SATO

Operator Manual

For printer model:
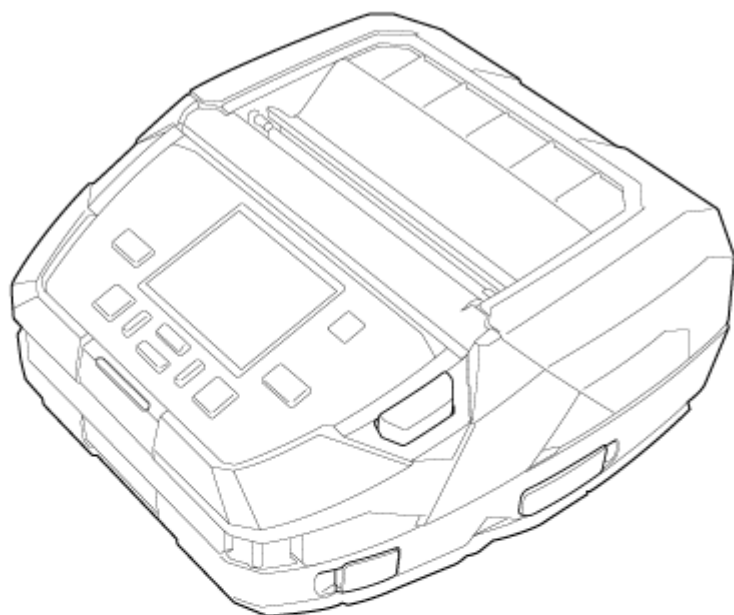
PW4NX

Table of Contents

Before You Start

About This Manual

Thank you for purchasing the SATO PW4NX (hereafter referred to as "the product").

This manual supplies basic information on how to operate the product. Read the manual carefully to understand each function of the product before operation.

Symbols

This operator manual uses following symbols:

Item	Description
⚠️ Warning	The Warning symbol indicates that you can cause death or serious injury if you do not follow the instructions or procedures.
⚠️ Caution	The Caution symbol indicates that you can cause injury or property damage if you do not follow the instructions or procedures.
✏️ Note	The Note symbol indicates useful and supplemental information that you should know.
☞ Reference	The Reference symbol indicates the link of relevant information.

⚠️
- Reproduction in any manner of all or part of this manual is prohibited.
- The content of this manual is subject to change without notice.
- Great care has been taken in the preparation of this document, but if any problems, mistakes, or omission are found, please contact your SATO reseller or technical support.

Safety Precautions

This topic describes how to use the product safely.

Be sure to read the following information carefully before using the product.

Pictographic Symbols

This operator manual and the product labels use a variety of pictographic symbols. These symbols emphasize the safe and correct use of the product and to prevent injury to others and property damage. The explanation of the symbols is as follows. Be sure to understand these symbols well before you read the main text.

⚠ **Warning**	Ignoring the instructions marked by this symbol and erroneously operating the product could result in death or serious injury.
⚠ **Caution**	Ignoring the instructions marked by this symbol and erroneously operating the product could result in injury or property damage.

Example Pictographs

⚠   The △ pictograph means "Caution is required".

🚫   The ⃠ pictograph means "Should not be done".

❗   The ● pictograph means "Must be done".

⚠ Warning

🚫 **Do not use the voltage other than specified**	• Do not use the power supply voltage other than the one specified. Doing so could result in a fire or electric shock.
🚫 **Do not use in hazardous locations**	• The product is not explosion proof certified. Do not use in a potentially explosive environment or atmosphere. Doing so could result in a fire or explosion.
🚫 **Do not set on an unstable area**	• Do not set the product on an unstable area, such as a wobbly table or slanted area or on an area subject to strong vibration. The product could fall or topple over, possibly resulting in injury.
🚫 **Do not place in high-temperature locations**	• Do not place the product near heating equipment such as cooking appliances or a heater, or in high-temperature locations. Doing so could damage the product or result in a fire or electric shock.
⚠ **When the product or AC adapter is dropped or breaks**	• If the product or AC adapter is dropped or breaks, immediately power off the product, unplug the power cord from the outlet, and contact your SATO reseller or technical support. Using the product in one of these conditions could result in a fire or electric shock.
🚫 **Handling the power cord and other cables**	• If the power cord and other cables become damaged (core is exposed, wires broken, deformed, etc.), contact your SATO reseller or technical support. Using the power cord and other cables in this condition could result in a fire or electric shock.
🚫 **Handling the AC adapter, power cord, and other cables**	• Do not damage, break, or alter the AC adapter, power cord, or other cables. Do not place heavy objects on them, apply heat to them, or place them in high-temperature locations. Also, do not forcibly bend, twist, or pull the power cord and other cables. Doing so could result in a fire or electric shock. • Do not splash water on the AC adapter, power cord, and other cables or get them wet. Doing so could result in damage or electric shock.
🚫	• Do not use the product if any abnormality such as smoke or an unusual odor is detected. Doing so could result in a fire or electric shock. Immediately power off the product, unplug the power cord

Do not use the product when something is abnormal	from the outlet, and contact your SATO reseller or technical support for repairs.
🚫 **Do not place containers holding water or other liquid near the product**	• Do not place flower vases, cups, or other containers holding liquids, such as water or chemicals, near the product. If water or chemicals get inside the product, immediately power it off, and contact your SATO reseller or technical support. Using the product in this condition could result in a fire or electric shock.
🚫 **Do not drop the product in water**	• Do not use the product near a container holding liquid. If the product is dropped into water, immediately power it off, and contact your SATO reseller or technical support. Using the product in this condition could result in a fire or electric shock.
🚫 **Do not put objects inside the product**	• Do not insert or drop any metal or flammable objects down the opening (cable port, etc.) of the product. If a foreign object gets inside the product, immediately power it off, unplug the power cord from the outlet, and contact your SATO reseller or technical support. Using the product in this condition could result in a fire or electric shock.
❗ **Connecting cables or optional devices**	• When connecting a cable or optional device to the product, be sure to turn off each of the devices. If they are connected with the power on, an optional device could move unexpectedly, resulting in injury, electric shock, or damage. • When installing a cable or optional device, be sure not to make a mistake in the orientation and steps to install. Otherwise, it could result in injury, fire, electric shock, or damage. • Do not use cables other than the ones supplied with the product or recommended by us. Doing so could result in smoke, fire, electric shock, or damage.
🚫 **Do not operate with wet hands**	• Do not power on/power off the product, replace the battery, or plug/unplug the power cord and other cables with wet hands. Doing so could result in electric shock.
🚫 **Do not disassemble the product and the AC adapter**	• Do not disassemble or modify the product or the AC adapter. Doing so could result in a fire or electric shock. Ask your SATO reseller or technical support to conduct internal inspections, adjustments, and repairs.
⚠️ **Using the cleaning fluid**	• Do not use cleaning fluids other than the ones supplied with the product or recommended by us. • The cleaning fluid is to be strictly kept away from the fire. Never apply heat or place it in the fire.

	• Keep the fluid out of reach of children to prevent them from accidentally drinking it. If a child accidentally drinks the fluid, immediately consult with a physician.

⚠ Caution

⚠ **Carrying the product**	• Before moving the product, be sure to power it off, unplug the power cord from the outlet, and disconnect any connected cables. Moving the product with the power cord or cables still connected could damage them, possibly resulting in a fire, electric shock, or damage.
🚫 **Do not place the product in areas with high humidity**	• Do not place this product in an area with high humidity or where condensation occurs. If condensation has occurred, immediately power off the product, and avoid using it until it is dried. Using the product while condensation is on it could result in a fire, electric shock, or damage.
⚠ **AC adapter**	• An AC adapter could become hot. Be careful not to get burned.
⚠ **Power cord and other cables**	• Grab a power cord and other cables by the plug when removing from the outlet or connector port. Removing a power cord and other cables by grabbing the cord/cable area could result in exposure of wires, breakage, fire, electric shock, or damage. • Do not place the power cord and other cables near a heater or other sources of heat. Doing so could result in melting of the power cord and other cables sheathing, fire, electric shock, or damage.
⚠ **Loading fan-fold media**	• Be careful not to get injured when handling the media inlet or the cover.
⚠ **Loading media roll**	• When loading a media roll, be careful not to get your fingers trapped between the media roll and the supply spindle.
⚠ **Print head**	• The print head is hot after printing. Be careful not to get burned when replacing media or cleaning immediately after printing. • Do not touch the print head with your bare hands. Doing so could result in injury or damage. • To replace the print head, follow the procedure in the Operator Manual. If the Operator Manual does not contain this procedure,

⚠️ **Cover**	• When opening and closing the cover, be careful not to get your fingers trapped in between. Also, firmly hold the cover to prevent it from closing unexpectedly.
  When not using the product for a long time	• When not using the product for a long time, remove the battery from the product and unplug the power cord from the outlet to maintain safety.
  During maintenance and cleaning	• When maintaining and cleaning the product, remove the battery from the product and unplug the power cord from the outlet to maintain safety.

(Note: The top partial row reads:) avoid trying to replace it on your own terms, and contact your SATO reseller or technical support.

Safety Precautions for the Battery

Always observe the following safety precautions for battery use.

Mishandling the battery may cause electric shock, battery leakage, overheating, smoke, rupture, or fire.

Pictographic Symbols

This operator manual and the product labels use a variety of pictographic symbols. These symbols emphasize the safe and correct use of the product and to prevent injury to others and property damage. The explanation of the symbols is as follows. Be sure to understand these symbols well before you read the main text.

⚠ Warning	Ignoring the instructions marked by this symbol and erroneously operating the product could result in death or serious injury.
⚠ Caution	Ignoring the instructions marked by this symbol and erroneously operating the product could result in injury or property damage.

Example Pictographs

The ⚠ pictograph means "Caution is required".

The 🚫 pictograph means "Should not be done".

The ⬤ pictograph means "Must be done".

⚠ Warning

⊘	• Do not disassemble or modify the battery.
⊘	• Never apply heat or place the battery in the fire.
⊘	• Do not place the battery near heating equipment such as cooking appliances or a heater, inside a car under the blazing sun, or in other high-temperature locations (above 60°C or 140°F). Doing so could cause the battery to rupture.
⊘	• While charging or discharging the battery, do not put any flammable material on the battery or cover the battery with a cloth or other materials.
⊘	• Do not place the positive (+) and negative (-) terminals of the battery on or in contact with any conductive materials, such as metal wires. Do not carry or store the battery together with necklaces, hairpins, or other metal objects. Doing so could result in accidental short-circuiting of the battery.
⊘	• Do not wet or immerse the battery in liquids such as water, seawater, beverages, and seasoning agents.
⊘	• Do not beat the battery with a hammer, and do not step on, throw, or drop it.
⊘	• Do not pierce the battery with a nail or other metal objects.
⊘	• Do not touch the terminals of the battery. Doing so could cause the battery to corrode.
❶	• The lithium ion battery has a finite lifespan. We recommend that you replace the battery after 300 charge cycles or 3 years from the date of first use, whichever comes first.
❶	• If you notice any dents or cracks on your battery caused by a strong impact or shock, stop using the battery immediately and replace it with a new one. Using the battery in this condition could lead to abnormal overheating or fire.
❶	• Use only the specified battery.

	• When charging the battery while in the product, use an AC adapter specified by us.
	• When connecting the battery to an outlet such as a car cigarette lighter outlet, always use the dedicated battery charger.
	• Do not rub your eyes if the liquid from the battery leaks and comes into contact with your eyes. Rinse well with clean water such as tap water, and seek medical attention immediately. Otherwise, it could impair your vision.
	• If charging is not completed even after a specified time elapses, remove the battery from the product or battery charger and stop charging. Then, contact your SATO reseller or technical support.
	• If any abnormality is detected (such as a strange odor, overheating, discoloration, deformation, leakage, etc.), stop using the product immediately and perform the following. Then, contact your SATO reseller or technical support. Using the product in this condition could result in a fire, injuries, or electric shock. ◦ Power off the product. ◦ Unplug the power cord from the outlet. ◦ Remove the battery from the product or battery charger, and place it away from any flammable materials.

⚠ Caution

	• Be sure to charge the battery before its first use or when it has not been used for a long time.
	• Charge the battery in the recommended temperature range from 5°C to 35°C (41°F to 95°F).
	• Store the battery in a location out of reach of young children. Also, do not lick the battery or put it in your mouth.
	• Dirty terminals on the battery could result in an unstable connection, battery exhaustion, or an inability to charge. Clean the terminals of the battery with a dry cloth before use.
	• When storing the battery, avoid storing in the following state. Doing so could result in a degraded battery performance or reduced lifespan.

	◦ In a fully charged state (a state immediately following the completion of charging) ◦ In a state with no remaining capacity (the battery is so exhausted that it is even impossible to power on the product) An optimal remaining capacity to store the battery is approximately 40%.
⚠	• When not using the battery, store it in a location with low humidity to prevent the battery from leaking or rusting.
⚠	• When replacing the battery, be sure to install it in the correct orientation. Incorrectly inserting the battery could damage the periphery of the battery insertion slot.
⚠	• If you have an old battery to dispose, to ensure the efficient use of scarce resources, seal the contact with tape or with a similar material, and consult with your reseller or technical support on how to dispose them. Do not place the battery together with other batteries such as dry batteries.

A tip before use

If you write down the start date on the sticker on the battery, you will know when to replace the battery.

Precautions for Installation and Handling

Select a Safe Location

Product operations can be affected by the product's environment.

Refer to the following instructions regarding how to install and handle the product.

Install the product on a surface that is flat and level.

Installing the product on a surface that is tilted, and not flat, may reduce the print quality. This may also cause malfunctions and decrease the life span of the product.

Store the product on a level surface.

Do not store the product on an uneven or slanted surface. Doing so may result in a falling accident.

Do not use or store the product in a location where the temperature and/or humidity are high.

Avoid locations subject to extreme or fast changes in temperature or humidity.

Do not place the product near heating equipment such as a cooking appliance or heater, or in other high-temperature locations.

The product may break.

Do not use or store the product in a location exposed to water or oil.

Water or oil entering inside the product may cause a fire, electric shock or malfunction.

Avoid dust.

Dust build up may result in reduced print quality, malfunctions, or damage.

Keep out of direct sunlight.

The product has a built-in optical sensor. Exposure to direct sunlight may cause false detections by the sensor, and may cause the product to not operate correctly. In addition, close the cover when using the product.

Do not use in hazardous locations.

Do not use in a potentially explosive environment or atmosphere. Doing so could cause a fire or explosion.

Do not supply power from an AC outlet near electrical equipment with high power consumption.

Doing so could cause malfunctions or damage due to electrical noise or voltage reduction.

Power Supply

Product operations can be affected by the product's environment.

Refer to the following instructions regarding how to install and handle the product.

The product requires a battery.

Be sure to install a battery in the product.

Supply a stable source of electricity to the product.

Do not share its power outlet with other electrical devices. This could cause power fluctuations and performance issues with your product.

Printing

The print result varies depending on the usage environment (temperature and humidity), the supply condition, and the product settings (the print speed, the print darkness, etc.).

Please sufficiently test the product in your usage environment, and use it with the optimal combination.

If anything is unclear, or if you have any questions, contact your SATO sales representative or reseller.

Regulatory Approval

⚠ • When you want to take the product to countries other than where you purchased it, contact your SATO reseller.

FCC Warning

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Shielded cable must be used in order to comply with the emission limits.

FCC Statement for Wireless LAN

This device complies with RF radiation exposure limits set forth for an uncontrolled environment.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all people and must not be collocated or operating in conjunction with any other antenna or transmitter.

Bluetooth/Wireless Communication

Compliance Statement

This product has been certified for compliance with the relevant radio interference regulations of your country or region. To make sure continued compliance, do not:

- Disassemble or modify this product.

- Remove the certificate label (serial number seal) affixed to this product.

Use of this product near microwave and/or other wireless LAN equipment, or where static electricity or radio interference is present, may shorten the communication distance, or even disable communication.

Industry Canada (IC) Statement for Bluetooth

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference.

- This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles).

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- L'appareil ne doit pas produire de brouillage.

- L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps (à l'exception des extrémités : mains, poignets, pieds et chevilles).

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

	A product marked with this symbol on itself or on its packaging shall not be treated as household waste. Instead it shall be handed over to an appropriate collection point for the recycling of electrical and electronic equipment in accordance with local regulations. Inappropriate waste handling of this product may cause detrimental consequences for the environment and damage to human health. The recycling of materials will help to conserve natural resources and contribute to your community. For more detailed information on recycling of this product, please contact your local municipal organization, your household waste disposal service or the dealer where you purchased the product.

机器名称:条码打印机

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板	×	○	○	○	○	○
电源、交流转换器 电池	×	○	○	○	○	○
热敏头、液晶显示屏	×	○	○	○	○	○
电动机、切纸机	×	○	○	○	○	○
树脂(ABS、PC等)	○	○	○	○	○	○
金属(铁、非铁金属)	×	○	○	○	○	○
电缆等	×	○	○	○	○	×
包装材料(纸盒等)	○	○	○	○	○	○

本表格依据SJ/T 11364的规定编制。

○:表示该有毒有害物质在该部件所有均质材料中的含量均在
　　GB/T 26572 "电子信息产品中有毒有害物质的限量要求"的标准规定以下。

×:表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
　　GB/T 26572 "电子信息产品中有毒有害物质的限量要求"的标准规定。

环保使用期限	本标志中的年数,是根据2006年2月28日公布的"电子信息产品污染防止管理办法"和SJ/T11364"产品污染防止标识要求",适用于在中华人民共和国(除台湾、香港和澳门外)生产或进口的电子信息产品的"环保使用期限"。在遵守使用说明书中记载的有关本产品安全和使用上的注意事项、且没有其他法律和规定的免责事由的情况下,在从生产日开始的上述年限内,产品的有毒、有害物质或元素不会发生外泄或突变,使用该产品不会对环境造成严重污染或对使用者人身、财产造成严重损害。

注1):　"环保使用期限"不是安全使用期限。尤其不同于基于电气性能安全、电磁安全等因素而被限定的使用期限。产品在经适当使用后予以废弃时,希望依照有关电子信息产品的回收和再利用的法律与规定进行处理。

注2):　本标志中的年数为"环保使用期限",不是产品的质量保证期限。对于同一包装内包含电池、充电器等附属品的产品,产品和附属品的环保使用期限可能不同。

Environmentally Hazardous Materials

RoHS Directive

This product is in conformity with RoHS Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.

Compliance Status of REACH Regulation

(1) Status of registered chemical substances

No chemical substances are intentionally emitted, nor are there any chemical substances that are registered with the European Chemicals Agency.

(2) Information about the Substances of Very High Concern (SVHC) contained in the product

Currently, there has been no information communicated regarding SVHC that exceed 0.1% of the product's weight. In the future, if SVHC that exceed 0.1% of the product's weight are found, we will immediately communicate that information.

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  - Stylized SOS (SATO Online Services)
  - SATO App Storage

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- QR Code is a registered trademark of DENSO WAVE INCORPORATED.
- Wi-Fi$^®$ is a registered trademark of Wi-Fi Alliance.
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  - Wi-Fi Protected Setup^{TM}
  - WPA^{TM}
  - WPA2^{TM}

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  - iPhone
  - iPod
  - iPod touch

- IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.
- Atheros is a registered trademark of Qualcomm Atheros, Inc.
- SOTI and SOTI Connect are trademarks of SOTI Inc and/or its affiliates.
- All other trademarks are the property of their respective owners.

What You Can Do with This Product

Features of the Product

The mobile printer PW4NX is a label printer that is highly durable and has superior printing performance. We provide reliability in a mobile printer you can trust as a company with the most reliable automatic identification solutions. The main features of the PW4NX are as follows:

- High-speed printing achieved in mobile printers; previously available only in desktop printers

- Uses smart battery that shows the condition of the battery

    ◦ Equipped with the [Estimated Printable] function that shows an estimate of how many labels can be printed based on the battery's remaining power and consumption rate

    ◦ Easy to confirm from the operator panel the condition of the battery and the number of times it has been charged

    ◦ Recognizes consumption status and degradation of the battery, and notifies you about replacement

- Long operating times achieved through low power consumption

- High visibility 2.4 inch TFT color LCD and LED indicators allow quick assessment of errors and product status

- Supports use of environmentally friendly linerless labels to prevent waste (linerless models only)

- Easy troubleshooting provided by viewing guidance videos

- Easy to replace print heads and platen roller

- Supports 31 languages for display and 47 languages for printing scalable fonts

- Just place the printer in the 1Bay Charging Cradle (option) for charging

- Equipped with SATO's original Application Enabled Printing (AEP) for flexible user orientated features, such as PC less printing and linking directly to PLC and much more

- Equipped with SATO Online Services. Minimize equipment stoppage by preventive maintenance and repairs to avoid troubles

- Supports SOTI Connect for managing multiple devices

- Cloud-based data management service, "SATO App Storage"

    SATO App Storage is a cloud service that stores and distributes your label printing applications for SATO products. This service enables you to centrally manage application data and easily control all on-site products so that the data is accurate and up-to-date from the cloud. It also enables you to add or replace products smoothly by installing application data to new products from the cloud.

    Account registration is required to use this service. Contact your SATO sales representative or refer to your local SATO website for more details.

- 802.11ac/Bluetooth 5.0 dual wireless

Various Ways to Output

Outputting with General-purpose Software

Labels can be easily output by using software, such as the NiceLabel series.

- NiceLabel series

  This software has multiple functions and is easy to operate so you can create and print labels with richly versatile layouts.

- For details of the products, contact your SATO sales representative.

Outputting and Controlling with Dedicated Command

A variety of labels and tags can be printed from simple formats to complex formats by sending an SBPL (SATO Barcode Printer Language) command to the product.

In addition, you can print characters, barcodes, and graphics in various styles by combining multiple SBPL commands. There are many functions for modifying the printed items, such as enlarging fonts, specifying a print direction, ruled line, and black and white reverse printing.

For programming references, contact your SATO sales representative or technical support.

Outputting with Standalone (AEP) Applications

Labels can be printed by running standalone (AEP) applications within the product.

• For details of the standalone applications, contact your SATO sales representative.

Basic Information

Bundled Accessories

After unpacking the product, make sure that you have all the bundled accessories. If there are missing items, contact the SATO reseller or technical support.

- User documents (Quick Guide, Safety Instructions, Global Warranty Program leaflet, Product Information Download, To Customers Using Radio Devices, Declaration of Conformity, MFi license information)
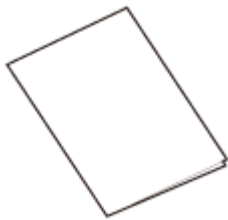
- Lithium-ion battery

- Belt clip (1 set)

- Screws (2)
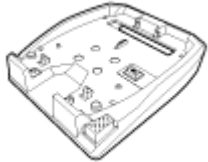
- 1-inch media guide cores (2)
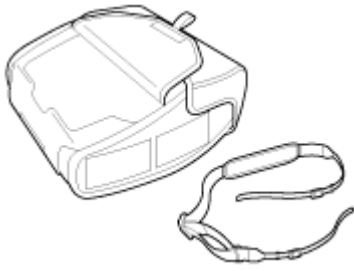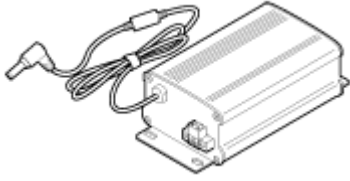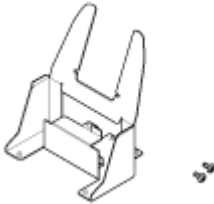
>
> - AC adapter is optional.
>
> - Keep the packaging box and cushioning material after installing the product. You can pack the product into the packaging box to ship it to have repairs done.

Optional Devices

The optional devices for the printer are as follows.

Optional Devices	Description
Lithium-ion battery	PW4NX series only. Guideline for replacement is after about 300 charge/discharge cycles.
AC adapter	An adapter for charging the battery installed in the product. About 3 hours for full charge.
1ch battery charger	A quick charger capable of fully charging the battery in approx. 3 hours. Equipped with the Eco Charge function. Also includes an AC adapter.
4ch battery charger	A charger capable of fully charging up to 4 batteries in approx. 4 hours. Equipped with the Eco Charge function. Also includes an AC adapter.
1Bay Charging Cradle	Cradle in which the product is placed for charging. About 3 hours for full charge. Allows you to easily load fan-fold media. Also includes an AC adapter.
Carrying case	An option for using the product hands-free. Also includes a shoulder strap.

Optional Devices	Description
Hand strap	An option for easily carrying the product.
Shoulder strap	An option for using the product hands-free.
Belt loop	An option for using the product hands-free.
Cigarette lighter adapter 	An adapter for charging the product from a cigarette lighter socket in a car or truck.
12-60V DC power supply 	A device for charging the product by connecting directly to a DC power supply, such as the customer's battery.
Linerless kit[1]	Allows use of environmentally friendly linerless labels.

Optional Devices	Description
Printer Stand	An option for effectively using space where the product is installed. Allows you to easily load fan-fold media.

[1] Cannot be installed after the product is purchased. Before purchasing the product, contact the SATO reseller or the technical support.

• For more details about the optional devices, contact your SATO sales representative.

Parts Identification

Front View
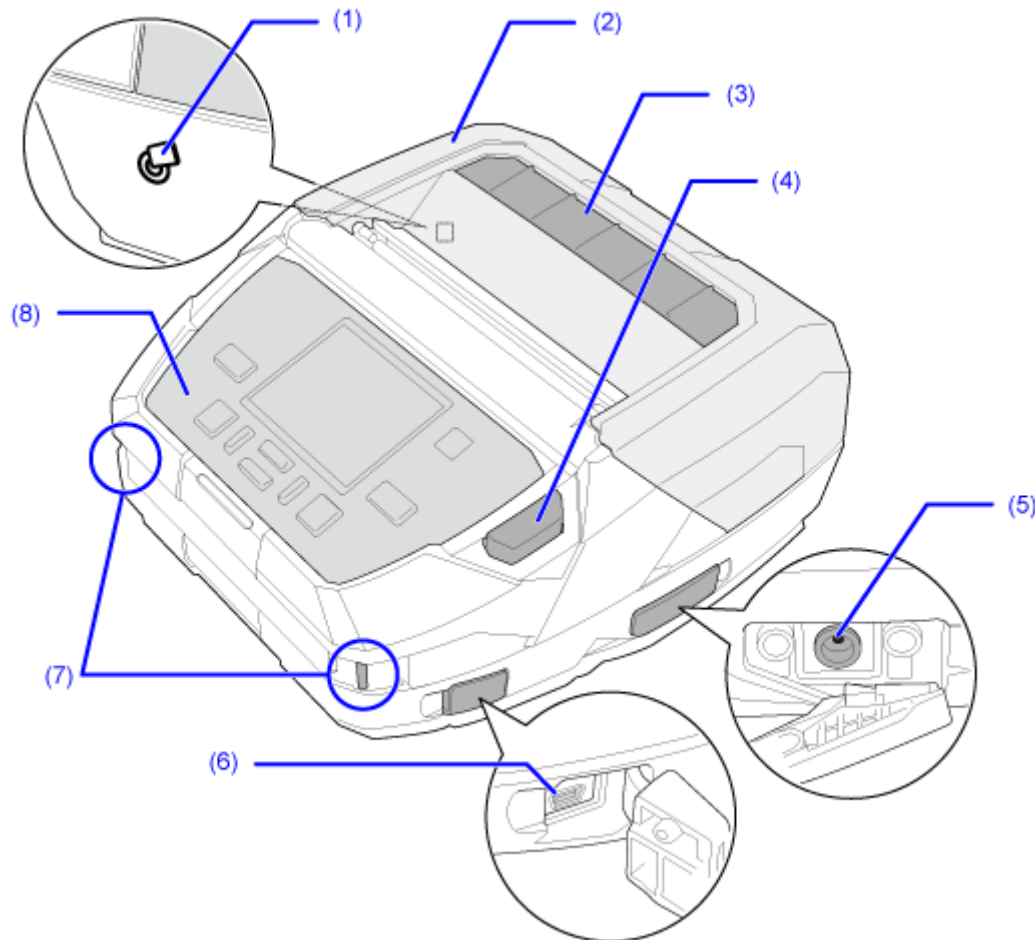
(1) **NFC antenna location**

(2) **Top cover**

(3) **Window**

> You can check the amount of remaining media.

(4) **Cover open button**

(5) **DC input connector (AC power connector)**

> Before connecting, make sure that the AC voltage of your region is in the range of AC 100 to 240 V, 50 to 60 Hz.

(6) **USB connector (Mini-B)**

> To connect the product to the computer using the USB interface.
>
> You can also use USB memory to get the product log data and setting information, and to install certificates.

> ⚠ • Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

(7) **Strap groove**

   Attaching the shoulder strap (option) and the hand strap (option)

(8) **Operator panel**

Bottom View
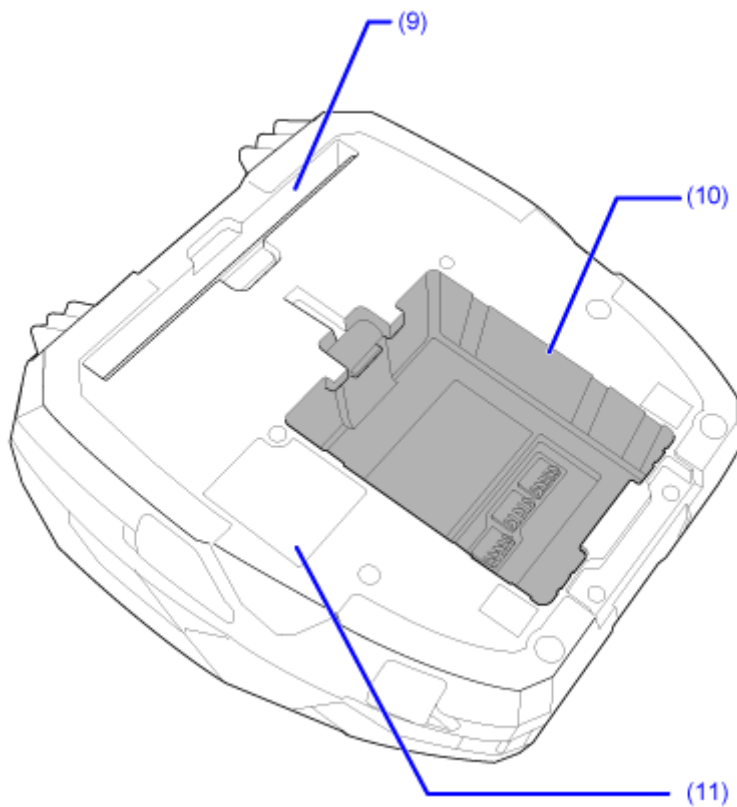
(9) **Fan-fold media inlet**

(10) **Battery compartment**

(11) **Charging terminal for the 1Bay Charging Cradle (Option)**

| | • | The product is shipped with a black protective sheet marked "CRADLE ACCESS" on the terminal for the 1Bay Charging Cradle (option). Remove this sheet when charging using the 1Bay Charging Cradle. |

Internal View
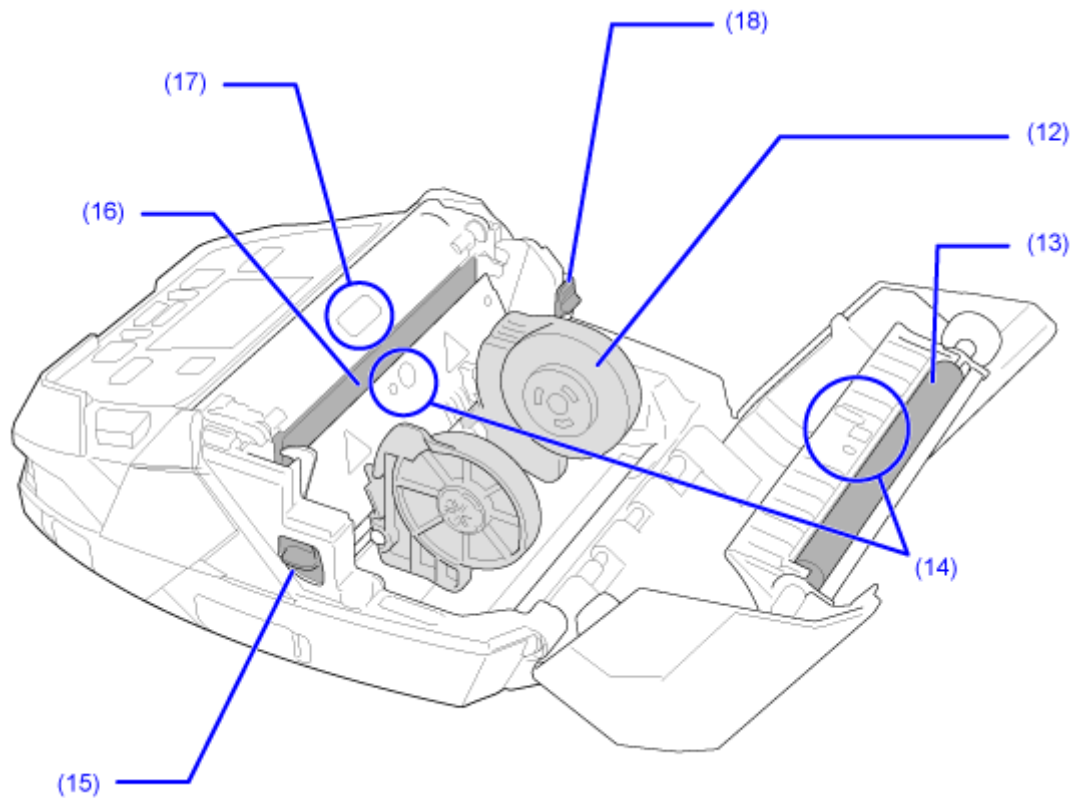
(12) **Media guide**

(13) **Platen roller (Consumables)**

(14) **Media sensors**

(15) **Dispenser roller release button**

(16) **Print head (Consumables)**

(17) **Dispenser sensor**

(18) **Media guide lock**

    ✏️   •   A platen roller is a component that feeds media.

             A print head is a component that prints on media.
             These components are for printing and need to be maintained regularly.

Operator Panel
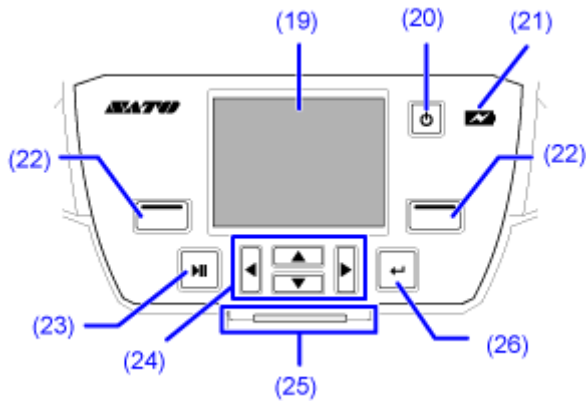
(19) **Display**

(20) ⏻ **(power) button**

To power on the product, press the ⏻ (power) button until the LED indicator lights blue.

To power off the product, press the ⏻ (power) button for more than 2 seconds, and then follow the on-screen instructions.

(21) **Battery indicator**

(22) ▬**Left/right select button**

The functions differ according to the screen. The functions of the buttons are shown at the bottom of the screen.

Example 1: When in Offline mode
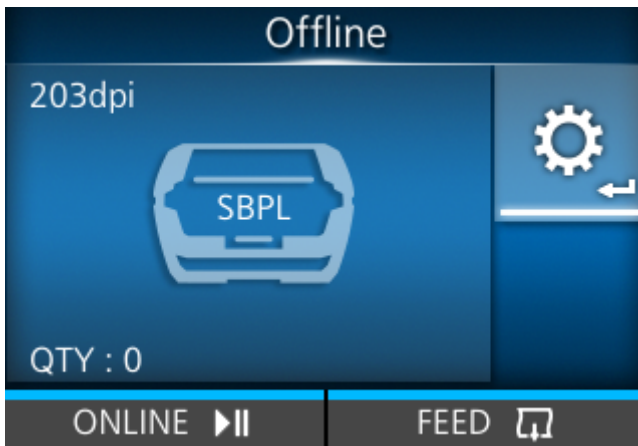
▬Left select button: Online, ▬Right select button: Feed

Example 2: Numeric input screen for settings menu

Left select button: Return to previous screen, Right select button: Save

(23) ▷|| **LINE button**

Switches online/offline, and plays and pauses videos.

(24) **Arrow buttons**

Moves the cursor on the menu screens.

(25) **LED indicator**

(26) ⬅⏎ **Enter button**

Applies selected items and set values.

Using the Operator Panel

LED Indicator

The LED indicator lights up or flashes to show the current status of the product. The product statuses which the LED indicator shows are as follows:

LED Indicator	Color/Status	Description
	Blue/Lights on	Online mode
	Lights off	Power off or Offline mode
	Red/Lights on	Product error, or during the powering off process
	Blue/Flashes	Sleep mode (energy saving mode), when power is on

> • By default, the product goes into sleep mode after 5 seconds of inactivity. You can use the [Sleep Timeout] menu to change the period before the product enters sleep mode.

Operations in Online/Offline Mode

Online Mode

In Online mode, you can execute the print job.

In the default settings, the product powers on in Online mode.
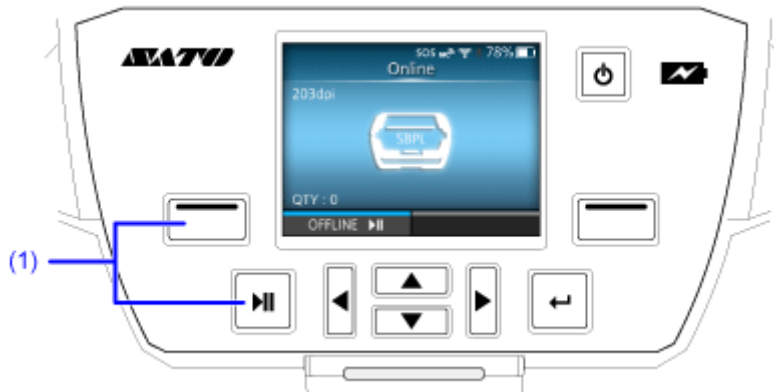
(1) Change to Offline mode.

> ✎ • You can use the [Printing] > [Advanced] > [Start Online] menu in the Settings mode to
> set whether the product starts in Online mode or Offline mode when powering on.

Offline Mode

In Offline mode, the print job will stop.

You can adjust the print settings, cancel the print job or feed the media.

After you complete or cancel the print job, you can show the Settings mode.
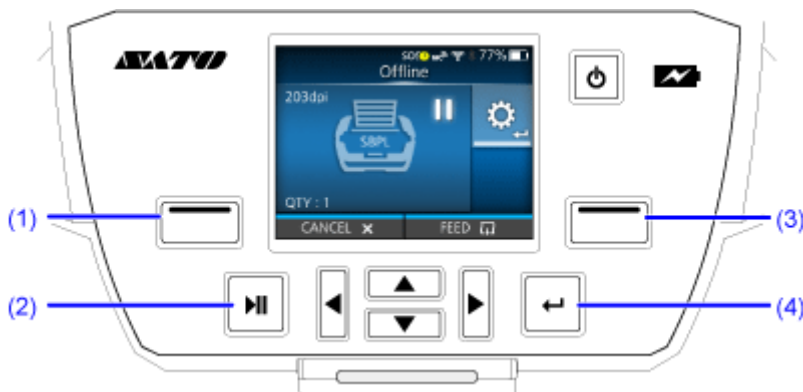
(1) Cancel the print job.

   When there are no print jobs, the product changes to Online mode.

(2) Change to Online mode.

(3) Feed the media.

(4) Shows the Adjustments mode when the print job is paused.

Shows the Settings mode when there are no print jobs.

Status Icon

The icons on the status bar of the display show the product's status.

(1) Status bar

Communication Interface Status

Icon	Description
	Bluetooth is enabled but not connected.
	Bluetooth is enabled and connected.
	Bluetooth startup failed.
	NFC is enabled but not connected.
	NFC is enabled and connected.

Icon	Description
	Not connected to the NTP time server.
	Wi-Fi is authenticated, but not connected.
	Wi-Fi startup failed.
	Wi-Fi is connected. Signal Level: 1
	Wi-Fi is connected. Signal Level: 2
	Wi-Fi is connected. Signal Level: 3
	Wi-Fi is connected. Signal Level: 4
	Wi-Fi Direct is connected or the product is set to act as an access point.
	Product is connected to USB host.

Icon	Description
	Standard code is disabled.
	The On-Demand mode of the SOS (SATO Online Services) is enabled.
	The Real Time mode or the Light mode of the SOS is enabled. The product is connected to the SOS cloud.
	The Real Time mode or the Light mode of the SOS is enabled, but not connected to the SOS cloud. If the Wi-Fi icon is grayed out, the product is not connected to the network. If the Wi-Fi icon is active, the Internet connection of the SOS cloud has a trouble.
	The product is not connected to the SOS cloud.
	Time period set for periodic notification for On-Demand mode for SOS has been reached. Scan the QR code and send the information to the SOS cloud.
	[SOTI Connect] is enabled, but [Start Auto Enrollment] is disabled.
	[SOTI Connect] and [Start Auto Enrollment] are enabled, but failed to enroll automatically.
	[SOTI Connect] and [Start Auto Enrollment] are enabled. The product successfully enrolled automatically.

Icon	Description
IP ⚠	IP address could not be acquired. Or a communication error has occurred.

USB Memory Status

Icon	Description
	USB memory is connected.

Print Job Status

Icon	Description
	Waiting for media removal. Remove the media.
	Command error detected. Check the print data.
	Receive buffer is nearly full. Stop sending print data until the buffer is no longer nearly full.
	Defective print head is detected. Replace the print head.
	Incompatible print head is detected. Replace the print head.
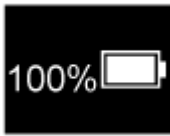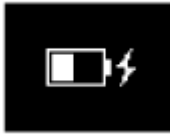
Icon	Description
	Dispenser sensor failed due to strong exterior light. To output the next media, remove the media, and go to online mode.

Maintenance Status

Icons notify you about cleaning the product and replacing parts at the set periods when [Notifications] is enabled.

Icon	Description
	Clean the print head or platen roller.
	Replace the print head.
	Replace the platen roller.

Battery Status (When [Eco Charge] is Disabled)

Icon	Description
100%	Shows the remaining battery level in an icon and percent.
	Shows that the battery is charging.
	Shows that the battery is not in a chargeable temperature range and cannot be charged.

Icon	Description
	Shows that it is time to replace the battery.

Battery Status (When [Eco Charge] is Enabled)

Icon	Description
100% ECO	Shows the remaining battery level in percent.
ECO ⚡	Shows that the battery is eco-charging.
ECO	Shows that the battery is not in a chargeable temperature range and cannot be charged.
ECO	Shows that it is time to replace the battery.
ECO	

Battery Indicator

The battery indicator lights or flashes to indicate the current state of the battery. The battery indicator shows the following states of the battery.

Battery indicator	Condition	Description
	Off	• Power-off • Remaining battery level 31% or more, not charging
	Lit	Fully charged condition
	Flashing	• Charging • Remaining battery level 30% or less, not charging

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Operations When Errors Occur

When a product error occurs, an icon and message (the error and solution) for the error appear on the display. When an error occurs, you can perform the following operations:

- Change to Offline mode.

- Cancel the error.

- Feed the media.

- Change to Settings mode.

- Change to guidance video.

- Change to the SOS error screen on which the QR code and phone number are displayed if the SOS (SATO Online Services) is enabled.

✎ • The available operations vary, depending on the situation.

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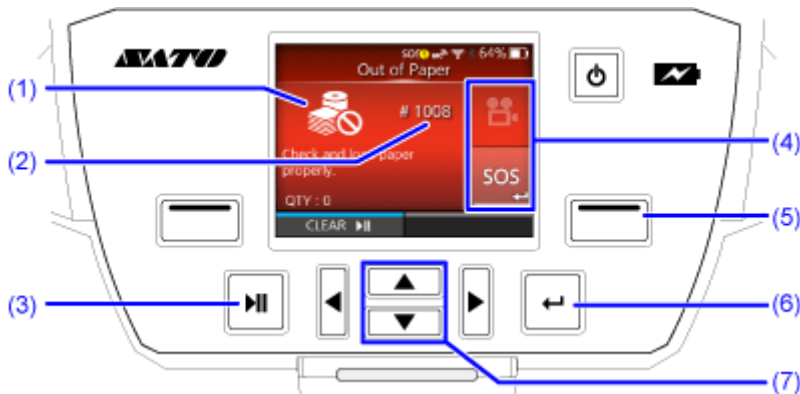
(1) Error Icon

(2) Error number

(3) Change to Offline mode if allowed for the active error.

(4) The icon appears when the Settings mode or guidance video is available.

   The SOS icon appears when the SOS is enabled.

(5) Feed the media if allowed for the active error.

(6) Change to Settings mode or guidance video.

   Change to the SOS error screen on which the QR code and phone number are displayed if the SOS is enabled.

(7) When there are two icons on the (4) area, select the icon by using ▲ / ▼ buttons. The selected icon will be highlighted.

Adjusting the Print Settings During Printing

Follow the procedure below to adjust the print position, print darkness and print speed during printing.

1. **Press the ▷|| button or ▬ button (OFFLINE) to pause print job and change the product to Offline mode.**

2. **Press the ◁⤶ button.**

The Adjustments mode appears.

> ✎ • Input the password if it is enabled.

3. **Select an item and adjust the setting.**

4. **Press the ▬ button (↩) to return to Offline mode.**

5. **Press the ▷|| button to change to Online mode.**

The print job resumes with the adjusted settings.

- When [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands] and the print settings have been specified by command, the changes made in the Adjustments mode will be applied only to the data already analyzed at that time. The settings specified by command will be applied to the rest of the data.

Canceling the Print Job

Cancel the print job according to the following procedure. When the print job is canceled, the data stored in the receive buffer of the product is also deleted.

1. **Press the ▷❙❙ button or ▬ button (OFFLINE) to change the product to Offline mode.**

2. **Press the ▬ button (CANCEL).**

A message appears, confirming that you want to cancel the print job.

3. **Press the ▬ button (✓).**
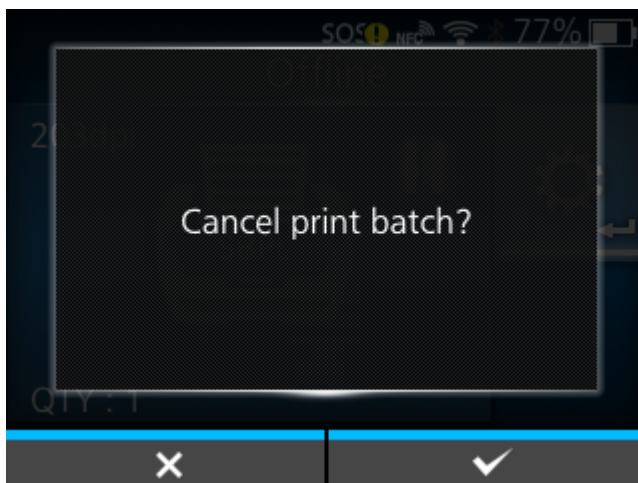
The print job is canceled.

Guidance Videos

The product contains guidance videos that are shown on the display for visual reference of the product's operations.

List of the Guidance Videos

The product contains the guidance videos for visual reference of product operations.

The onboard guidance videos are as follows:

Guidance video	Show video from		
	Error screen	Startup Guide	[Information] Menu
Media roll loading (continuous and tear-off)	-	Possible	Possible
Media roll loading (dispenser)	-	Possible	Possible
Media roll loading (linerless tear-off)	-	Possible	Possible
Fan-fold media loading (continuous and tear-off)	-	Possible	Possible
Media roll replacement (continuous and tear-off)	Possible	-	Possible
Media roll replacement (dispenser)	Possible	-	Possible
Media roll replacement (linerless tear-off)	Possible	-	Possible
Fan-fold media replacement (continuous and tear-off)	Possible	-	Possible
Print head replacement (standard model)	-	-	Possible
Platen roller replacement (standard model)	-	-	Possible
Battery replacement	-	-	Possible
Cleaning the product	-	-	Possible

Playing the Guidance Video from the Error Screen

Play the guidance video from the error screen and resolve the error by following the procedure of the video.

1. **On the error screen, press the ⬅ button to play the guidance video.**

If there are more videos to choose from, press the arrow buttons to select the guidance video, and then press the ⬅ button. The guidance video starts.

2. Follow the procedures to resolve the error according to the guidance video.

Getting Access to the Guidance Video in Online Mode

When in the Online mode, play the guidance video according to the following procedure.

1. **Press the ▬ button (OFFLINE) or ▶‖ button in Online mode.**

The product changes to Offline mode.
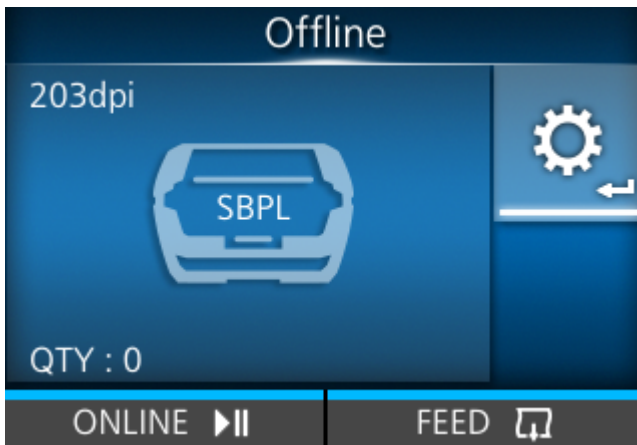
2. **Press the ⬅ button.**

The product changes to Settings mode.

✎ • Input the password if it is enabled.

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3. Select [Information] using the ◁ / ▷ buttons.
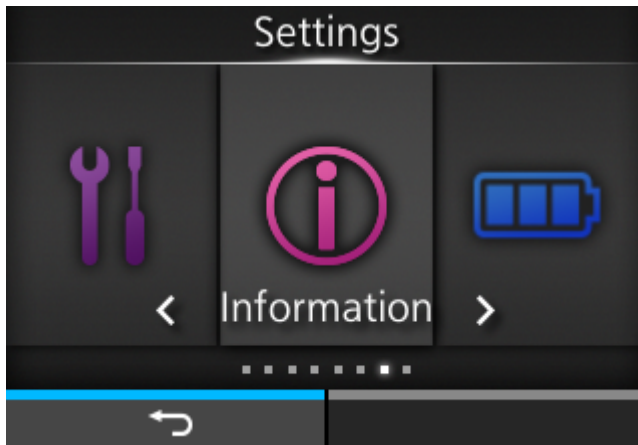
4. Press the ⬅ button.

The item list appears.

5. Select [Help] using the ▲ / ▼ buttons.
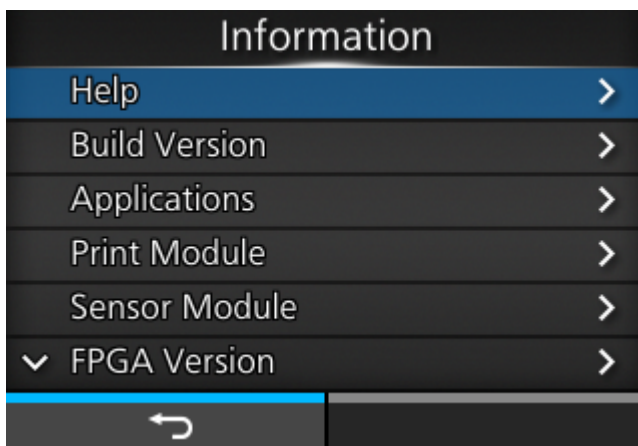
6. Press the ⬅ button.

The guidance video list appears.

7. Select the video for playback using the ▲ / ▼ buttons, and then press the ↵ button.

Help	
Install Paper	>
Replace Paper	>
Replace Head	
Replace Platen	
Replace Battery	
Cleaning	
↩	
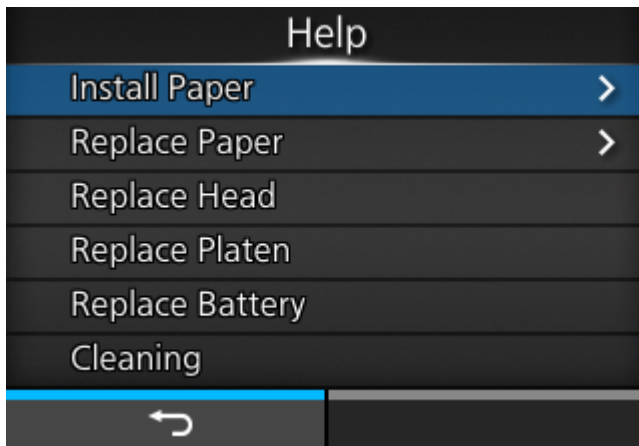
The guidance video starts.

Operating the Guidance Video
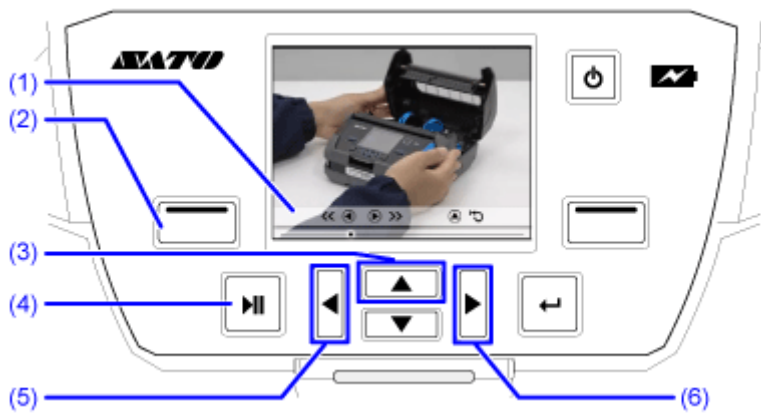
(1) Indication panel appears again when one of the buttons is pressed.

(2) Stop the playback of the video and return to menu.

(3) Playback the video from the start.

(4) Playback or pause the video.

(5) Rewind the video.

(6) Fast-forward the video.

Settings Mode

In the Settings mode, you can set the product's various settings. The topics here explain how to operate the Settings mode.

Settings Mode Menus

There are the following main menus in the Settings mode and each menu contains many layers of submenus. Frequently used settings are also listed in the [Shortcut] menu so that you can directly access them.
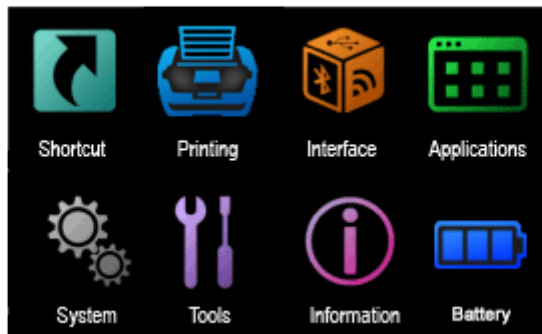
Menu	Description
Shortcut Menu	Directly access frequently used settings.
Printing Menu	Access the settings related to printing.
Interface Menu	Access the settings related to the interfaces.
Applications Menu	Access the settings related to the printer command.
System Menu	Access the settings related to the display language, buzzer volume etc.
Tools Menu	Access the test print, initialization and other settings.
Information Menu	Displays the information and guidance videos for the product.
Battery Menu	Access the battery condition information and charging settings.

- The icon appears between the [Information] menu and [Battery] menu when the [System] > [Regional] > [Display Language Icon] menu is enabled. You can easily access the [Language] menu.

Changing to the Settings Mode

The Settings mode appears when no print jobs remain in the product.

Change the product to the Settings mode according to the following procedure:

1. Press the ▬ button (OFFLINE) or ▷‖ button in Online mode.
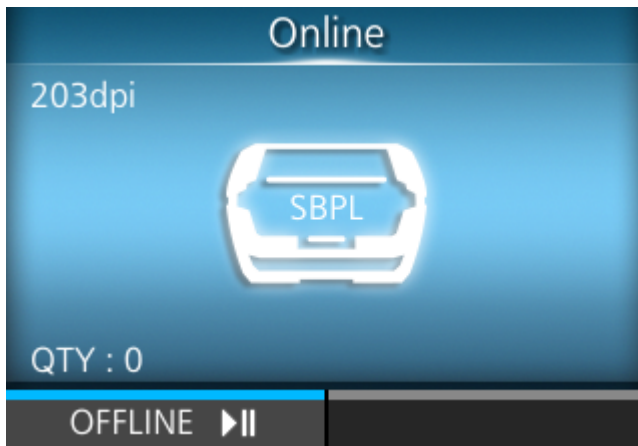
The product changes to Offline mode.
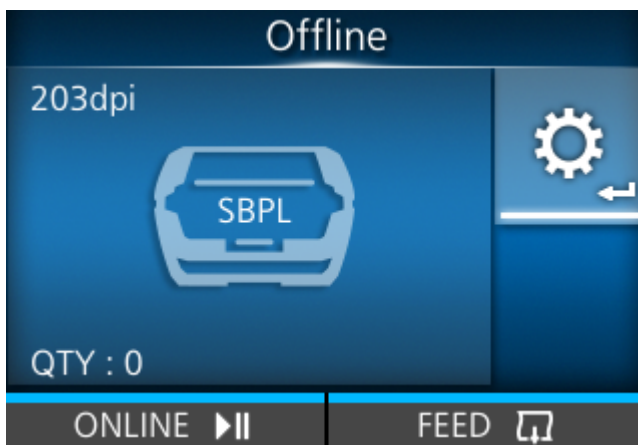
2. Press the ⬅ button.

The product changes to Settings mode.
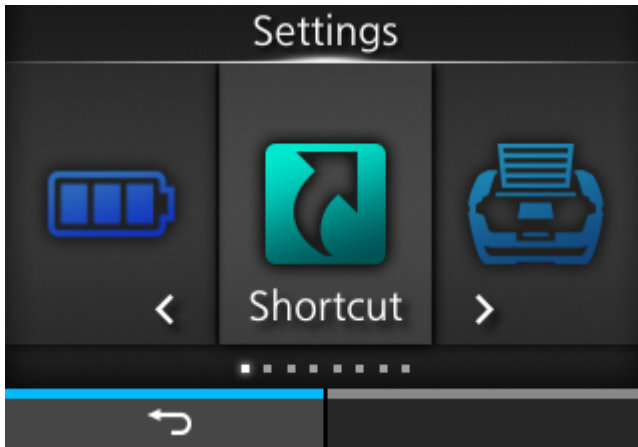
• To exit the Settings mode, press the � button.

Logging In to/Logging Out of the Settings Mode

The Settings mode logs in and logs out by the following procedure, if the password is enabled.

- **If the password is enabled, input the password after entering the Settings mode.**

When logged in to the Settings mode, [LOG OUT] appears on the bottom right of the screen.

- **Press the ▬ button (LOG OUT) to log out of the Settings mode.**
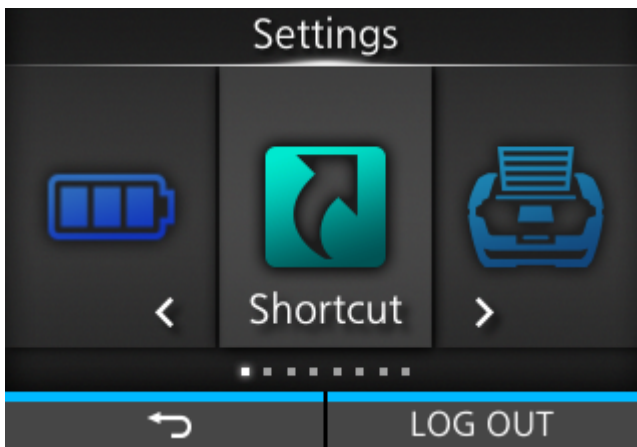
Password is required to enter the Settings mode again.

- With password enabled, if no button is pressed for about 10 minutes after login, the login session will end automatically. Password is required to enter the Settings mode again.

Item Selection

Select an item in Settings mode according to the following procedure:

1. Select menu using the ◁ / ▷ **buttons.**

2. Press the ⬅ **button.**
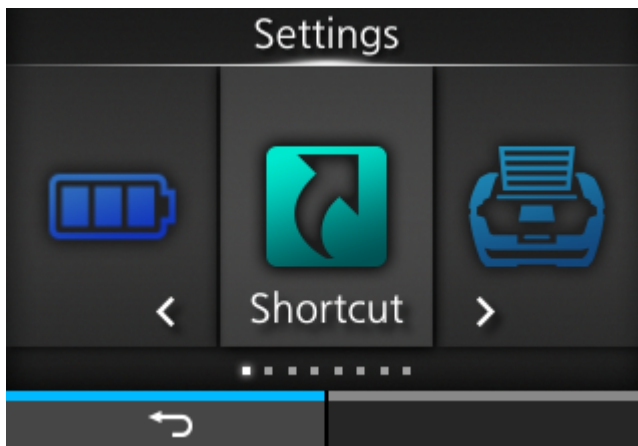
Settings

The item list appears.

3. Select an item using the ▲ / ▼ **buttons.**

4. Press the ⬅ **button.**

Shortcut

Adjustments	>
Speed	4 ips
Darkness Range	A
Darkness	5
Print Mode	Tear-Off
∨ Backfeed	Before

If the selected item is a setting item, the setting screen appears.

If the selected item is a handling item such as the auto calibration, copy, or delete, the starting screen or confirmation screen appears.

Items with a [>] indicated on the right side have more items in the next layer of the submenu.

Press the ▷ or ⬅ button to show the next layer.

Similarly, select an item using the ▲ / ▼ and ⬅ buttons.

Press the ▬ button (↩) to return to the previous screen.
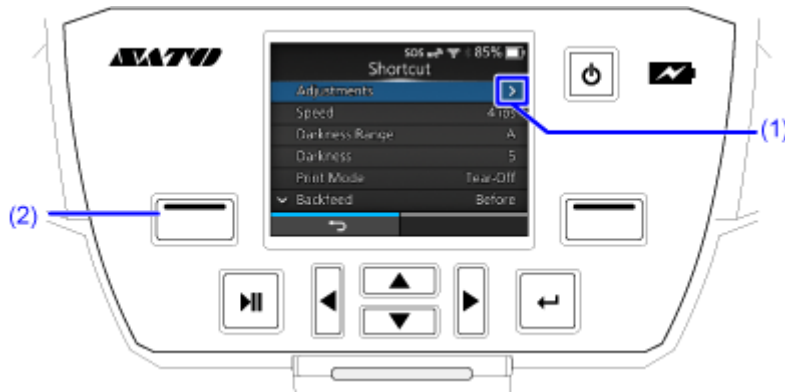
(1) There are more items in the next layer.

(2) Return to the previous screen.

Setting Value Input or Selection

This topic describes the character and number input on the setting screen and how to select an item from the list.

> ✎ • You can also input characters and numbers from a USB keyboard by connecting it to the product.
>
> • To connect a USB keyboard to the product, you need a USB host cable (Mini-B).
>
> • We recommend connecting the AC adapter and inserting a battery into the product while a USB keyboard is connected.

- Character Input
- Numeric Input
- Selection from the List
- Selection from the Box
- IP Address Input

- **Character Input**
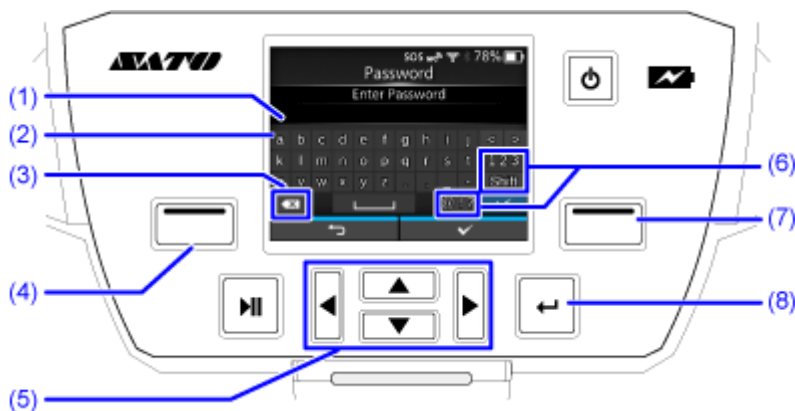
(1) Text box

(2) Selection area

(3) Delete the character displayed to the left of the cursor in the text box.

(4) Cancel the character you enter in the text box and return to the item list.

(5) Select the character for input using the arrow buttons. The selected character will be highlighted in the selection area.

(6) Change the input mode.

(7) Save the character you enter in the text box and return to the item list.

(8) Enter the selected character into the text box.

- **Numeric Input**
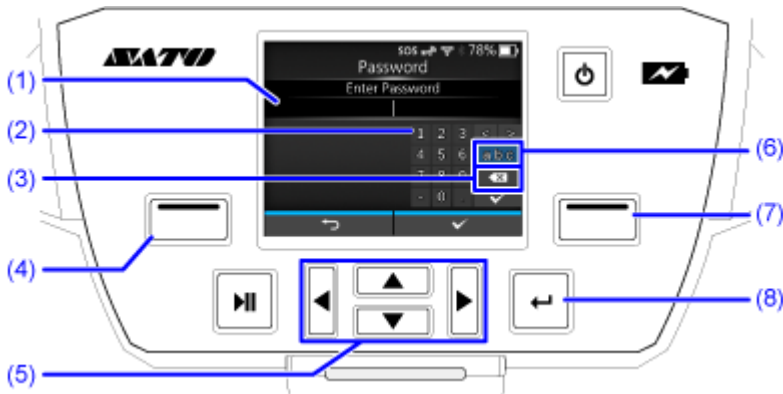
(1) Text box

(2) Selection area

(3) Delete the number displayed to the left of the cursor in the text box.

(4) Cancel the number you enter in the text box and return to the item list.

(5) Select the number for input using the arrow buttons. The selected number will be highlighted in the selection area.

(6) Change the input mode.

(7) Save the number you enter in the text box and return to the item list.

(8) Enter the selected number into the text box.

- **Selection from the List**
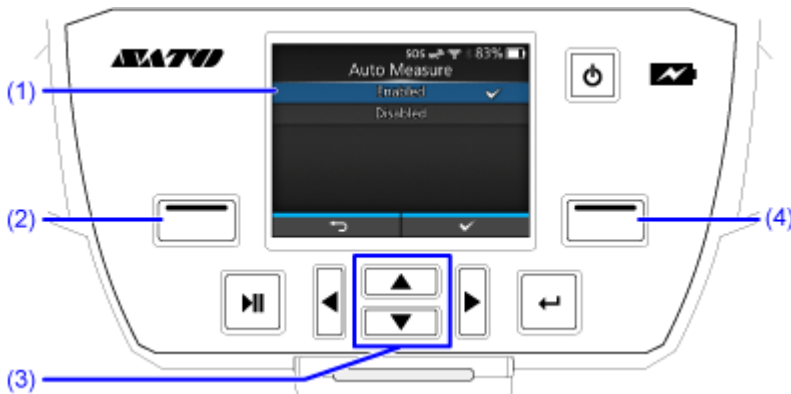
(1) Selection area

(2) Cancel the selection from the list and return to the item list.

(3) Select an item using the ▲ / ▼ buttons. The selected item will be highlighted in the selection area.

(4) Save the selection from the list and return to the item list.

- **Selection from the Box**
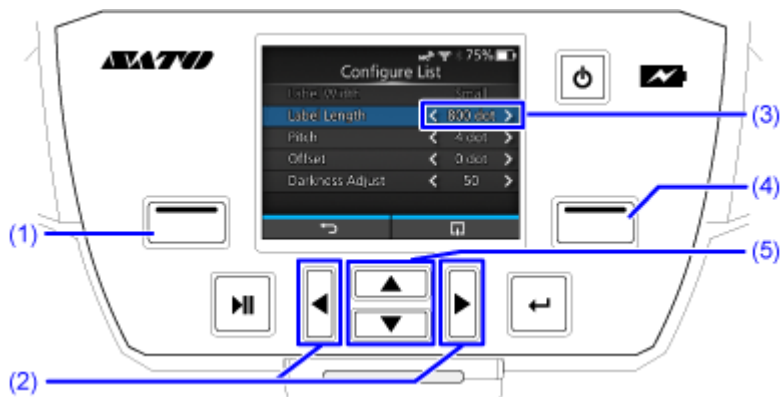
(1) Return to the previous screen.

(2) Change the value in the selection box using the ◁/▷ buttons.

(3) Selection box

(4) Perform the function as shown on the screen.

(5) Select an item using the ▲/▽ buttons. The selected item will be highlighted in the selection area.

- **IP Address Input**
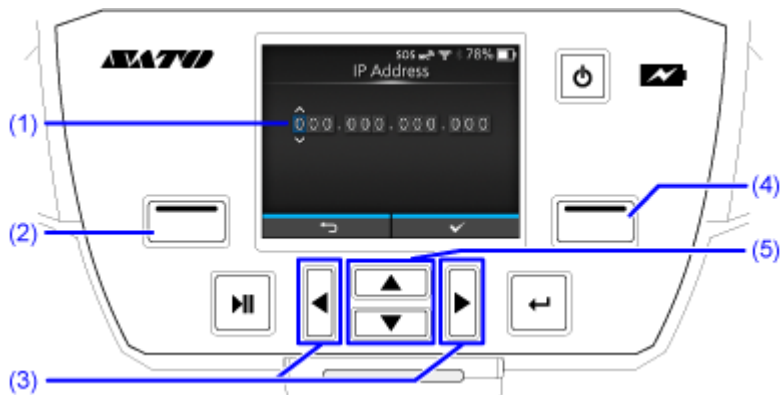
(1) Text box

(2) Cancel the IP address you enter in the text box and return to the item list.

(3) Select the digit for input using the ◁/▷ buttons.

(4) Save the IP address you enter in the text box and return to the item list.

(5) Select the number to input using the ▲/▽ buttons.

Memory of the Product

Product Memory and USB Memory

The user registration area of the product is a maximum of 2GB.

However, you cannot use the whole memory of the user area, because this area is also used for the log data and HEX dump functions.

Note that, USB memory can be connected to the product. There is no capacity limit for USB memory.

A USB memory can be connected to the USB connector (Mini-B) on the side of the product.

What you can do by connecting a USB memory to the product is as follows:

- Get the HEX dump data
- Install certificates used for Wi-Fi authentication and for HTTPS
- Create a clone (copy the product's setting information)
- Apply setting information saved to a clone

> ⚠ • Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

> ✎ • To connect a USB memory to the product, you need a USB host cable (Mini-B).
> • The product does not support USB memory with security functions such as fingerprint authentications.
> • The product does not support connection through the USB HUB.
> • Use USB memories that are formatted to FAT32.

Connecting a USB Memory to the Product

Install a USB memory to the USB connector (Mini-B) on the side of the product to be able to use it for the following operations.

- Get the HEX dump data

- Install certificates used for Wi-Fi authentication and for HTTPS

- Create a clone (copy the product's setting information)

- Apply setting information saved to a clone

- To connect a USB memory to the product, you need a USB host cable (Mini-B).

1. **Attach a USB memory (2) to the USB host cable (Mini-B) (1), and then connect the USB host cable (Mini-B) (1) to the USB connector (3) on the product.**
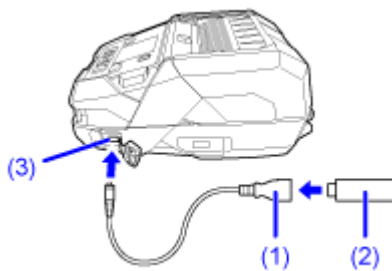
Getting Started

Charging the Battery

⚠ • The AC adapter (optional) and charging cradle (optional) are specifically designed for use with this product. Do not use them with other electronic products. Never connect a non-genuine AC adapter to this product. Doing so may result in product failure.

✎ • Be sure to charge the battery before its first use. You need to release the protection function that was set to suppress battery consumption during transportation.

• Even when not using the battery for a long time, to enable the battery to maintain its performance, have it fully charged every two months and use it to run your product until its remaining capacity is approximately down to 40%. Then, remove the battery from the product and store it in a cool room with low humidity.

Precautions during charging

⚠ • If the ⏻ (Power) button is pressed during charging, the error below is displayed.

   Error 1067 "Charging - Please wait for charging to complete."

- The product powers on automatically when it is connected to the AC adapter while it is powered off.

- Do not remove the battery while charging is in progress. If the battery is removed during charging, the following error message will appear:

   Error 1060 "No Battery - Please insert battery"

- The product will not power off during charging, even if the [Auto Power Off] option is set to [Enabled].

- Printing and feeding operations cannot be performed if a Battery Low error (error 1043) has occurred, even while charging. Continue to charge the battery for a while after the low battery error has been cleared.

- If a battery error (error 1063) occurs, replace with a different battery.

- Replace the battery if a "No Battery" error (error 1060) occurs while a battery is inserted in the product. If the error persists, contact your SATO reseller or technical support.

- If the product powers off during printing with a degraded battery and the product cannot be restarted, you need to replace the battery.

Inserting the Battery

⚠️   •   Power off the product before inserting or removing the battery.

        •   Do not touch the terminals on the battery. Doing so could result in corrosion of the battery.

1. Insert the battery from the bottom of the product.

Align the battery with the battery terminals on the product ❶, and insert it until it clicks ❷.
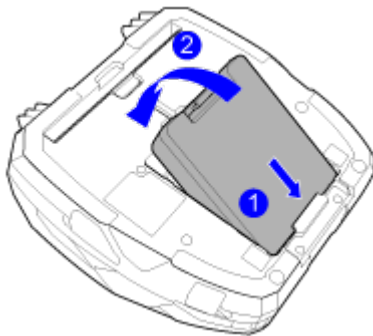
✏️   •   Be sure to charge the battery before its first use. You need to release the protection function that was set to suppress battery consumption during transportation.

Charging Using AC Adapter (Option)

> ⚠️ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
>
> • Make sure that the AC voltage of your region is in the range of AC 100 - 240 V, 50 - 60 Hz. If your local voltage is not in the stated range, contact your SATO reseller or technical support.

> ⚠️ • Do not power off the product while the battery is being charged.
>
> • The AC adapter (option) is specifically designed for use with this product. You cannot use them for other electrical equipment. Never connect a non-genuine AC adapter to this product. Doing so may result in product failure.

1. **Connect the AC adapter (1) (option).**

   a. Connect the AC adapter (1) and the power cord (2) ❶.

   b. Insert the DC plug (3) of the AC adapter into the DC input connector of the product ❷.

   c. Insert the power plug into an AC outlet ❸.
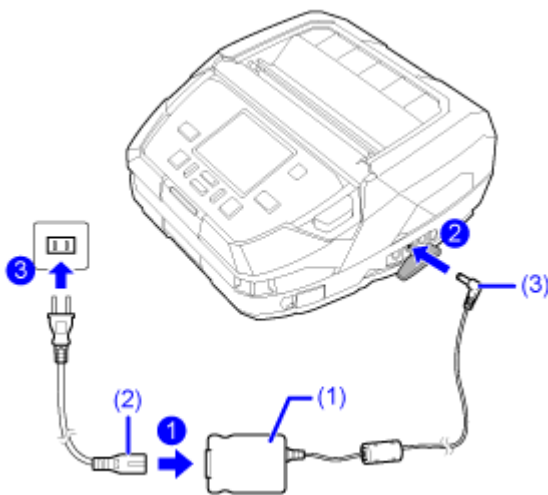
   Charging starts.

   > ✏️ • The shape of the power plug varies depending on the region in which it was purchased.

Charging Using the 1Bay Charging Cradle (Option)

⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

• Make sure that the AC voltage of your region is in the range of AC 100 - 240 V, 50 - 60 Hz. If your local voltage is not in the stated range, contact your SATO reseller or technical support.

⚠ • The AC adapter supplied with the 1Bay Charging Cradle is specifically designed for use with the 1Bay Charging Cradle. You cannot use them for other electrical equipment.

• Do not place the 1Bay Charging Cradle in a location that is exposed to splashing water. Wet terminals can cause fire or electric shock.

1. Connect the AC adapter to the 1Bay Charging Cradle.

a. Turn over the 1Bay Charging Cradle, and then connect the DC plug (3) of the AC adapter (2) to the DC input jack (1) on its bottom ❶.

Pass the DC plug (3) through the 2 protrusions (4) as shown in the following diagram.

b. Connect the AC adapter (2) with the power cord ❷, and then plug the power plug into the AC outlet ❸.
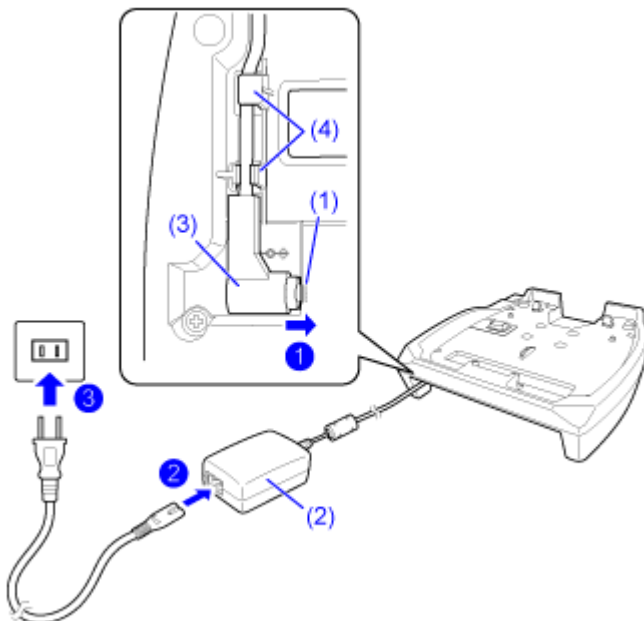
- The shape of the power plug varies depending on the region in which it was purchased.

2. **Remove the black protective sheet (5) marked CRADLE ACCESS from the bottom of the product.**
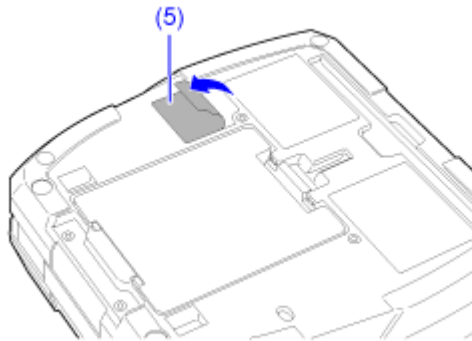
3. **Align the recess on the back side of the 1Bay Charging Cradle with the protrusions on the back of the product ❶, and slowly lower the product onto the 1Bay Charging Cradle ❷.**

When mounted in the correct position, it "clicks" and is secured in place.
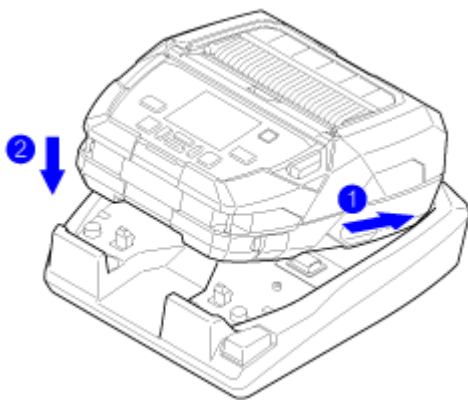
Charging starts.

Precautions when using the product on the 1Bay Charging Cradle

- Set [Full Charge Power-Off] to [Disabled].

- You are recommended to set [Eco Charge] to [Enabled] to conserve battery life.

- The product cannot be powered off when being used while being charged on the 1Bay Charging Cradle. To power off the product, either set a time to enable [Auto Power Off] or remove the product from the 1Bay Charging Cradle.

To remove the product from the 1Bay Charging Cradle

Remove the product while pressing the release button (6) on the 1Bay Charging Cradle.
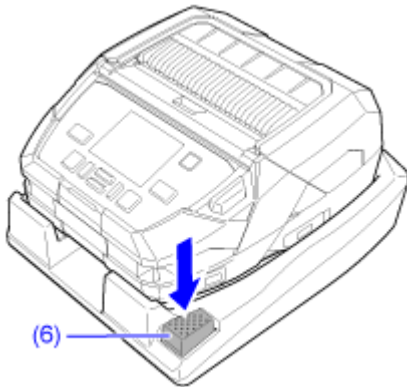
Charging Using the Battery Charger (Option)

To charge the battery using the battery charger, you need to remove the battery from the product. There is a 1ch battery charger for charging 1 battery, and a 4ch battery charger for charging 4 batteries.

⚠️ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

• Make sure that the AC voltage of your region is in the range of AC 100 - 240 V, 50 - 60 Hz. If your local voltage is not in the stated range, contact your SATO reseller or technical support.

✎ • If the product is hot or cold, leave the battery in a location between 5 to 35 °C (41 to 95 °F) for approximately 1 hour before charging. We recommend charging the battery in a location between 10 to 30 °C (50 to 86°F).

• When the battery temperature reaches above or below a certain threshold, the battery goes into standby state and stops charging.

• Refer to the battery charger operator manual for how to use the battery charger.

• Use the AC adapter that was provided with each battery charger.

• The shape of the power plug varies depending on the region in which it was purchased.

---

1. **Connect the AC adapter (1) supplied with the battery charger to the battery charger.**

a. Connect the AC adapter (1) and the power cord (2) ❶.

b. Insert the DC plug (3) of the AC adapter into the power supply connector (4) of the battery charger ❷.

c. Insert the power plug into an AC outlet ❸.
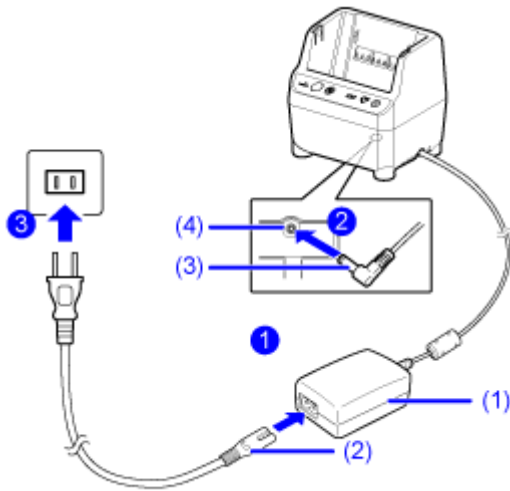
2. **Place the battery (6) on the battery charger (5) with the terminal side facing the rear.**
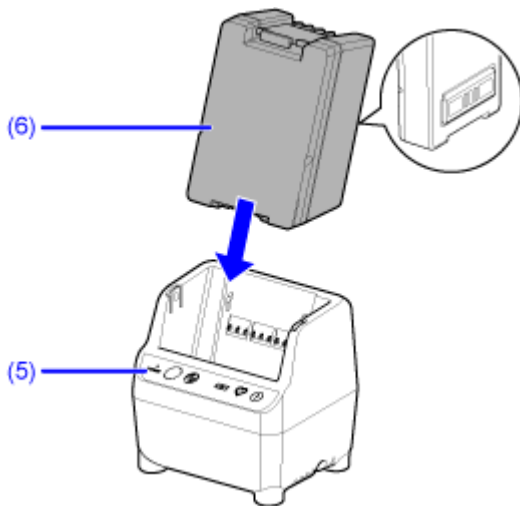
Charging starts.

Charging Using Cigarette Lighter Adapter (Option)

⚠️ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

• Do not leave the product and the cigarette lighter adapter in a vehicle for an extended period of time. Doing so could result in damage, fire, or electric shock.

• Do not use with a voltage outside the rated 10 to 30 V range. Doing so could result in fire, electric shock, or malfunction.

1. **Connect the cigarette lighter adapter to the product and a cigarette lighter socket in a vehicle.**

a. Connect the DC plug (1) of the cigarette lighter adapter to the DC input connector (2) of the product.

b. Connect the cigarette lighter plug (3) of the cigarette lighter adapter to the cigarette lighter socket (4) in the vehicle.
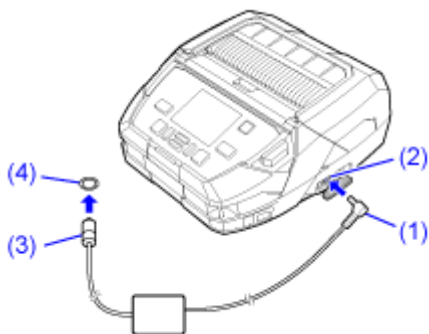
✏️ • The cigarette lighter adapter supports 12-V vehicles and 24-V vehicles.

Charging starts automatically when the engine is started.

Charging Using 12-60V DC Power Supply (Option)

> ⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

> ✎ Tools and screws to prepare
> - Flathead screwdriver
> - Phillips screwdriver (to permanently install a 12-60V DC power supply)
> - 4 screws (to permanently install a 12-60V DC power supply)

1. **To permanently install a 12-60V DC power supply, put the screws you prepared in the 4 mounting holes (1) to mount it.**
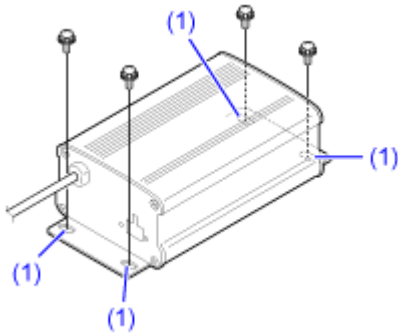
> ⚠ • We assume no responsibility for the product dropping due to insufficient mounting strength or your carelessness. The customer is responsible for confirming the condition of the installation location.

> ✎ • The customer must prepare the Phillips screwdriver and mounting screws.

2. **Use the flathead screwdriver to loosen the 2 screws (2) on top of the connector, insert the positive (+) and negative (-) leads of your power supply, and then tighten the screws.**
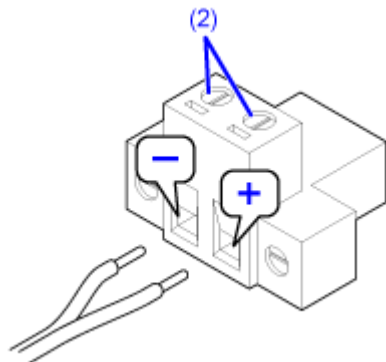
- The customer must prepare the flathead screwdriver.

- Connect the positive (+) to the right side and the negative (-) to the left side.

- Use 12 to 22 AWG electric power wires for the connections. We also recommend that the power cable be less than 1.5 m (4.92 ft) long.

- Tighten the power supply wires so they do not come out if you lightly pull on them. If they are too tight, the power lines could be cut off.

3. **Insert the connector into the receptacle (3) of the 12-60V DC power supply, and tighten the 2 screws (4).**
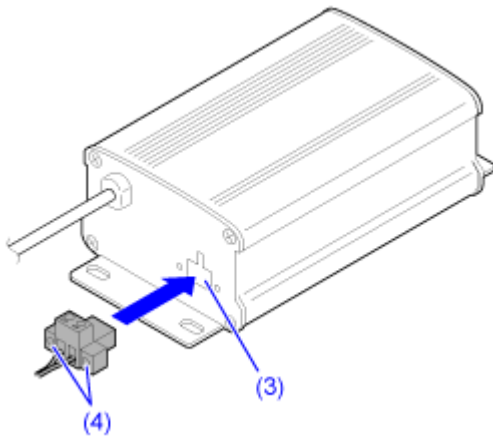
Installing Accessories

Attaching the Shoulder Strap (Option) and the Carrying Case (Option)

You can carry the product around hands free by attaching the shoulder strap (option) and the carrying case (option).

1. **Run the shoulder strap (2) through the strap grooves (1) on the front of the product ❶, and then run it through the shoulder strap adjustment buckles (3) (2 locations) ❷.**
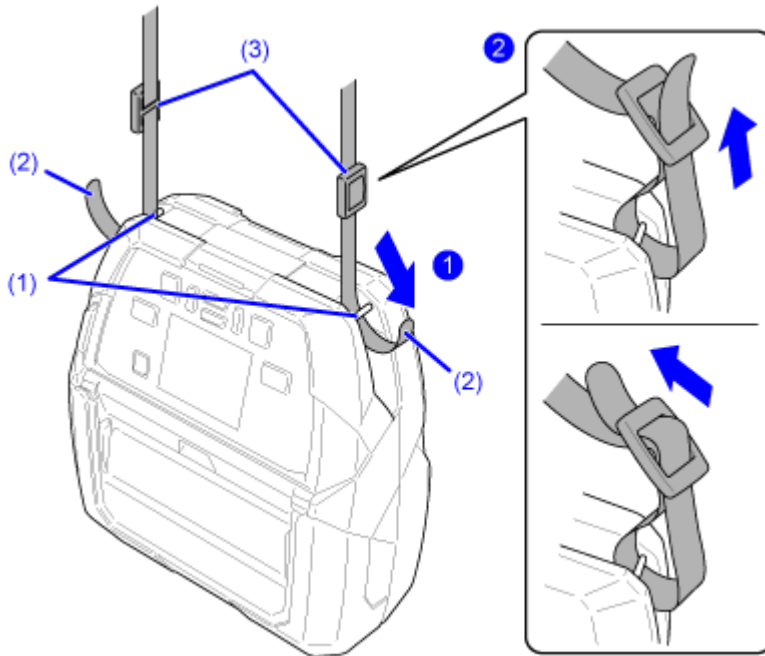
| ✏️ | • | Allow some slack in the strap as you run it through the adjustment buckles, and then tighten it to a secure length. Also, before using the strap, be sure to confirm that it will not slip out of the adjustment buckles. Otherwise, the product could fall off. |

2. **After removing all the fastening tape from the carrying case, run the shoulder strap through the hole in the top.**

3. **Put the product into the carrying case, then close the fastening tape on two places on the left and right sides (1) and the top (2) of the carrying case.**
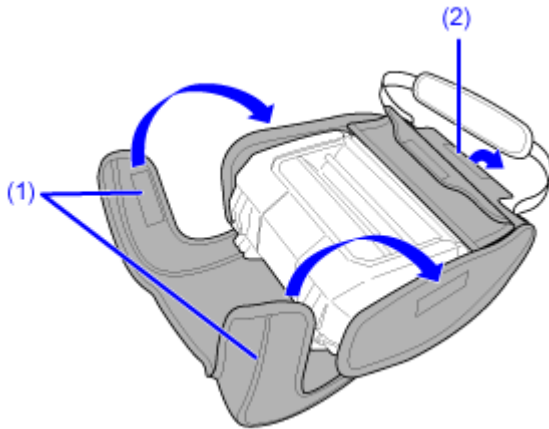
- Open and close the clear flap on the front of the carrying case as needed.
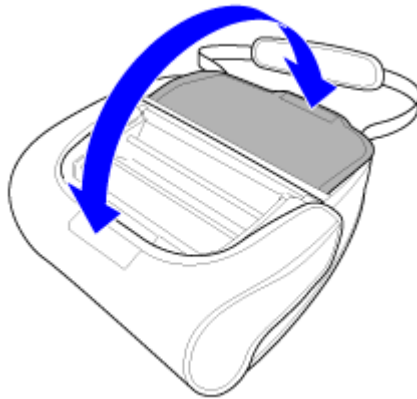
- To replace the battery, open the back of the carrying case.
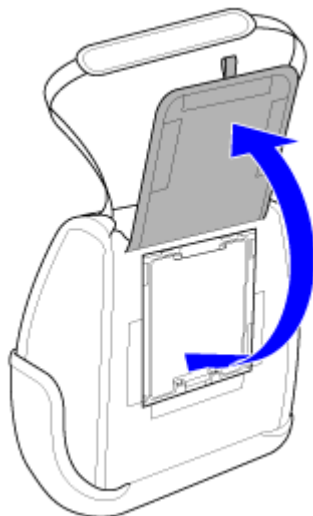
Attaching the Hand Strap (Option)

You can carry the product around with one hand by attaching the hand strap (option).

1. **Run the hand strap (2) through the strap grooves (1) on the front of the product ❶, and then run it through the hand strap adjustment buckles (3) (2 locations) ❷.**
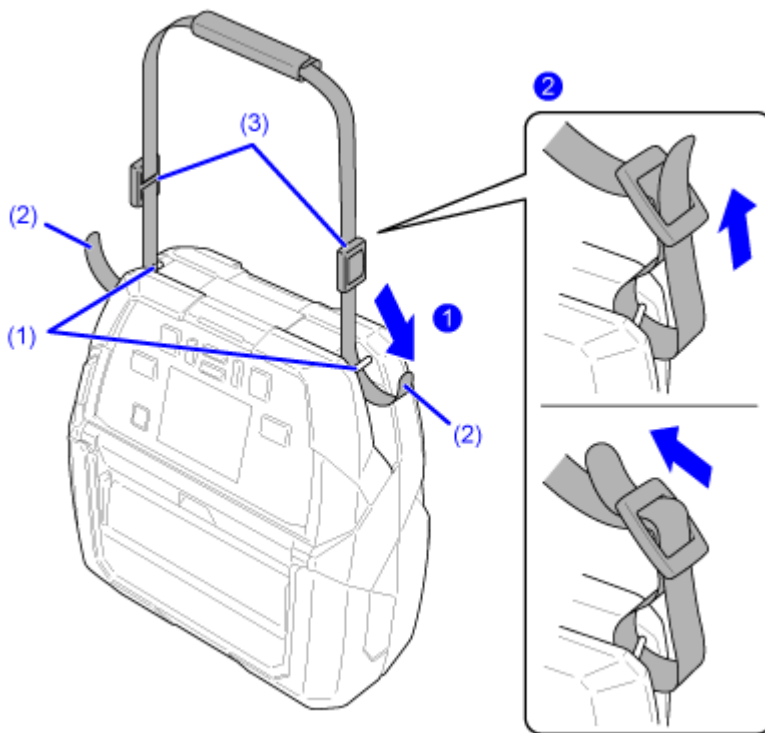
> ✏️ • Allow some slack in the strap as you run it through the adjustment buckles, and then tighten it to a secure length. Also, before using the strap, be sure to confirm that it will not slip out of the adjustment buckles. Otherwise, the product could fall off.

2. **Tighten the fastening tape on the handle of the hand strap.**
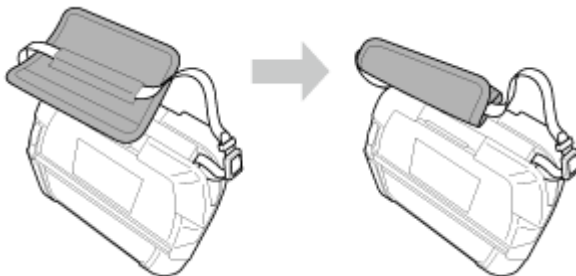
Attaching the Belt Clip or Belt Loop (Option)

You can carry the product around hands free by attaching the provided belt clip or the belt loop (option) to the product, so you can fasten the product to your waist.

1. Fasten the belt clip to the 2 screw holes on the bottom of the product.
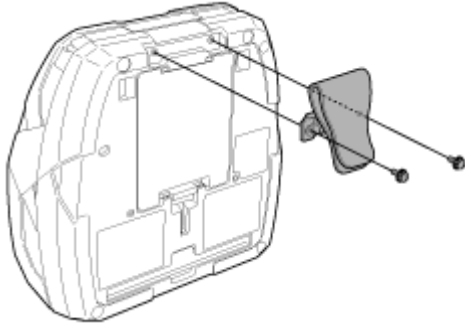
- The customer must prepare the Philips screwdriver.
- This is the same as when using the belt loop (option). If the screws are difficult to attach, tilt the clip part.

2. Attach the belt clip to your own belt from above.
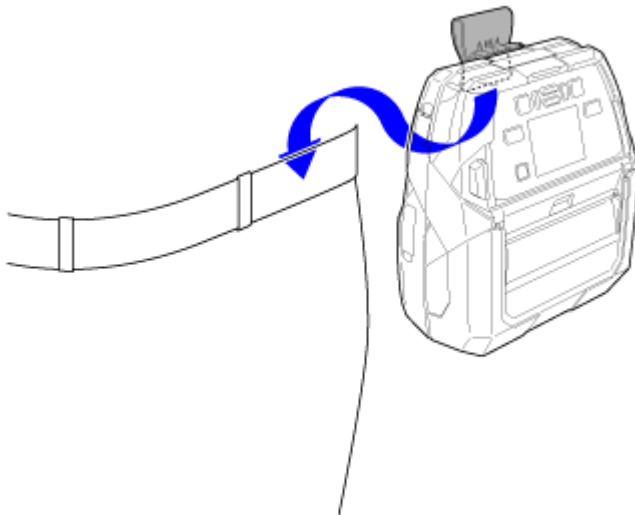
- To use the belt loop (option), remove the fastening tape (1) from the lower part, attach it to the belt (2), and then refasten the tape.
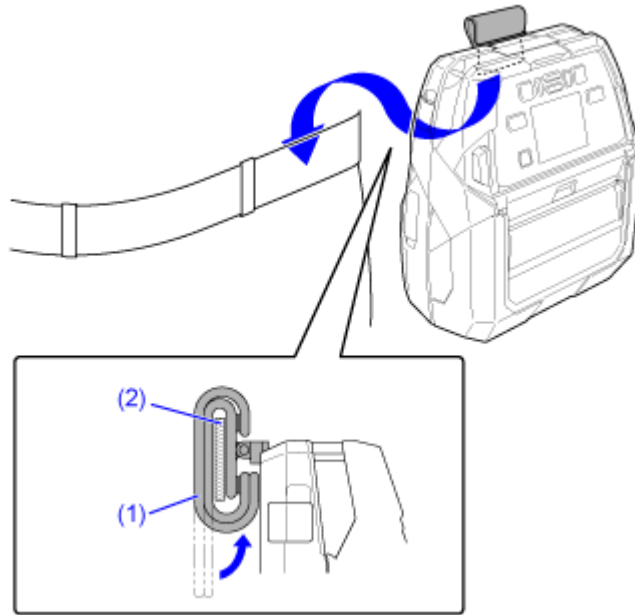
Powering On/Off the Product

Powering On the Product

> ⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

> ✎ • Be sure to charge the battery before its first use. You need to release the protection function that was set to suppress battery consumption during transportation.

1. **Press the ⏻ (power) button (1) of the operator panel until the LED indicator (2) lights blue, and then remove your finger.**
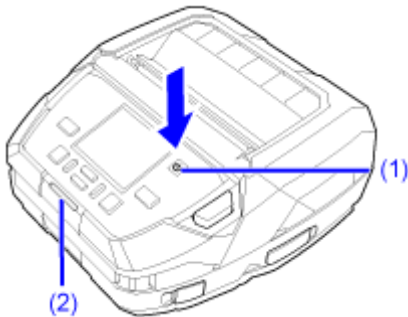
   "Online" appears on the display.

- When you power on the product for the first time after purchase or reboot after resetting the settings, the startup guide appears. You can easily set the printing preferences on the product by following the on-screen instructions.

- The screen that appears after you power on the product varies depending on the settings.
  - If [Start Online] in the [Printing] menu is disabled, the Offline screen appears.
  - If [AEP] in the [Applications] menu is enabled, the application screen appears, depending on the [Starting Application] setting.

Powering Off the Product

⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

⚠ • Do not power off the product during operation, such as when printing or updating. Doing so could cause a malfunction of the product.

    • Do not disconnect the battery until the powering off process is completed on the product.

    • An incorrect power on/off operation may damage the product settings. In such a case, the product settings are reset to their initial values. It is always recommended to use the power button to allow proper shutdown of the product and ensure changes made to menu settings are saved appropriately.

1. **To turn off the product's power, press the ⏻ (power) button for more than 2 seconds.**
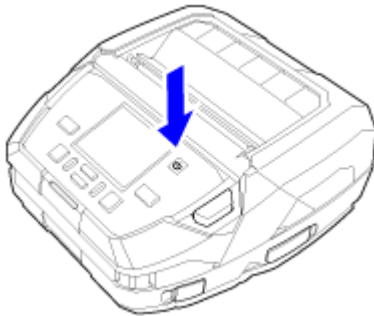
Initial Setup (Startup Guide)

The topics here explain how to complete the startup guide that appears when you power on the product for the first time after purchase.

Startup Guide Flow

The startup guide is a function to help you through the initial product settings (language selection, regional settings, loading media, etc.).

You can cancel the startup guide and perform the configuration later from the menu.

- If you enabled the NTP function, the time zone settings screen appears.
- Select choices for each item with the ▲ / ▼ buttons, and apply them with the ▬ button (✔) or ⬅ button.
- Selecting a choice opens the next screen. To return to the previous screen, press the ▬ button (↩).

---

1. **Press the ⏻ (power) button on the operator panel until the LED indicator lights blue to power on the product.**

   The startup guide screen appears.

2. **Select a display language.**
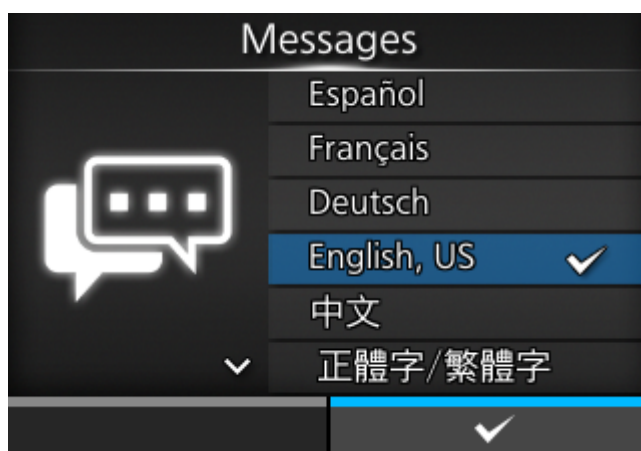
3. **Select the region to set for the time zone.**

   (Appears if you enabled the NTP function.)
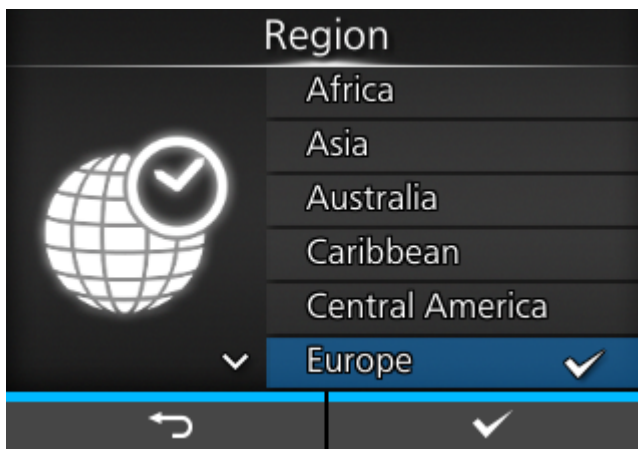
4. **Select the city to set for the time zone.**

   (Appears if you enabled the NTP function.)
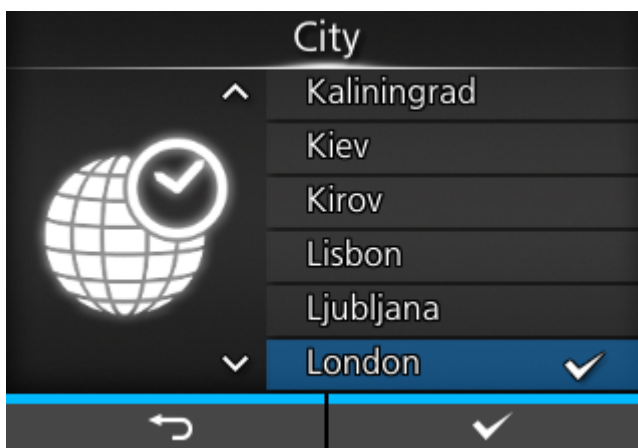
5. **Selects the print mode to use.**
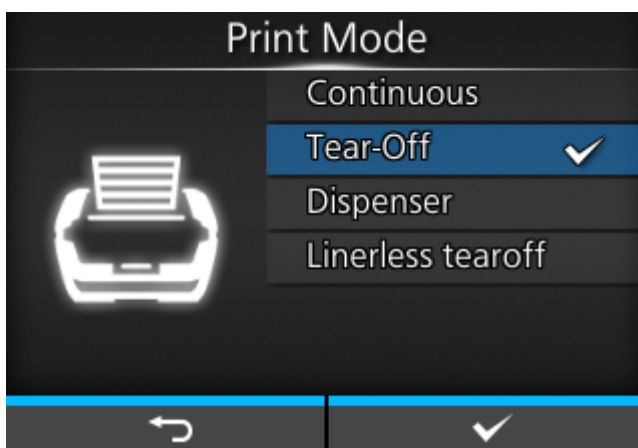
   [Continuous]

   Continuously print the specified number of the media. The media remains in position for printing at all times.

[Tear-Off] (Function that feeds the printed media to the tear-off position)

After printing the specified number of media, the product feeds the last printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position for starting the next printing.

[Dispenser]

Peel the liner from the printed label as the label is fed to the product's front. Once the printed label has been removed from the product, the next label is positioned for printing.

[Linerless tearoff]

The product feeds each printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position for starting the next printing.

Select this when using a linerless label on a linerless model.

6. **Select the sensor type for detecting the media.**
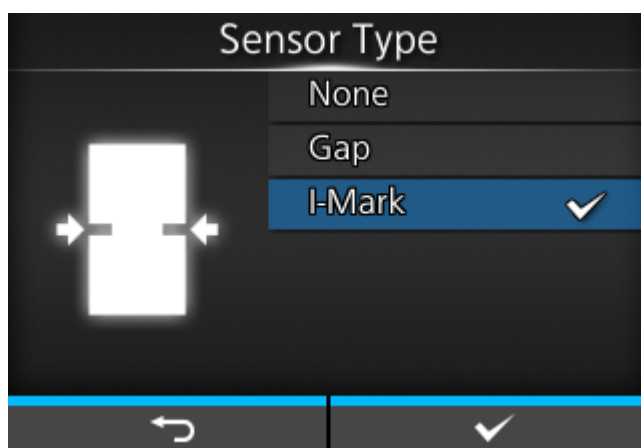
[None]

Disable the media sensor.

[Gap]

Select when using the media of Gap type. Use the transmissive sensor.

[I-Mark]

Select when using the media of I-mark type. Use the reflective sensor.

• The available selections vary depending on the [Print Mode] set on the product. The default value for [Print Mode] is [Tear-Off].

   ◦ If [Print Mode] is set to [Dispenser], only [Gap] and [I-Mark] will be available.

   ◦ If [Print Mode] is set to [Linerless tearoff], only [None] and [I-Mark] will be available.

---

7. **Load the media while checking the video.**

a. Press the ⬅ button.

Load Paper

Press Enter to play video.
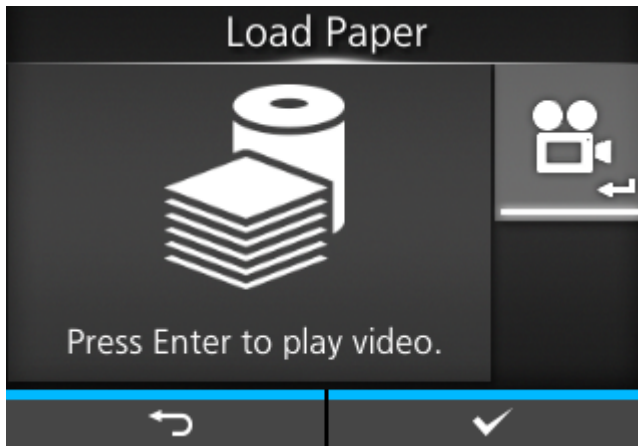
The screen for selecting a video to play opens.

b. Use the ▲ / ▼ buttons to select a video for playback.

Load Paper

| Continuous/Tearoff |
| Dispenser |
| Linerless tearoff |
| Fanfold |

c. Press the ⬅ button.

The video starts playing.

8. **When you have finished loading the media, press the ▬ button (left) to stop the video.**

Returns to the screen that was open before the video played.

9. **Press the ▬ button (✓).**

The confirmation screen appears.

10. **To show the startup guide the next time the product is started, press the ▬ button (✖). To not show it, press the ▬ button (✔).**
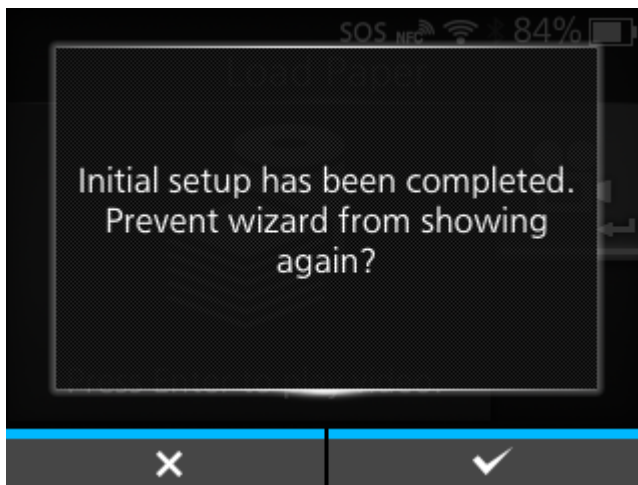
✎ • You can set whether to open the startup guide the next time you start up the product in [Startup Guide] in the [Tools] menu.

Startup Guide Cancelation

You can cancel the startup guide at any time.

1. **Press the** ▷|| **button while configuring the startup guide.**

   The screen to confirm whether or not to show the startup guide again appears.
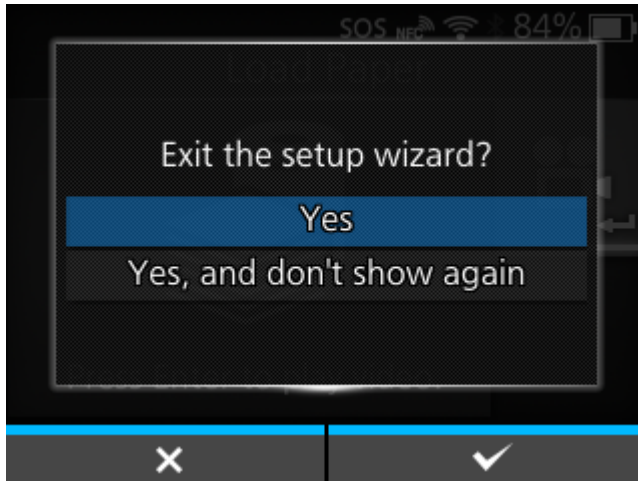
2. **Select whether or not to show the startup guide during the next startup using the** △ / ▽ **buttons, and press the** ⬅ **button to confirm.**

   Press the ▬ button (✕) to return to the startup guide setting without canceling it.

> ✎ • You can enable or disable the startup guide in [Startup Guide] under the [Tools] menu.
>
> • Even if you cancel the startup guide before completing it, the product will save the settings you have changed.

Connecting the Product to a Computer

This section explains how to connect the product to a computer, and how to install the printer driver and the All-In-One Tool.

Procedure for Connecting the Product to a Computer

The product supports various interfaces and can be connected to a computer in an optimum way for your environment. When you have installed the printer driver to the computer, the data created with the computer (documents and illustrations) can be printed to a label through easy operations.

Also, you can print by sending a command directly to the product.

The product can be connected to a computer in the following way.

1. Connecting Interfaces

2. Configuring the Interface Settings
   Set the product's interface from the Settings menu, which can be accessed from the product's display or the web configuration page.
   Also, the settings can be done from the All-In-One Tool.

   ◦ When you connect them with a wireless LAN interface, configure the communication conditions, such as the IP address of the product.

   ◦ When you connect them with other interfaces, configure the communication conditions when needed to adapt to the computer to which you are connecting.

   ◦ To use the printer driver, the communication protocol must be set to Status4. (The initial value for the communication protocol for the product's interfaces is Status4.)

3. Installing the Printer Driver (Unnecessary when using commands)

   • Use barcode fonts to create a barcode. Sometimes the barcode may not be read by a scanner if it is created with tools for creating images (such as BMP) and printed from this product. Because the tools create the barcode as an image only, the barcode may not be the correct data. Therefore, if the barcode cannot be read by a scanner, it is not a failure of the product or printer driver. Note that reading of the barcode is not guaranteed if it is created by such tools.

   • The head check is just for a reference to check a broken element of the print head, and it is not a function to guarantee barcode readability. A regular barcode reader test is required.

Connecting Interfaces

Available Interfaces

The product supports the following interfaces.

> ✏ • The product prints the received data in order of reception. The next received data is stored in the receive buffer while the first data is printed.
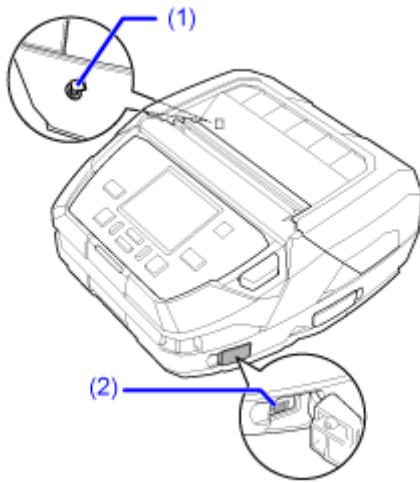
(1) NFC

(2) USB

(3) Bluetooth

(4) Wireless LAN

> ✏ • The NFC interface supports the handover function that simplifies the Bluetooth/Wi-Fi connection setup with Android devices. In addition, the NFC interface can be used for changing product settings with an Android device while the product is powered off and the power cord is not connected.

> ⚠ • Do not connect or disconnect the interface cables (or use a switch box) with power supplied to either the product or computer. This may cause damage to the interface circuitry in the product or computer and is not covered by warranty.

USB Interface Connection (Standard)

Connect the interface cable when the product is powered off.

Connect the USB cable to the USB connector (Mini-B) (1) of the product.

Be careful of the orientation of the USB connector (Mini-B) and connect it correctly.
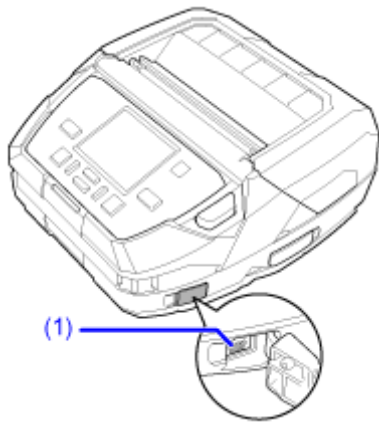
The USB interface is selected after connecting the USB cable to the computer and the product, and powering on the product while the computer is turned on.

When using a USB cable for NFC transmissions, install a ferrite core as shown below to prevent signal interference.

Recommended core characteristics: Impedance of 180 Ω @ 100 MHz

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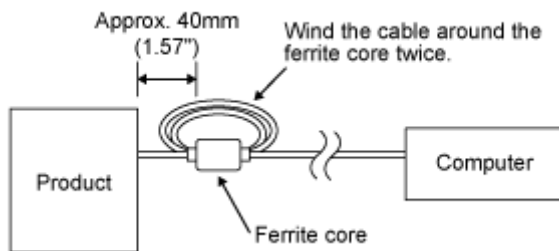
✏️ • If the product is powered on without installing the printer driver, Windows' Plug & Play runs. When using the printer driver, do not power on the product while the USB cable is connected until instructed in the procedure for installing the printer driver.

• We recommend a USB cable that is less than 5 m (16.4 feet) long.

Bluetooth Interface Connection (Standard)

Wireless communications is possible with Bluetooth-compatible computers that are placed within about 10 m (32.8 feet) of the product.

Make sure that the Bluetooth function of the product and the computer are enabled, and then add the product as a Bluetooth device on the computer.

The product's Bluetooth function is enabled by default and can be configured from the [Interface] menu or the All-In-One Tool.

⚠️ • Bluetooth connection may be unstable depending on a module spec or version of Bluetooth. When using Bluetooth connection, please test the operation beforehand in your usage environment (computer, print data, print quantity, print frequency, etc.).

✏️ • To use the printer driver, the communication protocol must be set to Status4. (The initial value of the communication protocol for the product's Bluetooth interface is .)

NFC Interface Connection (Standard)

The NFC interface of the product supports a handover function that simplifies the Bluetooth/Wi-Fi connection setup with Android devices.

The handover function only performs the connection setup, such as the pairing and authentication with NFC, and passes the actual interface to the more advanced Bluetooth and Wi-Fi when communicating between NFC supported devices.

In general, the pairing and authentication require some procedures to enter authentication information, but the connection can be completed simply by holding the Android devices over the product while using NFC.

Touch the NFC antenna (1) of the product with the NFC mark on the Android device.
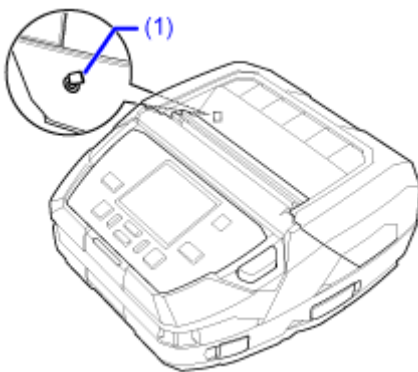
- If it does not communicate well, shift the Android device to the front, back, left and right, and then hold it up again.

- For the operation of the NFC for the Android device, refer to the user manual for the Android device.

Wireless LAN Interface Connection (Standard)

The printer driver performs data communication using the dedicated SOCKET interfaces.

The communication condition settings must be configured according to your network environment. Set the IP address of the product.

The IP address of the product can be set through the product's [Interface] menu or the All-In-One Tool.

- To use the printer driver, the communication protocol must be set to Status4. (The initial value of the communication protocol for the product's wireless LAN interface is Status4 ENQ.)

- The product does not support Atheros, SuperG, or XR functions.

Configuring the Interface Settings

Interface Setting Methods

Configure the interface settings of the product according to the communication conditions of the connected network and computer.

You can set the interface settings of the product doing either of the following.

- Set from the Settings mode of the product
- Set using the All-In-One Tool from the computer

Configuring the Interface Settings from the Interface Menu of the Product

Configure the settings related to the interfaces from the [Interface] menu in the Settings mode of the product.

1. Press the ▬ button (OFFLINE) or ▷|| button in Online mode.
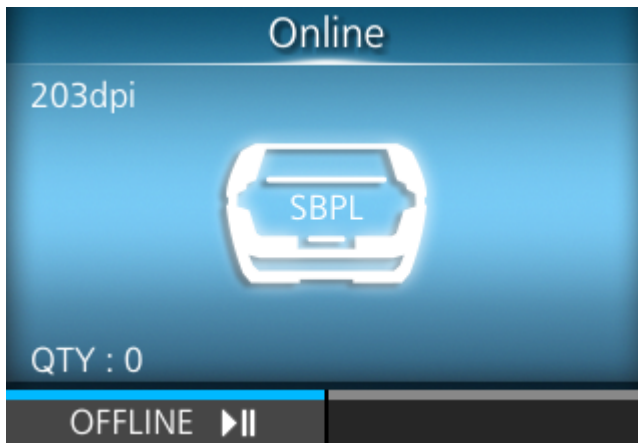
The product changes to Offline mode.

2. **Press the** ⬅ **button.**

The product changes to Settings mode.

✏️ • Input the password if it is enabled.

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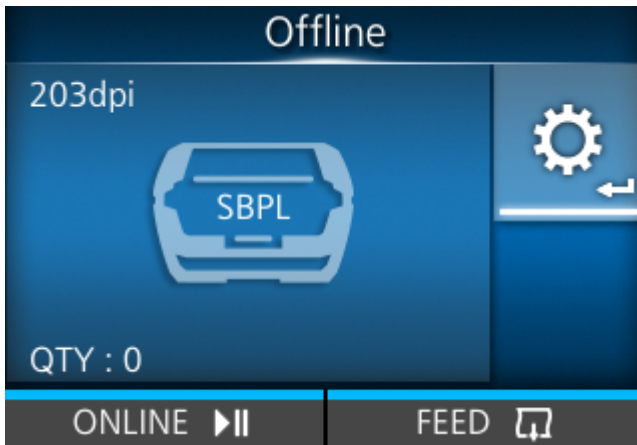
3. **Select [Interface] using the** ◀/▶ **buttons.**
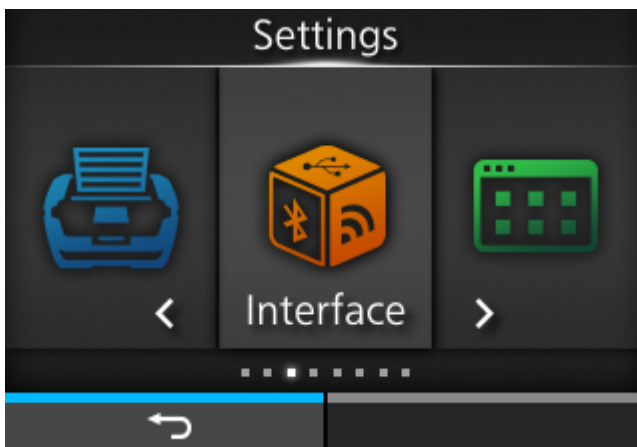
4. **Press the** ⬅ **button.**

The item list appears.

5. **Select the interface using the ▲ / ▼ buttons.**
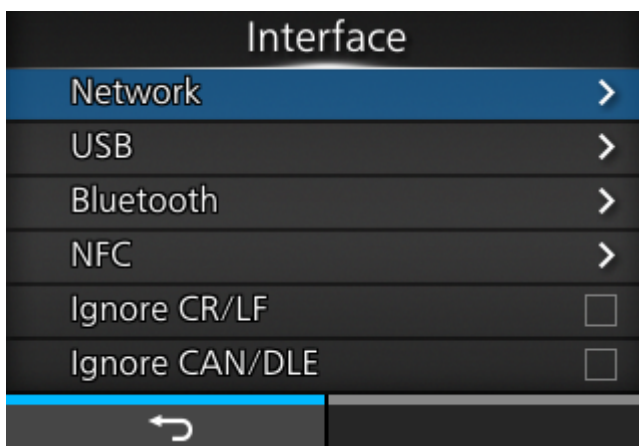
[Network]

Set the wireless LAN connection.

[USB]

Sets the USB connection.

[Bluetooth]

Sets the Bluetooth connection.

[NFC]

Sets the NFC connection.

[Ignore CR/LF]

Sets to ignore CR/LF codes.

[Ignore CAN/DLE]

Sets to ignore CAN/DLE codes.

6. **Press the ⬅ button.**

The settings items of the selected interface appear.

Change the settings according to the communication conditions of the connected network and computer.

Configuring the Interface Settings Using the All-In-One Tool

Installing the All-In-One Tool

When you use the All-In-One Tool, you can easily set and manage the product.

Download the All-In-One Tool and All-In-One Tool Manual from your local SATO website https://www.sato-global.com/drivers/redirect.html, and install the software to a computer. For the compatible OS, refer to the "System Requirements" section of the All-In-One Tool Manual.

- This product is supported from All-In-One Tool V2.

Installing the Printer Driver

The printer driver is software that can send data created on the computer (documents and illustrations) to the product and print it to a label.

Download and use the printer driver from your local SATO website https://www.sato-global.com/drivers/redirect.html.

From the same site, you can download and refer to the Printer Driver Manual for details regarding how to install and the functions of the printer driver.

All-In-One Tool Features

When you add the product to the All-In-One Tool, you can easily set and manage the product.

- For details of the All-In-One Tool, download and read the All-In-One Tool Manual from your local SATO website. https://www.sato-global.com/drivers/redirect.html

- This product is supported from All-In-One Tool V2.

Loading Media

Usable Media

The product can print on the following types of media:

- Media roll

- Fan-fold media

The product uses media sensors to detect I-marks or Gaps on the media in order to precisely print the content.

I-mark	Gap
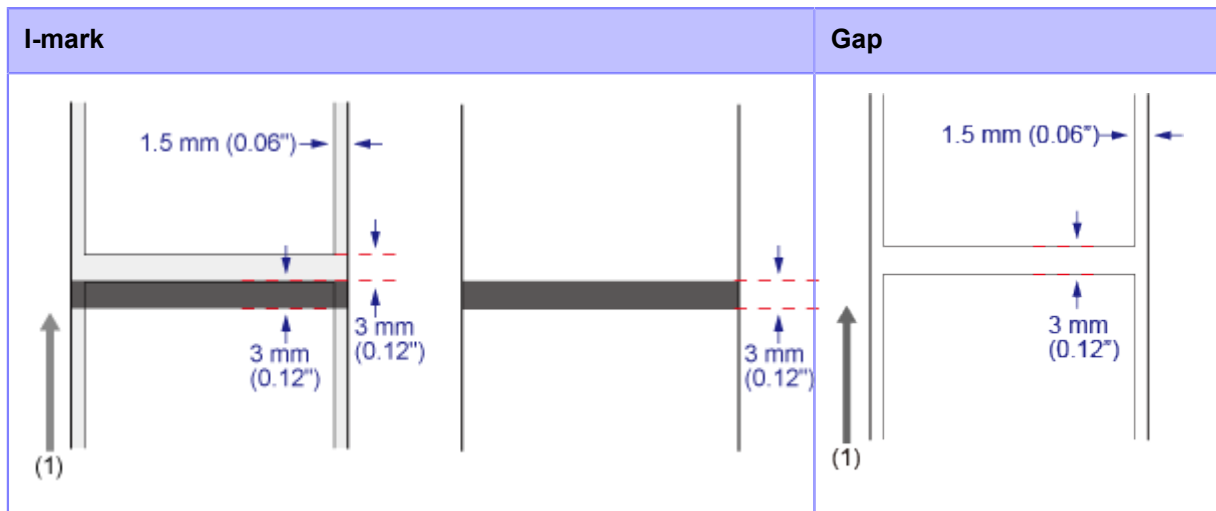
 (1) Feed direction

Loading the Media

Precautions for Loading the Media

Use our specified supply products for the product, for optimum print quality.

| ⚠ | • | The print head and its surroundings are hot after printing. Be careful not to get burned. |
| | • | Touching the edge of the print head with your bare hand could cause injury. |

| ✎ | • | The usable media sizes and print quality depends conditions such as print speed, media combination, product settings and used environment. It is highly recommended to check the performance based on actual usage conditions in advance. |

Loading the Media Roll: Continuous/Tear-Off/Linerless Tear-Off Mode

⚠️
- The print head and its surroundings are hot after printing. Be careful not to get burned.
- Touching the edge of the print head with your bare hand could cause injury.

1. **Press the cover open button (1) to open the top cover (2).**
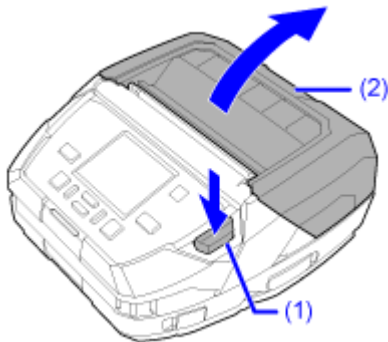
2. **If the dispenser unit is out, press the dispenser roller release button (3) as you fold it in.**
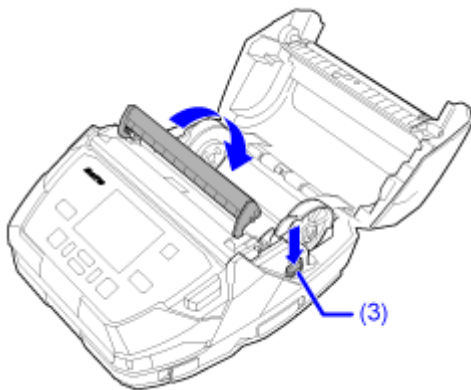
3. Spread the media guide (4), and then load the media roll.

a. Load the media roll from above so the print side faces the print head.

b. If you are using a coreless label roll (media roll with no core), lower the media guide lock (5) to fix the width of the media guide.

- If the media roll is difficult to load, rewind the media roll so that the sides of the roll become even.

- If you are using the same width of media roll continuously, it is convenient to lower the media guide lock (5) to fix the width of the media guide.

- If you are using media with a 1-inch core, then replace the media guide core that is installed on the media guide with the 1-inch label core provided. A 0.75-inch media guide core is installed as standard.

- Coreless label rolls may be deformed by impact or other factors. If you use a deformed media roll, it could rub against the media compartment of the product, which may affect print quality. Shape the media roll before loading it into the product.

Also, be careful not to fold the center of the media roll when loading it on the projections of the media guide.

4. **Close the top cover.**

   Push both ends of the top cover, and close it firmly until it clicks.

   ⚠ • When closing the top cover, be careful not to pinch your fingers.
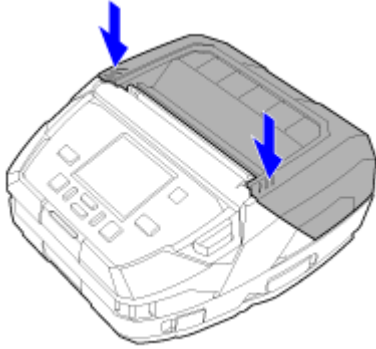
   ✏ • Eject the media roll in the illustrated direction.
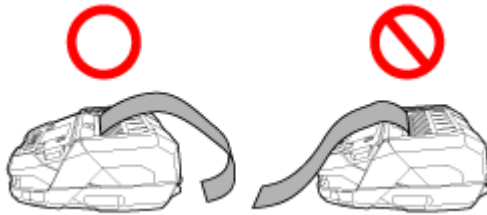
5. **Press the ▬ button (FEED) to feed the media.**

6. **Press the ▬ button (ONLINE) to go to Online mode.**

Loading the Media Roll: Dispenser Mode

⚠️ • The print head and its surroundings are hot after printing. Be careful not to get burned.

• Touching the edge of the print head with your bare hand could cause injury.

1. **Press the cover open button (1) to open the top cover (2).**
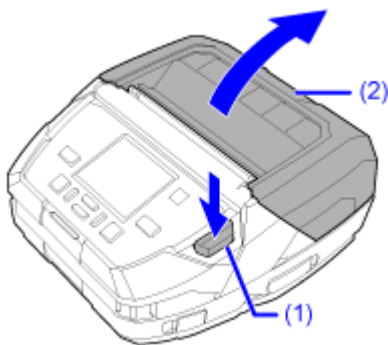
2. **Press the dispenser roller release button (3), and pull out the dispenser unit (4).**
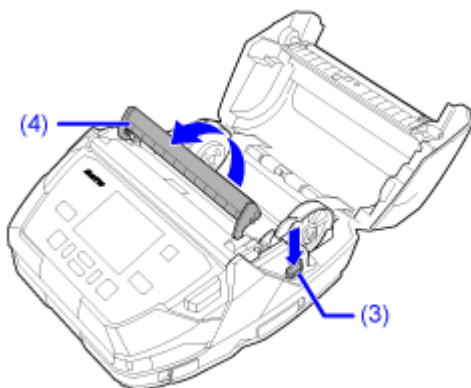
3. **Spread the media guide (5), and then load the media roll.**

a. Load the media roll from above so the print side faces the print head.

b. If you are using a coreless label roll (media roll with no core), lower the media guide lock (6) to fix the width of the media guide.

- If the media roll is difficult to load, rewind the media roll so that the sides of the roll become even.

- If you are using the same width of media roll continuously, it is convenient to lower the media guide lock (6) to fix the width of the media guide.

- If you are using media with a 1-inch core, then replace the media guide core that is installed on the media guide with the 1-inch label core provided. A 0.75-inch media guide core is installed as standard.

- Coreless label rolls may be deformed by impact or other factors. If you use a deformed media roll, it could rub against the media compartment of the product, which may affect print quality. Shape the media roll before loading it into the product.

Also, be careful not to fold the center of the media roll when loading it on the projections of the media guide.

4. Peel off 1 label, and then close the top cover.

Peel off 1 label, have the liner be pinched between the dispenser unit and top cover, and then press on both ends of the top cover firmly until it clicks.

⚠ • When closing the top cover, be careful not to pinch your fingers.
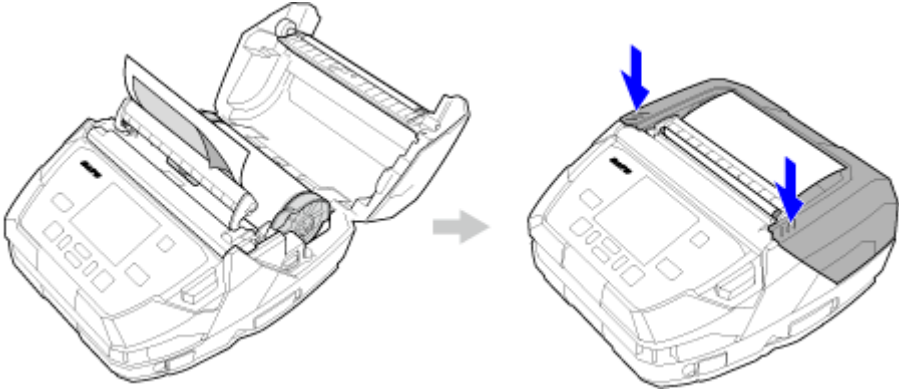
✎ • Eject the media in the illustrated direction.

5. Pull the liner lightly so that the liner and label do not sag.

6. Press the ⬅ button.

The product enters Settings mode.

7. Use the ◀ / ▶ / ▲ / ▼ buttons to select [Printing] > [Print Mode], and then press the ⬅ button.

Printing	
Label Length	8000 dot
Label Width	832 dot
Auto Measure	☐
Speed	4 ips
Print Mode	Tear-Off
⌄ Backfeed	Before
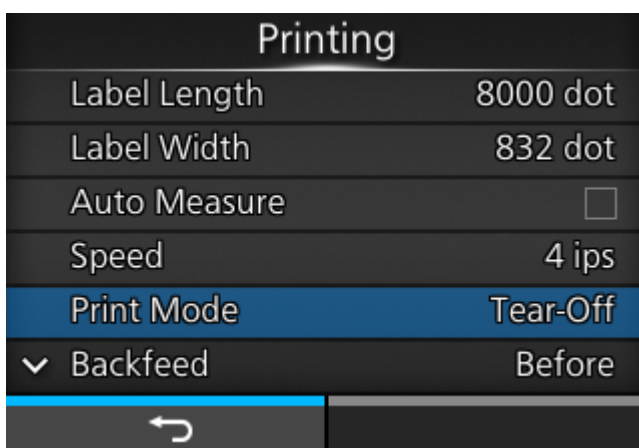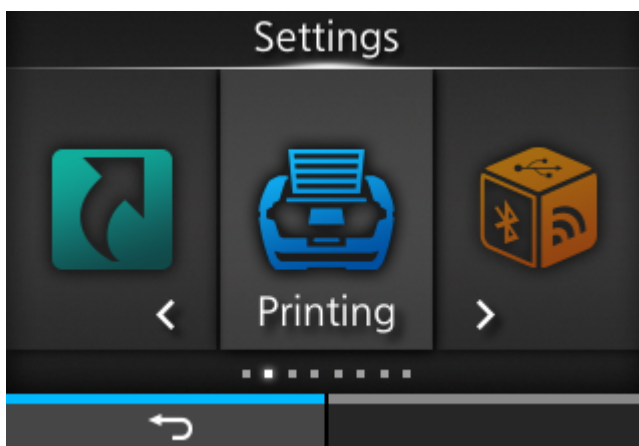
The [Print Mode] screen appears.

8. Use the ▲ / ▼ buttons to select [Dispenser], and then press the ⬅ button.

Print Mode
Continuous
Tear-Off
Dispenser ✓
Linerless tearoff

↩   ✓

9. Press the ▶‖ button.

Returns to the Offline screen.

Offline
203dpi

SBPL

QTY : 0
ONLINE ▶‖   FEED 🔁

10. Press the ▬ button (FEED) to feed the media.

11. Press the ▬ button (ONLINE) to go to Online mode.

Loading the Fan-fold Media (When Using the 1Bay Charging Cradle (Option))

The media is fed from the bottom of the product, so you need to keep the product high enough off the tabletop. This section describes the procedure for using the 1Bay Charging Cradle (option).

> ⚠️ • The print head and its surroundings are hot after printing. Be careful not to get burned.
>
> • Touching the edge of the print head with your bare hand could cause injury.

> ✏️ • Fan-fold media is not available in dispenser mode since the perforated line affects the dispenser function.

1. **Open the fan-fold media inlet on the bottom of the product.**
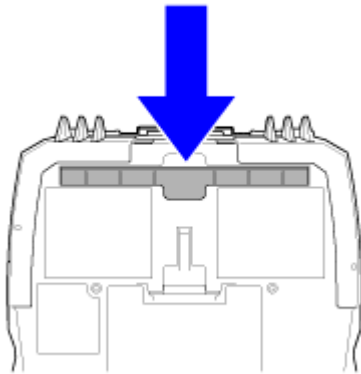
2. **Remove the black protective sheet marked CRADLE ACCESS from the bottom of the product.**
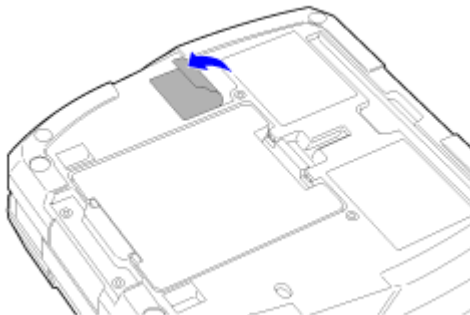
3. **Align the recess on the back side of the 1Bay Charging Cradle with the protrusions on the back of the product ❶, and slowly lower the product onto the 1Bay Charging Cradle ❷.**
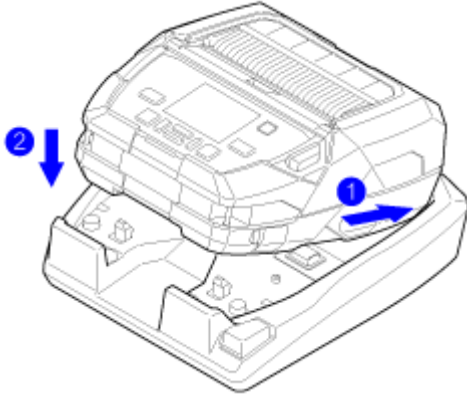
4. **Press the cover open button (1) to open the top cover (2).**

5. Insert the fan-fold media from the fan-fold media inlet.

(A) Media height (from desk): Within 100 mm (3.94") (guideline)

(B) Distance between the back side of the product and the media: The size of 1 fold of the media, or more (guideline)

- Load the media so that the print side touches the print head.
- The height may be limited depending on where media is placed.
- When drawing the media from under the desk, not from the position on the same desk which the rear side of the product is placed, place the media so as not to obstruct the printing operation.
- Place the AC adapter and cord so they do not touch the media.
- Confirm operations, in advance, for the operating environment, such as the type and size of media being used, environmental conditions, installation location.

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6. **Pull out the fan-fold media that was inserted from the bottom ❶, adjust the media guide (3) to the width of the fan-fold media ❷, and then lower the media guide lock ❸.**
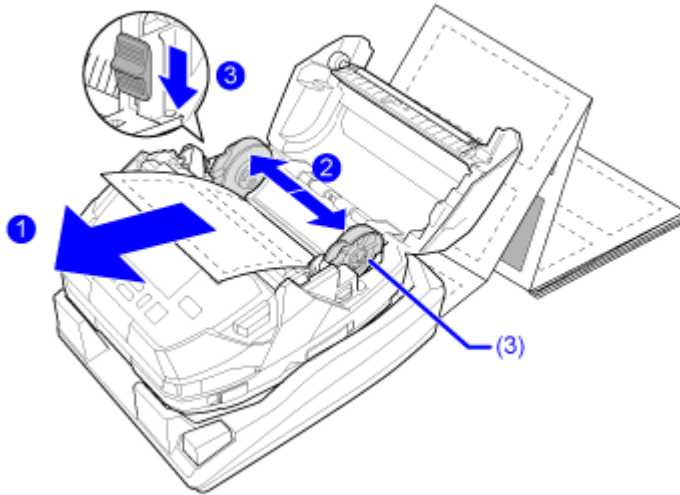
7. **Close the top cover.**

   Push both ends of the top cover, and close it firmly until it clicks.

   ⚠ • When closing the top cover, be careful not to pinch your fingers.

   ✎ • Eject the media in the illustrated direction.
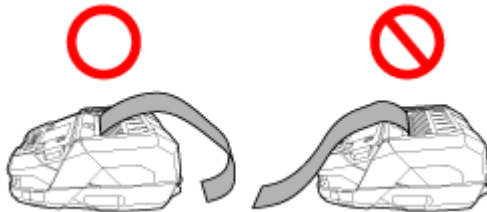
8. **Press the ▬ button (FEED) to feed the media.**

9. **Press the ▬ button (ONLINE) to go to Online mode.**

Loading the Fan-fold Media (When Using the Printer Stand (Option))

The media is fed from the bottom of the product, so you need to keep the product high enough off the tabletop. This section describes the procedure for using the Printer Stand (option).

⚠️
- The printer stand has sharp edges. Be careful not to hurt yourself.
- After installing the product on the printer stand, hold the printer stand with your hands so it doesn't fall over while the product is being operated.
- The print head and its surroundings are hot after printing. Be careful not to get burned.
- Touching the edge of the print head with your bare hand could cause injury.

✏️
- Fan-fold media is not available in dispenser mode since the perforated line affects the dispenser function.

1. Open the fan-fold media inlet on the bottom of the product.
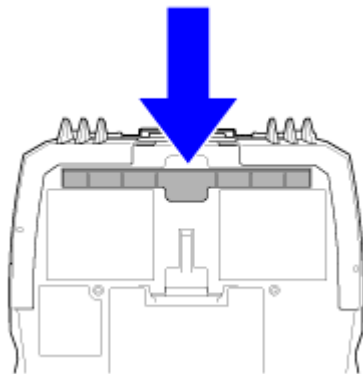
2. **Install the product on the printer stand and secure it with the 2 screws provided.**
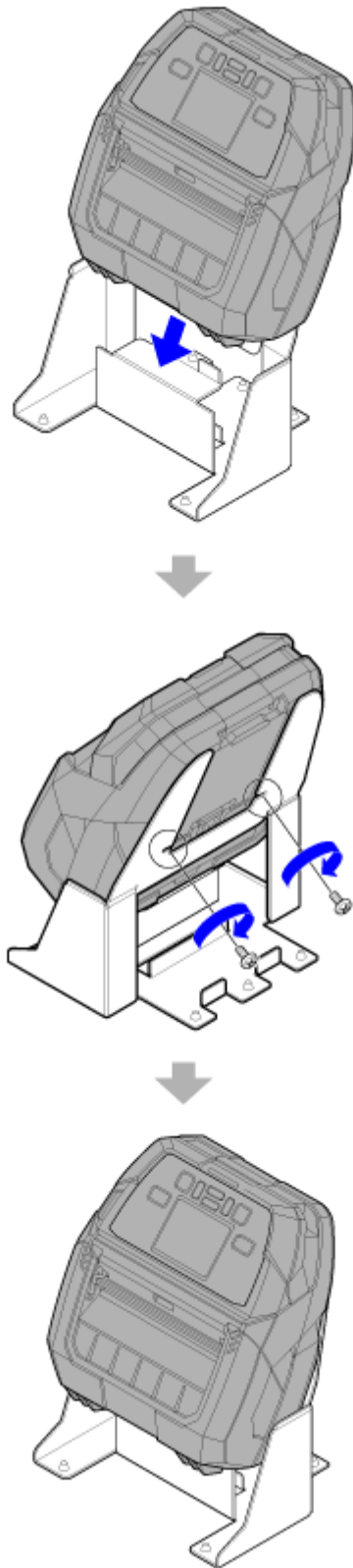
- The customer must prepare the Philips screwdriver.
- You can install the AC adapter at the bottom of the printer stand.
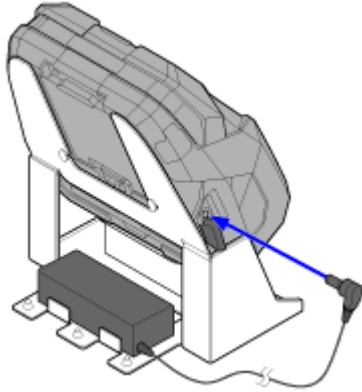
3. Press the cover open button (1) to open the top cover (2).

⚠ • Hold the printer stand with your hands to prevent it from falling over.

(1)

(2)

4. Insert the fan-fold media from the fan-fold media inlet.

(A) Media height (from desk): Within 100 mm (3.94") (guideline)

(B) Distance between the back side of the product and the media: The size of 1 fold of the media, or more (guideline)

- Load the media so that the print side touches the print head.
- The height may be limited depending on where media is placed.
- When drawing the media from under the desk, not from the position on the same desk which the rear side of the product is placed, place the media so as not to obstruct the printing operation.
- Place the AC adapter and cord so they do not touch the media.
- Confirm operations, in advance, for the operating environment, such as the type and size of media being used, environmental conditions, installation location.

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5. **Pull out the fan-fold media that was inserted from the bottom ❶, adjust the media guide (3) to the width of the fan-fold media ❷, and then lower the media guide lock ❸.**
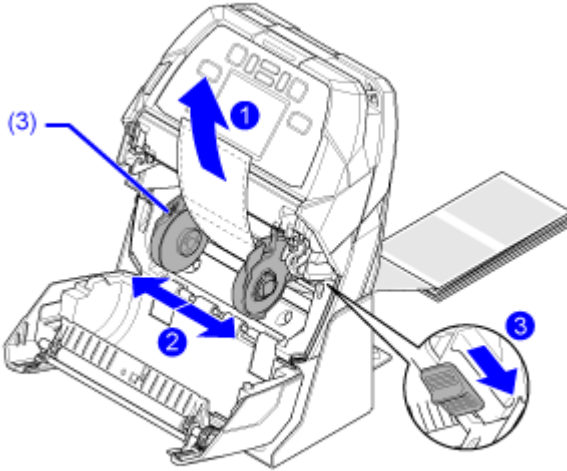
6. **Close the top cover.**

   Push both ends of the top cover, and close it firmly until it clicks.

   ⚠️ • When closing the top cover, be careful not to pinch your fingers.

   • Hold the printer stand with your hands to prevent it from falling over.

   ✏️ • Eject the media in the illustrated direction.

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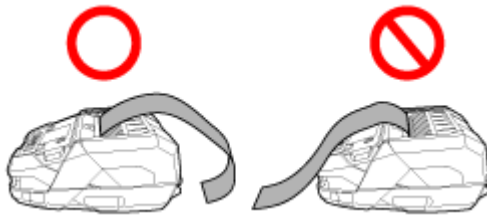
7. **Press the ▬ button (FEED) to feed the media.**

8. **Press the ▬ button (ONLINE) to go to Online mode.**

Settings to Match the Media

Media Sensor Type

The product adjusts the print position precisely by detecting I-marks or gaps on the media (label) using media sensors.

The I-marks or gaps on each type of media are as follows:

I-mark	Gap
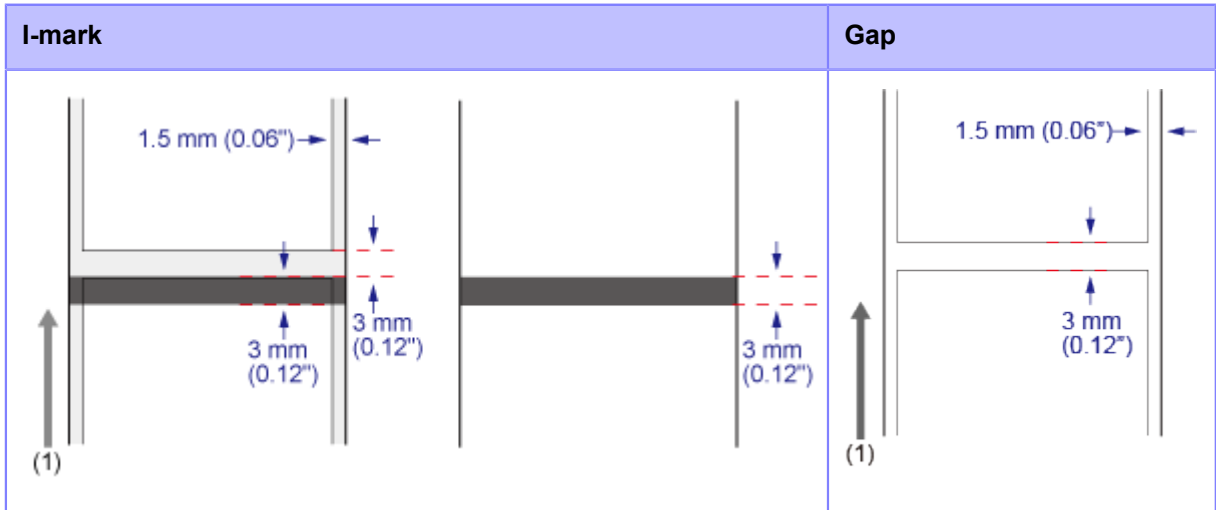
 (1) Media feed direction

Set the sensor type to detect the print position according to the media to be used.

You can set the sensor type by using the startup guide. Alternatively, the following procedure can be used.

1. **Press the ▬ button (OFFLINE) or ▷|| button in Online mode.**

The product changes to Offline mode.

2. **Press the** ⬅ **button.**

The product changes to Settings mode.

🖊 • Input the password if it is enabled.

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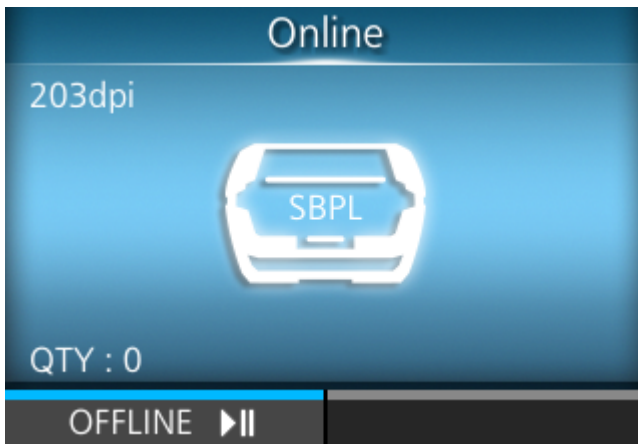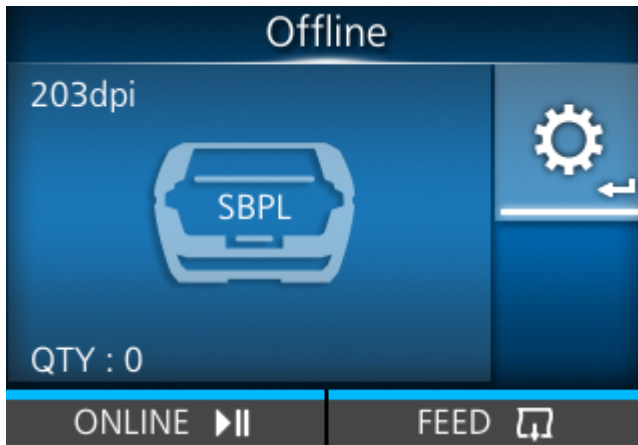
3. **Select [Printing] using the** ◁/▷ **buttons.**
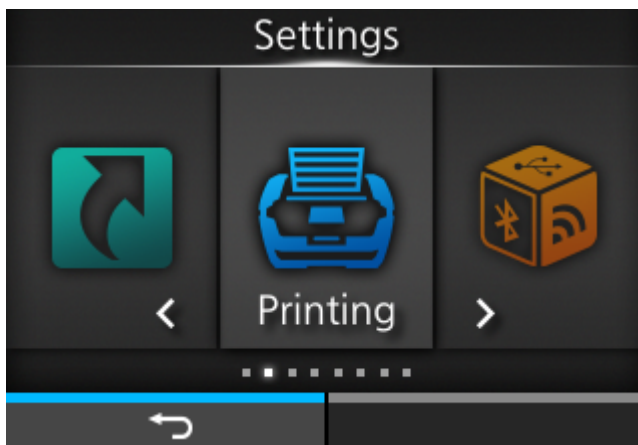
4. **Press the** ⬅ **button.**

The item list appears.
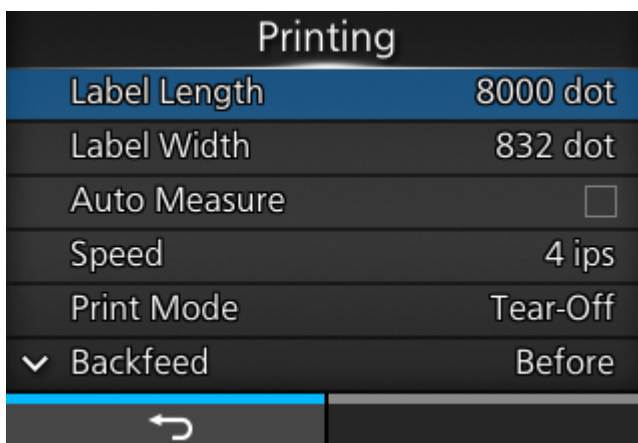
5. Select [Sensor Type] using the ▲ / ▼ buttons.

Printing	
∧ Label Width	832 dot
Auto Measure	☐
Speed	4 ips
Print Mode	Tear-Off
Backfeed	Before
∨ Sensor Type	I-Mark

↩
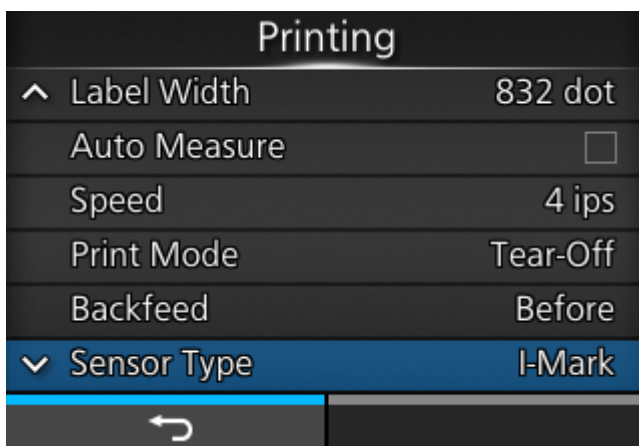
6. Press the ↵ button.

The [Sensor Type] screen appears.

7. Select the sensor type to detect the print position using the ▲ / ▼ buttons.

Sensor Type	
None	
Gap	
I-Mark	✓

↩   ✓
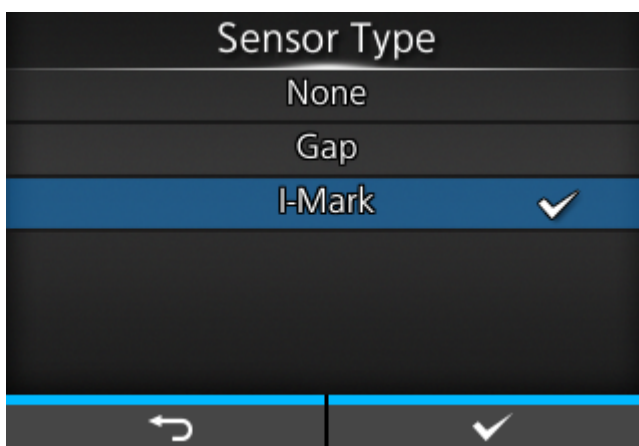
[None]

Disables the media sensor.

[Gap]

Select when using gap type media. Use the transmissive type sensor.

[I-Mark]

Select when using I-mark type media. Use the reflective type sensor.

✏️ • If you have selected [Dispenser] in the [Print Mode] menu, only [Gap] and [I-Mark] are available.

• If you have selected [Linerless tearoff] in the [Print Mode] menu, only [None] and [I-Mark] are available.

---

8. **Press the ▬ button (✓) to confirm.**

Manually Setting the Print Mode

You can change the print mode of the product according to its usage.

The product has the following print modes:

[Continuous]

Prints the specified number of media. The media remains in position for printing at all times.

[Tear-Off] (Feeding media to the position for manual cutting)

After printing the specified number of media, the product feeds the last printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position to start the next printing.

[Dispenser]

Peels the liner from the printed label as the label is fed to the product's front. Once the printed label has been removed from the product for application, the next label will retract and position itself for printing.

[Linerless tearoff]

The product feeds each printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position for starting the next printing.

Select this when using a linerless label on a linerless model.

- To select [Dispenser], you need to pull out the product's dispenser unit when loading media.

You can set the print mode by using the startup guide. Alternatively, the following procedure can be used.

1. **Press the ▬ button (OFFLINE) or ▶❙❙ button in Online mode.**

The product changes to Offline mode.

2. **Press the** ⬅ **button.**

The product changes to Settings mode.

✏️   •   Input the password if it is enabled.

---
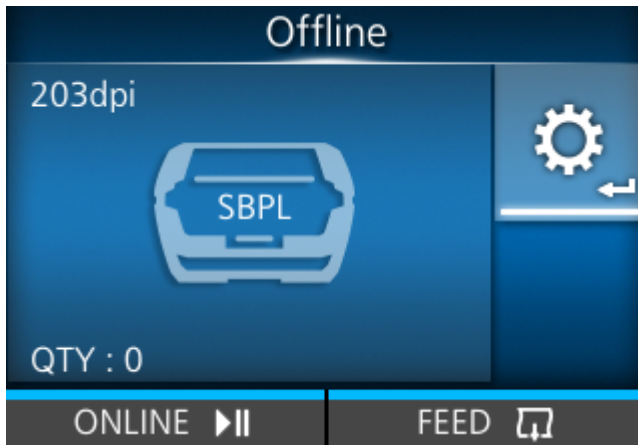
3. **Select [Printing] using the** ◀/▶ **buttons.**
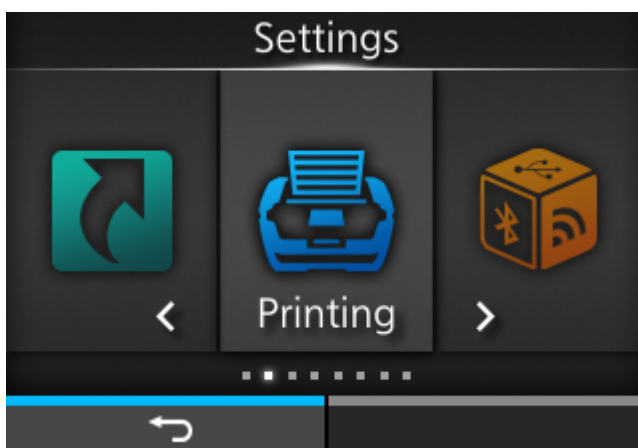
4. **Press the** ⬅ **button.**

The item list appears.
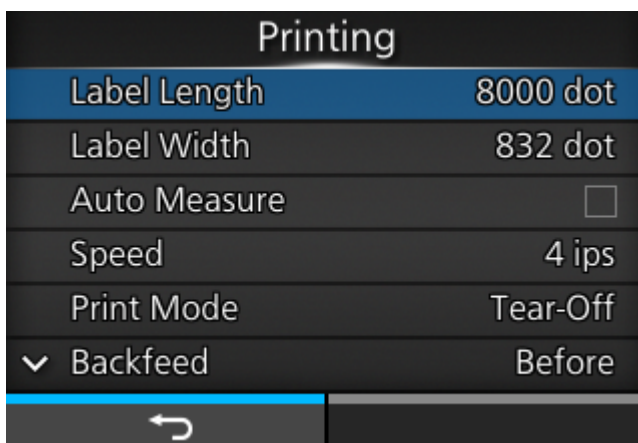
5. Select [Print Mode] using the ▲ / ▼ buttons.

Printing	
Label Length	8000 dot
Label Width	832 dot
Auto Measure	☐
Speed	4 ips
Print Mode	Tear-Off
⌄ Backfeed	Before

↩
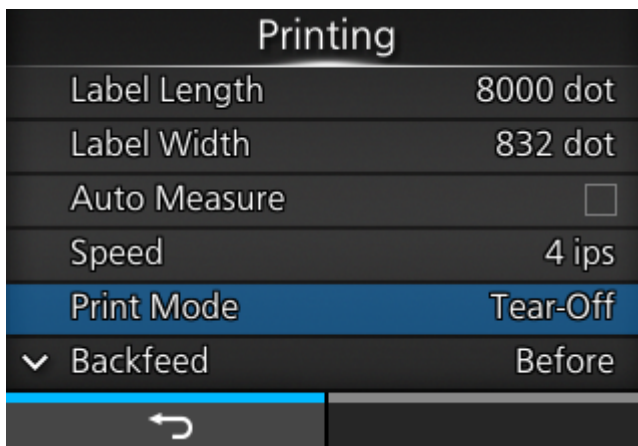
6. Press the ⬅ button.

The [Print Mode] screen appears.

7. Select the print mode using the ▲ / ▼ buttons.

Print Mode
Continuous
Tear-Off ✓
Dispenser
Linerless tearoff

↩　　✓
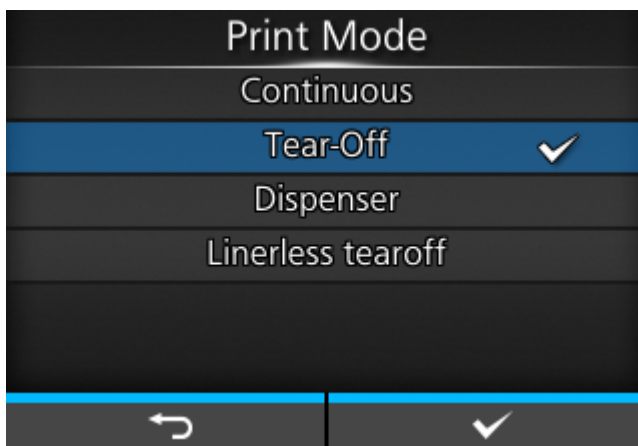
8. Press the ▬ button (✓) to confirm.

When to Replace Media

The product has a paper end detection function that detects when the media runs out.

When the product detects the paper's end, an icon and an error message are shown on the product's screen.

The conditions in which paper ends vary depending on the operation of the product.

Various Settings of the Product

The [Settings] Menu

The following categories of menus are available for the [Settings] menu of the product. Click the icon to jump to the description of each menu item.
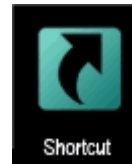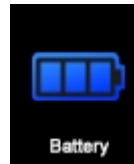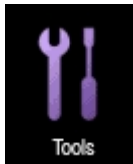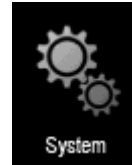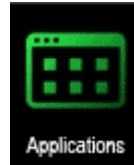
Printing

Interface

Applications

System

Tools

Information

Battery

Shortcut

[Printing] Menu

The following settings are available in the [Printing] menu:

[Label Length]

Set the length of the media.

The setting range of the label length is 1 to 8000 dots.

> • 1 dot length is 0.125 mm (0.0049").
>
> • Set the label size to a value that includes the liner.

[Label Width]

Set the width of the media.

The setting range of the label width is 1 to 832 dots.

> • 1 dot length is 0.125 mm (0.0049").
>
> • Set the label size to a value that includes the liner.

[Auto Measure]

The product automatically measures the length of the media.

The measured length of the media will be automatically saved in [Label Length].

The Auto Measure function can be performed when [Sensor Type] is set [Gap] or [I-Mark].

The setting procedure of the label length using the Auto Measure function is as follows:

1. Load the media.
2. Set [Auto Measure] to [Enabled].
3. Press the ▶❚❚ button to display the Offline screen.
4. Press the ▶❚❚ button again to show the Online screen.

   A label is fed and the length of the label is measured.
   The measured label length is saved in [Label Length].

✏️ • When you enable [Auto Measure], this function executes in the following conditions:

   ◦ The first time the product changes to Online mode after being powered on

   ◦ When the product changes to Online mode after the top cover is opened/closed

   ◦ When the product changes to Online mode after the settings in the [Sensor Type] menu are changed

• If [Protocol] in the [Applications] menu is changed to [SZPL], then [Auto Measure] is enabled and executes automatically.

[Speed]

Set the print speed.

The setting range of the print speed is from 2 to 6 ips (inches/sec) (50.8 to 152.4 mm/sec).

✏️ • Setting the print speed to a level that is too fast may affect the print quality.

• The actual print speed may vary depending on the battery capacity, environment, or print layout.

• If you have selected [Dispenser] or [Linerless tearoff] in the [Print Mode] menu, then print speed has a maximum of 4 ips (inches/second) (101.6 mm/sec).

• When [Quality Priority] or [Balance] has been selected in the [Print Control] menu, printing may not be done at the speed set in these settings, depending on the conditions while printing.

[Print Mode]

Set the print mode.

The options are as follows.

Continuous

   Continuously print the specified number of the media. The media remains in position for printing at all times.

Tear-Off (Function for feeds the printed media for removal)

   After printing the specified number of media, the product feeds the last printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position to start the next printing.

Dispenser

Peels the liner from the printed label as the label is fed to the product's front. Once the printed label has been removed from the product for application, the next label retracts and positions itself for printing.

Linerless tearoff

The product feeds each printed media so that it is fully extended out of the product's front for removal. After printing, tear off the media manually. The media will be back to the print head position to start the next printing.

Select this when using a linerless label on a linerless model.

- To select [Dispenser], you need to pull out the product's dispenser unit when loading media.

[Backfeed]

The options are as follows:

After

After printing and dispensing, backfeed the front part of the next media to the print head position.

Before

Before printing, backfeed the front part of the next media to the print head position.

None

Do not backfeed.

- The selectable operations differ according to the print mode.

[Print Mode]	[After]	[Before]	[None]
[Continuous]	-	-	Possible
[Tear-Off]	-	Possible	-
[Dispenser]	Possible	Possible	Possible
[Linerless tearoff]	-	Possible	-

[Sensor Type]

Set the sensor type for detecting the media.

The options are as follows:

Gap

Select when using the media of Gap type. Use the transmissive type sensor.

I-Mark

Select when using the media of I-mark type. Use the reflective type sensor.

None

Disables the media sensor.

> ✎ • If you have selected [Dispenser] in the [Print Mode] menu, only [Gap] and [I-Mark] will
>   be available.
>
>   • If you have selected [Linerless tearoff] in the [Print Mode] menu, only [I-Mark] and
>   [None] will be available.

[Darkness Range]

Set the range of the print darkness.

The darkness range affects the print darkness.

The options are as follows.

A, B, C, D, E, F

> ✎ • The normal setting is A. You can also select B to F but the print darkness does not
>   change.

[Darkness]

Specify the print darkness from 10 steps.

The setting range is from 1 to 10. 1 is the lightest and 10 is the darkest.

> ✎ • To further fine tune the print darkness, set [Printing] > [Advanced] > [Adjustments] >
>   [Darkness Adjust].

[Imaging]

Set the print reference position in the vertical and horizontal directions.

The setting items are as follows:

Vertical

Set the print position in the vertical direction.

Set the correction value from the print reference position as "-" for the direction of the paper feed and "+" for the direction opposite to the paper feed.
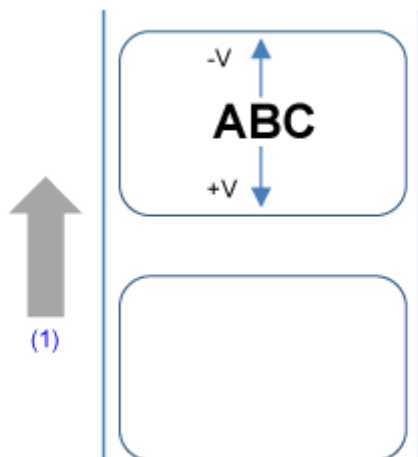
(1) Feed direction

The setting range is from -7999 to +7999 dots.

Horizontal

Set the print position in the horizontal direction.

Set the correction value from the print reference position when facing the product as "-" to adjust to the left side and "+" to adjust to the right side.
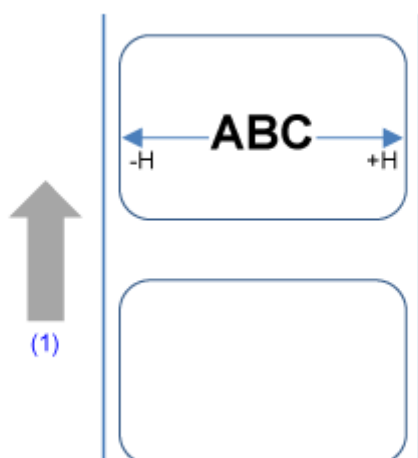
(1) Feed direction

The setting range is from -831 to +831 dots.

Adjusting Direction of the Print Reference Position and Base Reference Point
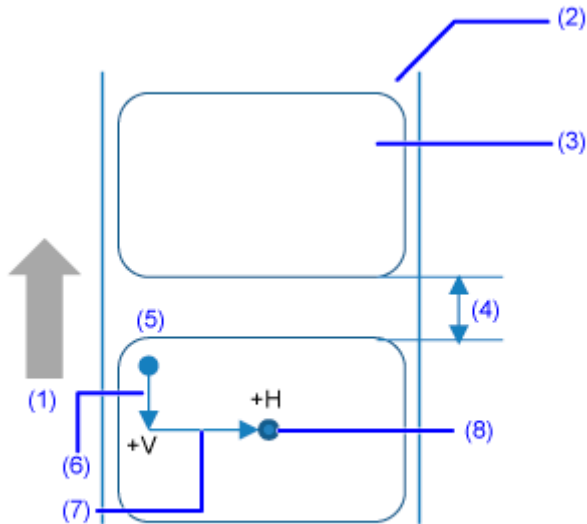
(1) Feed direction

(2) Liner

(3) Label

(4) Gap between labels

(5) Print reference position (before correction)

(6) Adjustment of vertical base reference point

(7) Adjustment of horizontal base reference point

(8) Base reference point after adjustment

[Advanced]

Set detailed sensor operation and print motion.

The available setting items are as follows.

[Calibrate]

Adjust the media sensor level.

In instances of media detection malfunction, adjust the media sensor level (Gap and I-mark sensors).

The setting items are as follows:

[Auto-calibration]

Perform the auto-calibration for the selected media sensor.

The options are as follows:

Gap + I-Mark

  Adjusts both the Gap sensor and I-mark sensor.

Gap

  Adjusts the Gap sensor.

I-Mark

  Adjusts the I-mark sensor.

The procedure to auto-calibrate the media sensor is as follows:

1. Open the top cover.
2. Load the media.
   Remove the label from the media and place the liner above the gap sensor position.
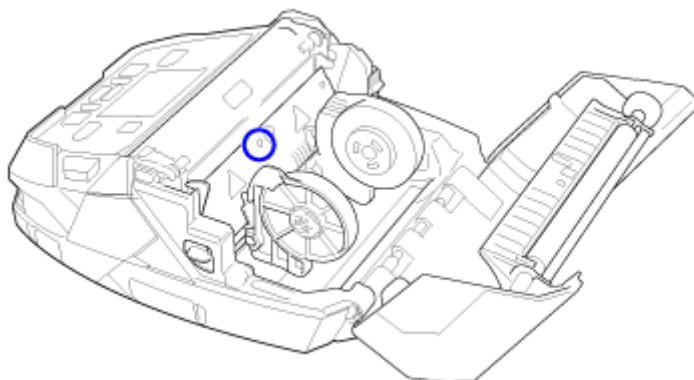
3. Close the top cover.
4. Select the type of sensor to adjust, and then press the � button (START).
5. When the confirmation screen appears, press the ▬ button (✓) to start adjusting the sensors.
   If message indicating adjustment failed, load the media correctly and try again.
6. Press the ▬ button (✓).
7. Reload the media.
8. Confirm the results of adjusting the media sensor.
   Display the Offline screen, press the ▬ button (FEED), and then confirm that the media is fed correctly.

> ✎ • If the media is not fed correctly after executing [Auto-calibration], contact your SATO reseller or technical support.

[GAP Levels]

Manually set the Gap sensor level.

The setting procedure is as follows:

First, adjust the "Low" level (voltage) of the Gap sensor.

1. Remove the label from the liner.

2. Pass the liner above the media sensor. Align it so that the media sensor does not detect the I-mark (black mark).

3. Close the print head. To get the correct adjustment result, adjust after you have closed the print head.

4. Select the [GAP Levels] in the [Calibrate] menu and press the ⬅ button.

5. Press the 🔺 / 🔻 buttons to change the [Emit] value until the [Sensor] value is below 0.5 (V). Set the [Emit] value as low as possible.

6. If the [Sensor] value does not decrease below 0.5 after you changed the [Emit] value, press the ◀ / ▶ buttons to change the [Receive] value.

7. Take a note of the [Sensor] value from the above procedure. This is the "Low" level value for the Gap sensor.

Next, check the "High" level (voltage) of the Gap sensor as follows:

1. Pass the media (attached with liner) above the media sensors. Align it so that the media sensor does not detect the I-mark (black mark).

2. Close the print head.

3. Check the [Sensor] value.

   If the value is 1.0 (V) higher than the "Low" level value you have recorded, this is the "High" level value for the Gap sensor.
   If the difference between the "High" and the "Low" levels is less than 1.0, adjust the [Emit] and [Receive] values so that the difference is more than 1.0, or adjust the "Low" level (voltage) of the Gap sensor again.

4. If both "High" and "Low" levels comply with the standard value, press the ▬ button (✔) to confirm the value.

   The standard values for the "High" and "Low" levels for the Gap sensor are as follows:

   ◦ Low (with only liner) ≤ 0.5 (V)

   ◦ High (media attached with liner) - Low ≥ 1.0 (V)

[GAP Slice Level]

Set the Gap sensor slice level.

The setting procedure is as follows:

1. Use the following formula to calculate the slice level:
   (High level - Low level) x 0.3 + Low level = slice level

2. Select the [GAP Slice Level] in the [Calibrate] menu and press the ⬅ button.

3. Press the 🔺 / 🔻 buttons to change the [Slice level] value. Set the [Slice level] to the level calculated in step 1.

4. Press the ▬ button (✔) to confirm the value.

✎ • If you set the [Slice level] to 0.0 (V), the product sets the slice level automatically.

[I-Mark Levels]

Manually set the I-mark sensor level.

The setting procedure is as follows:

First, adjust the "Low" level (voltage) of the I-mark sensor.

1. Pass the media (attached with liner) above the media sensors. Align it so that the media sensor does not detect the I-mark (black mark).
2. Close the print head. To get the correct adjustment result, adjust after you have closed the print head.
3. Select the [I-Mark Levels] in the [Calibrate] menu and press the ⬅ button.
4. Press the ▲ / ▼ buttons to change the [Emit] value until the [Sensor] value is below 0.5 (V). Set the [Emit] value as low as possible.
5. If the [Sensor] value does not decrease below 0.5 after you changed the [Emit] value, press the ◀ / ▶ buttons to change the [Receive] value.
6. Take a note of the [Sensor] value from the above procedure. This is the "Low" level value for the I-mark sensor.

Next, check the "High" level (voltage) of the I-mark sensor as follows:

1. Pass the media above the media sensors so that the media sensor can detect the I-mark (black mark).
2. Close the print head.
3. Check the [Sensor] value.
   If the value is 1.0 (V) higher than the "Low" level value you have recorded, this is the "High" level value for the I-mark sensor.
   If the difference between the "High" and the "Low" levels is less than 1.0, adjust the [Emit] and [Receive] values so that the difference is more than 1.0, or adjust the "Low" level (voltage) of the I-mark sensor again.
4. If both "High" and "Low" levels comply with the standard value, press the ▬ button (✓) to confirm the value.
   The standard values for the "High" and "Low" levels for the I-mark sensor are as follows:
   - Low (without I-mark) ≤ 0.5 (V)
   - High (with I-mark) - Low ≥ 1.0 (V)

[I-Mark Slice Level]

Set the I-mark sensor slice level.

The setting procedure is as follows:

1. Use the following formula to calculate the slice level:
   (High level - Low level) x 0.7 + Low level = slice level

2. Select the [I-Mark Slice Level] in the [Calibrate] menu and press the ⬅ button.

3. Press the 🔼 / 🔽 buttons to change the [Slice level] value. Set the [Slice level] to the slice level calculated in step 1.

4. Press the ▬ button (✔) to confirm the value.

> ✏️ • If you set the [Slice level] to 0.0 (V), the product sets the slice level automatically.

[Head Check]

Automatically check if there is a broken element of the print head.

The options are as follows:

Off

Disable the Head Check.

All

Check the entire print area.

Barcode

Check only the area for printing a barcode. Head check is not applicable for barcodes printed as graphic data.

> ⚠️ • Head check is a reference for checking for a broken element of the print head. This function does not guarantee barcode readability. A regular barcode reader test is required. When a void of printing got up, the head check function may not work immediately. Some gaps may occur.
>
> For the outputted label after the head error, perform the scanner reader of the printed barcode to check the label.

[Head Check Mode]

Set the method for head check.

This setting item appears if you have selected [All] or [Barcode] in the [Head Check] menu.

The options are as follows:

Always

Perform the head check for every item.

After Batch

The head check occurs before starting to print and when printing is stopped. If backfeed is applicable, the head check occurs before starting to print, when stopping to print and during the backfeed.

Every Page

Perform the head check for each specified number of media.

[Every Page]

Perform the head check for each specified number of media.

Appears only if you have selected [Every Page] in the [Head Check Mode] menu.

The setting range is from 1 to 999999.

[Check Media Size]

Enable or disable media size check.

The Media size check function detects a media longer than the media size specified by command, or the print data larger than the loaded media length.

Appears if you have selected [Gap] or [I-Mark] in the [Sensor Type] menu.

The options are as follows:

Enabled

Enable media size check.

Disabled

Disable media size check.

[Adjustments]

Correct the offset position, print position and print darkness.

The available setting items are as follows.

[Offset]

Correct the offset position.

Offset adjusts the backfeed printing and media stop position for Tear-off/Dispense operation.

Set the value '+' to move the offset position in the direction opposite to the feed direction and '-' to move in the feed direction.

 (1) Feed direction

The setting range is from -30 to +30 dots.

[Pitch]

Pitch adjusts the print position in the vertical by setting print start position.

Set the value '+' to move print position in the direction opposite to the feed direction and '-' to move in the feed direction.

(1) Feed direction

The setting range is from -30 to +30 dots.

[Darkness Adjust]

Fine tune the print darkness.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

[Start Online]

Select default mode at power of the product.

The options are as follows:

Enabled

The product powers on in Online mode.

Disabled

The product powers on in Offline mode.

[Feed After Error]

Set whether to automatically feed the media when recovering from an error and changing to Online mode.

The options are as follows:

Enabled

Feed the media when changing to Online mode after recovering from an error.

Disabled

Do not feed the media when changing to Online mode after recovering from an error.

However, if [Feed At Power On] is enabled, the product feeds the media when it is powered on and changes to Online mode.

Also, if [Auto Measure] is enabled, the product feeds the media when it changes to Online mode for the first time after being powered on.

[Feed At Power On]

Set whether to automatically feed the media at power on.

The options are as follows:

Enabled

The product feeds the media when it changes to Online mode for the first time after being powered on.

Disabled

The media is not fed when the product is powered on.

However, if [Auto Measure] is enabled, the product feeds the media when it changes to Online mode for the first time after being powered on.

[Finisher Feed]

Set the media feed amount for Tear-off, Linerless and dispense stop. Set the media feed amount based on the print head position of 0.

The actual media feed amount is the value of [Offset] + [Finisher Feed].

The setting range is from 0 to 2040 dots.

- • 1 dot length is 0.125 mm (0.0049").
- • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

- • A message prompting you to restart the product will appear on the Online/Offline screen if you have made any changes. In such a case, reboot the product to apply the settings.

[Paper End]

Select the sensor for sensing the paper end.

The options are as follows:

Using I-mark

Use the I-mark sensor (reflective type) to detect the paper end.

Using Gap

Use the Gap sensor (transmissive type) to detect the paper end.

[Prioritize]

For product settings, set whether to prioritize the settings that are done through the product or through commands.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

[Reprint]

Enable or disable the reprint function.

The options are as follows:

Enabled

Enable the reprint function.

Disabled

Disable the reprint function.

If you have selected [Enabled] in [Reprint], you can press the ▬ button (REPRINT) on the Online screen to print the previous data again.

⚠ • The previous data will be lost if you power off the product.

[Print Control]

Set print performance.

The options are as follows:

Quality Priority

Prioritize print quality. The product checks the battery status for each sheet and automatically corrects the print darkness before printing. To prioritize print quality, print speed may be slower than specified.

Balance

Standard setting. The product checks the battery status before the print operation and automatically corrects the print darkness. To maintain print quality, print speed may be slower than specified.

Speed Priority

Prioritize print speed. The product checks the battery status before the print operation, automatically corrects the print darkness, and prints at the specified print speed.

[Print End Position]

Adjust the media stop position when [Sensor Type] is set to [None]. This adjustment also sets the blank amount from the media stop position.

The setting range is from 0 to 8000 dots.

| | • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu. |

[Interface] Menu
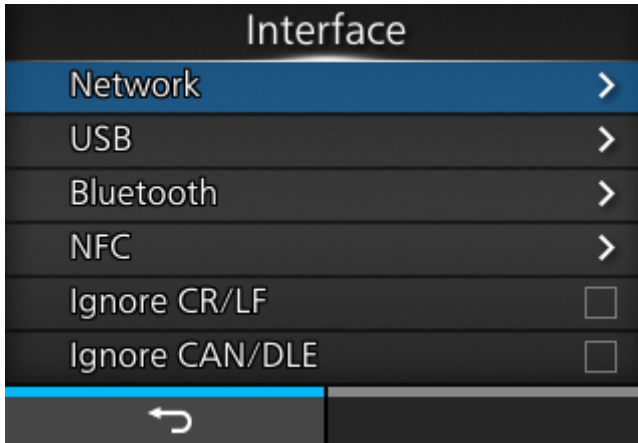
The following settings are available in the [Interface] menu:

[Network]

To use wireless LAN for the interface between the host and the product.

The setting items are as follows:

[Settings]

Set the wireless LAN.

The setting item is as follows:

[Wi-Fi]

Set the wireless LAN.

- After completing the settings, press the ▬ button (✓). While the button to decide whether to save the settings is displayed on the [Wi-Fi] screen, press the ▬ button (✓) to apply the values that were input in each setting screen.

- Press the ▬ button (↩) to discard the changes. While the button to decide whether to save the settings is displayed on the [Wi-Fi] screen, press the ▬ button (✗) and then press the ▬ button (✓) on the message to confirm whether you want to discard the changes.

The setting items are as follows:

[IPv4]

Configure IPv4 for Wi-Fi.

The setting items are as follows:

[Mode]

Select the IP address assignment method.

The options are as follows:

DHCP

Automatically retrieve the IP address, subnet mask address, default gateway address, and DNS server address from the DHCP server.

Static

Manually set the IP address, subnet mask address, default gateway address, and DNS server address.

[DHCP]

Update the lease time and get the IP address from the DHCP server again.

Shown only if [Wi-Fi Direct] is disabled and you have selected [DHCP] in the [Mode] menu.

[IP Address]

If you have selected [DHCP] in the [Mode] menu or [Wi-Fi Direct] is set, the gateway address you received from the DHCP server is displayed on the screen.

If you have selected [Static] in the [Mode] menu, set the IP address.

The setting range is as follows:

000.000.000.000 to 255.255.255.255

[Netmask]

If you have selected [DHCP] in the [Mode] menu or [Wi-Fi Direct] is set, the gateway address you received from the DHCP server is displayed on the screen.

If you have selected [Static] in the [Mode] menu, set the subnet mask address.

The setting range is as follows:

128.000.000.000 to 255.255.255.254

[Gateway]

If you have selected [DHCP] in the [Mode] menu or [Wi-Fi Direct] is set, the gateway address you received from the DHCP server is displayed on the screen.

If you have selected [Static] in the [Mode] menu, set the gateway address.

The setting range is as follows:

000.000.000.000 to 255.255.255.255

[DNS]

Only appears when [Wi-Fi Direct] is disabled.

Set and check DNS server addresses.

If you have selected [DHCP] in the [Mode] menu, the screen shows the DNS server address you received from the DHCP server.

If you have selected [Static] in the [Mode] menu, set the address of the DNS server.

The setting range is as follows:

000.000.000.000 to 255.255.255.255

> ✎ • You can register up to three IP addresses for the DNS server. Use a comma to delimit different IP addresses.

[IPv6]

Configure IPv6 for Wi-Fi.

Only appears when [Wi-Fi Direct] is disabled.

The setting items are as follows:

[Mode]

Select the IP address assignment method.

The options are as follows:

Disable

> Disable IPv6.

Auto

> Automatically generate the IP address, prefix length, default gateway address, and DNS server address (stateless mode).

DHCP

> Automatically acquire the IP address, prefix length, default gateway address, and DNS server address from the DHCP server (stateful mode).

Static

> Manually set the IP address, prefix length, default gateway address, and DNS server address.

[DHCP]

Update the lease time and get the IP address from the DHCP server again.

Available only if you have selected [DHCP] in the [Mode] menu.

[IP Address]

Set and check the IP address.

If you have selected [Auto] or [DHCP] in the [Mode] menu, the screen shows the IP address you acquired.

If you have selected [Static] in the [Mode] menu, set the IP address.

The setting range is as follows:

0:0:0:0:0:0:0:1 to ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff

[Prefix Length]

If you have selected [DHCP] in the [Mode] menu, the prefix length is displayed on the screen.

If you have selected [Static] in the [Mode] menu, set the prefix.

The setting range is from 1 to 128.

[Gateway]

Set and check the default gateway address.

If you have selected [Auto] or [DHCP] in the [Mode] menu, the screen shows the gateway address you acquired.

If you have selected [Static] in the [Mode] menu, set the default gateway address.

The setting range is as follows:

0:0:0:0:0:0:0:0 to ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff

[DNS]

Set and check the address of the primary DNS server.

If you have selected [Auto] or [DHCP] in the [Mode] menu, the screen shows the DNS server address that was acquired.

If you have selected [Static] in the [Mode] menu, set the address of the DNS server.

The setting range is as follows:

0:0:0:0:0:0:0:0 to ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff

• You can register only one IP address for the DNS server for IPv6.

[Ports]

Set the TCP/IP port number.

The setting items are as follows:

Roles of Port1 to Port3

In the socket server function of TCP/IP, either of the following connection methods can be used.

The ports to be used and their roles change depending on the connection method and communication protocol.

Two-port connection

Port1 is used for receiving print data, and Port2 is used for returning the product status.

Two-port connection is available when the communication protocol is Status4.
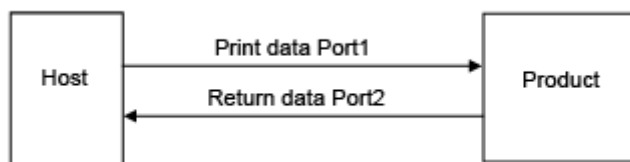
One-port connection

One port is used for both receiving print data and returning the product status.

When the communication protocol is Status4, Port3 is used.
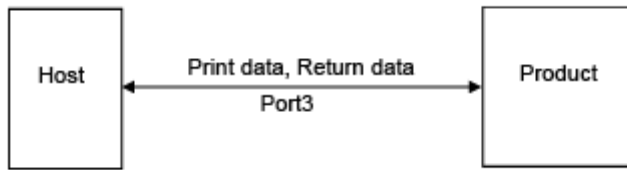
When the communication protocol is STATUS3, Port1 or Port3 is used.
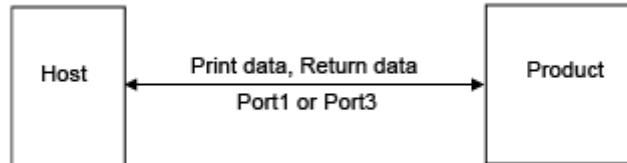
[Port1]

Set the port number of Port1.

For the two-port connection of Status4, this port is used for receiving print data. For the one-port connection of Status3, this port is used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.

> ⚠ • Each port (1, 2 and 3) must be set to different values.
> • Set a port number not used by other services. If port numbers that overlap with those used by other services are used, communication cannot be performed properly.

[Port2]

Set the port number of Port2.

For the two-port connection of Status4, this port is used for returning the product status.

The setting range is from 1 to 65535.

> ⚠ • Each port (1, 2 and 3) must be set to different values.
> • Set a port number not used by other services. If port numbers that overlap with those used by other services are used, communication cannot be performed properly.

[Port3]

Set the port number of Port3.

For the one-port connection of Status3/Status4, this port is used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.

> ⚠ • Each port (1, 2 and 3) must be set to different values.
> • Set a port number not used by other services. If port numbers that overlap with those used by other services are used, communication cannot be performed properly.

> ✎ • You can change the return status format of port3 to Compatible mode by enabling [Legacy Status for Port 9100].

[Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS4 ENQ]

- [STATUS3]

- [NONE]

[TCP Connection Queue]

Set whether to allow queuing for connection when multiple hosts or applications are sending connection requests to the product.

The options are as follows:

Enabled

While connecting with one host or application, the product can receive connection requests from other hosts or applications. The subsequent connection requests are put on hold, and processed in order of reception after the first connection is closed.

Disabled

While connecting with one host or application, the product cannot receive connection requests from other hosts or applications.

> ⚠ • When you have selected [Enabled], be sure to use one port connection for Status3 and Status4. Operation using two port connections for Status4 is not guaranteed.

[Legacy Status for Port 9100]

Set whether to change the return status format of port3 to legacy status.

The options are as follows:

Enabled
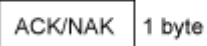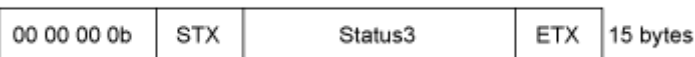
Change the return status format of port3 to legacy status.

Disabled
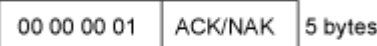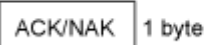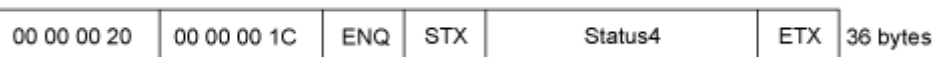
Do not change the return status format of port3 to legacy status.

In legacy status, the return status format of port3 becomes as follows:

Status3

Mode	Data format
Normal ([Legacy Status for Port 9100] is [Disabled])	ACK/NAK Reply ACK/NAK — 1 byte Status Reply STX — Status3 — ETX — 11 bytes
Legacy status ([Legacy Status for Port 9100] is [Enabled])	ACK/NAK Reply ACK/NAK — 1 byte Status Reply 00 00 00 0b — STX — Status3 — ETX — 15 bytes

Status4

Mode	Data format
Normal ([Legacy Status for Port 9100] is [Disabled])	ACK/NAK Reply 00 00 00 01 — ACK/NAK — 5 bytes Status Reply 00 00 00 1C — ENQ — STX — Status4 — ETX — 32 bytes
Legacy status ([Legacy Status for Port 9100] is [Enabled])	ACK/NAK Reply ACK/NAK — 1 byte Status Reply 00 00 00 20 — 00 00 00 1C — ENQ — STX — Status4 — ETX — 36 bytes

[Delay Reply ENQ]

Set the period to delay status reply to status request ENQ.

The target interface is Wireless LAN.

The target statuses are STATUS3 and STATUS4 ENQ reply.

The setting range is from 0 to 9999 ms.

> ✎ • Normally, keep this setting at the default value.

[Proxy]

Configure the proxy for Wi-Fi.

The setting items are as follows:

163

[Enabled]

Enable or disable use of proxy.

The options are as follows:

Enabled

      Enable proxy server usage.

Disabled

      Disable proxy server usage.

    •   To enable a proxy, you need to set [Server] and [Exclude].

[Server]

Set the name or IP address of the proxy server.

Example of input) http://172.128.1.100

    •   Be sure to specify a format for the IP address that starts with http. If you specify an address that starts with https, then the certification check is not done and connection to a legitimate SOS server may be impossible.

    •   Server should be set with a valid name or IP address.

[Port No.]

Set the port number that allows communication with the proxy server.

The setting range is from 1 to 65535.

    •   Set a port number not used by other services. If port numbers that overlap with those used by other services are used, communication cannot be performed properly.

    •   To set the port number, [Server] should be set.

[Username]

Set the username if you need a username to connect to the proxy server.

You can enter 1 to 8 characters. Alphabets (capital and small letters) and numbers can be used.

    •   To set the username, [Server] should be set.

[Password]

Set the password if you need a password to connect to the proxy server.

You can enter 1 to 16 characters. Alphabets (capital and small letters), numbers and symbols can be used.

⚠ • Some symbols cannot be used. If you enter a symbol that cannot be used, [Invalid value] appears on the screen.

✎ • To set the password, [Server] should be set.

[Exclude]

Set names, IP addresses or domains for the proxy to exclude.

✎ • Because this setting needs to include "127.0.0.1" and "localhost", these 2 items are already input when the setting screen appears. You can add values delimited by commas.

[DHCP Options]

Configure the DHCP options for Wi-Fi.

[DHCP Options] can be set only if you have selected [DHCP] in the [IPv4] > [Mode] menu or [IPv6] > [Mode] menu.

The setting items are as follows:

[Update DNS (Option 81)]

Enable or disable the use of DHCP server option 81.

The options are as follows:

Enabled

Enable the use of DHCP server option 81.

Disabled

Disable the use of DHCP server option 81.

[Hostname]

Set the hostname.

You can enter 0 to 255 characters. Alphabets (capital and small letters), numbers and symbols can be used.

⚠ • Some symbols cannot be used. If you enter a symbol that cannot be used, [Invalid value] appears on the screen.

✎ • Periods can be input only as delimiter text.
   • If left blank, the setting is disabled.

[Hostname (Option 12)]

Enable or disable use of DHCP server option 12.

The options are as follows:

Enabled

Enable use of DHCP server option 12.

165

Disabled

    Disable use of DHCP server option 12.

[Hostname Suffix]

Set the host name to use for DHCP server option 12.

- [Printer serial number]
- [MAC Address]

[UserClass (Option 77)]

Enable or disable use of DHCP server option 77.

The options are as follows:

Enabled

    Enable use of DHCP server option 77.

Disabled

    Disable use of DHCP server option 77.

[UserClass]

Set the user class name to use for DHCP server option 77.

You can enter 1 to 64 characters. You can use alphabet (capital and small letters), numbers and symbols.

> ⚠ • Some symbols cannot be used. If you enter a symbol that cannot be used, [Invalid value] appears on the screen.

> ✎ • If left blank, the setting is disabled.

[Wi-Fi Protected Setup(WPS)]

Set the wireless LAN connection using the Button (PBC) or PIN code method.

> ✎ • Refer to the manual of the access point device for its operation.
> • If the [Wi-Fi Direct] is already set, this setting item is not displayed.

The available setting items are as follows.

[Button (PBC)]

Set the wireless LAN connection using the button (PBC).

1. Select [Button (PBC)] in the [Wi-Fi Protected Setup(WPS)] menu.
2. When [Scanning...] appears on the screen, press the WPS button on the access point of the wireless LAN device.
3. When the connection to the access point is established, [Successfully configured.] appears on the screen.

> ✎ • When the connection to the access point is failed, [Failed to find an Access Point.] appears on the screen.

[PIN]

Set the wireless LAN connection using the PIN code method.

1. Select [PIN] in the [Wi-Fi Protected Setup(WPS)] menu.
2. When [Scanning...] appears on the screen, set the PIN code shown on the screen to the access point of the wireless LAN or computer.
3. When the connection to the access point is established, [Successfully configured.] appears on the screen.

> ✎ • If the connection to the access point is failed, [Failed to find an Access Point.] appears on the screen.

[Wi-Fi Direct]

Set the Wi-Fi Direct function.

The Wi-Fi Direct function is enabled if you have selected [Infrastructure] in the [Mode] menu. If you have changed the setting from [Ad-hoc] to [Infrastructure] in the [Mode] menu, reboot the product before setting the Wi-Fi Direct function.

The setting procedure is as follows:

1. Set the device name for the product using [Device Name]. You can enter 1 to 32 characters. Alphabets (capital and small letters), numbers and symbols can be used.
2. Select [Connect] to search and show the connectable device names or to accept connection requests when the product is the GO (Group Owner).
3. Select [Start Group] if you want to start a new persistent group or select a group from the list.
4. Select [Remove Group] to remove the persistent group in step 3.
5. Complete the connection according to the display on the product or device you want to connect.
6. Select [Disconnect] if you want to stop the connection.

> ✎ • You can connect a maximum of 10 devices.
>
> • When Wi-Fi Direct is active, [Device Name] cannot be changed.
>
> • [Start Group] and [Remove Group] are shown only if Wi-Fi is active and the product is not connected to a Wi-Fi Direct network.
>
> • After setting up a start group, the product will be set to the GO (Group Owner) and will wait for a connection request from another device.
>
> • If the product is powered off during a persistent group connection, the group will be started automatically after the product is powered on.

[Band]

Set the Band.

Appears only if you have selected [Infrastructure] in the [Mode] menu.

The options are as follows:

- [All]

- [2.4 GHz]

- [5 GHz]

[SSID]

Display or set the SSID.

The screen shows the Wi-Fi network detected by the product.

Select the name of the Wi-Fi network you want to connect using the ▲ / ▼ buttons and press the ▬ button (✓) to confirm.

To register a Wi-Fi network manually, select (+) and enter the name of the network.

You can enter a maximum of 32 characters. Alphabets (capital and small letters), numbers and symbols can be used.

[Hidden SSID]

Set the hidden SSID (stealth function).

Appears only if you have selected [Infrastructure] in the [Mode] menu.

The options are as follows.

Enabled

Enable the hidden SSID.

Disabled

Disable the hidden SSID.

[Mode]

Set the communication method of the wireless LAN.

The options are as follows:

Infrastructure

Communication is performed via access point infrastructure mode.

Ad-hoc

Communication is performed in Ad-hoc mode.

✏ • When switching the [Mode], you need to restart the product.

[Channel]

Set the communication channel.

[Channel] can be set only if you have selected [Ad-hoc]in the [Mode] menu.

The number of channels you can set varies depending on the region where you use the product.

[Security]

Set the security method of the network. Set the security methods so that the product, host and network devices match.

The options are as follows:

- [None]
- [WEP]
- [WPA2+WPA]
- [WPA2]
- [Dynamic WEP]

If you have selected [Ad-hoc] in the [Mode] menu, only [None] and [WEP] will be available.

[WEP Conf.]

Set the WEP key.

Appears if you have selected [WEP] in the [Security] menu.

The setting items are as follows:

[Authentication]

Set the WEP authentication method.

The options are as follows:

- [Open System]
- [Shared Key]

[Key Index]

Set the key index.

Set the key index (WEP key) according to the access point of the wireless LAN you connect.

The setting range is from 1 to 4.

> ⚠️ • Depending on the connecting device, the range of the key index may be 0 to 3. In such a case, if you have set the product to 1, set the connecting device to 0.

[Key #1] to [Key #4]

Set the WEP key #1 - key #4.

You can enter alphabets (capital and small letters) and numbers.

Depending on the length of the WEP key, the number of characters you can set is as follows:

- When the key length is 64 bits

  ASCII: Five characters
  Hexadecimal: 10 characters

- When the key length is 128 bits

  ASCII: Thirteen characters
  Hexadecimal: 26 characters

[WPA Conf.]

Set the WPA authentication.

Appears only if you have selected [WPA2+WPA] or [WPA2] in the [Security] menu.

The setting items are as follows:

[WPA Authentication]

Set the WPA authentication method.

The options are as follows:

- [Personal (PSK)]

- [Enterprise (802.1x)]

- [CCKM]

[PSK]

Set the PSK shared key.

Appears only if you have selected [Personal (PSK)] in the [WPA Authentication] menu.

You can enter 8 to 63 ASCII characters or 64 hexadecimal digits. Alphabets, numbers and symbols can be used.

[EAP Conf.]

Set the functions for EAP.

Appears only if you have selected items other than [Personal (PSK)] in the [WPA Authentication] menu or if you have selected [Dynamic WEP] in the [Security] menu.

The setting items are as follows:

[EAP Mode]

Set the EAP Mode (authentication mode).

The options are as follows:

- [FAST]

- [LEAP]

- [PEAP]

- [TLS]

- [TTLS]

[Inner Method]

Set the inner method.

Appears only if you have selected [FAST], [PEAP], or [TTLS] in the [EAP Mode] menu.

- If you have selected [FAST] in the [EAP Mode] menu, the option is [AUTO] only.

- If you have selected [PEAP] in the [EAP Mode] menu, the option is [MSCHAPv2] only.

- If you have selected [TTLS] in the [EAP Mode] menu, the options are [MSCHAPv2], [MSCHAP], [CHAP], and [PAP].

[Username]

Set the user name.

You can enter 0 to 63 characters. Alphabets, numbers and symbols can be used.

[Password]

Set the password.

You can enter 0 to 32 characters. Alphabets, numbers and symbols can be used.

[Anon. Outer ID]

Set the external ID.

Appears if you have selected [FAST], [PEAP], or [TTLS] in the [EAP Mode] menu.

You can enter 0 to 63 characters. Alphabets, numbers and symbols can be used.

[Verify Server Cert.]

Enable or disable server certificate validation.

Appears if you have selected anything other than [LEAP] in the [EAP Mode] menu.

The options are as follows:

Enabled

Enable server certificate validation.

Disabled

Disable server certificate validation.

[Private Key P/W]

Set the Private Key password.

Appears only if you have selected [TLS] in the [EAP Mode] menu.

You can enter 0 to 64 characters. Alphabets, numbers and symbols can be used.

[PAC Auto Provisioning]

Enable or disable PAC auto provisioning.

Appears if you have selected [FAST] in the [EAP Mode] menu.

The options are as follows:

Enabled

Enable PAC auto provisioning.

Disabled

Disable PAC auto provisioning.

[PAC Password]

Set the PAC password.

Appears only if you have selected [FAST] in the [EAP Mode] menu and if you have selected [Disabled] in [PAC Auto Provisioning].

You can enter 0 to 64 characters. Alphabets, numbers and symbols can be used.

[Services]

Set the NTP, LPD, FTP, SFTP, SNMP, SOS (SATO Online Services), SATO App Storage, or SOTI Connect Services.

The setting items are as follows:

[NTP]

Set the functions for NTP.

The NTP function gets the time information from the NTP server through the network and sets the time of the product.

The setting items are as follows:

[Enable]

Enable or disable the functions for NTP.

The options are as follows:

Enabled

Enable the NTP function.

Disabled

Disable the NTP function.

[Error]

Set to show the NTP error message if detected.

The options are as follows:

Enabled

Shows the error message.

Disabled

Does not show the error message.

[Time Server IP]

Set the IP address of the NTP server.

The setting range is as follows:

0.0.0.0 to 255.255.255.255

The IP address should normally be set to 0.0.0.0 (the default value). For the default value, the global NTP servers are assigned automatically. Set to a valid IP if the time synchronization is requested for a specific server.

[LPD]

Set the functions for LPD.

- This setting supports only the IPv4.

The setting items are as follows:

[Enable]

Enable or disable the LPD function.

The options are as follows:

Enabled

Enable the LPD function.

Disabled

Disable the LPD function.

[DNS Lookup]

Enable or disable the DNS Lookup function.

The options are as follows:

Enabled

Enable the DNS Lookup function.

Disabled

Disable the DNS Lookup function.

[FTP]

Set the FTP function.

The available setting items are as follows.

[Enable]

Enable or disable the functions for FTP.

The options are as follows:

Enabled

Enable the FTP function.

Disabled

Disable the FTP function.

[FTP Timeout]

Set the connection timeout period between the product's FTP server and clients.

Specify the maximum number of seconds that the product's FTP server will allow clients to stay connected without receiving any data on either the control or data connection.

The setting range is from 10 to 3600 seconds.

[SFTP]

Set the functions for SFTP.

The setting items are as follows:

[Enable]

Enable or disable the SFTP function.

The options are as follows:

Enabled

Enable the SFTP function.

Disabled

Disable the SFTP function.

[SFTP Timeout]

Set the connection timeout period between the product's SFTP server and clients.

Specify the maximum number of seconds that the product's SFTP server will allow clients to stay connected without receiving any data on either the control or data connection.

The setting range is from 10 to 3600 seconds.

[Authentication Method]

Set the SFTP authentication method.

The options are as follows:

- [Password Authentication]
- [Key Authentication]

[Password Authentication]

Set the password authorization.

Available only if you have selected [Password Authentication] in the [Authentication Method] menu.

User

Shows the user name.

Password

Set the password.

You can enter 4 to 32 characters. You can use alphabet (capital and small letters), numbers and symbols.

[Key Authentication]

Shows information about authentication.

Available only if you have selected [Key Authentication] in the [Authentication Method] menu.

[SNMP]

Set the functions for SNMP.

The SNMP function enables you to monitor and manage a UDP/IP based network.

The setting items are as follows:

[sysContact]

Set the contact information.

You can enter 0 to 255 characters. Alphabets, numbers and symbols can be used.

[sysName]

Set the name information.

You can enter 0 to 255 characters. Alphabets, numbers and symbols can be used.

[sysLocation]

Set the location information.

You can enter 0 to 255 characters. Alphabets, numbers and symbols can be used.

[prtMarkerCounterUnit]

Set the unit to use for reporting counter values for subunits.

The options are as follows:

impressions

    Report the number of printed labels.

meters

    Report the length of printed labels in meters.

[Agent]

Set the Agent function.

The setting items are as follows:

[Enable]

Enable or disable the functions for Agent.

The options are as follows:

Enabled

    Enable the functions for Agent.

Disabled

    Disable the functions for Agent.

[Read-Only]

Set the read-only function.

The setting items are as follows:

[SNMP Version]

Set the SNMP version.

The options are as follows:

- [1|2c|3]

- [1|2c]

- [3]

- [Disabled]

[Community]

Set the read-only community name.

Appears only if you have selected [1|2c|3] or [1|2c] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: public

[User]

Set the read-only user name.

Appears only if you have selected [1|2c|3] or [3] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: rouser

[User Security]

Set the read-only security level.

Appears only if you have selected [1|2c|3] or [3] in the [SNMP Version] menu.

The options are as follows:

- [None]

- [Authentication]

- [Privacy]

[Authentication Protocol]

Set the authentication protocol.

Appears only if you have selected [Authentication] or [Privacy] in the [User Security] menu.

The options are as follows:

- [MD5]

- [SHA]

[Authentication Passphrase]

Set the authentication passphrase.

Appears only if you have selected [Authentication] or [Privacy] in the [User Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Privacy Protocol]

Set the privacy protocol.

Appears only if you have selected [Privacy] in the [User Security] menu.

The options are as follows:

- [DES]

- [AES]

[Privacy Passphrase]

Set the privacy passphrase.

Appears only if you have selected [Privacy] in the [User Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Read-Write]

Set the read-write function.

The setting items are as follows:

[SNMP Version]

Set the SNMP version.

The options are as follows:

- [1|2c|3]
- [1|2c]
- [3]
- [Disabled]

[Community]

Set the read-write community name.

Appears only if you have selected [1|2c|3] or [1|2c] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: private

[User]

Set the read-write user name.

Appears only if you have selected [1|2c|3] or [3] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: rwuser

[User Security]

Set the read-write security level.

Appears only if you have selected [1|2c|3] or [3] in the [SNMP Version] menu.

The options are as follows:

- [None]
- [Authentication]
- [Privacy]

[Authentication Protocol]

Set the authentication protocol.

Appears only if you have selected [Authentication] or [Privacy] in the [User Security] menu.

The options are as follows:

- [MD5]

- [SHA]

[Authentication Passphrase]

Set the authentication passphrase.

Appears only if you have selected [Authentication] or [Privacy] in the [User Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Privacy Protocol]

Set the privacy protocol.

Appears only if you have selected [Privacy] in the [User Security] menu.

The options are as follows:

- [DES]

- [AES]

[Privacy Passphrase]

Set the privacy passphrase.

Appears only if you have selected [Privacy] in the [User Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Traps]

Set the Traps function.

The setting items are as follows:

[Enable]

Enable or disable the functions for Traps.

The options are as follows:

Enabled

Enable the Traps function.

Disabled

Disable the Traps function.

[SNMP Version]

Set the SNMP version.

The options are as follows:

- [1]

- [2c]

- [3]

[IP Version]

Set the IP version to use for trap destinations.

The options are as follows:

<u>4</u>

Set the IP version to IPv4.

<u>6</u>

Set the IP version to IPv6.

[Destinations]

Set the number of trap destinations.

The setting range is from 1 to 3.

[Destination 1]

Set address 1 for the trap destination.

The displayed IP version differs depending on the [IP Version] setting.

[Destination 2]

Set address 2 for the trap destination.

The displayed IP version differs depending on the [IP Version] setting.

Appears only if you have selected [2] or [3] in the [Destinations] menu.

[Destination 3]

Set address 3 for the trap destination.

The displayed IP version differs depending on the [IP Version] setting.

Appears only if you have selected [3] in the [Destinations] menu.

[Community]

Set the Traps community name.

Appears only if you have selected [1] or [2c] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: trapcom

[User]

Set the Traps user name.

Appears only if you have selected [3] in the [SNMP Version] menu.

You can enter 1 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: trapuser

[Engine ID]

Set the engine ID.

Appears only if you have selected [3] in the [SNMP Version] menu.

The default engine ID is generated from the unique code of each product.

Hexadecimal characters are allowed and the range is from 10 to 64 characters. (Only an even number of characters is allowed.)

[Security]

Set the security level.

Appears only if you have selected [3] in the [SNMP Version] menu.

The options are as follows:

- [None]
- [Authentication]
- [Privacy]

[Authentication Protocol]

Set the authentication protocol.

Appears only if you have selected [Authentication] or [Privacy] in the [Security] menu.

The options are as follows:

- [MD5]
- [SHA]

[Authentication Passphrase]

Set the authentication passphrase.

Appears only if you have selected [Authentication] or [Privacy] in the [Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Privacy Protocol]

Set the privacy protocol.

Appears only if you have selected [Privacy] in the [Security] menu.

The options are as follows:

- [DES]
- [AES]

[Privacy Passphrase]

Set the privacy passphrase.

Appears only if you have selected [Privacy] in the [Security] menu.

You can enter 8 to 32 characters. Alphabets, numbers and symbols can be used.

Initial setting: mypassword

[Online Services] (SOS Users Only)

Set the functions for SOS (SATO Online Services).

To use SOS, it is necessary to first create an SOS account and add the product.

For details on the SOS, refer to the SOS portal site.

The setting items are as follows:

[SOS Mode] (SOS Users Only)

Select the mode of SOS (SATO Online Services) or disable SOS.

The options are as follows:

Disabled

Disables SOS.

On-Demand

Shows the product information with a QR code. Scan the displayed QR code with a tablet or smartphone and send the information to the SOS cloud. Also, the product information can be acquired via NFC and sent to the SOS cloud. This connection allows you to check the product's operating information via SOS Web. A specialized SOS application is required to scan the QR code or send the product information to the SOS cloud.

Real-Time

Sends the product information to the SOS cloud in real-time using the wireless LAN connection. This connection allows you to check the product's operating information and to check or modify the product's settings via SOS Web. Confirm and agree with the Terms of Use to enable the Real-Time mode.

Light

Sends the product information to the SOS cloud in real-time using the wireless LAN connection. This connection allows you to check the product's operating information via SOS Web.

[Allow Remote Control] (SOS Users Only)

Set whether or not to allow setting the product (remote control) from SOS (SATO Online Services).

Available only if you have selected [Real-Time] in the [SOS Mode] menu.

The options are as follows:

Deny

Does not allow remote control from SOS.

Until Reboot

Allows remote control from SOS until the product reboots.

Always

Always allows remote control from SOS.

[MQTT Protocol] (SOS Users Only)

Set the communication protocol of MQTT.

Available only if you have selected [Real-Time] in the [SOS Mode] menu.

The options are as follows:

MQTT

Set this to use port number 443 and 8883 to do MQTT communication.

MQTT over WebSocket

Set this to use port number 443 only to do MQTT communication.

[Add Device] (SOS Users Only)

Shows the serial number and association code that are necessary when adding the product to SOS (SATO Online Services).

Available only if you have selected something other than [Disabled] in the [SOS Mode] menu.

- • Regarding the procedure to add a product to SOS, refer to the printer setup manual.

  https://www.sato-sos.com/en/support/#print_preparation_manual

- • If authentication with the server fails, a screen like the one shown below appears. The message differs depending on the cause. Close the message according to the instructions displayed on the screen and contact your network administrator about the network settings.

Provisioning

RetCode:403 Unauthorized. Abort.
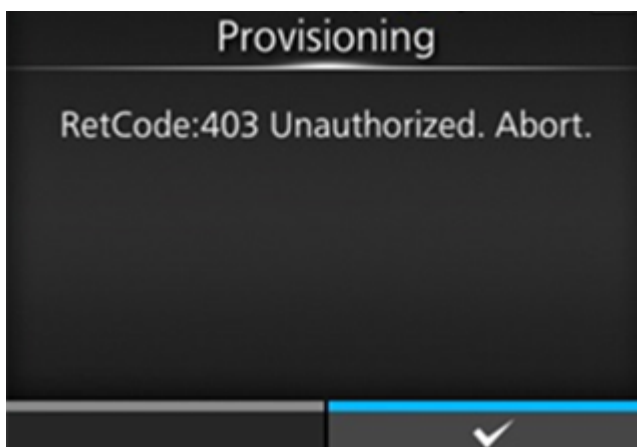
[Contact Information] (SOS Users Only)

Shows the SOS (SATO Online Services) contact information that is displayed at the time of the error outbreak.

Available only if you have selected something other than [Disabled] in the [SOS Mode] menu.

The item is as follows:

Phone Number

Shows the phone number that is displayed on the error screen.

[Periodic Notification] (SOS Users Only)

Sets the function for periodic SOS (SATO Online Services) notifications.

Available only if you have selected [On-Demand] in the [SOS Mode] menu.

In this function, the product information is shown periodically with a QR code. Scan the displayed QR code with a tablet or smartphone, and send the information to the SOS cloud.

A specialized application is required to scan the QR code.

The setting items are as follows:

[Type] (SOS Users Only)

Select the timing to perform the periodic notification or disable this function.

Advanced setting items appear on the [Periodic Notification] menu according to the selected options.

The options are as follows:

Disabled

Disables the periodic notification function.

Daily

Displays the notification screen every day for specified number of times, at the specified time.

- Appears only if you enabled the NTP function.

Weekly

Displays the notification screen every week at the specified day of week and time.

- Appears only if you enabled the NTP function.

Monthly

Displays the notification screen every month at the specified day and time.

- Appears only if you enabled the NTP function.

Counter

Displays the notification screen when the counter of a consumable reaches to the specified value.

Offline

Displays the notification screen when the product is changed to Offline mode.

[Counter] (SOS Users Only)

Print head is selected for the timing to perform periodic notifications.

Available only if you have selected [Counter] in the [Type] menu.

Advanced setting items appear on the [Periodic Notification] menu according to the selected options.

[Head] (SOS Users Only)

You can specify or check the print distance of the print head for the timing to perform the periodic notification.

Available only if you have set [Thermal Head] for [Counter] in the [Type] menu.

The setting items are as follows:

Meters

Specifies the print distance of the print head for the timing to perform the periodic notification. You will be notified for every meter you specify.

The setting range is from 1 to 100,000.

Last Update

Shows the print distance of the print head for the last periodic notification.

Next Update

Shows the print distance of the print head for the next periodic notification.

Current Value

Shows the current print distance of the print head.

[Weekday] (SOS Users Only)

Specifies the day of the week to perform the periodic notification.

Shown only if the NTP function is enabled and you have selected [Weekly] in the [Type] menu.

The setting range is from Sunday to Saturday.

[Day] (SOS Users Only)

Sets the date to perform the periodic notification.

Shown only if the NTP function is enabled and you have selected [Monthly] in the [Type] menu.

The setting range is from 1 to 28.

[Notifications] (SOS users only)

Specifies the number of periodic notifications to be sent per day.

Shown only if the NTP function is enabled and you have selected [Daily] in the [Type] menu.

The setting range is from 1 to 3.

[Time 1] (SOS Users Only)

Specifies the time to perform the first periodic notification.

Shown only if the NTP function is enabled and you have selected [Daily] in the [Type] menu.

[Time 2] (SOS Users Only)

Specifies the time to perform the second periodic notification.

Shown only if the NTP function is enabled and you have selected 2 times or more for [Notifications] for [Daily] in the [Type] menu.

[Time 3] (SOS Users Only)

Specifies the time to perform the third periodic notification.

Shown only if the NTP function is enabled and you have selected 3 times for [Notifications] for [Daily] in the [Type] menu.

[Time] (SOS Users Only)

Specifies the time of the specified day or date to perform periodic notifications.

Shown only if the NTP function is enabled and you have selected [Weekly] or [Monthly] in the [Type] menu.

[Update Screen] (SOS Users Only)

Sets whether to print a QR code displayed with SOS (SATO Online Services) periodic notification or Daily Checkup.

Available only if you have selected [On-Demand] in the [SOS Mode] menu.

A specialized application is required to scan the QR code.

The options are as follows:

Normal

Shows the scan screen of a normal QR code.

Print

You can execute printing in the scan screen for the QR code. Press the ▬ button (PRINT) to print the QR code.

To print the QR code, use media of more than 33 mm (1.3") in length and more than 33 mm (1.3") in width (not including the liner).

[QR code offset] (SOS Users Only)

Adjust the print position for printing a QR code displayed on the notification screen for SOS (SATO Online Services).

Available only if you have selected [On-Demand] in the [SOS Mode] menu.

This can be set only if you have selected [Print] in the [Update Screen] menu.

The setting items are as follows:

Vertical

Adjust the print position of the QR code in the vertical direction.

Set the correction value from the print reference position as "-" for the direction of the paper feed and "+" for the direction opposite to the paper feed.
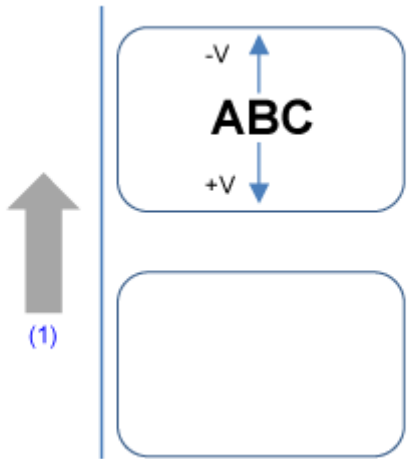
(1) Feed direction

The setting range is from -7999 to +7999 dots.

Horizontal

Adjust the print position of the QR code in the horizontal direction.

Set the correction value from the print reference position when facing the product as "-" to adjust to the left side and "+" to adjust to the right side.

ABC

-H   +H

(1)
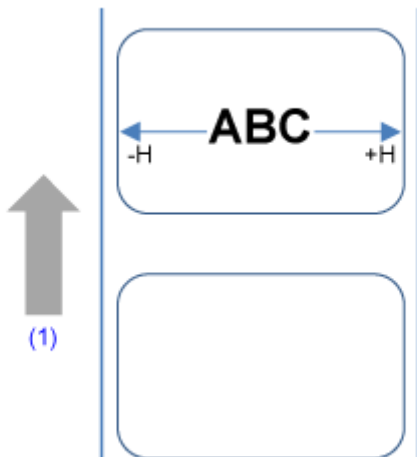
(1) Feed direction

The setting range is from -831 to +831 dots.

✐ • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

[Daily Checkup] (SOS Users Only)

Shows the current product information with a QR code. Scan the QR code with a tablet or smartphone, and send it to the SOS cloud.

Also, the product information can be acquired via NFC and sent to the SOS cloud.

Available only if you have selected [On-Demand] in the [SOS Mode] menu.

A specialized application is required to scan the QR code or send the product information to the SOS cloud.

If you have selected [Print] in the [Update Screen], press the ▬ button (PRINT) to print the QR code.

To print the QR code, use media of more than 33 mm (1.3") in length and more than 33 mm (1.3") in width (not including the liner).

[SATO App Storage]

Set the SATO App Storage function.

The setting items are as follows:

Login

Enter the Company ID, Login ID and Password to log in to SATO App Storage.

Application Setting

Shows the applications that are installed on the product. You can check the SATO App Storage settings of each application.

Upload log data

Uploads print logs, that have not been uploaded, to SATO App Storage, if [Upload log data] is selected. Appears only if there is a print log which has not been uploaded to SATO App Storage.

[SOTI Connect]

Set the SOTI Connect Services.

Please contact your nearest SATO sales representative regarding SOTI Connect Services in your region.

The setting items are as follows:

[SOTI Connect Services]

Enable or disable the SOTI Connect Services.

The options are as follows:

Enabled

Enable the SOTI Connect Services.

Disabled

Disable the SOTI Connect Services.

[Start Auto Enrollment]

Enable or disable the auto enrollment function.

Available only if you have selected [Enabled] in the [SOTI Connect Services] menu.

The options are as follows:

Enabled

Enable the auto enrollment function.

Connect to a server that was set in [Auto Enrollment Server] at product startup.

Disabled

Disable the auto enrollment function.

[Auto Enrollment Server]

Enter the URL of SOTI Connect server.

Available only if you have selected [Enabled] in the [SOTI Connect Services] menu.

[Enable Client Key Passphrase]

Enable or disable the client key passphrase for connecting to SOTI Connect server.

Available only if you have selected [Enabled] in the [SOTI Connect Services] menu.

The options are as follows:

Enabled

    Enable the passphrase.

Disabled

    Disable the passphrase.

[Client Key Passphrase]

Set the Passphrase.

Available only if you have selected [Enabled] in the [Enable Client Key Passphrase] menu.

[Errors, Warnings, and Notifications Push Service]

Enable or disable the Error, Warning, and Notifications Push Service.

The options are as follows:

Enabled

    When this function is enabled, the push notification of errors and warnings are set to be sent to the product.

Disabled

    Disable the Error, Warning, and Notifications Push Service.

[Advanced]

Set the advanced function for the interface.

The setting item is as follows:

[ARP Announcement]

Set the functions for ARP announcement.

The ARP announcement is useful for updating other hosts mapping of a hardware address when the IP address or MAC address of the sender has changed.

The available setting items are as follows.

[Additional]

Set the additional ARP announcement.

The options are as follows:

Enabled

    Enable the additional ARP announcement. The ARP is sent at 1, 2, 4, 8 and 16 seconds after the link up/DHCP assignment.

Disabled

    Disable the additional ARP announcement. The ARP is only sent at 1 second after the link up/DHCP assignment.

[Periodic]

Set the interval of the ARP announcement in the range of 0 to 600 seconds.

Initial setting: 300

[Firewall]

Set the functions for the firewall.

A firewall can improve security. It prevents unauthorized access from external computers or malicious programs. When the firewall is enabled, only the services and ports that are allowed will be able to access the product.

> • As a basic policy of filtering, all OUTPUT is allowed (ACCEPT) and both INPUT and FORWARD are not allowed (DROP).

The setting items are as follows:

[Enable]

Enable or disable the firewall function.

The options are as follows:

Enabled

Enable the firewall function.

Disabled

Disable the firewall function.

[Allow Services And Ports]

Set the service or port to allow communication.

Available only if you have selected [Enabled] in the [Enable] menu.

> ⚠ • The product becomes accessible only through services or ports that are allowed in [Allow Services And Ports].

The setting items are as follows:

Data Ports

Enable or disable access through data ports.

FTP

Enable or disable the functions for FTP.

The setting changes in conjunction with [Enable] in the [FTP] menu.

SFTP

Enable or disable the SFTP function.

Changes to this setting are linked to [Enable] in the [SFTP] menu.

LPD

Enable or disable the LPD function.

The setting changes in conjunction with [Enable] in the [LPD] menu.

MAILC

When using the AEP (Application Enabled Printing) function, enable or disable port access for the product's internal e-mail client function.

NTP

Enable or disable the functions for NTP.

The setting changes in conjunction with [Enable] in the [NTP] menu.

Online Services (SOS users only)

Selects the mode for SOS or disable SOS.

The setting changes in conjunction with [SOS Mode].

PING

Enable or disable PING access.

SATO All-In-One Tool

Enable or disable the access from SATO All-In-One Tool.

SCP

When using the AEP (Application Enabled Printing) function, enable or disable port access for the SCP client function.

SNMP Agent

Enable or disable the SNMP Agent function.

The setting changes in conjunction with [Enable] in the [Agent] menu.

WEBC

When using the AEP (Application Enabled Printing) function, enable or disable port access for the Web client function.

WebConfig

Enable or disable access to the web configuration page.

The below table shows the packet filtering setting for each allowed services and port setting.

[Allow Services And Ports]	[TCP Source Port]	[TCP Destination Port]	[UDP Source Port]	[UDP Destination Port]	[ICMP Type]
[Data Ports] *	-	1024,1025,9100	-	-	-
[FTP]	-	20,21	-	-	-
[LPD]	-	515	53	-	-
[MAILC]	465,587	-	53	-	-
[NTP]	-	-	53,123	-	-
[Online Services]*	443,8883	-	53	-	-
[PING]	-	-	-	-	0,8
[SATO All-In-One Tool]	-	9100	-	161,19541	-
[SCP]	22	-	53	-	-

[Allow Services And Ports]	[TCP Source Port]	[TCP Destination Port]	[UDP Source Port]	[UDP Destination Port]	[ICMP Type]
[SFTP]	-	22	-	-	-
[SNMP Agent]	-	-	-	161	-
[WEBC]	80,443,8080	-	53	-	-
[WebConfig]	-	80,443	-	-	-

*The values may vary depending on other settings.

[Custom Settings]

Specify the ICMP type or the port number of TCP or UDP to allow communication.

Available only if you have selected [Enabled] in the [Enable] menu.

The setting items are as follows:

[TCP Source Port]

Register the TCP source port number to allow communication.

[Existing Port No.]

The port number of the items enabled in [Allow Services And Ports] are shown.

[Additional Port No.]

Register the TCP source port number to allow communication.

The acceptable input values are as follows:

Active port number	An integer from 1 to 65535
Specifying multiple values	Delimit active port numbers using a comma ","
Specifying a range	Create a range of active port numbers using a colon ":" (Input in the order of low port number: high port number)
Maximum number of specifications	21 ports in total by specifying with either numbers or a range
No setting	Blank

Input Example

Port number	Comments
10000	-
10000,10001,10002,10003	This results in the same ports in both settings to be allowed.

Port number	Comments
10000:10003	
10000,10001,10002,10003,20000	This results in the same ports in both settings to be allowed.
10000:10003,20000	
Blank	Keep it blank when no setting is needed.

[TCP Destination Port]

Register the TCP destination port number to allow communication.

[Existing Port No.]

The port number of the items enabled in [Allow Services And Ports] are shown.

[Additional Port No.]

Register the TCP destination port number to allow communication.

The acceptable input values are as follows:

Active port number	An integer from 1 to 65535
Specifying multiple values	Delimit active port numbers using a comma ","
Specifying a range	Create a range of active port numbers using a colon ":" (Input in the order of low port number: high port number)
Maximum number of specifications	21 ports in total by specifying with either numbers or a range
No setting	Blank

Input Example

Port number	Comments
10000	-
10000,10001,10002,10003	This results in the same ports in both settings to be allowed.
10000:10003	
10000,10001,10002,10003,20000	This results in the same ports in both settings to be allowed.
10000:10003,20000	
Blank	Keep it blank when no setting is needed.

[UDP Source Port]

Register the UDP source port number to allow communication.

[Existing Port No.]

The port number of the items enabled in [Allow Services And Ports] are shown.

[Additional Port No.]

Register the UDP source port number to allow communication.

The acceptable input values are as follows:

Active port number	An integer from 1 to 65535
Specifying multiple values	Delimit active port numbers using a comma ","
Specifying a range	Create a range of active port numbers using a colon ":" (Input in the order of low port number: high port number)
Maximum number of specifications	21 ports in total by specifying with either numbers or a range
No setting	Blank

Input Example

Port number	Comments
10000	-
10000,10001,10002,10003	This results in the same ports in both settings to be allowed.
10000:10003	
10000,10001,10002,10003,20000	This results in the same ports in both settings to be allowed.
10000:10003,20000	
Blank	Keep it blank when no setting is needed.

[UDP Destination Port]

Register the UDP destination port number to allow communication.

[Existing Port No.]

The port number of the items enabled in [Allow Services And Ports] are shown.

[Additional Port No.]

Register the UDP destination port number to allow communication.

The acceptable input values are as follows:

Active port number	An integer from 1 to 65535
Specifying multiple values	Delimit active port numbers using a comma ","

Specifying a range	Create a range of active port numbers using a colon ":" (Input in the order of low port number: high port number)
Maximum number of specifications	21 ports in total by specifying with either numbers or a range
No setting	Blank

Input Example

Port number	Comments
10000	-
10000,10001,10002,10003	This results in the same ports in both settings to be allowed.
10000:10003	
10000,10001,10002,10003,20000	This results in the same ports in both settings to be allowed.
10000:10003,20000	
Blank	Keep it blank when no setting is needed.

[ICMP Type]

Register the ICMP type to allow communication.

[Existing ICMP Type]

The ICMP type number of the items enabled in [Allow Services And Ports] are shown.

[Additional ICMP Type]

Register the ICMP type number to allow communication.

The acceptable input values are as follows:

Active ICMP type	An integer from 0 to 43
Specifying multiple values	Delimit active ICMP types using a comma ","
Maximum number of specifications	44 ports
No setting	Blank

Input Example

ICMP type	Comments
0	-
0,1,2,3	-

ICMP type	Comments
Blank	Keep it blank when no setting is needed.

[USB]

Set the USB connection.

The available setting item is as follows.

[Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS4]
- [NONE]

[Change USB Serial]

Set the type of the USB serial number that the product returns.

The options are as follows:

Enabled

Returns the USB serial number (00000000).

This option is suitable when you want to replace the product without adding a new printer driver.

To do so, you need to set this setting to enabled before installing the product.

Disabled

Returns the factory set USB serial number (unique to each product).

This option is suitable when you want to set the printer driver for each product.

> ⚠ • If two products that have the same USB serial number connected to the same computer, it may cause the computer to show a blue screen error.

[Bluetooth]

Set the Bluetooth connection.

> ✎ • Disabling the [Enable] menu, hides the items below the [Enable] menu.

The setting items are as follows:

[Enable]

Enable or disable the functions for Bluetooth.

The options are as follows:

Enabled

Enable the Bluetooth function.

Disabled

Disable the Bluetooth function.

[BT Operation Mode]

Set the operating mode for when Bluetooth is enabled.

The options are as follows:

Device

Set the product as a device to connect to other devices. The supported profiles are SPP and ISPP.

Host

Set the product as a host to connect to other devices. The supported profile is HID.

[Name]

Set the device name for the product.

You can enter 1 to 53 characters. Alphabets (capital and small letters), numbers and symbols can be used.

[PIN Code]

Set the PIN code.

You can enter 4 to 16 characters for the PIN code. Alphabets (capital and small letters), numbers and symbols can be used.

[BD Address]

Shows the BD address of the product. (You cannot change this address.)

[Firm Version]

Shows the firmware version of the Bluetooth. (You cannot change this value.)

[Host BD Address]

Check the Host BD address.

[Pairing]

Pair the product with a Bluetooth device.

Appears only if you have selected [Host] in the [BT Operation Mode] menu.

The items are as follows:

Available devices

The product searches for a Bluetooth device and shows the name of the device.

Paired devices

Shows a list of previously paired device. Select a device to reconnect to or to delete from the list.

- In [Available devices], only devices with an HID profile are shown. For example, keyboards, etc.

- The product cannot connect to and communicate with multiple devices.

[IAP Ready]

Shows the operational status of the IAP authentication chip, enabling the communication between an iOS-equipped device and a Bluetooth device.

When the communication is enabled, is displayed.

[iOS Reconnect]

Disable the iOS reconnect function or set to the Manual mode.

The options are as follows:

Disabled

The product does not perform iOS reconnection. You need try reconnection from iOS device.

Manual

The product perform iOS reconnection when the product is powered on or it switches to online or offline.

[Authentication]

Set the authentication level.

The options are as follows:

None

None

Level 2-1

PIN code authentication, service level, no encryption

Level 2-2

PIN code authentication, service level, encryption

Level 3

PIN code authentication, link level, no encryption

Level 4

Secure Simple Pairing compatible, service level, encryption (Can be communicated with devices that are not compatible with Secure Simple Pairing)

[ISI]

Set the ISI communication parameter.

The setting range is 0, or from 18 to 4096.

Set to a value that is higher than the ISW communication parameter setting value.

[ISW]

Set the ISW communication parameter.

The setting range is 0, or from 18 to 4096.

The setting range varies depending on the ISI communication parameter setting value.

Set to a value that is less than the ISI communication parameter setting value.

[PSI]

Set the PSI communication parameter.

The setting range is from 18 to 4096.

Set to a value that is higher than the PSW communication parameter setting value.

[PSW]

Set the PSW communication parameter.

The setting range is 0, or from 18 to 4096.

The setting range varies depending on the PSI communication parameter setting value.

Set to a value that is less than the PSI communication parameter setting value.

[CRC Mode]

Enable or disable the CRC check function.

The options are as follows.

Enabled

Enable the CRC check function.

Disabled

Disable the CRC check function.

[Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS3]
- [STATUS4 MULTI]
- [NONE]

[NFC]

Sets the NFC connection.

The setting item is as follows:

[I/F Enable]

Enables or disables the NFC interface.

The options are as follows:

Enabled

Enables the NFC interface.

Disabled

Disables the NFC interface.

[Ignore CR/LF]

Set whether to ignore the CR/LF code (0x0D / 0x0A) in the received data.

The options are as follows:

Enabled

Ignore the CR/LF code.

Disabled

Do not ignore the CR/LF code.

[Ignore CAN/DLE]

Set whether to ignore the CAN/DLE code (0x18 / 0x10) in the received data.

The options are as follows:

Enabled

Ignore the CAN/DLE code.

Disabled

Do not ignore the CAN/DLE code.

[Applications] Menu
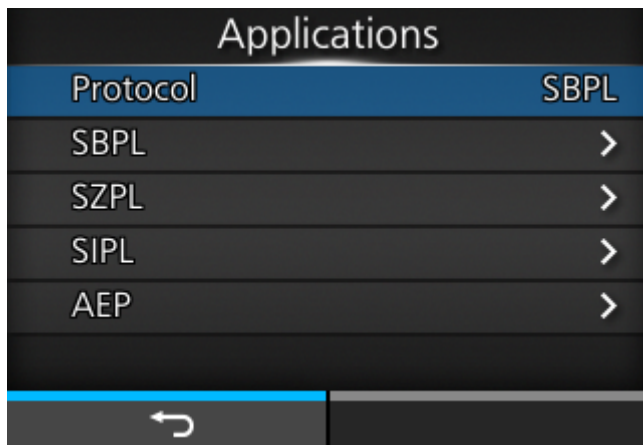
The following settings are available in the [Applications] menu:

[Protocol]

Set the printer language.

The options are as follows.

AUTO

Automatically analyze the received print data and set the printer language. In [AUTO] mode, the product can change the language after startup by receiving another language.

SBPL

Set when you use the SBPL printer language or XML.

SZPL

Set when you use the SZPL printer language.

SIPL

Set when you use the SIPL printer language.

SCPL

Set when you use the SCPL printer language.

⚠ (When [AUTO] is selected in the [Protocol] menu)

- A message prompting you to restart the product appears on the Online/Offline screen if [AUTO] is selected. In such a case, reboot the product to apply the settings.

- Once the printer language is set, the name of the printer language will appear on the Online/Offline screen.
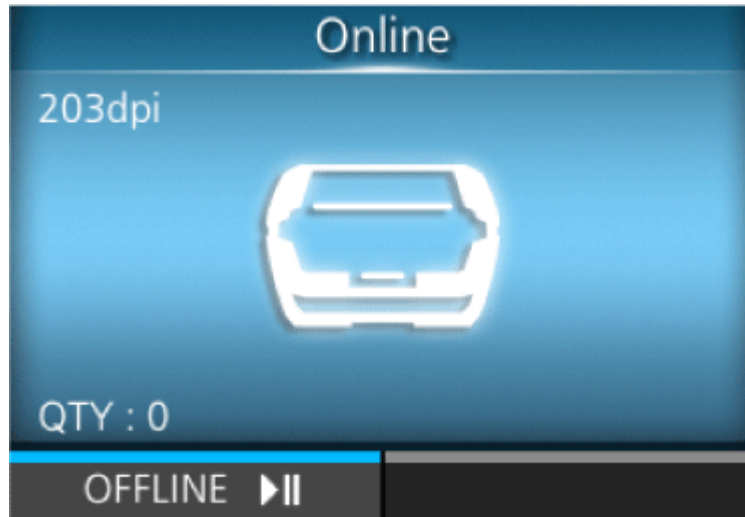
- Printer language is finalized with the received print data.
- When [SBPL] > [Standard Code] in the [Applications] menu is disabled, the [Protocol] setting will be changed to [SBPL].

[SBPL]

SBPL (SATO Barcode Printer Language) is the common command that controls SATO barcode label printers.

To use SBPL as a printer command, set the following items:

[Show Error]

Enable or disable the command error indication when incorrect command or parameter is detected in the print data.

The options are as follows:

Enabled

The command error is shown and the printing operation is paused when incorrect commands or parameters are detected in the print data.

Disabled

Ignores incorrect commands or parameters and continues printing operations. The status icon for command error is displayed.

[Standard Code]

Set the protocol code.

The options are as follows:

Enabled

Use a standard code.

Disabled

Use a non-standard code.

[Orientation]

Select the layout for printing the label.

Portrait

Use a portrait layout. (No rotation)

Landscape

Use a landscape layout. (90-degree rotation)

Inv. Portrait

Use an inverse portrait layout. (180-degree rotation)

Inv. Landscape

Use an inverse landscape layout. (270-degree rotation)

[Font Settings]

Set the font.

The setting items are as follows:

[Zero Slash]

Set whether to print the number zero (0) with or without a slash (/).

This setting is applied to the following bitmap fonts:

U, S, M, WB, WL, XU, XS, XM, XB, XL, X20, X21, X22, X23, X24

The options are as follows:

Enabled

Print zero with a slash.

Disabled

Print zero without a slash.

[Kanji]

Set the kanji code to be used.

The setting items are as follows:

[Kanji Set]

Set the kanji code to be used.

The options are as follows:

- [JP-COMPATIBLE]
- [JP-JISX0208]
- [JP-JISX0213]
- [GB18030]
- [BIG5]
- [KSC5601]

[Character Code]

Set the character code to be used.

The options vary depending on the kanji code set in the [Kanji Set]:

- **When set to [JP-COMPATIBLE] or [JP-JISX0208]**
    - [JIS]
    - [SJIS]
    - [UTF-16]
    - [UTF-8]

- **When set to [JP-JISX0213]**
    - [SJIS]
    - [UTF-16]
    - [UTF-8]

- **When set to [GB18030]**
    - [GB18030]
    - [UTF-8]

- **When set to [BIG5]**
    - [BIG5]
    - [UTF-8]

- **When set to [KSC5601]**
  - ◦ [KSC5601]
  - ◦ [UTF-8]

[Kanji Style]

Set the font to be used.

The options are as follows:

- [Mincho]
- [Gothic]

[Proportional]

Set whether to print each character using a proportional pitch or fixed pitch.

The options are as follows:

Enabled

Print each character with a proportional pitch.

Disabled

Print all characters with a fixed pitch.

[Code Page]

Select the code page to be used from the list.

The selected item is as follows:

UTF-8, 858, 8859-1, 8859-2, 8859-9, 737, 855, 850, 852, 857, 866, 1250, 1251, 1252, 1253, 1254, 1257, 869, X201

[€]

Set the European currency symbol to an ASCII code.

The setting range is from 00 to ff (hexadecimal).

[Compatible]

Set the compatible code for SBPL.

The setting items are as follows:

[CODE128(C) Zero Fill]

Set whether to allow odd digits and print the barcode with zero-filling when start code C is used in CODE128.

The options are as follows:

Enabled

Allow odd digits and print the barcode with zero-filling.

Disabled

Do not allow odd digits. A command error occurs and the barcode will not be printed.

[Kanji Command]

Set the product behavior when the received data includes the Kanji command ESC+K5, ESC+K6 or ESC+K7.

The options are as follows:

Enabled

Change the Kanji commands ESC+K5, ESC+K6 and ESC+K7 in the received data to the proper commands and print.

- ◦ ESC+K5: 16x16 dots Kanji in horizontal line with one-byte character
- ◦ ESC+K6: 24x24 dots Kanji in horizontal line with one-byte character
- ◦ ESC+K7: 22x22 dots Kanji in horizontal line

Disabled

Do not change the Kanji commands ESC+K5, ESC+K6 and ESC+K7 in the received data. The product behavior when it receives these commands is as follows:

- ◦ ESC+K5: Print with 40x40 dots Kanji in horizontal line.
- ◦ ESC+K6: A command error occurs and the data will not be printed.
- ◦ ESC+K7: A command error occurs and the data will not be printed.

[Call Font/Logo]

Set how to process the character code specified in Recall font & logo command (ESC+RF).

The options are as follows:

Enabled

Character codes are processed in little-endian format.

Disabled

Character codes are processed in big-endian format.

[PDF417 ECC Level fixed]

Set whether to print the PDF417 code with the security level specified by the PDF417 printing command.

The options are as follows:

Enabled

Print the PDF417 code with the security level specified by the PDF417 printing command.

Disabled

Print the PDF417 code with the security level specified by the PDF417 (or higher) printing command.

[SZPL]

To use SZPL as a printer command, set the following items:

[Label]

Set the print position.

The available setting items are as follows.

[Shift]

Set the shift offset position of the label.

The setting range is from -832 to +832 dots.

> ✏️ • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

[Top]

Set the top offset position of the label.

The setting range is from -120 to +120 dots.

> ✏️ • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

[Label Rotation]

Set the page orientation for label printing.

The label size set in the product is used as a reference for rotation.

The options are as follows:

0 degree

Labels are printed in a portrait orientation.

180 degree

Labels are printed in an inverse-portrait orientation.

[Caret]

Set the caret (^) code.

The setting range is from 0 to 255.

> ⚠️ • You need to set different values for each code (caret, delimiter, tilde).

[Delimiter]

Set the delimiter (,) code.

The setting range is 0 to 255.

⚠ • You need to set different values for each code (caret, delimiter, tilde).

[Tilde]

Set the tilde (~) code.

The setting range is from 0 to 255.

⚠ • You need to set different values for each code (caret, delimiter, tilde).

[Clock Format]

Set the date format.

The options are as follows: (e.g. In the case of 1:45 pm on January 24, 2017)

- [(none)]
- [MM/DD/YY (24-hour clock)] (Example: 01/24/17 (13:45))
- [MM/DD/YY (12-hour clock)] (Example: 01/24/17 (01:45))
- [DD/MM/YY (24-hour clock)] (Example: 24/01/17 (13:45))
- [DD/MM/YY (12-hour clock)] (Example: 24/01/17 (01:45))

[Default Font]

Select a default font from the list for when printing using a multilingual font contained in the product.

[SIPL]

To use SIPL as a printer command, set the following items:

[Font Settings]

Set the font.

The setting items are as follows:

[Code Page]

Select the code page to be used from the list.

[New Font Encoding]

Enable or disable new font encoding.

✎ • Contact your SATO sales representative for more information about the new font.

[Proportional]

Set whether to print each character using a proportional pitch or fixed pitch.

Enabled

Print each character with a proportional pitch.

Disabled

Print all characters with a fixed pitch.

[Zero Slash]

Set whether to print the number zero (0) with or without a slash (/).

Enabled

Print zero with a slash.

Disabled

Print zero without a slash.

[Format Save]

Set whether to save the user format data registered at printing in the product.

Enabled

Save the user format data registered at printing in the product.

Disabled

Do not save the user format data registered at printing in the product. The user format data remains in the product memory until the product is powered off. You need to register a user format again after reboot.

[AEP]

Set the functions for AEP (Application Enabled Printing).

AEP mode allows you to use the product as a stand-alone printer by running applications within the product.

Use the standard application, or install custom applications to the product from a USB memory, All-In-One Tool, WebConfig page, etc.

In AEP mode, you can use USB keyboards and barcode scanners to input data.

The setting items are as follows:

- Contact your SATO sales representative for more information about the use of AEP mode.

- To connect a USB keyboard or a USB scanner to the product, you need a USB host cable (Mini-B).

- We recommend connecting the AC adapter and inserting a battery into the product while a USB keyboard or a USB scanner is connected.

[Enable]

Enable or disable AEP (Application Enabled Printing) mode.

The options are as follows:

Enabled

Enable AEP mode.

Disabled

Disable AEP mode.

✎ • A message prompting you to restart the product will appear on the Online/Offline screen if you have made any changes. In such a case, reboot the product to apply the settings.

[Starting Application]

Select the application to start at product startup in AEP (Application Enabled Printing) mode.

Select the application using the ▲ / ▼ buttons and press the ▬ button (✓) to confirm.

[Delete Application]

Delete installed applications from the list.

Select the application to be deleted using the ▲ / ▼ buttons and press the ▬ button (✓) to confirm.

[Label Rotation]

Set whether to rotate the page orientation for label printing.

The options are as follows:

Enabled

Rotates the page orientation 180 degrees.

Disabled

Does not rotate the page orientation.
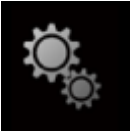
[System] Menu
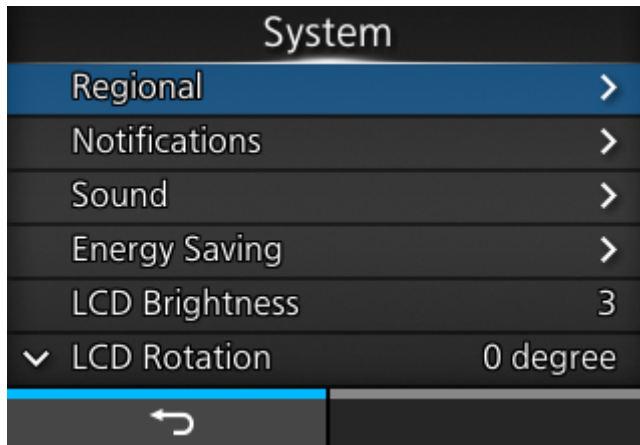
The following settings are available in the [System] menu:

[Regional]

Set the display language, time zone, and units.

The setting items are as follows:

[Messages]

Set the display language of the LCD.

Select the display language from the list.

[External Keyboard]

Set the language for the external keyboard connected to the product.

> • Japanese, Chinese, and Korean only support a change in the layout of the keyboard. The IME (Input Method Editor) is not compatible, so you cannot input hiragana, katakana, or kanji.

[Locale]

Set the locale to be used in AEP (Application Enabled Printing) mode.

This setting determines the format of time, dates, numbers, prices, names of weekdays, months, etc. in AEP applications.

Select the locale from the list.

[Unit]

Set the unit of length for indication.

The options are as follows:

- [dot]
- ["] (inch)
- [mm]

[Time]

Shows the time.

[Date]

Shows the date.

[Time Zone]

Set the time zone.

First select the region from the [Region] list.

Then select the city from the [City] list.

[Display Language Icon]

Set whether to display the [Language] icon on the top screen of the [Settings] menu.

The options are as follows:

Enabled

Display the [Language] icon.

Disabled

Do not display the [Language] icon.

If this function is enabled, the [Language] icon is added to the [Settings] menu screen as below. You can directly access the display language setting screen.
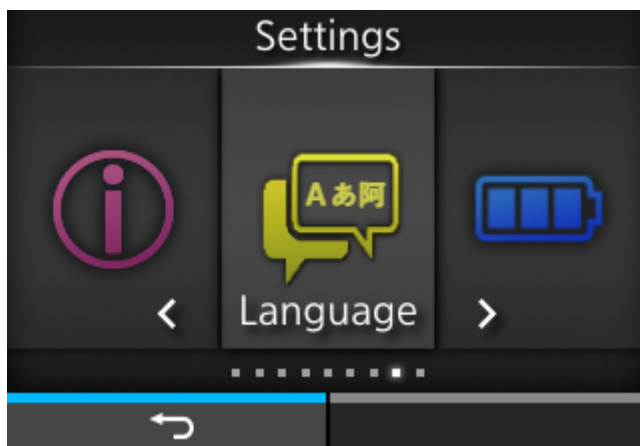
[Notifications]

Set the function to notify when to clean and replace parts.

The setting items are as follows:

[Clean Printhead]

Notify when the print head needs to be cleaned.

The setting items are as follows:

[Clean Printhead]

Enable or disable the notification function about when the print head needs to be cleaned.

The options are as follows:

Enabled

Enable the notification function.

Disabled

Disable the notification function.

[Cleaning Interval]

Set the notification interval about when the print head needs to be cleaned.

You can change this setting if you have selected [Enabled] in the [Clean Printhead] menu.

The product shows the print distance as a set value. The setting range is from 10 to 1000 meters.

[Clean Counter]

Shows the current print distance.

[Change Printhead]

Notify when the print head needs to be replaced.

The setting items are as follows:

[Change Printhead]

Enable or disable the notification function about when the print head needs to be replaced.

The options are as follows:

Enabled

Enable the notification function.

Disabled

Disable the notification function.

[Printhead Interval]

Set the notification interval about when the print head needs to be replaced.

You can change this setting if you have selected [Enabled] in the [Change Printhead] menu.

The product shows the print distance as a set value. The setting range is from 10 to 100 km.

[Printhead Count]

Shows the current print distance.

[Change Platen]

Notify when the platen roller needs to be replaced.

The setting items are as follows:

[Change Platen]

Enable or disable the notification function about when the platen roller needs to be replaced.

The options are as follows:

Enabled

Enable the notification function.

Disabled

Disable the notification function.

[Platen Interval]

Set the notification interval about when the platen roller needs to be replaced.

You can change this setting if you have selected [Enabled] in the [Change Platen] menu.

The product shows the fed distance as a set value. The setting range is from 10 to 100 km.

[Platen Count]

Shows the current distance the platen roller has fed.

[Sound]

Set the buzzer sound.

The setting items are as follows:

[Volume]

Set the volume.

The setting range is from 0 to 5.

0 is the lowest and 5 is the highest.

If you set the volume to 0, it mutes the sound.

[Sound type]

Set the type of sound for when errors occur and when the power is turned off.

The options are as follows:

- [Type1]
- [Type2]
- [Type3]

[Energy Saving]

The setting items are as follows:

[Sleep Timeout]

Set the period before the product enters sleep mode.

The setting range is Off, or from 5 to 999 (sec).

Conditions Not to Transit to the Sleep Mode

- Status of Settings Mode
- When the following errors occur

  - Machine Error (error 1001)
  - Print Head Overheated (error 1022)
  - Battery Low (error 1043)
  - Bluetooth Error (error 1050)
  - Battery Low (error 1059)
  - No Battery (error 1060)
  - Battery Degradation (error 1061)
  - Battery Temperature Error (error 1062)
  - Battery Error (error 1063)
  - Motor Overheated (error 1064)
  - WLAN Error (error 1068)
  - Invalid command in NFC (error 1076)
  - Bluetooth MFi Chip Module Error (error 1128)
  - Battery Lock (error 1138)

Conditions to Return from the Sleep Mode

- When the top cover is closed and opened
- While the product receives the data
- When the button is pressed
- When the battery is removed with an AC adapter connected (No Battery (error 1060) occurs)
- When an AC adapter is removed or connected
- When connected to the 1Bay Charging Cradle (option)
- When the product is removed from 1Bay Charging Cradle (option) connection
- When the product detects the Battery Low error (error 1043)
- When the time set for the auto power-off function passes

	•	The sleep function is disabled if you set the period to 0.
	•	When the product transits to the sleep mode during wireless LAN connection, the product returns to the normal mode after it receives the data. However, if you move the product temporarily outside the access point connection range, the product is disconnected from wireless LAN. If you want to reconnect it to the wireless LAN, press any button to clear the sleep mode.

[Auto Power Off]

Set the time before the product is powered off due to inactivity.

The setting range is 0 to 999 minutes.

The Auto Power-Off function will be disabled in the following cases:

- ◦ When the product is in settings mode
- ◦ When the battery is charging
- ◦ While the product is executing package update
- ◦ While the product receives the print data
- ◦ When the following errors occur

  - ▪ Battery Low (error 1043)
  - ▪ Battery Lock (error 1138)
  - ▪ No Battery (error 1060)

	•	If you set the time to 0, the Auto Power-Off function will be disabled.

[LCD Brightness]

Set the brightness of the screen.

The setting range is from 1 to 5.

1 is the darkest and 5 is the brightest.

	•	The product has a built-in energy saving function, which will decrease the brightness of the screen when you have not operated the product for a period.

[LCD Rotation]

Set the orientation of the display on the LCD.

The options are as follows:

0 degree

Normal orientation of the display.

180 degree

Upside-down orientation of the display.

✎ • If you set [180 degree], the functions of the buttons on the operator panel are also turned upside-down and reversed left to right.

[Show Total Count]

Enable or disable the indication of the total print count.

If this is enabled, the total print count appears on both the Online and Offline screens.

The number in the brackets to the right of [QTY] on the Online and Offline screens is the total print count.

The options are as follows.

Enabled

Enable the indication of the total print count.

Disabled

Disable the indication of the total print count.

✎ • Shows the total print count from the time the product is on until it is off.

When you power off the product, the count is reset to [0].

[Password]

Set the password.

The setting items are as follows:

[Password Enable]

Enable or disable the password setting.

If you have set the password to [Enabled], the product requires you to enter the password set in the [Password] screen before you enter the [Settings] menu.

The options are as follows:

Enabled

Enable the password setting.

Disabled

Disable the password setting.

✎ • The default password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu. You can change the password in [Password] > [Change Password] > [level1].

[Install Security]

Enable or disable the password input for installing the pkg file to the product.

If you have enabled the password input, the product requires you to enter the password set in the [Password] screen before you can download the package file.

The options are as follows:

None

No password is required to install a pkg file.

USB

Password is required to install a pkg file from the USB memory.

Always

Password is required to install a pkg file from the USB memory or downloaded from computer.

[NFC Security]

Set the security when writing the settings to the NFC interface.

The options are as follows:

None

No security setting is made.

Confirm

The confirmation message is shown before the settings are written to the NFC interface.

Password

You need to enter the password when writing to the NFC interface.

[Change Password]

Change the password.

You can enter 4 to 32 characters. Alphabets (capital and small letters), numbers and symbols can be used.

The setting items are as follows:

admin

These are the setting items for factory.

Strictly for SATO authorized service personnel use.

manager

The password for accessing the [Service] menu.

Strictly for SATO authorized service personnel use.

level1

The password for accessing the [Settings] menu.

• Passwords other than [level1] are exclusively for factory and maintenance personnel.

[Tools] Menu
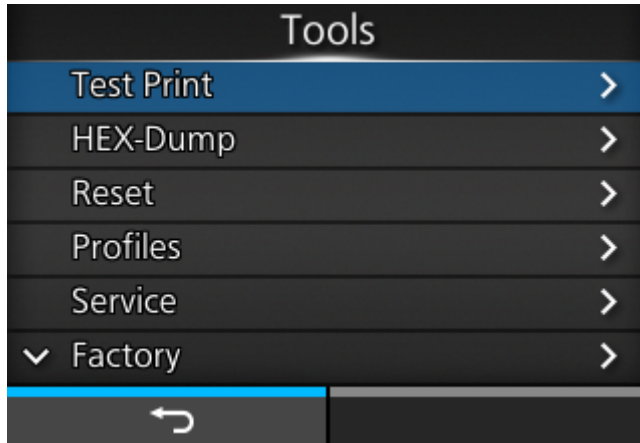
The following settings are available in the [Tools] menu:

[Test Print]

Perform a test print.

The setting items are as follows:

[Factory]

Perform the factory test print.

1. Check and set the items as listed on the [Factory] menu.
2. Press the ▬ button (⬚) to start a test print. Press the ▬ button (✕) again to pause printing.

To stop the test print, first pause printing, and then press the ▬ button (⤺).

The setting items are as follows:

Label Width

    Shows the necessary media width of the test print.

    The options are [Large] (101.6 mm (4")) and [Small] (55 mm (2.17")).

Pitch

    Set the print position in the vertical direction.

    The setting range is from -30 to 30 dots.

    When you decrease the setting value, the print position moves in the feed direction.

    When you increase the setting value, the print position moves opposite the feed direction.

Offset

Set the stop position of the media.

The setting range is from -30 to 30 dots.

When you decrease the setting value, the stop position moves in the feed direction.

When you increase the setting value, the stop position moves opposite the feed direction.

Darkness Adjust

Fine tune the print darkness of the test print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

- The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.

- The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[Configure List]

Print the product setting information.

1. Check and set the items as listed on the [Configure List] menu.
2. Press the ▬ button (⬚) to start a test print. Press the ▬ button (✕) again to pause printing.

To stop the test print, first pause printing, and then press the ▬ button (⬚).

The setting items are as follows:

Label Width

Shows the necessary media width of the test print.

The necessary media width is 55 mm (2.17") for [Small].

Label Length

Set the length of one piece of the media used for the test print.

The setting range is from 400 to 1600 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the print position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the print position moves opposite the feed direction (toward the end part of the media).

Offset

Set the stop position of the media.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the stop position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the stop position moves opposite the feed direction (toward the end part of the media).

Darkness Adjust

Fine tune the print darkness of the test print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.
- The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[Configure QR]

Print the configuration information with a QR code.

1. Check and set the items as listed on the [Configure QR] menu.
2. Press the ▬ button (🖨) to start a test print. Press the ▬ button (❌) again to pause printing.

To stop the test print, first pause printing, and then press the ▬ button (↩).

The available setting items are as follows.

Label Width

Shows the necessary media width of the test print.

The necessary media width is 55 mm (2.17") for [Small].

Label Length

Set the length of one piece of the media used for the test print.

The setting range is from 400 to 1600 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the print position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the print position moves opposite the feed direction (toward the end part of the media).

Offset

Set the stop position of the media.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the stop position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the stop position moves opposite the feed direction (toward the end part of the media).

Darkness Adjust

Fine tune the print darkness of the test print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

- The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.

- The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[Paper Sensor]

Print the detection result of the media sensor level.

When you do a test print for the media sensor, the print mode automatically changes to the [Continuous] mode. Close the dispenser unit before doing a test print.

1. Check and set the items as listed on the [Paper Sensor] menu.
2. Press the ▬ button (🔲) to start the test print. Press the ▬ button (✖) again to pause the print.

To stop the test print, first pause the print and then press the ▬ button (↩).

The setting items are as follows:

Label Width

Shows the necessary media width of the test print.

The necessary media width is 55 mm (2.17") for [Small].

Label Length

Set the length of one piece of the media used for the test print.

The setting range is from 400 to 1600 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the print position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the print position moves opposite the feed direction (toward the end part of the media).

Offset

Set the stop position of the media.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the stop position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the stop position moves opposite the feed direction (toward the end part of the media).

Darkness Adjust

Fine tune the print darkness of the test print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

- The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.

- The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[BD Address]

Perform the factory test print.

1. Check and set the items as listed on the [BD Address] menu.
2. Press the ▬ button (⌷) to start a test print. Press the ▬ button (✕) again to pause printing.

To stop the test print, first pause printing, and then press the ▬ button (↩).

The setting items are as follows:

Label Width

Shows the necessary media width of the test print.

The necessary media width is 101.6 mm (4") for [Large].

Pitch

Set the print position in the vertical direction.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the print position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the print position moves opposite the feed direction (toward the end part of the media).

Offset

Set the stop position of the media.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the stop position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the stop position moves opposite the feed direction (toward the end part of the media).

Darkness Adjust

Fine tune the print darkness of the test print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

- • You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

- • The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.

- • The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[Head Check]

Perform the head check print.

1. Check and set the items as listed on the [Head Check] menu.
2. Press the ▬ button ( ) to start the head check print. Press the ▬ button ( ) again to pause the print.

To stop the head check print, first pause the print and then press the ▬ button ( ).

The setting items are as follows:

Label Width

Set the media width used for the head check print.

The setting range is from 320 to 832 dots.

Label Length

Set the length of one piece of the media used for the head check print.

The setting range is from 40 to 240 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the print position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the print position moves opposite the feed direction (toward the end part of the media).

Offset

Set the stop position of the media.

The setting range is from -30 to +30 dots.

When you decrease the setting value, the stop position moves in the feed direction (toward the front part of the media).

When you increase the setting value, the stop position moves opposite the feed direction (toward the end part of the media).

Darkness Adjust

Fine tune the print darkness of the head check print.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.

• You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

• The changes to the settings in this menu are linked and are changed with each of the test print settings under the [Test Print] menu.

• The settings in [Pitch], [Offset], and [Darkness Adjust] are linked and are changed with the settings in the [Printing] > [Advanced] > [Adjustments] menu.

[HEX-Dump]

Save the hex dump print data or dump data from the receive buffer to the USB memory.

The setting items are as follows:

[Hex Dump Mode]

Enable or disable the Hex Dump mode.

If you set the [Hex Dump Mode] to [Enabled], the product prints the received data and at the same time creates a file of the received data inside "hexdump/".

• If [Hex Dump Mode] is enabled, [HEX-Dump] appears on both the Online and Offline screens.

- You can save a maximum of 10 received data files for each type of interface. Depending on the file size, the number of files you can save will be less than 10.

- The details of the file created inside "hexdump/" of the product are as follows:

  BT00xx.bin

    Received data through Bluetooth.

  NFC00xx.bin

    Received data through NFC.

  USB00xx.bin

    Received data through USB.

  WIFI00xx.bin

    Received data through wireless LAN.

- When the received data size reaches to 1024 KB or the status without receiving data lasts for 60 seconds, the file is saved.

- You can print or delete the files created inside "hexdump/" of the product from [Log Files] menu.

[Buffer Dump]

Save the receive buffer data to the product.

Available only if you have set to [Disabled] in the [Hex Dump Mode] menu.

Save the receive buffer data to "buff/" in the product.

- The data files of the receive buffer are created for each type of interface.
- The details of the file created inside "buff/" of the product are as follows:

    BT0001.bin

    The contents of the receive buffer for Bluetooth.

    NFC001.bin

    Received data through NFC.

    PIPE001.bin

    Received data through pipe.

    USB0001.bin

    The contents of the receive buffer for USB.

    WIFI0001.bin

    The contents of the receive buffer for wireless LAN.

- If you perform the [Buffer Dump] again, the existing file will be overwritten.
- You can print or delete files from the [Log Files] menu.

[Log Files]

Manage the log files of the product.

The setting items are as follows:

[Copy]

Copy the log files of the product to the USB memory.

Available only if you have installed the USB memory.

To connect a USB memory to the product, you need a USB host cable (Mini-B).

- Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

The procedure to copy the log files is as follows:

1. Select the file type to copy and press the ⬅ button.

○ **buff/**

The buffer data saved when you perform the [Buffer Dump].

○ **hexdump/**

The received data created through [Hex Dump Mode].

2. Select the file to copy and press the ⬅ button. A check mark appears on the right side of the file name.

3. After you select the file, press the ▬ button (✓) to copy the selected file to the USB memory.

✏ • When [Hex Dump Mode] is set to [Enabled], it may take some time before the files appear.

[Remove]

Remove the log files of the product.

The procedure to delete the log files is as follows:

1. Select the file type to delete.

○ **buff/**

The buffer data saved after you perform the [Buffer Dump].

○ **hexdump/**

The received data created through [Hex Dump Mode].

2. Select the file to delete and press the ⬅ button. A check mark appears on the right side of the file name.

3. After you select the file, press the ▬ button (✓) to delete the selected file.

✏ • When [Hex Dump Mode] is set to [Enabled], it may take some time before the files appear.

[Print]

Print a hex dump of the log files of the product.

The procedure to print the log files is as follows:

1. Select the file type to print.

○ **buff/**

The buffer data saved after you perform the [Buffer Dump].

○ **hexdump/**

The received data created through [Hex Dump Mode].

2. Select the file to print and press the ⬅ button to perform the dump print.

⚠ • Printing the contents of the file may use a lot of media.

✏ • When [Hex Dump Mode] is set to [Enabled], it may take some time before the files appear.

[Reset]

Initialize the settings or counter of the product.

The setting item is as follows:

[Select]

Select the items to be initialized.

The items are as follows:

[Data]

Initializing the data saved in the product.

The data to be initialized are the fonts and graphics registered in the product.

When you select [Data], the confirmation screen appears.

If you are sure, press the ▬ button (✓).

If not, press the ▬ button (✕).

⚠ • Normally, it is not necessary to perform the initialization. Doing so could change the print conditions.

[Data & Settings]

Initialize the data and setting values of the product.

The data to be initialized are the fonts and graphics registered in the product.

Select the setting items to be initialized.

The options are as follows.

User Reset

Initialize the data and setting values.

User Reset (-Interface)

Initialize the data and setting values that are not included in the [Interface] menu.

Factory Reset

Initialize to the status after factory shipment.

Factory Reset (-Interface)

Initialize the items that are not included in the [Interface] menu to the status after factory shipment.

Interface

Initialize the data and setting values in the [Interface] menu.

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Printing

Initialize the data and setting values in the [Printing] menu.

Select the item to be initialized and then press the ▬ button (✓) to show the confirmation screen.

If yes, press the ▬ button (✓).

If not, press the ▬ button (✗).

The product will reboot after the initialization.

[Settings]

Select the setting items to be initialized.

The options are as follows.

User Reset

Initialize the setting values.

User Reset (-Interface)

Initialize the setting values that are not included in the [Interface] menu.

Factory Reset

Initialize to the status after factory shipment.

Factory Reset (-Interface)

Initialize the items that are not included in the [Interface] menu to the status after factory shipment.

Interface

Initialize the setting values in the [Interface] menu.

Printing

Initialize the setting values in the [Printing] menu.

Select the item to be initialized and then press the ▬ button (✓) to show the confirmation screen.

If yes, press the ▬button (✓).

If not, press the ▬ button (✗).

[Profiles]

Maintain the customized profile of the product settings.

The name of the last loaded profile appears in the parentheses.

The setting items are as follows:

[Delete]

Delete the profile of the product.

Not available if no profile is registered.

The procedure to delete the profile is as follows:

1. Select the profile to be deleted using the ▲ / ▼ buttons.

2. Press the ⬅ button or press the ▬ button (✓) to confirm.

3. In the message screen, press the ▬ button (✓).

   The profile name is deleted from the list.

[Load]

Load the profile of the product.

Not available if no profile is registered.

The procedure to load the profile is as follows:

1. Select the profile to be loaded using the ▲ / ▼ buttons.

2. Press the ⬅ button or press the ▬ button (✓) to confirm.

   A check mark appears on the right side of the loaded profile name. And the name of the loaded profile appears on the [Profiles] menu in the parentheses.

[Save]

Save the current product settings as a new profile.

The screen shows a list of the profiles saved in the product. If no profile is saved, the screen shows an empty list.

To save the current product settings as a new profile, press the ▬ button (✓) and enter the name of the profile.

You can enter a maximum of 32 characters. You can use alphabets (capital and small letters), numbers and symbols.

Press the ▬ button (✓) to confirm.

The new profile name appears on the list and is loaded.

[Start with]

Select the profile to be loaded at product startup.

Not available if no profile is registered.

The procedure to load the profile at product startup is as follows:

1. Select the profile to be loaded at product startup using the ▲ / ▼ buttons.

2. Press the ⬅ button or the ▬ button (✓) to confirm.

[Service]

These are the setting items for service.

Strictly for SATO authorized service personnel use.

[Factory]

These are the setting items for factory.

Strictly for SATO authorized service personnel use.

[Wi-Fi Site Survey]

Make a survey of the wave strength for each access point and display or print the survey results.

The selected items are as follows:

SiteSurveyDisp.

Configure Wi-Fi Site Survey.

SiteSurveyPrint

Print Wi-Fi Site Survey.

[Install Certificates]

Install certificates used for Wi-Fi authentication and for HTTPS.

Available only if you have connected the USB memory to the product.

To connect a USB memory to the product, you need a USB host cable (Mini-B).

⚠ • Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

The setting items are as follows:

HTTPS

Installs the HTTPS certificates from the USB memory.

Wi-Fi Root CA

Installs the Wi-Fi Root CA certificates from the USB memory.

Wi-Fi Client

Installs the Wi-Fi client certificates from the USB memory.

Wi-Fi Private Key

Installs the Wi-Fi private key from the USB memory.

EAP-FAST PAC File

Installs the EAP-FAST PAC file from the USB memory.

SFTP Public Key

Installs the SFTP certificates from the USB memory.

SOTI Root CA

Installs the SOTI Root CA certificates from the USB memory.

SOTI Client

Installs the SOTI client certificates from the USB memory.

SOTI Private Key

Installs the SOTI private key from the USB memory.

The procedure to install the certificates and PAC files is as follows:

1. Save the certificate files to the USB memory's root folder.
   Acceptable file extensions are as follows:
   ◦ .pem, .crt, .cer, .der for Root CA and client certificate in PEM or DER format
   ◦ .pfx and .p12 for client certificates in PKCS #12 format
   ◦ .prv and .key for private keys in PEM/PKCS #8 format
   ◦ .pac for PAC files

2. Connect the USB memory to the product.
   To connect a USB memory to the product, you need a USB host cable (Mini-B).
3. Go to the [Settings] > [Tools] > [Install Certificates] menu.
4. Select the certificate you want to install. Refer to the item description above.
5. Select the certificate file from the list.

[Delete Certificates]

Delete certificates used for Wi-Fi authentication and for HTTPS.

HTTPS

Deletes the installed HTTPS certificates.

Wi-Fi Root CA

Deletes the installed Wi-Fi Root CA certificates.

Wi-Fi Client

Deletes the installed Wi-Fi client certificates.

Wi-Fi Private Key

Deletes the installed Wi-Fi private key.

EAP-FAST PAC File

Deletes the installed EAP-FAST PAC file.

SFTP Public Key

Deletes the installed SFTP certificates.

SOTI Root CA

 Deletes the installed SOTI Root CA certificates.

SOTI Client

 Deletes the installed SOTI client certificates.

SOTI Private Key

 Deletes the installed SOTI private key.

The procedure to delete the certificates and PAC files is as follows:

1. Go to the [Settings] > [Tools] > [Delete Certificates] menu.
2. Select the certificate you want to delete. Refer to the item description above.
3. In the message screen, press the ▭ button (✓).

[Clone]

Copy the current product settings and installed data to the USB memory.

You can select this menu only if USB memory is connected.

A USB host cable (Mini-B) is required to connect a USB memory to the product.

⚠ • Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

The selected item is as follows:

Excl. Wi-Fi/IP/Bluetooth

 Copy the product settings and data, excluding network information and Bluetooth device name, to the USB memory. This is useful when you set up multiple products already configured for network with the same product settings.

 ◦ The names of the clone file created:

 Clone_PW4NX_[the serial number of the product].pkg

Incl. Wi-Fi/Bluetooth

 Copy the product settings and data, including network information (excluding the IP address) and Bluetooth device name, to the USB memory. This is useful when you set up multiple products to be connected to the same network with the same product settings.

 ◦ The names of the clone file created

 Clone_PW4NX_[he serial number of the product]_WIFI_BT.pkg

Incl. Wi-Fi/IP/Bluetooth

 Copy the product settings and data, including network information (with the IP address) and Bluetooth device name, to the USB memory. This is useful when carrying the settings of the product to be replaced to a new product.

 ◦ The names of the clone file created

Clone_PW4NX_[the serial number of the product]_WIFI_IP_BT.pkg

[Logging Function]

Save the log data.

The setting items are as follows:

[Enabled]

Enable or disable the logging function.

The options are as follows:

Enabled

Enable the logging function. When this function is enabled, the log data is saved when powering off the product.

Disabled

Disable the logging function.

- When this function is enabled, log data is saved when powering off, so it may take some time to power off the product. Wait until the product is powered off.
- While the log data is being saved, a message that says "Log Saving" appears on the screen.
- The product stores log data for the last five times the product was powered off.
- The types of log data that are saved are as follows:
  ◦ Key events
  ◦ Analysis status
  ◦ System logs and settings
  ◦ Shared memory (including receive buffer)

[Save]

Save the log data to the USB memory.

Available only if there is log data in the product and if you have installed the USB memory.

To connect a USB memory to the product, you need a USB host cable (Mini-B).

- Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.

Press the ▬ button (✓) to copy the log data to the USB memory.

- The saved log data is strictly for the use of SATO authorized service personnel.

[Remove]

Delete the log data.

Press the ▬ button (✓) to delete the log data.

[Startup Guide]

The startup guide is a function to help you through the initial product settings (language settings, print mode settings, and loading media, etc.).

Enable or disable the startup guide.

The options are as follows:

Enabled

Enable the startup guide.

Disabled

Disable the startup guide.

If you have selected [Enabled], the startup guide appears when you power on the product.

[Information] Menu
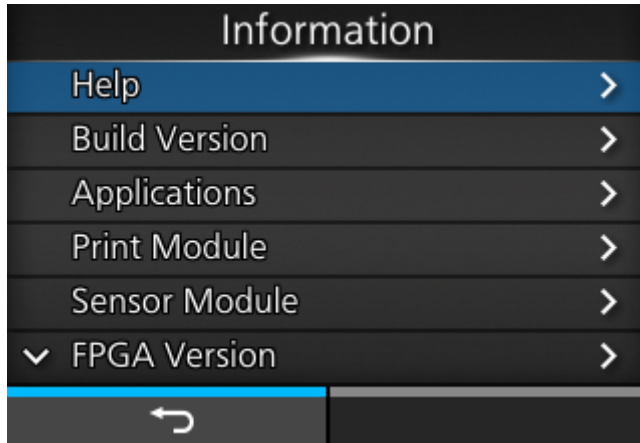
The following settings are available in the [Information] menu: In the [Information] menu, you cannot change a setting in the display items.

[Help]

Shows the guidance video.

You can view the video for loading the media, the cleaning method and replacement method of consumables.

The list of videos are as follows:

[Install Paper]

Shows the video for loading the media.

The items are as follows:

[Roll]

Shows the video for loading the media roll.

The items are as follows:

Continuous/Tearoff

Shows the video for loading the media roll to the product to print in continuous/tear-off mode.

Dispenser

Shows the video for loading the media roll to the product to print in dispenser mode.

Linerless tearoff

Shows the video for loading the media roll to the product to print in linerless tearoff mode.

[Fanfold]

Shows the video for loading the fan-fold media.

The items are as follows:

Continuous/Tearoff

Shows the video for loading the fan-fold media.

[Replace Paper]

Shows the video for replacing the media.

The items are as follows:

[Roll]

Shows the video for replacing the media roll.

The items are as follows:

Continuous/Tearoff

Shows the video for replacing the media roll to the product to print in continuous/tear-off mode.

Dispenser

Shows the video for replacing the media roll to the product to print in dispenser mode.

Linerless tearoff

Shows the video for replacing the media roll to the product to print in linerless tearoff mode.

[Fanfold]

Shows the video for replacing the fan-fold media.

The items are as follows:

Continuous/Tearoff

Shows the video for replacing the fan-fold media.

[Replace Head] (Standard models only)

Shows the video for replacing the print head.

[Replace Platen] (Standard models only)

Shows the video for replacing the platen roller.

[Replace Battery]

Shows the video for replacing the battery.

[Cleaning]

Shows the video for cleaning the product.

[Build Version]

Shows the information and version of the product.

Name

Shows the name of the build version.

Date

Shows the build date.

Checksum

Shows the checksum of the build version.

Kernel Version

Shows the kernel version.

Boot Version

Shows the boot version.

[Applications]

Shows the printer language, etc., and versions of applications that are installed on the product.

[Installation Log]

Show or clear the installation log data in the product.

Press the ▬ button (CLEAR) to clear the selected log data.

✎ • This screen does not appear if there is no log data in the product.

The setting items are as follows:

[RPM log]

Shows a list of RPM log files containing three sections: installed, updated and obsolete.

The RPM log file is created after installing a pkg-file containing rpm-files.

[System Restore]

Shows the system restore log.

The system restore log file is created after installing a pkg-file that caused a state in which the product's operator panel cannot be operated.

[Print Module]

Shows the information about the print module of the product.

The item is as follows:

Main

Shows the Main firmware information.

[Sensor Module]

Shows the information about the sensor module of the product.

The item is as follows:

Main

Shows the Main firmware information.

[FPGA Version]

Shows the FPGA version on the product.

The item is as follows:

Name

Shows the FPGA version.

[Counters]

Shows the counter information of the product.

> ⚠ • Only SATO authorized service personnel are permitted to clear the counter.

The setting items are as follows:

[Head]

Shows the head counter information of the product.

Life

Shows the current print distance.

Head 1

Head 2

Head 3

[Head 1] shows the current print distance. When you replace the print head and the counter is cleared, the value of [Head 2] appears in [Head 3] and the value of [Head 1] appears in [Head 2]. [Head 1] will start to count from 0 again.

[Estimated Printable]

Shows estimates of the remaining number of sheets that can be printed, based on the remaining battery power, the number of sheets output, and the battery consumption.

The count is cleared at the following times.

- When the product is powered off
- When the top cover is opened
- When setting values are initialized
- When charging is started

[Wi-Fi]

Shows the address of the wireless LAN interface.

The items are as follows:

Wi-Fi IPv4 Address

Shows the IPv4 address of the wireless LAN.

Wi-Fi IPv6 Address

Shows the IPv6 address of the wireless LAN.

Does not appear when Wi-Fi Direct is active.

Wi-Fi MAC

Shows the MAC address of the wireless LAN.

Wi-Fi Region

Shows the region information of the wireless LAN.

Wi-Fi Status

Shows the status of the wireless LAN.

[Wi-Fi Direct]

Shows the connection information of Wi-Fi Direct.

Appears only if Wi-Fi Direct is the active interface and you are connected using Wi-Fi Direct.

SSID

Shows the SSID.

Role

Shows the Wi-Fi Direct connection status with the following item:

GO: Group Owner

Device Address

Shows the device address.

IP Address

Shows the IP Address.

<u>Passphrase</u>

Shows the passphrase.

<u>Channel</u>

Shows the channel.

[Wi-Fi Versions]

Shows the version of the wireless LAN.

[Bluetooth]

Shows the information of the Bluetooth connection.

[Battery] Menu

The following settings are available in the [Battery] menu:

[Health]

Shows the battery condition.

The condition is shown as [Good], [Replace], or [Poor].

You cannot change the setting.

[SOH]

Shows the condition of the battery as a numerical value.

You cannot change the setting.

[Cycle Counts]

Shows the cycle count (charge/discharge cycle).

You cannot change the setting.

[Eco Charge]

Set up the Eco Charge function.

The Eco Charge function is designed to extend the battery life by keeping the after-charged volume of the battery a little lower than the fully charged volume, thus delaying the degree of deterioration.

The options are as follows:

<u>Enabled</u>

Enable the Eco Charge function.

Disabled

Disable the Eco Charge function.

✏️ • When using the product being set on the 1Bay Charging Cradle (option), [Enabled] is recommended.

[Full Charge Power-Off]

Set up the product's power-off function after charging is complete.

While the product is paused in Online/Offline screen, the product powers off 3 seconds after it completes charging.

The options are as follows:

Enabled

The product powers off automatically after it completes charging.

Disabled

The product does not power off automatically after it competes charging.

Conditions to disable the Full-Charge Power-off function

- ◦ While the product is printing or feeding the media.
- ◦ While the product button is being used.
- ◦ During Adjustments or Settings mode.
- ◦ While the product receives the data.
- ◦ If the temperature in the product exceeds the tolerance range (error 1065).
- ◦ When an AC adapter is removed.

✏️ • When using the product being set on the 1Bay Charging Cradle (option), [Disabled] is recommended.

[Voltage]

Shows the battery voltage.

[Capacity]

The remaining battery level, given the battery's initial fully charged capacity is 100%, is displayed.

[Temp]

Shows the battery temperature.

[Battery Type]

Shows the type of battery in use.

[Shortcut] Menu

Frequently used settings are listed in the [Shortcut] menu.

Configuring the Product Settings from a Web Browser

Accessing to the Web Configuration Page

The product can be operated through a web configuration page using any browser.

With a WLAN connection, users can remotely get information from product or perform the product settings.

✎ • You need the product's IP address to access the web configuration page. The product IP address can be checked in [Information] > [Wi-Fi].

• If the product's [Settings] > [Interface] > [Network] > [Advanced] > [Firewall] > [Enable] menu is set to [Enabled], [Settings] > [Interface] > [Network] > [Advanced] > [Firewall] > [Allow Services And Ports] > [WebConfig] must be set to [Enabled].

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1. **Open up the browser and enter the product's URL.**

   If the product's IP address is 192.168.143.123, enter the following URL: https://192.168.143.123

   When a security certificate is prompted, you must acknowledge and click Continue.

   The web configuration page for the product appears. On the upper right (1) of each page, the model name, current resolution and MAC address are shown.
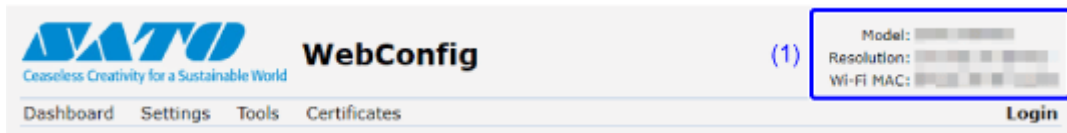
2. **Log in.**

   You can view a part of the [Dashboard] page without logging in.

   a. Click [Login] (2).
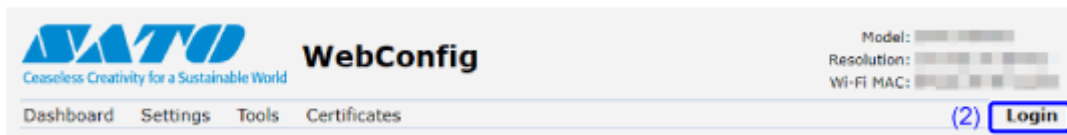
b. Select [settings] for the user, enter the password, and click [Login].

The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.

3. Click on the page (3) you want to view.

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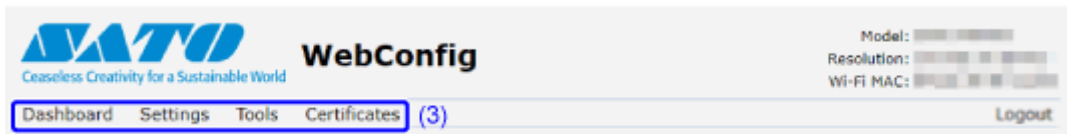
Dashboard

[Dashboard] is the default page for the web configuration page. Each section shows specific information or the current status of the product.

(1) [Printer Status]

Shows the current state (online, offline, error) and current status icons.

(2) [Printing]

Shows the print speed, darkness, sensor, print mode and backfeed setting.

(3) [Device]

Shows the model, current resolution and options that are installed.

(4) [System]

Shows the current firmware version, uptime, SNMP contact, name and location.

(5) [Network]

Shows the current IP address and MAC address of the active interface.

> • Click [Login] to log in for viewing.
>
> The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.

(6) [Wi-Fi]

Shows the current Wi-Fi setting.

- Click [Login] to log in for viewing.

  The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.

- This information is shown only if Wi-Fi is available and active.

(7) [Wi-Fi Strength]

Shows the current Wi-Fi communication strength.

- If the product is P2P GO, the Wi-Fi Strength will not be shown.

Settings

The settings equivalent to the product's Settings mode can be performed on the browser.

> ✏ • Login is required to view the [Settings] page. Click [Login] to log in before opening the [Settings] page.
>
> The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.
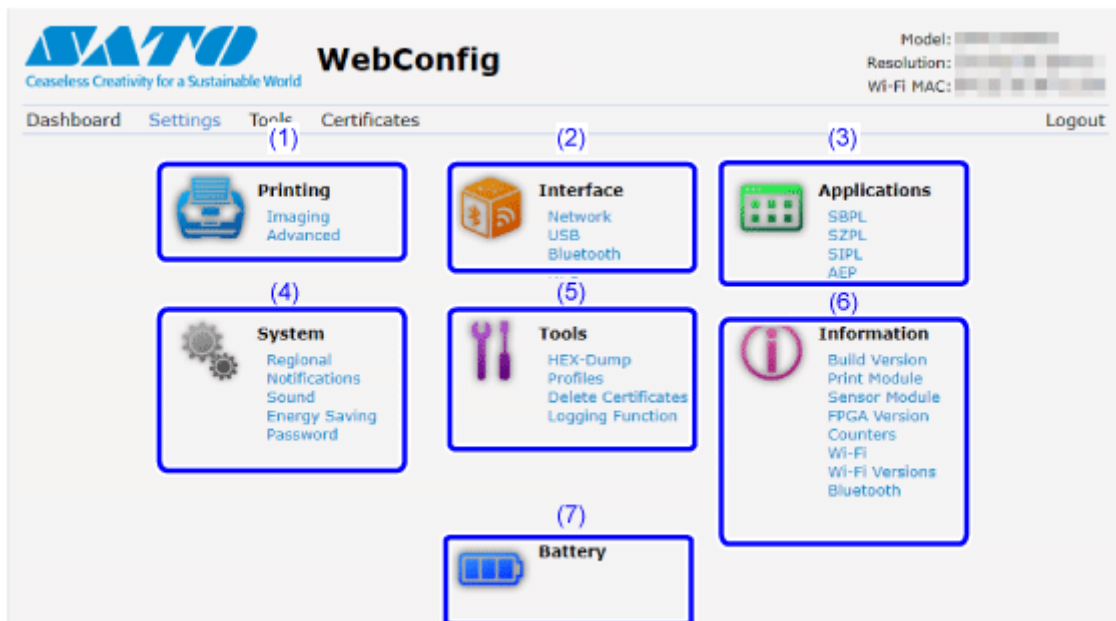
(1) [Printing]

You can do the settings equivalent to the [Printing] menu in the Settings mode.

(2) [Interface]

You can do the settings equivalent to the [Interface] menu in the Settings mode.

(3) [Applications]

You can do the settings equivalent to the [Applications] menu in the Settings mode.

(4) [System]

You can do the settings equivalent to the [System] menu in the Settings mode.

(5) [Tools]

You can do the settings equivalent to the [Tools] menu in the Settings mode.

(6) [Information]

You can do the settings equivalent to the [Information] menu in the Settings mode.

(7) [Battery]

You can do the settings equivalent to the [Battery] menu in the Settings mode.

The screen below is the example of [Printing] page.

> ✎ • If a message prompting you to restart the product appears at the top of the page, click [Reboot printer] to reboot the product to apply the settings.

Tools

Various settings and operations can be performed in this page: installing certificates for authentication, checking the log, and test printing.

> ✎ • Login is required to view the [Tools] page. Click [Login] to log in before opening the [Tools] page.
>
>   The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.

(1) [Upload]

Click [Choose File] of the certificate you want to install.

Select the certificate file from the list and click [Upload], and the authentication file will be installed.

(2) [Clone]

You can do the setting equivalent to [Tools] > [Clone] in the Settings mode. Copy the current product settings and the data that is installed.

(3) [Install Package]

Contact your SATO reseller or technical support for more information of the package file.

(4) [Logs]

List all log files in the log directory. Users can click to download the file.

(5) [Reset]

You can do the setting equivalent to [Tools] > [Reset] in the Settings mode. Initialize the setting values and data saved on the product.

(6) [Passwords]

You can do the setting equivalent to [System] > [Password] > [Change Password] in the Settings mode. Change the each password of the product.

(7) [Test Print]

You can do the setting equivalent to [Tools] > [Test Print] in the Settings mode. Perform a test print.

(8) [Support Info]

List various information of the product such as attached options, serial number, application versions and settings configuration.

You can also get a screenshot of the current product display and an image of the last printout.

(9) [Reboot]

Reboot the product.

Certificates

Shows the root certificate authority and client certificates installed on the product.

✎ • Login is required to view the [Certificates] page. Click [Login] to log in before opening the [Certificates] page.

The default setting for user is [settings], and for password is "PCB serial number (8 digits of uppercase English letters and numerals) +user". You can confirm the PCB serial number by executing [Configure List] from the [Tools] > [Test Print] menu.

✎ • The client certificate that is a PFX (PKCS #12) file will not be shown.

Enabling SATO App Storage

If you are a SATO App Storage user, log in to the cloud to enable the service on the product. This makes the product automatically download and install the latest label printing application that you uploaded to the cloud.

The login procedure is as follows:

1. **Press the** ▬ **button (OFFLINE) or** ▷|| **button in Online mode.**

The product changes to Offline mode.

2. **Press the** ⏎ **button.**

The product changes to Settings mode.
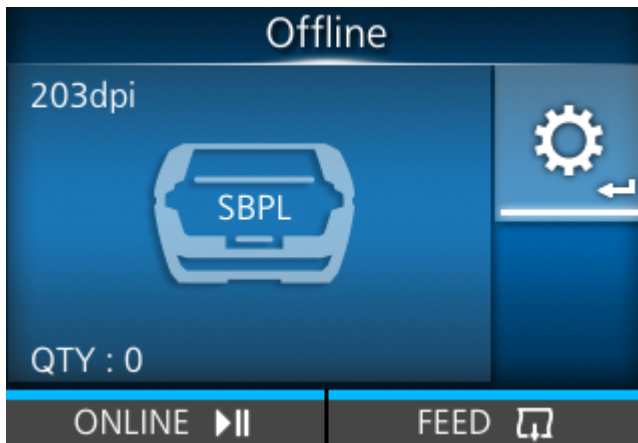
- Input the password if it is enabled.

3. Select [Interface] using the ◀/▶ buttons and press the ⟵ button.

Settings

Interface
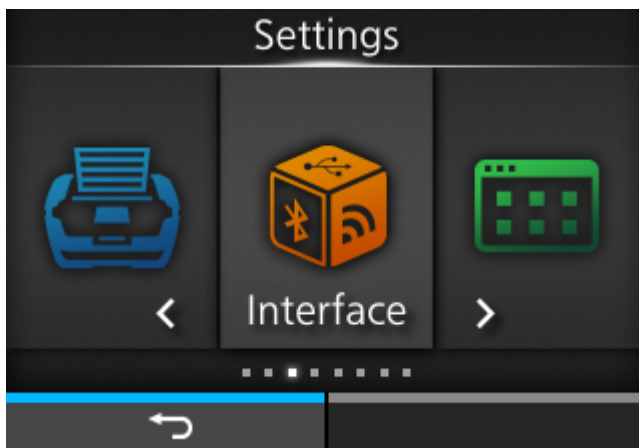
4. Select [Network] > [Services] > [SATO App Storage] using the ▲/▼ buttons.

5. Select [Login] and press the ▬ button (✓).

SATO App Storage

Login
Application Setting
Upload log data

> ✏ • When [Upload log data] is displayed, there is a print log which has not been uploaded
> to SATO App Storage. All the print logs which have not been uploaded to SATO App
> Storage are uploaded if [Upload log data] is selected.

6. Input your SATO App Storage account information and press the ▬ button (✓).

Company ID

a	b	c	d	e	f	g	h	i	j	<	>
k	l	m	n	o	p	q	r	s	t	1 2 3
u	v	w	x	y	z	.	,	_	-	Shift
⌫				@ !?	✓
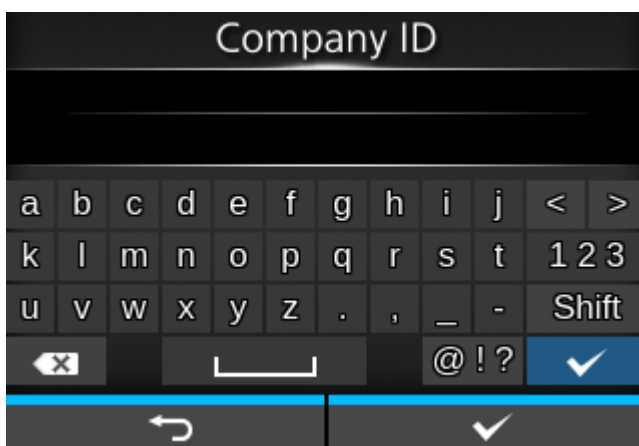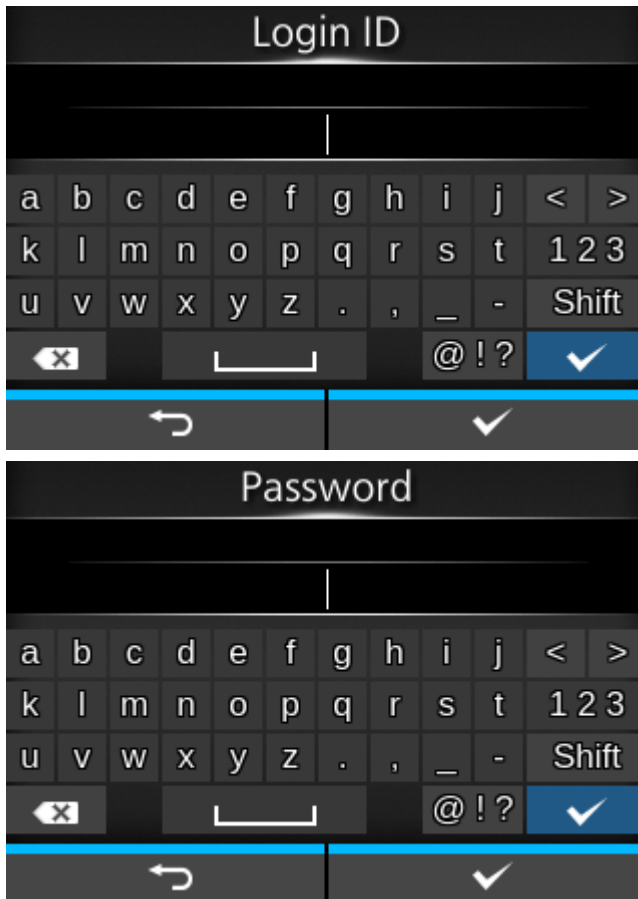
The product logs onto the cloud.

- If a login fails, a screen like the one shown below appears. The message that appears depends on the cause. Confirm that the account information is correct, and then try again.
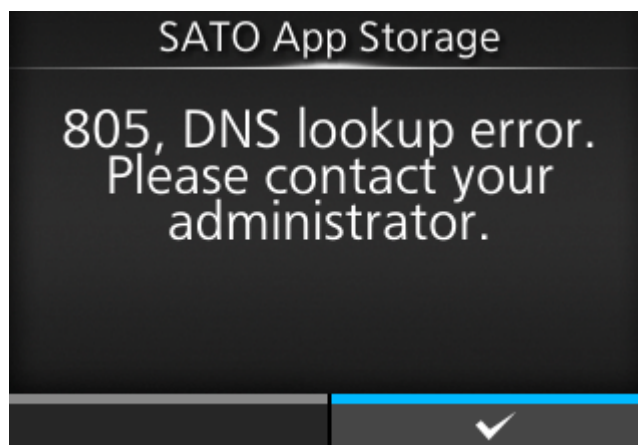
7. **If your account contains multiple different applications, the screen to select an application appears. Select the desired application and press the ▬ button (✓).**
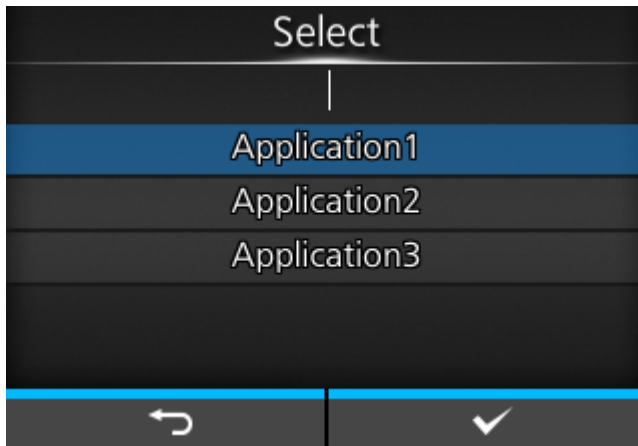
The downloading and installing of application data automatically starts.
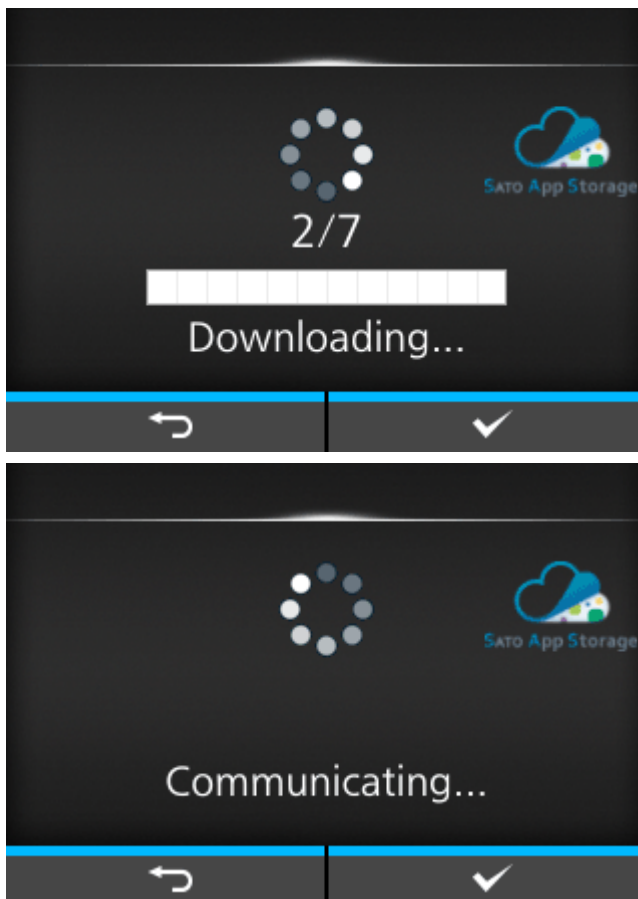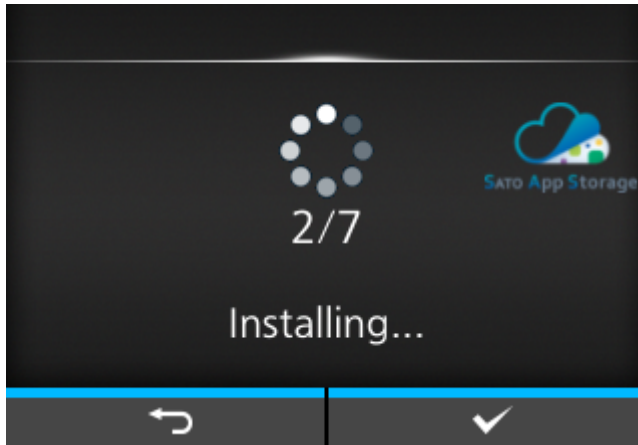
- If you download an application which is set to be updated automatically at the startup of it or the product, the product automatically connects to the cloud at startup the next time it is powered on. Then, every time you start the installed application, the product downloads and installs the latest version from the cloud. This automatic update is executed in accordance with the settings in the application.

- After installing applications via SATO App Storage, information for each application can be checked by pressing [Application Setting] on the screen in step 5. Select an application from the list and press the [ ] button (✓). You can check the setting status of the automatic application update and the time product access the SATO App Storage.

SATO App Storage

Login

Application Setting

↰   ✔

⬇

Select

Application1

Application2

Application3

↰   ✔
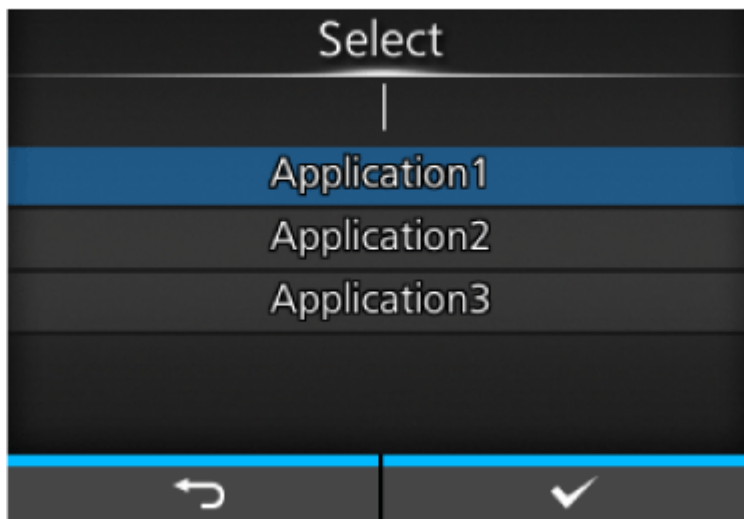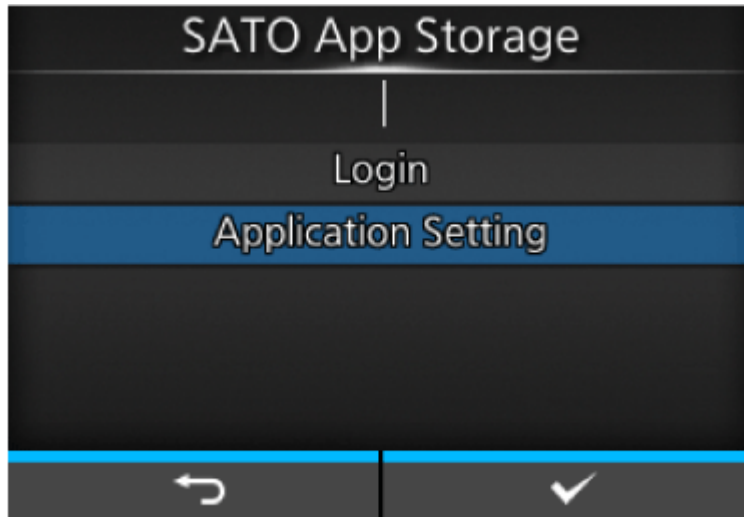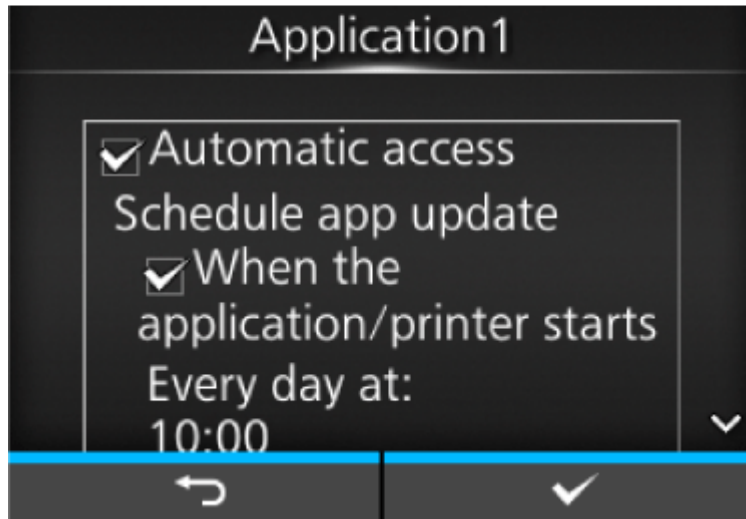
- Login information and the times that SATO App Storage is accessed can be displayed while running an application, that has automatic updates enabled, via SATO App Storage.

  When the product is in Offline mode, briefly press the (power) button.

Offline

203dpi

QTY : 0

ONLINE ▶II   FEED

⬇

SATO App Storage

Company ID: sastest
Login ID: sas_sc

Last access: 2022-04-25 12:01:50
Next access: 2022-04-26 12:00:00
Last upload: 2022-04-25 12:01:26.155
(Print log)

✓
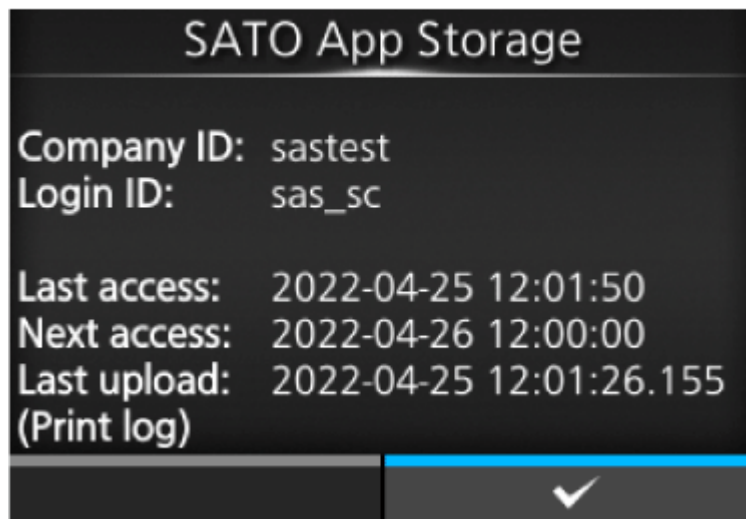
When the product is in Online mode, briefly press the ⏻ (power) button. And then press ▬ button (✓) while selecting [SATO App Storage].
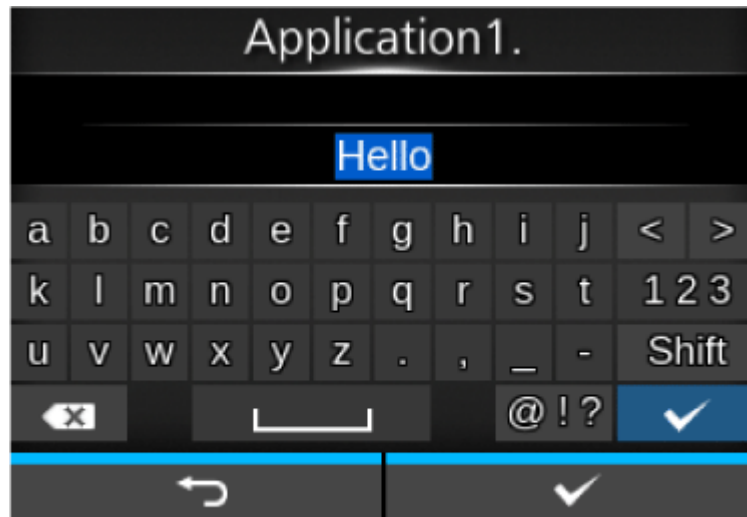
SATO App Storage

Company ID: sastest
Login ID: sas_sc

Last access: 2022-04-25 12:01:50
Next access: 2022-04-26 12:00:00
Last upload: 2022-04-25 12:01:26.155
(Print log)

Adjusting the Product

Printable Area

The printable area of the product is shown in the figure below.
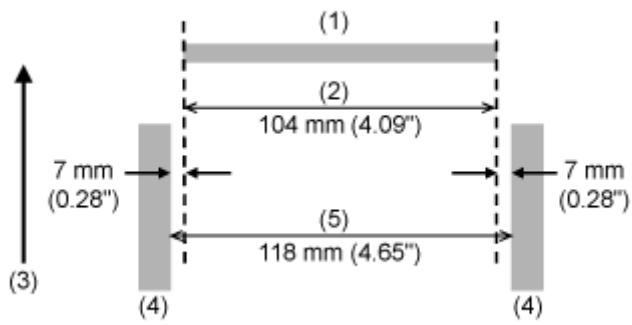
(1) Print head

(2) Printable area

(3) Feed direction

(4) Media guide

(5) Maximum media width

Media Sensor Positions and Media Stop Positions

The positions of the media sensors and the media stop positions with the various print modes are as follows:
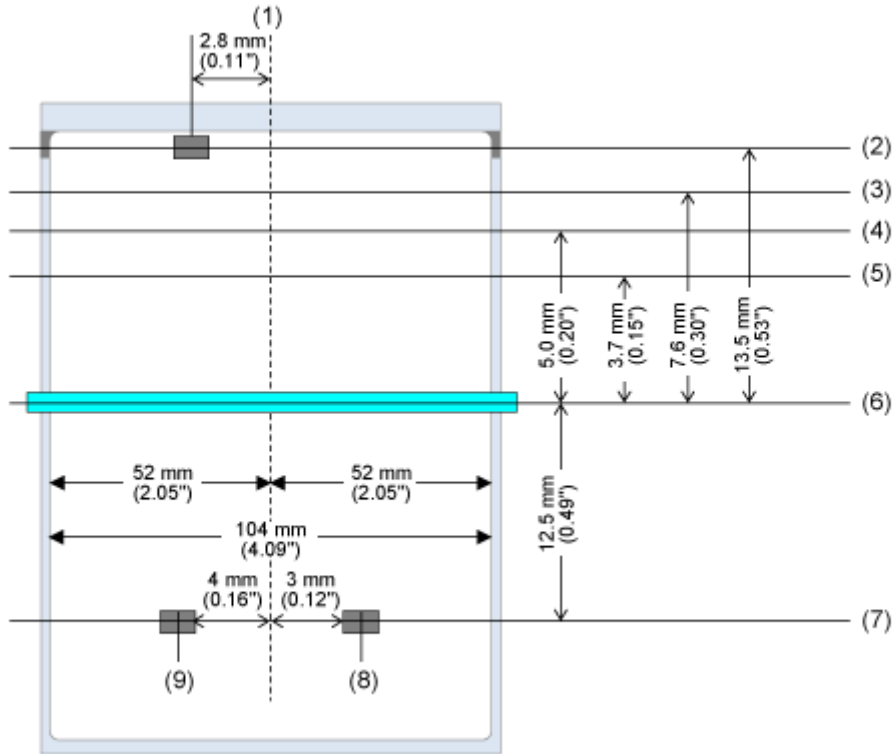
(1) Center position

(2) Dispenser sensor position

(3) Tear-off position

(4) Linerless cut position

(5) Dispensing position

(6) Print head position

(7) Gap/I-mark sensor position

(8) Gap sensor position

(9) I-mark sensor position

Flow of Printing Operations

Printing Operations

Printing operations vary depending on the combination of the following settings.

- Print modes
- Enabled/disabled media sensor
- Enabled/disabled head check

Operations in Continuous Mode

Continuous Mode/Media Sensor Enabled
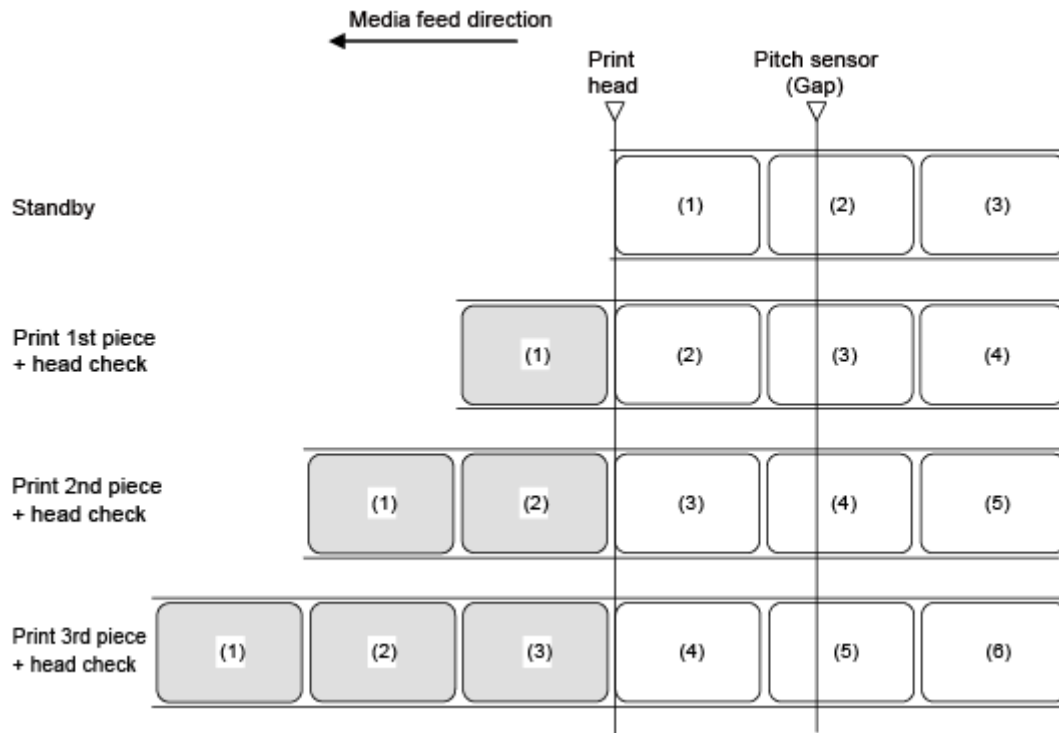
Operation

> ✎ • The figure above shows the reference position when the Gap sensor is used.

Timing Chart (Without Head Check)
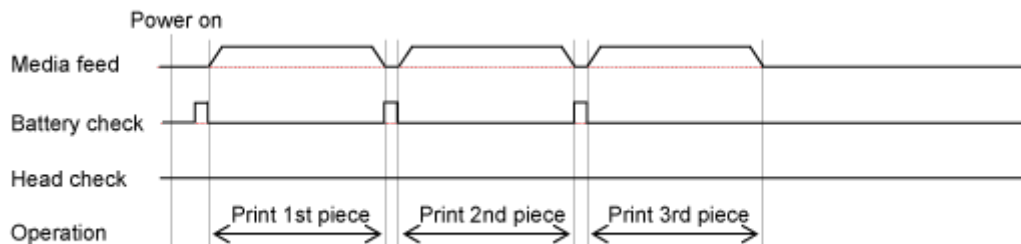
Timing Chart (With Head Check)
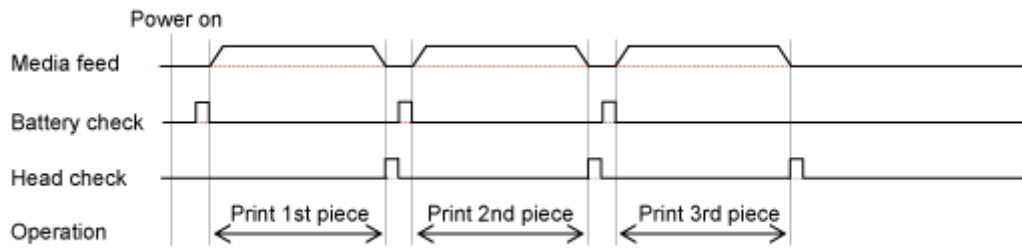
Continuous Mode/Media Sensor Disabled

Operation
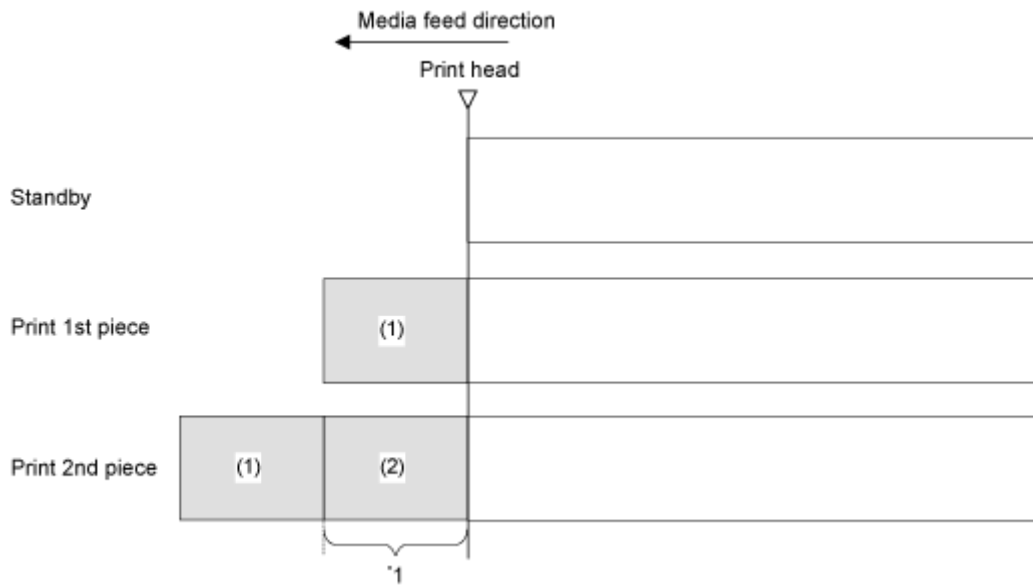
*1 The product will feed the actual vertical print size of media. However, if you specify the End Position (<EP>) command, the product will feed the specified vertical size of media.

- The spaces between each layout varies depending on the print speed. In the figure above, as you set the print speed faster, the space between the first and second print becomes wider.

Timing Chart (Without Head Check)
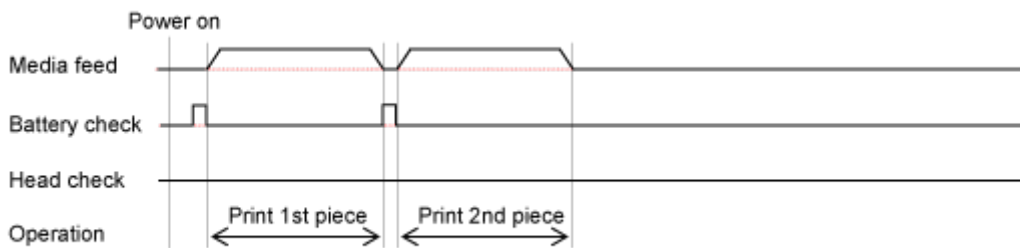
Timing Chart (With Head Check)
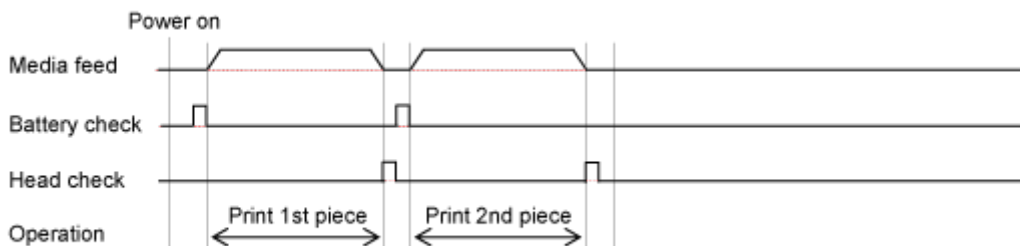
Operations in Tear-Off Mode

Tear-off Mode/Media Sensor Enabled
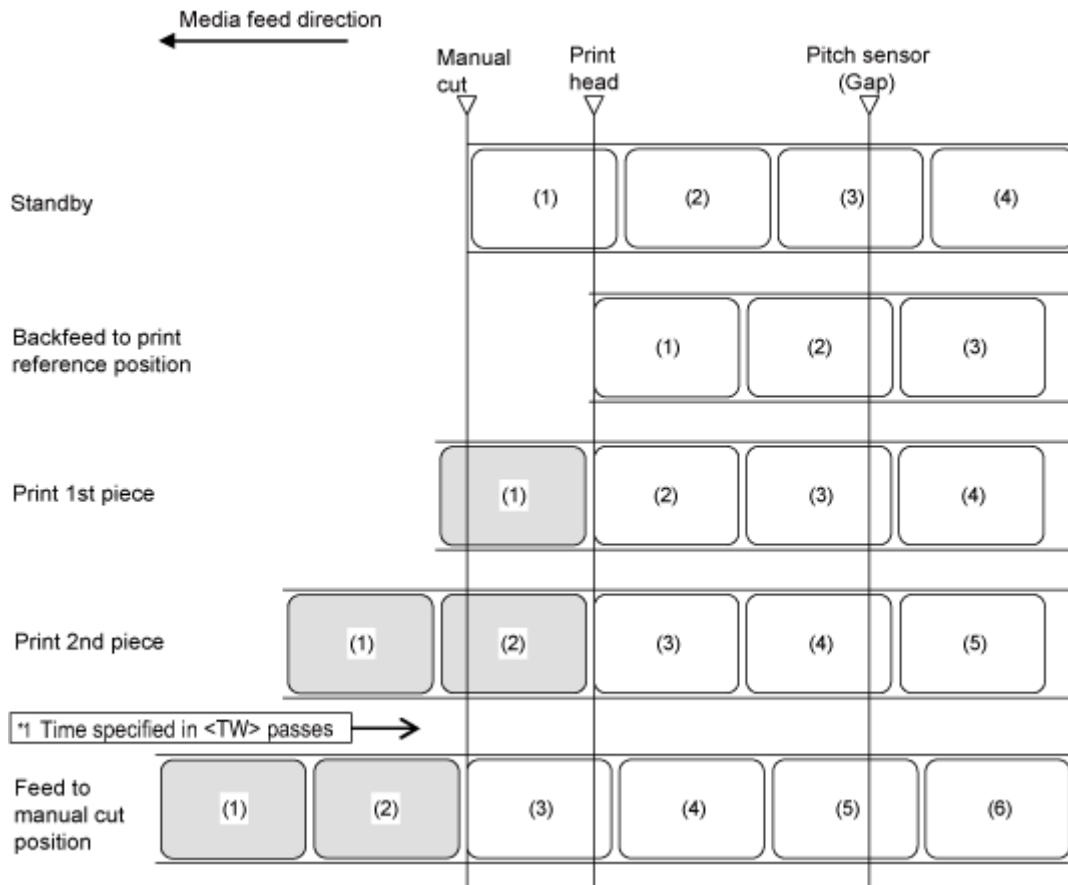
Operation

*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the product will feed the media to the position for manual cutting.

> • The figure above shows the reference position when the Gap sensor is used.

Timing Chart (When <TW> is 0)
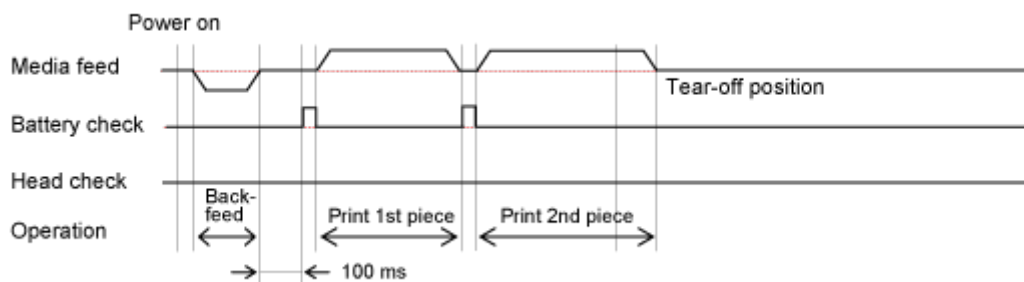
Without head check
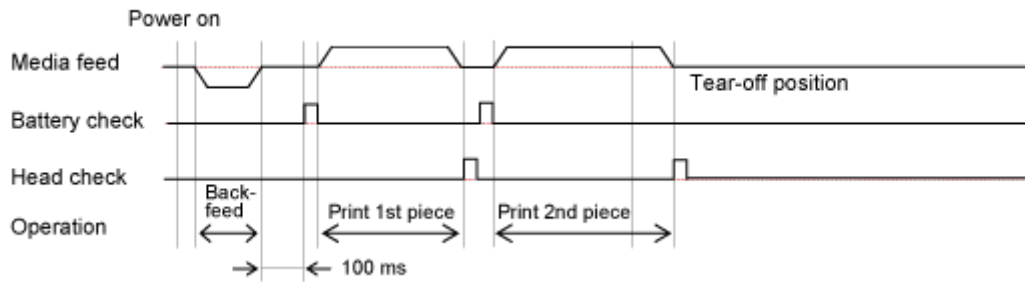
With head check

Timing Chart (When <TW> is 500)

Without head check
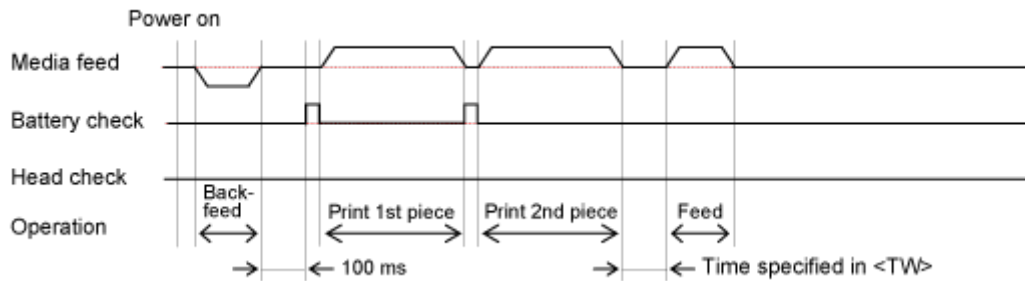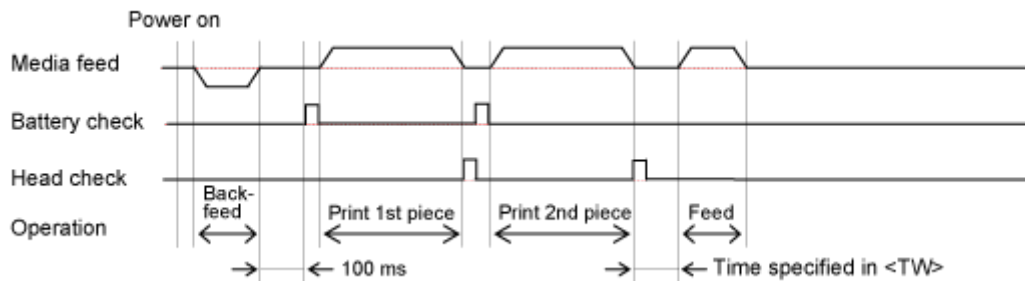
With head check

Tear-off Mode/Media Sensor Disabled
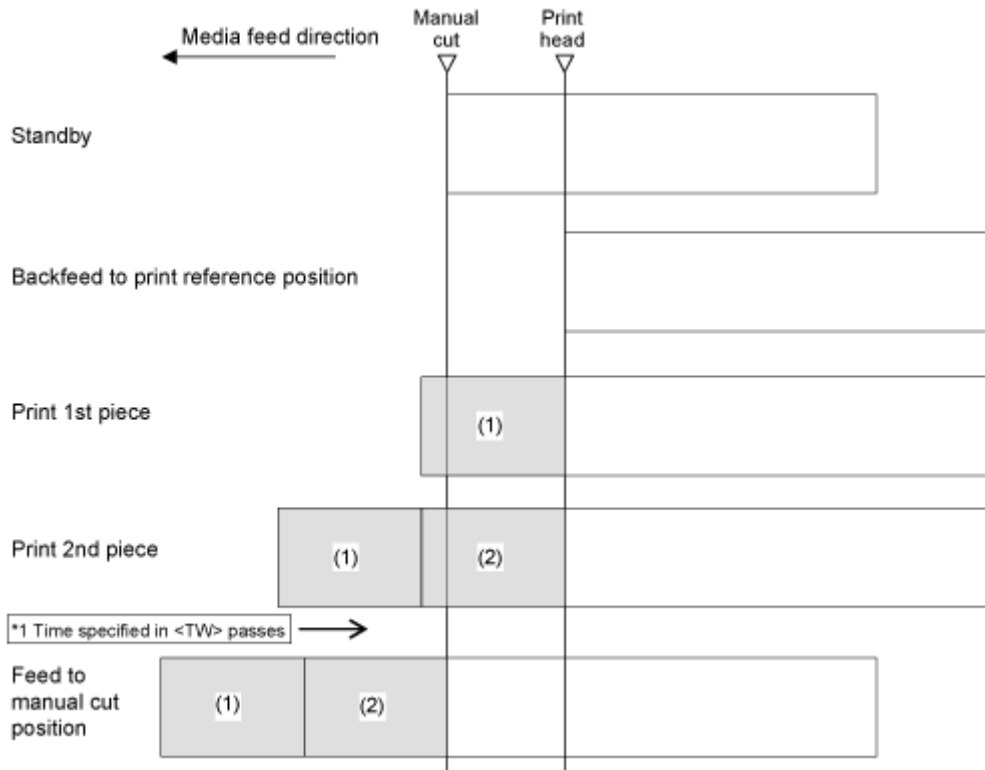
Operation

*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the product will feed the media to the position for manual cutting.

> • The spaces between each layout varies depending on the print speed. In the figure above, as you set the print speed faster, the space between the first and second print becomes wider.

Timing Chart (When <TW> is 0)

Without head check
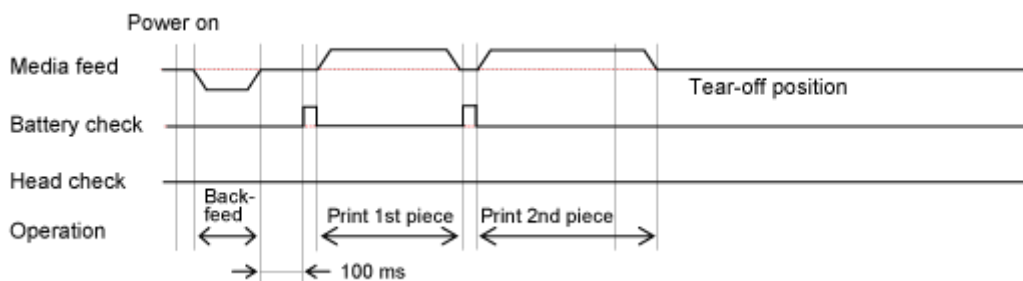
With head check
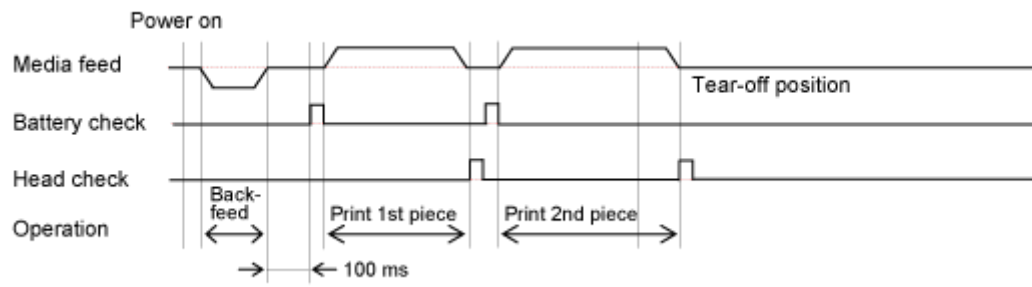
Operations in Dispenser Mode

Dispenser Mode, No Backfeed, with Media Sensor Enabled
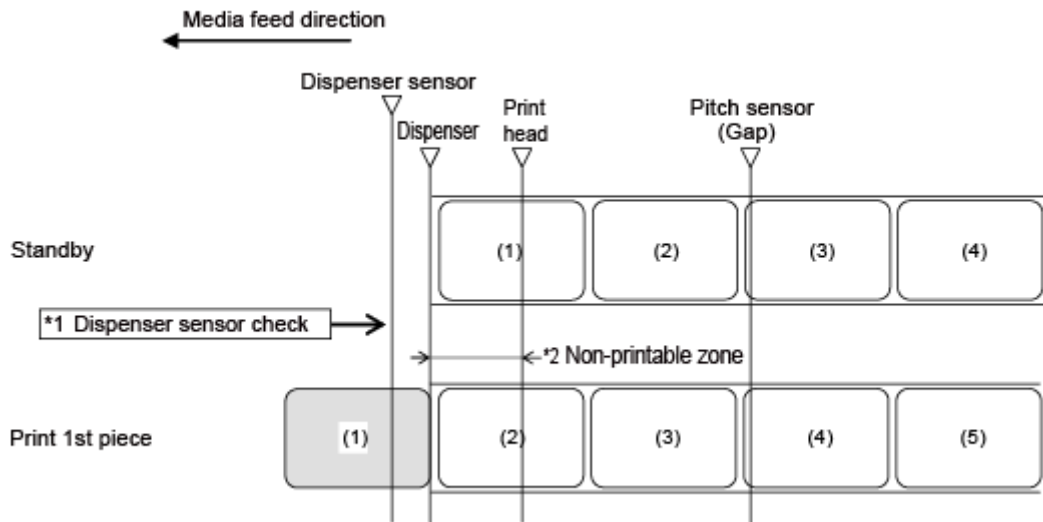
Operation

*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

*2 Because backfeeding is not done, the media in this area is non-printable.

> • The figure above shows the reference position when the Gap sensor is used.

Timing Chart (Without Head Check)
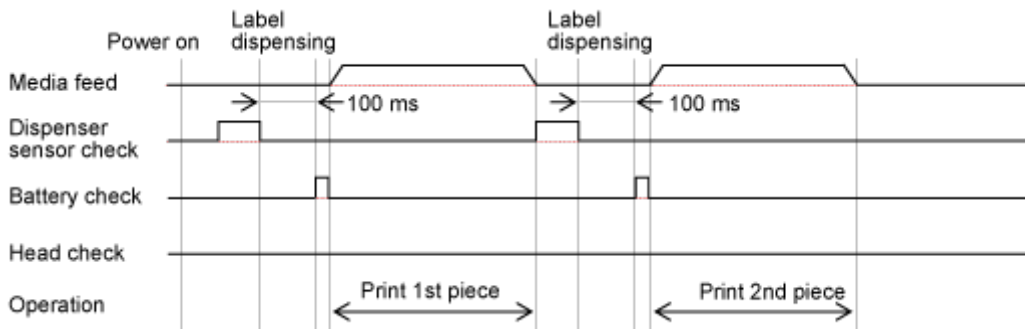
Timing Chart (With Head Check)
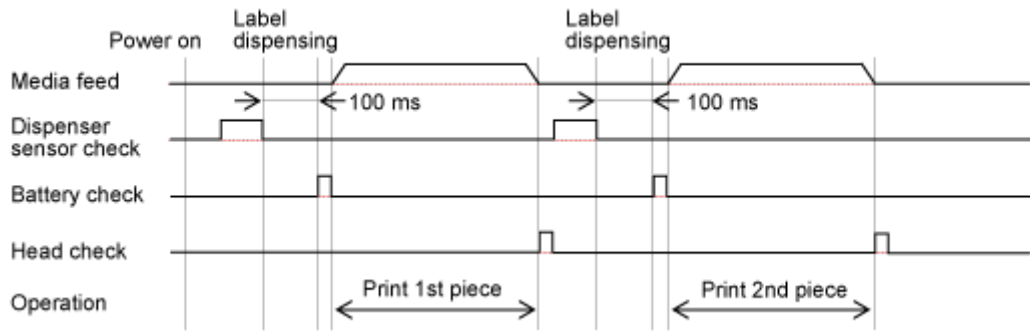
Dispenser Mode, Backfeed After Printing, with Media Sensor Enabled

Operation

*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

> ✏️ • The figure above shows the reference position when the Gap sensor is used.

Timing Chart (Without Head Check)
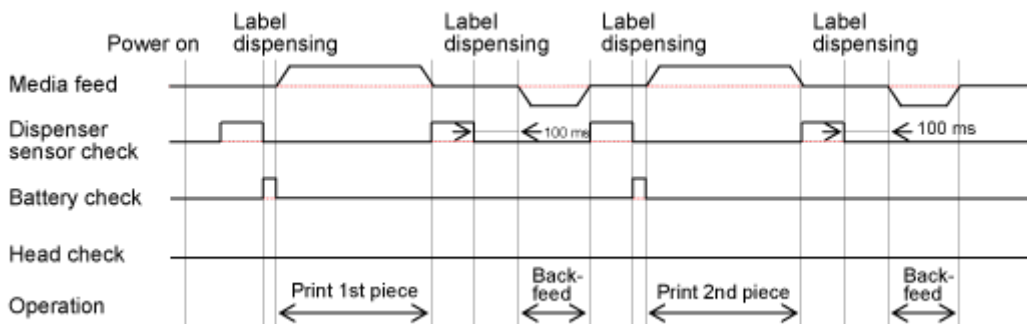
Timing Chart (With Head Check)
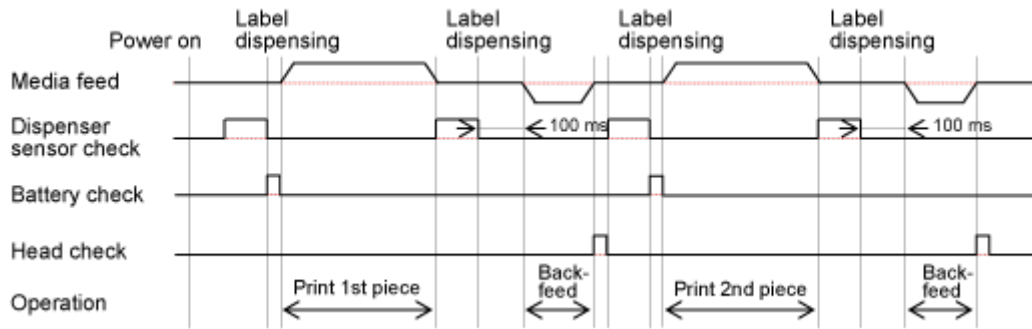
Dispenser Mode, Backfeed Before Printing, with Media Sensor Enabled
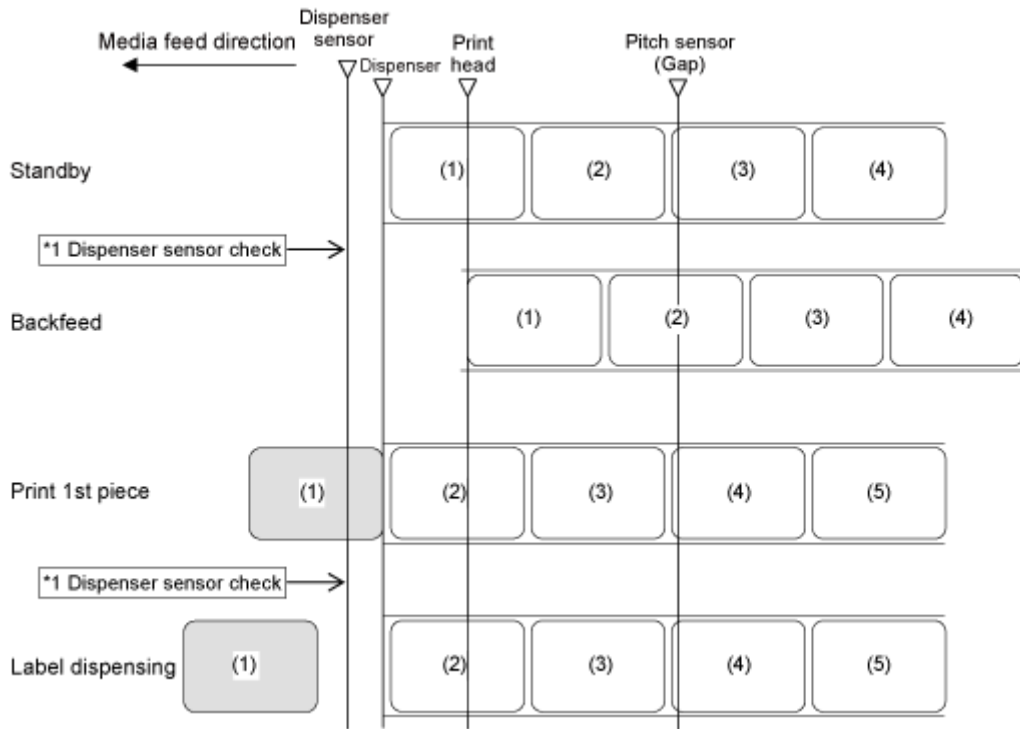
Operation

*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

> • The figure above shows the reference position when the Gap sensor is used.

Timing Chart (Without Head Check)

Timing Chart (With Head Check)

Operations in Linerless Mode

Linerless Mode, Backfeed Before Printing, with Media Sensor Enabled
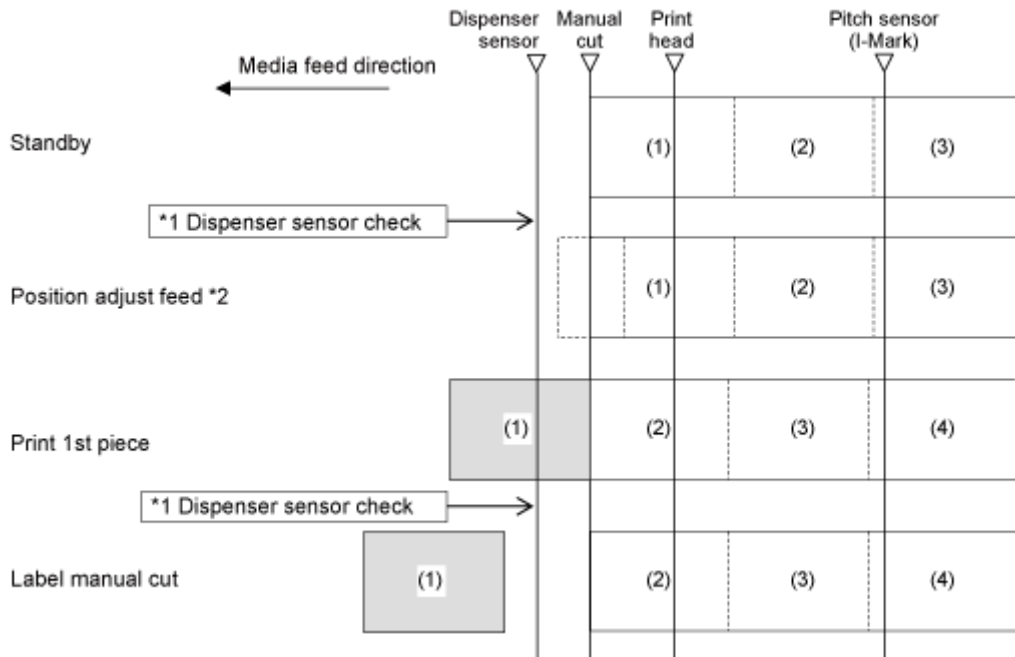
Operation

*1 The dispenser sensor checks the presence of labels; and the product does not perform the next operation until manual cutting is performed.

*2 Adjustment of the feed position is only done after moving to the start position using the various adjustment functions. If no adjustment is done, then start printing without a feed operation. The direction of feed changes depending on the adjustments.

- The figure above shows the reference position when the I-mark sensor is used.

Timing Chart (Without Head Check)

Timing Chart (With Head Check)

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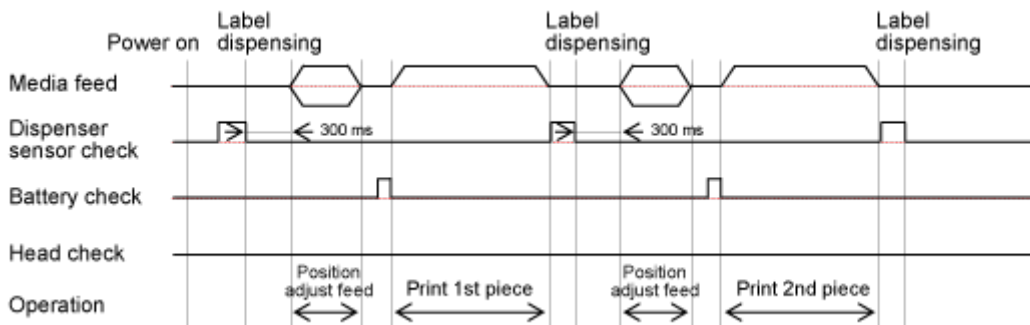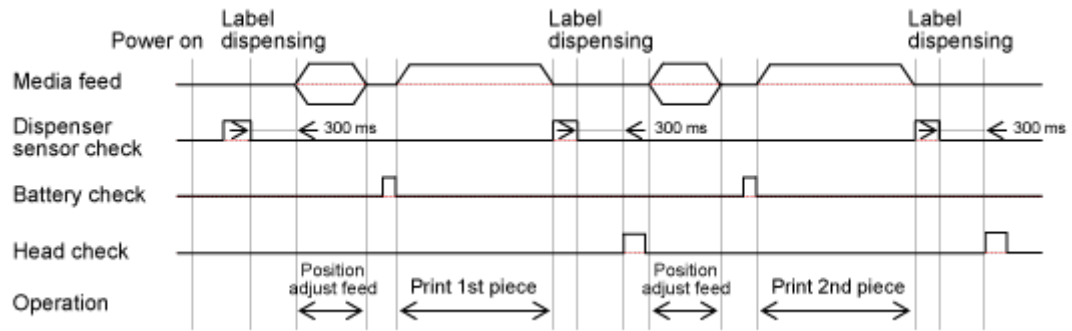
Linerless Mode, Backfeed Before Printing, with Media Sensor Disabled
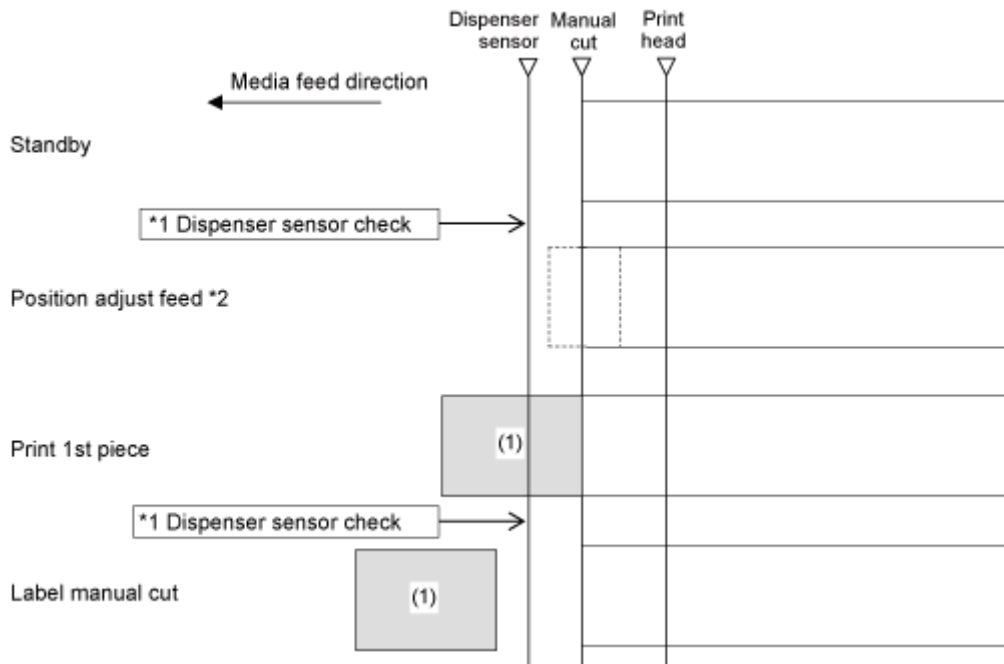
Operation

*1 The dispenser sensor checks the presence of labels; and the product does not perform the next operation until manual cutting is performed.

*2 Adjustment of the feed position is only done after moving to the start position using the various adjustment functions. If no adjustment is done, then start printing without a feed operation. The direction of feed changes depending on the adjustments.

> • The figure above shows the reference position when the I-mark sensor is used.
>
> • The spaces between each layout varies depending on the print speed. In the figure above, as you set the print speed faster, the space between the first and second print becomes wider.

Timing Chart (Without Head Check)
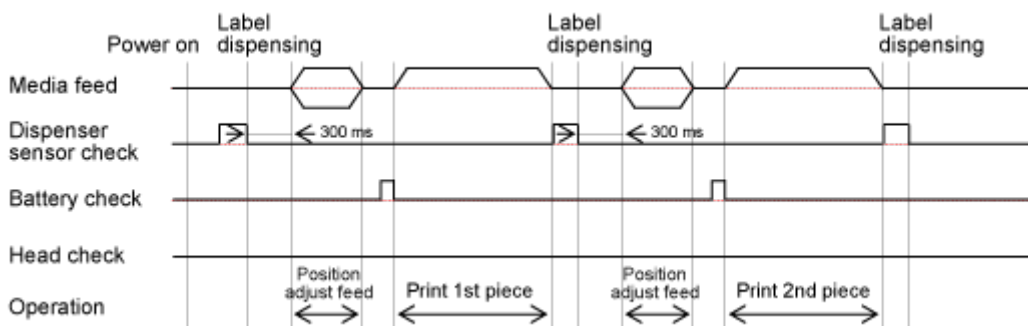
Timing Chart (With Head Check)
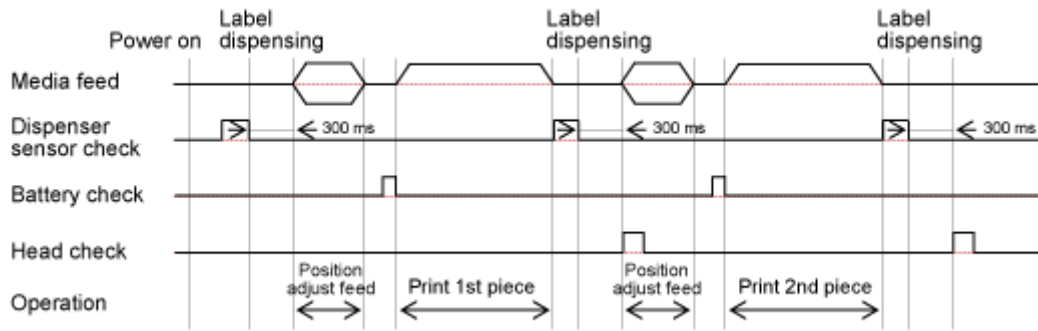
Operations When the Media Sensor Is Disabled

Media Sensor Disabled

When the media sensor is disabled, media stops at the specified print end line.
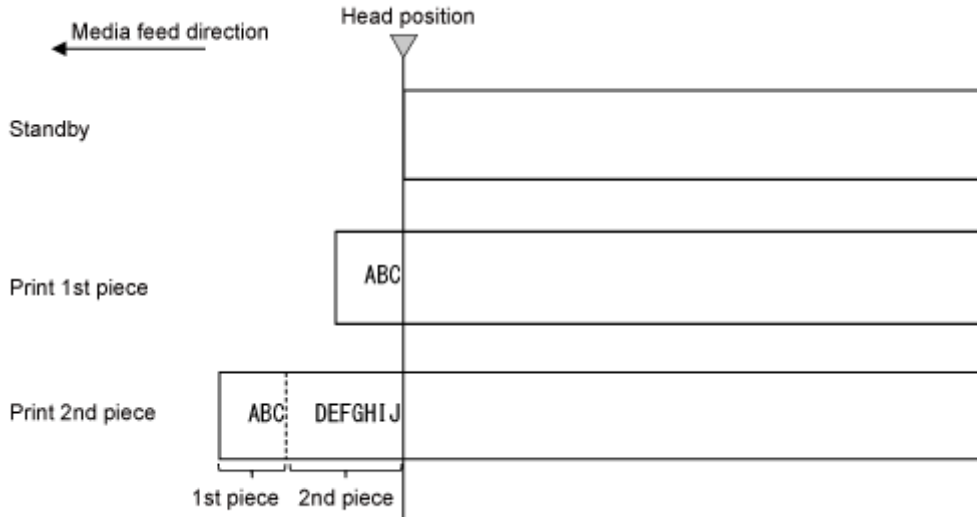
> • The spaces between each layout varies depending on the print speed. In the figure above, as you set the print speed faster, the space between the first and second print becomes wider.
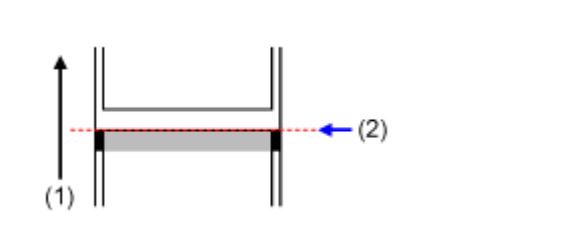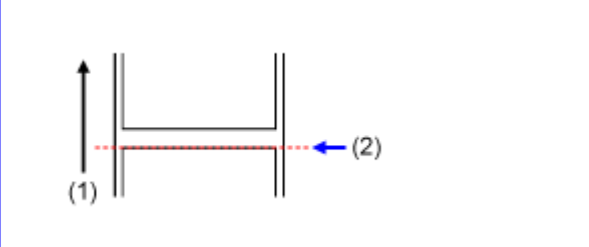
Adjusting the Base Reference Point

About the Base Reference Point
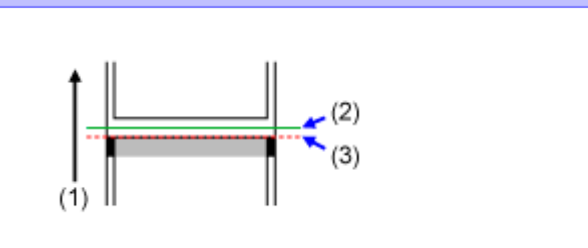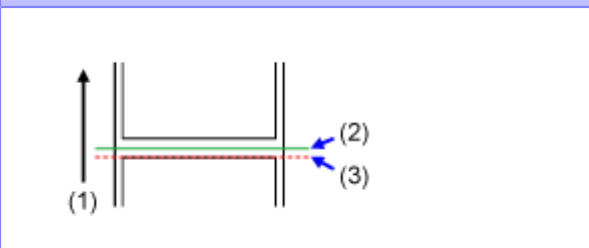
The base reference point is the point at which one determines the print position and stop/dispensing position.

The base reference point differs depending on the print mode or media sensor you use.
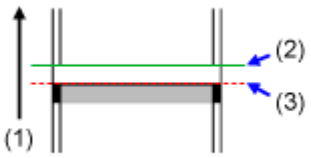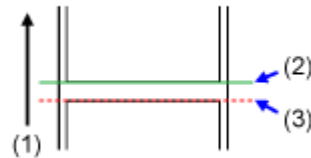
Continuous Mode

I-mark label	Gap label
(1) Feed direction (2) Print position	(1) Feed direction (2) Print position

Tear-Off Mode

I-mark label	Gap label
(1) Feed direction (2) Tear-off position (3) Print position	(1) Feed direction (2) Tear-off position (3) Print position

Dispenser Mode

I-mark label	Gap label
  (1) Feed direction (2) Dispensing position (3) Print position	 (1) Feed direction (2) Dispensing position (3) Print position

Linerless Tearoff Mode

I-mark Linerless Label
  (1) Feed direction (2) Tear-off position (3) Print position

Adjusting the Print Position

Set the [Pitch] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the print position.
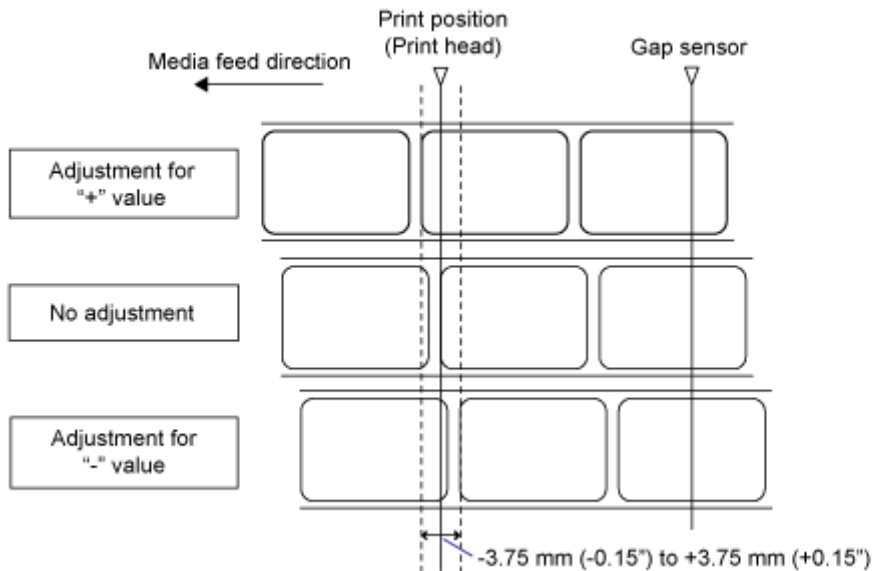
✏️ • The above reference position (print position) is the stop position when the media sensor type is set to Gap.

---

1. When the product is in Online mode, press the ⏸ button on the operator panel to change to Offline mode.

2. Press the ⏎ button to show the [Settings] menu.

✏️ • Input the password if it is enabled.

---
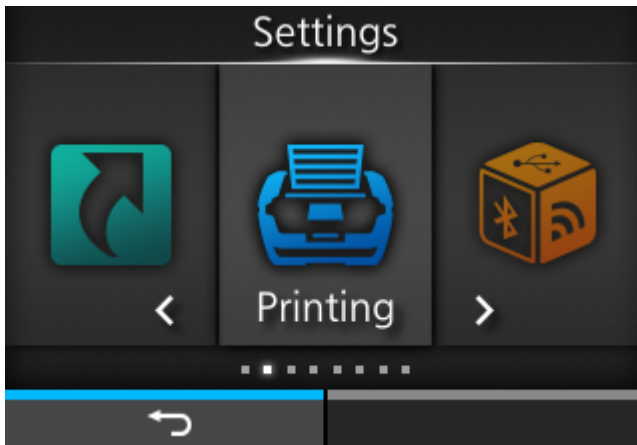
3. **Select [Printing] using the ◁/▷ buttons, and then press the ⬅ button.**

Settings

Printing

4. **Select the [Advanced] > [Adjustments] > [Pitch] menu using the ▲/▼ buttons, and then press the ⬅ button.**

The [Pitch] screen appears.

Pitch
-30 <–> +30 dot
0

1	2	3	<	>
4	5	6	⌫	
7	8	9		
-	0	.	✓	

5. **Change the setting value. Press the ◁/▷/▲/▼ buttons to select a number and then press the ⬅ button to enter the number to the text box.**

The setting range is from -30 to +30 dots.

• Depending on the operating mode, if the setting is higher than -8dot, the labels may fall off the rollers or the back edge of the labels may be folded. If this happens, set the print position in the [Printing] > [Imaging] menu.

• You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

6. **Press the ▬ button (✓) to save the setting value.**

7. **Press the ▷|| button to change to Offline mode.**

8. **Press the ▷|| button again to change to Online mode.**

You can print to check the adjusted print position.

✏️ • While the print job is paused, the [Adjustments] menu will appear instead of the [Settings] menu and you can adjust the print position.

Adjusting the Media Stop Position

Set the [Offset] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the media stop position.

When Adjusting the Tear-off Position
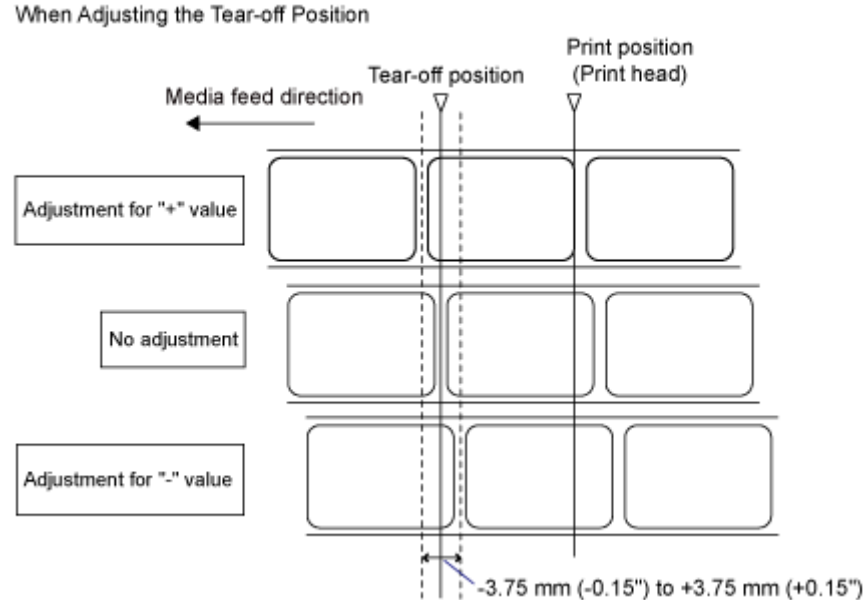
✏️ • The above tear-off position for printing indicates the label stop position when the media sensor is set to Gap sensor.

---

1. **When the product is in Online mode, press the** ⏸ **button on the operator panel to change to Offline mode.**

2. **Press the** ↵ **button to show the [Settings] menu.**

✏️ • Input the password if it is enabled.

---
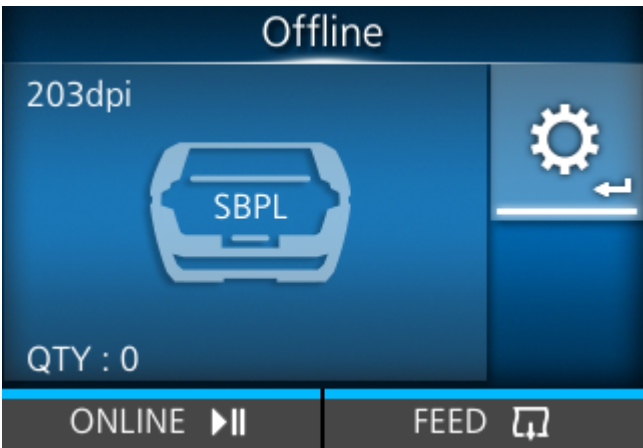
3. Select [Printing] using the ◁/▷ buttons, and then press the ⬅ button.

Settings

Printing
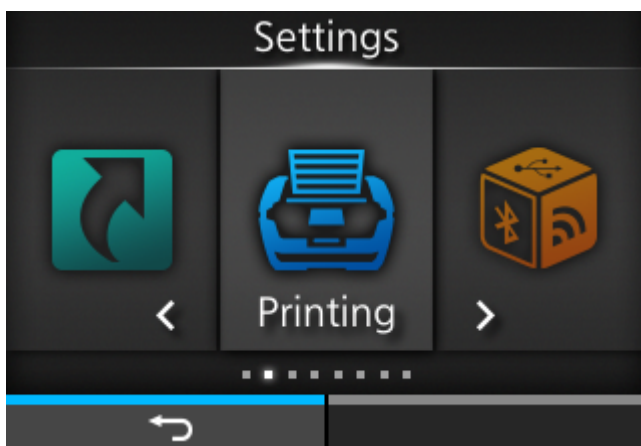
4. Select the [Advanced] > [Adjustments] > [Offset] menu using the ▲/▼ buttons, and then press the ⬅ button.

The [Offset] screen appears.

Offset

-30 <–> +30 dot

0

1	2	3	<	>
4	5	6	⬅✕	
7	8	9		
-	0	.	✓	

5. Change the setting value. Press the ◁/▷/▲/▼ buttons to select a number and then press the ⬅ button to enter the number to the text box.

The setting range is from -30 to +30 dots.

- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

6. Press the ▬ button (✓) to save the setting value.

7. Press the ▷II button to change to Offline mode.

8. Press the ▷II button again to change to Online mode.

You can print to check the adjusted stop position.

- While the print job is paused, the [Adjustments] menu appears instead of the [Settings] menu and you can adjust the media stop position.

Notes on the Stop/Cut Position of Different Media

Stop Position of the Label in Dispenser Mode

The regular position is to let the label stay about 4mm (0.16") on the liner.

(1) Feed direction

(2) Dispenser bar

(3) Print head

Cut Position When Using the Label in Tear-Off Mode

The regular cut position is between labels (only cut on the liner).

When you cut the label, the glue adheres to the blade of the cutter and the blade will decrease the performance of the cutter. Adjust the cut position so as not to cut the label.
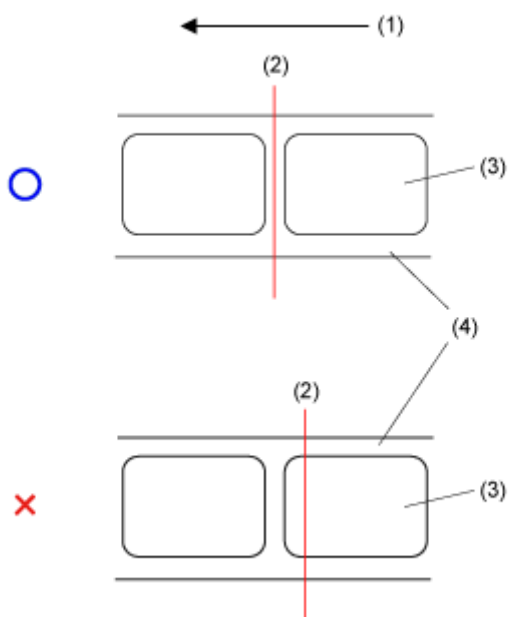
(1) Feed direction

(2) Cut position (I-mark sensor/Gap sensor)

(3) Label

(4) Liner

Cut Position When Using the Media with Perforated Line in Tear-Off Mode

For media with perforated lines, adjust the cut position so as not to cut the media on the perforated line or before the perforated line.

When the media is cut on the area not to be cut, it could cause a paper jam or damage.
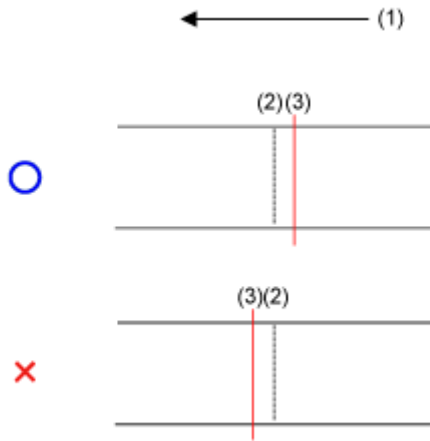
(1) Feed direction

(2) Perforated line

(3) Cut position

Adjusting the Print Quality

Adjusting the Print Darkness

The adjustment procedure for the print darkness is as follows:

> • You can fine tune the print darkness by setting the [Darkness Adjust] in the [Printing] > [Advanced] > [Adjustments] menu.
>
> • When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands] and the print darkness is specified by command, the data will be printed with the print darkness specified by the command.
>
> • While the print job is paused, the [Adjustments] menu will appear instead of the [Settings] menu and you can adjust the print darkness.

1. **When the product is in Online mode, press the ⏯ button to change to Offline mode.**
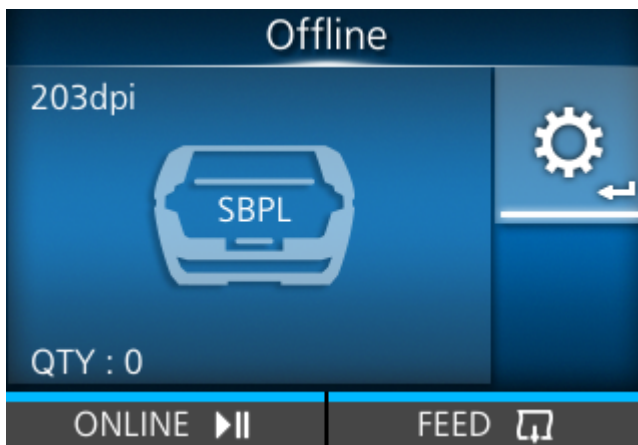
2. **Press the ⏎ button to show the [Settings] menu.**

> • Input the password if it is enabled.

3. Press the ◀/▶ buttons to select [Printing], and then press the ⬅ button.

Settings

Printing

4. Press the ▲/▼ buttons to select [Darkness], and then press the ⬅ button.

Printing	
∧ Speed	4 ips
Print Mode	Tear-Off
Backfeed	Before
Sensor Type	I-Mark
Darkness Range	A
∨ Darkness	5

The [Darkness] screen appears.

5. Press the ▲/▼ buttons to select a value.

Darkness	
1	
2	
3	
4	
5	✓
∨ 6	

The setting range is from 1 to 10. 1 is the lightest and 10 is the darkest.

6. Press the ▬ button (✓) or ⬅ button to save the setting value.

7. Press the ▶❙❙ **button to change to Offline mode.**

8. Press the ▶❙❙ **button again to change to Online mode.**

You can print to check the print quality.

Adjusting the Print Speed

The adjustment of the print speed not only changes the speed of printing but also affects the print quality.

✏️ • When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands] and the print speed is specified by command, the data will be printed with the print speed specified by the command.

• While the print job is paused, the [Adjustments] menu will appear instead of the [Settings] menu and you can adjust the print speed.

---

1. **When the product is in Online mode, press the** ▶‖ **button to change to Offline mode.**
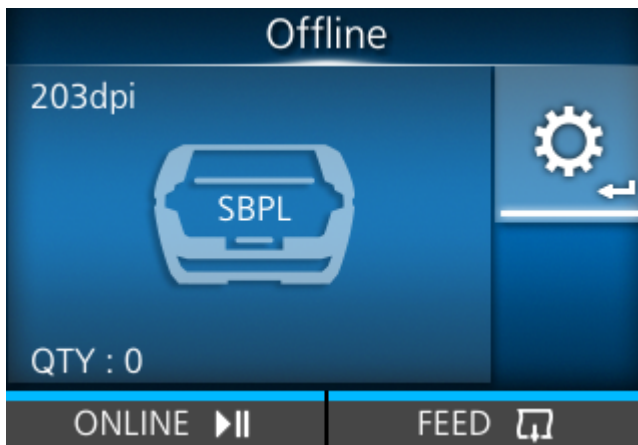
2. **Press the** ◀— **button to show the [Settings] menu.**

✏️ • Input the password if it is enabled.

---

3. **Press the** ◀/▶ **buttons to select [Printing], and then press the** ◀— **button.**
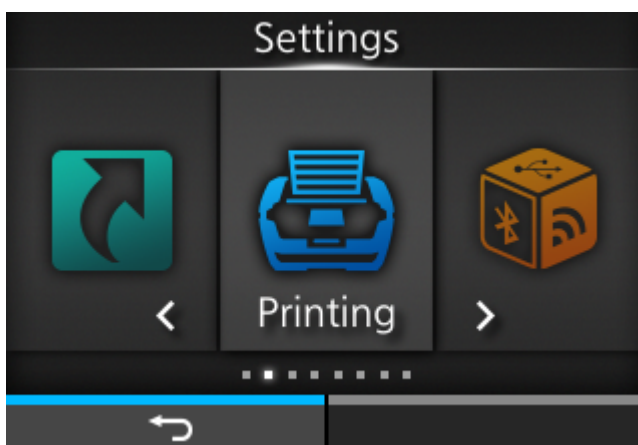
4. Press the ▲ / ▼ buttons to select [Speed], and then press the ⬅ button.

Printing	
Label Length	8000 dot
Label Width	832 dot
Auto Measure	☐
Speed	**4 ips**
Print Mode	Tear-Off
⌄ Backfeed	Before
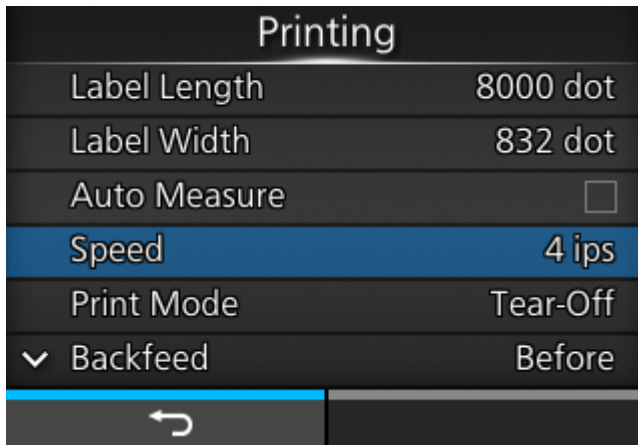
The [Speed] screen appears.

5. Press the ▲ / ▼ buttons to select a value.
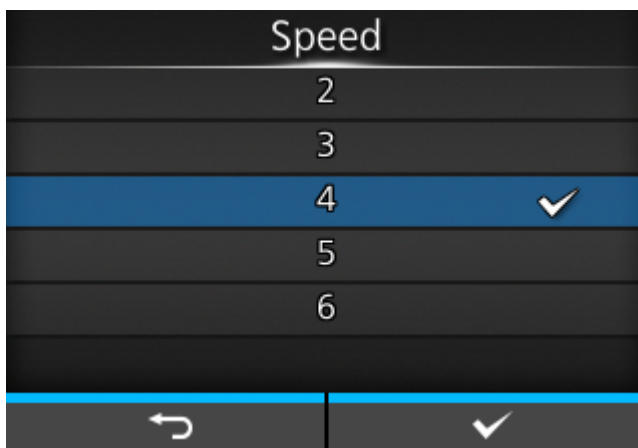
Speed
2
3
4 ✔
5
6

6. Press the ▬ button (✔) or ⬅ button to save the setting value.

7. Press the ▷‖‖ button to change to Offline mode.

8. Press the ▷‖‖ button again to change to Online mode.

You can print to check the print quality.

Adjusting the Product's Buzzer Volume

The adjustment procedure for the buzzer volume when an error occurs is as follows:

1. **When the product is in Online mode, press the ⏯ button to change to Offline mode.**
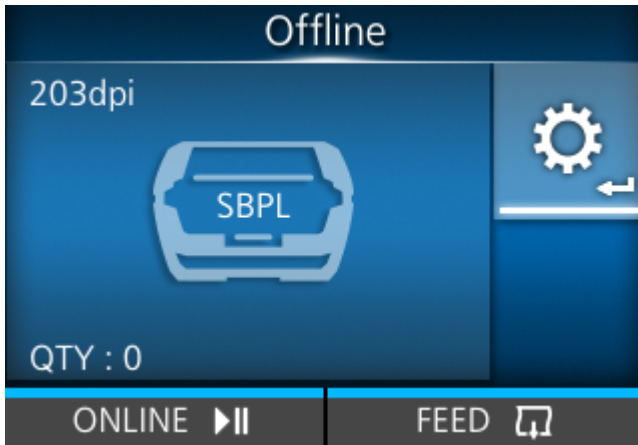
2. **Press the ⏎ button to show the [Settings] menu.**

> ✏ • Input the password if it is enabled.

3. **Press the ◀/▶ buttons to select [System], and then press the ⏎ button.**
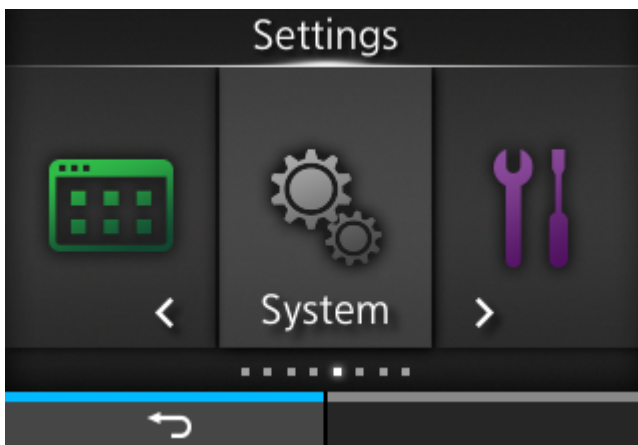
4. **Press the ▲ / ▼ buttons to select [Sound] > [Volume], and then press the ⬅ button.**

> ### Sound
> | Volume | 3 |
> |---|---|
> | Sound type | Type1 |
>
> ↩
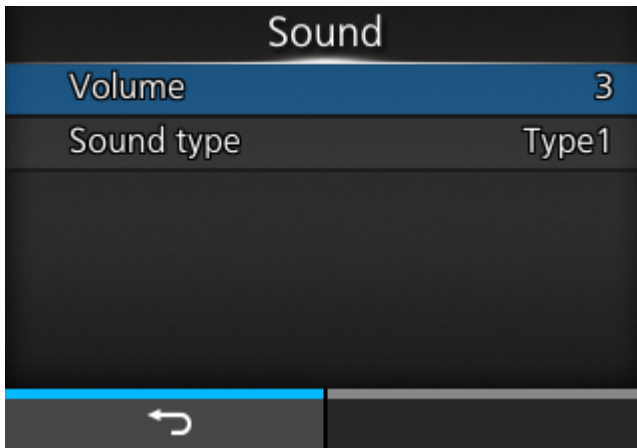
The [Volume] screen appears.

5. **Press the ▲ / ▼ buttons to set the volume.**

> ### Volume
> 0 <–> 5
>
> ⌃
> 3
> ⌄
>
> ↩   ✓

6. **Press the ▬ button (✓) or ⬅ button to save the setting.**

Initializing the Product

Procedures for Initializing

Initialize the product's data and setting values.

> ⚠ • It is generally not necessary to perform the initialization. Doing so could change the print conditions.
>
> • You cannot recover the data and settings that are lost because of initialization. Before doing an initialization, make a backup if needed. You can back up the product's data and setting values by using the following function in the [Tools] menu.
>
>   ◦ [Clone]: Copies the current data and settings to the USB memory. To recover the data and setting values, use the USB memory to take the .pkg file that was created, and then apply them to the product.

> ✎ • The data that is initialized is the fonts and graphics registered in the product.

1. **If the product is in Online mode, press the ▷|| button to go to Offline mode.**
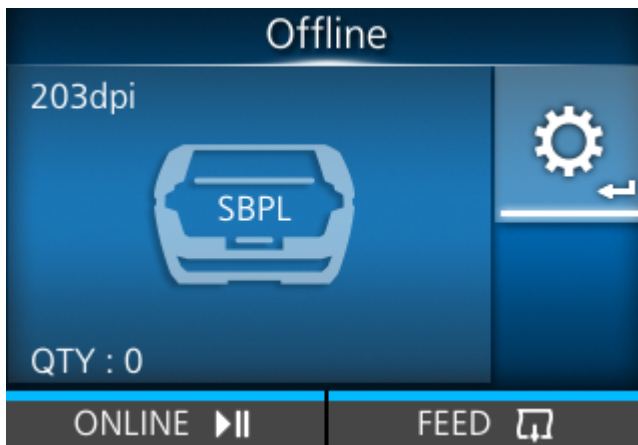
2. **Press the ⇐ button to show the [Settings] menu.**

3. Press the ◀/▶ buttons to select [Tools], and then press the ⬅ button.

Settings

Tools
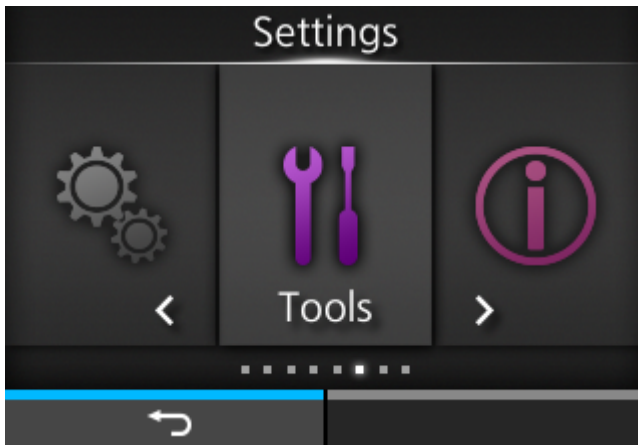
4. Press the ▲/▼ buttons to select [Reset], and then press the ⬅ button.

5. Select a type of reset.

Select

Data

Data & Settings
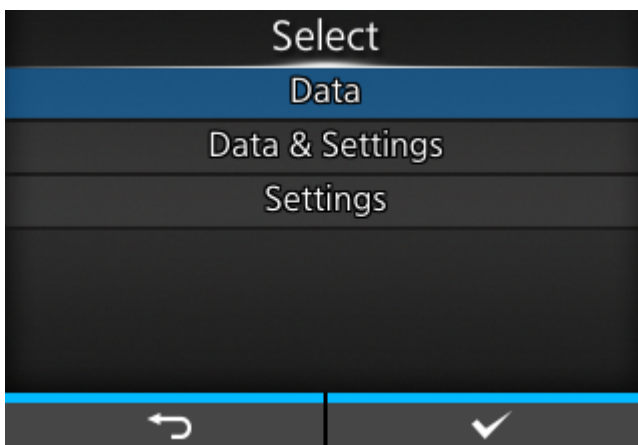
Settings

[Data]

Initialize the data saved in the product.

[Data & Settings]

Initialize the product's data and setting values.

[Settings]

Initialize the product's setting values.

6. **If you selected [Data & Settings] or [Settings], you can select the setting items to be initialized.**
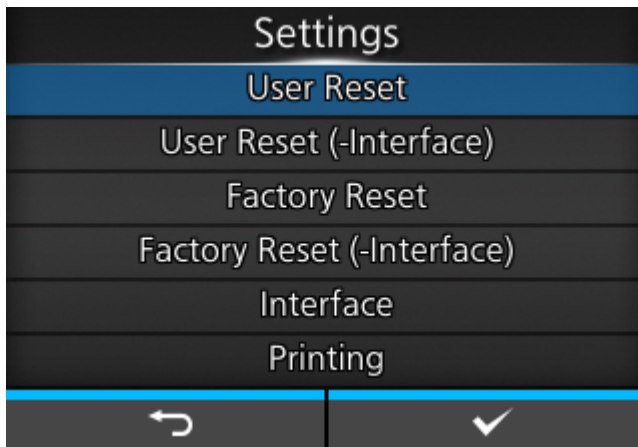
   [User Reset]

    Initialize the setting values.

   [User Reset (-Interface)]

    Initialize the setting values, except the interface settings.

   [Factory Reset]

    Initialize to the factory default settings.

   [Factory Reset (-Interface)]

    Initialize the setting items, except the interface settings, to the factory default settings.

   [Interface]

    Initialize the setting values for the interface settings.

   [Printing]

    Initialize the setting values in the [Printing] menu.

7. **Press the ▬ button (✔) to initialize.**

Press the ▬ button (✖)to cancel the initialization.
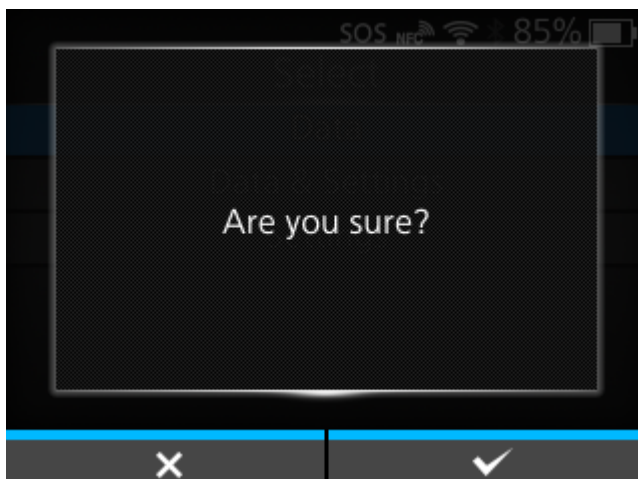
The initialization is performed.

Depending on the reset items you selected, the product restarts when the initialization is complete.

List of Initial Values

[Printing] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

⚠ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[Label Length]	8000 dot	Yes/Yes
[Label Width]	832 dot	Yes/Yes
[Auto Measure]	[Disabled]	Yes/Yes
[Speed]	4 ips	Yes/Yes
[Print Mode]	[Tear-Off]	Yes/Yes
[Backfeed]	**If [Print Mode] is set to [Continuous]** 　[None] **If [Print Mode] is set to [Tear-Off], [Dispenser], or [Linerless tearoff]** 　[Before]	Yes/Yes
[Sensor Type]	**If [Print Mode] is set to [Dispenser], [Tear-Off], or [Continuous]** 　[Gap] **If [Print Mode] is set to [Linerless tearoff]** 　[I-Mark]	Yes/Yes
[Darkness Range]	A	Yes/Yes
[Darkness]	5	Yes/Yes
[Imaging]		
[Vertical]	0 dot	Yes/Yes

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
		[Horizontal]	0 dot	Yes/Yes
[Advanced]				
	[Calibrate]			
		[Auto-calibration]	-	-
		[GAP Levels]	Value adjusted by the factory	No/No
		[GAP Slice Level]	Auto	No/No
		[I-Mark Levels]	Value adjusted by the factory	No/No
		[I-Mark Slice Level]	Auto	No/No
	[Head Check]		[Off]	Yes/Yes
	[Head Check Mode]		[Always]	Yes/Yes
	[Every Page]		1	Yes/Yes
	[Check Media Size]		[Disabled]	Yes/Yes
	[Adjustments]			
		[Offset]	0 dot	No/No
		[Pitch]	0 dot	No/No
		[Darkness Adjust]	50	No/No
	[Start Online]		[Enabled]	Yes/Yes
	[Feed After Error]		[Disabled]	Yes/Yes
	[Feed At Power On]		[Disabled]	Yes/Yes
	[Finisher Feed]		0 dot ([Standard])	Yes/Yes
	[Paper End]		[Using I-mark]	Yes/Yes
	[Prioritize]		[Commands]	Yes/Yes
	[Reprint]		[Disabled]	Yes/Yes
	[Print Control]		[Balance]	Yes/Yes
	[Print End Position]		0 dot	Yes/Yes

[Interface] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

- [Network] > [Settings] > [Wi-Fi]

- [Network] > [Services] > [NTP]/[LPD]/[FTP]/[SFTP]/[SNMP]

- [Network] > [Services] > [Online Services]

- [Network] > [Services] > [SOTI Connect]

- [Network] > [Advanced]

- [USB]/[Bluetooth]/[NFC]/[Ignore CR/LF]/[Ignore CAN/DLE]

> ⚠️ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

- **[Network] > [Settings] > [Wi-Fi]**

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[IPv4]		
[Mode]	[DHCP]	Yes/Yes
[DHCP]	-	-
[IP Address]	0.0.0.0	Yes/Yes
[Netmask]	255.255.255.0	Yes/Yes
[Gateway]	0.0.0.0	Yes/Yes
[DNS]	0.0.0.0, 0.0.0.0, 0.0.0.0	Yes/Yes
[IPv6]		
[Mode]	[Disable]	Yes/Yes
[DHCP]	-	-
[IP Address]	::	Yes/Yes
[Prefix Length]	64	Yes/Yes
[Gateway]	::	Yes/Yes
[DNS]	::	Yes/Yes

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[Ports]		
[Port1]	1024	Yes/Yes
[Port2]	1025	Yes/Yes
[Port3]	9100	Yes/Yes
[Flow Control]	[STATUS4 ENQ]	Yes/Yes
[TCP Connection Queue]	[Enabled]	Yes/Yes
[Legacy Status for Port 9100]	[Disabled]	Yes/Yes
[Delay Reply ENQ]	0 ms	Yes/Yes
[Proxy]		
[Enabled]	[Disabled]	Yes/Yes
[Server]	-	Yes/Yes
[Port No.]	-	Yes/Yes
[Username]	-	Yes/Yes
[Password]	-	Yes/Yes
[Exclude]	-	Yes/Yes
[DHCP Options]		
[Update DNS (Option 81)]	[Disabled]	Yes/Yes
[Hostname]	sato-wlan-serial number	Yes/Yes
[Hostname (Option 12)]	[Disabled]	Yes/Yes
[Hostname Suffix]	Printer serial number	Yes/Yes
[UserClass (Option 77)]	[Disabled]	Yes/Yes
[UserClass]	[PTR]	Yes/Yes
[Wi-Fi Protected Setup(WPS)]	-	-
[Wi-Fi Direct]		
[Device Name]	SATO_PRINTER	Yes/Yes

Setting Item		Initial Value	Initialized by User Reset/ Factory Reset
[Band]		[All]	Yes/Yes
[SSID]		SATO_PRINTER	Yes/Yes
[Hidden SSID]		[Enabled]	Yes/Yes
[Mode]		[Infrastructure]	Yes/Yes
[Channel]		6	Yes/Yes
[Security]		[None]	Yes/Yes
[WEP Conf.]			
	[Authentication]	[Open System]	Yes/Yes
	[Key Index]	1	Yes/Yes
	[Key #1] to [Key #4]	-	Yes/Yes
[WPA Conf.]			
	[WPA Authentication]	[Personal (PSK)]	Yes/Yes
	[PSK]	-	Yes/Yes
	[EAP Conf.]		
	[EAP Mode]	[FAST]	Yes/Yes
	[Inner Method]	[AUTO]	Yes/Yes
	[Username]	-	Yes/Yes
	[Password]	-	Yes/Yes
	[Anon. Outer ID]	-	Yes/Yes
	[Verify Server Cert.]	[Enabled]	Yes/Yes
	[Private Key P/W]	-	Yes/Yes
	[PAC Auto Provisioning]	[Disabled]	Yes/Yes
	[PAC Password]	-	Yes/Yes

- **[Network]** > **[Services]** > **[NTP]/[LPD]/[FTP]/[SFTP]/[SNMP]**

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[NTP]				
	[Enable]		[Disabled]	No/Yes[1]
	[Error]		[Disabled]	No/Yes[1]
	[Time Server IP]		0.0.0.0	No/Yes[1]
[LPD]				
	[Enable]		[Enabled]	Yes/Yes
	[DNS Lookup]		[Disabled]	Yes/Yes
[FTP]				
	[Enable]		[Disabled]	Yes/Yes
	[FTP Timeout]		300 sec	Yes/Yes
[SFTP]				
	[Enable]		[Disabled]	Yes/Yes
	[SFTP Timeout]		300 seconds	Yes/Yes
	[Authentication Method]		[Password Authentication]	Yes/Yes
	[Password Authentication]			
		[User]	sftpuser	-
		[Password]	-	Yes/Yes
	[Key Authentication]			
		[User]	sftpuser	-
		[Public Key]	[Unregistered]	Yes/Yes
[SNMP]				
	[sysContact]		-	Yes/Yes
	[sysName]		-	Yes/Yes
	[sysLocation]		-	Yes/Yes
	[prtMarkerCounterUnit]		[meters]	Yes/Yes
	[Agent]			

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
		[Enable]	[Enabled]	Yes/Yes
		[Read-Only]		
		[SNMP Version]	[1|2c|3]	Yes/Yes
		[Community]	public	Yes/Yes
		[User]	rouser	Yes/Yes
		[User Security]	[None]	Yes/Yes
		[Authentication Protocol]	[MD5]	Yes/Yes
		[Authentication Passphrase]	mypassword	Yes/Yes
		[Privacy Protocol]	[DES]	Yes/Yes
		[Privacy Passphrase]	mypassword	Yes/Yes
		[Read-Write]		
		[SNMP Version]	[Disabled]	Yes/Yes
		[Community]	private	Yes/Yes
		[User]	rwuser	Yes/Yes
		[User Security]	[None]	Yes/Yes
		[Authentication Protocol]	[MD5]	Yes/Yes
		[Authentication Passphrase]	mypassword	Yes/Yes
		[Privacy Protocol]	[DES]	Yes/Yes
		[Privacy Passphrase]	mypassword	Yes/Yes
	[Traps]			
		[Enable]	[Disabled]	Yes/Yes
		[SNMP Version]	1	Yes/Yes
		[IP Version]	4	Yes/Yes
		[Destinations]	1	Yes/Yes
		[Destination 1]	0.0.0.0	Yes/Yes
		[Destination 2]	0.0.0.0	Yes/Yes
		[Destination 3]	0.0.0.0	Yes/Yes

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
		[Community]	trapcom	Yes/Yes
		[User]	trapuser	Yes/Yes
		[Engine ID]	Number generated from codes unique to each product	Yes/Yes
		[Security]	[None]	Yes/Yes
		[Authentication Protocol]	[MD5]	Yes/Yes
		[Authentication Passphrase]	mypassword	Yes/Yes
		[Privacy Protocol]	[DES]	Yes/Yes
		[Privacy Passphrase]	mypassword	Yes/Yes

- **[Network]** > **[Services]** > **[Online Services]**

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[SOS Mode]			[Disabled]	No/No
[Allow Remote Control]			[Always]	No/No
[MQTT Protocol]			[MQTT]	No/No
[Add Device]			-	-
[Contact Information]				
	[Phone Number]		-	-
[Periodic Notification]				
	[Type]		[Disabled]	No/No
	[Counter]		[Thermal Head]	No/No
	[Head]			
		[Meters]	1000	No/No
		[Last Update]	0.0 km	-
		[Next Update]	1.0 km	-
		[Current Value]	0.0 km	-

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[Notifications]	1	No/No
[Time 1]	00:00	No/No
[Time 2]	00:00	No/No
[Time 3]	00:00	No/No
[Weekday]	[Monday]	No/No
[Day]	1	No/No
[Time]	00:00	No/No
[Update Screen]	[Normal]	No/No
[QR code offset]		
[Vertical]	0 dot	No/No
[Horizontal]	0 dot	No/No
[Daily Checkup]	-	-

- **[Network]** > **[Services]** > **[SOTI Connect]**

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[SOTI Connect]		
[SOTI Connect Services]	[Disabled]	Yes/Yes
[Start Auto Enrollment]	[Disabled]	Yes/Yes
[Auto Enrollment Server]	-	-
[Enable Client Key Passphrase]	[Disabled]	Yes/Yes
[Client Key Passphrase]	-	-
[Errors, Warnings, and Notifications Push Service]	[Disabled]	Yes/Yes

- **[Network]** > **[Advanced]**

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[ARP Announcement]				
	[Additional]		[Enabled]	Yes/Yes
	[Periodic]		300 sec	Yes/Yes
[Firewall]				
	[Enable]		[Disabled]	Yes/Yes
	[Allow Services And Ports]			
		[Data Ports]	[Enabled]	Yes/Yes
		[FTP]	[Disabled]	Yes/Yes
		[SFTP]	[Disabled]	Yes/Yes
		[LPD]	[Enabled]	Yes/Yes
		[MAILC]	[Enabled]	Yes/Yes
		[NTP]	[Disabled]	No/Yes[1]
		[Online Services]	[Disabled]	No/No
		[PING]	[Enabled]	Yes/Yes
		[SATO All-In-One Tool]	[Enabled]	Yes/Yes
		[SCP]	[Enabled]	Yes/Yes
		[SNMP Agent]	[Enabled]	Yes/Yes
		[WEBC]	[Enabled]	Yes/Yes
		[WebConfig]	[Enabled]	Yes/Yes
	[Custom Settings]			
		[TCP Source Port]		
		[Existing Port No.]	22 80 443 465 587 8080	-
		[Additional Port No.]	-	Yes/Yes
		[TCP Destination Port]		
		[Existing Port No.]	80 443 515 1024 1025 9100	-
		[Additional Port No.]	-	Yes/Yes

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
		[UDP Source Port]		
		[Existing Port No.]	53	-
		[Additional Port No.]	-	Yes/Yes
		[UDP Destination Port]		
		[Existing Port No.]	161 19541	-
		[Additional Port No.]	-	Yes/Yes
		[ICMP Type]		
		[Existing ICMP Type]	0 8	-
		[Additional ICMP Type]	-	Yes/Yes

- **[USB]/[Bluetooth]/[NFC]/[Ignore CR/LF]/[Ignore CAN/DLE]**

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[USB]				
	[Flow Control]		[STATUS4]	Yes/Yes
	[Change USB Serial]		[Disabled]	No/Yes[1]
[Bluetooth]				
	[Enable]		[Enabled]	Yes/Yes
	[BT Operation Mode]		[Device]	Yes/Yes
	[Name]		SATO PRINTER_xxxxxxxxxxxx (BD address)	Yes/Yes
	[PIN Code]		0000	Yes/Yes
	[BD Address]		xxxxxxxxxxxx	Yes/Yes
	[Firm Version]		-	No/No
	[Host BD Address]		-	Yes/Yes
	[Pairing]			
		[Paired devices]	-	No/No

Setting Item		Initial Value	Initialized by User Reset/ Factory Reset
	[IAP Ready]	[Enabled]	No/No
	[iOS Reconnect]	[Disabled]	Yes/Yes
	[Authentication]	[Level 4]	Yes/Yes
	[ISI]	2048	Yes/Yes
	[ISW]	18	Yes/Yes
	[PSI]	2048	Yes/Yes
	[PSW]	18	Yes/Yes
	[CRC Mode]	[Disabled]	Yes/Yes
	[Flow Control]	[STATUS4 MULTI]	Yes/Yes
[NFC]			
	[I/F Enable]	[Enabled]	Yes/Yes
[Ignore CR/LF]		[Disabled]	Yes/Yes
[Ignore CAN/DLE]		[Disabled]	Yes/Yes

[1]Can also initialized by [Factory Reset (-Interface)]

[Applications] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

⚠ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item		Initial Value	Initialized by User Reset/ Factory Reset
[Protocol]		[AUTO]	Yes/Yes
[SBPL]			
	[Show Error]	[Disabled]	Yes/Yes
	[Standard Code]	[Enabled]	Yes/Yes
	[Orientation]	[Portrait]	Yes/Yes

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
	[Font Settings]			
		[Zero Slash]	[Enabled]	Yes/Yes
		[Kanji]		
		[Kanji Set]	[GB18030]	Yes/Yes
		[Character Code]	[GB18030]	Yes/Yes
		[Kanji Style]	[Gothic]	Yes/Yes
		[Proportional]	[Enabled]	Yes/Yes
		[Code Page]	858	Yes/Yes
		[€]	d5	Yes/Yes
	[Compatible]			
		[CODE128(C) Zero Fill]	[Disabled]	Yes/Yes
		[Kanji Command]	[Disabled]	Yes/Yes
		[Call Font/Logo]	[Disabled]	Yes/Yes
		[PDF417 ECC Level fixed]	[Disabled]	Yes/Yes
[SZPL]				
	[Label]			
		[Shift]	0 dot	Yes/Yes
		[Top]	0 dot	Yes/Yes
	[Label Rotation]		[0 degree]	Yes/Yes
	[Caret]		94 (^)	Yes/Yes
	[Delimiter]		44 (,)	Yes/Yes
	[Tilde]		126 (~)	Yes/Yes
	[Clock Format]		[(none)]	Yes/Yes
	[Default Font]		[(none)]	Yes/Yes
[SIPL]				
	[Font Settings]			
		[Code Page]	1252	Yes/Yes

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
		[New Font Encoding]	[Disabled]	Yes/Yes
		[Proportional]	[Disabled]	Yes/Yes
		[Zero Slash]	[Disabled]	Yes/Yes
	[Format Save]		[Enabled]	Yes/Yes
[AEP]				
	[Enable]		[Disabled]	No/Yes
	[Starting Application]		Standard Demo	No/Yes
	[Delete Application]		-	-
	[Label Rotation]		[Disabled]	Yes/Yes

[System] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

> ⚠ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[Regional]				
	[Messages]		[English US]	Yes/Yes
	[External Keyboard]		[English US]	Yes/Yes
	[Locale]		[English US]	Yes/Yes
	[Unit]		[dot]	Yes/Yes
	[Time Zone]		-	Yes/Yes
		[Region]	Europe	Yes/Yes
		[City]	London	Yes/Yes
	[Display Language Icon]		[Disabled]	Yes/Yes
[Notifications]				

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
	[Clean Printhead]			
		[Clean Printhead]	[Disabled]	Yes/Yes
		[Cleaning Interval]	25 m	Yes/Yes
	[Change Printhead]			
		[Change Printhead]	[Disabled]	Yes/Yes
		[Printhead Interval]	30 km	Yes/Yes
	[Change Platen]			
		[Change Platen]	[Disabled]	Yes/Yes
		[Platen Interval]	30 km	Yes/Yes
[Sound]				
	[Volume]		3	Yes/Yes
	[Sound type]		[Type1]	Yes/Yes
[Energy Saving]				
	[Sleep Timeout]		5 sec	Yes/Yes
	[Auto Power Off]		0 min (Off)	Yes/Yes
[LCD Brightness]			3	No/Yes
[LCD Rotation]			[0 degree]	Yes/Yes
[Show Total Count]			[Disabled]	Yes/Yes
[Password]				
	[Password Enable]		[Disabled]	No/Yes
	[Install Security]		[None]	No/Yes
	[NFC Security]		[None]	Yes/Yes

[Tools] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

⚠ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[Test Print]				
	[Factory]			
		[Label Width]	[Large]	Yes/Yes
		[Pitch]	0 dot	No/No
		[Offset]	0 dot	No/No
		[Darkness Adjust]	50	No/No
	[Configure List]			
		[Label Width]	[Small]	-
		[Label Length]	800 dot	Yes/Yes
		[Pitch]	0 dot	No/No
		[Offset]	0 dot	No/No
		[Darkness Adjust]	50	No/No
	[Configure QR]			
		[Label Width]	[Small]	-
		[Label Length]	800 dot	Yes/Yes
		[Pitch]	0 dot	No/No
		[Offset]	0 dot	No/No
		[Darkness Adjust]	50	No/No
	[Paper Sensor]			
		[Label Width]	[Small]	-
		[Label Length]	800 dot	Yes/Yes
		[Pitch]	0 dot	No/No
		[Offset]	0 dot	No/No
		[Darkness Adjust]	50	No/No

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
	[BD Address]			
		[Label Width]	[Large]	-
		[Pitch]	0 dot	No/No
		[Offset]	0 dot	No/No
		[Darkness Adjust]	50	No/No
	[Head Check]			
		[Label Width]	832 dot	Yes/Yes
		[Label Length]	120 dot	Yes/Yes
		[Pitch]	0	No/No
		[Offset]	0	No/No
		[Darkness Adjust]	50	No/No
[HEX-Dump]				
	[Hex Dump Mode]		[Disabled]	Yes/Yes
[Reset]			-	-
[Profiles]			-	No/No
[Service]				
[Factory]				
[Wi-Fi Site Survey]			-	-
[Install Certificates]			-	Yes/Yes
[Delete Certificates]			-	Yes/Yes
[Clone]			-	-
[Logging Function]				
	[Enabled]		[Disabled]	No/Yes
	[Save]		-	-
	[Remove]		-	-
[Startup Guide]			[Enabled]	No/Yes

[Information] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

⚠️ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item			Initial Value	Initialized by User Reset/ Factory Reset
[Help]			-	-
[Build Version]			-	-
[Applications]			-	-
[Installation Log]			-	-
[Print Module]			-	-
[Sensor Module]			-	-
[FPGA Version]			-	-
[Counters]				
	[Head]			
		[Life]	Measured value	No/No
		[Head 1]	Measured value	No/No
		[Head 2]	Measured value	No/No
		[Head 3]	Measured value	No/No
[Estimated Printable]			-	-
[Wi-Fi]			-	-
[Wi-Fi Direct]			-	-
[Wi-Fi Versions]			-	-
[Bluetooth]			-	-

[Battery] Menu

Initial values refer to the values set for the product when it was shipped from the factory. If you reset the product, the values set in the product are initialized. The table below shows the initial value of each setting item and whether it would be initialized.

⚠ • Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

Setting Item	Initial Value	Initialized by User Reset/ Factory Reset
[Health]	-	No/No
[SOH]	-	No/No
[Cycle Counts]	-	No/No
[Eco Charge]	[Disabled]	Yes/Yes
[Full Charge Power-Off]	[Enabled]	Yes/Yes
[Voltage]	-	No/No
[Capacity]	-	No/No
[Temp]	-	No/No
[Battery Type]	-	No/No

Maintenance

Cleaning the Product

Cleaning

A dirty print head or platen roller not only affects the print quality but also causes errors and malfunctions. Clean the product periodically to keep it running reliably.

> ⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

> ⚠ • Disconnect the power cord from the AC outlet or remove the battery before you begin cleaning.
>
>   The print head and its surroundings are hot after printing. Wait until the product cools down.
>
> • Touching the edge of the print head with your bare hand could cause injury.
>
> • Use our recommended cleaning products for cleaning. Do not clean with a hard object. Doing so could cause damage.
>
> • Remove the media before cleaning.
>
> • Open the top cover and remove linerless labels from the platen roller if they are not used for printing for a long period. Paper jam might occur if the top cover is closed for a long period with linerless labels loaded.

> ✎ • Contact your SATO reseller or technical support to purchase the cleaning kit, cleaning sheets, and other of our cleaning products.

Cleaning Intervals

Clean the product at the following regular intervals.

> • The below cleaning intervals are only for reference. Clean the product when necessary even if you are not at a regular interval.

- After you print 1 media roll or whenever there is any glue residue or paper dust on the media route.

  Clean following parts:
    ◦ Platen roller
    ◦ Linerless platen roller (linerless models only)
    ◦ Print head
    ◦ Media guide
    ◦ Media sensors
    ◦ Media roll holder
    ◦ Media route around the platen roller
    ◦ Media route around the linerless platen roller (linerless models only)
    ◦ Dispenser unit
    ◦ Linerless tear-off parts (linerless models only)

Cleaning the Inside of the Product

This topic explains how to clean the inside of the product.

> ⚠️ • Be sure to power off the product and remove the battery before cleaning the product.
>
> • Never use organic solvents, such as thinner and benzine to clean the product.
>
> • Do not use cleaning fluids other than the ones recommended by us.

> ✎ • Cleaning fluid for the product is optional. To purchase the cleaning fluid for the product, contact your SATO reseller or technical support.

1. **Make sure that the product is powered off, and then remove the battery.**

2. **Press the cover open button (1) to open the top cover (2).**
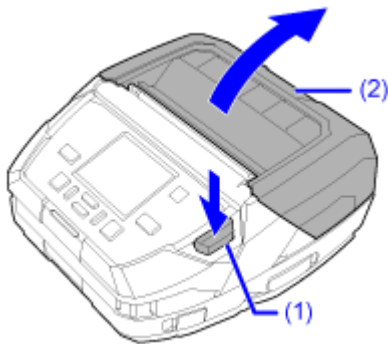
3. **Remove the media if it is already loaded.**

4. **Use a cotton cloth dampened with cleaning fluid to wipe dirt off the print head (3).**

> ⚠️ • The print head and its surroundings are hot after printing. Wait until the product cools down.
>
> • Touching the edge of the print head with your bare hand could cause injury.
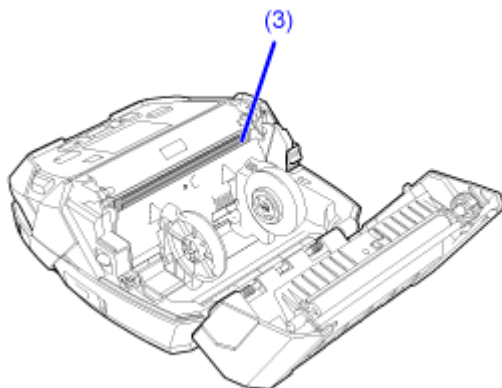
5. **Use a cotton cloth dampened with cleaning fluid to wipe dirt off the media guides (4), media roll holder (5), 3 sensors (6), media route around the platen roller (7), and the platen roller (8).**
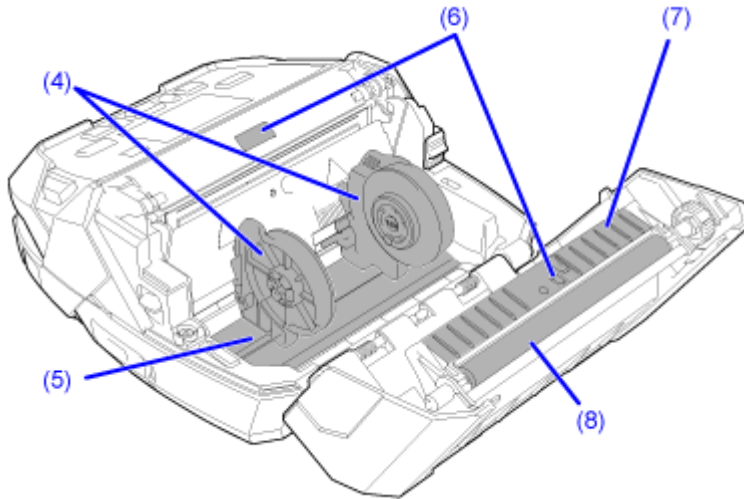
6. **Press the dispenser roller release button (9), and pull out the dispenser unit (10), and then use a cotton cloth soaked in cleaning fluid to wipe away any dirt.**
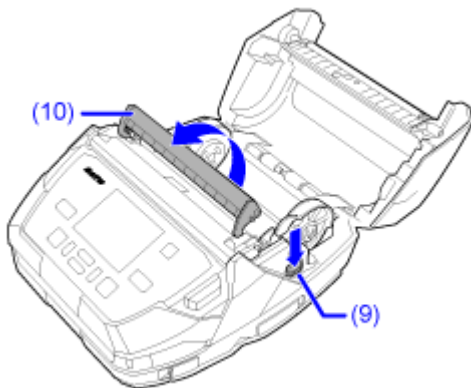
7. **Reload the media if you removed it in step 3.**

8. **Close the top cover.**

    Push both ends of the top cover, and close it firmly until it clicks.

    ⚠️ • When closing the top cover, be careful not to pinch your fingers.

Cleaning the Inside of the Product (for Linerless Models)

This topic explains how to clean the inside of the product, for linerless models.

⚠ • Be sure to power off the product and remove the battery before cleaning the product.

• Never use organic solvents, such as thinner and benzine to clean the product.

✎ • Cleaning fluid for the product is optional. To purchase the cleaning fluid for the product, contact your SATO reseller or technical support.

1. **Make sure that the product is powered off, and then remove the battery.**

2. **Press the cover open button (1) to open the top cover (2).**
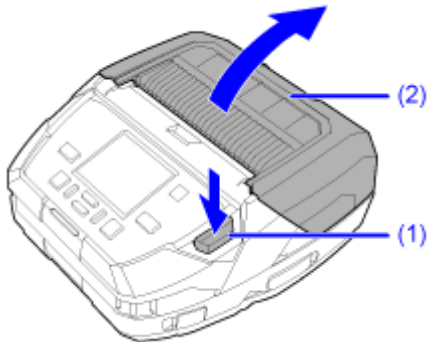
3. **Remove the media if it is already loaded.**

4. **Use a cotton cloth dampened with cleaning fluid to wipe dirt off the print head (3).**

⚠ • The print head and its surroundings are hot after printing. Wait until the product cools down.

• Touching the edge of the print head with your bare hand could cause injury.
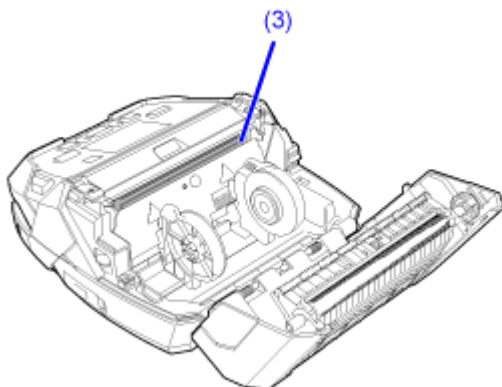
5. **Use a cotton cloth dampened with cleaning fluid to wipe dirt off the linerless tear-off parts (4), media guides (5), media roll holder (6), 3 sensors (7), rollers (8), media route around the linerless platen roller (9), and the linerless platen roller (10).**
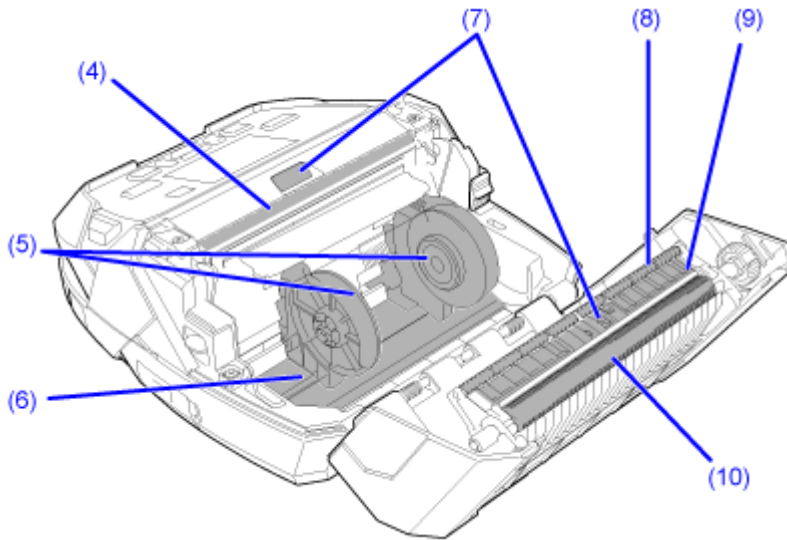
6. **Reload the media if you removed it in step 3.**

7. **Close the top cover.**

   Push both ends of the top cover, and close it firmly until it clicks.

   ⚠️ • When closing the top cover, be careful not to pinch your fingers.

Cleaning the Exterior of the Product Using Disinfectant Chemicals

You can clean the exterior of the product using disinfectant chemicals.

Available chemicals are as follows:

Read the manufacturer's precautions before using any of these chemicals and be sure to use them as instructed.

- Benzalkonium chloride less than 0.5% (approximately equal to a quaternary ammonium compound)
- Sodium hypochlorite less than 0.5% [1]
- Hydrogen peroxide solution less than 6%
- Isopropyl alcohol 100%

⚠️
- Do not use cleaning fluids other than the ones recommended by us for cleaning the inside of the product. Doing so could cause corrosion and lead to product malfunctions.
- Do not use sodium hypochlorite or hydrogen peroxide solution on the metal parts of the product. They have oxidizing properties, so if they get on metal parts of the product, they could oxidize and corrode its metal parts. So, if these chemicals get on the metal parts of the product, wipe them immediately. Be especially careful that these chemicals do not get on the following parts.

  - Top cover hinge shaft, 2 springs
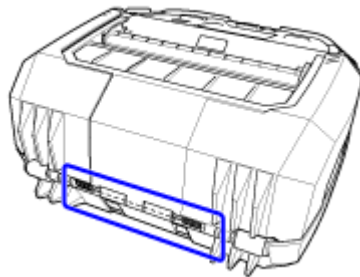
  - Print head
  - Platen roller
  - Display
  - Battery terminals
  - Charging terminal for the 1Bay Charging Cradle

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[1] When using a product that includes sodium hypochlorite (bleach), follow the procedures that are recommended by its manufacturer.

1. **Make sure that the product is powered off, and remove the battery.**

2. **Wearing gloves, wipe the exterior of the product using a cotton cloth dampened with a disinfectant chemical.**
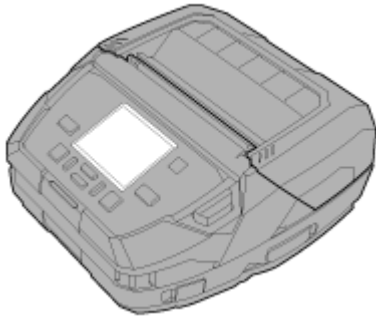
⚠️ • Wipe off the surfaces of the product so that no chemicals remain.

• Do not spray chemicals directly onto the product. Chemicals that get into the product through gaps may cause malfunctions.

Replacing Consumable Parts

Replacing the Print Head

You can easily remove and replace a damaged or worn print head.

> ⚠ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
>
> • Disconnect the power supplies, such as the power cord and the battery before you begin replacing the print head.
>
> • Wear gloves before replacing the print head, to prevent damage to the print head.

1. **Make sure that the product is powered off, and then remove the battery.**

2. **Press the cover open button (1) to open the top cover (2).**
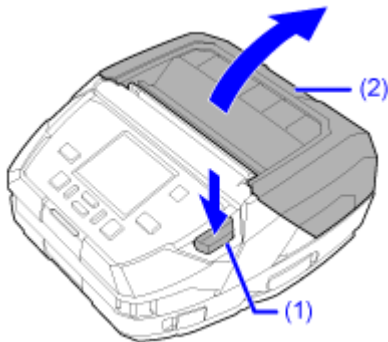
3. **Press the dispenser roller release button (3), and pull out the dispenser unit (4).**
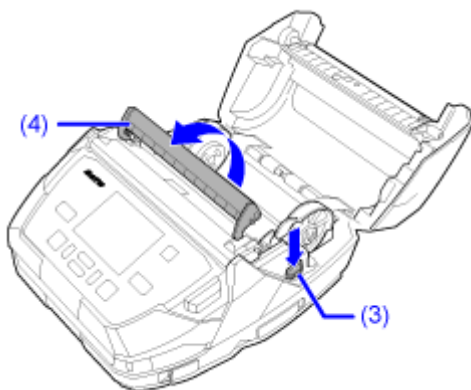
4. **Remove the media if it is already loaded.**

5. **Take out the print head (5).**

⚠️
- The print head and its surroundings are hot after printing. Wait until the product cools down.

- Touching the edge of the print head with your bare hand could cause injury.

- Do not touch the heating unit and terminals of the print head.

a. Press in the print head (5) while pulling it out upward.
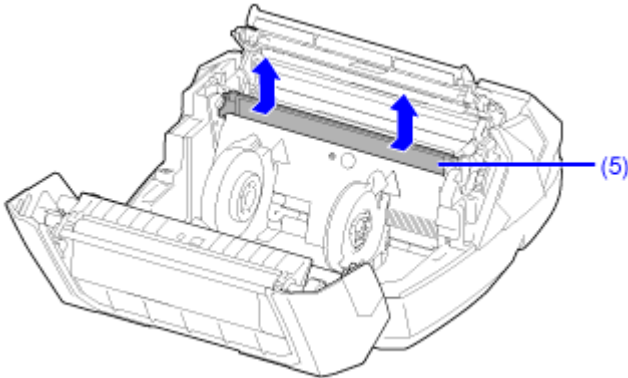
b. Raise both ends of the connector (6), and remove the flat cable (7).
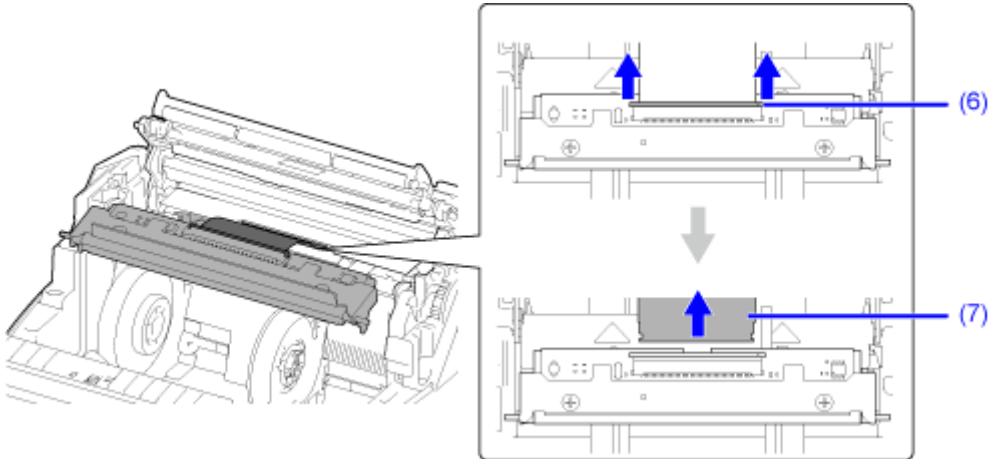
6. **Insert the flat cable (7) into the connector (6) of the new print head, and press the connector in, in the direction of the arrows.**
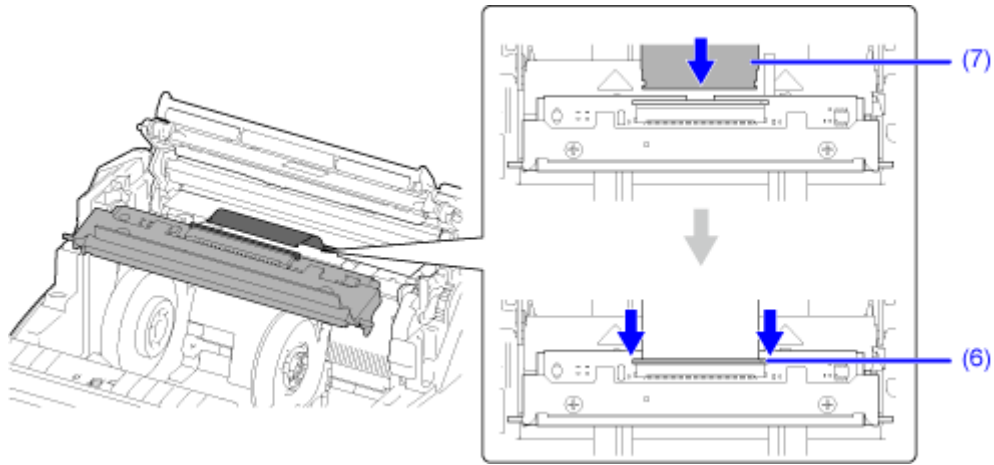
Insert the flat cable perpendicularly into the connector until the white line on the flat cable.
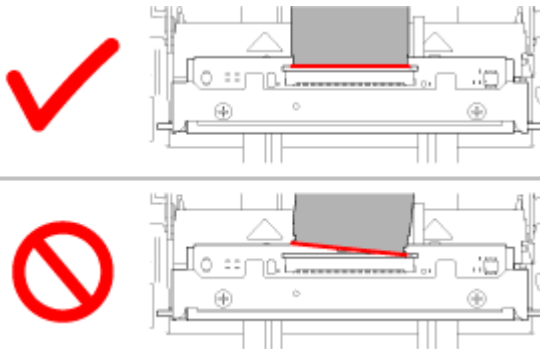
> ✎ • Handle the print head and flat cable with care. Do not contaminate or scratch the sensitive print head surface.

7. **Insert the print head, install it to fix the grooves on both ends as you press it inward.**
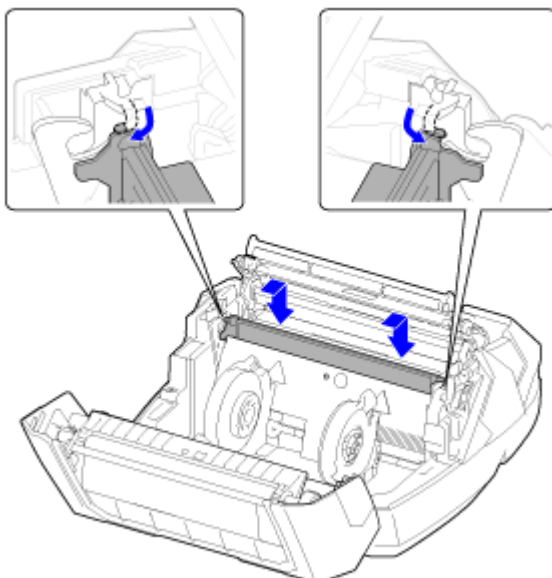
8. **Reload the media if you removed it in step 4.**

9. **Close the top cover.**

    Push both ends of the top cover, and close it firmly until it clicks.

⚠	•	When closing the top cover, be careful not to pinch your fingers.

Replacing the Platen Roller

You can easily remove and replace a damaged or worn platen roller.

> ⚠️ • Do not power on or off the product, connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
>
> • Disconnect the power cord from the AC outlet and remove the battery before you begin replacing the platen roller.

> ✏️ Tools to prepare
>
> • Philips screwdriver

1. **Make sure that the product is powered off, and then remove the battery.**

2. **Press the cover open button (1) to open the top cover (2).**
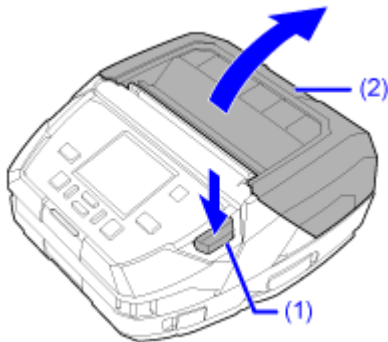
3. **Remove the media if it is already loaded.**

4. **Loosen the 2 fixed screws.**
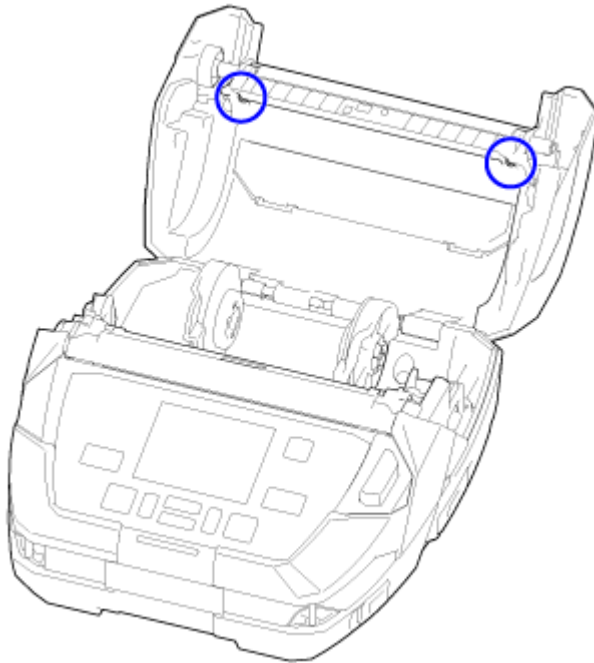
5. **Lower the inner cover (3) forward and pull the platen roller (4) forward to remove it.**
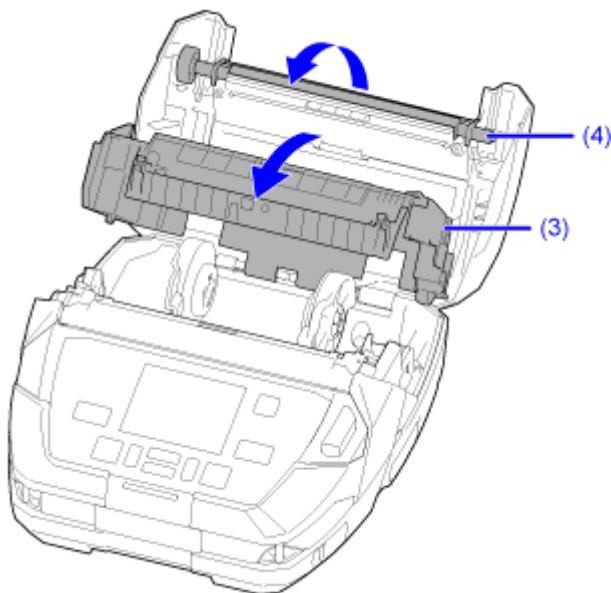
6. **Install the new platen roller (5) and lower it inside ❶ and press on both ends firmly from above ❷.**
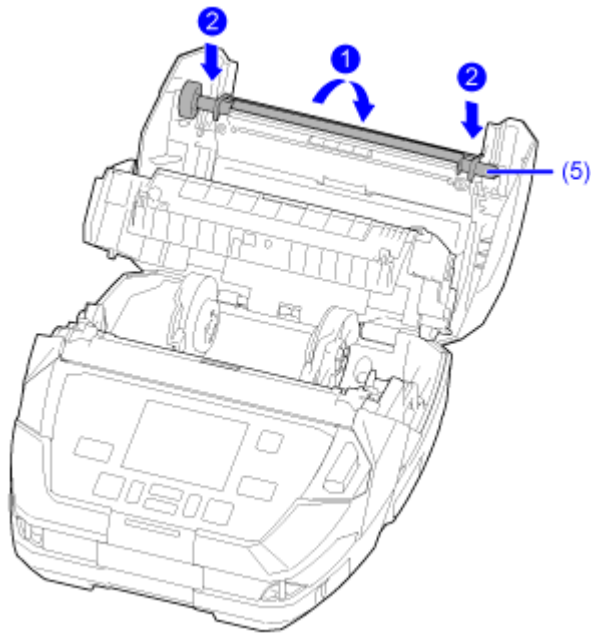
7. **Return the inner cover (3).**
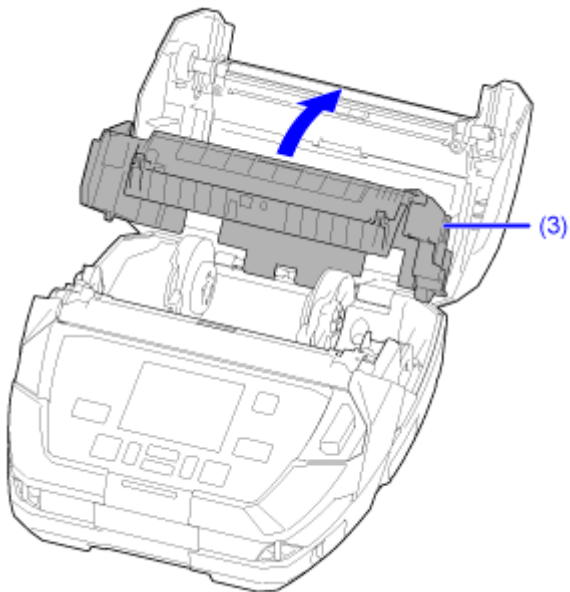
8. **Fasten the 2 screws.**
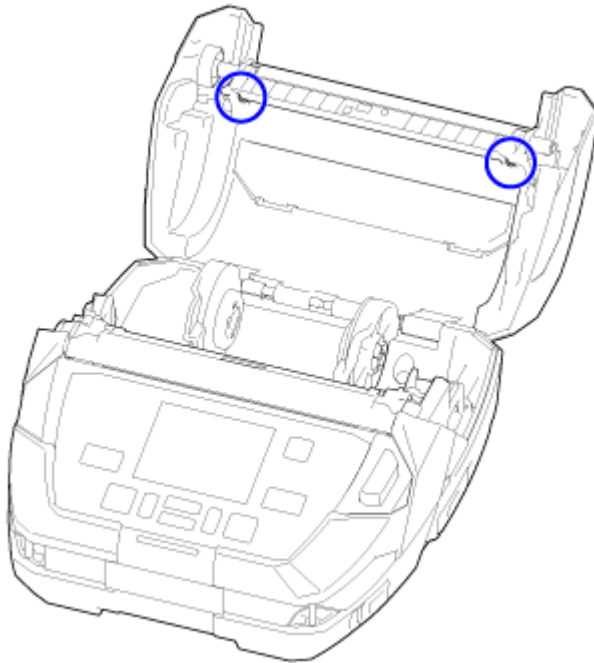
9. **Reload the media if you removed it in step 3.**

10. **Close the top cover.**

   Push both ends of the top cover, and close it firmly until it clicks.

   ⚠ • When closing the top cover, be careful not to pinch your fingers.

Linerless Platen Roller Replacement Timing

The linerless platen roller has a blue stripe on the center of the roller. When the blue striped marking started to fade off, it indicates that you should replace the linerless platen roller.

- This is only a general guideline. The condition in which the linerless platen roller wears out varies depending on the media that is used. In any case, replace the worn linerless platen roller when it affects the printing quality of the product.

Operating the Notification Screen of the SOS (SATO Online Services) On-Demand Mode (SOS users only)

In the SOS (SATO Online Services) function, the product information is sent to the SOS cloud and monitored and managed.

The status icon SOS and the notification screen appear at the time specified when [SOS Mode] is set to [On-Demand] in the [Interface] > [Network] > [Services] > [Online Services] menu and [Periodic Notification] is enabled on the product. A QR code with the product information is displayed on the notification screen. You can send the product information to the SOS cloud by scanning the QR code with a tablet or a smartphone.

The following shows how to operate the notification screen.

The soft key function changes according to the setting of [Update Screen].

When [Update Screen] Is Set to [Normal]

By pressing the ▬ button (✕), the display returns to the Offline screen without resetting the QR code for periodic notification.

The status icon remains SOS.

By pressing the ▬ button (✓), the QR code for periodic notification is reset and the display returns to the Offline screen.

The status icon changes to SOS.

When [Update Screen] Is Set to [Print]

By pressing the ▬ button (✖), the QR code for periodic notification is reset and the display returns to the Offline screen.

The status icon changes to **SOS**.

By pressing the ▬ button (PRINT), the QR code for periodic notification is printed.

✏️ • QR codes can also be displayed from [Daily Checkup].

SOS (SATO Online Services) Application (SOS users only)

Information on the product can be sent to the SOS cloud if you enable the SOS (SATO Online Services) on the product. To send the information on the product to the SOS cloud, you need to install the SOS application on an NFC-enabled mobile device and connect it with the product.

The SOS application allows you to check the operation information of the product, save and apply clones, and request repairs. You can also use asset management functions in the SOS cloud.

For instructions on installing and using the SOS application, refer to the SOS application user's manual.

☞ https://www.sato-sos.com/en/support/#sos_use_manual

When You Are in Trouble

When an Error Message Appears

Error Message 1001 (Machine Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Power off the product.

Cause and Countermeasure	Reference

Cause
 	
    A defect has occurred in the product.
 	
Countermeasure
 	
    Power the product off and then on again.
	☞ Powering On/Off the Product

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

Error Message 1007 (Cover Open)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Close the top cover.

Cause and Countermeasure
Cause (1) The top cover is open. **Countermeasure (1)** Close the top cover so that it clicks when locked.
Cause (2) The sensor for detecting the open/close status of the top cover is defective. **Countermeasure (2)** Contact your technical support.

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1008 (Out of Paper)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open the top cover and load media or press the ▬ button (CLEAR) or the ▶❚❚ button.

Cause and Countermeasure	Reference
Cause (1) The media is not loaded. **Countermeasure (1)** Load the media.	📑 Loading the Media
Cause (2) The media is not loaded correctly. **Countermeasure (2)** Load the media correctly.	📑 Loading the Media
Cause (3) The media sensor level is not set correctly. **Countermeasure (3)** Adjust the media sensor level.	📑 Calibrate
Cause (4) The media sensor is not operating correctly. ◦ The media sensor is dirty, or there is a label attached to it. ◦ The media sensor has poor sensitivity.	📑 Cleaning the Inside of the Product 📑 Cleaning the Inside of the Product (for Linerless Models)

Cause and Countermeasure	Reference
Countermeasure (4) Clean the media sensor.	

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1010 (Media Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open and close the top cover or press the ▬ button (CLEAR) or the ▷❚❚ button.

Cause and Countermeasure	Reference
Cause (1) The media size of the print data and the actual media size are different. **Countermeasure (1)** Check the media size of the print data and the actual media size again. If the error is not solved, power on the product again.	-
Cause (2) The media size of the print data is longer than the actual media size. **Countermeasure (2)** Check the print data. If the error is not solved, power on the product again.	-
Cause (3) The media is fed a longer distance due to the incorrect sensor level.	☞[Calibrate](#)

Cause and Countermeasure	Reference
Countermeasure (3) Adjust the media sensor level. If the error is not solved, power on the product again.	

- The media error appears when [Check Media Size] in [Advanced] under the [Printing] menu is set to [Enabled].

  Check Media Size

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1012 (Head Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
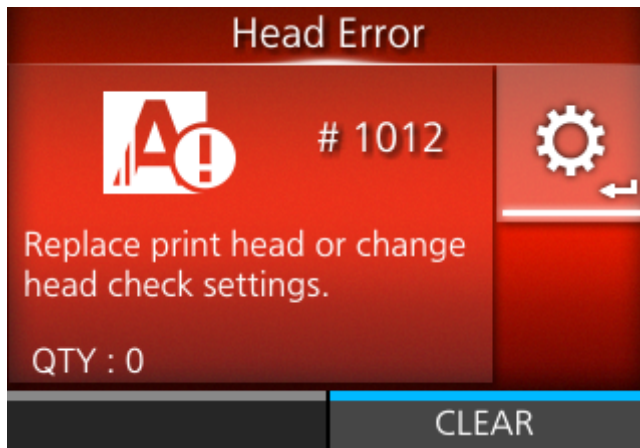
To clear the error:

Press and hold the ▬ button (CLEAR) for 5 seconds to switch to Offline mode and temporarily disable the head check until the product is powered off.

☞ [Head Check](#)

Cause and Countermeasure	Reference
Cause The print head is worn or damaged. **Countermeasure** Replace the print head.	☞[Replacing the Print Head](#) ☞[Contact Information for When You Are in Trouble](#)

⚠️ • Regarding labels output after a head error, use your own barcode scanner to read and check the printed barcodes.

Error Message 1013 (USB R/W Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
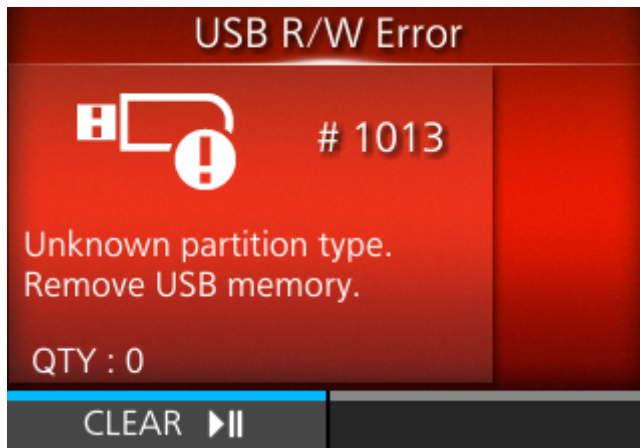
To clear the error:

Connect the USB memory and then disconnect it, or press the ▬ button (CLEAR) or the ▷‖ button.

Cause and Countermeasure

Cause (1)
    The USB memory is disconnected while writing.
Countermeasure (1)
    Connect the USB memory.

Cause (2)
    The copy area in the USB memory is not sufficient.
Countermeasure (2)
    Make sure that the USB memory has sufficient copy area.

Cause (3)
    Writing to the USB memory fails.
Countermeasure (3)
    Replace the USB memory.

Cause (4)   The USB memory is not formatted.

Cause and Countermeasure
Countermeasure (4)   Format the USB memory to FAT32 format.

Contact your SATO technical support if the error cannot be resolved.

Error Message 1017 (SBPL Command Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CANCEL) or ▷|| button.

Cause and Countermeasure	Reference

Cause
 	
Incorrect command or parameter in the print data.
 	
For details about the error, check the "Caaa: \<bb\>: cc" part below the error number.
 	
  ◦ Caaa: position of error occurrence
 	
  ◦ \<bb\>: error command name
 	
  ◦ cc: error content
 	
Countermeasure
 	
Check the print data.
 	
If the error is not solved, power on the product again.
 	
--- 	
 	
  • The command error appears when [Show Error] in [SBPL] under the [Applications] menu is set to [Enabled].
 	
--- 	
	☞ How to See the Command Error Information
	
	☞ Show Error

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

How to See the Command Error Information

  • **Location of error occurrence**

"Caaa" in the command error message shows the location of command error.
The number of ESC commands from start code <A> command is shown in "aaa".
Note that the start code <A> command is not included in the number of ESC commands, which can be shown up to 999.
When a command error is detected by the Horizontal Print Position <H> command.

------: [ESC]A
C001: [ESC]V100
C002: [ESC]H99999
C003: [ESC]L0202
C004: [ESC]M,ABCDEF
C005: [ESC]Q1
C006: [ESC]Z

In this case, C002 is the location of the error.

- **Error command name**

   The command name is shown in "<bb>". Error is detected in the command name.

   ◦   A one-byte command name is left aligned

- **Error description**

   The cause of command error appears in "cc" in the error message ("Caaa:<bb>:cc").

Description ("cc")	Cause
Invalid command	Analyzed improper command.
Invalid parameter	Received improper parameter.
Command table read error	Failed to read the command table.
Invalid graphic data/ custom designed data	Analyzed improper graphic and custom designed data.
Invalid registration area	• Specified memory area (card slot) is inappropriate. • Tried to write to a write-protected media.
This number is already registered.	Number specified by registration command has already been taken.
Over registration area limit	Exceeded the registration area. (Memory full)
Data is not registered	Data, such as form overlay, is not registered.
Printing position is out of printable area	The specified print start position is outside the printable area.
Barcode image is out of printable area	The printing image is outside the printable area. (Barcode only)

Description ("cc")	Cause
PDF417 is specified incorrectly	There is a mistake in the PDF417 specification.
Error in generating QR code	There was a fault when generating the QR code.

Error Message 1022 (Print Head Overheated)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Stop the operation of the product to let the temperature decrease.

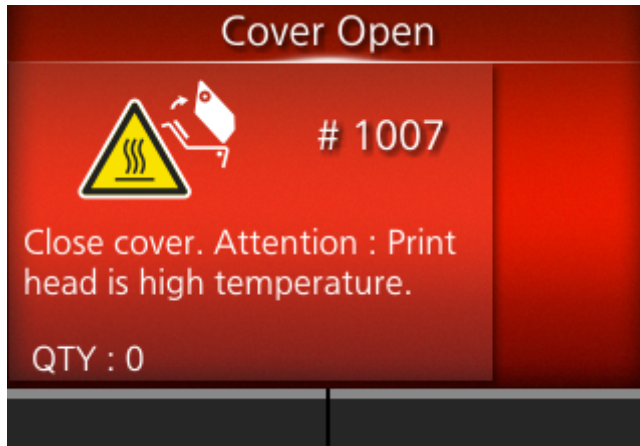| Cause and Countermeasure |
| --- |
| **Cause**
The temperature of the product has exceeded its tolerance value.
Countermeasure
Stop the operation of the product to let the temperature decrease. |

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1023 (NTP Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▭ button (CLEAR) or change the network settings.

Cause and Countermeasure	Reference
Cause (1) Could not connect to the time server and set the date and time. **Countermeasure (1)** ◦ Confirm that the address of the time server is correct. ◦ Confirm that there is a connection to the time server.	☞ [Time Server IP](#) ☞ [Regional](#)
Cause (2) There was a mistake in the network settings or a network malfunction occurred. **Countermeasure (2)** Check the network settings and the network environment.	☞ [Network](#)

Contact your SATO technical support if the error cannot be resolved.

☞ [Contact Information for When You Are in Trouble](#)

Error Message 1028 (Gap Not Found)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open and close the top cover or press the ▬ button (CLEAR) or the ▶‖ button.

Cause and Countermeasure	Reference
Cause (1) Meandering media. **Countermeasure (1)** Load the media correctly.	☞[Loading the Media](#)
Cause (2) A label is attached to the media sensor. **Countermeasure (2)** Clean the media sensor.	☞[Cleaning the Inside of the Product](#)
Cause (3) The media sensor type is incorrect. **Countermeasure (3)** Set the media sensor type which is compatible with the media you use.	☞[Media Sensor Type](#)
Cause (4) The media sensor level is incorrect.	☞[Calibrate](#)

Cause and Countermeasure	Reference
Countermeasure (4) Adjust the media sensor level.	

Contact your SATO technical support if the error cannot be resolved.

[Contact Information for When You Are in Trouble](#)

Error Message 1035 (I-mark Not Found)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open and close the top cover or press the ▬ button (CLEAR) or the ▶‖ button.

Cause and Countermeasure	Reference
Cause (1) Meandering media. **Countermeasure (1)** Load the media correctly.	☞ Loading the Media
Cause (2) A label is attached to the media sensor. **Countermeasure (2)** Clean the media sensor.	☞ Cleaning the Inside of the Product
Cause (3) The media sensor type is incorrect. **Countermeasure (3)** Set the media sensor type which is compatible with the media you use.	☞ Media Sensor Type
Cause (4) The media sensor level is incorrect.	☞ Calibrate

Cause and Countermeasure	Reference
Countermeasure (4) 　Adjust the media sensor level.	

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1043 (Battery Low)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
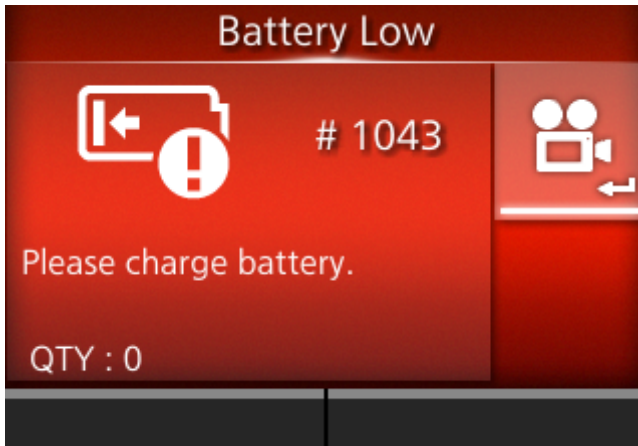
To clear the error:

Connect an AC adapter and charge the battery so that the low battery level is cleared. The product is automatically powered off after 30 to 40 seconds.

Cause and Countermeasure	Reference
Cause The battery is running low. **Countermeasure** Charge or replace the battery.	Charging the Battery Inserting the Battery

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1046 (EAP Authentication Error (EAP Failure))

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Change the Wi-Fi settings or press the ▬ button (CLEAR).

Cause and Countermeasure	Reference

Cause
    EAP Authentication failure.
Countermeasure
    Use the correct Wi-Fi settings.
	☞EAP Conf.

Contact your SATO technical support if the error cannot be resolved.

☞Contact Information for When You Are in Trouble

Error Message 1047 (EAP Authentication Error (EAP Timeout))

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause EAP Authentication failure. --- ✎ • This error occurs when authentication with the EAP authentication server times out. This error will not occur if the connection to the access point is not established. --- **Countermeasure** Use the correct Access Point (AP) and authentication server settings.	☞[EAP Conf.](#)

Contact your SATO technical support if the error cannot be resolved.

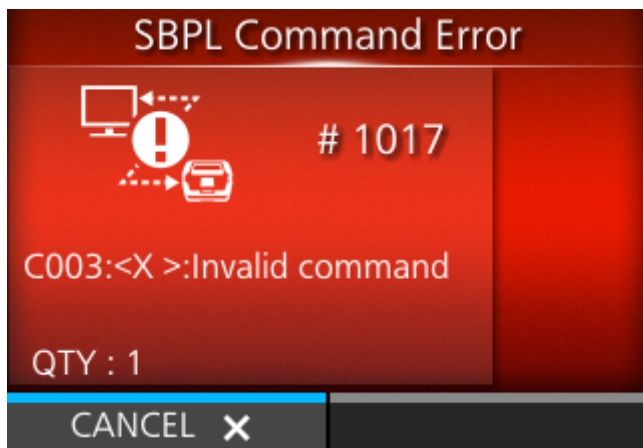☞[Contact Information for When You Are in Trouble](#)

Error Message 1050 (Bluetooth Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause Bluetooth module is defective. **Countermeasure** Replacement of control board is necessary. Contact your SATO technical support.	☞Contact Information for When You Are in Trouble

Error Message 1058 (CRC Check Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CANCEL) or ▬ button (PRINT).

Cause and Countermeasure

Cause
 	
   ◦   CRC has not been added to the data.
 	
   ◦   CRC does not match.
 	
Countermeasure
 	
Check transmitted data and interface settings.
 	
   ◦   [PRINT]: Continue printing from the print data where the CRC error occurred.
 	
   ◦   [CANCEL]: Cancel the print data where the CRC error occurred and continue printing from the next item.

Contact your SATO technical support if the error cannot be resolved.

☞Contact Information for When You Are in Trouble

Error Message 1059 (Battery Low)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
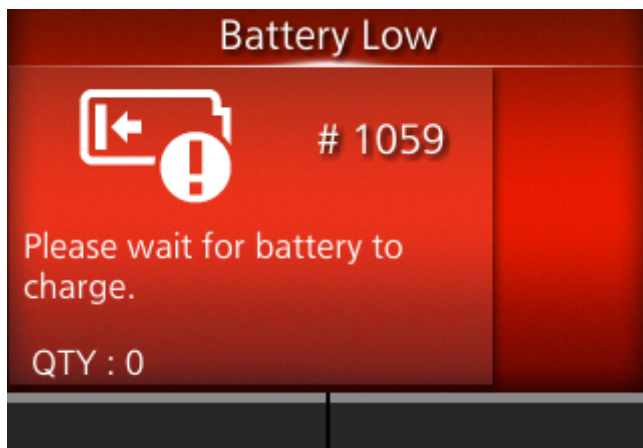
To clear the error:

Charge the product until printing is possible.

Cause and Countermeasure
Cause The battery is being charged with low battery status. **Countermeasure** Charge the product so that it can perform printing.

Contact your SATO technical support if the error cannot be resolved.

 Contact Information for When You Are in Trouble

Error Message 1060 (No Battery)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

No Battery
1060
Please insert battery.
QTY : 0

To clear the error:

Insert the battery.

Cause and Countermeasure	Reference
Cause ◦ The battery is disconnected. ◦ The battery is not inserted. **Countermeasure** Insert the battery.	☞ Inserting the Battery

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

Error Message 1061 (Battery Degradation)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Replace the battery.

Cause and Countermeasure	Reference
Cause The battery has deteriorated. **Countermeasure** Replace the battery. • When this error occurs, charging is not possible.	Inserting the Battery

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1062 (Battery Temperature Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Replace the battery.

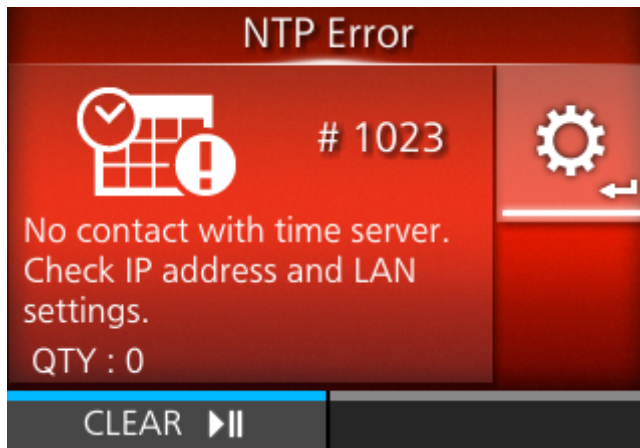| Cause and Countermeasure	Reference
Cause The battery temperature is abnormal. **Countermeasure** Replace the battery. • When this error occurs, charging and operations are not possible. Check the environmental conditions in which the product is being used.	Inserting the Battery Hardware

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1063 (Battery Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Replace the battery.

Cause and Countermeasure	Reference
Cause A defect has occurred in the battery. **Countermeasure** Replace the battery. • When this error occurs, charging is not possible.	Inserting the Battery

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1064 (Motor Overheated)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Stop the operation of the product to let the temperature decrease.

Cause and Countermeasure
Cause The temperature of the product has exceeded its tolerance value. **Countermeasure** Stop the operation of the product to let the temperature decrease.

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1066 (Paper Jam)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
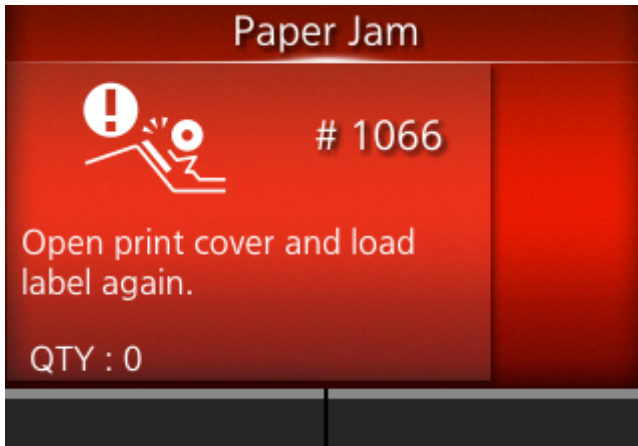
To clear the error:

Open the top cover and load the media again.

Cause and Countermeasure	Reference
Cause (1) The media has jammed. **Countermeasure (1)** Remove the jammed media. Refer to the video for loading the media, for the media path, and for the operation of each part inside the product.	☞ Loading the Media
Cause (2) The media is not loaded correctly. **Countermeasure (2)** Load the media correctly.	☞ Loading the Media
Cause (3) Something, such as glue, is stuck to the media path, and a feed problem has occurred. **Countermeasure (3)** Clean the inside of the product.	☞ Cleaning the Inside of the Product ☞ Cleaning the Inside of the Product (for Linerless Models)
Cause (4) A label is attached to the media sensor.	☞ Cleaning the Inside of the Product

Cause and Countermeasure	Reference
Countermeasure (4) Clean the media sensor.	☞ Cleaning the Inside of the Product (for Linerless Models)

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

Error Message 1067 (Charging)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
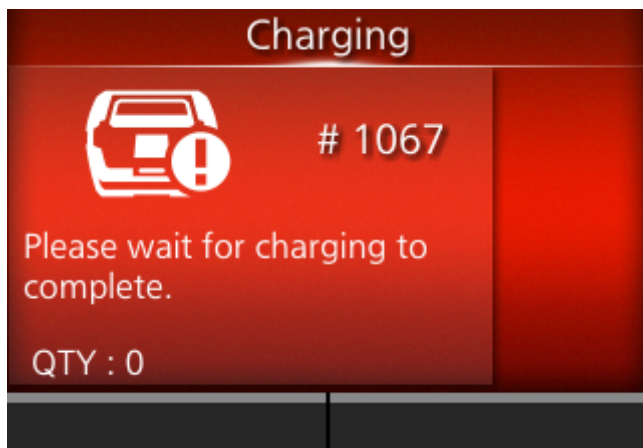
To clear the error:

Wait until charging of the battery is complete. Or, stop charging the battery.

Cause and Countermeasure

Cause
    You cannot power off the product during charging.
Countermeasure
    Power off the product after charging is complete.

Contact your SATO technical support if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1068 (WLAN Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause The wireless LAN module is damaged. **Countermeasure** Replacement of control board is necessary. Contact your SATO technical support.	☞[Contact Information for When You Are in Trouble](#)

Error Message 1070 (Battery wearing out)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause The battery is exhausted. It is recommended that the battery should be replaced. The operation time may become short and printing quality may become poor. **Countermeasure** Replace the battery.	👉 [Inserting the Battery](#)

Contact your SATO technical support if the error cannot be resolved.

👉 [Contact Information for When You Are in Trouble](#)

Error Message 1071 (Worn out battery)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause The battery is exhausted. Replace the battery. The operation time may become short and printing quality may become poor. **Countermeasure** Replace the battery.	☞ [Inserting the Battery](#)

Contact your SATO technical support if the error cannot be resolved.

☞[Contact Information for When You Are in Trouble](#)

Error Message 1072 (Power Off Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

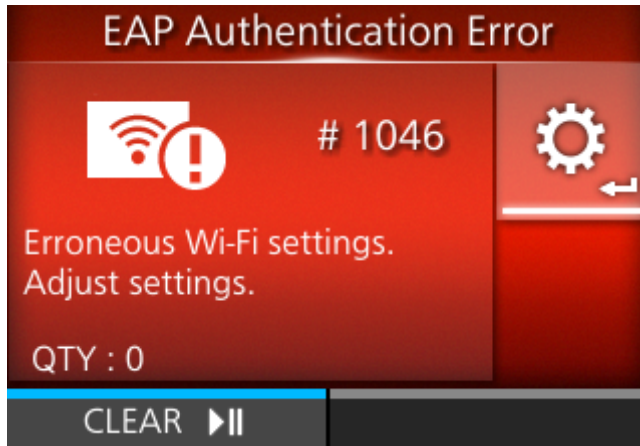| Cause and Countermeasure |
| --- |
| **Cause**

The product has not been correctly powered off. (The battery is disconnected.)

Countermeasure

◦ Power off the product, and then remove the battery.

◦ Check the setting information. |

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

Error Message 1075 (NFC Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause The NFC module is not operating correctly. **Countermeasure** A replacement of the NFC module is required. Contact your SATO technical support.	☞ Contact Information for When You Are in Trouble

Error Message 1076 (Invalid command in NFC)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
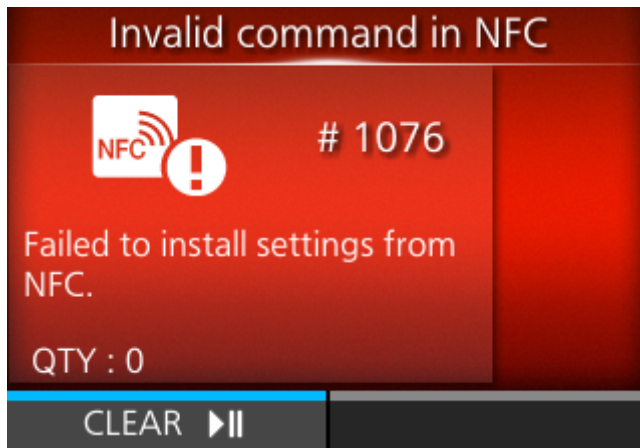
To clear the error:

Press the ▬ button (CLEAR).

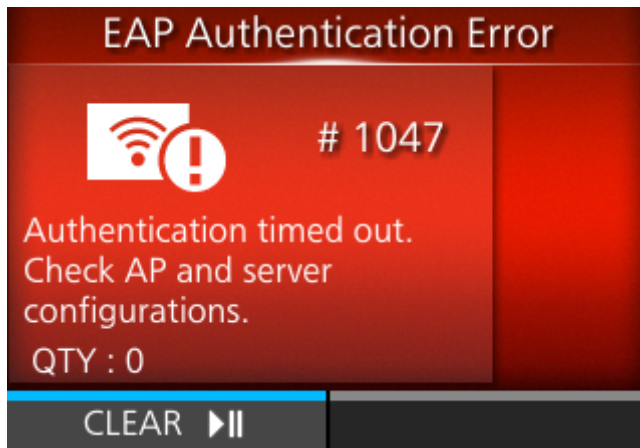| Cause and Countermeasure |
|---|
| **Cause**
A command error occurs and the settings are not saved correctly.
Countermeasure
Check the command. |

Contact your SATO technical support if the error cannot be resolved.

☞ Contact Information for When You Are in Trouble

Error Message 1099 (Config Warning)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

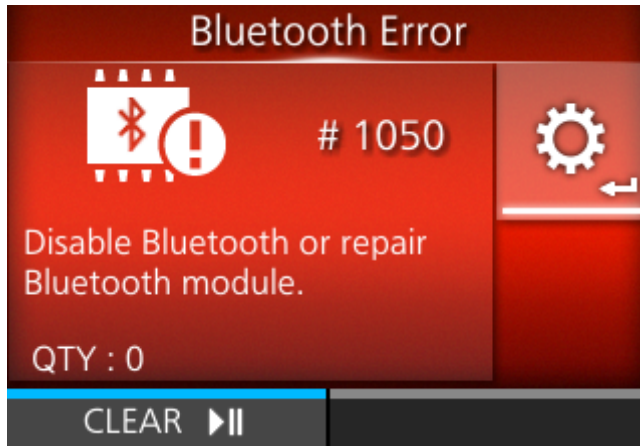| Cause and Countermeasure	Reference
Cause The product has not been correctly powered off. (The battery is disconnected or other problem exists.) **Countermeasure** ◦ Power off the product correctly. ◦ Reset the product in the Settings menu.	☞ [Powering Off the Product](#) ☞ [The Settings Menu](#)

Contact your SATO technical support if the error cannot be resolved.

☞ [Contact Information for When You Are in Trouble](#)

Error Message 1128 (Bluetooth MFi Chip Module Error)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Press the ▬ button (CLEAR).

Cause and Countermeasure	Reference
Cause The MFi chip in the Bluetooth module is damaged. **Countermeasure** Replacement of control board is necessary. Contact your SATO technical support.	☞[Contact Information for When You Are in Trouble](#)

Error Message 1137 (Invalid Dispenser Setup)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
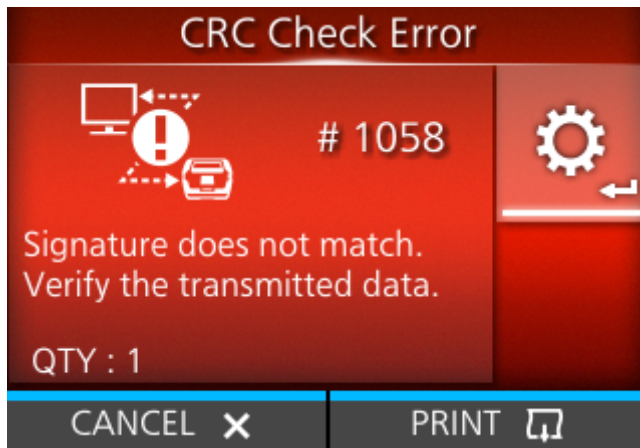

To clear the error:

Open and close the top cover or press the ▬ button (CLEAR) or the ▶‖ button.

Cause and Countermeasure	Reference
Cause The dispenser unit status is different from the print mode settings, when printing. **Countermeasure** If the dispenser unit is pulled out, then set [Print Mode] to [Dispenser]. If the dispenser unit is not set up, then set something other than [Dispenser].	☞[Manually Setting the Print Mode](#)

Contact your SATO technical support if the error cannot be resolved.

☞[Contact Information for When You Are in Trouble](#)

Error Message 1138 (Battery Lock)

When there is an error with the product, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.
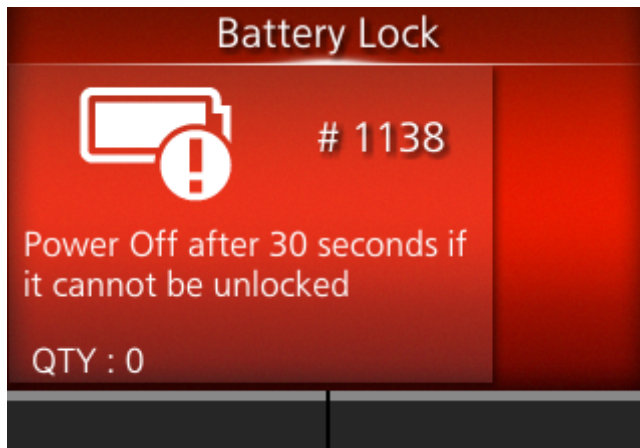
To clear the error:

Do the following "Countermeasure" to release the battery lock condition.

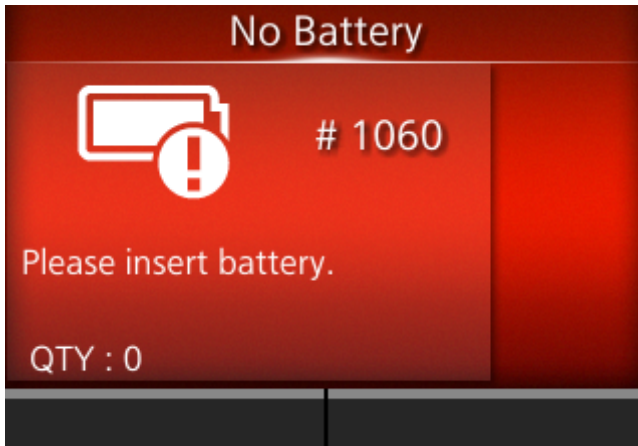| Cause and Countermeasure	Reference
Cause The battery's battery lock protection has activated because the product was used continuously in a high-temperature or low-temperature environment, or high print-ratio printing was done continuously. **Countermeasure** ◦ Remove the battery from the product, and then wait about 10 seconds. ◦ Charge the battery with the AC adapter (option) or the battery charger (option) If it is not resolved, replace the battery.	☞Charging Using AC Adapter (Option) ☞Charging Using the Battery Charger (Option)

Contact your SATO technical support if the error cannot be resolved.

☞Contact Information for When You Are in Trouble

Error Message Indication and Operating Procedure When the SOS (SATO Online Services) Is Enabled (SOS users only)

The SOS (SATO Online Services) icon appears in the error message when SOS is enabled.

If you select the SOS icon, a QR code containing the error information and the contact telephone number appears.

- **Press the** **button.**
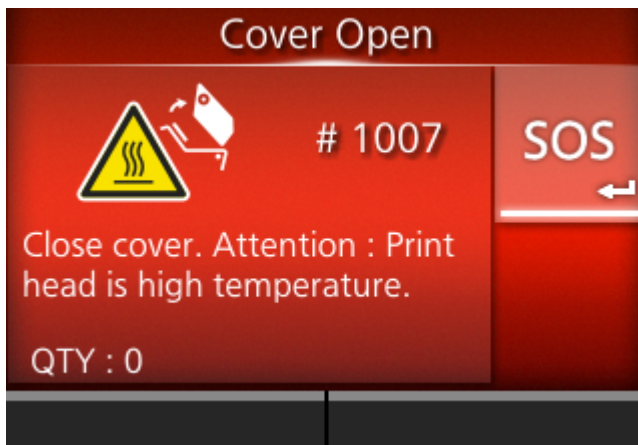
- **If the icon of the guidance videos also appears, select the SOS icon using the** / **button, and then press the** **button.**
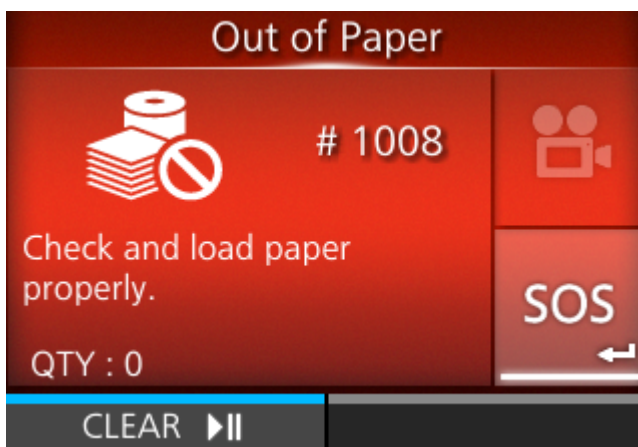
A screen with QR code, phone number, serial number, and error number appears after selecting the SOS icon and pressing the button.
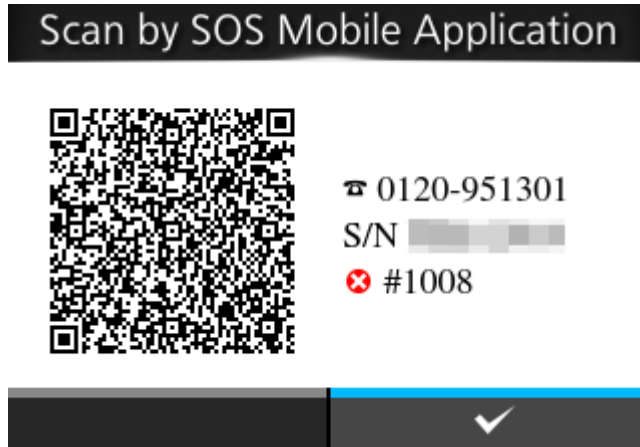
Scan the QR code with the specialized SOS application from a tablet device or smartphone. After scanning the QR code, the menu for the specialized SOS application appears.

Press the ▭ button (✓) to return to the error message screen.

Messages for Provisioning Errors When SOS (SATO Online Services) is Enabled (SOS users only)

A provisioning error occurs if authentication with the server fails while adding the product to SOS. The messages differ depending on the cause. Check the following countermeasures, and then take appropriate action.

Return Code	Message	Countermeasure
400	RetCode:400 Malformed payload. Abort.	Temporarily disable the SOS mode and then reset it. If resetting the SOS mode does not resolve the error, contact your nearest SATO reseller.
403	RetCode:403 Unauthorized. Abort.	Temporarily disable the SOS mode and then reset it. If resetting the SOS mode does not resolve the error, contact your nearest SATO reseller.
405	RetCode:405 Unknown Model.	Contact your nearest SATO reseller.
406	RetCode:406 This serial has not been registered for use with SOS	Confirm the registration with the administrator of your SOS account.
409	RetCode:409 No serial number is registered with this printer.	Contact your nearest SATO reseller.
500	RetCode:500 SOS server failure. Please contact the help desk.	A system error has occurred with the SOS or the proxy server. Wait for a while and contact your nearest SATO reseller if the error cannot be resolved.
503	RetCode:503 SOS Server Maintenance.	Cannot be used during maintenance. Please wait until the maintenance is finished.
-	Unknown error. Please contact the help desk.	Wait for a while and contact your nearest SATO reseller if the error cannot be resolved.

Contact Information for When You Are in Trouble

Contact Us

Access the following site to send us your questions or comments.

 https://www.sato-global.com/contact/

Product Specifications

Hardware

Dimensions and Weight

Item	Description
External dimensions	180 mm (7.09") (width) x 195 mm (7.68") (depth) x 85 mm (3.35") (height) (excludes projections)
Weight	Approx. 1440 g (3.2 lb) (including the battery, not including media)

Power Supply

Item	Description
Input Voltage	AC 100 - 240 V
Frequency	50 Hz-60 Hz
Output Voltage	DC 19 V 2.37 A
Battery specifications	Lithium-ion battery **Nominal voltage** 14.4 V **Nominal capacity** 2500 mAh **Charge/discharge cycle** Approx. 300 cycles or 3 years from the start of use, whichever comes first. **Charging time** ◦ When using AC adapter: About 3 hours ◦ When using cigarette lighter adapter (option): About 3 hours ◦ When using 12-60V DC power supply (option): About 3 hours ◦ When using 1ch battery charger (option): About 3 hours ◦ When using 4ch battery charger (option): About 4 hours *The charge/discharge cycle and charging time vary depending on the operating environment.
Power Consumption	Input voltage conditions: AC 100 - 240 V, 50 - 60 Hz

Item	Description
	When charging 55 VA/28 W (AC100 V/50 Hz) 83 VA/28 W (AC230 V/50 Hz) **Standby** 10.0 VA/3.3 W (AC100 V/50 Hz) 15.2 VA/3.6 W (AC230 V/50 Hz)

Processing

Item	Description
Flash ROM	8GB
SDRAM	1GB
User Registration Area	Maximum 2GB
Receive Buffer	**Buffer full** 2.95MB **Buffer near full** Occurrence: 2 MB, Release: 1 MB

Operation

Item	Description
LCD	TFT color 2.4-inch
LED	**STATUS** Blue/Red **Battery** Green
Display Language	English / German / French / Spanish / Italian / Portuguese / Brazilian Portuguese / Czech / Danish / Dutch / Finnish / Greek / Hungarian / Norwegian / Polish / Romanian / Russian / Slovak / Swedish / Turkish / Chinese (Simplified) / Chinese (Traditional) / Korean / Japanese / Arabic / Thai / Vietnamese / Persian / Indonesian / Hindi / Bulgarian

Environmental Conditions

Item	Description
Operating Temperature	**Standard** 　-15 to 50 °C (5 to 122 °F) (environment except when printing or feeding) **Linerless Tearoff Mode** 　5 to 35 °C (41 to 95 °F)
Storage temperature	-25 to 60 °C (-13 to 140 °F)
Charging temperature range	5 to 35 °C (41 to 95 °F)
Operating Humidity	**Standard** 　10 to 90% RH (Non-condensing) **Linerless Tearoff Mode** 　30 to 75% RH (Non-condensing)
Storage humidity	**Standard** 　10 to 90% RH (Non-condensing) **Linerless Tearoff Mode** 　30 to 75% RH (Non-condensing)
Charging humidity	20 to 80% RH (Non-condensing)

Print

Item	Description
Print Method	Direct thermal
Print Speed	2 to 6 inches/sec (50.8 to 152.4 mm/sec) *Dispenser mode, linerless tear-off mode: Maximum 4 inches/sec (101.6 mm/sec) Note that the speed may be limited depending on the print layout, ambient temperature or battery level.
Resolution (Head Density)	203 dpi (8 dots/mm)
Non-printable Area	Continuous, dispenser, tear-off **Pitch direction (Excludes liner)** 　Top: 1.5mm (0.06"), Bottom: 1.5 mm (0.06") **Width direction (Excludes liner)** 　Left: 1.5 mm (0.06"), Right: 1.5 mm (0.06")

Item	Description

	Linerless tearoff
	Pitch direction
	   Top: 5.0mm (0.2"), Bottom: 1.5 mm (0.06")
	Width direction
	   Left: 1.5 mm (0.06"), Right: 1.5 mm (0.06")
	
	*May affect the print quality. Be sure to avoid the non-printable area when printing.

Printable Area	Length 1000 mm (39.37") x Width 104 mm (4.09")
Print End Position	0 to 8000 dots (1 dot = 0.125mm)
Print darkness	**Darkness level** 1 to 10

Sensors

Item	Description
I-mark (reflective type)	Adjustable
Gap (transmissive type)	Adjustable
Cover open	Fixed
Paper End Sensor	Detect with I-mark sensor or Gap sensor
Dispenser (reflective type)	Fixed
Linerless (reflective type)	Fixed

- Specifications are subject to change without notice.

Interface

Supported Interfaces

For data communication with the host, the product supports the following interfaces.

Standard

- USB Interface (Mini-B)
- Wireless LAN Interface
- Bluetooth Interface
- NFC Interface

> ⚠ • Do not connect or disconnect the interface cables (or use a switch box) with power supplied to either the product or host. This may cause damage to the interface circuitry in the product or computer and is not covered by warranty.

> ✎ • You can set the interface settings of the product through [Interface] in the [Settings] menu.

USB Interface

This interface complies with the USB 2.0 standard.

Install the USB driver to the computer before use.

Basic Specifications	
Connector	USB (Mini-B)
Protocol	• STATUS4
Power Supply	BUS Power through cable
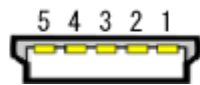
Pin Assignments	
Pin No.	**Description**
1	VBus
2	-Data
3	+Data
4	USB ID
5	GND

Cable Specifications	
Cable Connector	USB (Mini-B)
Cable Length	5 m (16.4 feet) or less

• Specifications are subject to change without notice.

Bluetooth Interface

This interface complies with the Bluetooth 5.0 standard.

Basic Specifications	
Signal Level	Class 2
Communication Distance	10 m (32.8 feet)
Profile	• Serial Port Profile (SPP) • Human Interface Device Profile (HID) • iAP/ Serial Port Profile (iSPP) • Generic Attribute Profile(GATT)/Generic Access Profile (GAP)
Security Level	• None • level 2-1 • level 2-2 • level 3 • level 4
PIN Code	4 to 16 characters consisting of ASCII code (20H, 21H, 23H to 7EH)
Disconnect Timeout (LMP Layer)	60 seconds

> • Specifications are subject to change without notice.

NFC Interface

This interface complies with the NFC Forum Type 2 Tag.

> 🖉 • Specifications are subject to change without notice.

Wireless LAN Interface

This interface complies with the IEEE802.11a/b/g/n/ac standard.

> ⚠️ • Before using wireless LAN near medical devices and facilities, consult your system administrator.

Basic Specifications	
Protocol	• STATUS3 • STATUS4
IP Address	• IPv4 • IPv6
Subnet Mask / Prefix Length	• IPv4 • IPv6
Gateway Address	• IPv4 • IPv6

Data Transfer Method	**802.11a**
	  Max 54 Mbps
	802.11n
	  Max 150Mbps
	802.11b
	  Max 11 Mbps
	802.11g
	  Max 54 Mbps
	802.11ac
	  Max 433.3 Mbps
	
	✏️ • These are the theoretical values based on the wireless LAN specifications and are not the actual data transfer speeds.

Frequency Band	• 2.4GHz • 5 GHz
Communication Channel	The number of channels you can set varies depending on the region where you use the product.
SSID	Any alphanumeric character or symbols (Maximum 32)
Authentication	• Open System

Basic Specifications	
	• Shared Key • WPA/WPA2 • Perform the RADIUS server authentication using 802.1x (EAP-TLS, EAP-LEAP, EAP-TTLS, EAP-PEAP, EAP-FAST protocol)
Encryption	• None • WEP (64 bits/128 bits) • TKIP • AES (WPA2-PSK, WPA2-802.1x)
Communication Mode	• Infrastructure • Ad Hoc

Software Specifications	
Supported Protocol	TCP/IP
Network Layer	• IP • ICMP
Session Layer	• TCP • UDP
Application Layer	• LPR • FTP • HTTP/HTTPS • SNMP • DHCP • NTP • SFTP

• Specifications are subject to change without notice.

Printer language

- SBPL
- SZPL
- SIPL
- SCPL

Standards

Item	Description
Environmental Standard	Compatible with the RoHS directive
Energy Saving	• Use an AC adapter that complies with DoE Level 6 • Use an AC adapter that complies with ErP Directive Tier 2. • Complies with the California Energy Commission's standards for battery chargers.

• Specifications are subject to change without notice.

Usable Media

⚠ • Use our specified supply products.

Type

- Media roll (face-out)
- Fan-fold media

Size

- Continuous

Item	Description
Media Length	13 to 305 mm (0.51" to 12.01")
Media Length (With Liner)	16 to 308 mm (0.63" to 12.13")
Media Width	38 to 111 mm (1.5" to 4.37")
Media Width (With Liner)	41 to 114 mm (1.61" to 4.49") (media roll)/41 to 118 mm (1.61" to 4.65") (fan-fold media)

- Tear-Off

Item	Description
Media Length	16 to 305 mm (0.63" to 12.01")
Media Length (With Liner)	19 to 308 mm (0.75" to 12.13")
Media Width	38 to 111 mm (1.5" to 4.37")
Media Width (With Liner)	41 to 114 mm (1.61" to 4.49") (media roll)/41 to 118 mm (1.61" to 4.65") (fan-fold media)

- Dispenser

Item	Description
Media Length	16 to 254 mm (0.63" to 10")
Media Length (With Liner)	19 to 257 mm (0.75" to 10.12")

Item	Description
Media Width	38 to 111 mm (1.5" to 4.37")
Media Width (With Liner)	41 to 114 mm (1.61" to 4.49") (media roll)/41 to 118 mm (1.61" to 4.65") (fan-fold media)

- Linerless

Item	Description
Media Length	16 to 257 mm (0.63" to 10.12")
Media Width	38 to 114 mm (1.5" to 4.49")

> - For Linerless label, you need to set the product according to your print layout conditions. For details, contact your SATO reseller.
>
> - The supported label sizes and print quality vary depending on the output speed and media combination, and the product settings and operating environment. We recommend confirming operations in the operating environment in advance.

Roll Diameter (Media Roll)

- Maximum φ67 mm (φ2.6")
- Core diameter

  Standard: φ19.05 mm (φ0.75")
  1-inch media guide cores (accessory): φ26.9 mm (φ1")

Height (Fan-fold Media)
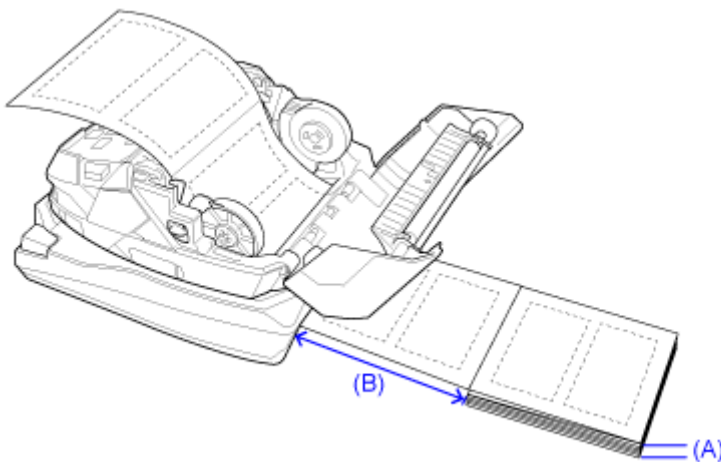
(A) Media height (from desk): Within 100 mm (3.94") (guideline)

(B) Distance between the back side of the product and the media: Size of 1 fold of the media, or more (guideline)

	•	The height may be limited depending on where media is placed.
	•	When drawing the media from under the desk, not from the position on the same desk which the rear side of the product is placed, place the media so as not to obstruct the printing operation.
	•	Fan-fold media is not available in dispenser mode since the perforated line affects the dispenser function.

Thickness

58 to 190.5 μm (0.058 to 0.1905 mm)

Usable Fonts

Bitmap Fonts

Item	Description
U	9 dots H x 5 dots W
S	15 dots H x 8 dots W
M	20 dots H x 13 dots W
WB	30 dots H x 18 dots W
WL	52 dots H x 28 dots W
XU	9 dots H x 5 dots W
XS	17 dots H x 17 dots W
XM	24 dots H x 24 dots W
XB	48 dots H x 48 dots W
XL	48 dots H x 48 dots W
X20	9 dots H x 5 dots W
X21	17 dots H x 17 dots W
X22	24 dots H x 24 dots W
X23	48 dots H x 48 dots W
X24	48 dots H x 48 dots W
OCR-A	22 dots H x 15 dots W
OCR-B	24 dots H x 20 dots W
POP	133 dots H x 80 dots W
JIS X 208 Kanji Fonts (Mincho/Gothic)	• 16 dots H x 16 dots W • 22 dots H x 22 dots W • 24 dots H x 24 dots W • 32 dots H x 32 dots W • 40 dots H x 40 dots W
JIS X 0213 Kanji Fonts (Gothic)	• 16 dots H x 16 dots W • 22 dots H x 22 dots W • 24 dots H x 24 dots W • 32 dots H x 32 dots W

Item	Description
	• 40 dots H x 40 dots W
Compatible Kanji Fonts (Mincho)	• 16 dots H x 16 dots W • 24 dots H x 24 dots W
Simplified Chinese Characters	• 16 dots H x 16 dots W • 24 dots H x 24 dots W
Traditional Chinese Characters	• 16 dots H x 16 dots W • 24 dots H x 24 dots W
Korean Fonts	• 16 dots H x 16 dots W • 24 dots H x 24 dots W

Scalable Fonts

Item	Description
Rasterized Fonts	• SATO CG Sleek • SATO CG Stream • SATO 0 • SATO Alpha Bold Condensed • SATO Beta Bold Italic • SATO Folio Bold • SATO Futura Medium Condensed • SATO Gamma • SATO OCR-A • SATO OCR-B • SATO Sans • SATO Serif • SATO Symbol Set • SATO Vica • SATO WingBats • SATO UD Mincho Japanese • SATO UD Gothic Japanese • SATO UD Song Simplified Chinese • SATO UD Hei Simplified Chinese • SATO UD Ming Traditional Chinese • SATO UD Hei Traditional Chinese • SATO UD Batang Korean

Item	Description
	• SATO UD Dotum Korean • SATO UD Serif • SATO UD Sans • SATO UD Naskh Arabic • SATO UD Kufic Arabic • SATO UD Serif Hebrew • SATO UD Sans Hebrew • SATO UD Serif Thai • SATO UD Sans Thai • SATO UD Serif Hindi • SATO UD Sans Hindi
Rasterized Fonts (Multilingual)	• SATO Hebe Sans • SATO Hebe Sans Arabic • SATO Hebe Sans Thai • SATO Hebe Sans Hebrew • SATO Hebe Sans Hindi • SATO Gothic Traditional Chinese • SATO Gothic Japanese • SATO Gothic Simplified Chinese • SATO Gothic Korean • SATO Silver Serif • SATO Mincho Traditional Chinese • SATO Mincho Japanese • SATO Mincho Simplified Chinese • SATO Mincho Korean • SATO Roman Arabic
Outline Fonts	• Helvetica Outline Font • JIS0208 Kanji Outline Fonts

• Specifications are subject to change without notice.

X20 Font

The X20 font is a bitmap font with a basic size of 9 dots H x 5 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P		p				—	タ	ミ		
1	!	1	A	Q	a	q				ア	チ	ム		
2	"	2	B	R	b	r				イ	ツ	メ		
3	#	3	C	S	c	s				ウ	テ	モ		
4	$	4	D	T	d	t				エ	ト	ヤ		
5	%	5	E	U	e	u		·	オ	ナ	ユ			
6	&	6	F	V	f	v		ヲ	カ	ニ	ヨ			
7	'	7	G	W	g	w				キ	ヌ	ラ		
8	(	8	H	X	h	x				ク	ネ	リ		
9	)	9	I	Y	i	y				ケ	ノ	ル		
A	*	:	J	Z	j	z				コ	ハ	レ		
B	+	;	K	¢	k	←				サ	ヒ	ロ		
C	,	<	L	¥	l	→				シ	フ	ワ		
D	-	=	M		m	|				ス	ヘ	ン		
E	.	>	N		n	l				セ	ホ			
F	/	?	O		o					ソ	マ			

X21 Font

The X21 font is a bitmap font with a basic size of 17 dots H x 17 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p				—	タ	ミ		
1	!	1	A	Q	a	q			｡	ア	チ	ム		
2	"	2	B	R	b	r			｢	イ	ツ	メ		
3	#	3	C	S	c	s			｣	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ア	キ	ヌ	ラ		
8	(	8	H	X	h	x			イ	ク	ネ	リ		
9	)	9	I	Y	i	y			ウ	ケ	ノ	ル		
A	*	:	J	Z	j	z			エ	コ	ハ	レ		
B	+	;	K	[	k	{			オ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ヤ	シ	フ	ワ		
D	–	=	M	]	m	}			ユ	ス	ヘ	ン		
E	.	>	N	^	n	~			ヨ	セ	ホ	゛		
F	/	?	O	_	o				ツ	ソ	マ	゜		

- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X22 Font

The X22 font is a bitmap font with a basic size of 24 dots H x 24 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p				―	タ	ミ		
1	!	1	A	Q	a	q			｡	ア	チ	ム		
2	"	2	B	R	b	r			｢	イ	ツ	メ		
3	#	3	C	S	c	s			｣	ウ	テ	モ		
4	$	4	D	T	d	t			､	エ	ト	ヤ		
5	%	5	E	U	e	u			･	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ア	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	―	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	゜		

> ✏ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X23 Font

The X23 font is a bitmap font with a basic size of 48 dots H x 48 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p				―	タ	ミ		
1	!	1	A	Q	a	q			｡	ア	チ	ム		
2	"	2	B	R	b	r			｢	イ	ツ	メ		
3	#	3	C	S	c	s			｣	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	―	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	゜		

• To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X24 Font

The X24 font is a bitmap font with a basic size of 48 dots H x 48 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p				―	タ	ミ		
1	!	1	A	Q	a	q			｡	ア	チ	ム		
2	″	2	B	R	b	r			｢	イ	ツ	メ		
3	#	3	C	S	c	s			｣	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ア	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	−	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	゜		

✎ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

U Font

The U font is a bitmap font with a basic size of 9 dots H x 5 dots W.

This supports the fixed pitch only.

The figure below is a font sample when the code on page 858 is used.

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

S Font

The S font is a bitmap font with a basic size of 15 dots H x 8 dots W.

This supports fixed pitch only.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	0		ð	ó	-
1	!	1	A	Q	a	q	ü	æ	í			Đ	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	|	î	£	¼				ý	³
D	-	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		ì		■
F	/	?	O	_	o	▓	Å	ƒ	»		¤		´	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

M Font

The M font is a bitmap font with a basic size of 20 dots H x 13 dots W.

This supports fixed pitch only.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	Ø			ð	Ó	–
1	!	1	A	Q	a	q	ü	æ	í				Đ	ß	±
2	"	2	B	R	b	r	é	Æ	ó				Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú				Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ				È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á			€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã		Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã		Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©			Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®					Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬					Û	·
B	+	;	K	[	k	{	ï	ø	½					Ù	¹
C	,	<	L	\	l	¦	î	£	¼					ý	³
D	–	=	M	]	m	}	ì	Ø	¡	¢			¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥			Ì	¯	
F	/	?	O	_	o	█	Å	ƒ	»			¤		´	

> ✎ • The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

WB Font

The WB font is a bitmap font with a basic size of 30 dots H x 18 dots W.

This supports fixed pitch only.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	0		ð	ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	β	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▓	Å	ƒ	»		¤		´	

WL Font

The WL font is a bitmap font with a basic size of 52 dots H x 28 dots W.

This supports fixed pitch only.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	'	p	Ç	É	á	Ø			ð	Ó	−
1	!	1	A	Q	a	q	ü	æ	í				Đ	ß	±
2	"	2	B	R	b	r	é	Æ	ó				Ê	Ô	_
3	#	3	C	S	c	s	â	ô	ú				Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ				È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á			€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã		Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã		Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©			Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨	
A	*	:	J	Z	j	z	è	Ü	¬				Û	·	
B	+	;	K	[	k	{	ï	ø	½				Ù	¹	
C	,	<	L	\	l	¦	î	£	¼				ý	³	
D	−	=	M	]	m	}	ì	Ø	¡	¢			Ý	²	
E	.	>	N	^	n	~	Ä	×	«	¥			Ì	■	
F	/	?	O	_	o	▒	Å	ƒ	»		¤		'	´	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

XU Font

The XU font is a bitmap font with a basic size of 9 dots H x 5 dots W.

You can select fixed pitch or proportional pitch.

The figure below is a font sample when the code on page 858 is used.

> ✎ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
>
> • The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

XS Font

The XS font is a bitmap font with a basic size of 17 dots H x 17 dots W.

You can select fixed pitch or proportional pitch.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	0		ð	Ó	-
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	·
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	-	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		¦	¯	
F	/	?	O	_	o	█	Å	ƒ	»		¤		´	

✎ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

• The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

XM Font

The XM font is a bitmap font with a basic size of 24 dots H x 24 dots W.

You can select fixed pitch or proportional pitch.

The figure below is a font sample when the code on page 858 is used.

✏️
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specify with the command.

XB Font

The XB font is a bitmap font with a basic size of 48 dots H x 48 dots W.

You can select fixed pitch or proportional pitch.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	0			ð	Ó	—
1	!	1	A	Q	a	q	ü	æ	í				Ð	β	±
2	''	2	B	R	b	r	é	Æ	ó				Ê	Ô	_
3	#	3	C	S	c	s	â	ô	ú				Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ				È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á			€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	μ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©			Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	·
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	—	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		¦	Ì	¯
F	/	?	O	_	o		Å	ƒ	»		¤		´

✎
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

XL Font

The XL font is a bitmap font with a basic size of 48 dots H x 48 dots W.

You can select fixed pitch or proportional pitch.

The figure below is a font sample when the code on page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á	0			ð	Ó	-
1	!	1	A	Q	a	q	ü	æ	í				Đ	ß	±
2	"	2	B	R	b	r	é	Æ	ó				Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú				Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ				È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á			€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í		µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î		þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©			Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®					Ú	··
A	*	:	J	Z	j	z	è	Ü	¬					Û	·
B	+	;	K	[	k	{	ï	ø	½					Ù	¹
C	,	<	L	\	l	¦	î	£	¼					ý	³
D	-	=	M	]	m	}	ì	Ø	¡		¢			Ý	²
E	.	>	N	^	n	~	Ä	×	«		¥		Ì	-	
F	/	?	O	_	o		Å	ƒ	»		¤			´	

✎ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

• The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu.

OCR-A Font

The OCR-A font is a bitmap font with a basic size of 22 dots H x 15 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0		P										
1		1	A	Q										
2		2	B	R										
3		3	C	S										
4	$	4	D	T										
5		5	E	U										
6		6	F	V										
7		7	G	W										
8		8	H	X										
9		9	I	Y										
A			J	Z										
B			K											
C			L											
D			M											
E	.	>	N											
F	/		0											

OCR-B Font

The OCR-B font is a bitmap font with a basic size of 24 dots H x 20 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P										
1	!	1	A	Q										
2	"	2	B	R										
3	#	3	C	S										
4	$	4	D	T										
5	%	5	E	U										
6	&	6	F	V										
7	'	7	G	W										
8	(	8	H	X										
9	)	9	I	Y										
A	*	:	J	Z										
B	+	;	K	¥										
C	,	<	L	￥										
D	—	=	M											
E	.	>	N											
F	/	?	O											

POP Font

The POP font is a bitmap font with a basic size of 133 dots H x 80 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

> ✎ • To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Outline Fonts

The font type, font size and font shape can be specified for the outline fonts.

For the font type, you can select fixed pitch or proportional pitch. You can also specify kanji, but kanji supports fixed pitch only.

The figure below is a sample of some font shapes. Shapes such as normal font, white characters on black background, grey font, font with shadow, mirrored font and italic font can be specified.

This is a sample of Outline font.

Outline font0 ABCabc123
Outline font1 ABCabc123
Outline font2 ABCabc123
Outline font3 ABCabc123
Outline font4 ABCabc123
Outline font5 ABCabc123
Outline font6 ABCabc123
Outline font7 ABCabc123
Outline font8 ABCabc123
Outline font9 ABCabc123

The figure below is a font sample with the standard font.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	Ç	É	á			ð	Ó	—
1	!	1	A	Q	a	q	ü	æ	í			Ð	β	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	´	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®			Ú	¨	
A	*	:	J	Z	j	z	è	Ü	¬			Û	·	
B	+	;	K	[	k	{	ï	ø	½			Ù	¹	
C	,	<	L	\	l	¦	î	£	¼			ý	³	
D	–	=	M	]	m	}	ì	Ø	¡	¢		Ý	²	
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	‾	
F	/	?	O	_	o		Å	ƒ	»				´	

✎ • The font size can be specified from 1 to 999 dots, but if the font size is too small for the font shape, it cannot be recognized as a font. Please be careful. Also, if the specified font size is too small, it may collapse, depending on the font.

Multilingual Font

The product contains various multilingual fonts.

The figure below is a sample of some of the multilingual fonts.

b	Fontname	Sample
0	SATO Hebe Sans	This is a fontsample.
8	SATO Silver Serif	This is a fontsample.
1	SATO Hebe Sans Arabic	هذا هو عينة من الخط.
13	SATO Roman Arabic	هذا هو عينة من الخط.
2	SATO Hebe Sans Thai	นี่คือตัวอย่างของตัวอักษร
3	SATO Hebe Sans Hindi	इस फॉन्ट का एक नमूना है.
14	SATO Hebe Sans Hebrew	זוהי דוגמא של הגופן.
4	SATO Gothic Tradional Chinese	這是字體的樣本。
9	SATO Mincho Tradional Chinese	這是字體的樣本。
6	SATO Gothic Simplified Chinese	这是字体的样本。
11	SATO Mincho Simplified Chinese	这是字体的样本。
5	SATO Gothic Japanese	これはフォントのサンプルです。
10	SATO Mincho Japanese	これはフォントのサンプルです。
7	SATO Gothic Korean	이것은 글꼴의 샘플입니다.
12	SATO Mincho Korean	이것은 글꼴의 샘플입니다.

Scalable Fonts

The product contains various scalable fonts.

The figure below is a sample of some scalable fonts.

Fontname	Sample
SATOCGSleek.ttf	ABCXYZabcxyz123
SATOCGStream.ttf	ABCXYZabcxyz123
SATOOCRA.ttf	ABCXYZabcxyz123
SATO8.ttf	ABCXYZabcxyz123
SATOALPHABC.ttf	ABCXYZabcxyz123
SATOBETABI.ttf	ABCXYZabcxyz123
SATOFOLIOB.ttf	ABCXYZabcxyz123
SATOFUTURAMC.ttf	ABCXYZabcxyz123
SATOGAMMA.ttf	ABCXYZabcxyz123
SATOOCRB.ttf	ABCXYZabcxyz123
SATOSANS.ttf	ABCXYZabcxyz123
SATOSERIF.ttf	ABCXYZabcxyz123
SATOSYM.ttf	ƒ/...√∞¬HΘIηθι678
SATOVICA.ttf	ABCXYZabcxyz123
SATOWING.ttf	(symbols)

Usable Barcodes

Code Type	Description
Barcodes	• UPC-A/UPC-E • JAN/EAN • CODE39, CODE93, CODE128 • GS1-128(UCC/EAN128) • CODABAR(NW-7) • ITF • Industrial 2 of 5 • Matrix 2 of 5 • MSI • POSTNET • UPC add-on code • BOOKLAND • USPS Code • GS1 DataBar Omnidirectional • GS1 DataBar Truncated • GS1 DataBar Stacked • GS1 DataBar Stacked Omnidirectional • GS1 DataBar Limited • GS1 DataBar Expanded • GS1 DataBar Expanded Stacked
2D Codes	• QR Code • Micro QR Code • PDF417 • Micro PDF417 • Maxi Code • GS1 Data Matrix • Data Matrix (ECC200) • Aztec Code
Composite Symbols	• EAN-13 Composite (CC-A/CC-B) • EAN-8 Composite (CC-A/CC-B) • UPC-A Composite (CC-A/CC-B) • UPC-E Composite (CC-A/CC-B) • GS1 DataBar Composite (CC-A/CC-B) • GS1 DataBar Truncated Composite (CC-A/CC-B)

Code Type	Description
	• GS1 DataBar Stacked Composite (CC-A/CC-B)
	• GS1 DataBar Expanded Stacked Composite (CC-A/CC-B)
	• GS1 DataBar Expanded Composite (CC-A/CC-B)
	• GS1 DataBar Stacked Omnidirectional Composite (CC-A/CC-B)
	• GS1 DataBar Limited Composite (CC-A/CC-B)
	• GS1-128 Composite (CC-A/CC-B/CC-C)
	• GS1-QR

• Specifications are subject to change without notice.

Support and Warranty

SOS (SATO Online Services) (SOS users only)

The SOS (SATO Online Services) is a remote maintenance service that monitors your product status for 24 hours and supports its stable operation. To use this service, create an SOS account and add your product.

For details on the SOS, refer to the SOS Portal Site.

☞ https://www.sato-sos.com/en/

Warranty for Consumables within the Product Warranty Period

For information on the warranty period for print heads and platen rollers refer to the SATO Global Warranty Program.

☞ https://www.sato-global.com/warranty/

SATO