sources: [Alert: Printhead Under Temp](#) · [Standard Interface Controls](#) · [Status – Printhead Operation](#) – ZD421 / ZD621 user guide (official documentation).

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Why does my Zebra ZD421 report “Out of Memory” with the DATA light flashing amber?

Alert: **Out of Memory** · Lights: DATA flashing amber, STATUS solid amber.

Short answer: The printer no longer has enough memory to store the content received (formats, graphics, fonts). Delete unused graphics, fonts or formats, or reduce the label format.

LIKELY CAUSE

The data cannot be saved to the requested memory location. Zebra distinguishes four types of storage (graphic, format, bitmap and font); the second line of the message indicates the function for which memory is insufficient.

WHAT TO DO

1. Free up memory by reducing the label format or the printer parameters, to reduce the print area.
2. Delete the graphics, fonts or formats you no longer use.
3. Check that the data is not being sent to a device that is not installed or is unavailable.

Sources: [Alert: Out of Memory](#) · [Standard Interface Controls](#) · [Status – Typical Operating Conditions](#)
– ZD421 / ZD621 user guide (official documentation).

What does the solid amber STATUS light mean on my Zebra ZD421?

Light: STATUS solid amber.

Short answer: According to Zebra, a solid amber STATUS light signals one of four situations: printhead overheating, failure of a printhead element, memory full while saving content, or a power fault on the USB host port or the serial port. The other

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lights and the context help you decide.

LIKELY CAUSE

The “Standard Interface Controls” page groups under this light printhead overheating, failure of a printhead element, memory full while saving content and a power fault on the USB host port or the serial port.

HOW TO INTERPRET THE LIGHT

1. The DATA light is also flashing amber: memory is full, see [Out of Memory](#).
2. Printing stopped during a job: the printhead is overheating, see [Printhead Over Temp](#).
3. The other two causes given by Zebra are failure of a printhead element and a power fault on the USB host port or the serial port.

Source: [Standard Interface Controls](#) [↗](#) – ZD421 / ZD621 user guide (official documentation).

What do the STATUS, PAUSE, DATA, SUPPLIES and NETWORK lights mean on my Zebra ZD421?

Lights: STATUS, PAUSE, DATA, SUPPLIES, NETWORK.

Short answer: STATUS shows the general status (solid green: ready; red or amber: error or alert), PAUSE shows pause, DATA shows data exchanges, SUPPLIES shows consumables (media and ribbon) and NETWORK shows the Ethernet or Wi-Fi connection. The [lookup table](#) links each state to its entry.

MEANING OF THE LIGHTS ACCORDING TO ZEBRA

1. **STATUS:** solid green, ready to print; green slowly turning on and off, sleep mode; solid red, out of media, media detection error, cover or printhead open, cut error or printhead authentication failure; solid amber, printhead overheating, failure of a

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printhead element, memory full or power fault on the USB host or serial port; flashing amber, printhead too cold; flashing red with PAUSE flashing red, printhead overheating (let it cool down, then restart).

2. PAUSE: solid amber, printer paused; flashing red with STATUS flashing red, printhead overheating.

3. DATA: off, no data transfer; solid green, communication session open with no transfer; flashing green, data transfer in progress; flashing amber, memory full.

4. SUPPLIES: solid red, out of media; flashing red, out of ribbon (thermal transfer); alternating red and amber, ribbon cartridge nearly empty (ZD421 cartridge model); flashing amber, ribbon detected in direct thermal mode (ZD421).

5. NETWORK: solid amber, 10 Mbit/s Ethernet link; solid green, 10/100 Ethernet link or Wi-Fi with strong signal; solid red, Ethernet or Wi-Fi fault; flashing red, Wi-Fi association in progress; flashing amber, Wi-Fi authentication in progress; flashing green, Wi-Fi connected with weak signal.

Sources: [Standard Interface Controls](#) · [Status – Typical Operating Conditions](#) – ZD421 / ZD621 user guide (official documentation).

Calibration problems: my Zebra ZD421 skips labels or does not detect them

SmartCal calibration and adjusting the movable sensor, as Zebra describes them for the ZD421, when labels are skipped or the print is out of position.

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How do I calibrate my Zebra ZD421 with SmartCal after changing labels?

Symptoms: new labels not detected properly, print out of position, skipped labels.

Short answer: Load the media (and the ribbon in thermal transfer mode), close the cover and wait until the STATUS light is solid green. Then press and hold PAUSE and CANCEL together for two seconds: the printer feeds and measures a few labels, then STATUS returns to solid green.

LIKELY CAUSE

Before printing, the printer must know the media type (labels separated by a gap, black mark or notch, continuous media) and measure its characteristics. Zebra asks for a SmartCal calibration after loading different media (size, length, supplier or batch).

OFFICIAL SMARTCAL CALIBRATION PROCEDURE

1. Load the media and, in thermal transfer mode, the ribbon; close the cover.
2. Press POWER and wait for the ready state: STATUS light solid green.
3. Hold PAUSE and CANCEL down together for two seconds, then release.
4. The printer feeds and measures a few labels, then adjusts its media detection levels.
5. Calibration is complete when the STATUS light returns to solid green.

There is no need to recalibrate for a roll identical to the previous one (same type, supplier, batch and size): the printer measures it and adjusts during printing; press FEED once or twice to synchronise the labels. If the printer does not recognise or does not correctly calibrate the media, Zebra refers you to manual calibration.

Sources: [Running a SmartCal Media Calibration](#) · [Detecting and Recovering from a Media-Out Condition](#)
🔗 – ZD421 / ZD621 user guide (official documentation).

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Why does my Zebra ZD421 skip labels or print out of position?

Symptoms: distorted labels, variable start position, printing straddling two labels.

Short answer: Zebra first cites incorrectly loaded media or a badly positioned movable sensor, then sensors not calibrated for the media. Check the loading and the sensor position, run a SmartCal calibration; if the problem persists, clean or replace the platen roller.

LIKELY CAUSE

Four causes according to Zebra: media loaded incorrectly or movable sensor incorrectly set for the media type; sensors not calibrated for the length, physical properties or detection type of the media (gap/notch, continuous or mark); platen roller slipping or damaged; communication problem (cables or parameters).

WHAT TO DO

1. Check the media loading and the position of the movable sensor: it must match the media type and the location of the marker (gap, notch or black mark).
2. For a black mark or a notch on the back of the media, the sensor is aligned with the middle of the marker, not with the middle of the roll; for gaps between labels, detection is transmissive, using the central array of the sensor.
3. Run a [SmartCal calibration](#).
4. If labels are still skipped, Zebra suggests a manual media calibration.
5. Clean or replace the platen roller if it slips or is damaged (see [platen roller](#)).
6. Check the cables and the communication parameters (see [communication diagnostics](#)).

The printer uses transmissive detection (gaps) or reflective detection (marks, notches), never both at the same time.

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Sources: [Issue: Labels Are Distorted in Size or Print Area Start Position Varies](#) · [Movable Sensor Adjustment](#) · [Running a SmartCal Media Calibration](#) – ZD421 / ZD621 user guide (official documentation).

Zebra ZD421 ribbon and labels: wrinkled ribbon, thermal transfer mode, cartridge, platen roller

Loading the ribbon and the cartridge, setting thermal transfer mode, maintaining the platen roller and the linerless option, based on the Zebra guide.

How do I clean the platen roller on my Zebra ZD421 when the labels slip or jam?

Symptoms: media slipping or sticking, jams, distorted image, declining print quality.

Short answer: Zebra recommends cleaning the platen roller as soon as printing or media feed deteriorates: a dirty roller can damage the printhead or cause the media to slip and stick. If the labels still stick or jam after cleaning, the roller must be replaced.

LIKELY CAUSE

Adhesive, dust, dirt and oils deposited on the roller cause the media to slip or stick and can damage the printhead. The Zebra cleaning schedule states that a slipping roller can distort the printed image or prevent the media from advancing; rollers wear or become damaged over time.

Caution: Linerless roller (labels without liner): do not wash it, rub it or use any cleaning solution, as this would permanently damage its surface. Zebra asks you to clean it only by lightly touching the particles with the adhesive side of a linerless label.

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OFFICIAL ROLLER CLEANING PROCEDURE

1. Open the cover (and the label dispenser door if there is one), then remove the media from the roller area.
2. Pull the bearing release tabs on the right and left towards the front, then rotate them upwards.
3. Take the roller out of the lower frame, then slide the gear and the two bearings off the shaft.
4. Clean the roller from the centre outwards with a fibre-free swab or a clean, lint-free cloth very lightly moistened with pure 99.7% medical-grade isopropyl alcohol; discard the swab or cloth after use.
5. Repeat with new swabs until the whole surface is clean, especially after an adhesive build-up or a jam.
6. Put the bearings and the gear back on the shaft, then replace the roller in the frame, with the gear on the left.
7. Fold the release tabs back towards the rear, on both sides, until they lock into place.
8. Let it dry for one minute before closing the dispenser door and the cover, and before loading the labels.

The page consulted asks you to replace the roller if the labels still stick or jam after cleaning, without detailing the replacement procedure. Standard rollers: black for 203 dpi, grey for 300 dpi.

Sources: [Cleaning and Replacing the Platen](#) · [Recommended Cleaning Schedule](#) · [Issue: Labels Are Distorted in Size or Print Area Start Position Varies](#) – ZD421 / ZD621 user guide (official documentation).

Why does the ribbon on my Zebra ZD421t wrinkle during printing?

Symptoms: wrinkled ribbon, erratic end-of-ribbon detection, intermittent faults.

Short answer: According to Zebra, a take-up core that does not match the inner diameter of the ribbon roll, or whose notches are damaged, makes the ribbon slip and causes wrinkles. Use an empty core of the same diameter, with intact notches,

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then feed at least 20 cm of media with FEED to tension the ribbon.

LIKELY CAUSE

Ribbon cores have an inner diameter of 12.2 mm (0.5 in) or 25.4 mm (1 in); an empty core of a different diameter can cause the ribbon to wrinkle. Damaged notches prevent the core from locking onto the spindle: it slips, causing wrinkles, poor end-of-ribbon detection or intermittent faults. Slack left during loading is the other source of wrinkles that Zebra covers.

Caution: Use a ribbon wider than the media (including the liner) to protect the printhead from wear. According to Zebra, media or ribbons not approved for the printer can damage the printer or the printhead.

WHAT TO DO

1. Always use an empty core with the same inner diameter as the ribbon roll (12.2 mm or 25.4 mm).
2. Replace cores with damaged notches: square notches are needed to lock the core onto the spindle.
3. Do not fit a 74 m ribbon on the cores of the early desktop printers, which are too large.
4. Attach the ribbon leader straight onto the take-up core, then turn the take-up hub (top towards the back) to remove the slack.
5. With the printer on and the cover closed, press FEED to feed at least 20 cm (8 in) of media: the ribbon tightens, the wrinkles disappear and the ribbon aligns on the spindles.
6. 300 m non-Zebra ribbon: use the Zebra core adapters and a 25.4 mm cardboard core, centre the ribbon and wind at least one and a half turns of ribbon onto the take-up core.

Sources: [Thermal Transfer Roll Ribbon Loading](#) · [Loading Zebra Transfer Roll Ribbon](#) · [Loading Non-Zebra 300-Meter Transfer Ribbon](#) – ZD421 / ZD621 user guide (official documentation).

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How do I switch my Zebra ZD421t to thermal transfer mode after installing the ribbon?

Symptoms: ribbon installed but printer still in direct thermal mode, “ribbon-in” error.

Short answer: After loading the ribbon, change the print mode from direct thermal to thermal transfer in the driver, the labelling software or by command (ZPL ^MT). Then print a configuration report: the PRINT METHOD line should show THERMAL-TRANS.

LIKELY CAUSE

Zebra asks you to change the print mode after loading the ribbon. The printer cannot print in direct thermal mode with a ribbon loaded: attempting to do so causes a “ribbon-in” error.

WHAT TO DO

1. Check that the ribbon and the media are loaded correctly, then close the cover.
2. Change the print mode from direct thermal to thermal transfer from the printer driver, the application software or the programming commands (ZPL: Media Type command ^MT; EPL in page mode: O command).
3. Print a configuration report (see [configuration report](#)): the PRINT METHOD line should show THERMAL-TRANS.

Sources: [Loading Zebra Transfer Roll Ribbon](#) · [Loading Non-Zebra 300-Meter Transfer Ribbon](#) · [Alert: Ribbon In – ZD421 Ribbon Cartridge Printer Only](#) – ZD421 / ZD621 user guide (official documentation).

How do I install the ribbon cartridge in my Zebra ZD421c?

Short answer: Open the printer, insert the cartridge by the end that carries the chip, holding it by its guide rails, push it in until it clicks, then close the printer. When it is closed, the printer reads the chip: only genuine Zebra ribbon cartridges

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are supported.

LIKELY CAUSE

The ZD421 cartridge model prints in thermal transfer mode with a ribbon cartridge. Authentication is done by the chip reader, which reads the cartridge information when the printer is closed.

WHAT TO DO

1. Open the printer.
2. Hold the cartridge by its guide rails and insert the end that carries the chip into the ribbon transport slot.
3. Push the cartridge in until it is almost flush with the front of the ribbon transport: it locks with an audible and tangible click.
4. Close the printer: it then reads the information stored on the cartridge chip.

Source: [Loading the Ribbon Cartridge – ZD421 Ribbon Cartridge Printers Only](#) – ZD421 / ZD621 user guide (official documentation).

How do I use and maintain my Zebra ZD421 fitted with the linerless option (labels without liner)?

Short answer: Linerless models print one label at a time: the printer pauses after each label and prints the next one when you remove the previous one. Enable dispensing mode (MEDIA HANDLING set to PEEL-OFF) and never use cleaning solution on the linerless roller.

LIKELY CAUSE

According to Zebra, the linerless options (tear-off or cutter) work in the same way as on printers with standard media, plus a sensor that detects when the printed label is removed. They require specific cleaning to preserve the platen roller and the non-stick surfaces of the media path.

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Caution: Never rub the linerless roller or use any cleaning solution: Zebra states that this damages it permanently. Rings of adhesive on the edges of the roller can come loose and carry particles to the printhead.

WHAT TO DO

1. Set MEDIA HANDLING to PEEL-OFF in the printer driver, or with the Configure Printer Settings wizard in Zebra Setup Utilities; the setting can also be sent in ZPL (^MMP command).
2. Remove each printed label: the printer then prints and presents the next one, until the end of the job.
3. Only clean the linerless roller if particles are visible, removing them with the adhesive side of a linerless label.
4. Replace the linerless roller if the media sticks or jams: its non-stick coating may be worn.

Linerless rollers: reddish-brown for 203 dpi, brown for 300 dpi. The shared ZD421 / ZD621 guide does not specify which ZD421 part numbers exist in a linerless version.

Sources: [Using the Linerless Options](#) · [Recommended Cleaning Schedule](#) · [Cleaning and Replacing the Platen](#) – ZD421 / ZD621 user guide (official documentation).

How do I clean the media path on my Zebra ZD421 when it is fouled with adhesive or dust?

Symptoms: adhesive deposits, dust or debris in the media compartment.

Short answer: Remove debris, dust and crust from the holders, guides and surfaces of the media path with a swab or lint-free cloth lightly moistened with pure 99.7% medical-grade isopropyl alcohol. Let the alcohol evaporate completely before reloading.

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LIKELY CAUSE

The Zebra cleaning schedule provides for cleaning the media path as needed, with fibre-free swabs or cloths moistened with 99.7% isopropyl alcohol, letting the alcohol evaporate completely.

Caution: Zebra specifies that the printhead, the movable sensor and the platen roller must not be cleaned as part of this procedure. Too much alcohol can contaminate the electronic components and greatly lengthen the drying time. Do not use an air compressor instead of a can of compressed air: it blows out microparticles that can damage the printer.

WHAT TO DO

1. Remove debris, dust and crust from the roll holders, the guides and the surfaces of the media path with a swab or lint-free cloth.
2. Lightly moisten the swab or cloth with pure 99.7% medical-grade isopropyl alcohol.
3. For difficult areas, soak a swab more thoroughly to loosen adhesive deposits in the media compartment.
4. Let the alcohol evaporate completely.
5. The printhead, the movable sensor and the platen roller are cleaned separately, following their own procedures (see [printhead](#) and [platen roller](#)).

Sources: [Cleaning the Media Path](#) · [Recommended Cleaning Schedule](#) · [Cleaning](#) – ZD421 / ZD621 user guide (official documentation).

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

Zebra ZD421 print quality: faded or blurred print, or blank labels

Printhead cleaning, darkness setting, ribbon compatibility with the media and labels that come out blank: the procedures from the Zebra documentation.

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How do I clean the printhead on my Zebra ZD421 when print quality declines?

Symptoms: declining print quality; routine maintenance with each roll.

Short answer: Zebra recommends cleaning the printhead each time a new roll of media is loaded, with a new cleaning pen. Rub the dark area of the printhead from the centre outwards, then wait one minute before closing the printer or reloading the ribbon.

LIKELY CAUSE

The Zebra guide presents printhead cleaning as necessary for optimal printing. Cleaning from the centre outwards pushes adhesive coming from the edges of the media out of the media path. A pen that has already been used carries contaminants that can damage the printhead.

Caution: The printhead heats up during printing: do not touch it, to avoid damaging it and injuring yourself. Observe anti-static precautions: electrostatic discharge can damage or destroy the printhead and the electronic components under the cover. Use the cleaning pen only for the printhead.

OFFICIAL PRINTHEAD CLEANING PROCEDURE

1. ZD421t (ribbon roll): if a ribbon is installed, remove it.
2. ZD421 cartridge model: lift the printhead actuator arm to access the printhead.
3. Rub a new cleaning pen across the dark area of the printhead, from the centre outwards.
4. Wait one minute for everything to dry before closing the printer or reloading the ribbon.
5. ZD421 cartridge model: release the actuator arm, then push the ribbon transport against it until the release arms lock into place.
6. If the print is still faded after cleaning, adjust the darkness (see [darkness setting](#)).

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Frequency: the printhead cleaning page recommends cleaning with each new roll, whereas the Zebra cleaning schedule specifies cleaning every five rolls printed. Both instructions appear in the official guide.

Sources: [Cleaning the Printhead](#) · [Cleaning the Printhead – ZD421/ZD621 Thermal Transfer Printers](#) · [Cleaning the Printhead – ZD421 Ribbon Cartridge Printers](#) · [Recommended Cleaning Schedule](#) – ZD421 / ZD621 user guide (official documentation).

How do I adjust the print darkness (density) on my Zebra ZD421?

Symptoms: print too faded or too dark, barcodes not scanning properly.

Short answer: Print a print quality report (FEED self test): the printer prints a series of labels at different darkness settings and at two speeds. Keep the setting that gives the best barcodes, then apply it with Zebra Setup Utilities, the labelling software or the manual darkness adjustment.

LIKELY CAUSE

According to Zebra, print quality depends on the printhead heat setting (darkness), the print speed and the media used: these settings are adjusted together. Each media requires its own darkness setting, and the media manufacturer may recommend a speed lower than the printer's maximum speed.

WHAT TO DO

1. First print a configuration report (CANCEL self test) to check the media settings.
2. Run the print quality report (FEED self test): the series starts three steps below the current darkness (-3) and rises to three steps above it (+3), once at low speed and once at high speed (51 and 152 mm/s at 203 dpi, 51 and 102 mm/s at 300 dpi).
3. Each label shows its relative darkness and its speed: compare the barcodes and keep the best-rated combination for your media.

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4. Apply the setting with the Configure Print Quality wizard in Zebra Setup Utilities; the speed can also be set in the labelling software (for example ZebraDesigner) or with the ZPL command ^PR.
5. Another method is manual darkness adjustment in advanced mode: the printer prints a test pattern for each darkness level; confirm the pattern whose black lines are solid and even to save that value.

Sources: [Printing a Print Quality Report \(FEED Self Test\)](#) · [Adjusting the Print Quality](#) · [Manual Print Darkness Adjustment](#) · [Printing the Printer and Network Configuration Reports \(CANCEL Self Test\)](#) – ZD421 / ZD621 user guide (official documentation).

Why is the print from my Zebra ZD421t blurred or smudged with the ribbon?

Symptoms (thermal transfer): blurred print, smudge marks, voids or holes with no particular pattern.

Short answer: According to Zebra, the ribbon material (wax, wax-resin or resin) may not be suitable for the media (paper, coated paper or synthetic). Use a ribbon suited to the media and do not exceed the maximum print speed recommended for the ribbon.

LIKELY CAUSE

Incompatibility between the ribbon material and the media material, or a print speed above the maximum speed recommended for the ribbon.

WHAT TO DO

1. Check that the ribbon matches the media: Zebra offers wax (Performance Wax), wax-resin (Premium Wax/Resin) and resin (Performance Resin for synthetics and coated paper, Premium Resin for synthetics) ribbons, with different maximum speeds.
2. Set the printer so as not to exceed the maximum speed recommended for the ribbon.
3. ZD421 cartridge model: the cartridge characteristics can be read with the commands described in “Ribbon Cartridge Programming Commands”.



Sources: [Issue: General Print Quality Issues](#) · [Thermal Transfer Roll Ribbon Loading](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421d produce blank labels without printing anything?

Symptoms: the labels feed but remain blank.

Short answer: In direct thermal mode, the label must have a heat-sensitive coating. According to Zebra, a thermal transfer label printed without a ribbon comes out blank. Scratch the label with your fingernail: if no mark appears, it is not a direct thermal label.

LIKELY CAUSE

Direct thermal labels have a coating that turns black with heat. Thermal transfer labels do not: printed without a ribbon in direct thermal mode, they remain blank.

WHAT TO DO

1. Do the fingernail test: scratch the surface of the label; a direct thermal label will mark.
2. If no mark appears, consult your label supplier, or switch to thermal transfer mode with a ribbon (ZD421t or ZD421 cartridge model).
3. In thermal transfer mode, check that the print mode is set correctly (see [thermal transfer mode](#)).

Sources: Testing Labels for Direct Thermal Printing Applications – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) · [ZD421 and ZD621 Series Desktop Printers User Guide \(PDF\)](#) › [Determining Thermal Media Types](#) (official documentation).

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Why do labels printed by my Zebra ZD421d turn black or become unreadable over time?

Symptoms: labels turning black, barcodes that no longer scan after a few days or weeks.

Short answer: According to Zebra, direct thermal paper is very sensitive to heat and light: if overexposed, it turns black and makes the text or barcode unreadable. It is suitable for short-life labels (shipping, receipts, tickets, patient or visitor identification); for a durable label, Zebra points you to thermal transfer.

LIKELY CAUSE

Direct thermal paper turns black under the effect of heat, light or other catalysts. Zebra states that it is not suitable for environments exposed to heat, prolonged direct sunlight or abrasion, nor for lifetime identification.

WHAT TO DO

1. Check the conditions the label will be exposed to: heat, long exposure to direct sunlight or friction degrade direct thermal labels.
2. For exposed labels, Zebra mentions top-coated direct thermal labels that are more resistant to UV, chemicals and abrasion: discuss this with your label supplier.
3. For durable identification (product identification, asset inventory, laboratory, cold rooms, outdoors), switch to thermal transfer with a ribbon suited to the media (ZD421t or ZD421 cartridge model).

Zebra also states that printheads in thermal transfer printers last longer than those in direct thermal printers.

Source: [What Is the Difference Between Direct Thermal and Thermal Transfer Printing?](#)  – Zebra FAQ (Resource Library) (official documentation).



Zebra ZD421 printhead: replacement and printhead not recognised

Replacing the printhead according to the variant (direct thermal or thermal transfer) and the alerts displayed when the printer does not recognise the installed printhead.

How do I replace the printhead on my Zebra ZD421?

Short answer: Unplug the printer, let it cool down and work at a station protected against static electricity. Release the printhead with its latch, disconnect its connectors, install the new printhead, clean it with a new pen, then print a configuration report.

LIKELY CAUSE

Zebra provides a procedure for each variant: direct thermal (ZD421d), thermal transfer with ribbon roll (ZD421t) and thermal transfer with ribbon cartridge.

Caution: Zebra asks you to unplug the printer and let it cool down to avoid injury and damage to the circuits, and to work at an anti-static workstation (earthed conductive mat, conductive wrist strap).

WHAT TO DO

1. Prepare an anti-static workstation: printer placed on an earthed conductive cushioning mat, conductive strap on your wrist.
2. Switch the printer off, unplug it and let it cool down; open the cover.
3. Push the printhead release latch (towards the printhead on the ZD421t, away from the printhead on the ZD421d): the right side of the printhead is released.
4. Free the printhead (ZD421t: to the right and downwards, out of the ribbon carriage; ZD421d: to the right, out of the cover), then firmly but gently disconnect the two cable harnesses and, on the ZD421d, the earth wire.

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5. Connect the new printhead: right connector first (keyed, fits one way only), earth wire on the ZD421d, then left connector.
6. Put the left side of the printhead back in place, then push the right side until it is locked by the latch; check that the printhead moves up and down freely under pressure and stays locked when you release it.
7. Clean the new printhead with a new cleaning pen, from the centre outwards, to remove fingerprints and debris.
8. Reload the media, reconnect the power cord, switch the printer on and print a configuration report to check that it is working.

The procedure specific to ZD421 ribbon cartridge models (“Replacing the Printhead – ZD421 Thermal Transfer Ribbon Cartridge Printer Models”) was not read for this guide.

Sources: [Replacing the Printhead](#) · [Replacing the Printhead – ZD421/ZD621 Thermal Transfer Ribbon Roll Printer Models](#) · [Replacing the Printhead – ZD421/ZD621 Direct Thermal Printer Models](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 report “Unauthorized Printhead Error” after the printhead has been replaced?

Alerts: `Unauthorized Printhead Error`, `Printhead Resolution Error`.

Short answer: The installed printhead is not a genuine Zebra printhead, or the printer cannot read its resolution (dpi) because it was replaced incorrectly. Install a genuine Zebra printhead following the replacement procedure.

LIKELY CAUSE

According to Zebra, “Printhead Resolution Error” means that the printer cannot read the printhead resolution type, which happens if the printhead was replaced incorrectly or replaced with a non-Zebra printhead; “Unauthorized Printhead Error” means that the installed printhead is not a genuine Zebra printhead. The “Standard Interface Controls” page lists printhead authentication failure among the causes of a solid red STATUS light.



WHAT TO DO

1. Check that the installed printhead is a genuine Zebra printhead; if not, install one to be able to continue.
2. If it is indeed a Zebra printhead, redo the fitting following the [replacement procedure](#).

Sources: [Status – Printhead Operation](#)  · [Standard Interface Controls](#)  – ZD421 / ZD621 user guide (official documentation).

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

Zebra ZD421 connection problems: USB, Ethernet, Wi-Fi, nothing prints

DATA light, communication diagnostics test, NETWORK light and USB driver: the causes and checks Zebra gives for the ZD421.

Why does my Zebra ZD421 not respond when I send a label, with the DATA light off?

Symptoms: job sent, nothing happens · Light: DATA off (not flashing).

Short answer: The label format was not recognised and no data arrived: according to Zebra, the communication parameters are incorrect. Check the communication settings in the driver or the software and, for a serial connection, the port parameters and the cable.

LIKELY CAUSE

Incorrect communication parameters between the computer and the printer.

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WHAT TO DO

1. Check the communication parameters in the printer driver or the software, if applicable.
2. Serial connection: check that the flow control (handshake) protocol and the serial port parameters of the printer match those of the computer.
3. Serial connection: check the cable; it may not be a standard DTE or DCE cable, may be damaged or may exceed the maximum length specified by the RS-232 standard.
4. With USB, if the printer was connected before the driver was installed, see [USB driver](#).

Sources: [Issue: Label Job Sent, No Data Transfer](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

Why does my Zebra ZD421 receive data (DATA light flashing) but print nothing?

Symptoms: job sent, nothing prints · Light: DATA flashing.

Short answer: The data is arriving but the format is not recognised. Zebra gives three causes: different prefix and delimiter characters between the printer and the format, computer communication parameters different from those of the printer, or an incorrect label format.

LIKELY CAUSE

Label format received but not recognised: different prefix and delimiter, different communication parameters, or incorrect format.

WHAT TO DO

1. Check the printer's ZPL command prefix (COMMAND CHAR) and delimiter (DELIM./CHAR) characters; the correspondence with the commands is given in "Configuration Setting to Command Cross-reference".

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2. Check that the computer's communication settings match those of the printer.
3. Check the label format using the Zebra ZPL programming guide.

Sources: [Issue: Label Job Sent, Data Transfers, But No Print](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

How do I test communication between my Zebra ZD421 and the computer (FE, OE, PE, NE codes)?

Symptoms: incorrect printed content, doubt about the connection · Light: STATUS alternating green and amber in diagnostics mode.

Short answer: Run the communication diagnostics test: press and hold PAUSE and FEED together for two seconds. The printer then prints the data received as ASCII text with its hexadecimal values; the codes FE, OE, PE or NE indicate a communication error.

LIKELY CAUSE

The test checks the link between the printer and the computer or host device: it shows exactly what the printer receives.

OFFICIAL COMMUNICATION DIAGNOSTICS TEST PROCEDURE

1. Load the media and switch the printer on.
2. Set the print width to a value equal to or less than the width of the test label.
3. Press and hold PAUSE and FEED together for two seconds: the STATUS light alternates between green and amber, and the printer is in diagnostics mode.
4. The printer prints the data received as ASCII characters, with the hexadecimal values below (including control codes, such as CR); the test label comes out upside down.
5. Look for the error codes: FE (framing error), OE (overrun error), PE (parity error), NE (noise). If there are any, check the communication parameters.

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6. To exit diagnostics mode, press and hold PAUSE and FEED again for two seconds, or switch the printer off and on again.

Source: [Performing a Communication Diagnostics Test](#) – ZD421 / ZD621 user guide (official documentation).

Why is my Zebra ZD421 not detected on the Ethernet network?

Lights: NETWORK off (no link) or solid red (Ethernet fault); RJ-45 connector lights off.

Short answer: First look at the two lights on the RJ-45 connector: if both are off, no Ethernet link is detected; then check the cable (RJ-45 UTP, category 5 or higher) and the connection. A solid red NETWORK light signals an Ethernet fault. The printer must also be configured to connect to the network, via the web pages of its print server.

LIKELY CAUSE

According to Zebra, the printer must be physically connected to the network and configured to establish the connection. On the ZD421, the modular slot takes either a 10/100 Ethernet module or an RS-232 serial port, which can be installed on site.

WHAT TO DO

1. Check that the printer is fitted with the Ethernet module: on the ZD421, 10/100 Ethernet is a module to be installed on site in the modular slot.
2. Use a category 5 or higher RJ-45 UTP Ethernet cable.
3. Read the RJ-45 connector lights: both off, no link; green, 100 Mbit/s link; green with flashing amber, 100 Mbit/s link with activity; amber, 10 Mbit/s link; amber with flashing green, 10 Mbit/s link with activity.
4. Read the NETWORK light: off, no Ethernet link; solid green, 10/100 link; solid amber, 10 Mbit/s link; solid red, Ethernet fault (printer not connected).

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5. Configure the connection in the web pages of the built-in print server; for this, Zebra refers you to the “Wired and Wireless Print Server User Guide”.
6. Print a configuration report (see [configuration report](#)): the network report prints at the same time.

The Zebra guide does not give a user name or password at this point: for access to the print server web pages, refer to the Zebra print server guide.

Sources: [Ethernet \(LAN, RJ-45\)](#) · [Status – Ethernet \(LAN\) Option](#) · [Standard Interface Controls](#) · [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#) · [ZD421 / ZD621 user guide \(official documentation\)](#).

Why won't my Zebra ZD421 connect to Wi-Fi (NETWORK light flashing or red)?

NETWORK light: flashing red (association), flashing amber (authentication), flashing green (weak signal), solid red (error).

Short answer: The NETWORK light shows the stage at which the connection is stuck: flashing red during network association, flashing amber during authentication, flashing green if the signal is weak, solid red in the event of an error (printer not connected). Wi-Fi is an option: first check that the wireless module is installed.

LIKELY CAUSE

According to Zebra, the printer goes through two phases, association then authentication, before it is connected; a link error leaves it off the network. Wi-Fi (802.11ac) and Bluetooth Classic 4.1 are options installed at the factory or on site.

Caution: Before installing the wireless module, Zebra asks you to remove the media, switch the printer off and disconnect all power and interface cables, observing anti-static precautions.

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WHAT TO DO

1. Identify the state of the NETWORK light: flashing red, network association in progress; flashing amber, authentication in progress; solid green, connected with a strong signal; flashing green, connected with a weak signal; solid red, error, printer not connected.
2. If the wireless module was added on site, check that it is pushed fully home: according to Zebra, the module door only closes properly if the module is correctly in place.
3. Print a configuration report (see [configuration report](#)): the network report prints at the same time.
4. To change the network settings, Zebra refers you to the print server web pages; the guide states that the print server must be reset for network changes to take effect.

Sources: [Status – Wi-Fi \(WLAN\) Option](#) · [Standard Interface Controls](#) · [Installing the Wireless Connectivity Module](#) · [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#)
· [ZD421 / ZD621 user guide \(official documentation\)](#).

Why does my Zebra ZD421 appear as an unknown device in Windows after connecting it via USB?

Short answer: If the printer is switched on and connected before the drivers are installed, Windows classifies it as an unspecified device. Install the Zebra driver, then assign it to the printer from Devices and Printers: Properties, Hardware tab, update driver.

LIKELY CAUSE

The Zebra guide specifies installing the drivers before connecting the printer. If it is powered on before, Windows shows it as an unspecified device.

WHAT TO DO

1. Open the Windows Control Panel, then Devices and Printers.
2. Right-click the incorrectly identified Zebra printer and open its Properties.

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3. In the Hardware tab, select the printer in the list of device functions and open its properties.
4. In the driver settings, choose to update the driver by browsing the computer for the software.
5. Point to the Downloads folder and confirm: the printer receives the correct driver and appears under its name.
6. Use a USB cable bearing the “Certified USB” logo, which guarantees USB 2.0 compliance.

Sources: [What To Do If You Forget to Install the Printer Drivers First](#) · [USB Interface](#) – ZD421 / ZD621 user guide (official documentation).

Zebra ZD421 cutter and peeler: cut error, cleaning, labels piling up

The cutter and the label dispenser are ZD421 options; Zebra states that the cutter has no user-serviceable parts.

Why does my Zebra ZD421 report “Cutter Error” and how do I free the cutter?

Alert: **Cutter Error** · Light: STATUS solid red.

Short answer: The cutter blade is jammed, usually by media, adhesive or a foreign object. Switch the printer off by holding POWER for five seconds, wait until it has shut down completely, then switch it back on; if the error persists, call in a technician.

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LIKELY CAUSE

The cutter blade is stuck and does not move correctly: media, adhesive or a foreign object is blocking it. The “Status – Typical Operating Conditions” page refers to a binding blade (Cut Error, Binding).

Caution: The cutter contains no user-serviceable parts. Never remove its cover and never insert objects or your fingers into the mechanism. According to Zebra, unapproved tools, cotton buds and solvents (including alcohol) can damage the cutter, shorten its life or cause it to jam.

WHAT TO DO

1. Switch the printer off by holding down the POWER button for five seconds.
2. Wait until it has shut down completely.
3. Switch the printer back on.
4. If the error persists, do not work on the mechanism: contact a technician.

When to call a technician: if “Cutter Error” persists after a restart, Zebra asks you to contact a technician: the cutter cannot be repaired by the user.

Sources: [Alert: Cutter Error](#) · [Status – Typical Operating Conditions](#) · [Standard Interface Controls](#) – ZD421 / ZD621 user guide (official documentation).

How do I clean the cutter on my Zebra ZD421 without damaging it?

Short answer: Only clean the plastic surfaces of the media path, at the cutter's entry and exit, with a swab or lint-free cloth lightly moistened with 99.7% isopropyl alcohol. Never clean the blade or the mechanism: their special coating can be damaged.

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LIKELY CAUSE

According to Zebra, the cutter blade requires no maintenance cleaning: it has a special coating that resists adhesives and wear, and cleaning can damage it.

Caution: The cutter contains no user-serviceable parts. Never remove its cover and never insert objects or your fingers into the mechanism. According to Zebra, unapproved tools, cotton buds and solvents (including alcohol) can damage the cutter, shorten its life or cause it to jam.

WHAT TO DO

1. Clean the ribs and plastic surfaces of the media entry (inside) and the exit slot (outside) of the cutter, with a clean swab or lint-free cloth lightly moistened with 99.7% isopropyl alcohol.
2. Repeat if necessary to remove adhesive residue, then let it dry.
3. For any other cleaning or maintenance of the cutter, Zebra refers you to a technician; only the outer cover is cleaned like the outside of the printer.

The Zebra cleaning schedule says to clean only the cutter cover, whereas the “Cleaning the Cutter Option” page also describes cleaning the plastic entry and exit surfaces. Both forbid touching the blade.

Sources: [Cleaning the Cutter Option](#) · [Recommended Cleaning Schedule](#) – ZD421 / ZD621 user guide (official documentation).

Why do labels pile up and jam the peeler on my Zebra ZD421?

Symptoms: peeled labels building up at the exit, mechanism jammed.

Short answer: If the label taken sensor is not enabled, peeled labels build up in the dispenser and can jam the mechanism. Enable this sensor with a programming command: the printer then waits for you to remove each label before presenting the next one.

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LIKELY CAUSE

In dispensing mode, the printer peels off the liner and presents the label. Without the label taken sensor enabled, it does not know that the label has been removed and the labels pile up.

Caution: According to Zebra, without the label taken sensor enabled, piled-up labels can jam the printer mechanism.

WHAT TO DO

1. Set Media Handling to Peel-Off in the Windows driver or with the Configure Printer Settings wizard in Zebra Setup Utilities (in ZPL: ^MMP).
2. Load the labels, close the printer and press FEED until at least 100 mm of labels come out; leave them on their liner.
3. Pass the liner over the top of the printer and open the dispenser door by pulling its gold central latch.
4. Slide the liner between the dispenser door and the printer body, then close the door while pulling the end of the liner taut.
5. Press FEED once or more until a label is presented.
6. Enable the label taken sensor with a programming command, then remove each label so that the next one prints.

Source: [Using the Label Dispenser Option](#)  – ZD421 / ZD621 user guide (official documentation).

Zebra ZD421 battery and power: red light, battery that will not start, sleep mode

The ZD421 can take an optional battery base; the Zebra guide explains its lights, its faults and the printer's sleep mode.

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Why does the battery on my Zebra ZD421 show a red light?

Battery health light: solid red or flashing red.

Short answer: Solid red health light: internal battery error; flashing red: charging error (temperature too high or too low, internal monitoring error...). Let the battery return to room temperature and check its charge; if the fault persists, it may be at the end of its life or faulty and must be replaced.

LIKELY CAUSE

Zebra gives three causes: battery too hot or too cold, battery at the end of its useful life, faulty battery component.

WHAT TO DO

1. In the event of an internal error (solid red), remove the battery from the printer, as Zebra requests.
2. If the battery is too hot or too cold, let it return to room temperature, then check its charge again.
3. Remove it and recharge it to check its state of charge: it may have reached the end of its life.
4. If a battery component is faulty, replace the battery.

Sources: [Issue: Battery Displays a Red Indicator](#) · [Battery Indicators and Controls](#) – ZD421 / ZD621 user guide (official documentation).

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Why won't my battery-powered Zebra ZD421 switch on?

Battery charge lights: no bars lit.

Short answer: When no charge bars are lit, the battery needs recharging and the printer cannot be switched on. Batteries are also shipped in shutdown mode: press the battery button to wake it up, then switch the printer on within one minute; a full charge takes about two hours.

LIKELY CAUSE

According to Zebra, batteries are shipped in shutdown mode, for safety and to prevent them discharging during storage and transport. A battery with no charge bars lit must be recharged: the printer cannot start in this state.

WHAT TO DO

1. Briefly press the battery control button: it comes out of sleep or shutdown mode and checks its status; all the lights flash three times together.
2. Switch the printer on within the next minute, otherwise the battery returns to its previous mode.
3. Read the charge level, displayed for 10 seconds: three solid green bars, fully charged; two bars with the top one flashing, partially charged; one flashing bar or no bars, recharging needed; amber, charging in progress.
4. Recharge the battery with the printer's power supply or another approved Zebra power source: allow about two hours; the status light changes from amber (charging) to green (charged).
5. To put the battery back into shutdown mode (storage, transport), hold its button down for 10 to 11 seconds: all the lights flash three times to confirm.

Sources: [Battery Indicators and Controls](#) ⓘ · [ZD421 and ZD621 Series Desktop Printers User Guide](#) (P1123730-05EN Rev A, PDF) ⓘ – ZD421 / ZD621 user guide (official documentation).

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Why does the STATUS light on my Zebra ZD421 slowly turn on and off in green?

Light: STATUS green slowly turning on and off.

Short answer: This is not a fault: according to Zebra, a green STATUS light that slowly turns on and off indicates that the printer is in sleep mode. The POWER button controls sleep and wake-up; a short press puts the printer into Energy Star low-power mode.

LIKELY CAUSE

Energy Star sleep mode: after a period of inactivity, the printer goes into sleep mode to reduce its power consumption.

WHAT TO DO

1. Use the POWER button: it switches the printer on and off and controls sleep and wake-up.
2. To switch the printer off completely, hold down POWER for 4 to 9 seconds.
3. For it to restart by itself when power returns after an outage, Zebra describes a recovery mode (Power Failure Recovery Mode), which requires a connectivity module.

Sources: [Standard Interface Controls](#) · [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#) · [ZD421 / ZD621 user guide \(official documentation\)](#).

Zebra ZD421 firmware and settings: update, lost settings, restoring factory defaults

Updating the firmware with Zebra Setup Utilities, understanding why settings are not retained and restoring factory values.

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How do I update the firmware on my Zebra ZD421?

Short answer: Download the firmware from the printer's Zebra support page, then send it with Zebra Setup Utilities: Open Printer Tools, Action tab, Send file. The DATA light flashes green during the download; the printer restarts and prints a configuration report at the end.

LIKELY CAUSE

Zebra recommends updating the firmware regularly to benefit from new features, improvements and changes to media handling and communications. The guide also asks for an update after options have been installed.

OFFICIAL UPDATE PROCEDURE

1. Download the firmware from your printer's Zebra support page.
2. Open Zebra Setup Utilities and select the printer.
3. Click Open Printer Tools, then open the Action tab.
4. Load media into the printer.
5. Click Send file, then Browse, and select the downloaded firmware file.
6. Wait until it finishes: the DATA light flashes green during the download, then the printer restarts with all the lights flashing.
7. The STATUS light turns solid green during validation and installation; the printer prints a configuration report when the update is complete.

The firmware is only downloaded if its version differs from the one already installed.

Sources: [Updating Printer Firmware](#)  · [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#)  – ZD421 / ZD621 user guide (official documentation).

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Why does my Zebra ZD421 lose its settings after being switched off?

Short answer: Most often, the settings were changed without being saved (ZPL command ^JU) before switching off, or a command in the label format overwrites them. Check the command syntax and the prefix characters; if the problem persists, restore the factory settings and then reload the firmware.

LIKELY CAUSE

Zebra gives four causes: settings changed without being saved with ^JU; syntax errors or misuse of format or direct commands (a command can prevent a parameter from being changed or reset it to its default value); different prefix and delimiter characters between the printer and the format; a main logic board problem (corrupted firmware or repair needed).

WHAT TO DO

1. Turn the printer off and on again to check whether the settings have been saved.
2. Check the use and syntax of the commands in the ZPL programming guide.
3. Check that the printer's Control, Command and Delimiter characters match your software environment, by comparing them with a configuration report.
4. Restore the factory settings (see [reset](#)), for example with Zebra Setup Utilities (Open Printer Tools, Action: Load printer defaults).
5. Reload the firmware (see [firmware update](#)).

When to call a technician: if the printer does not return to normal operation after restoring factory settings and reloading the firmware, Zebra refers you to a technician: the main logic board is not user-serviceable.

Source: [Issue: Settings are Lost or Ignored](#)  – ZD421 / ZD621 user guide (official documentation).

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How do I reset my Zebra ZD421 to factory settings?

Short answer: According to the Zebra guide, hold down FEED and PAUSE together while switching on to restore the printer parameters to their factory values. You can also use Zebra Setup Utilities (Open Printer Tools, Action: Load printer defaults). All manually changed settings will need to be redone.

LIKELY CAUSE

Zebra distinguishes between restoring the printer settings (all except network), resetting the wired or wireless print server (the printer then re-associates with the wireless network) and reloading the last saved configuration.

Caution: After a return to default values, all manually changed settings must be redone. On a printer in protected mode, this setting cannot be changed from the control panel.

WHAT TO DO

1. Note the settings you have changed: they will need to be redone.
2. Hold down FEED and PAUSE together while switching the printer on to restore the factory parameters.
3. Alternative method: Zebra Setup Utilities, Open Printer Tools, Action tab, Load printer defaults.
4. By ZPL command: ^JUF restores the printer's factory settings (excluding network), ^JUN resets the wired or wireless print server, ^JUR reloads the last saved configuration.
5. Print a configuration report to check the result (see [configuration report](#)).

Sources: [System > Settings > Restore Defaults](#)  · [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#)  · [Issue: Settings are Lost or Ignored](#)  – ZD421 / ZD621 user guide (official documentation).

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Other Zebra ZD421 questions: printing a configuration label

The configuration report, the first diagnostic step suggested by Zebra.

How do I print a configuration label on my Zebra ZD421?

Short answer: Load the media, close the cover and switch the printer on. When the STATUS light is solid green, press and hold FEED and CANCEL together for two seconds: the printer prints the printer configuration report and the network configuration report.

LIKELY CAUSE

Zebra recommends printing this report before connecting the printer to a computer, to check that it is working; it also helps with installation and troubleshooting. If the reports do not print, the guide refers you to its troubleshooting chapter.

OFFICIAL PROCEDURE (CANCEL SELF TEST)

1. Load the media (and the ribbon in thermal transfer mode), then close the cover.
2. Switch the printer on and wait until the STATUS light is solid green.
3. Press and hold FEED and CANCEL together for two seconds, then release.
4. The printer and network configuration reports print; the STATUS light returns to solid green at the end.

Sources: [Printing the Printer and Network Configuration Reports \(CANCEL Self Test\)](#) · [Test Printing with a Configuration Report](#) · ZD421 / ZD621 user guide (official documentation).

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When should you call a technician for a Zebra ZD421?

The entries above first suggest restarting, reloading, cleaning or calibrating. In the following cases, the Zebra guide refers you to a technician:

- **“Printhead Open” persisting with the cover latched:** head-open switch to be repaired.
- **“Media Out” persists after reloading the firmware:** media still not detected (corrupted data in memory or faulty component).
- **“Printhead Under Temp” persisting in a room at the right temperature:** printhead thermistor probably faulty.
- **“Cutter Error” persisting after a restart:** the cutter has no user-serviceable parts.
- **Settings still lost after a factory reset and firmware reload:** main logic board not user-serviceable.

Avoiding recurring faults on the Zebra ZD421: 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 ZD421 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 ZD421 troubleshooting: frequently asked questions

How do I calibrate a Zebra ZD421?

Load the media (and the ribbon in thermal transfer mode), close the cover and wait until the STATUS light is solid green. Then press and hold PAUSE and CANCEL together for two seconds. The printer feeds and measures a few labels, then STATUS returns to solid green. [See the detailed entry.](#)

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What does Media Out mean on a Zebra ZD421?

The printer does not detect any media in the print path: empty roll, label missing on the roll, or printer set for labels while continuous media is loaded. Reload or reposition the media, then press FEED or PAUSE once to resume. [See the detailed entry.](#)

Why is the SUPPLIES light flashing red on a Zebra ZD421?

According to Zebra, a flashing red SUPPLIES light signals the end of the ribbon in thermal transfer mode. Replace the ribbon roll or the cartridge, close the printer and press FEED once. If it flashes alternately red and amber, the ribbon cartridge is nearly empty. [See the detailed entry.](#)

How do I clean the printhead on a Zebra ZD421?

Zebra recommends cleaning the printhead each time a new roll of media is loaded, with a new cleaning pen. Rub the dark area of the printhead from the centre outwards, then wait one minute before closing the printer or reloading the ribbon. [See the detailed entry.](#)

How do I reset a Zebra ZD421 to factory settings?

According to the Zebra guide, hold down FEED and PAUSE together while switching on to restore the printer parameters to their factory values. You can also use Zebra Setup Utilities (Open Printer Tools, Action: Load printer defaults). All manually changed settings will need to be redone. [See the detailed entry.](#)

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How do I print a configuration label on a Zebra ZD421?

Load the media, close the cover and switch the printer on. When the STATUS light is solid green, press and hold FEED and CANCEL together for two seconds: the printer prints the printer configuration report and the network configuration report. [See the detailed entry.](#)

Why is my Zebra ZD421 printing blank labels?

In direct thermal mode, the label must have a heat-sensitive coating. According to Zebra, a thermal transfer label printed without a ribbon comes out blank. Scratch the label with your fingernail: if no mark appears, it is not a direct thermal label. [See the detailed entry.](#)

How do I update the firmware on a Zebra ZD421?

Download the firmware from the printer's Zebra support page, then send it with Zebra Setup Utilities: Open Printer Tools, Action tab, Send file. The DATA light flashes green during the download; the printer restarts and prints a configuration report at the end. [See the detailed entry.](#)

Sources consulted

All the causes, procedures and messages in this guide come from the pages below of the official Zebra documentation (shared ZD421 / ZD621 user guide, online and in PDF, and the Zebra knowledge base), consulted on 20 October 2026.

- [Standard Interface Controls](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Status – Typical Operating Conditions](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Status – Printhead Operation](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**

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- [Status – Wi-Fi \(WLAN\) Option](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Status – Ethernet \(LAN\) Option](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Battery Indicators and Controls](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Printhead Open](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Media Out](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Detecting and Recovering from a Media-Out Condition](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Ribbon Out](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Detecting and Recovering from a Ribbon-Out Condition](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Ribbon In – ZD421 Ribbon Cartridge Printer Only](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Ribbon Low – ZD421 Ribbon Cartridge Printer Only](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Cutter Error](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Printhead Over Temp](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Printhead Under Temp](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Alert: Out of Memory](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: General Print Quality Issues](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Labels Are Distorted in Size or Print Area Start Position Varies](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Label Job Sent, No Data Transfer](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Label Job Sent, Data Transfers, But No Print](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Erroneous Ribbon Cartridge Faults](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Battery Displays a Red Indicator](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Issue: Settings are Lost or Ignored](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Running a SmartCal Media Calibration](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**

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- [Movable Sensor Adjustment](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Thermal Transfer Roll Ribbon Loading](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Loading Zebra Transfer Roll Ribbon](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Loading Non-Zebra 300-Meter Transfer Ribbon](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Loading the Ribbon Cartridge – ZD421 Ribbon Cartridge Printers Only](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Ethernet \(LAN, RJ-45\)](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [USB Interface](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [What To Do If You Forget to Install the Printer Drivers First](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Test Printing with a Configuration Report](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning the Printhead](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning the Printhead – ZD421/ZD621 Thermal Transfer Printers](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning the Printhead – ZD421 Ribbon Cartridge Printers](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Recommended Cleaning Schedule](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning and Replacing the Platen](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning the Media Path](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Cleaning the Cutter Option](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Replacing the Printhead](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Replacing the Printhead – ZD421/ZD621 Thermal Transfer Ribbon Roll Printer Models](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Replacing the Printhead – ZD421/ZD621 Direct Thermal Printer Models](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Updating Printer Firmware](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Printing the Printer and Network Configuration Reports \(CANCEL Self Test\)](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**

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- [Printing a Print Quality Report \(FEED Self Test\)](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Performing a Communication Diagnostics Test](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Manual Print Darkness Adjustment](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Adjusting the Print Quality](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Using the Label Dispenser Option](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Using the Linerless Options](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [Installing the Wireless Connectivity Module](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [System > Settings > Restore Defaults](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- [ZD421 and ZD621 Series Desktop Printers User Guide \(P1123730-05EN Rev A, PDF\)](#)  – ZD421 and ZD621 Series Desktop Printers User Guide **official**
- Testing Labels for Direct Thermal Printing Applications – Zebra knowledge base (link removed on 21 October 2026: the page is no longer available at its former address) **official**
- [ZD421 and ZD621 Series Desktop Printers User Guide \(PDF\) > Determining Thermal Media Types](#)  **official**
- [What Is the Difference Between Direct Thermal and Thermal Transfer Printing?](#)  – Zebra FAQ (Resource Library) **official**

The following official pages were not consulted for this guide: “Alert: Printhead Shutdown”, “Issue: No Print on the Label”, “Issue: Non-continuous labels act as Continuous labels”, “Issue: Printer Locks Up”, “Issue: Label Job Sent, Skips Labels or Prints Bad Content”, “Printer Connectivity Issues”, “Connecting Your Printer to a Computer”, “Manually Calibrating Media”, “Activating Advanced Mode”, “Print > Sensors > Manual Calibration”, “Printing a Print Quality Report” (detailed procedure), “Cleaning the Printhead – ZD421/ZD621 Direct Thermal Printers”, “Cleaning the Sensor”, “Resetting Non-Network Printer Configuration Settings to their Factory Defaults”, “Resetting the Printer's Network Settings to Their Factory Defaults”, “RESET Button Functions”, “Status – Bluetooth Low Energy Option”, almost all of the French version of the guide on docs.zebra.com/fr (apart from the titles of the French pages for “Alert: Printhead Shutdown” and “Resetting the printer's network settings to their defaults”) and the support.zebra.com article “Changing the Print Method (Direct Thermal and Thermal Transfer Mode)”. They are not cited. 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 page on timcod.fr (in French): [Zebra ZD421](#)
- All Zebra printer troubleshooting guides (ZT230, ZT410, ZT421, ZT420, ZT411, S4M, GK420, GX420, QLn420, ZQ630, ZQ511, 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)
- [Printer cleaning kits](#) (in French)

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