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TROUBLESHOOTING GUIDE

Sato WS4 troubleshooting guide: errors, faults and fixes

Updated 21 October 2026 · By TIMCOD maintenance technicians · Source: official Sato documentation, WS4 Series operator manual (WS408 and WS412, DT and TT models) (list at the end of the page)

TIMCOD PRODUCT PAGE (IN FRENCH)

See the Sato WS4 Series product page →

In brief. The Sato WS4 Series comprises 4-inch desktop label printers, direct thermal (WS408DT, WS412DT) or thermal transfer (WS408TT, WS412TT), at 203 or 300 dpi. With no display, they report their status through two lights whose colour and flashing change depending on the problem. The Sato manual mainly blames incorrectly loaded media or ribbon, a dirty printhead or sensor and an uncalibrated sensor. This guide covers 26 situations documented by Sato, with the cause, the procedure and the safety instructions. Click a question to open the entry.

- **The lights are orange or red:** find the combination in the [lookup table](#) and open the matching entry.
- **No alert, but the print is poor:** see the [faded print and cleaning](#), [calibration](#) and [wrinkled ribbon](#) entries.

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- **The problem keeps coming back:** the [preventive maintenance](#) section explains how it reduces this type of fault.

What do the lights on my Sato WS4 mean? Lookup by light combination

The WS4 has no display: it combines two lights, LED 1 and LED 2, in green, orange or red, solid or flashing (fast: 0.5 s, slow: 2 s). The SATO WS4 utility also shows a plain-text status, given in brackets. The table links each combination to its meaning and to the troubleshooting entry.

Message or state	LED 2 / LED 1 lights (Sato manual)	Likely cause	Entry
Ready to print (ON LINE)	● ● LED 1 and LED 2 solid green	Normal operation	Reading the lights
Data transmission	● ● Two green lights, one fast-flashing	Receiving data	Reading the lights
Paused (PAUSE)	● ● Two green lights slow-flashing, simultaneously	Printer paused	Reading the lights
Writing to memory (SAVING)	● ● Two green lights slow-flashing, alternately	Writing to Flash or USB memory, or initialising the USB stick	USB stick and memory
Printhead too hot (EXCESS HEAD TEMP)	● ● LED 2 solid green, LED 1 solid orange	High printhead temperature	Overheating

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Message or state	LED 2 / LED 1 lights (Sato manual)	Likely cause	Entry
RTC battery low	● ● LED 2 solid green, LED 1 slow-flashing orange	Clock battery low (RTC clock installed)	Reading the lights
Print module open at power-on	● ● Green and orange lights, one fast-flashing	Print module open at switch-on	Cover open
Paper jam (PAPER JAM)	● ● LED 1 and LED 2 solid orange	Media stuck in the printer	Jam
End of media (NO PAPER)	● ● Two orange lights fast-flashing, simultaneously	No media left when the data was sent	End of media
Ribbon end or ribbon error (TT models)	● ● Orange lights fast-flashing, different pattern from end of media	Ribbon used up or in error	End of ribbon
Printhead damaged (HEAD ERROR)	● ● LED 2 solid red, LED 1 solid orange	Printhead damaged	Printhead damaged
RS-232C error (COMMS ERROR)	● ● Red and orange lights, one slow-flashing	Serial communication error (parity, overrun, framing)	RS-232C
Cutter error (CUTTER ERROR)	● ● Red and orange lights, one fast-flashing	Problem with the optional cutter	Cutter
Cover opened during printing	● ● LED 1 and LED 2 solid red	Cover (printhead) opened during printing	Cover open

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Message or state	LED 2 / LED 1 lights (Sato manual)	Likely cause	Entry
EEPROM or memory access error (SAVING ERROR)	● ● Two red lights, one slow-flashing	EEPROM backup cannot be read or written, abnormal memory access	Reading the lights
Command error (COMMAND ERROR)	● ● Two red lights, one fast-flashing	Incorrect command received	Reading the lights
Flash or USB memory error (MEMORY WRITE ERROR, FORMAT ERROR, MEMORY FULL)	● ● Two red lights slow-flashing, alternately	Flash memory, USB write or format failure, insufficient space	USB stick and memory

The combinations come from the “Status Lights” table in the WS4 Series Printer Operator Manual (revision r10), cross-checked with the “Voyants LED” (LED lights) table in the French manual. The layout of these tables in the PDFs does not always make it possible to know which of the two lights is flashing: in that case, the table gives only the colours and the rate. The states in brackets are those shown by the SATO WS4 utility (Get Status function); if in doubt, they confirm the diagnosis.

Orange or red lights on the Sato WS4: causes and solutions

These light combinations indicate a jam, end of media or ribbon, an open cover or an overheated printhead. For each one: the short answer, the cause given by Sato and the steps to follow.

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Why do both lights on my Sato WS4 stay solid orange?

Lights: LED 1 and LED 2 solid orange · Status in the utility: PAPER JAM

Short answer: According to the Sato light table, this combination indicates a paper jam. Open the printer, clear the stuck media and check that the paper guides are holding the roll properly.

LIKELY CAUSE

The WS4 manual associates the two solid orange lights with a paper jam. The Sato troubleshooting section also asks you to check that the paper guides are holding the media correctly.

Caution: Take care not to trap your fingers in the paper feed slot when opening or closing the cover. The printhead gets very hot during printing: do not touch it just afterwards.

WHAT TO DO

1. Open the printer and clear the stuck paper.
2. Check that the paper guides are holding the media correctly.
3. Close the print module, making sure that it is properly locked.

Sources: [1.4.1 Status Lights](#); [5.2 Media Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [1.3 Printer description](#); [6.1.1 Media problems](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

Why do both lights on my Sato WS4 flash orange when I start printing?

Lights: LED 1 and LED 2 orange, fast flashing simultaneously · Status in the utility: NO PAPER

Short answer: This combination indicates that there is no media left when the printer receives the data. Load a new roll; if the roll was in place, clean the label

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sensor, as Sato states that a dirty sensor detects the media poorly.

LIKELY CAUSE

According to the manual, the media roll has run out when the data is sent. The Maintenance chapter adds that dirty sensors do not detect the media correctly.

Caution: Sato asks you to always switch off the printer before cleaning it.

WHAT TO DO

1. Load a new media roll following section 2.3 of the manual (DT or TT procedure).
2. Press **FEED**: the printer should feed a blank label.
3. If the roll was properly in place, clean the label sensor: cotton bud or soft cloth moistened with ethyl alcohol (or a SATO cleaning wipe), gentle brushing, then a dry cloth to remove any residue.

Sources: [1.4.1 Status Lights](#); [5.2 Media Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [1.3 Printer description](#); [5.1.3 Label sensor](#); [7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

What do the flashing orange lights mean on my thermal transfer Sato WS4?

Lights: LED 1 and LED 2 orange, fast flashing with a different pattern from end of media · TT models only

Short answer: On the WS408TT and WS412TT, this combination indicates a ribbon end or a ribbon error. Load a new ribbon roll following section 2.4 of the manual and check that it is correctly installed.

LIKELY CAUSE

According to the light table, ribbon end or ribbon error, on thermal transfer models. The Sato troubleshooting section says to load a new roll when the ribbon has run out.

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WHAT TO DO

1. Open the printer and check the ribbon roll.
2. If it has run out, load a new roll (section 2.4, “Installing a ribbon roll, TT model only”).
3. If it is broken, follow the [broken ribbon](#) entry.

Sources: [1.4.1 Status Lights](#); [5.3 Ribbon Issues \(TT Model\)](#) [↗](#) – WS4 Series Printer Operator Manual (Sato, r10) · [1.4 LED indicators](#); [6.1.2 Ribbon problem](#) [↗](#) – WS4 Series operator manual (Sato, French version) (official documentation).

Why do both lights on my Sato WS4 turn solid red?

Lights: LED 1 and LED 2 solid red (cover opened during printing), or green and orange lights with one fast-flashing (module open at power-on) · Utility: **HEAD OPEN** , **HEAD OPEN ERROR**

Short answer: Two solid red lights indicate that the cover (printhead) was opened during printing. Close the print module, checking that it is properly locked; a green and orange combination at power-on likewise indicates a module left open.

LIKELY CAUSE

The Sato light table distinguishes the cover being opened during printing (two solid red lights) from the print module being open at power-on. The utility shows **HEAD OPEN** when the cover is open and **HEAD OPEN ERROR** when a feed or a print is requested with the cover open.

Caution: Do not trap your fingers in the paper feed slot when closing the cover. The printhead gets very hot: do not touch it just after printing.

WHAT TO DO

1. Close the print module and check that it is properly locked (a check that the Sato troubleshooting section also asks for when the media does not come out).
2. Restart printing or feed with **FEED**.



Sources: [1.4.1 Status Lights](#); [5.1 Printer Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [1.3 Printer description](#); [7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

Why does my Sato WS4 stop during printing with an orange light?

Lights: LED 2 solid green and LED 1 solid orange · Utility: **EXCESS HEAD TEMP**

Short answer: The printhead is too hot. The WS4 suspends printing by itself until the printhead cools, then resumes the unfinished job: no action is needed.

LIKELY CAUSE

The printer monitors the printhead temperature; according to the manual, when it is too high, printing stops until the printhead has cooled.

Caution: Do not touch the printhead or the area around it just after printing: it gets very hot.

WHAT TO DO

1. Wait for the printhead to cool, without intervening.
2. Printing resumes automatically if the current job was not finished.

Sources: [1.4.1 Status Lights](#); [5.4 Other Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [1.3 Printer description](#); [6.1.3 Other problems](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

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Calibrating the Sato WS4: offset print or labels poorly detected

The WS4 is calibrated without a computer, from system mode, which is accessed with the FEED button.

How do I calibrate the label sensor on a Sato WS4?

Symptoms: incorrect print position, labels poorly detected.

Short answer: Calibration is done without a computer, using system mode: with the printer off, hold FEED while switching it on and release when LED 1 is green and LED 2 is red (transmissive sensor) or LED 2 is orange (reflective sensor). Pressing FEED starts calibration.

LIKELY CAUSE

According to the Sato troubleshooting section, an uncalibrated media sensor is one of the causes of an incorrect print position.

OFFICIAL CALIBRATION PROCEDURE

1. Check that the media is loaded correctly and the print module is closed, then set the power switch to O (off).
2. Hold down the **FEED** button and switch the printer on.
3. Both lights turn solid orange for a few seconds, then briefly green, before changing colour.
4. Transmissive sensor: release FEED as soon as LED 1 is green and LED 2 is red.
Reflective sensor: release FEED as soon as LED 1 is green and LED 2 is orange.
5. Press **FEED** once: the printer feeds 3 or 4 labels then stops, which completes the calibration.

The choice between the transmissive sensor and the reflective sensor depends on the media; the manual describes them in the “Media detection” chapter.

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Sources: [3.1 Media sensor calibration](#); [6.1.1 Media problems](#) – WS4 Series operator manual (Sato, French version) · [1.4.2 System Mode](#) – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

Why is the print offset on the labels from my Sato WS4?

Symptoms: the print position on the label is not correct.

Short answer: Sato cites unsuitable or incorrectly loaded media, the wrong sensor type, an uncalibrated or dirty sensor, and a drive roller that needs replacing. Reload the media, calibrate and then clean the sensor; if nothing changes, replace the rubber roller.

LIKELY CAUSE

Both versions of the WS4 manual list: unsuitable media, incorrectly loaded media, uncalibrated or dirty media sensor. The English revision r10 adds the choice of sensor type and replacement of the drive roller (platen).

Caution: Always switch off the printer before cleaning it.

WHAT TO DO

1. Check that the media is suitable for printing and that the sensor type selected matches the media.
2. Reload the media (section 2.3 of the manual).
3. Calibrate the sensor: see the [calibration](#) entry.
4. Clean the label sensor with a cotton bud moistened with ethyl alcohol, then dry it with a dry cloth.
5. If the offset persists, replace the rubber roller (platen).

Sources: [6.1.1 Media problems](#); [5.1.3 Label sensor](#) – WS4 Series operator manual (Sato, French version) · [5.2 Media Issues](#) – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

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Media and ribbon problems on the Sato WS4

Media that does not come out, ribbon that is broken, wrinkled or pulled along with the labels: the Sato manual describes each case.

Why does my Sato WS4 not feed out the labels?

Symptoms: the media stays stuck, nothing comes out of the printer.

Short answer: Revision r10 of the Sato manual cites incorrectly loaded media, a jam, a print module that is not properly locked or a rubber roller that needs replacing. Reload the media, clear any jam and close the print module firmly.

LIKELY CAUSE

According to the manual: media incorrectly loaded, jam, print module not securely locked, worn drive roller (platen).

Caution: Take care not to trap your fingers in the paper feed slot when opening or closing the cover. The printhead gets very hot during printing: do not touch it just afterwards.

WHAT TO DO

1. Reload the media correctly (section 2.3).
2. Clear any jam: see the [jam](#) entry.
3. Check that the print module is properly locked.
4. If the media still does not feed, replace the rubber roller (platen).

Sources: [5.1 Printer Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [2.3.2 Installing a media roll, DT model](#)  – WS4 Series operator manual (Sato, French version) (official documentation).



The ribbon on my Sato WS4 has broken: how do I repair it?

Symptoms: broken or torn ribbon (TT models).

Short answer: Sato suggests repairing the ribbon: overlap the ribbon from the supply roll onto the torn end on the take-up roll, stick the two together with adhesive tape and reload. Also check the contrast: if it is high, the manual advises reducing it.

LIKELY CAUSE

According to the manual, the ribbon is broken or torn; the troubleshooting section asks you to check the print contrast and reduce it if it is too high.

Caution: Take care not to trap your fingers in the paper feed slot when opening or closing the cover. The printhead gets very hot during printing: do not touch it just afterwards.

WHAT TO DO

1. Check the print contrast and reduce it if it is high.
2. Remove the ribbon supply roll and the ribbon take-up roll from the printer.
3. Unwind the ribbon from the supply roll so that it overlaps the torn part left on the take-up roll.
4. Stick the two parts together with adhesive tape.
5. Put both rolls back in place in the printer.

Sources: [6.1.2 Ribbon problem](#)  – WS4 Series operator manual (Sato, French version) · [5.3 Ribbon Issues \(TT Model\)](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).



Why does the ribbon come out with the labels on my Sato WS4?

Symptoms: the ribbon is pulled out of the printer with the media (TT models).

Short answer: The ribbon is incorrectly loaded, or the printhead is getting too hot. Reload the ribbon, print a configuration label to check the settings, then reduce the contrast if it is very high or reset the printer.

LIKELY CAUSE

The manual cites two causes: incorrectly loaded ribbon, and a printhead temperature that is too high, linked to a very high print contrast.

Caution: Take care not to trap your fingers in the paper feed slot when opening or closing the cover. The printhead gets very hot during printing: do not touch it just afterwards.

WHAT TO DO

1. Reload the ribbon (section 2.4).
2. Print a configuration label to check the settings: see the [self-test](#) entry.
3. If the contrast is very high, reduce it in the printing preferences on the computer.
4. Failing that, reset the printer: see the [reset](#) entry.

Sources: [6.1.2 Ribbon problem](#)  – WS4 Series operator manual (Sato, French version) · [5.3 Ribbon Issues \(TT Model\)](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

Why is the ribbon on my Sato WS4 wrinkling?

Symptoms: wrinkled ribbon, sometimes with broken lines on the label.

Short answer: First check that the ribbon is loaded correctly, then turn the take-up knob to tension it. If the wrinkle has already marked some labels, print a few until the wrinkled part has passed.

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LIKELY CAUSE

According to the manual, a ribbon that is incorrectly loaded or not tensioned enough wrinkles; the wrinkle can produce broken lines in the print.

Caution: Take care not to trap your fingers in the paper feed slot when opening or closing the cover. The printhead gets very hot during printing: do not touch it just afterwards.

WHAT TO DO

1. Check the ribbon loading (section 2.4).
2. Turn the knob on the take-up roll to tension the ribbon.
3. If labels show broken lines, print a few until the wrinkled part has passed, or reload the ribbon.

Sources: [6.1.2 Ribbon problem](#); [6.1.3 Other problems](#)  – WS4 Series operator manual (Sato, French version) · [5.3 Ribbon Issues \(TT Model\)](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

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

Faded print, white lines, nothing prints: Sato WS4 print quality

For print quality, Sato starts with cleaning the printhead and the roller, then adjusting the contrast and the speed.

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How do I fix faded or poor-quality print on my Sato WS4?

Symptoms: light, uneven or barely legible print.

Short answer: Sato points to a dirty printhead or rubber roller, incorrectly set contrast or speed, or incompatible media. Clean the printhead with ethyl alcohol, wiping in one direction only, then adjust the contrast or reduce the speed.

LIKELY CAUSE

According to the Sato troubleshooting section: dirty printhead, dirty rubber roller, unsuitable contrast or speed, media incompatible with the ribbon, or media not approved by Sato.

Caution: Do not use water: it corrodes the heating elements. Do not touch the printhead with your bare hands or with a hard object, and always switch off the printer before cleaning it.

OFFICIAL CLEANING PROCEDURE, THEN SETTINGS

1. Switch off the printer and, if you have just printed, let the printhead cool.
2. Moisten a soft cloth or a cotton bud with ethyl alcohol, or use a SATO cleaning wipe.
3. Gently wipe the printhead in one direction only (from left to right or from right to left), without a back-and-forth motion, so as not to redeposit dust and impurities.
4. Wipe the rubber roller in the same way to remove dust and glue.
5. Adjust the print contrast or reduce the speed.
6. Use media that is compatible with the ribbon and approved by Sato.

Sato advises cleaning the printhead with each new media roll, and more often in harsh environments or if quality drops; general maintenance is daily for high volumes, weekly otherwise. A dirty roller can damage the printhead.

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Sources: [5.1 Cleaning](#); [5.1.1 Printhead](#); [5.1.4 Rubber roller](#); [6.1.1 Media problems](#) [↗](#) – WS4 Series operator manual (Sato, French version) · [5.2 Media Issues](#) [↗](#) – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

Why do white lines appear on the labels from my Sato WS4?

Symptoms: interrupted strokes, broken lines in the print.

Short answer: The Sato manual cites a dirty printhead or a wrinkled ribbon. Clean the printhead; on a TT model, re-tension or reload the ribbon.

LIKELY CAUSE

Broken lines: dirty printhead, or wrinkled ribbon on thermal transfer models.

WHAT TO DO

1. Clean the printhead: see the [cleaning](#) entry.
2. On a TT model, tension or reload the ribbon: see the [wrinkled ribbon](#) entry.
3. If the lights indicate a damaged printhead (LED 2 red, LED 1 orange), see the [damaged printhead](#) entry.

Sources: [6.1.3 Other problems](#) [↗](#) – WS4 Series operator manual (Sato, French version) · [1.4.1 Status Lights](#); [5.4 Other Issues](#) [↗](#) – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

Why does my Sato WS4 print nothing?

Symptoms: no printing even though data has been sent.

Short answer: Sato cites incorrectly loaded media or ribbon, or data not transmitted correctly. Reload the media and the ribbon, check that the interface is set correctly in the printer driver, then resend the data.

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LIKELY CAUSE

According to the manual: media incorrectly loaded, ribbon incorrectly loaded (TT models), or print data not transmitted correctly because of an incorrectly set interface in the driver.

Caution: Do not switch off the printer during a data transmission.

WHAT TO DO

1. Reload the media (section 2.3) and, on a TT model, the ribbon (section 2.4).
2. In the printer driver, check that the correct interface (port) is selected.
3. Resend the print data.

Two red lights with one fast-flashing indicate a command error (**COMMAND ERROR** in the SATO WS4 utility).

Sources: [6.1.1 Media problems](#); [2.2.2 Powering off](#)  – WS4 Series operator manual (Sato, French version) · [1.4.1 Status Lights](#); [5.2 Media Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

Damaged printhead on the Sato WS4

The WS4 indicates a damaged printhead with a dedicated light combination.

What should I do if my Sato WS4 reports a damaged printhead (red light and orange light)?

Lights: LED 2 solid red and LED 1 solid orange · Utility: **HEAD ERROR**

Short answer: This combination indicates a damaged printhead. The Sato manual does not provide for any user action in this case: contact your reseller.



LIKELY CAUSE

The light table associates these lights with a damaged printhead; the SATO WS4 utility then shows HEAD ERROR, which indicates a damaged element on the printhead.

Caution: Do not touch the printhead with your bare hands or with a hard object; it gets very hot during printing.

WHAT TO DO

1. Stop printing.
2. Contact your local reseller for assistance, as the manual states.

When to call a technician: the Sato manual refers you to your local reseller as soon as the printhead is reported as damaged.

The printhead warranty is void if its serial number is erased, altered or illegible. A dirty rubber roller can damage the printhead: Sato asks you to clean it as soon as glue or dust builds up on it.

Sources: [1.4.1 Status Lights](#); [5.4 Other Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [5.1.1 Printhead](#); [5.1.4 Rubber roller](#); [6.1.3 Other problems](#); [7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

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

Connecting the Sato WS4: network, Wi-Fi, Bluetooth and RS-232C

On the WS4, communication settings are made from the computer with the SATO WS4 utility, not from the printer.

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How do I configure the IP address of a Sato WS4 on a wired network (LAN)?

Tool: SATO WS4 utility (WS4 Setting Tool), LAN tab.

Short answer: Network configuration is done with the SATO WS4 utility, with the printer connected via USB or serial. In Parameter Setting, LAN tab, enter a fixed IP address or enable DHCP, click Send, then Get to read the address applied.

LIKELY CAUSE

The manual says to set up the LAN connection from the computer, with the SATO WS4 utility.

OFFICIAL PROCEDURE (SATO WS4 UTILITY)

1. Install the SATO WS4 utility (available on the Sato Europe WS4 Resources page) and launch it.
2. Connect the printer and the computer to the same hub, switch or router with Ethernet cables.
3. In the utility, choose **USB** or **COM** as the port, then open **Parameter Setting, LAN** tab.
4. Fixed address: enter IP Address, Subnet Mask and Gateway under TCP/IP. Automatic address: enable DHCP. Then click **Send**: the printer restarts.
5. Click **Get** to read the settings; with DHCP, the address appears under Current TCP/IP.
6. Then choose **LAN** as the port, open **Setting**, enter the printer's IP address and confirm with **OK**.

With DHCP, the IP address may change if the printer stays in standby for a long time: click **Get** again to find it. Each click on Send restarts the printer. The IPv6 tab accepts a manual address (MANUAL) or DHCPv6.

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Sources: [7 SATO WS4 printer utility](#); [8 Configuring a LAN connection](#); [8.1 IPv6](#) [↗](#) – WS4 Series operator manual (Sato, French version) · [WS4-2 Series Printer Resources | SATO](#) [↗](#) – Sato Europe Resources page (official documentation).

How do I connect a Sato WS4 via Wi-Fi (WLAN)?

Utility: **WIRELESSLAN ERROR** in the event of a wireless LAN initialisation or settings error.

Short answer: On a WS4 fitted with Wi-Fi, the connection is configured with the SATO WS4 utility, WLAN tab: your network's SSID, security mode and key, then a fixed IP address or DHCP. If the utility shows WIRELESSLAN ERROR, the wireless LAN initialisation or configuration has failed.

LIKELY CAUSE

The manual does not associate any light with Wi-Fi; it is the utility that reports WIRELESSLAN ERROR in the event of a wireless LAN initialisation or settings error.

OFFICIAL PROCEDURE (SATO WS4 UTILITY)

1. Check that the computer is connected to the wireless network.
2. In the utility, choose **USB** or **COM** as the port, then open **Parameter Setting, WLAN** tab.
3. Enter the **SSID**, then the security: WEP key (Open mode with WEP), pre-shared key (WPA or WPA2 Personal), or EAP method with user name and password (802.1X, WPA or WPA2 Enterprise; with TTLS, also choose the TTLS method).
4. Set the IPv4 address: fixed (DHCP disabled) or DHCP enabled, then click **Send**: the printer restarts.
5. Click **Get** to read the address applied, then enter it in **LAN > Setting** and confirm with **OK**.

Source: [9 WLAN tab](#); [9.1 Configuring a WLAN connection](#); [7 Utility \(status\)](#) [↗](#) – WS4 Series operator manual (Sato, French version) (official documentation).

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How do I pair a Sato WS4 via Bluetooth?

Utility: **BLUETOOTH ERROR** in the event of a Bluetooth initialisation or settings error.

Short answer: Open the Bluetooth tab of the SATO WS4 utility to check the name, the BD address, the PIN code and the discovery mode (Inquiry Control). Then add the printer from the computer, enter its key and note the outgoing COM port assigned.

LIKELY CAUSE

According to the manual, the Inquiry Control setting makes the printer discoverable permanently, never, or only for 60 seconds after power-on. The utility shows **BLUETOOTH ERROR** in the event of a Bluetooth initialisation or settings error.

WHAT TO DO

1. In the utility, **Bluetooth** tab, check Device Name, BD Address, Pincode and **Inquiry Control**.
2. If the printer only responds for 60 seconds after power-on, start the search just after switching it on.
3. On the computer, add a Bluetooth device and select **SATO WS4**.
4. Choose to enter your own security key and enter the printer's key.
5. Note the outgoing COM port shown at the end of the wizard; if you forget it, it appears in the COM Ports tab of the Bluetooth devices.

The manual illustrates pairing with Windows XP; the screens vary depending on the system. For the PIN code, refer to the Sato manual.

Source: [10 Bluetooth; 10.1 Bluetooth wireless connection; 7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

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What do the slow-flashing red and orange lights mean on my Sato WS4?

Lights: red and orange, one slow-flashing (2 s) · Utility: **COMMS ERROR**

Short answer: This combination indicates an RS-232C communication error; the utility specifies a parity, overrun or framing error. Check that the computer's serial port settings match those in the COM tab of the SATO WS4 utility.

LIKELY CAUSE

The light table indicates an RS-232C communication error, which the utility details as COMMS ERROR (parity, overrun or framing). The manual points out that the settings in the COM tab must match those of the port, otherwise the printer does not work correctly.

WHAT TO DO

1. In the SATO WS4 utility, open the **COM** tab and compare its settings with those of the computer's serial port.
2. Make the two sets of settings match; the **Default** button restores the default COM settings.
3. Resend the data.

Sources: [1.4.1 Status Lights](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [7.2.4 COM; 7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

The Sato WS4 cutter no longer cuts: what should I do?

This entry concerns the optional cutter for the WS4.



Why does the cutter on my Sato WS4 no longer cut correctly?

Lights: red and orange, one fast-flashing · Utility: CUTTER ERROR

Short answer: Sato cites a jam, a poorly fitted cutter, a blunt blade or media that is not approved. Clear the jam, tighten the cutter and replace it if the blade is worn.

LIKELY CAUSE

The troubleshooting section of the manual lists: paper jam, loose cutter, blunt blade; revision r10 adds the use of approved media.

Caution: The manual warns of sharp edges (“Sharp edge!” label): handle the media exit and the cutter with care.

WHAT TO DO

1. Clear the jammed paper.
2. If the cutter is loose, put it back in place and tighten it.
3. If the blade is blunt, replace the cutter.
4. Use media approved by Sato.

Sources: [6.1.3 Other problems](#); [1.3 Printer description](#)  – WS4 Series operator manual (Sato, French version) · [1.4.1 Status Lights](#); [5.4 Other Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

My Sato WS4 does not switch on or switches off: power problems

Revision r10 of the Sato manual details the checks to make on the power supply side.

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My Sato WS4 does not switch on or switches off by itself: what should I check?

Symptoms: no light at power-on, or unexpected shutdown.

Short answer: Check that the power cord and the power connector are fully inserted, test the wall socket with another device, then unplug the printer and plug it back in. If it switches off by itself, also check that the power supply used is the correct one and that it is not damaged.

LIKELY CAUSE

Revision r10 of the manual cites an incorrectly connected power cord or connector, a faulty wall socket, an unsuitable or damaged power supply, or a socket that does not supply enough power.

Caution: Do not plug in the cable with wet hands, use only the specified voltage, earth the printer and do not damage the power cord: risk of fire or electric shock.

WHAT TO DO

1. Check that the power cord is plugged in and that the power supply connector is fully inserted in the printer's power socket.
2. Test the wall socket with another device, or plug the printer into another socket.
3. Unplug the printer and plug it back in, then switch it back on (switch set to I).
4. If it switches off by itself: switch it back on, then check that the power supply is the one specified, that the cord is not damaged and that the socket supplies enough power.

When to call a technician: if the printer has been dropped or damaged, if it gives off smoke or an unusual smell, or if a liquid or an object has got inside it, the manual asks you to switch it off, unplug it and contact your Sato reseller.

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Sources: [5.1 Printer Issues](#) – WS4 Series Printer Operator Manual (Sato, r10) · [2.1 Connecting the power cable](#); [12 Safety precautions](#) – WS4 Series operator manual (Sato, French version) (official documentation).

Sato WS4 reset and firmware

The reset is done from system mode; the firmware update is done with the SATO WS4 utility.

How do I reset a Sato WS4 printer to its original settings?

System mode: LED 1 and LED 2 red.

Short answer: Switch off the printer, hold FEED while switching it back on and release as soon as both lights turn red. Then hold FEED for 3 seconds: the printer returns to its as-shipped state, which corrects problems caused by changed settings.

OFFICIAL RESET PROCEDURE

1. Switch the printer off.
2. Hold down the **FEED** button and switch it back on.
3. After the orange then green sequence, release FEED as soon as both lights turn red.
4. Press and hold **FEED** for 3 seconds, then release: both lights flash red three times, then stay orange for a few seconds.
5. The reset is complete when LED 2 goes off and LED 1 stays solid green.

If FEED is not held long enough at step 4, the reset does not take place: LED 2 flashes orange three times and LED 1 goes off. In that case, start the procedure again.

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Sources: [3.3 Resetting the printer](#) – WS4 Series operator manual (Sato, French version) · [1.4.2 System Mode](#) – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

How do I update the firmware on a Sato WS4?

Utility: `UPDATING FIRMWARE NOW` , `UPDATING FIRMWARE ERROR`

Short answer: The WS4 manual states that the firmware is updated with the SATO WS4 utility (Download Firmware window) or from a USB stick, without detailing the procedure. During the operation, the utility shows `UPDATING FIRMWARE NOW`, and `UPDATING FIRMWARE ERROR` if an error occurs.

WHAT THE MANUAL PROVIDES

1. Install the SATO WS4 utility (WS4 Setting Tool, available on the Sato Europe WS4 Resources page).
2. Start the update from the utility and follow its progress in the **Download Firmware** window; the **Add Date/Time information** option (Setting > Progress Form) timestamps the messages.
3. Do not switch off the printer while the data is being transmitted.
4. Monitor the status shown: `UPDATING FIRMWARE NOW` during the update, `UPDATING FIRMWARE ERROR` if an error occurs.

The operator manual does not describe the complete procedure (file to use, detailed steps); it also mentions the USB stick as a means of updating, without describing it.

Sources: [1.1 Features; Printer Utility](#) – WS4 Series Printer Operator Manual (Sato, r10) · [7 SATO WS4 printer utility; 2.2.2 Powering off](#) – WS4 Series operator manual (Sato, French version) · [WS4-2 Series Printer Resources | SATO](#) – Sato Europe Resources page (official documentation).

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Other questions about the Sato WS4: lights, self-test, USB stick

Reading the lights, printing a configuration label and dealing with USB memory errors.

How do I print a configuration label (self-test) on a Sato WS4?

System mode: LED 1 orange, LED 2 green.

Short answer: With the printer off, hold FEED while switching it on and release when LED 1 is orange and LED 2 is green. Pressing FEED again prints a label that summarises the current settings.

OFFICIAL SELF-TEST PROCEDURE

1. Switch the printer off.
2. Hold down **FEED** and switch it back on.
3. After the sequence of orange then green lights, release FEED when LED 1 turns orange and LED 2 green.
4. Press **FEED**: the printer prints the configuration label.

The manual relies on this label to check the settings when the ribbon comes out with the media. It shows a sample label for the DT model and for the TT model.

Sources: [3.2 Self-test](#); [6.1.2 Ribbon problem](#)  – WS4 Series operator manual (Sato, French version) · [1.4.2 System Mode](#)  – WS4 Series Printer Operator Manual (Sato, r10) (official documentation).

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What should I do in the event of a USB stick error on my Sato WS4 (flashing red lights)?

Lights: two red lights slow-flashing, alternately · Utility: MEMORY WRITE ERROR , FORMAT ERROR , MEMORY FULL

Short answer: This combination indicates a Flash memory or USB stick error: writing impossible, formatting failed or insufficient space. Check that the stick is fully inserted, free up space or replace it; the WS4 accepts sticks of up to 16 GB.

LIKELY CAUSE

According to the manual: USB stick incorrectly inserted or faulty, insufficient space, erase error during formatting, or error in the Flash memory of the CPU board.

WHAT TO DO

1. Check that the USB stick is fully inserted in the port.
2. If there is not enough space, delete files from the stick or use an empty stick.
3. If the stick seems faulty, replace it with a stick of 16 GB or less.

Two green lights slow-flashing, alternately, indicate on the other hand that writing to Flash or USB memory is in progress, or that the stick is being initialised (**SAVING** status in the utility).

Sources: [1.4.1 Status Lights](#); [5.4 Other Issues](#)  – WS4 Series Printer Operator Manual (Sato, r10) · [6.1.3 Other problems](#); [7 Utility \(status\)](#)  – WS4 Series operator manual (Sato, French version) (official documentation).

How do I read the LED 1 and LED 2 lights on my Sato WS4?

Lights: combinations of green, orange and red, solid or flashing (fast: 0.5 s, slow: 2 s).

Short answer: The WS4 has no display: it indicates its status with two lights. Two solid green lights mean that the printer is ready; orange combinations mainly concern the media, the ribbon or the temperature, while those that include red



indicate an error (printhead, cover, communication, cutter, memory).

LIKELY CAUSE

The Sato “Status Lights” table (revision r10) also describes states without a dedicated entry: data transmission (two green, one fast-flashing), pause (two green slow-flashing simultaneously), RTC clock battery low (LED 2 green, LED 1 slow-flashing orange, if the clock is installed), EEPROM backup or memory access error (two red, one slow-flashing) and command error (two red, one fast-flashing).

WHAT TO DO

1. Note the colour of each light and whether it is solid, flashing fast (0.5 s) or flashing slowly (2 s).
2. Find the combination in the [lookup table](#) and open the matching entry.
3. For a more precise diagnosis, the SATO WS4 utility shows the printer status in plain text (Get Status): PAPER JAM , NO PAPER , HEAD ERROR , COMMAND ERROR , SAVING ERROR ...

The manual does not give any specific remedy for the EEPROM error, the command error or the low RTC battery.

Sources: [1.4.1 Status Lights](#) [↗](#) – WS4 Series Printer Operator Manual (Sato, r10) · [1.4 DT model LED indicators](#); [7 Utility \(status\)](#) [↗](#) – WS4 Series operator manual (Sato, French version) (official documentation).

When should you call a technician for a Sato WS4?

The entries above first suggest reloading, cleaning, calibrating or resetting. The Sato manual refers you to your reseller in the following cases:

- **Damaged printhead (LED 2 red, LED 1 orange):** the manual does not provide for any user action: contact your reseller.
- **Printer dropped, damaged, smoke, smell, liquid or object inside:** switch it off, unplug it and contact your Sato reseller.

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Avoiding recurring faults on the Sato WS4: 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 WS4 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.

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 Sato technicians

Support from teams who know your equipment.

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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).

Sato WS4 troubleshooting: frequently asked questions

How do I calibrate a Sato WS4?

With the printer off, hold the FEED button while switching it on. Release when LED 1 is green and LED 2 is red for the transmissive sensor, or LED 2 is orange for the reflective sensor. Press FEED once: the printer feeds 3 or 4 labels and calibration is complete. [See the detailed entry.](#)

How do I reset a Sato WS4 printer?

Switch off the printer, hold FEED while switching it back on and release as soon as both lights turn red. Then hold FEED for 3 seconds. The reset is complete when LED 2 goes off and LED 1 stays solid green. [See the detailed entry.](#)

Why are both lights on my Sato WS4 orange?

Two solid orange lights indicate a paper jam: open the printer, clear the stuck media and check the paper guides. If they flash fast simultaneously, there is no media left when the data is sent. [See the detailed entry.](#)

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How do I print a configuration label on a Sato WS4?

With the printer off, hold FEED while switching it on and release when LED 1 is orange and LED 2 is green. Pressing FEED again prints a label that summarises the current settings. [See the detailed entry.](#)

How do I clean the printhead on a Sato WS4?

Switch off the printer and let the printhead cool. Wipe it gently in one direction only with a soft cloth or a cotton bud moistened with ethyl alcohol, or a SATO wipe, without water. Sato advises this cleaning with each new media roll. [See the detailed entry.](#)

How do I configure the IP address of a Sato WS4?

Use the SATO WS4 utility, with the printer connected via USB or serial. In Parameter Setting, LAN tab, enter a fixed IP address or enable DHCP, then click Send. Then click Get to read the address applied. [See the detailed entry.](#)

Why is the ribbon on my Sato WS4 wrinkling?

The ribbon is incorrectly loaded or not tensioned enough. Check how it is loaded, then turn the take-up knob to tension it. If the wrinkle has marked some labels, print a few until the wrinkled part has passed. [See the detailed entry.](#)

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What should I do if the printhead on my Sato WS4 is damaged?

The WS4 indicates this with LED 2 red and LED 1 orange, both solid. The Sato manual does not provide for any user action in this case: contact your reseller. [See the detailed entry.](#)

Sources consulted

All the causes, procedures and light states in this guide come from the official Sato operator manuals for the WS4 Series (French version and English revision r10), published on the Sato Europe website and consulted on 20 October 2026.

- [User manual](#)  – WS4 Series (WS408DT, WS412DT, WS408TT, WS412TT), Sato, French version r01 **official**
- [WS4 Series Printer Operator Manual](#)  – Sato, revision r10 (2020) **official**
- [WS4-2 Series Printer Resources | SATO](#)  – Sato Europe Resources page (manuals, WS4 Setting Tool utility) **official**

No online WS4 manual exists on manual.sato-global.com, and the Sato help centre (helpcenter.sato-global.com) was not consulted for this guide and is not cited. If the fault falls under these documents, refer to the manufacturer's documentation or ask the TIMCOD technicians.

See also

- Product page on timcod.fr (in French): [Sato WS4 Series](#)
- [All Sato printer troubleshooting guides](#) (FX3-LX, PW208NX, CL4NX, CL6NX Plus, CT4-LX, PW4NX, WS2)
- [Maintenance and repair of Sato printers](#)
- [All printer troubleshooting guides, all brands](#)
- [Through-life maintenance \(MCO\): preventive and corrective maintenance](#) (in French)

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- [Consumables for thermal printers: labels, thermal transfer ribbons, printheads](#) (in French)
- [Printer cleaning kits](#) (in French)

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