

# Operator Manual

For printer model:

# CT4-LX



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# Before You Start

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## About This Manual

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Thank you for purchasing the SATO CT4-LX (hereafter referred to as "the product").

This manual supplies basic information on how to operate the CT4-LX. Read the manual carefully to understand each function of the CT4-LX 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.



- The illustrations and screenshots in this manual are for the combined direct thermal/thermal transfer model, unless otherwise noted.
  - This manual uses the build version 6.4.0-r3 firmware in its descriptions.
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## Safety Precautions

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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.

 <b>Warning</b>	Ignoring the instructions marked by this symbol and erroneously operating the product could result in death or serious injury.
 <b>Caution</b>	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

 <b>Do not use the voltage other than specified</b>	<ul style="list-style-type: none"> <li>Do not use the power supply voltage other than the one specified. Doing so could result in a fire or electric shock.</li> </ul>
 <b>Do not use in hazardous locations</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Do not set on an unstable area</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Do not place in high-temperature locations</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>When the product or AC adapter is dropped or breaks</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Handling the power cord and other cables</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Handling the AC adapter, power cord, and other cables</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>

	<ul style="list-style-type: none"> <li>The dedicated AC adapter and power cord included in the package are to be used specifically for this product. Do not use them for other electronic products. Also, do not use the AC adapter or power cord of other products for this product. Doing so could result in a fire or electric shock.</li> </ul>
 <b>Do not use the product when something is abnormal</b>	<ul style="list-style-type: none"> <li>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 from the outlet, and contact your SATO reseller or technical support for repairs.</li> </ul>
 <b>Do not place containers holding water or other liquid near the product</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Do not drop the product in water</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Do not put objects inside the product</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
 <b>Connecting cables or optional devices</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
 <b>Do not operate with wet hands</b>	<ul style="list-style-type: none"> <li>Do not power on/power off the product or plug/unplug the power cord and other cables with wet hands. Doing so could result in electric shock or damage.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>

<p><b>Do not disassemble the product and the AC adapter</b></p>	
 <p><b>Using the cleaning fluid</b></p>	<ul style="list-style-type: none"> <li>• Do not use cleaning fluids other than the ones supplied with the product or recommended by us.</li> <li>• The cleaning fluid is to be strictly kept away from the fire. Never apply heat or place it in the fire.</li> <li>• 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.</li> </ul>
 <p><b>Do not touch or insert any object in the cutter</b></p>	<ul style="list-style-type: none"> <li>• Do not touch the cutter with your hands or insert foreign objects other than media into the cutter. Doing so could result in injury.</li> </ul>

## Caution

 <p><b>Carrying the product</b></p>	<ul style="list-style-type: none"> <li>• Do not carry the product while loaded with media or attached to an optional external device. They could fall, possibly resulting in injury.</li> <li>• When setting the product on the floor or a stand, make sure not to get your fingers or hands trapped under the product.</li> <li>• 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.</li> </ul>
 <p><b>Do not place the product in areas with high humidity</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
 <p><b>AC adapter</b></p>	<ul style="list-style-type: none"> <li>• An AC adapter could become hot. Be careful not to get burned.</li> </ul>
 <p><b>Power cord and other cables</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>

 <p><b>Loading fan-fold media</b></p>	<ul style="list-style-type: none"> <li>• Be careful not to get injured when handling the media inlet or the cover.</li> </ul>
 <p><b>Loading media roll</b></p>	<ul style="list-style-type: none"> <li>• When loading a media roll, be careful not to get your fingers trapped between the media roll and the supply spindle.</li> </ul>
 <p><b>Print head</b></p>	<ul style="list-style-type: none"> <li>• The print head is hot after printing. Be careful not to get burned when replacing media or cleaning immediately after printing.</li> <li>• Do not touch the print head with your bare hands. Doing so could result in injury or damage.</li> <li>• To replace the print head, follow the procedure in the Operator Manual. If the Operator Manual does not contain this procedure, avoid trying to replace it on your own terms, and contact your SATO reseller or technical support.</li> <li>• When opening and closing the print head, make sure that objects other than media do not get caught. Otherwise, it could result in injury or damage.</li> </ul>
 <p><b>Cover</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
 <p><b>When not using the product for a long time</b></p>	<ul style="list-style-type: none"> <li>• When not using the product for a long time, unplug the power cord from the outlet to maintain safety.</li> </ul>
 <p><b>During maintenance and cleaning</b></p>	<ul style="list-style-type: none"> <li>• When maintaining and cleaning the product, unplug the power cord from the outlet to maintain safety.</li> </ul>

## Precautions for Installation and Handling

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### 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.

**Do not install the product in a location that vibrates.**

Subjecting the product to extreme physical shock or vibration may cause malfunctions or damage the product or lead to the product breakdown.

**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 an AC power supply.**

Be sure to connect the product to an AC power supply.

**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

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- 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 Optional 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治管理办法”和SJ/T11364“产品污染防治标识要求”，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。

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## Environmentally Hazardous Materials

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### **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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- Specifications and contents in this document are subject to change without notice.
- 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.
- Various types of data registered in the product and applications may be damaged. We recommend saving data separately in advance.

## Trademarks

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- The following are registered trademarks of SATO Holdings Corporation and its subsidiaries in Japan, the U.S. and other countries.
  - SATO
  - Stylized SOS (SATO Online Services)
- NiceLabel<sup>®</sup> is a trademark or registered trademark of Euro Plus d.o.o.
- QR Code is a registered trademark of DENSO WAVE INCORPORATED.
- Wi-Fi<sup>®</sup> is a registered trademark of Wi-Fi Alliance.
- The following are trademarks of Wi-Fi Alliance.
  - Wi-Fi Direct<sup>™</sup>
  - Wi-Fi Protected Setup<sup>™</sup>
  - WPA<sup>™</sup>
  - WPA2<sup>™</sup>
- Internet Explorer is a registered trademark of Microsoft Corporation in the United States.
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# What You Can Do with This Product

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## Features of the Product

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CT4-LX is a compact labeling system with versatile functions. Its main features are as follows:

- Very easy-to-use 4.3-inch color touch panel
- Supports various communication interfaces
- Wide range of options available to meet operating needs
- Batch set print settings by using Media Startup
- Print settings can be registered as media profiles for each type of media so they can be easily accessed
- Setting information can be manually copied or automatically backed up to USB memory (clone function and auto-clone function)
- Supports 31 languages for display and 47 languages for printing scalable fonts
- Supports use of environmentally friendly linerless labels to prevent waste
- Guidance videos allow for smooth operations, such as loading media and ribbons, and replacing consumable parts
- Equipped with SOS (SATO Online Services) for preventive maintenance to prevent problems
- Certified by Wi-Fi alliance



- MFi certified (for Bluetooth option only)



Made for:

iPhone X, iPhone 8, iPhone 7, iPhone SE, iPhone 6s, iPhone 5s, iPad Air 2, iPod touch (6th generation)

“Made for iPod,” “Made for iPhone,” and “Made for iPad” mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

## Various Ways to Output

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### 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.
  - AEP does not support RFID.
-

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# Basic Information

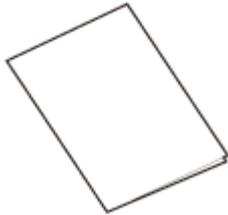
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## Bundled Accessories

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After unpacking the product, make sure that you have all the bundled accessories. If there are any missing items, contact the SATO reseller where you purchased the product.

- Printed materials (Quick Guide, Safety Instructions, Global Warranty Program leaflet, Product Information Download, Declaration of Conformity)



- Power cord



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

- AC adapter



- Core adapter (combined direct thermal/thermal transfer model only)



- Ribbon core (combined direct thermal/thermal transfer model only)





- 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

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The optional devices for the product are as follows:

Optional Devices	Description
Cutter kit (also does partial cuts)	Can automatically cut the media in the designated number of pages.
Dispenser kit	Removes the label from the liner.
Linerless cutter kit (direct thermal models only)	Allows use of environmentally friendly linerless labels. Can automatically cut the media in the designated number of pages.
RS-232C kit	Allows use of RS-232C interface.
Wireless LAN/Bluetooth kit	Wireless LAN and Bluetooth interfaces can be used.
RTC (calendar) kit	A calendar system for printing the date and time on a label to output.

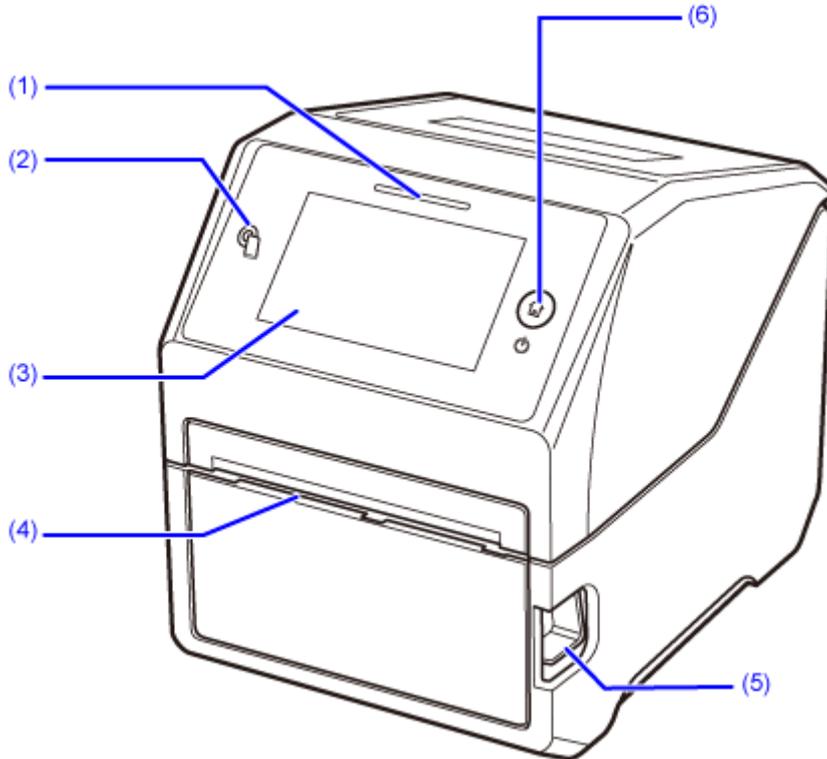


- For more details about the optional devices, contact your SATO sales representative.
-

## Parts Identification

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### Front View



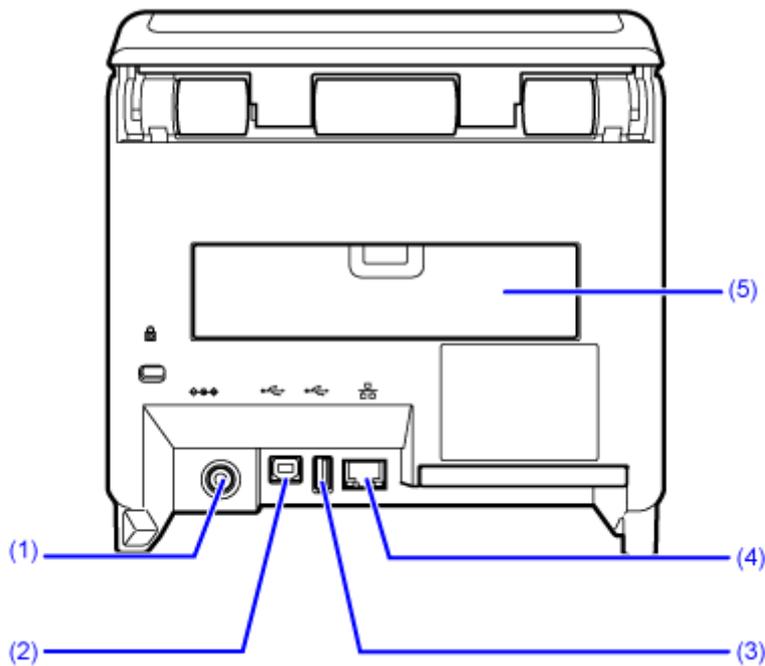
- (1) LED indicator
- (2) NFC antenna location
- (3) LCD/Touch panel
- (4) Media discharge outlet
- (5) Cover open latch
- (6)  (Power/Home) button

To power on the product, press the  (Power/Home) button until the LED lights blue.

While the product is powered on, press the  (Power/Home) button to switch to the Home screen. (The Home screen does not appear while print jobs remain in the product.)

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

## Rear View

**(1) DC input 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.

**(2) USB connector (Type B)**

To connect the product to the computer using the USB interface.

**(3) USB connector (Type A)**

You can use USB memory to get the product log data and setting information, and to install certificates.

Also, other devices like a barcode scanner or keyboard can be connected.



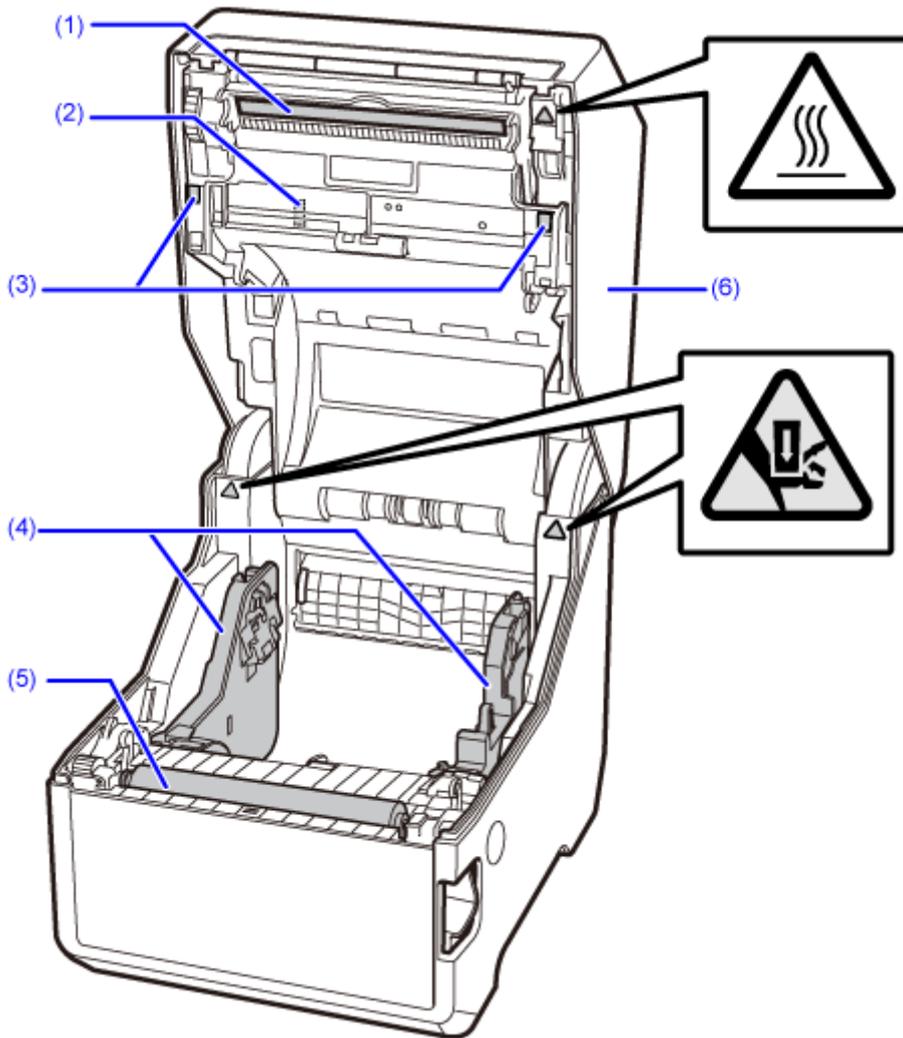
- Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.
- 

**(4) LAN connector**

Use to connect the product to a network using the LAN interface.

**(5) Media loading port (for fan-fold media)**

## Internal View



### (1) Print head (Consumables)

Creates an image on the media. Clean the print head regularly.

### (2) USB connector (Type A)

You can use USB memory to automatically back up setting information by using the auto-clone function.

The connector is on the underside of the top cover. Pull out the parts (3), on which  are engraved, inside the top cover, remove the cover that is held by screws, and then insert the USB memory.



- 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 size of the USB memory that can be connected inside the product is as follows:
    - Length: under 68 mm (2.68") (excludes the metal part of the connector)
    - Width: under 27.6 mm (1.09")
    - Thickness: under 8.6 mm (0.34")
- 

**(3) Engraved**

Indicated by the ▼ (ribbon cover open) marks on the combined direct thermal/thermal transfer model.

**(4) Media guide**

**(5) Platen roller (Consumables)**

**(6) Top cover**

## Using the Operator Panel

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### LED Indicator

The LED indicator lights to show the current status of the product. The LED indicator shows the following states of the product.

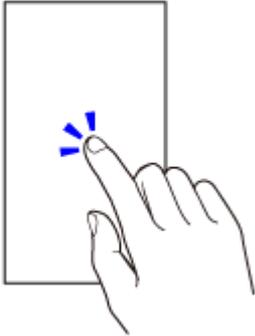
LED Indicator	Color/Status	Description
	Blue/Lit	Online mode
	Blue/Blinking	Power supply is on
	Off	Power off or Offline mode
	Red/Lit	Product error, or during the powering off process

## Operating the Touch Panel

This topic explains the basic operations of the touch panel.

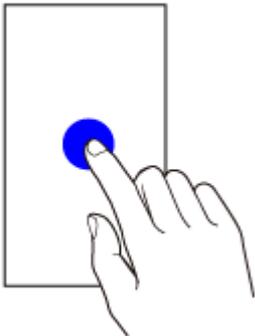
### Tap

Lightly touch the screen, and then release your finger.



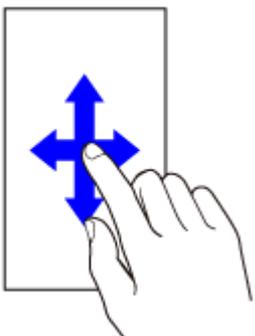
### Long touch

Touch the screen for more than 1 second before removing your finger.



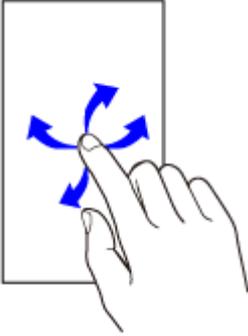
### Swipe/Slide

With your finger lightly touching the screen, move it across the screen to the desired direction.



### Flick

Quickly brush your finger up, down, left, or right against the screen.

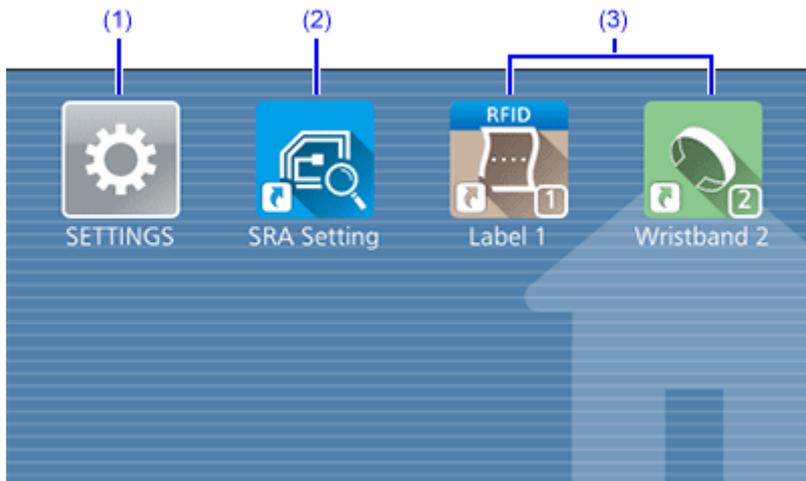


## Operations in the Home Screen

While the product is powered on, you can switch to the Home screen by pressing the  (Power/Home) button.

The Home screen does not appear when print jobs remain in the product.

You can perform the following operations on the Home screen.



- (1) Enters the Settings mode. Various settings of the product can be operated here.
- (2) Displays the setting menus of the SATO RF Analyze function on an RFID model. This function allows you to measure RFID tags and easily set conditions to consistently write and read the tags.
- (3) Access media profiles (combinations of media types and print settings) that have been registered, and apply them to the product.

An icon is added to the Home screen for each media profile that is registered in the [Tools] > [Media Profiles Editing] menu in the Settings mode.

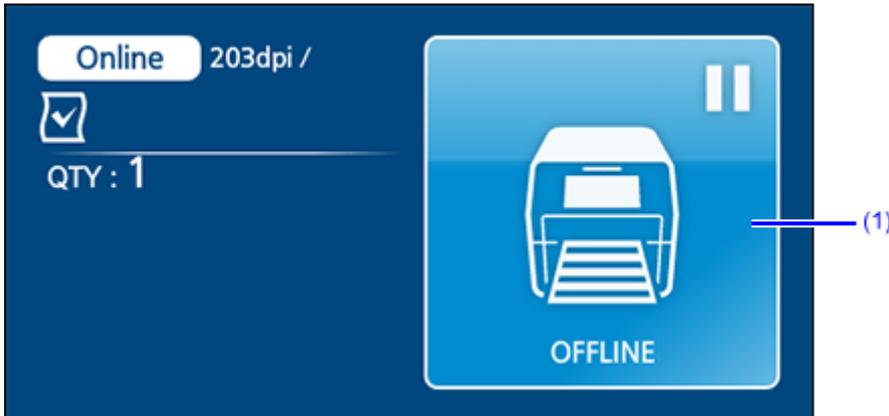
## Operations in Online/Offline Mode

### Online mode

In Online mode, you can execute the print job.

In the default settings, the product powers on in Online mode.

If the Home screen is displayed, press the  (Power/Home) button to switch to 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.



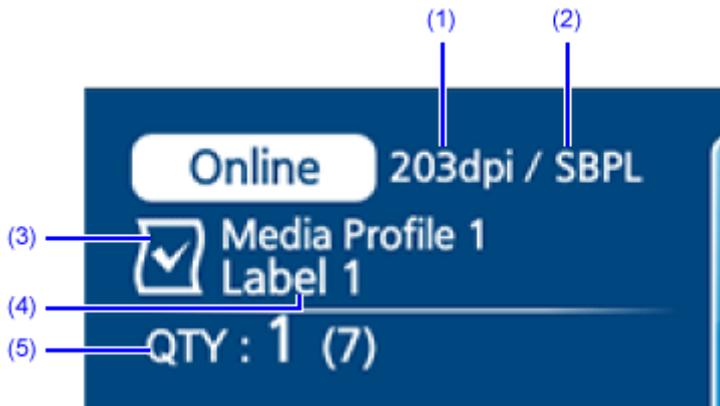
(1) Cancel the print job.

Disabled when there are no print jobs.

- (2) Shows the Adjustments mode when the print job is paused.  
Shows the Settings mode when there are no print jobs.
- (3) Feed the media.
- (4) Change to Online mode.

**Displays Shared in Online/Offline Mode**

The following information appears in the upper left of the screen.



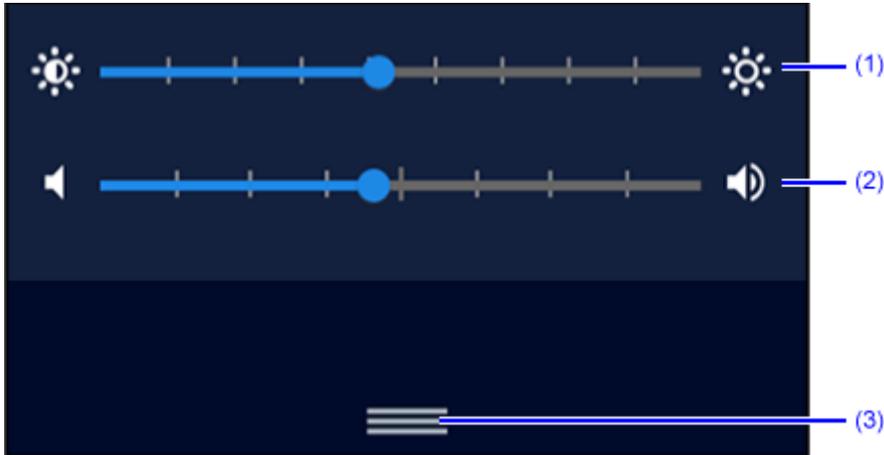
- (1) Resolution of the product
- (2) Current printer language
- (3) Label Waste Prevention function is enabled
- (4) Name of media profile being applied
- (5) Number of pages in the print job being processed

When the [System] > [Show Total Count] menu in the Settings mode is enabled, the total number of pages printed from after the power was turned on is shown in parentheses.

## Operations in the Panel That Is Displayed by Swiping the Screen

You can adjust the volume and brightness in the panel that is displayed by swiping the screen.

To open the panel, swipe down from the top of the screen.



(1) Slide the bar to adjust the brightness of the LCD.

You can do the settings equivalent to [System] > [LCD Brightness] in the Settings mode.

(2) Slide the bar to adjust the volume.

You can do the settings equivalent to [System] > [Sound] > [Volume] in the Settings mode.

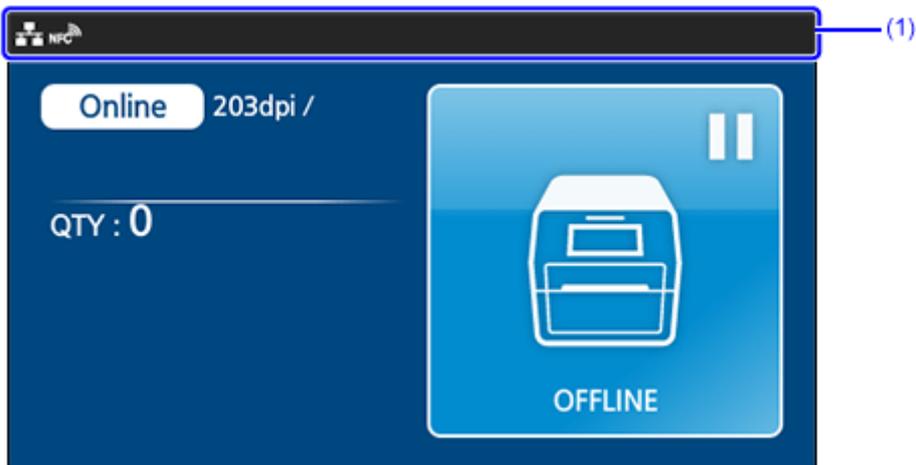


- You can do the settings equivalent to [System] > [Sound] > [Bluetooth Volume] while a Bluetooth device, such as a headset, is connected.
- 

(3) Close the panel.

## Status Icon

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



(1) Status bar

### Communication Interface Status

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

Icon	Description
	NFC is disabled.
	NFC is enabled and connected.
	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

Icon	Description
	<p>Wi-Fi Direct is connected or the product is set to act as an access point.</p>
	<p>Product is connected to USB host.</p>
	<p>RFID mode is enabled.</p>
	<p>RFID mode is enabled, but the system is defective. Or the SATO RF Analyze (SRA) motor unit is not operating correctly.</p>
	<p>Standard code is disabled.</p>
	<p>The On-Demand mode of the SOS (SATO Online Services) is enabled.</p>
	<p>The Real Time mode or the Light mode of the SOS is enabled. The product is connected to the SOS cloud.</p>
	<p>The Real Time mode or the Light mode of the SOS is enabled, but not connected to the SOS cloud. If LAN or Wi-Fi icon is grayed out, the product is not connected to the network. If LAN or Wi-Fi icon is active, the Internet connection of the SOS cloud has a trouble.</p>
	<p>The product is not connected to the SOS cloud.</p>

Icon	Description
	The periodic notification in the On-Demand mode of SOS as set previously has arrived. Scan the QR code and send the information to the SOS cloud.
	LAN or Wi-Fi is connected, but an IP address has not been assigned to the product. 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.
	Ribbon is near the end. The rest of the ribbon is decreased. Prepare a new ribbon.
	Command error detected. Check the print data.
	Receive buffer is nearly full. Wait until the product starts printing the previously sent data, and then send the next data.

Icon	Description
	Defective print head is detected. Replace the print head.
	Incompatible print head is detected. Replace the print head.

**Maintenance Status**

When [Notifications] is enabled, icons notify you at set periods about cleaning and replacing parts.

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

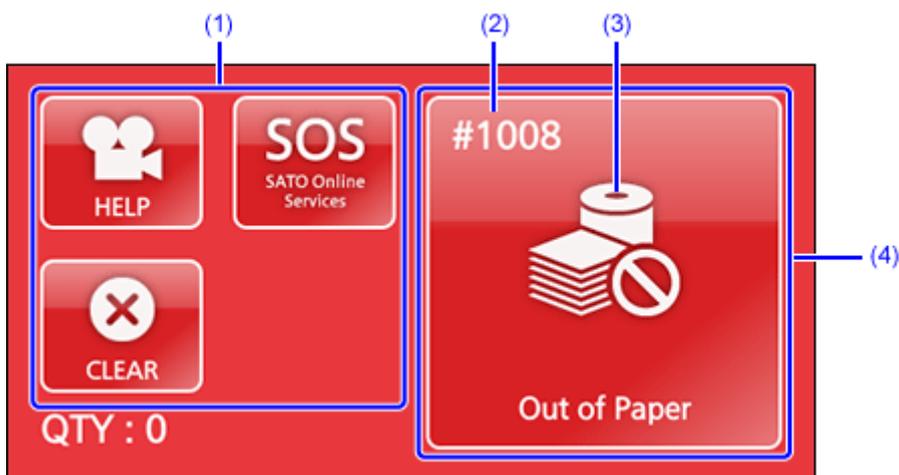
## Operations When Errors Occur

When an error occurs on the product, icons and messages that describe the error appear on the display. When an error occurs, you can perform the following operations:

- Clear the error.
- Display the relevant setting items.
- Play the guidance video.
- Select whether to continue, stop, or retry the process.
- When SOS (SATO Online Services) is enabled, scan the QR code or the NFC mark on the product, or contact support by telephone.



- The available operations vary, depending on the situation.



(1) Buttons of functions that can be executed during the displayed error appear.

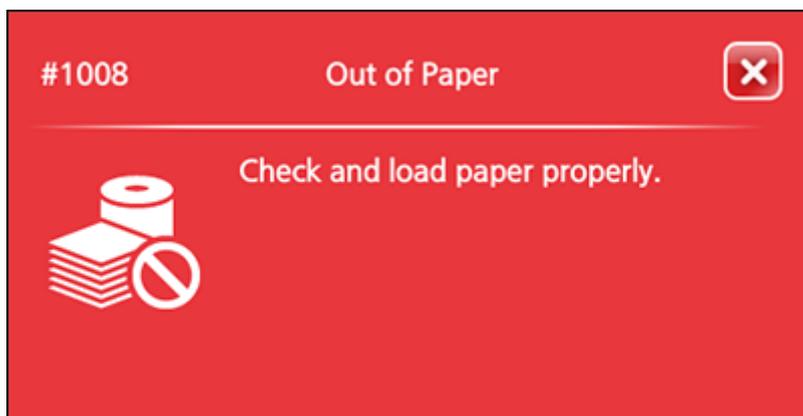
You can play the guidance video, display setting items, or clear an error.

The QR code and phone number are displayed when SOS is enabled.

(2) Error number

(3) Error icon

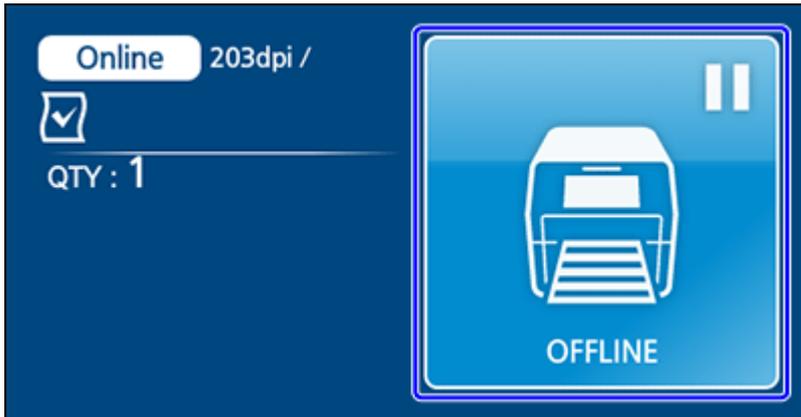
(4) Tap to display the details screen.



## Adjusting the Print Settings During Printing

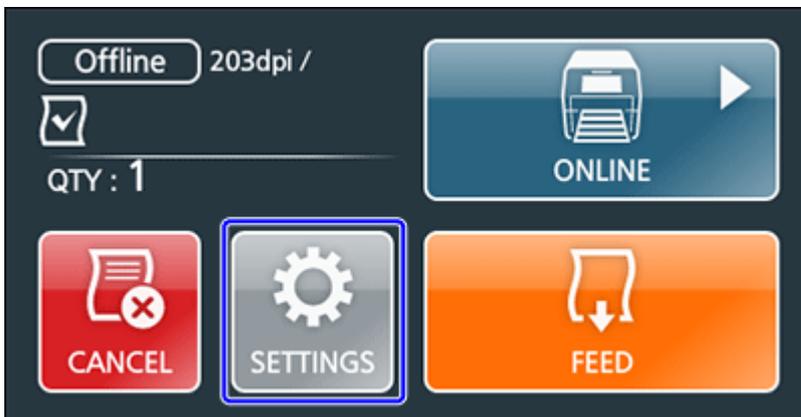
Follow the procedure below to adjust the print position, print darkness, print speed, and the label top sensor during printing.

1. Tap [OFFLINE] or press the  (Power/Home) button.



Printing stops and the product switches to Offline mode.

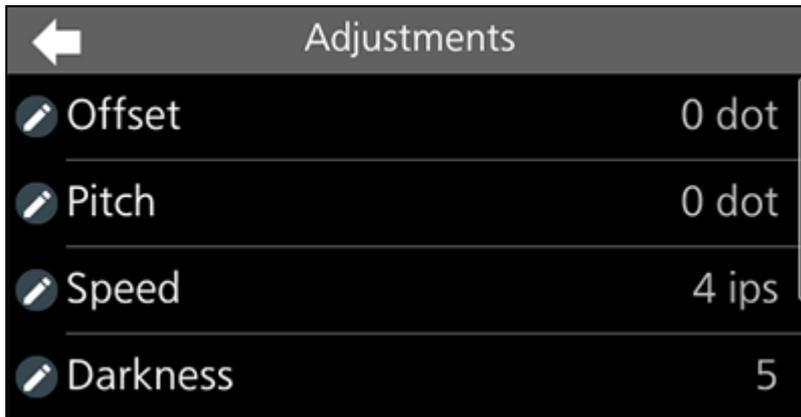
2. Tap [SETTINGS].



3. Input the password if it is enabled.

The Adjustments mode appears.

4. Select an item and adjust the setting.



5. Tap  or press the  (Power/Home) button.

Returns to the Offline screen.

6. Tap [ONLINE] or press the  (Power/Home) button.

The product switches to Online mode, and printing restarts using the adjusted settings.

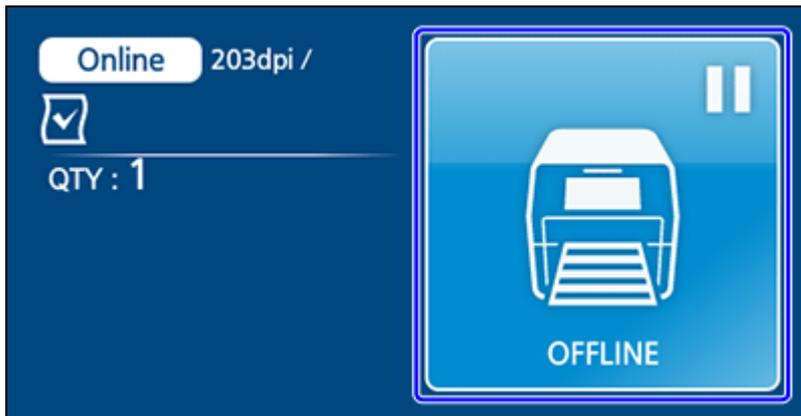


- When the [Printing] > [Advanced] > [Prioritize] menu is set to [Commands] and if the print settings have been specified by command, the changes made in the Adjustments mode are applied only to the data already analyzed at that time. The settings specified by command will be applied to the rest of the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

## Canceling the Print Job

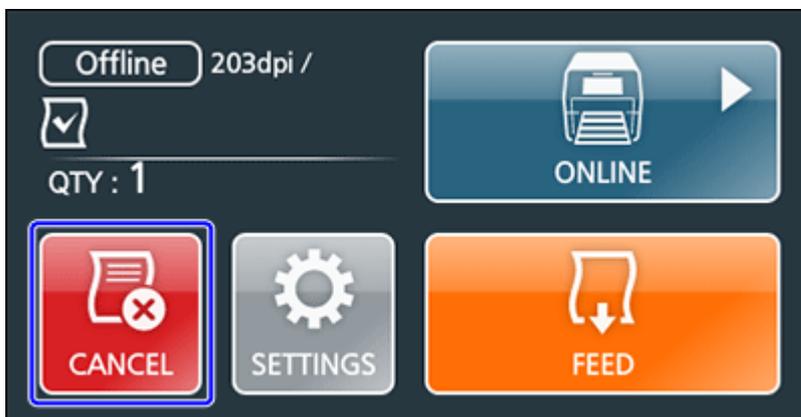
Cancel the print job according to the following procedure. When the print job is canceled, the data stored in the receive buffer of the product is also deleted.

1. Tap [OFFLINE] or press the  (Power/Home) button.



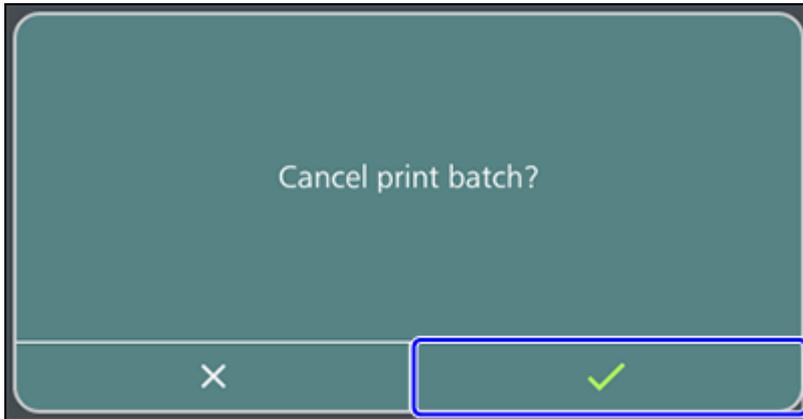
The product switches to Offline mode.

2. Tap [CANCEL].



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

3. Tap .



The print job is canceled.

## Guidance Videos

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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:

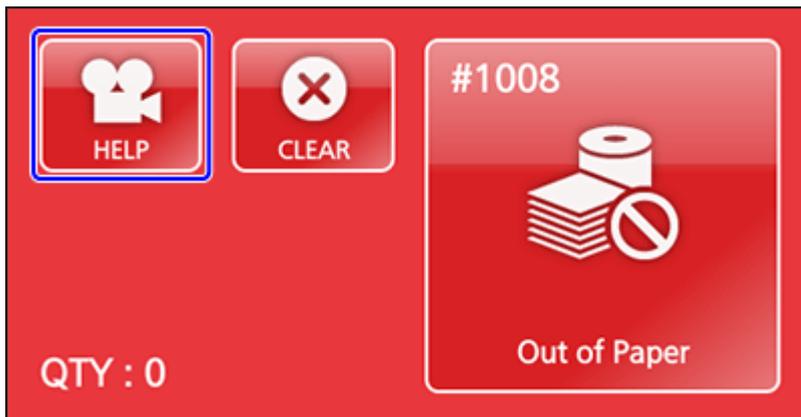
Guidance video	Show video from		
	Error screen	Startup Guide	[Information] Menu
Media roll loading (standard specifications)	-	Possible	Possible
Media roll loading (cutter specifications)	-	Possible	Possible
Media roll loading (dispenser specifications)	-	Possible	Possible
Fan-fold media loading (standard specifications)	-	Possible	Possible
Fan-fold media loading (cutter specifications)	-	Possible	Possible
Loading media when Label Waste Prevention is enabled (thermal transfer, standard specifications)	Possible	-	Possible
Loading media when Label Waste Prevention is enabled (thermal transfer, cutter specifications)	Possible	-	Possible
Loading media when Label Waste Prevention is enabled (direct thermal, standard specifications)	Possible	-	Possible
Loading media when Label Waste Prevention is enabled (direct thermal, cutter specifications)	Possible	-	Possible
Ribbon loading	-	Possible	Possible
Media roll replacement (standard specifications)	Possible	-	Possible
Media roll replacement (cutter specifications)	Possible	-	Possible
Media roll replacement (dispenser specifications)	Possible	-	Possible

Guidance video	Show video from		
	Error screen	Startup Guide	[Information] Menu
Fan-fold media replacement (standard specifications)	Possible	-	Possible
Fan-fold media replacement (cutter specifications)	Possible	-	Possible
Ribbon replacement	Possible	-	Possible
Print head replacement	Possible	-	Possible
Platen roller replacement (standard specifications)	-	-	Possible
Platen roller replacement (linerless specifications)	-	-	Possible
Cleaning the product (standard specifications)	-	-	Possible
Cleaning the product (linerless specifications)	-	-	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. In the error screen, tap [HELP].



The guidance video starts.



- The media selection screen appears when a paper end error occurs. Tapping the type of media you want to load starts the guidance video.

(It does not appear if the optional dispenser unit is installed.)

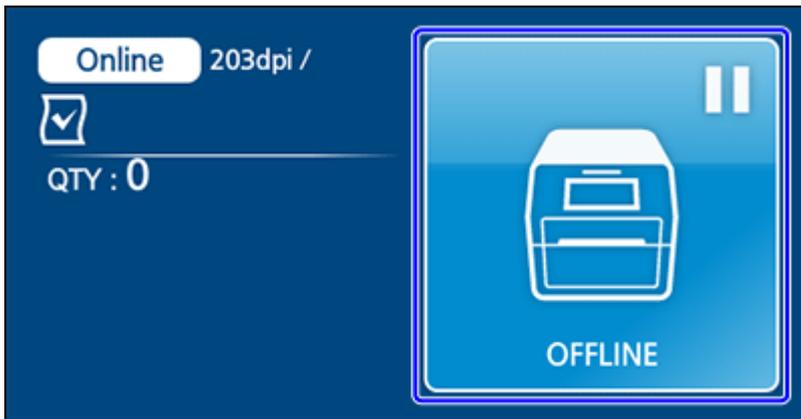


2. Follow the procedures to resolve the error according to the guidance video.

## Getting Access to the Guidance Video in Online Mode

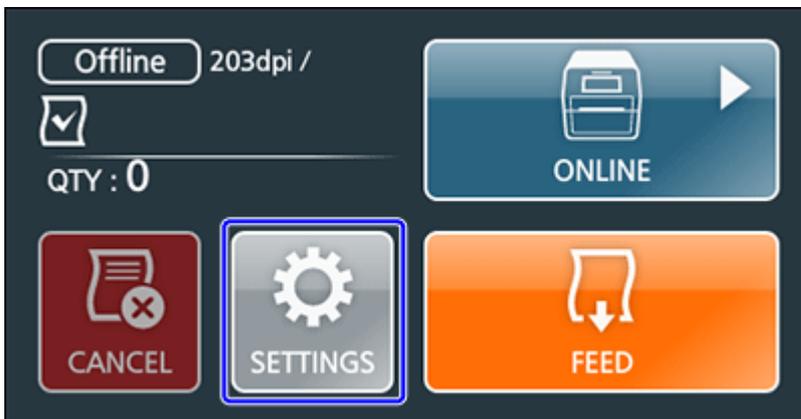
When in the Online mode, play the guidance video according to the following procedure.

1. Tap [OFFLINE] in Online mode.



The product switches to Offline mode.

2. Tap [SETTINGS].

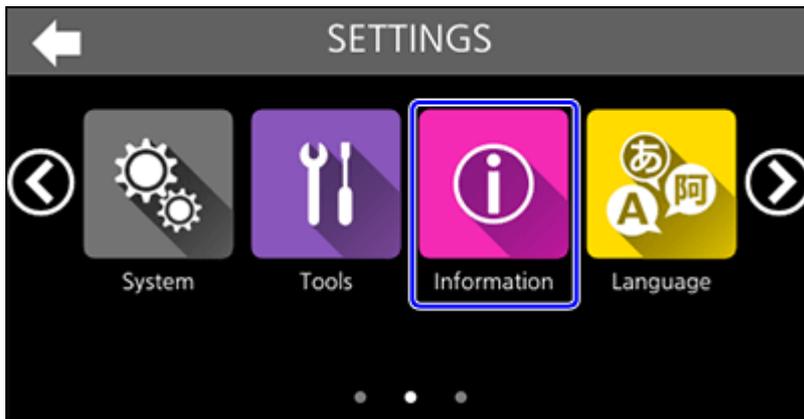


3. Input the password if it is enabled.

The product enters Settings mode.

4. Tap [Information].

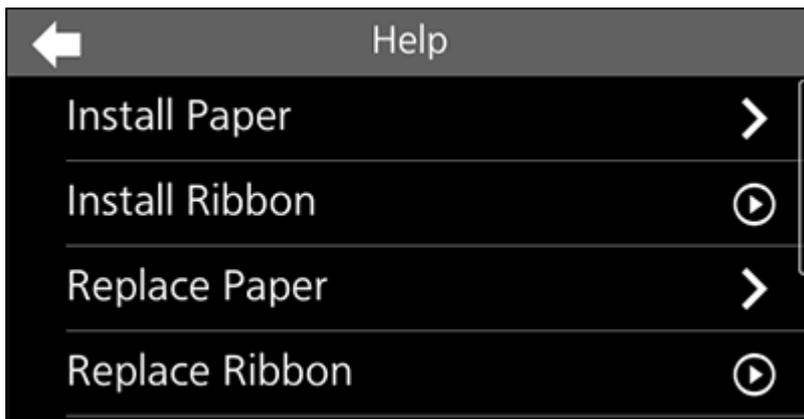
You can switch the screen by tapping   or sliding the screen to the left or right.



**5. Tap [Help].**

The guidance video list appears.

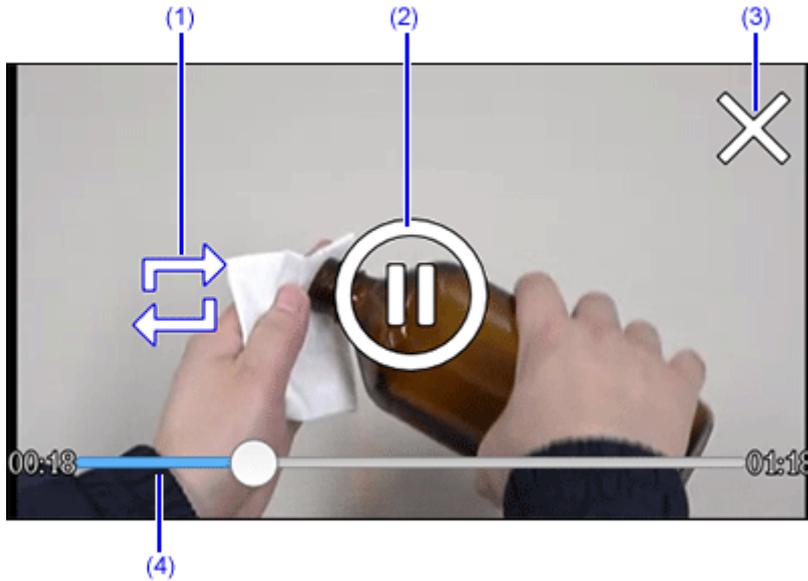
**6. Tap the video for playback.**



The guidance video starts.

## Operating the Guidance Video

Tap the screen as the video is playing to display the icons for operating the video.



(1) Tap to perform continuous playback.

When this function is enabled, the icon changes to blue.

(2) Playback or pause the video.

(3) End the video.

You can also press the  (Power/Home) button to end it.

(4) Slide or tap the bar to rewind or fast forward the video. Tap the left end of the bar to play the video from the start.

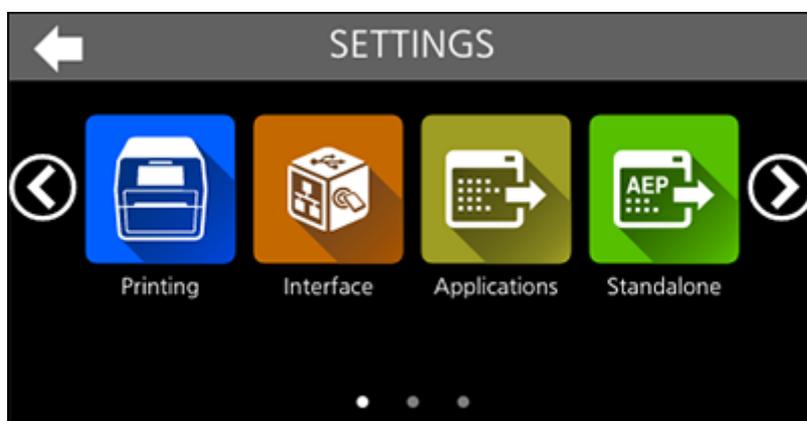
## Settings Mode

---

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 menus in the Settings mode and each menu contains many layers of submenus.



Menu	Description
<a href="#">Printing Menu</a>	Access the settings related to printing.
<a href="#">Interface Menu</a>	Access the settings related to the interfaces.
<a href="#">Applications Menu</a>	Access the settings related to the printer's command.
<a href="#">Standalone Menu</a>	Access the settings related to the AEP (Application Enabled Printing) mode.
<a href="#">System Menu</a>	Access the settings for the display language, buzzer volume, compatibility mode, etc.
<a href="#">Tools Menu</a>	Do media startup, media profile editing, test prints, initialization and other settings.
<a href="#">Information Menu</a>	Display the product information and guidance videos.
<a href="#">Language Menu</a>	Set the display language. Appears if the [System] > [Regional] > [Display Language Icon] menu is enabled.
<a href="#">Bluetooth Menu</a>	Configure settings related to Bluetooth. This information is shown only when the optional wireless LAN/Bluetooth kit is installed.
<a href="#">Wi-Fi Menu</a>	Configure settings related to wireless LAN. This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

## Changing to the Settings Mode

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

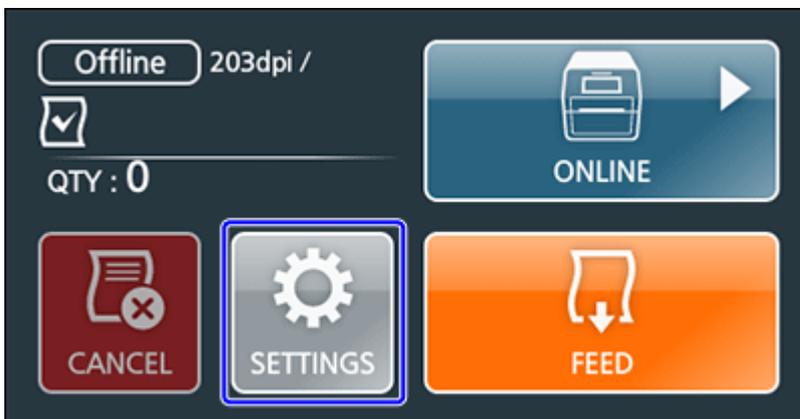
Change the product to the Settings mode according to the following procedure:

1. Tap [OFFLINE] in Online mode.



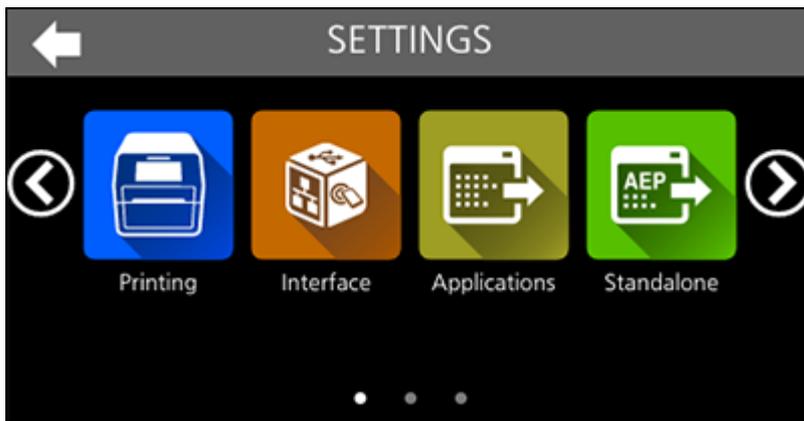
The product switches to Offline mode.

2. Tap [SETTINGS].



3. Input the password if it is enabled.

The product enters Settings mode.

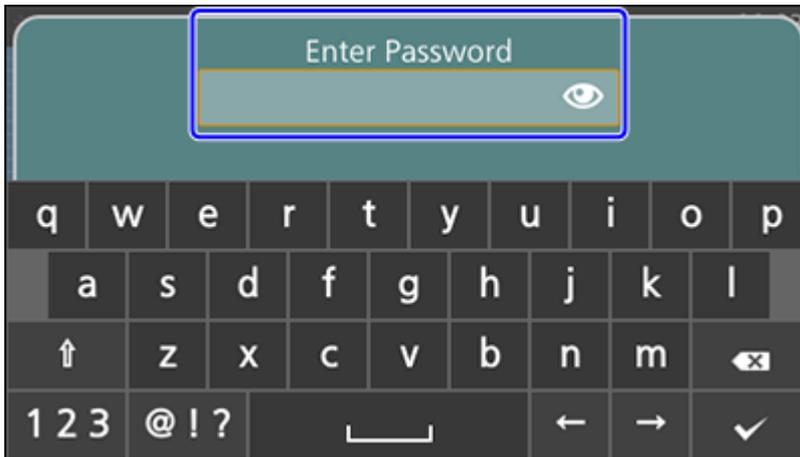


- You can also enter the Settings mode from the Home screen. Press the  (Power/Home) button while in Online or Offline mode to show the Home screen.
- To exit the Settings mode, press the  (Power/Home) button to show the Home screen, or tap  to return to the previous screen.

## Logging In to/Logging Out of the Settings Mode

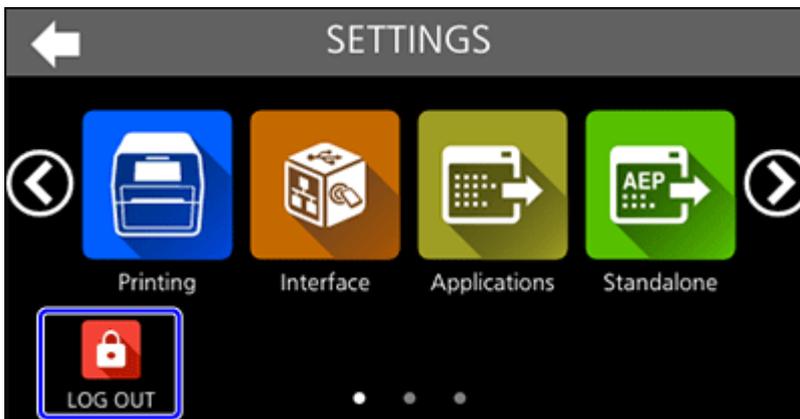
The Settings mode logs in and logs out by the following procedure, if the password is enabled.

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



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

- Tap [LOG OUT] to log out.



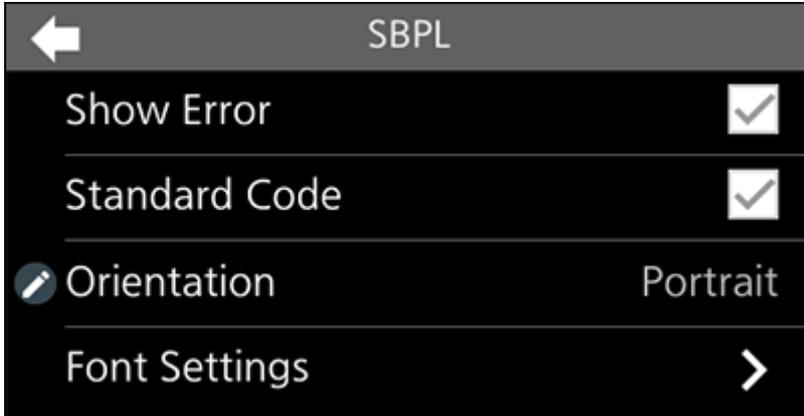
Password is required to enter the Settings mode again.



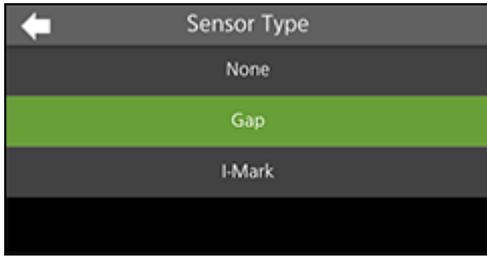
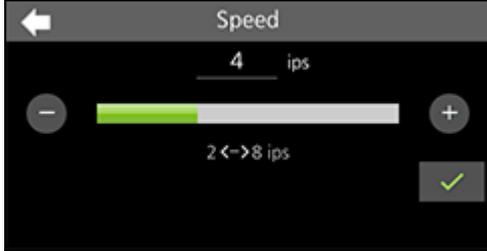
- When the password function is enabled, after inputting the password and logging in to the Settings mode, you can enter the mode again, for a certain period of time, without inputting the password. The initial value is 10 minutes. This time can be set in the [System] > [Password] > [Password Required After] menu. If you set it to 0, a password is required every time you enter the Settings mode or you select a Settings menu item.
- The login status is maintained while the Settings mode or Home screen is displayed. If you switch to the Online/Offline screen, you are logged out regardless of the [Password Required After] setting.

## Settings Mode Operations

Each menu in the Settings mode contains many layers of submenus, as follows:



The operations differ depending on the following type of setting items.

Display image	Description
	Select/clear the checkbox by tapping it to enable/disable the function.
	Tap the item to show the next layer of the submenus.
	Items with a pencil icon are items with changeable values. Tap the setting item to show the detailed options.  If the pencil icon is gray, the value cannot be changed.
	Tap an item from the list to select it. The selected item is highlighted in the list.
	There are two ways to adjust the setting value. <ul style="list-style-type: none"> <li>• Tap  / .</li> <li>• Directly tap or slide the slider.</li> </ul> Tap  to confirm the setting.

Display image	Description
	<p>Input values from the on-screen keyboard.</p> <p>Tap  to confirm the setting.</p>
	<p>Tap  to execute items.</p>
	<p>Tap  to a test print or print a list of settings.</p>
	<p>Tap  to delete items.</p>
	<p>Items with no pencil icon are read-only items.</p>

## Setting Value Input

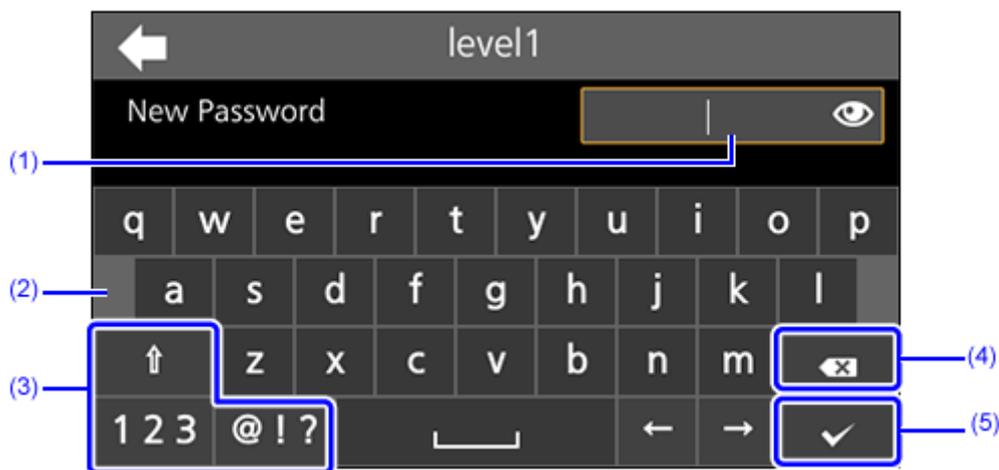
This topic describes the character and number input on the setting screen.



- You can also input characters and numbers from a USB keyboard by connecting it to the product.

- [Character Input](#)
- [Numeric Input](#)
- [IP Address Input](#)

- Character Input**



(1) The text you enter is displayed in the text box.

For passwords and other secret information, tap  to display what has been input.

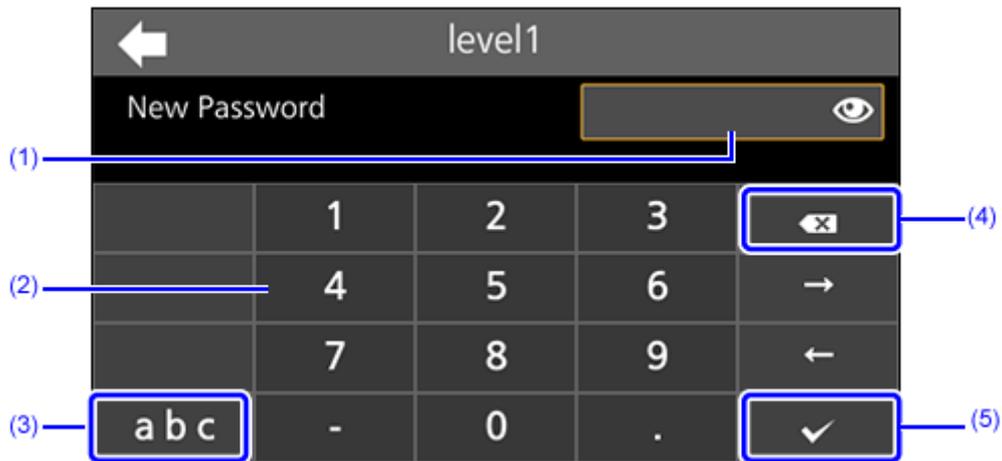
(2) Tap the on-screen keyboard to input characters. Hold the keys to show special characters.

(3) Change the input mode.

(4) Delete the character to the left of the cursor indicated in the text box.

(5) Confirm what was input.

- **Numeric Input**



(1) The numbers you enter are displayed in the text box.

For passwords and other secret information, tap  to display what has been input.

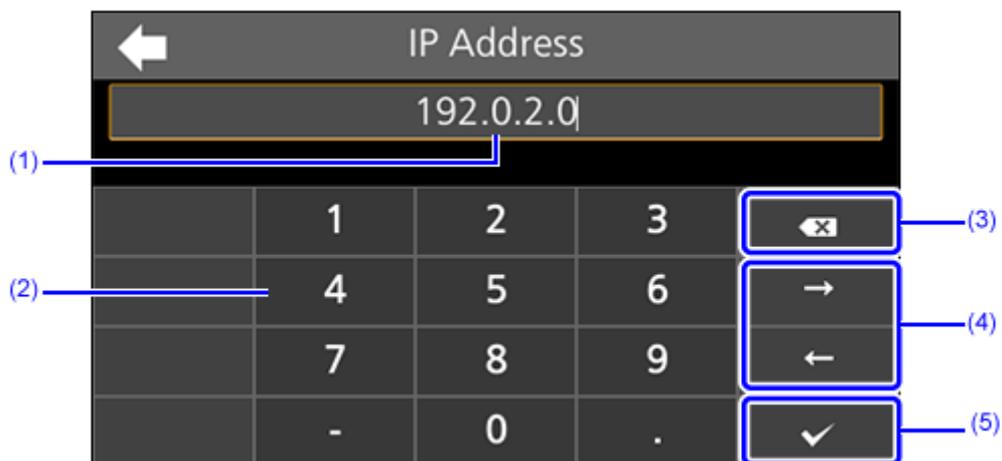
(2) Tap the on-screen keyboard to input numbers.

(3) Change the input mode.

(4) Delete the number to the left of the cursor indicated in the text box.

(5) Confirm what was input.

- **IP Address Input**



(1) The value you enter is displayed in the text box.

(2) Tap the on-screen keyboard to input numbers. Input each octet and separate them by "." dots.

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

(4) Move the cursor to the left or right.

(5) Confirm what was input.

## Memory of the Product

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### Product Memory and USB Memory

The user registration area of the product is a maximum of 1 GB.

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.

USB memories can be connected to the USB connectors (Type A) on the back of the product and inside the product. They can also be connected to the USB connector (Type A) on the optional wireless LAN/Bluetooth kit.

What you can do by connecting USB memories to the USB connectors (Type A) is as follows:

#### USB Connector (Type A) on the Back of the Product

It can be used 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)
- Register user data such as fonts, external characters, or graphics
- Apply setting information saved by using clone or auto-clone

#### USB Connector (Type A) Inside the Product

It can be used for one of the following operations.

- Auto-clone (automatically back up the product's setting information)  
You need to format the USB memory specifically to be used by the auto-clone function.
- Register user data such as fonts, external characters, or graphics  
It can be used if this connector is specified by using the card slot for use <CC> command.

#### USB Connector (Type A) on the Optional Wireless LAN/Bluetooth Kit

It can be used for the following operations.

- Register user data such as fonts, external characters, or graphics



- 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 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 the USB Memory Inside the Product

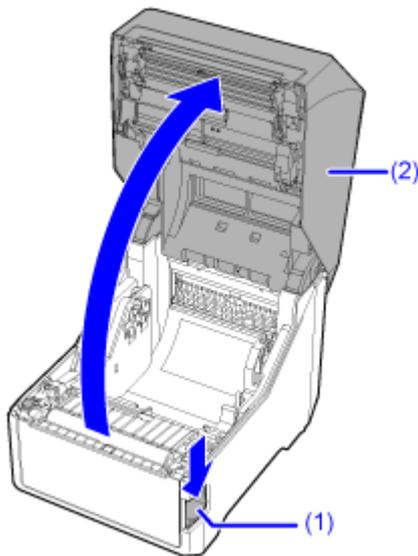
You can do automatically back up the product's setting information by connecting a USB memory for the auto-clone function into the USB connector (Type A) inside the product.

Also, user data, such as fonts, external characters, and graphics on the USB, can be registered to the product. (You need to specify this connector by using the card slot for use <CC> command.)



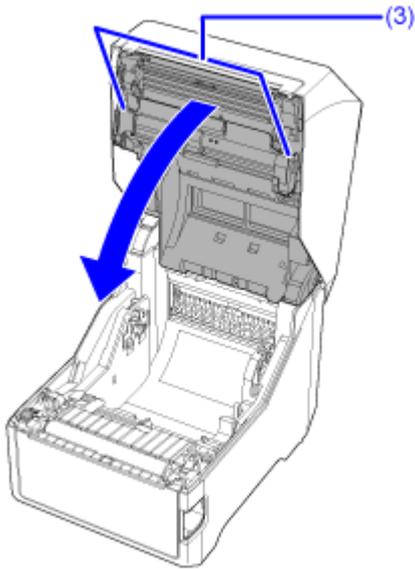
- The size of the USB memory that can be connected inside the product is as follows:
    - Length: under 68 mm (2.68") (excludes the metal part of the connector)
    - Width: under 27.6 mm (1.09")
    - Thickness: under 8.6 mm (0.34")
- 

1. Press the cover open latch (1) to open the top cover (2).

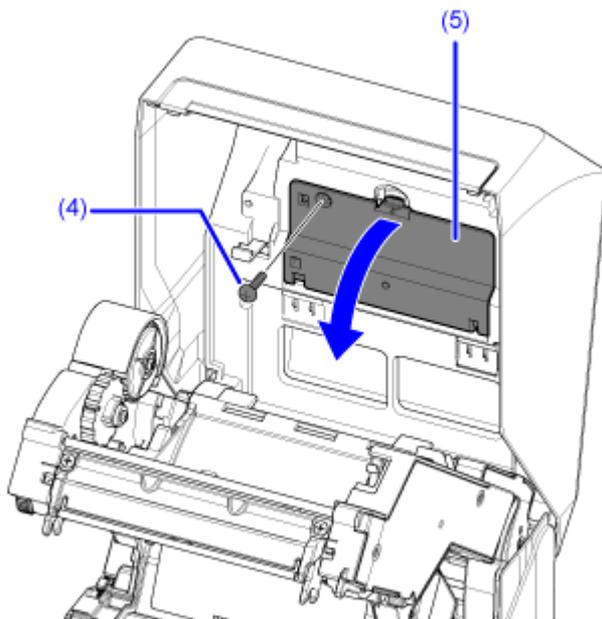


2. Pull out the parts (3), on which   are engraved.

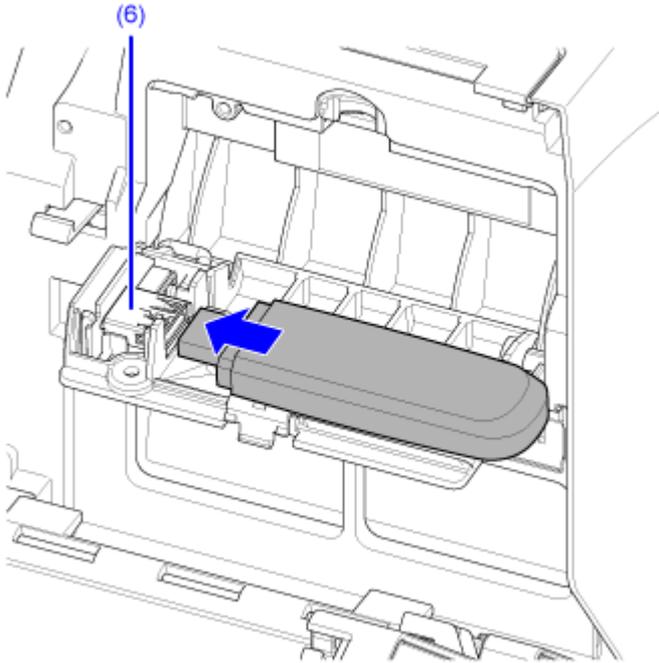
The parts (3) are indicated by the ▼ (ribbon cover open) marks on the combined direct thermal/thermal transfer model.



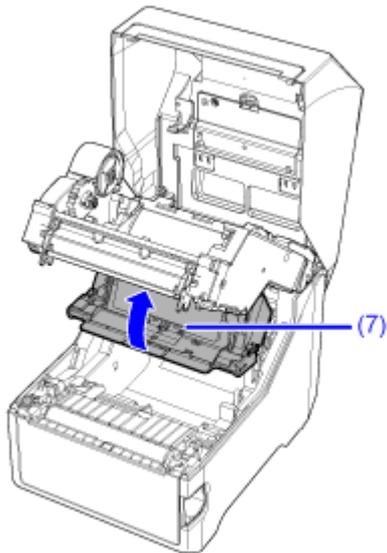
3. Remove the screw (4) from the underside of the top cover, and then open the USB memory cover (5).



4. Insert the USB memory into the USB connector (6).



5. Close the USB memory cover, and secure it with the screw.
6. Close the cover (7).

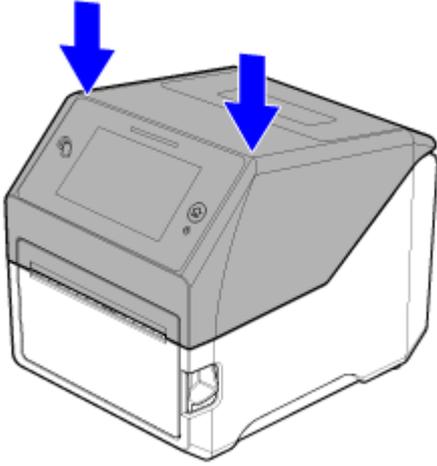


7. Close the top cover.

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.
- 



- The  icon is shown in the status bar.
-

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# Getting Started

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## Installation Space

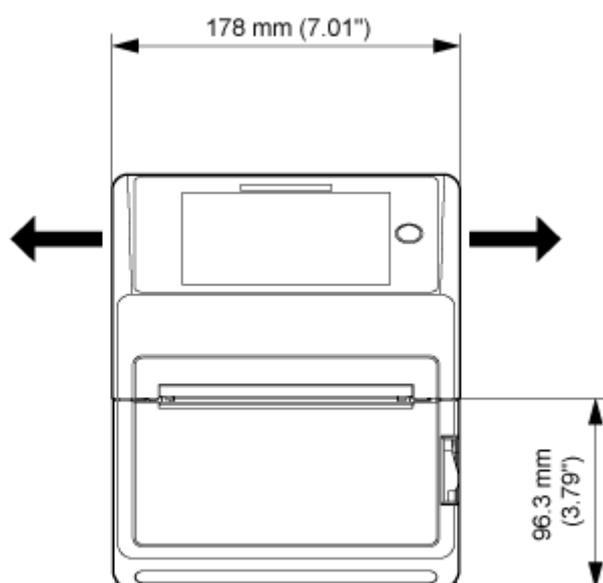
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### Front View

Keep sufficient space around the product.

The dimensions of the front of the product are as follows:

The figure below shows the standard model.



←: Leave open 150 mm (5.91") or more.

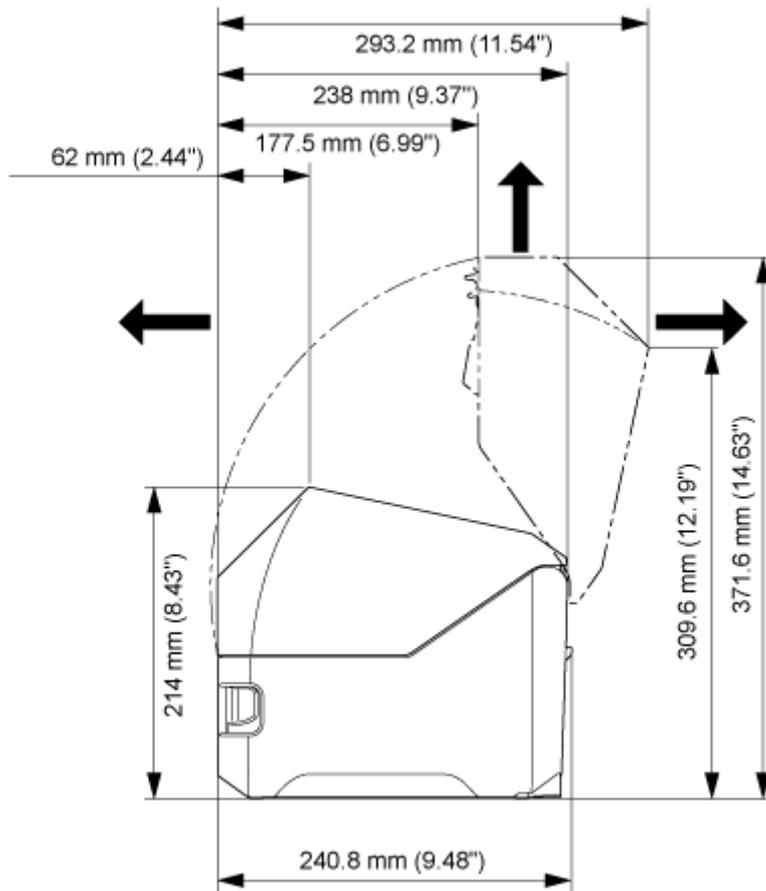
## Side View

Make sure that there is sufficient space around the product so that the top cover can be fully opened when operating or cleaning the product, or replacing consumables.

Make sure that there is sufficient space on the rear side of the product so that no stress is applied to the power cord or cables connected to the product.

The dimensions of the side of the product are as follows:

The figure below shows the standard model.

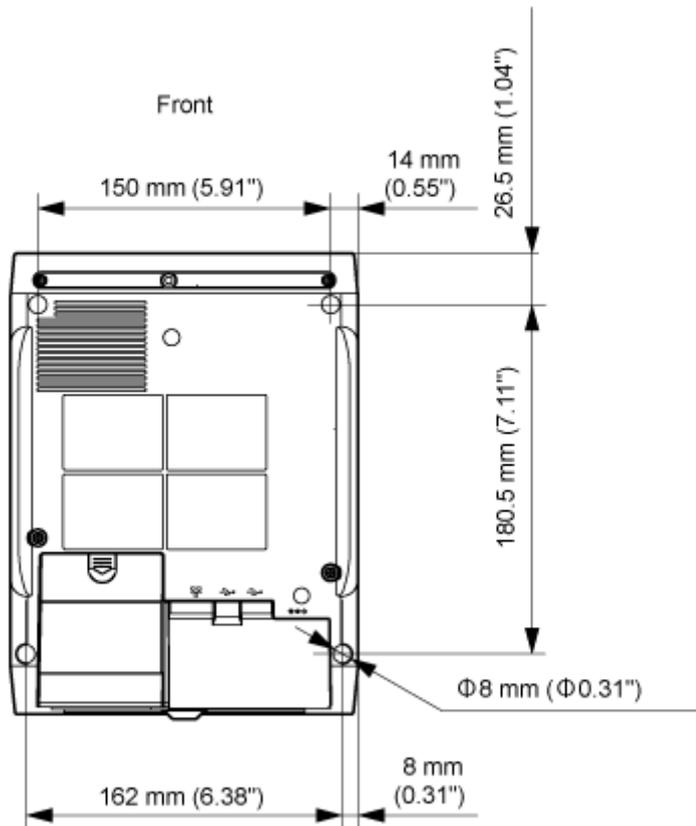


←: Leave open 150 mm (5.91") or more.

## Bottom View

The dimensions of the bottom of the product are as follows:

The figure below shows the standard model.



## Powering On/Off the Product

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### Connecting the AC Adapter and the Power Cord

---



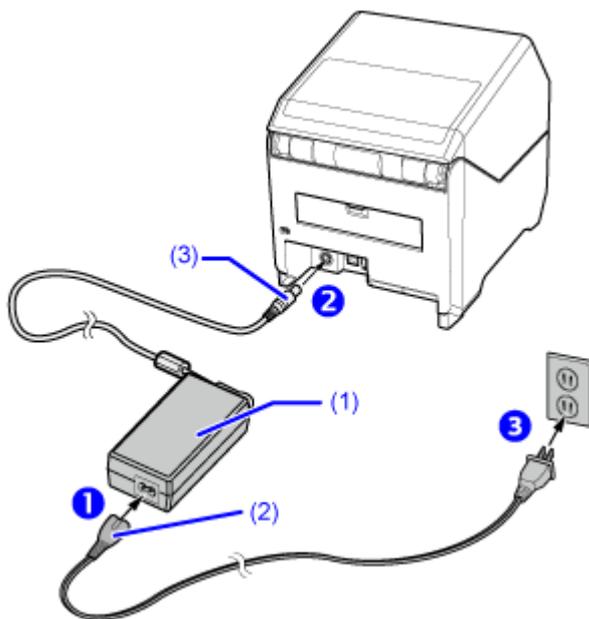
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
  - Make sure that the AC voltage of your region is in the range of AC 100 - 240 V, 50 - 60 Hz. If your local voltage is not in the stated range, contact your SATO reseller or technical support.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



- The attached power cord and AC adapter are designed exclusively for this product. Do not use them with other devices.
- 

#### 1. Connect the AC adapter and the power cord to the product.

- a. Connect the AC adapter (1) and the power cord (2) (1).
- b. Insert the AC adapter plug (3) into the DC input connector at the rear of the product (2).
- c. Insert the power plug into an AC outlet (3).



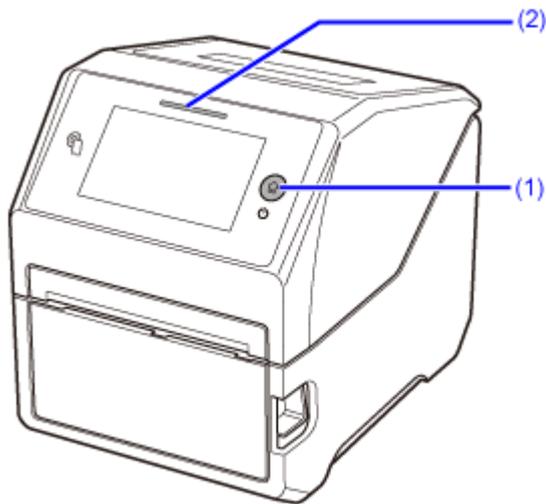
- The shape of the power plug varies depending on the region in which it was purchased.
-

## Powering On the Product

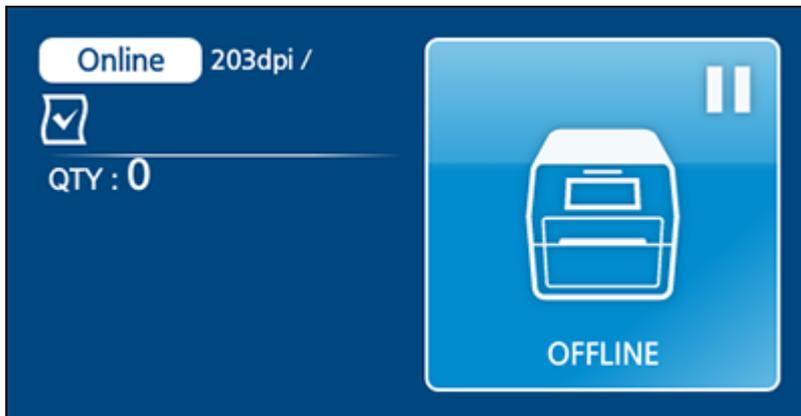


- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

1. Press the  (Power/Home) button (1) of the operator panel until the LED indicator (2) lights blue, and then remove your finger.



The Online screen appears.



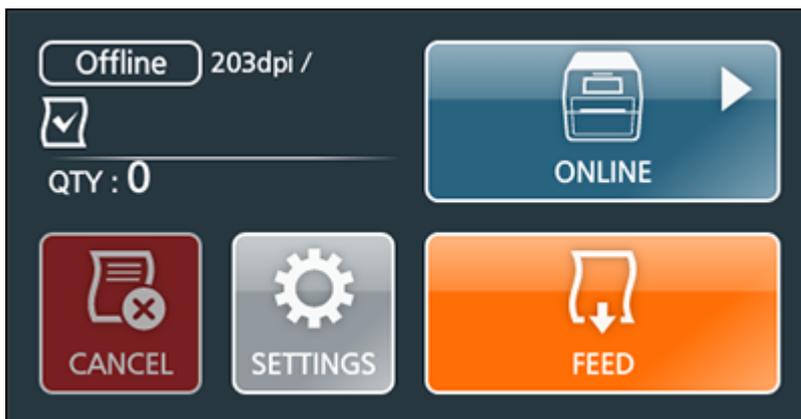


- When you power on the product for the first time after purchase or reboot after resetting the settings, the startup guide appears. You can easily set the printing preferences on the product by following the on-screen instructions.
  - The screen that appears after you power on the product varies depending on the settings.
    - If [Start Online] in the [Printing] menu is disabled, the Offline screen appears.
    - If [AEP] in the [Standalone] menu is enabled, the Home screen or the application screen appears, depending on the [Initial Display at Start-Up] setting.
  - You can power on/off the product from the main power source that supplies the product with power by enabling [Start on AC] on the [System] menu.
-

## Powering Off the Product

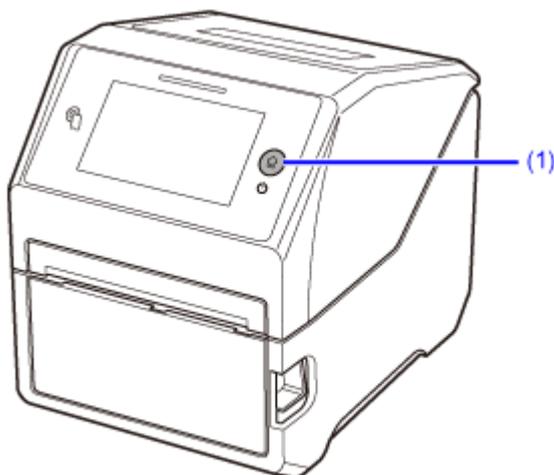
- 
- ⚠ Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
- 
- ⚠ Do not power off the product during operation, such as when printing or updating. Doing so could cause a malfunction of the product.
  - Do not operate the product or disconnect the power cord while the product is powering off.
  - 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. Before you power off the product, make sure that the product is in Offline mode.

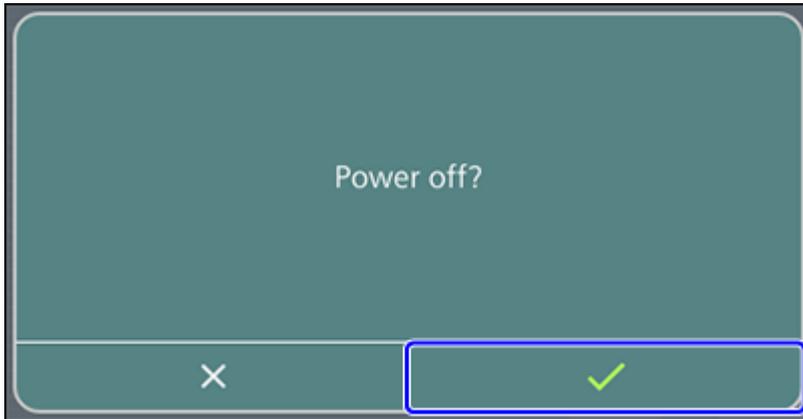


If "Online" is displayed on the display, tap [OFFLINE] to switch to Offline mode.

2. Press the  (Power/Home) button (1) for more than 2 seconds.



3. Tap .



- You can power on/off the product from the main power source that supplies the product with power by enabling [Start on AC] on the [System] menu.
-

## Initial Setup (Startup Guide)

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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, date and time settings, loading media, etc.).

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



- The time zone setting screen appears if the NTP function is enabled or the optional RTC (Real Time Clock) kit is installed.
- The date and time setting screen appears if the NTP function is disabled and the optional RTC kit is installed.
- Tapping a selection opens the next screen. To move manually to the next or previous screen, tap   or slide the screen to the left or right.

1. Press the  (Power/Home) button on the operator panel until the LED lights blue to power on the product.

The startup guide screen appears.

2. Tap the display language.



3. Tap the region to set for the time zone.

(Appears if you have enabled the NTP function or installed the optional RTC kit.)



**4. Tap the city to set for the time zone.**

(Appears if you have enabled the NTP function or installed the optional RTC kit.)



Tap  to reselect the region.

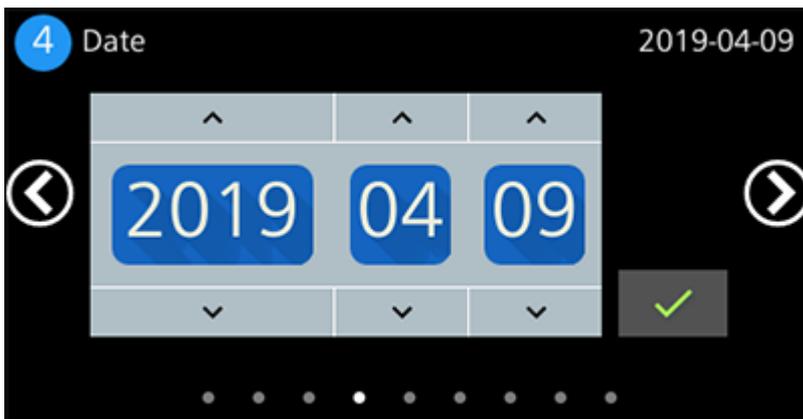
**5. Tap the unit to use.**

The options are as follows:

- dot
- " (inch)
- mm

**6. Tap  /  to set the current year, month, and date, and then tap .**

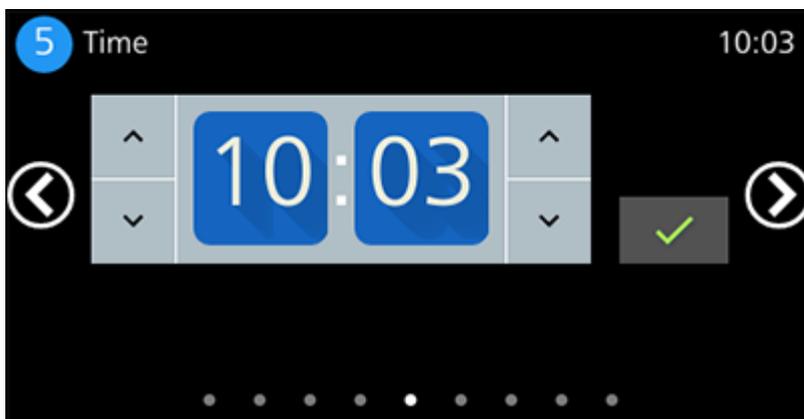
(Appears if you have disabled the NTP function and installed the optional RTC kit.)



When the confirmation screen appears, tap  to confirm the settings.

7. Tap  /  to set the current time, and then tap .

(Appears if you have disabled the NTP function and installed the optional RTC kit.)

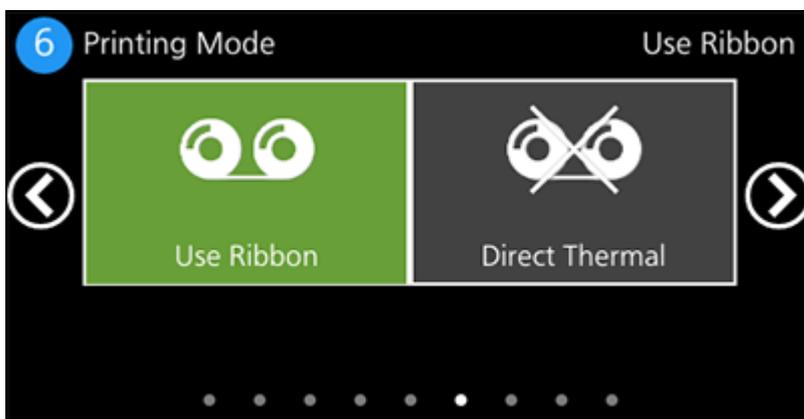


- The time is set in the 24-hour format.

When the confirmation screen appears, tap  to confirm the settings.

8. Tap the print method to use.

(Available only for the combined direct thermal/thermal transfer model.)



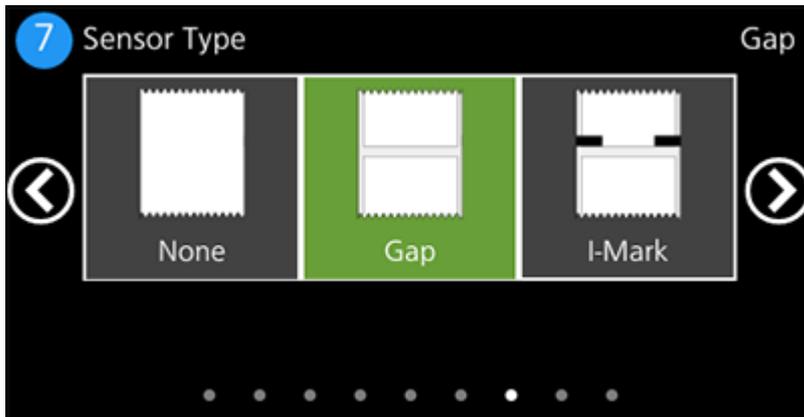
**[Use Ribbon]**

Prints using a ribbon.

**[Direct Thermal]**

Prints using direct thermal media.

**9. Tap 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 initial value of [Print Mode] differs depending on the options installed on the product.
  - If [Print Mode] is set to [Dispenser], only [Gap] and [I-Mark] will be available.
  - If [Print Mode] is set to [Linerless cutter] or [Linerless tearoff], only [None] and [I-Mark] will be available.

**10. Load the media and ribbon while checking the video.**

Tapping the icon starts playing the video.





- [Fanfold] is not displayed if the optional dispenser unit is installed.
- [Install Ribbon] is displayed only if [Use Ribbon] is selected for [Printing Mode] on the combined direct thermal/thermal transfer model.

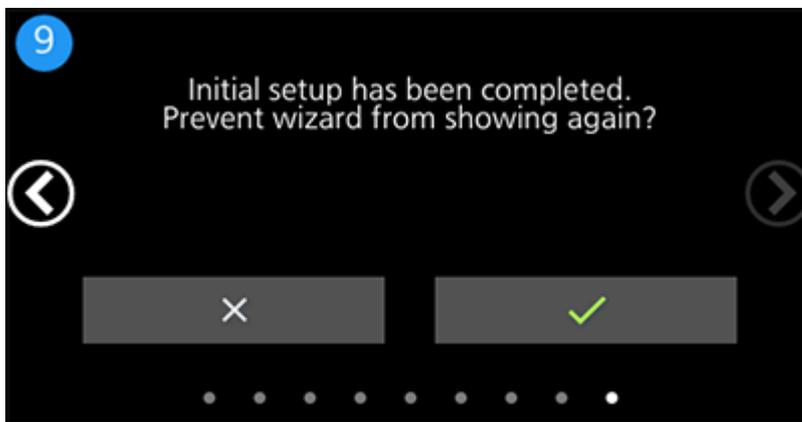
**11. When you have finished loading the media and ribbon, tap  on the video's screen to stop the video.**

Returns to the screen for selecting a video.

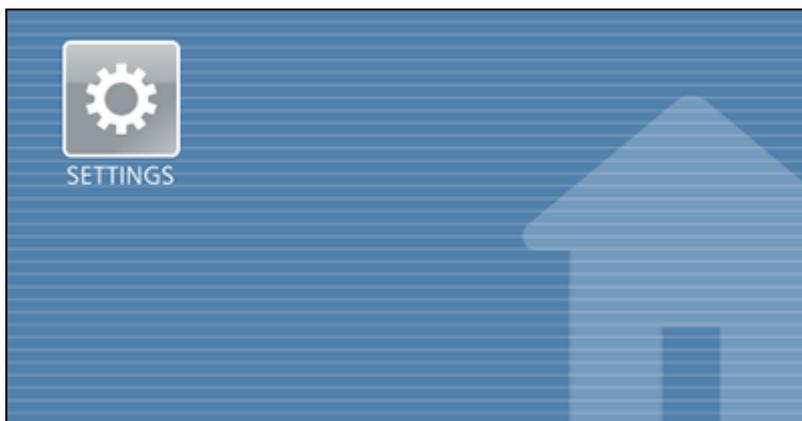
**12. Tap  or slide the screen to the left.**

The confirmation screen appears.

**13. If you want the startup guide to show the next time you start up, tap . If not, tap .**



The Home screen appears.



- 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 Cancellation

You can cancel the startup guide at any time.

1. Press the  (Power/Home) button while doing settings in 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.

Tap [CANCEL] to return to the startup guide setting without canceling it.



- You can set whether to open the startup guide the next time you start up the product in [Startup Guide] in the [Tools] menu.
  - Even if you cancel the startup guide before completing it, the product will save the settings you have changed.
-

## Manually Setting the Print Mode

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

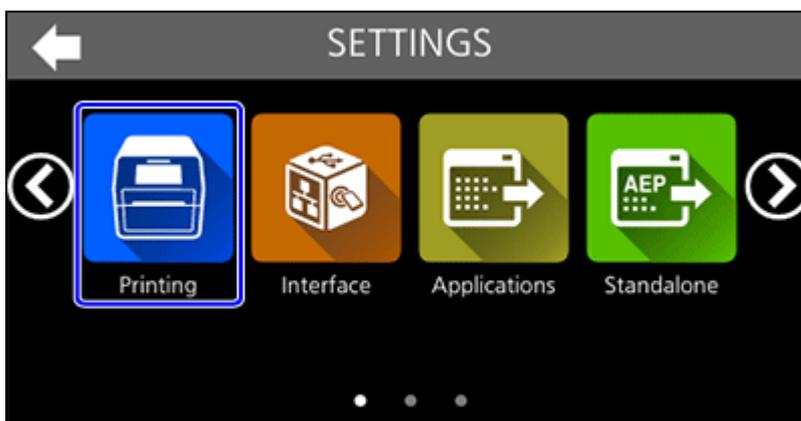
When [Auto-mode] is enabled, the print mode is set automatically according to the installed options.

You can manually set the print mode if you disable [Auto-mode]. The selectable print modes differ according to the installed options.

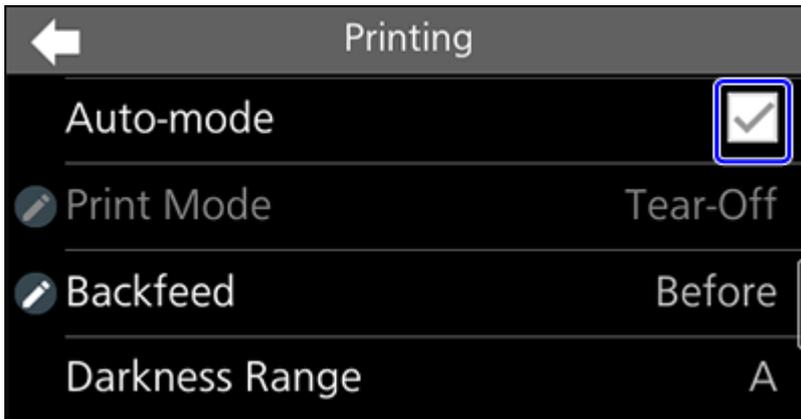
Installed option	Print mode
None	Continuous/Tear-Off
Dispenser unit	Continuous/Dispenser
Cutter unit	Continuous/Tear-Off/Cutter/Cut & Print/Partial cutter
Linerless cutter unit	Linerless cutter/Linerless tearoff

Change the print mode according to the following procedure:

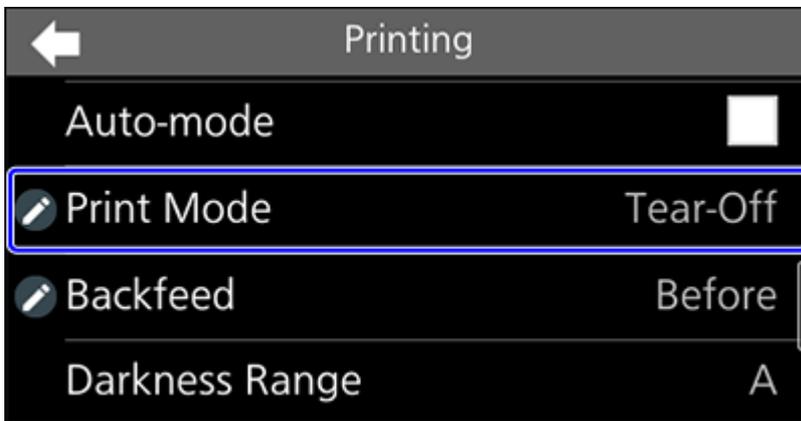
1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



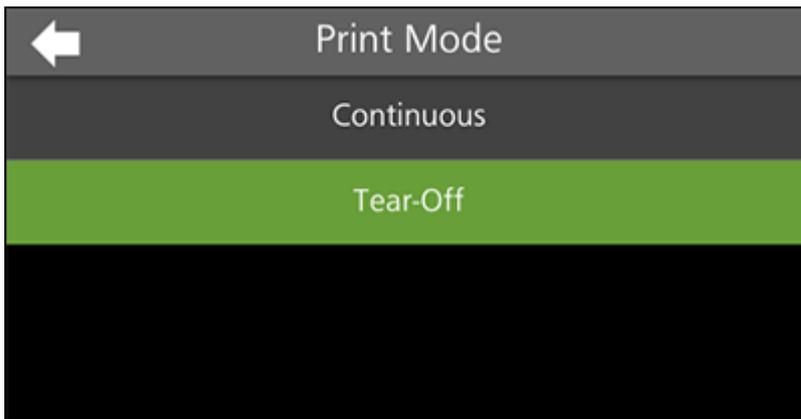
4. Disable [Auto-mode].



5. Tap [Print Mode].



6. Select the print mode.



- Changing the print mode may link to and change [Sensor Type] and [Backfeed]. After changing the settings, confirm that the settings have become compatible with the media you are using.
- When using RFID tags on an RFID model, do not select cutter mode with no backfeed, partial cutter mode, linerless cutter mode, or linerless tearoff mode. If these print modes are set, you cannot use RFID tags.

## Connecting the Product to a Computer

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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 LAN or wireless LAN interfaces, 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.
-

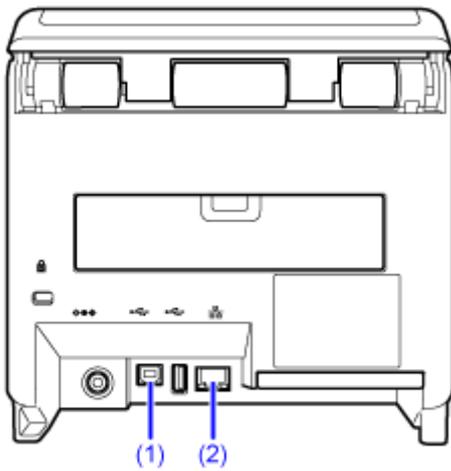
## Connecting Interfaces

### Available Interfaces

The product supports the following interfaces.

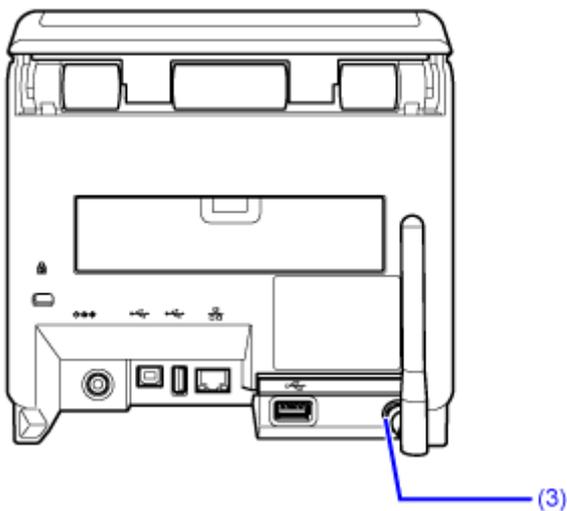


- A product connected with multiple interface cables can continue to operate when receiving data. However, you cannot receive data from more than one interface at a time. Normally, do not use multiple interfaces at a time.
- The product prints the received data in order of reception. The next received data is stored in the receive buffer while the first data is printed.

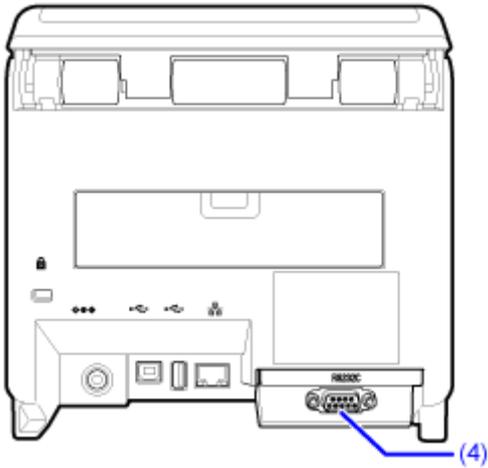


(1) USB

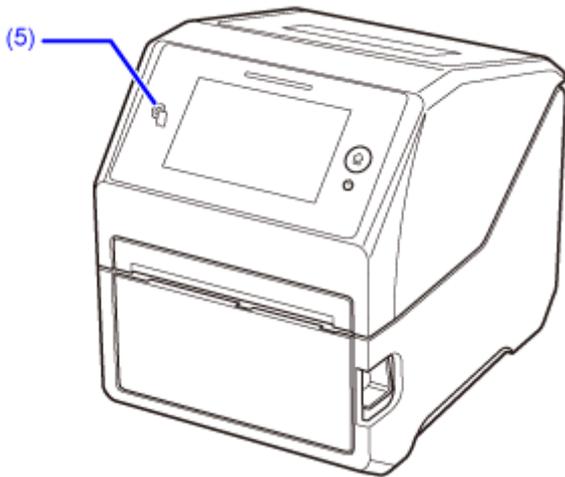
(2) LAN



(3) Wireless LAN/Bluetooth (optional)



(4) RS-232C (option)



(5) NFC

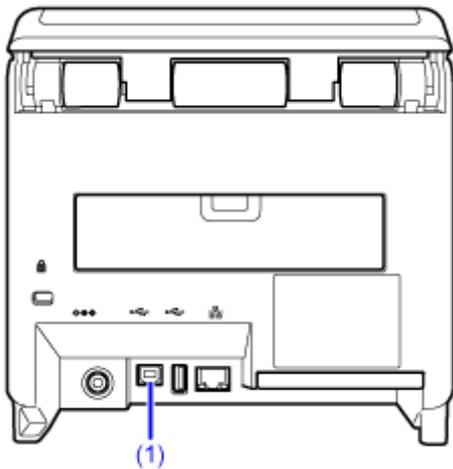


- The NFC interface supports the handover function that simplifies the Bluetooth/Wi-Fi connection setup with Android devices. In addition, the NFC interface can be used for changing product settings with an Android device while the product is powered off and the power cord is not connected.

## USB Interface Connection (Standard)

Connect the interface cable when the product is powered off.

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



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.



- 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.

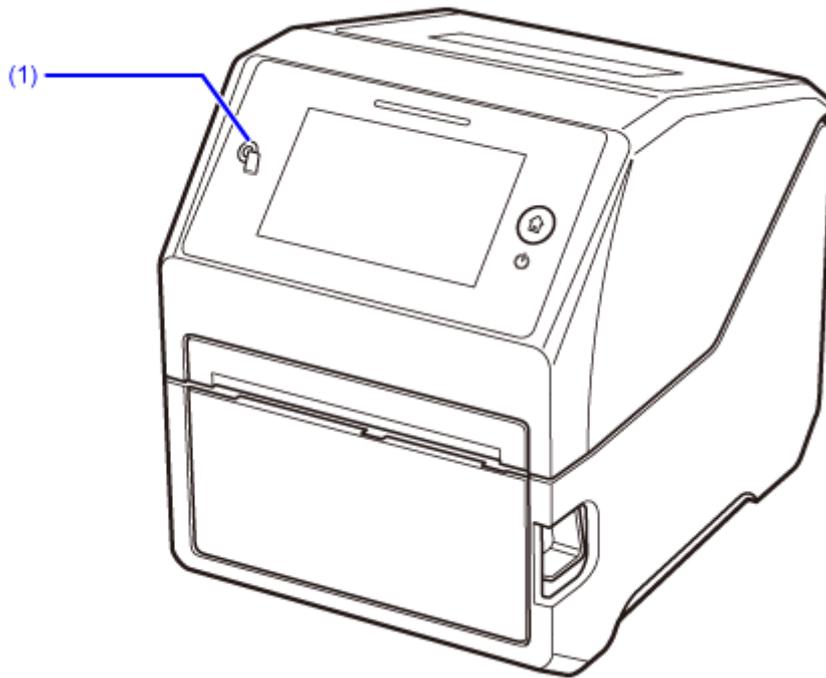
## NFC Interface Connection (Standard)

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.

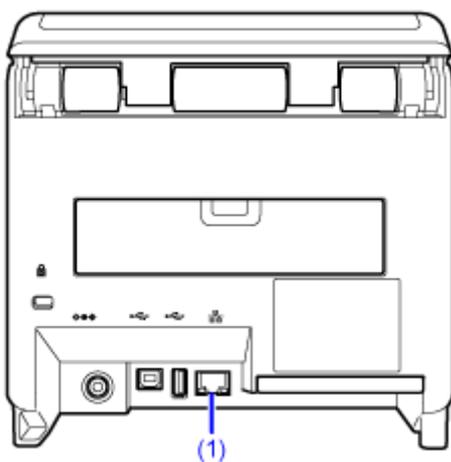


- If it does not communicate well, shift the Android device to the front, back, left and right, and then hold it up again.
- For the operation of the NFC for the Android device, refer to the user manual for the Android device.

### LAN Interface Connection (Standard)

Connect the interface cable when the product is powered off.

Connect the LAN cable to the LAN connector (1) on the product.



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.



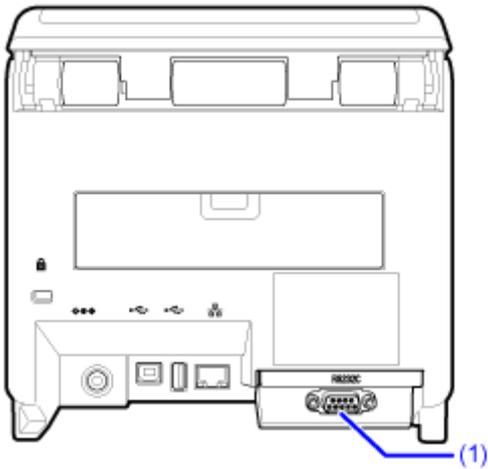
- To use the printer driver, the communication protocol must be set to Status4. (The initial value of the communication protocol for the product's LAN interface is Status4 ENQ.)

## RS-232C Interface Connection (Optional)

Check if the RS-232C kit is attached to the product.

Connect the interface cable when the product is powered off.

Connect the RS-232C cable to the RS-232C connector (1).

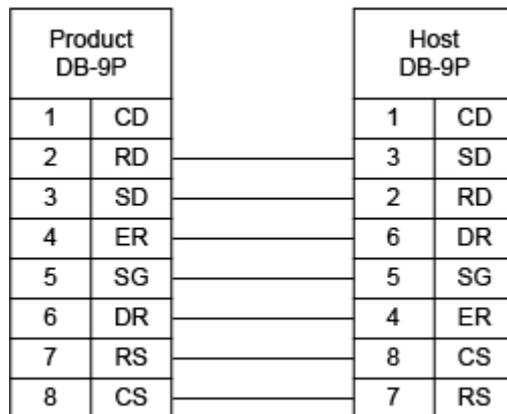


Configure the interface settings of the product according to the interface settings of the computer.

The communication conditions of the RS-232C interface can be set through the product's [Interface] menu or the All-In-One Tool.

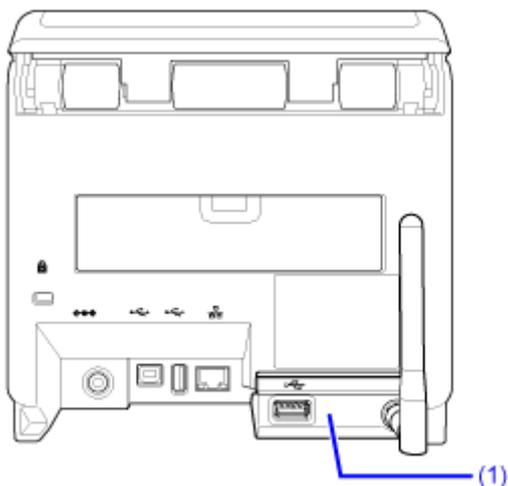


- When not using an RS-232C cable, put the connector cover that is provided onto the RS-232C connector.
- The interface settings of the computer can be confirmed by the following. In the Device Manager, right-click [Ports (COM & LPT)] > [Communications Port (COM1)] and select [Properties]. Then, check the [Port Settings] tab of the displayed Properties screen.
- For the RS-232C cable, note that the connection cable varies according to the communication protocol setting. If you use the wrong cable, it will not operate correctly.
- If the communication settings differ between the computer and product, it will not operate correctly. A communication error will be detected.
- To use the printer driver, the communication protocol must be set to Status4. (The initial value for the communication protocol for the product's RS-232C interface is Status4.)
- Be sure to use the recommended RS-232C cable.
- Printing using the USB serial conversion cable is not guaranteed. Also, no support for the connection procedure is provided.



## Wireless LAN Interface Connection (Optional)

Check if the wireless LAN/Bluetooth kit (1) is attached to the product.



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

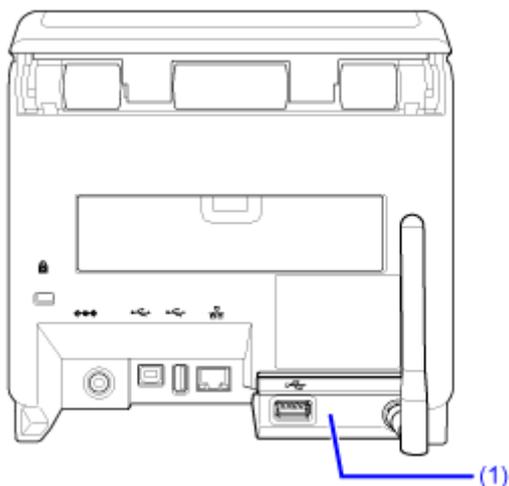
The IP address of the product can be set through the product's [Wi-Fi] menu or the All-In-One Tool.



- 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.

### Bluetooth Interface Connection (Optional)

Check if the wireless LAN/Bluetooth kit (1) is attached to the product.



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 [Bluetooth] 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 Status4 Multi.)

## 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 Settings Mode of the Product

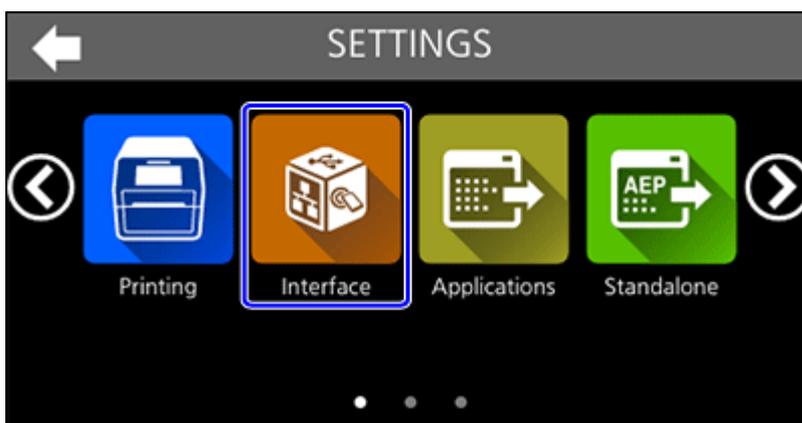
Configure the settings related to the interfaces from the [Interface] menu, [Bluetooth] menu, or [Wi-Fi] menu of the Settings mode of the product.

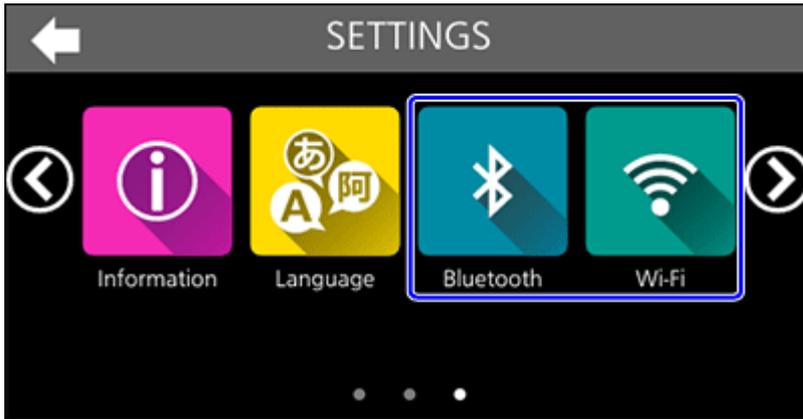
1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Interface], [Bluetooth], or [Wi-Fi]. The screen is switched by tapping   or sliding the screen to the left or right.

To configure settings related to LAN/USB/NFC/RS-232C connections or CR/LF, CAN/DLE codes, tap [Interface].

To configure settings related to Bluetooth, tap [Bluetooth].

To configure settings related to wireless LAN, tap [Wi-Fi].





The setting 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.

## 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>

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# Loading Media and Ribbon

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## Media, Ribbon and Print Methods

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The product is available in two models, the direct thermal model and the combined direct thermal/thermal transfer model.

The media or ribbon to be used varies depending on the print method.

**Thermal transfer (combined direct thermal/thermal transfer model only)**

Prints using a ribbon.

**Direct thermal**

Prints using direct thermal media.



- Ribbon is not necessary if you are using direct thermal media.
-

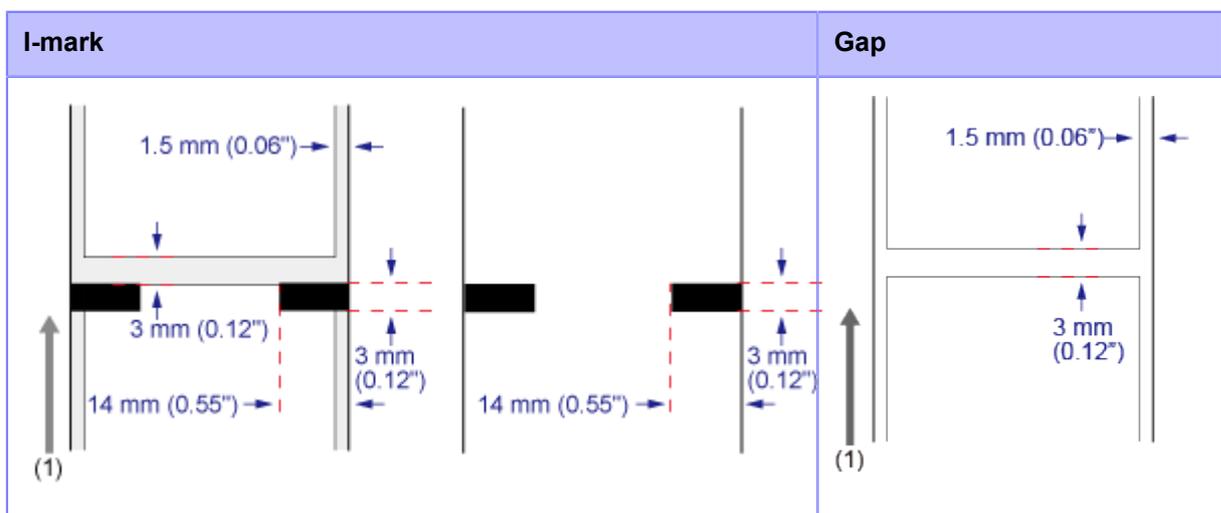
## Loading Media

### Usable Media

The product can print on the following types of media:

- Media roll
- Fan-fold media
- Wristbands

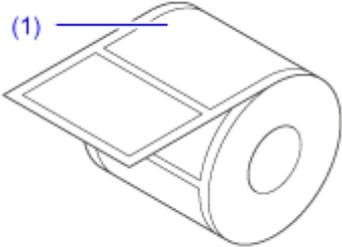
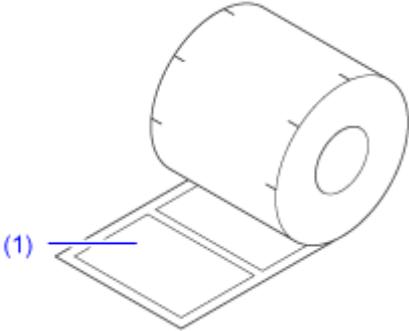
The product uses media sensors to detect I-marks or Gaps on the media in order to precisely print the content.



(1) Feed direction

## Wind Direction of the Media

The media either winds face-out or face-in. Load the media with the print side facing up.

Face-out	Face-in
<p>The print side faces the outer side of the media.</p> 	<p>The print side faces the inner side of the media.</p> 

(1) Print side

## 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.



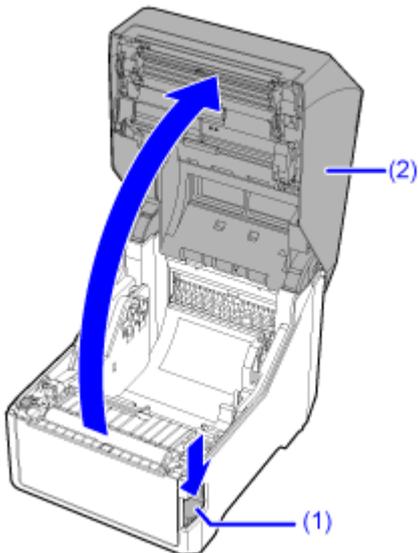
- The usable media sizes and print quality depends conditions such as print speed, media, media/ribbon combination, product settings and used environment. It is highly recommended to check the performance based on actual usage conditions in advance.
-

## Loading the Media Roll

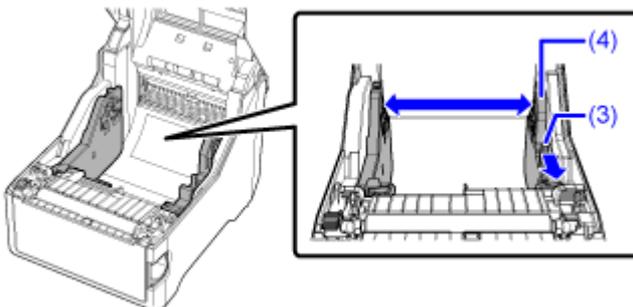


- The print head and its surroundings are hot after printing. Be careful not to get burned.
- Touching the edge of the print head with your bare hand could cause injury.

1. Press the cover open latch (1) to open the top cover (2).



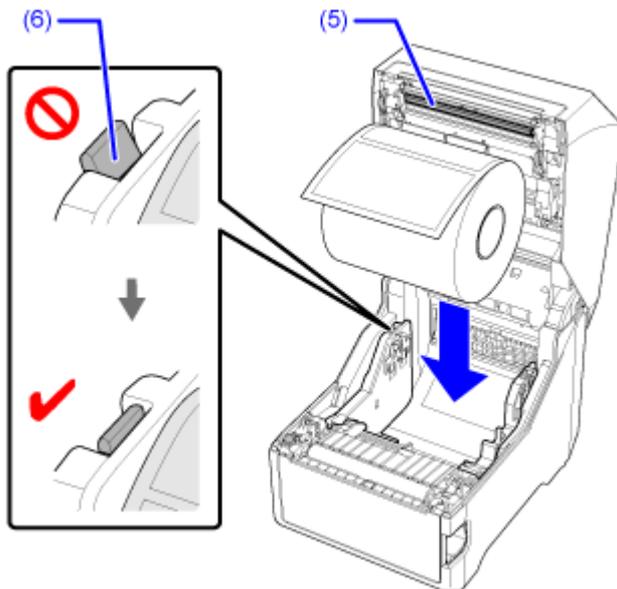
2. While pulling the slide lever (3), move the right side media guide (4) to adjust the width of the media guide to match the width of the media.



### 3. Load the media roll.

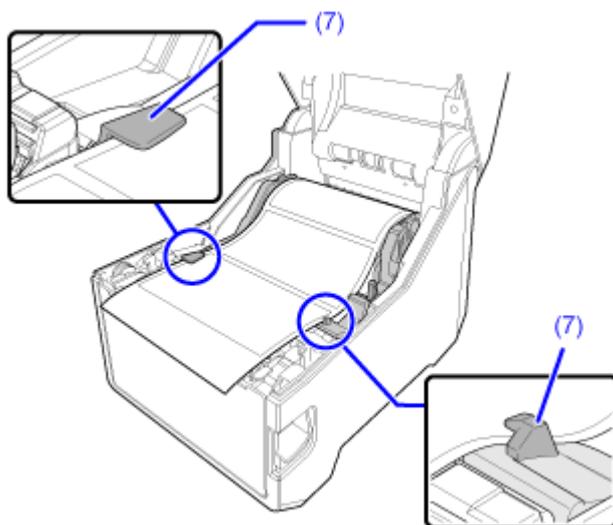
Load the media roll from above so the print side faces the print head (5).

If the media roll is loaded correctly, the flaps (6) stand up.



- There are two wind directions for the media. The illustration is for face-out media.

### 4. Pull the media out under the left and right tabs (7).

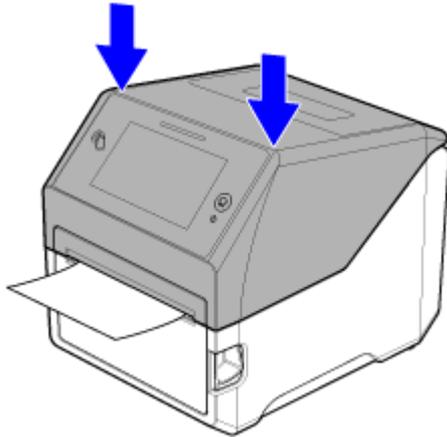


### 5. Close the top cover.

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.
- 

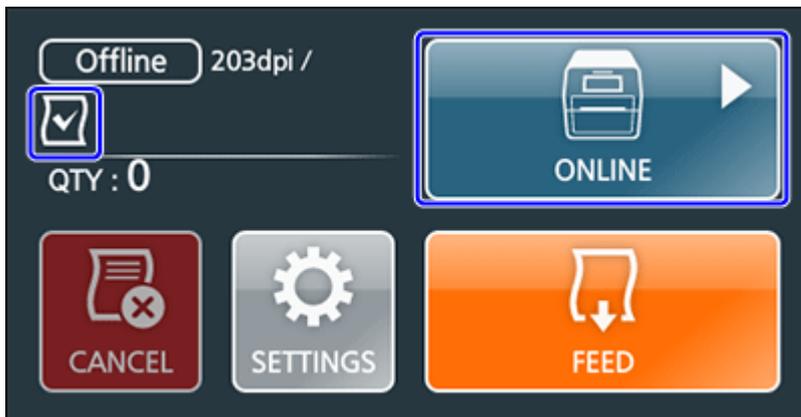


- When the Label Waste Prevention function is enabled, an error occurs if the leading edge of the media extends too far from the media discharge outlet. Align the leading edge of the media with the media discharge outlet.
- 

## 6. Align the media to the print start position, and switch to Online mode.

If the  icon appears on the screen, the Label Waste Prevention function is enabled. Tap [ONLINE] to have the media position adjusted automatically when switching to Online mode.

If the  icon does not appear on the screen, the Label Waste Prevention function is disabled. Tap [FEED] to feed media, and then tap [ONLINE].



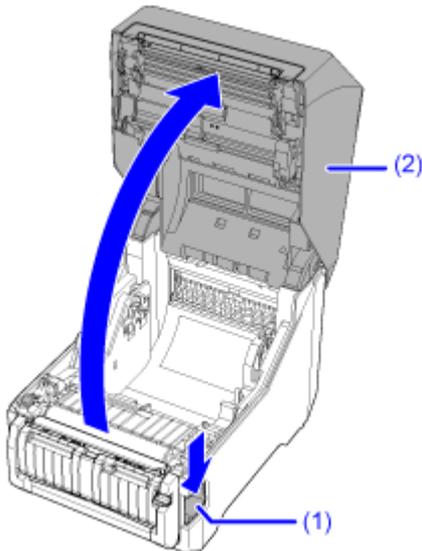
## Loading a Media Roll (When the Optional Dispenser Unit Is Installed)

This topic explains how to load media when [Dispenser] is selected in print mode while the optional dispenser unit is installed. If you have selected [Continuous] in print mode, the loading method is the same as the standard.

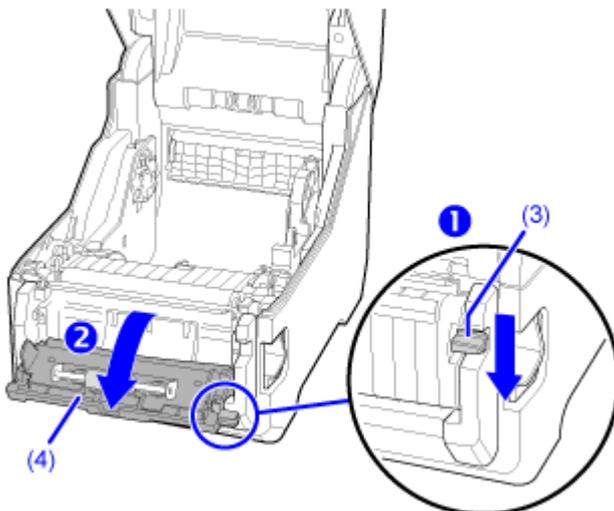
- 
- ⚠ • The print head and its surroundings are hot after printing. Be careful not to get burned.
  - Touching the edge of the print head with your bare hand could cause injury.
- 

- ⚠ • Labels with perforations is not available in dispenser mode since the perforated line affects the dispenser function.
- 

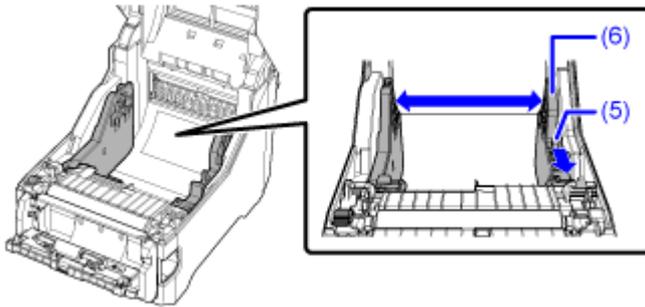
1. Press the cover open latch (1) to open the top cover (2).



2. Press the dispenser cover lever (3) to open the dispenser cover (4).



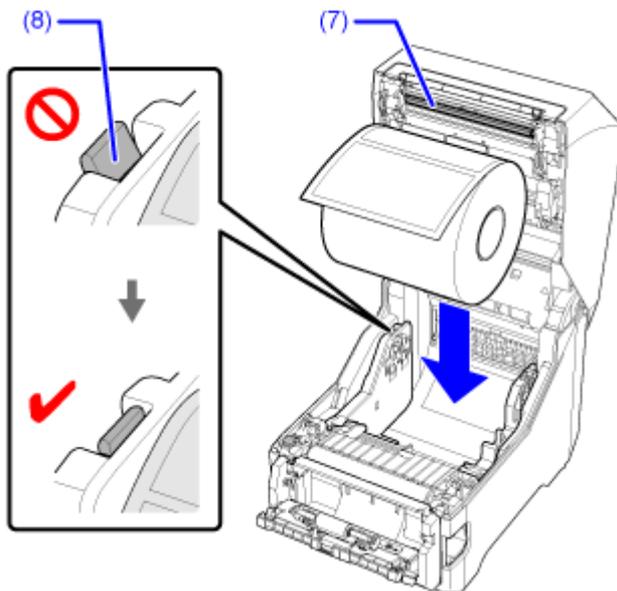
3. While pulling the slide lever (5), move the right side media guide (6) to adjust the width of the media guide to match the width of the media.



4. Load the media roll.

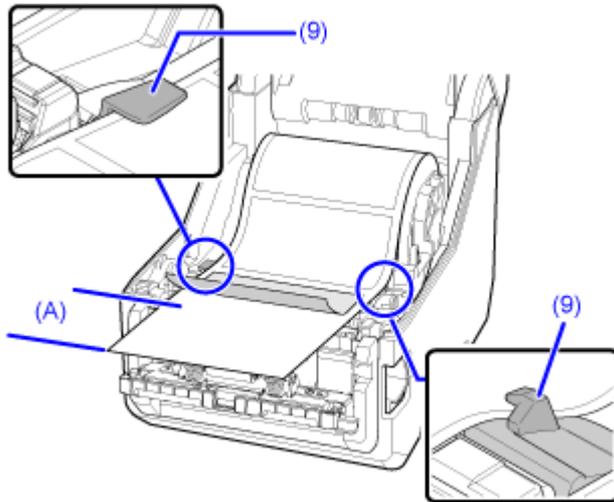
Load the media roll from above so the print side faces the print head (7).

If the media roll is loaded correctly, the flaps (8) stand up.



- There are two wind directions for the media. The illustration is for face-out media.

5. Peel off about 20 cm (7.87") of the label, and pull the liner out under the left and right tabs (9).

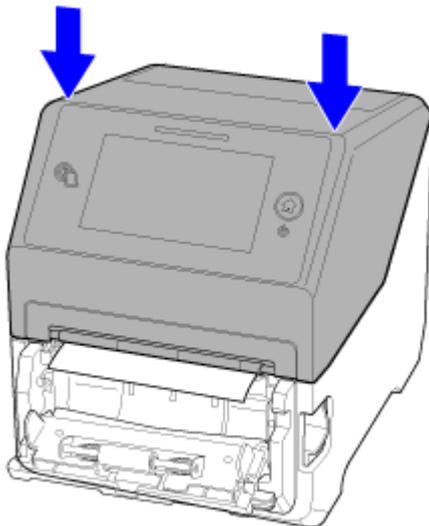


6. Close the top cover.

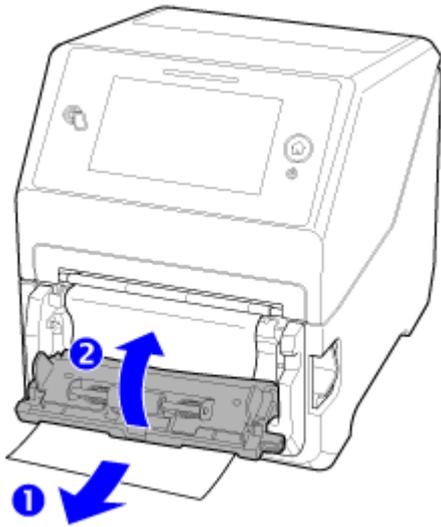
Push both ends of the top cover, and close it firmly until it clicks.



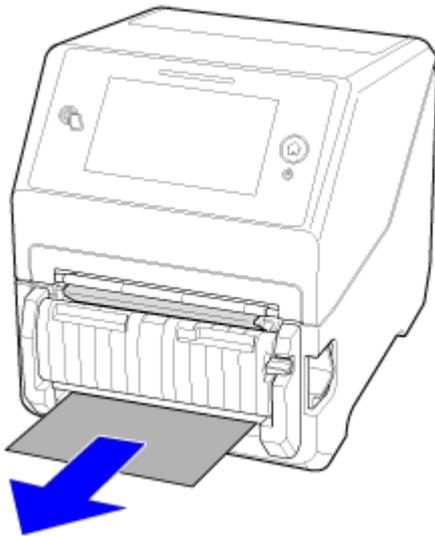
- When closing the top cover, be careful not to pinch your fingers.



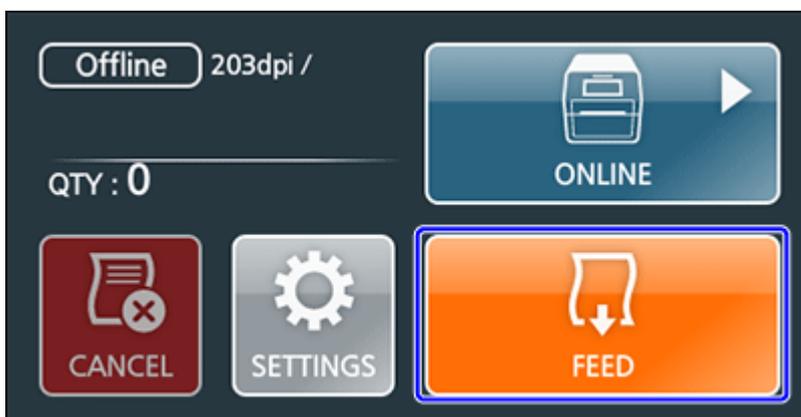
7. Pass the liner through the gap (opening) between the dispenser cover and the product out of the product ①, and close the dispenser cover ②.



8. Pull the liner lightly so that the media does not sag.



9. Tap [FEED] to feed the media to the print start position.



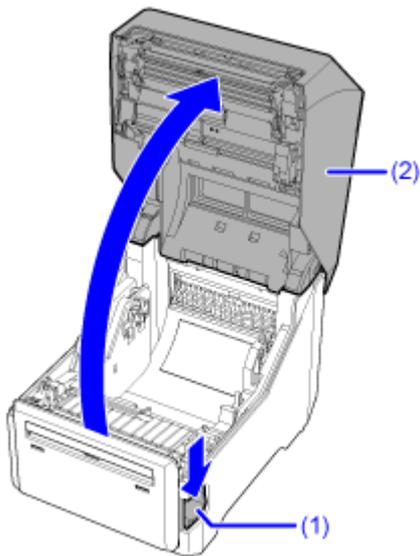
**10. Tap [ONLINE] to change the product to Online mode.**

## Loading a Media Roll (When the Optional Cutter Unit Is Installed)

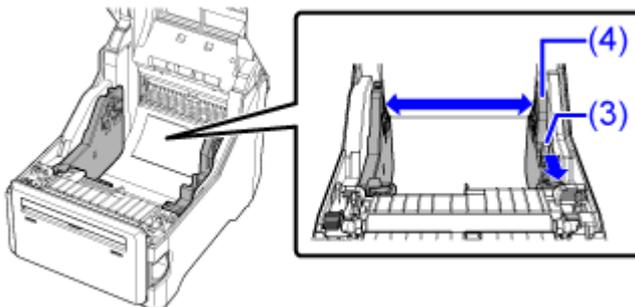


- The print head and its surroundings are hot after printing. Be careful not to get burned.
- Touching the edge of the print head with your bare hand could cause injury.
- Be careful not to touch the cutter blade.
- Adjust the cut position so as not to cut the label.

1. Press the cover open latch (1) to open the top cover (2).



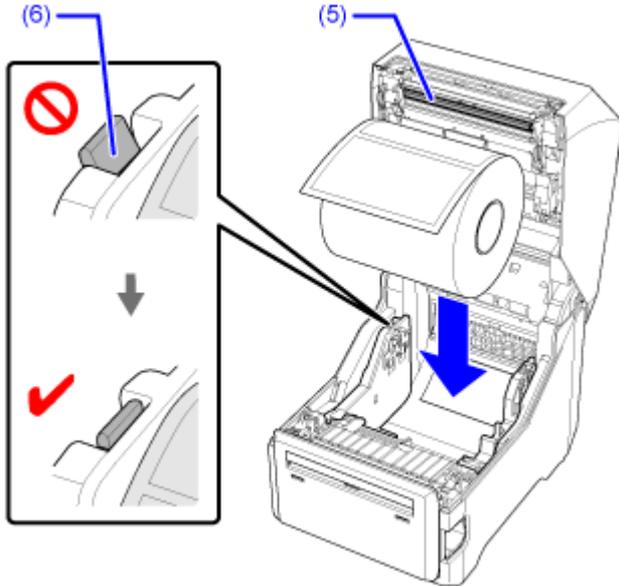
2. While pulling the slide lever (3), move the right side media guide (4) to adjust the width of the media guide to match the width of the media.



**3. Load the media roll.**

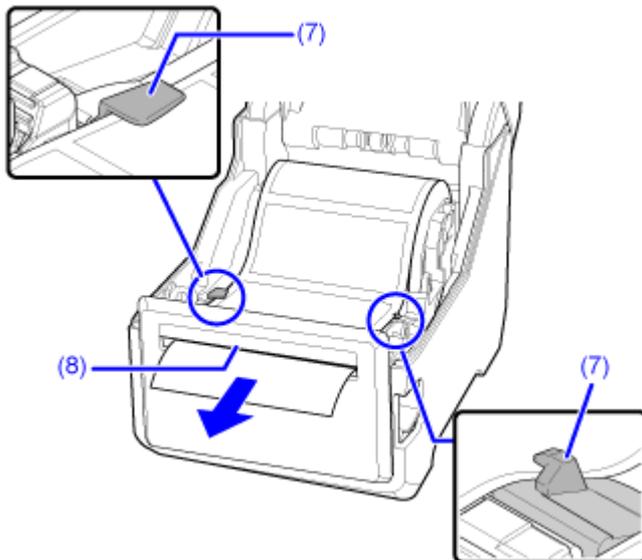
Load the media roll from above so the print side faces the print head (5).

If the media roll is loaded correctly, the flaps (6) stand up.



• There are two wind directions for the media. The illustration is for face-out media.

**4. Pull the paper out from the product so it goes under the left and right tabs (7), and pass it through the media discharge outlet (8).**

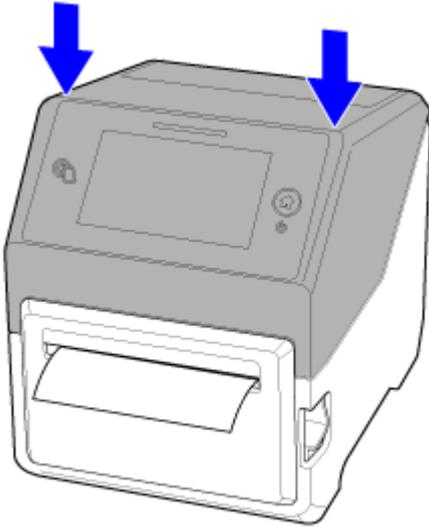


**5. Close the top cover.**

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.

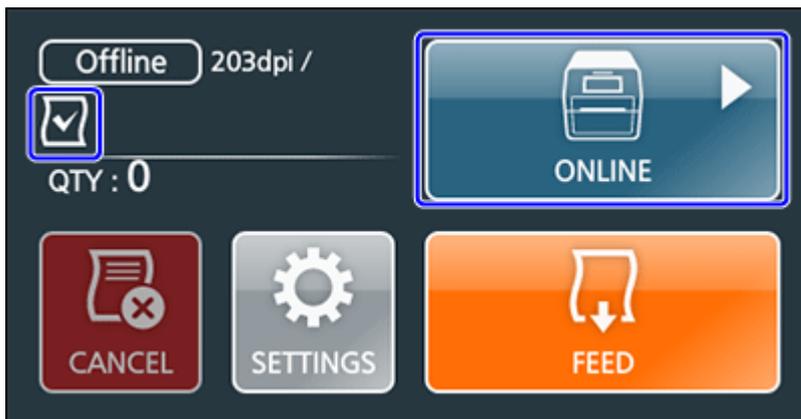


- When the Label Waste Prevention function is enabled, an error occurs if the leading edge of the media extends too far from the media discharge outlet. Align the leading edge of the media with the media discharge outlet.

## 6. Align the media to the print start position, and switch to Online mode.

If the  icon appears on the screen, the Label Waste Prevention function is enabled. Tap [ONLINE] to have the media position adjusted automatically when switching to Online mode.

If the  icon does not appear on the screen, the Label Waste Prevention function is disabled. Tap [FEED] to feed media, and then tap [ONLINE].

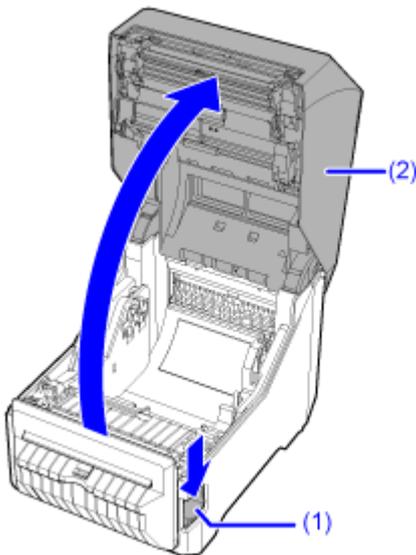


## Loading a Media Roll (When the Optional Linerless Cutter Unit Is Installed)

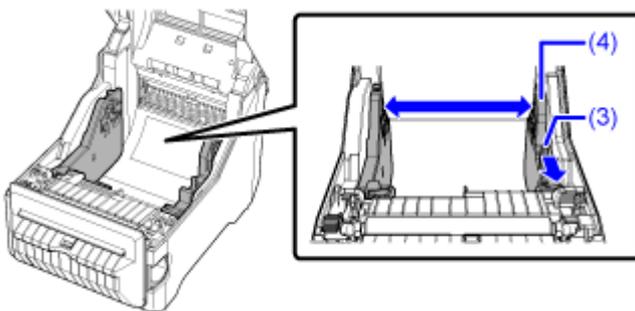


- The print head and its surroundings are hot after printing. Be careful not to get burned.
- Touching the edge of the print head with your bare hand could cause injury.
- Be careful not to touch the cutter blade.

1. Press the cover open latch (1) to open the top cover (2).



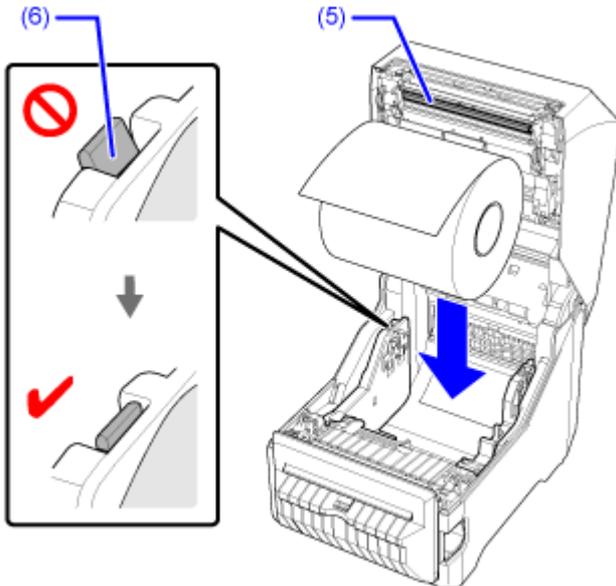
2. While pulling the slide lever (3), move the right side media guide (4) to adjust the width of the media guide to match the width of the media.



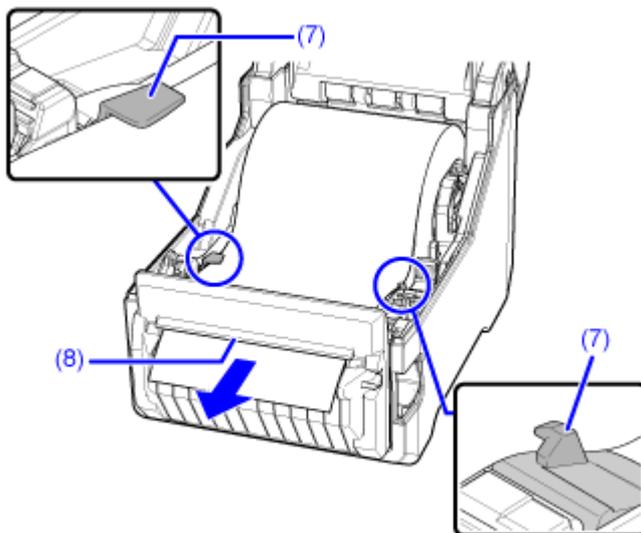
### 3. Load the media roll.

Load the media roll from above so the print side faces the print head (5).

If the media roll is loaded correctly, the flaps (6) stand up.



### 4. Pull the media out from the product so it goes under the left and right tabs (7), and pass it through the media discharge outlet (8).

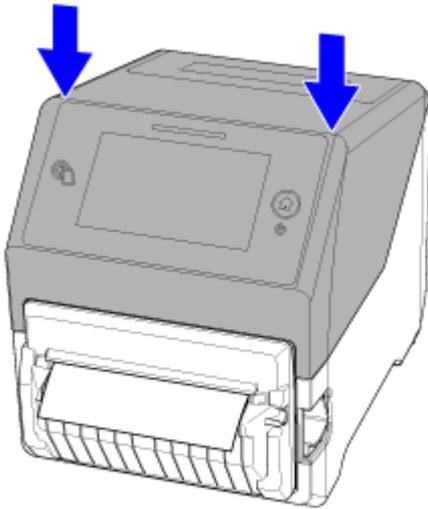


### 5. Close the top cover.

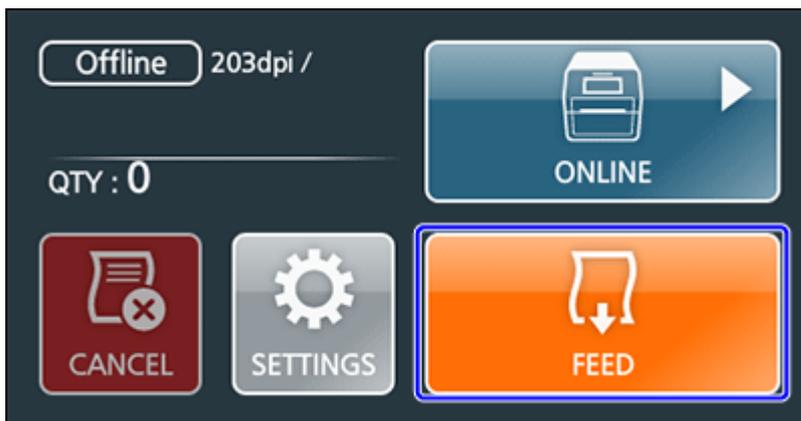
Push both ends of the top cover, and close it firmly until it clicks.



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



6. Tap [FEED] to feed the media to the print start position.



7. Tap [ONLINE] to change the product to Online mode.

## Loading the Fan-fold Media

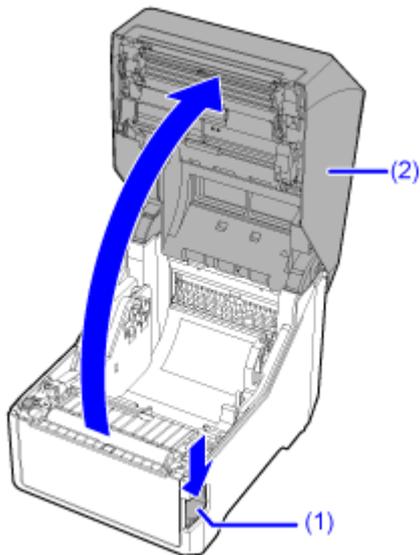


- The print head and its surroundings are hot after printing. Be careful not to get burned.
  - Touching the edge of the print head with your bare hand could cause injury.
- 

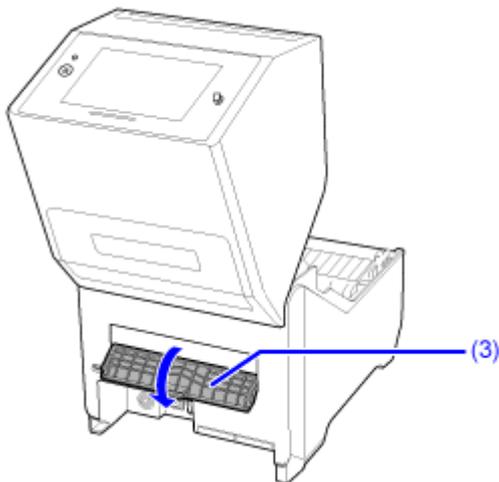


- Fan-fold media is not available in dispenser mode since the perforated line affects the dispenser function.
- 

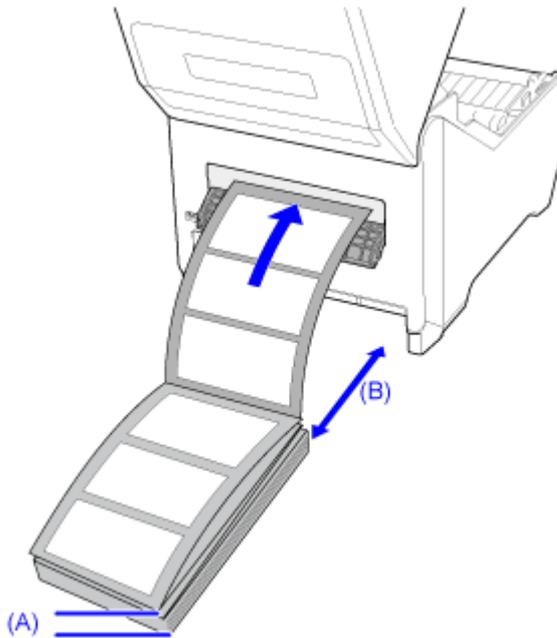
1. Press the cover open latch (1) to open the top cover (2).



2. Open the media loading port (3) on the back of the product.



**3. Insert the fan-fold media from the media loading port.**



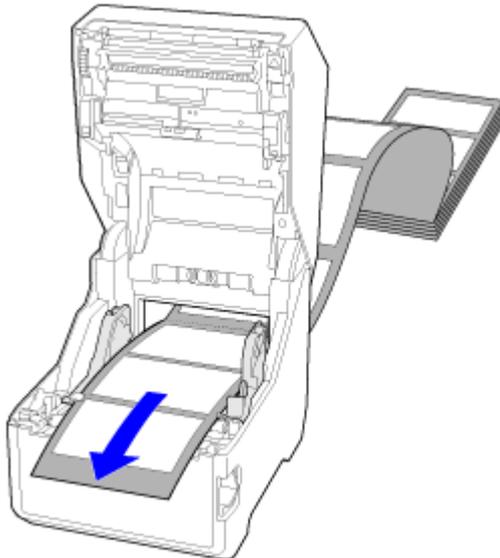
(A) Media height (from desk): within 100 mm (3.94")

(B) Distance between the back side of the product and the media: The size of 1 label, or more/the size of 2 RFID tags, or more

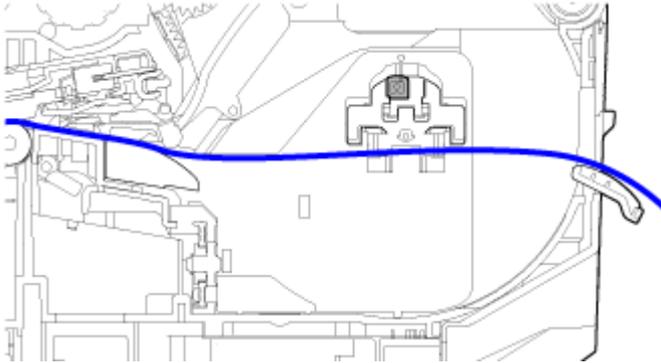


- When loading the media, make sure that the label side faces up.
- The height may be limited depending on where media is placed.
- When drawing the media from under the desk, not from the position on the same desk which the rear side of the product is placed, place the media so as not to obstruct the printing operation.

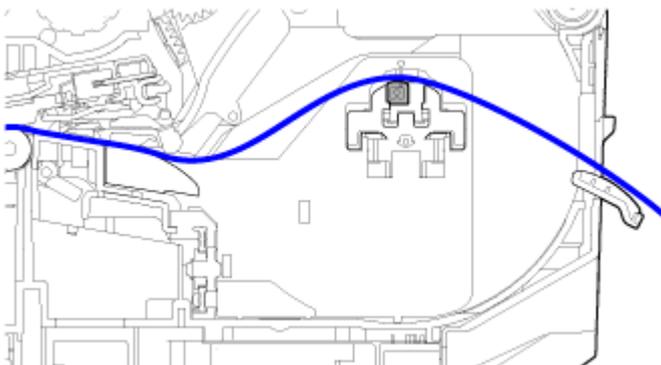
**4. Pull out the fan-fold media inserted from the back of the product.**



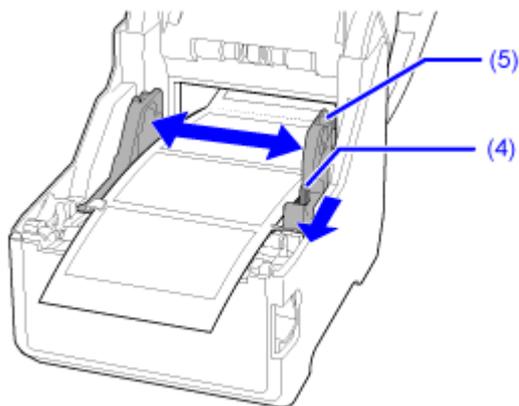
For normal media, pass the media under the protrusion on the inside of the media guide.



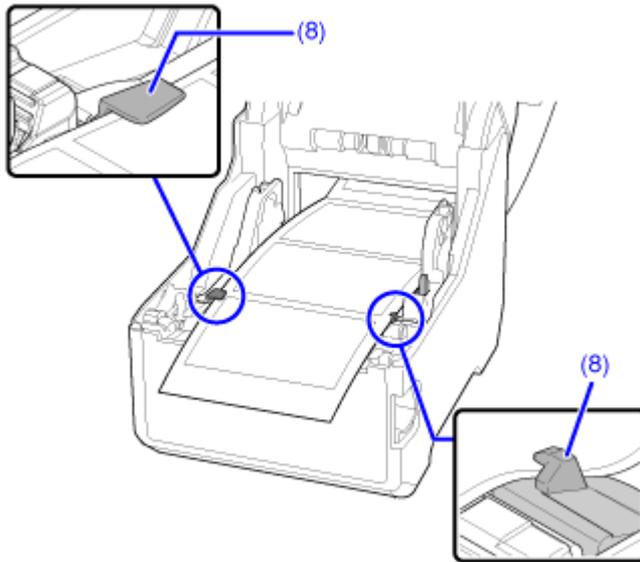
For RFID tags, pass the media over the protrusion on the inside of the media guide.



5. While pulling the slide lever (4), move the right side media guide (5) to adjust the width of the media guide to match the width of the media.



## 6. Pull the media out under the left and right tabs (8).



## 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.

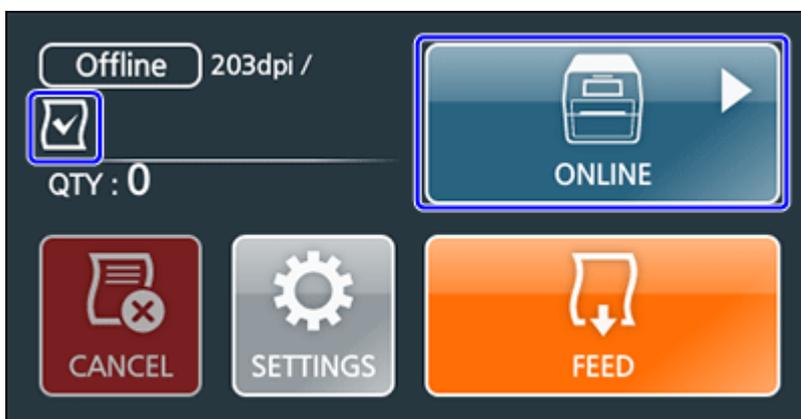


- When the Label Waste Prevention function is enabled, an error occurs if the leading edge of the media extends too far from the media discharge outlet. Align the leading edge of the media with the media discharge outlet.

## 8. Align the media to the print start position, and switch to Online mode.

If the  icon appears on the screen, the Label Waste Prevention function is enabled. Tap [ONLINE] to have the media position adjusted automatically when switching to Online mode.

If the  icon does not appear on the screen, the Label Waste Prevention function is disabled. Tap [FEED] to feed media, and then tap [ONLINE].



## Loading Ribbon (Thermal Transfer Only)

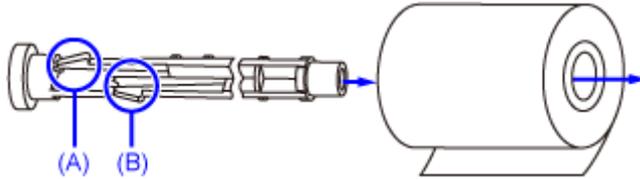
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You need to load the ribbon when printing using thermal transfer. The topics here explain how to load and replace the ribbon.

## Inserting the Core Adapters

Before loading the ribbon to the product, insert one core adapter into the carbon ribbon and one into the ribbon core.

The positions of the hooks on the core adapters need to be changed depending on the width of the carbon ribbon.



Width of carbon ribbon	Ribbon core being used	Position of core adapter hooks	
		(A)	(B)
92 mm (3.62")/110 mm (4.33")/111 mm (4.37")	111 mm (4.37")		
59 mm (2.32")/76 mm (2.99")	76 mm (2.99")		
45 mm (1.77")	45 mm (1.77")		

1. Change the positions of the hooks on the core adapters according to the width of the carbon ribbon.
2. Insert a core adapter into the carbon ribbon.
3. Insert a core adapter into the ribbon core.

## Loading the Ribbon

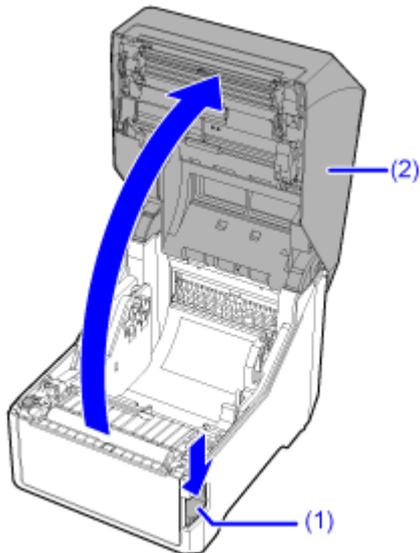


- The print head and its surroundings are hot after printing. Be careful not to get burned.
  - Touching the edge of the print head with your bare hand could cause injury.
- 

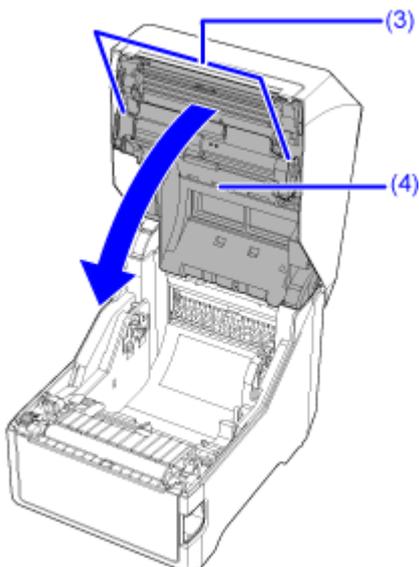


- Use our specified supply products for the product, for optimum print quality.
  - Before loading the ribbon to the product, insert one core adapter into the carbon ribbon and one into the ribbon core.
- 

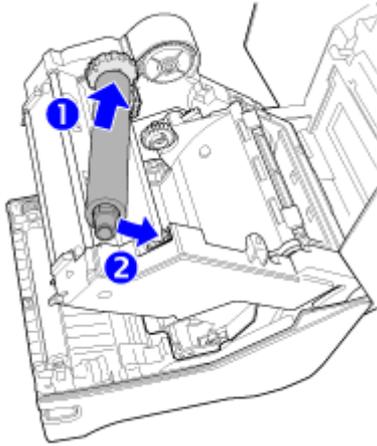
- 1. Press the cover open latch (1) to open the top cover (2).**



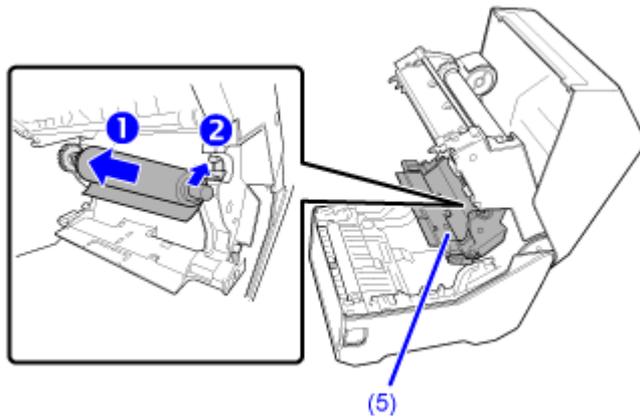
- 2. Pull the ▼ (ribbon cover open) marks (3) toward the front to open the ribbon unit (4) toward the front.**



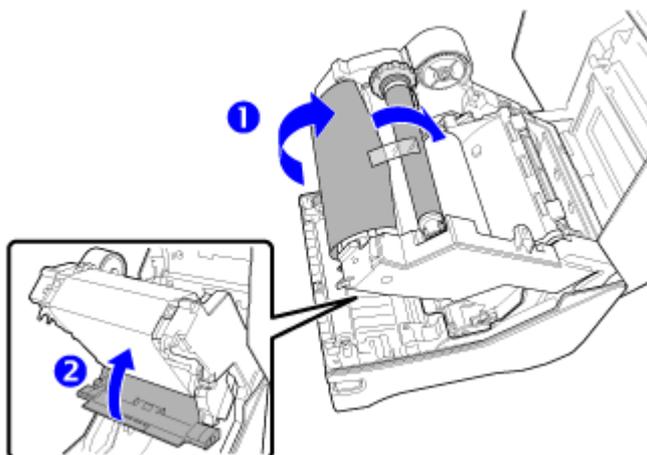
3. Load the ribbon core in order **1** **2** into the ribbon unit.



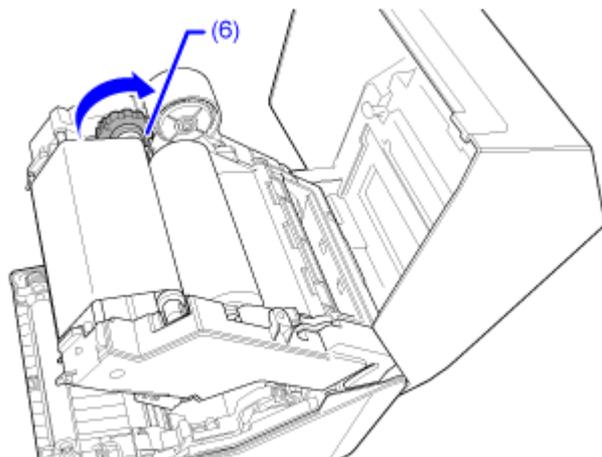
4. Load the carbon ribbon in order **1** **2** into the ribbon cover (5).



5. Pull out some carbon ribbon and tape it to the ribbon core **1**, and then close the ribbon cover **2**.



**6. Turn the dial (6) to rewind the carbon ribbon a few times.**

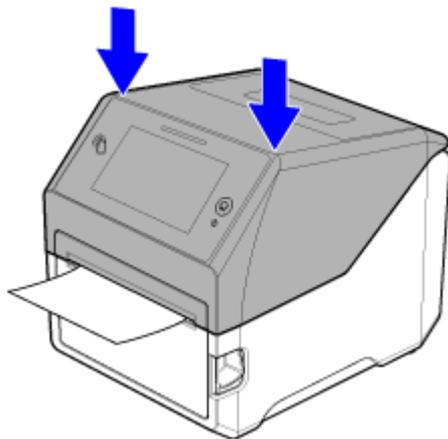


**7. Close the top cover.**

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

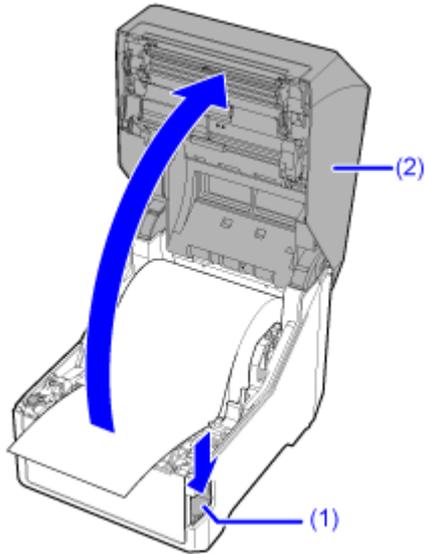


- When closing the top cover, be careful not to pinch your fingers.

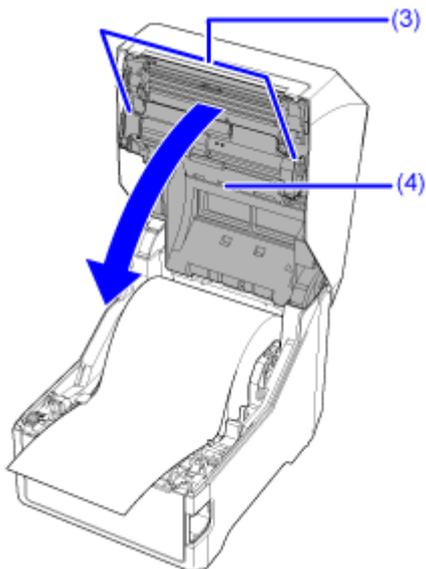


## Replacing the Ribbon

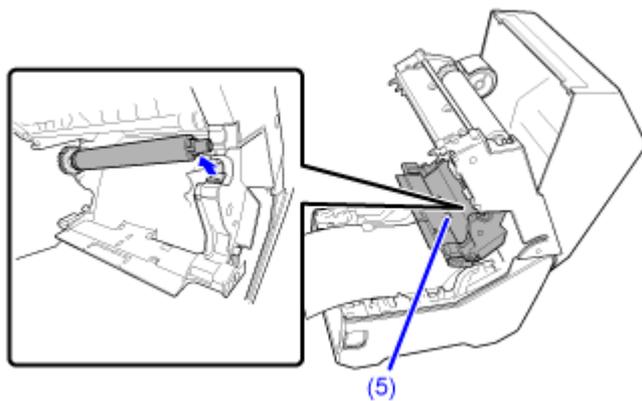
1. Press the cover open latch (1) to open the top cover (2).



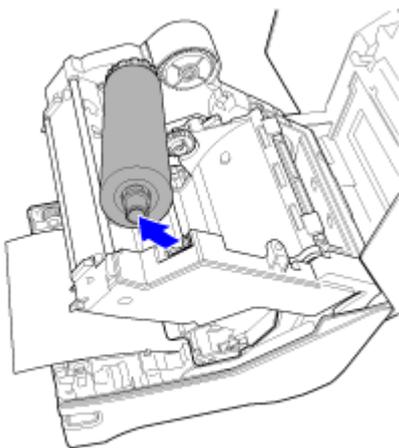
2. Pull the ▼ (ribbon cover open) marks (3) toward the front to open the ribbon unit (4) toward the front.



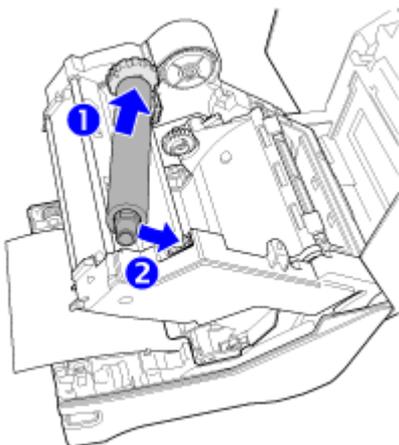
3. Remove the used ribbon core from the ribbon cover (5).



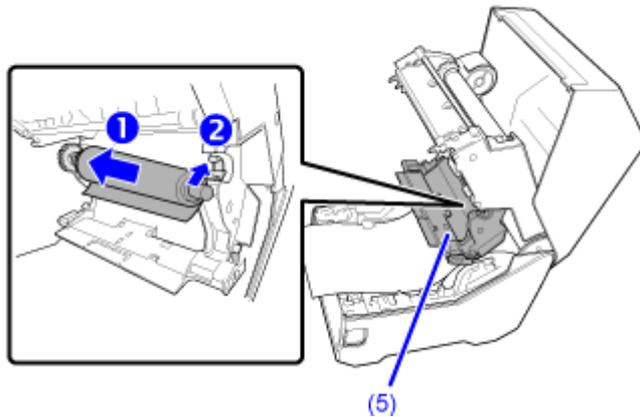
4. Remove the used ribbon from the ribbon unit.



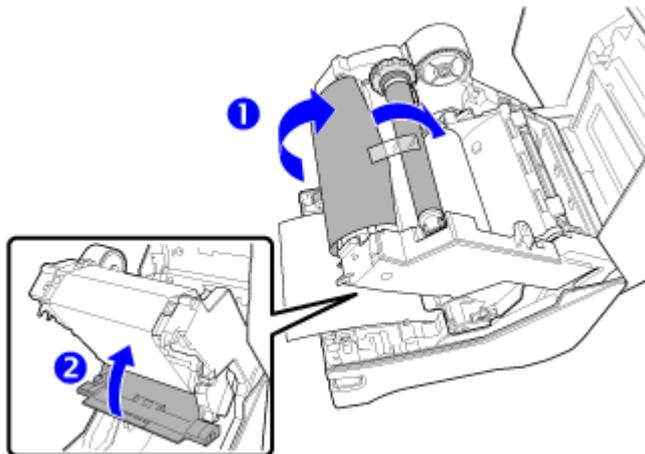
5. Load the ribbon core, which was removed in step 3, in order of ① ② into the ribbon unit.



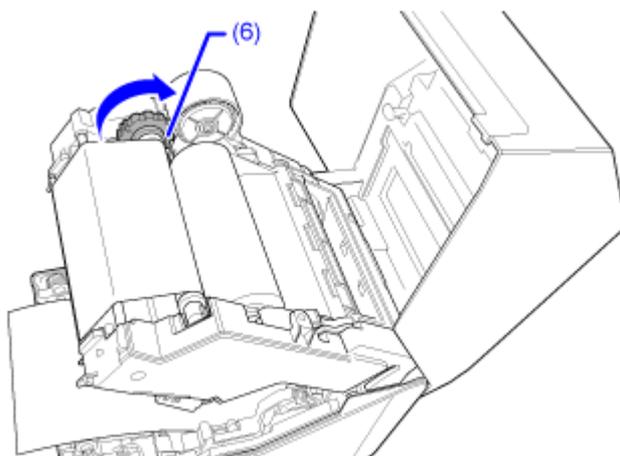
6. Load the carbon ribbon in order **1** **2** into the ribbon cover (5).



7. Pull out some carbon ribbon and tape it to the ribbon core **1**, and then close the ribbon cover **2**.



8. Turn the dial (6) to rewind the carbon ribbon a few times.

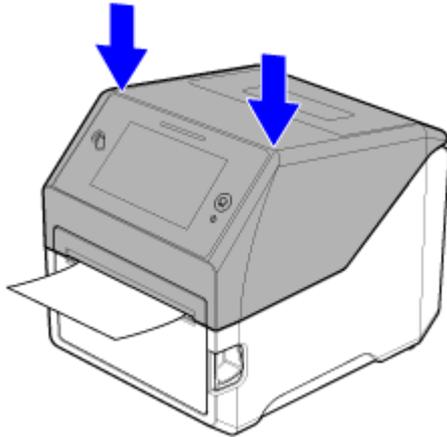


9. Close the top cover.

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.
- 

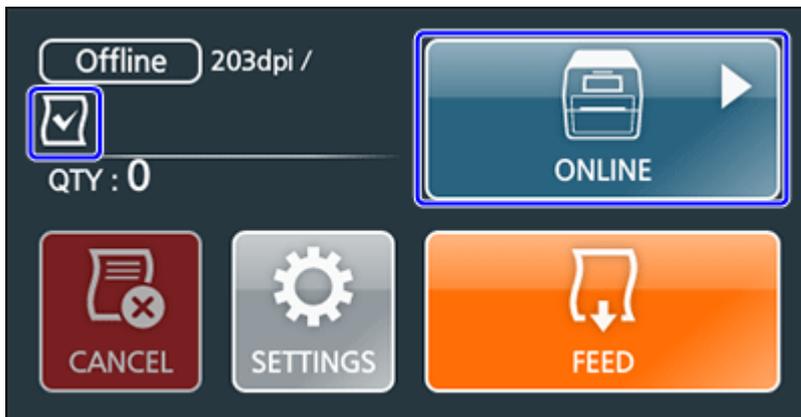


- When the Label Waste Prevention function is enabled, an error occurs if the leading edge of the media extends too far from the media discharge outlet. Align the leading edge of the media with the media discharge outlet.
- 

#### 10. Align the media to the print start position, and switch to Online mode.

If the  icon appears on the screen, the Label Waste Prevention function is enabled. Tap [ONLINE] to have the media position adjusted automatically when switching to Online mode.

If the  icon does not appear on the screen, the Label Waste Prevention function is disabled. Tap [FEED] to feed media, and then tap [ONLINE].



## Settings to Match the Media

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### About the Label Waste Prevention Function

The Label Waste Prevention function allows you to print on the first label by aligning the loaded label with the print start position. This allows you to prevent waste of labels that occurs by feeding several blank labels to align positions.

When the Label Waste Prevention function is enabled, the  icon is displayed in the Online/Offline screen.



This function is executed at the following times.

- 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



- The Label Waste Prevention function cannot be used in the following conditions:
  - When the optional dispenser unit or linerless cutter unit is installed
  - When using linerless labels, journal paper, or RFID tags

### Setting Method

On the [SETTINGS] menu, use [Tools] > [Media Startup] or [Media Profiles Registration] to batch set the settings related to the Label Waste Prevention function.

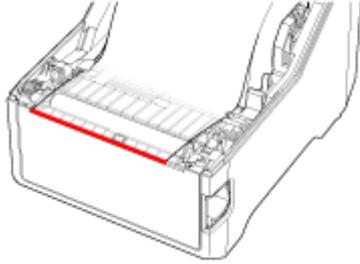
If you are using only one type of media, use [Media Startup] to do the settings.

If you are using multiple types of media, first use [Media Profiles Registration] to register a profile for each media. After that, apply the profile for the media you are using to the product.

### Precautions

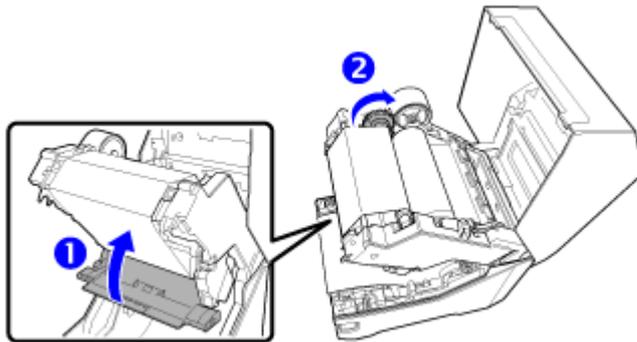
Note the following precautions when using the Label Waste Prevention function.

- Keep out of direct sunlight. This function may not operate correctly.
- Confirm that printing can be done on the first label. This function does not operate correctly if the media is torn, is cut in the middle, or if the label is peeled off so only the liner is left.
- Note the following precautions when loading media.
  - An error occurs if the leading edge of the media extends too far from the media discharge outlet. Align the leading edge of the media with the media discharge outlet.



- Rewind the ribbon several turns in thermal transfer mode. When the Label Waste Prevention function is in use, backfeed returns the ribbon that has been rewound one time to the print head. When this happens, rewinding the ribbon in advance can prevent the used ribbon from being used to print again.

1. Open the top cover.
2. Open the ribbon unit toward the front.
3. Close the ribbon cover **1**, turn the dial to rewind the carbon ribbon a few times **2**.



4. Close the top cover.

- When the Label Waste Prevention function is enabled, you do not need to tap [FEED] in Offline mode before printing. (Regardless of whether you enable the Label Waste Prevention function or not, tapping [FEED] feeds media to align with the print start position.)
- Use the default value for [Finisher Feed]. If you change [Finisher Feed], operation of the Label Waste Prevention function is not guaranteed.
- Disable [Auto Measure]. If you enable [Auto Measure], media feeds every time auto measure is executed, regardless of the settings for the Label Waste Prevention function.

### Adjusting the Label Top Sensor

With the Label Waste Prevention function, the label top sensor, which is located at the media discharge outlet, detects the leading edge of the media and aligns the media to the print start position.

If the print start position is misaligned, try adjusting the position and sensitivity of the label top sensor.

- **Adjusting the Position of the Sensor**  
[Printing] > [Advanced] > [Adjustments] > [Label Top Sensor]
- **Adjusting the Sensitivity of the Sensor**  
[Printing] > [Advanced] > [Calibrate] > [Auto-calibration] > [Label Top]

## Setting Batch Print Settings in Media Startup (When Using Only One Type of Media)

Follow the on-screen instructions to do batch settings for the print settings that are appropriate for the type of media you are using, and then you can apply them to the product. Use this function if you are using only one type of media.



- If you are using multiple types of media, first use [Tools] > [Media Profiles Editing] > [Media Profiles Registration] to register a profile for each media. After that, apply the profile for the media you are using to the product.

The items that can be set are as follows: The results of executing Media Startup are reflected in each of the setting items.

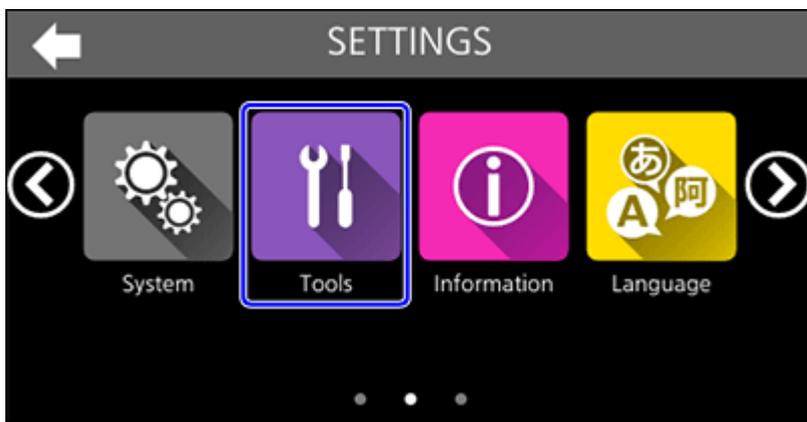
- [Printing] > [Media Type]
- [Printing] > [Printing Mode]
- [Printing] > [Speed]
- [Printing] > [Sensor Type]
- [Printing] > [Darkness]
- Setting items under [Printing] > [Advanced] > [Calibrate]
- Setting items under [Printing] > [Advanced] > [Label Waste Prevention]
- [Interface] > [RFID] > [RFID Tag Model] > [Load] (RFID models only)

1. Tap [SETTINGS] on the Home screen or Offline screen.

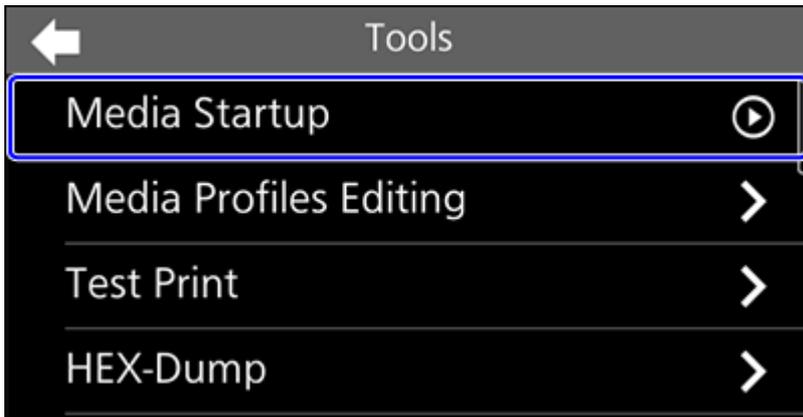
2. Input the password if it is enabled.

3. Tap [Tools].

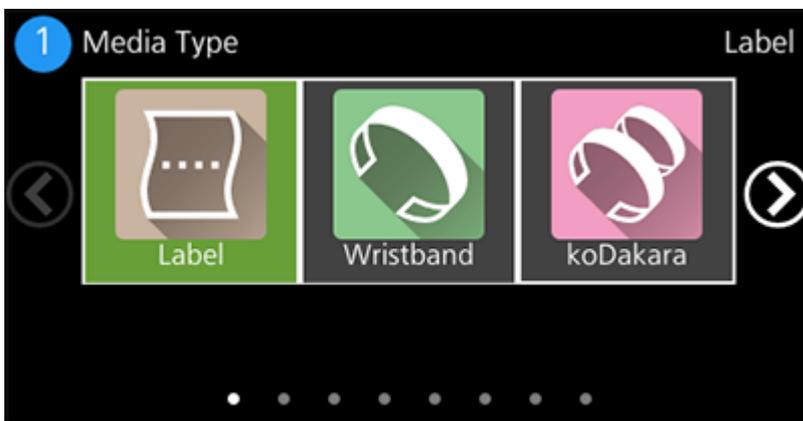
You can switch the screen by tapping   or sliding the screen to the left or right.



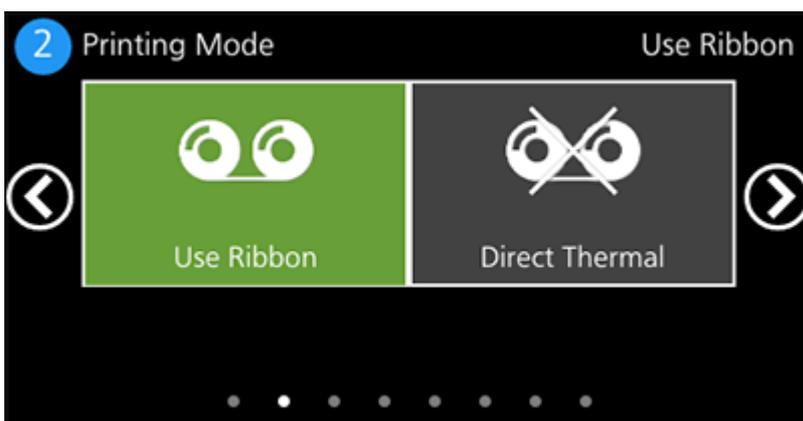
4. Tap [Media Startup].



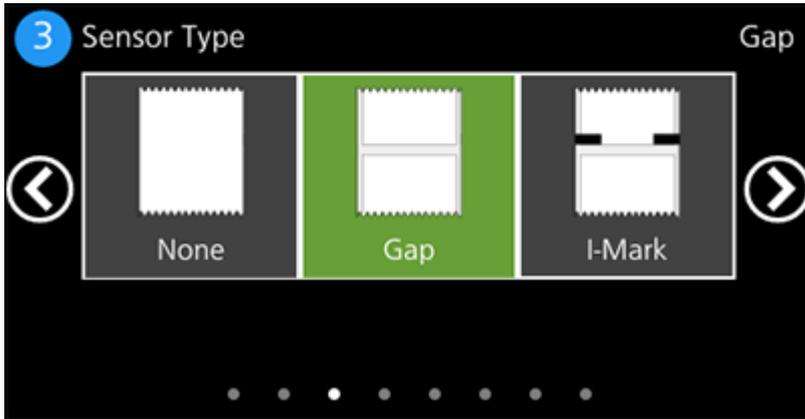
5. Tap the type of media to use, and then tap  or slide the screen to the left.



6. For the combined direct thermal/thermal transfer model, tap the print method to use, and then tap  or slide the screen to the left.



7. Tap the type of sensor to use, and then tap  or slide the screen to the left.

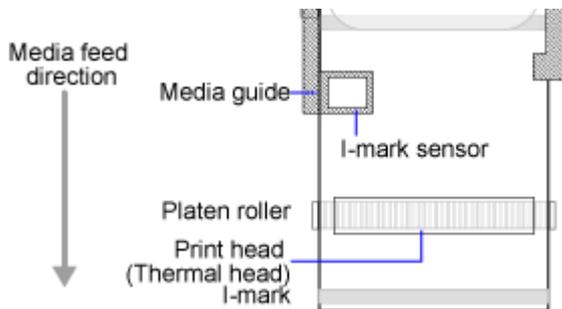


- If you have selected [Wristband] for media type, you can only select [Gap] or [I-Mark].
- If you have selected [koDakara] for media type, you can only select [I-Mark].
- Select something other than [None] to use the Label Waste Prevention function.
- Select something other than [None] to use RFID tags on an RFID model. If you set [None], you cannot use RFID tags.

8. Tap [Start] and execute automatic sensor adjustment according to the on-screen instructions.

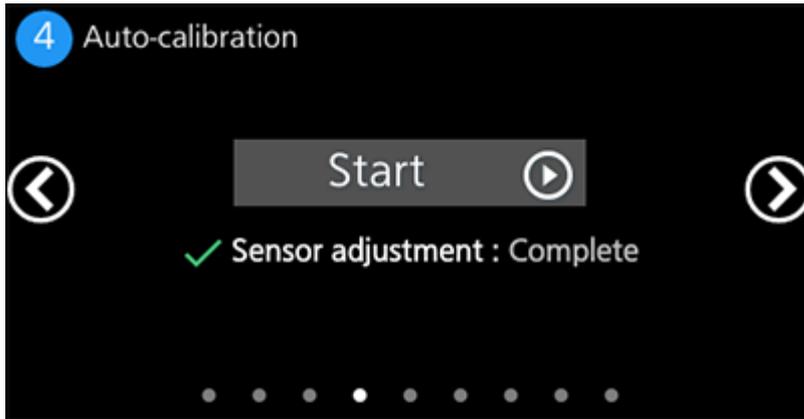


Remove the label from the liner and set the liner so the I-mark is not above the I-mark sensor.



For media without liners, such as wristbands or journal paper, load the media as is.

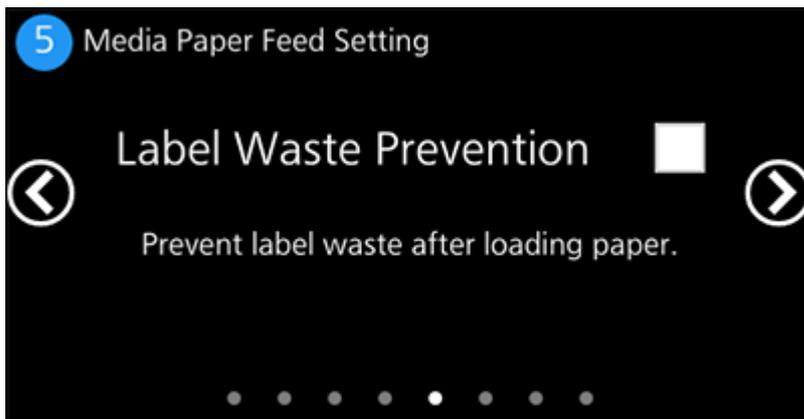
When the sensor adjustment is complete, the [Sensor adjustment] value changes to [Complete].



- This is displayed only if you have selected [Gap] or [I-Mark] for the sensor type.
- The results of executing automatic sensor calibration are reflected in the setting items under [Printing] > [Advanced] > [Calibrate].

9. Tap  or slide the screen to the left.

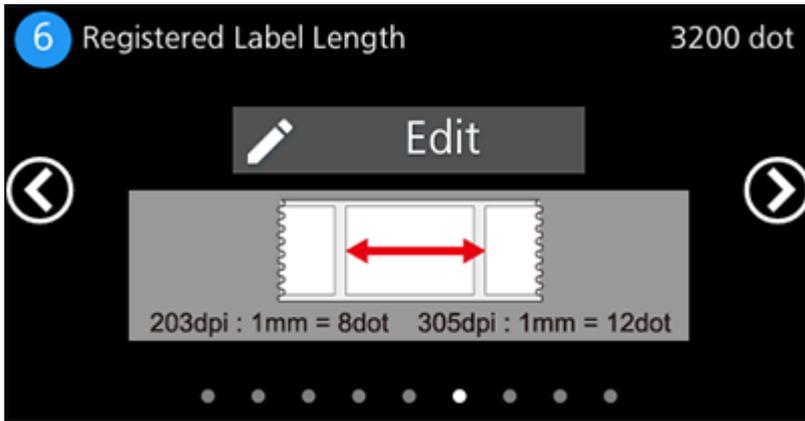
10. Select whether to enable or disable the Label Waste Prevention function, and then tap  or slide the screen to the left.



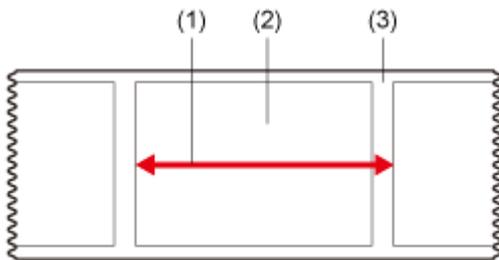
- This is not displayed if the optional dispenser unit or linerless cutter unit is installed.
- When using linerless labels, journal paper, or RFID tags, you cannot use the Label Waste Prevention function.

11. Tap [Edit].

To accurately execute the Label Waste Prevention function, register the length of the media.



Register the range of the label length (including liner) that the following illustration shows.



- (1) Label length (including liner)
- (2) Label
- (3) Liner

Calculate the values from the following equations to input dots.

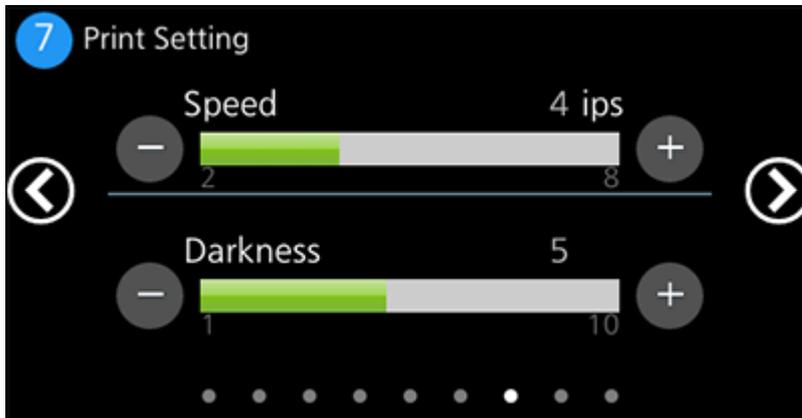
- 203 dpi: Label length (mm) x 8
- 305 dpi: Label length (mm) x 12



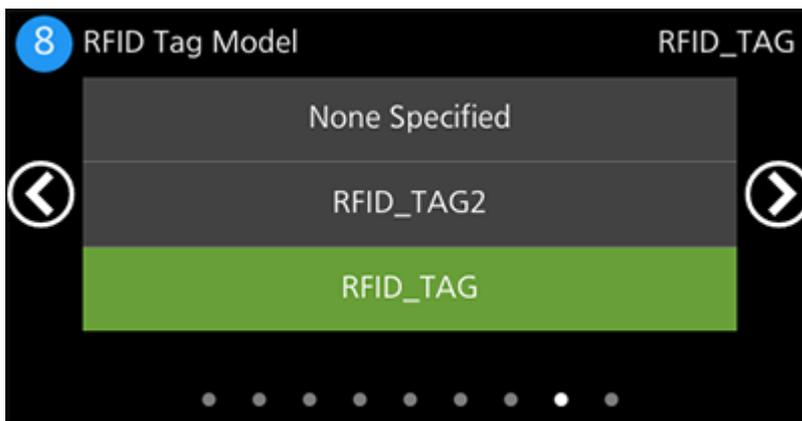
- This is not displayed if the optional dispenser unit or linerless cutter unit is installed.
- This is displayed if you have selected [Label] for the media type, and selected [Gap] or [I-Mark] for the sensor type, and enabled the Label Waste Prevention function.
- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

12. Tap  or slide the screen to the left.

13. Adjust the print speed and the print darkness, and then tap  or slide the screen to the left.



14. For the RFID models, tap the RFID tag format to use, and then tap  or slide the screen to the left.



- If an RFID tag format is not registered, only [None Specified] is displayed. You can register RFID tag formats from the [Interface] > [RFID] > [RFID Tag Model] > [Edit] menu.

15. Confirm the settings, and then tap [Apply].



**16. Tap  to finish.**

The settings are applied to the product.



- To cancel the settings you are currently doing, press the  (Power/Home) button. Tap  on the message to confirm you want to discard the settings.
-

## Registering Print Settings as Media Profiles (When Using Multiple Types of Media)

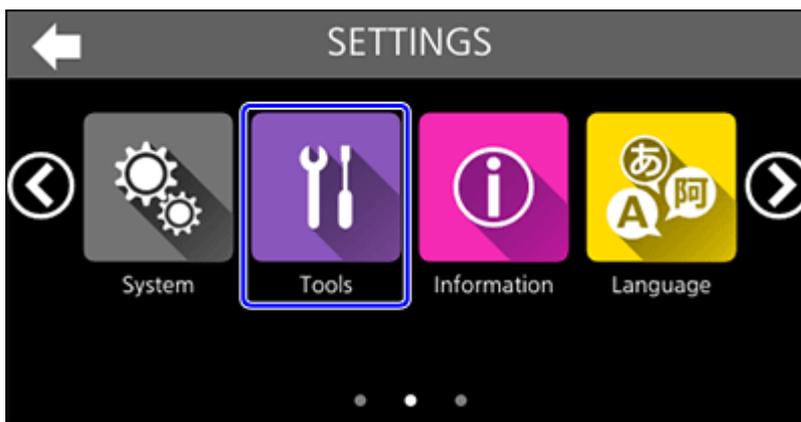
When you are using multiple types of media, register print settings as media profiles for each type of media. You can access the registered media profiles from the Home screen and apply them to the product. You can easily switch the settings when replacing the media. You can register a maximum of 5 media profiles.

The setting items that can be registered to media profiles are as follows:

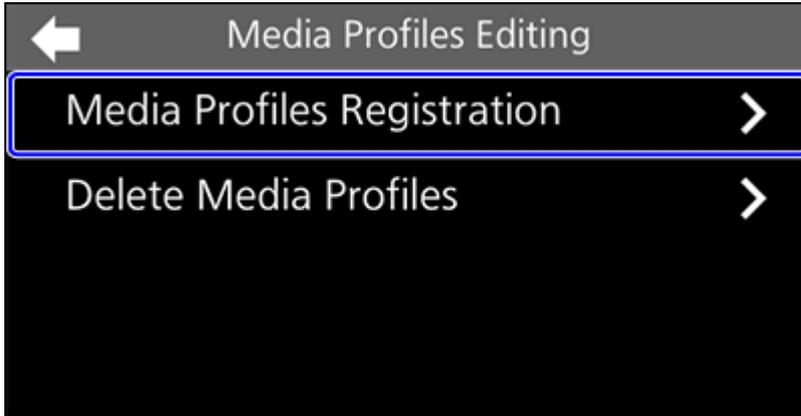
- [Printing] > [Media Type]
- [Printing] > [Printing Mode]
- [Printing] > [Speed]
- [Printing] > [Sensor Type]
- [Printing] > [Darkness]
- Setting items under [Printing] > [Advanced] > [Calibrate]
- Setting items under [Printing] > [Advanced] > [Label Waste Prevention]
- [Interface] > [RFID] > [RFID Tag Model] > [Load] (RFID models only)

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Tools].

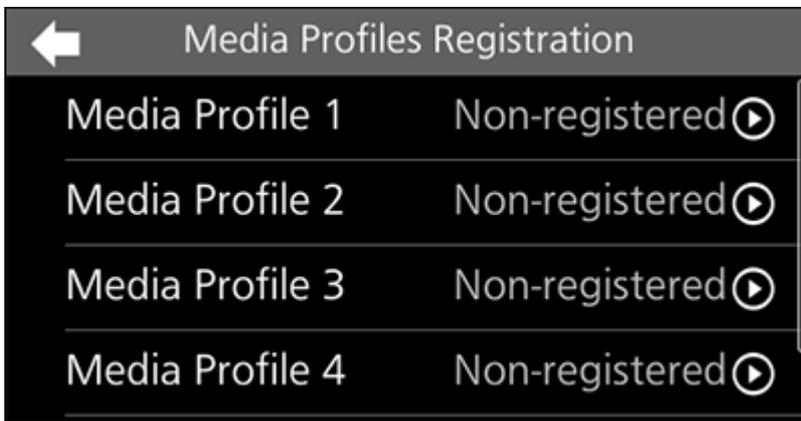
You can switch the screen by tapping   or sliding the screen to the left or right.



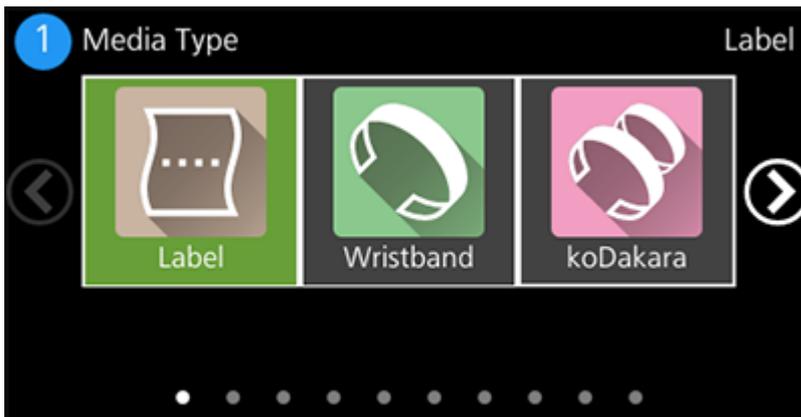
4. Tap [Media Profiles Editing] > [Media Profiles Registration].



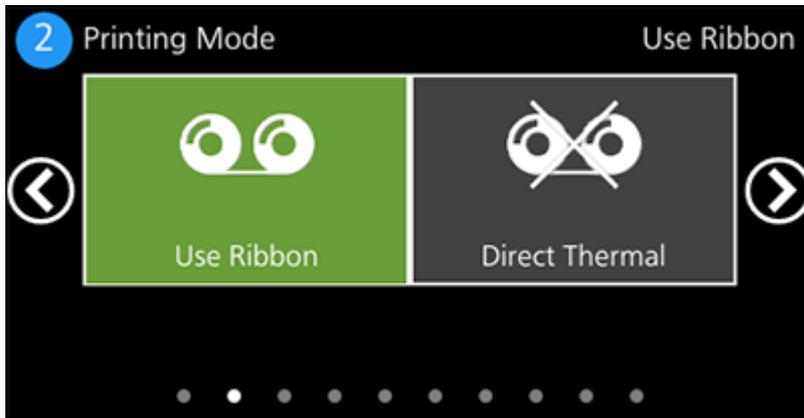
5. Tap the items shown as [Non-registered].



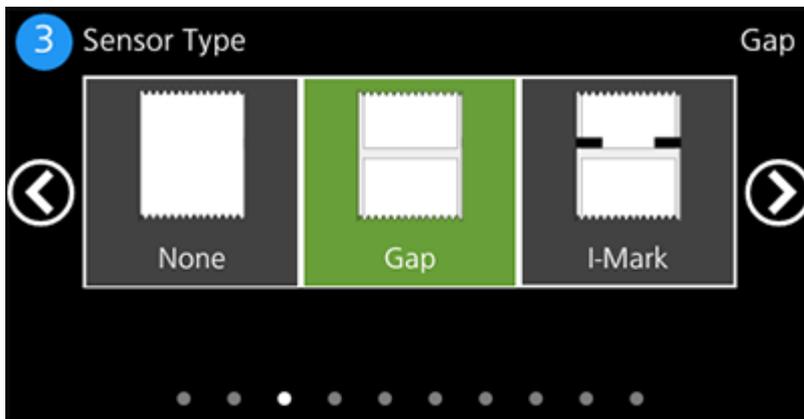
6. Tap the type of media to use, and then tap  or slide the screen to the left.



7. For the combined direct thermal/thermal transfer model, tap the print method to use, and then tap  or slide the screen to the left.

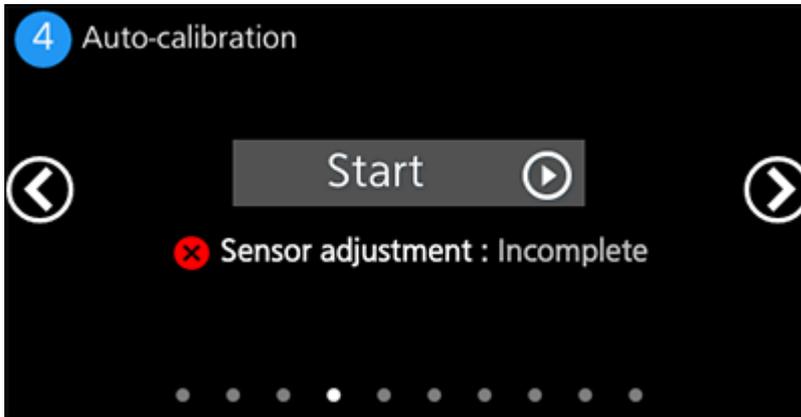


8. Tap the type of sensor to use, and then tap  or slide the screen to the left.

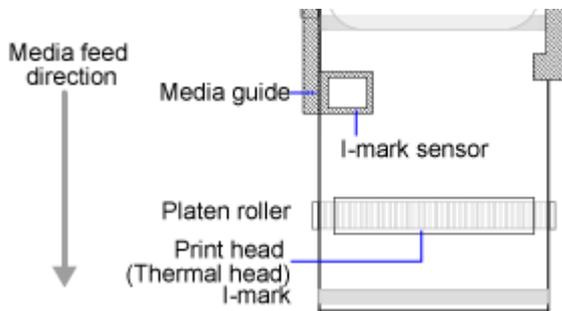


- If you have selected [Wristband] for media type, you can only select [Gap] or [I-Mark].
- If you have selected [koDakara] for media type, you can only select [I-Mark].
- Select something other than [None] to use the Label Waste Prevention function.
- Select something other than [None] to use RFID tags on an RFID model. If you set [None], you cannot use RFID tags.

9. Tap [Start] and execute automatic sensor adjustment according to the on-screen instructions.

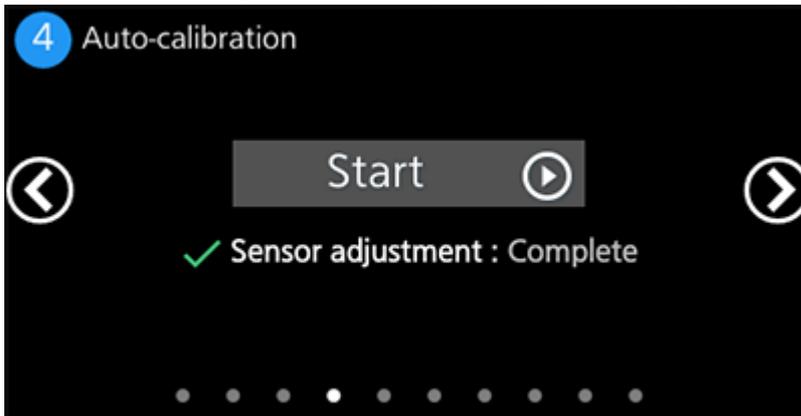


Remove the label from the liner and set the liner so the I-mark is not above the I-mark sensor.



For media without liners, such as wristbands or journal paper, load the media as is.

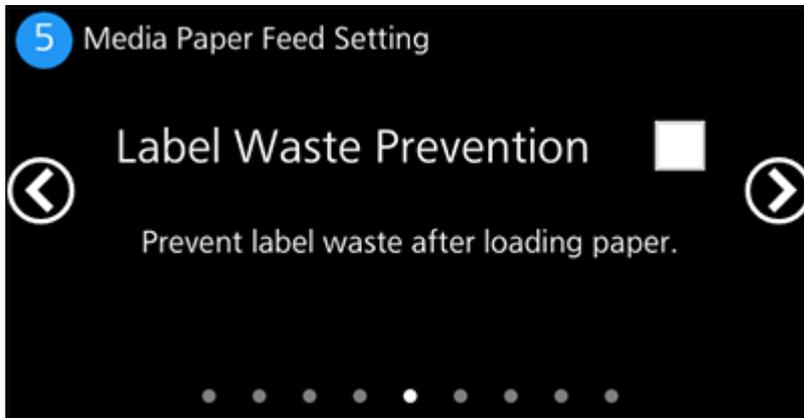
When the sensor adjustment is complete, the [Sensor adjustment] value changes to [Complete].



- This is displayed only if you have selected [Gap] or [I-Mark] for the sensor type.
- The results of executing automatic sensor calibration are reflected in the setting items under [Printing] > [Advanced] > [Calibrate].
- If you do not execute automatic sensor calibration, the product's currently set values are registered.

10. Tap  or slide the screen to the left.

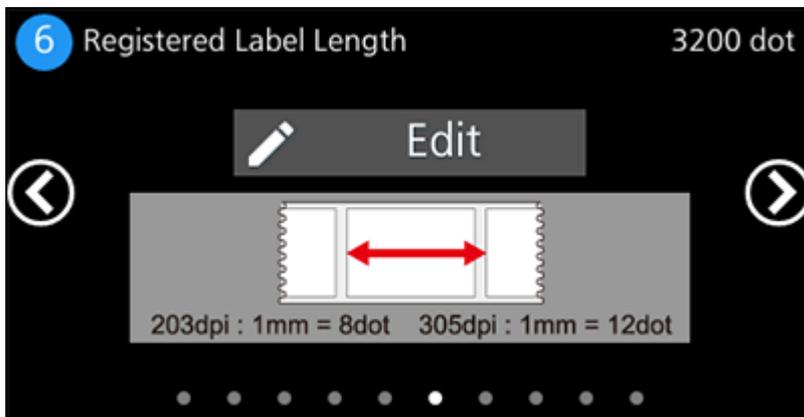
11. Select whether to enable or disable the Label Waste Prevention function, and then tap  or slide the screen to the left.



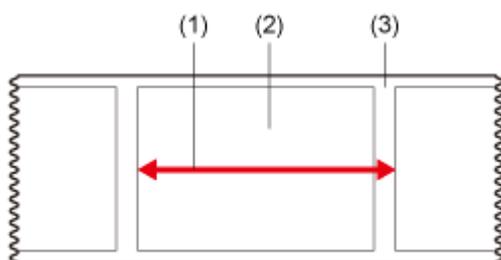
- This is not displayed if the optional dispenser unit or linerless cutter unit is installed.
- When using linerless labels, journal paper, or RFID tags, you cannot use the Label Waste Prevention function.

12. Tap [Edit].

To accurately execute the Label Waste Prevention function, register the length of the media.



Register the range of the label length (including liner) that the following illustration shows.



- (1) Label length (including liner)  
(2) Label

(3) Liner

Calculate the values from the following equations to input dots.

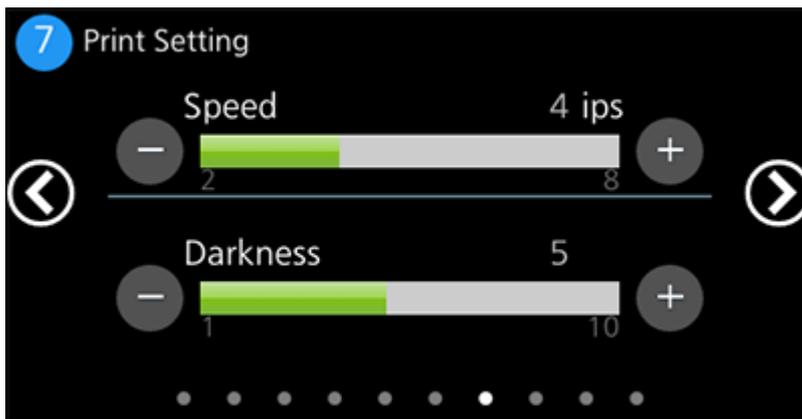
- 203 dpi: Label length (mm) x 8
- 305 dpi: Label length (mm) x 12



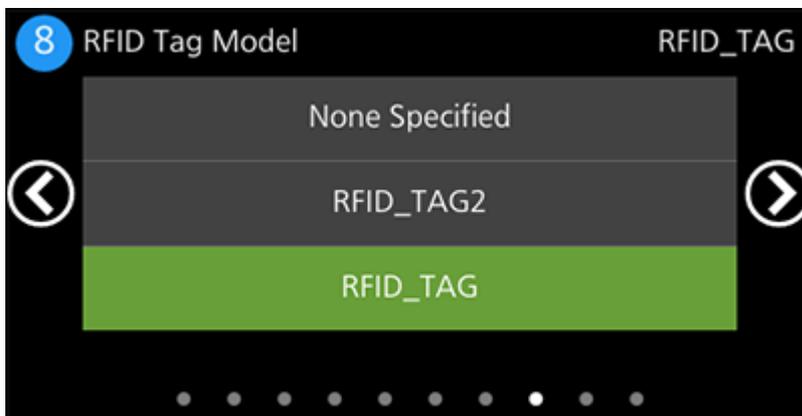
- This is not displayed if the optional dispenser unit or linerless cutter unit is installed.
- This is displayed if you have selected [Label] for the media type, and selected [Gap] or [I-Mark] for the sensor type, and enabled the Label Waste Prevention function.
- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.

13. Tap  or slide the screen to the left.

14. Adjust the print speed and the print darkness, and then tap  or slide the screen to the left.



15. For the RFID models, tap the RFID tag format to use, and then tap  or slide the screen to the left.





- If an RFID tag format is not registered, only [None Specified] is displayed. You can register RFID tag formats from the [Interface] > [RFID] > [RFID Tag Model] > [Edit] menu.

**16. Tap [Edit] and edit the name of the media profile to be registered.**

You can enter 1 to 16 characters. You can use alphabet (capital and small letters), numbers and symbols. If you do no edits, it is registered as "Media type Media profile number" (example: Label 1).



**17. Tap  or slide the screen to the left.**

**18. Confirm the settings, and then tap [Register].**



**19. Tap  to finish.**

The media profile is registered.



- To cancel the settings you are currently doing, press the  (Power/Home) button. Tap  on the message to confirm you want to discard the settings.

An icon is added to the Home screen for the media profile that was registered.

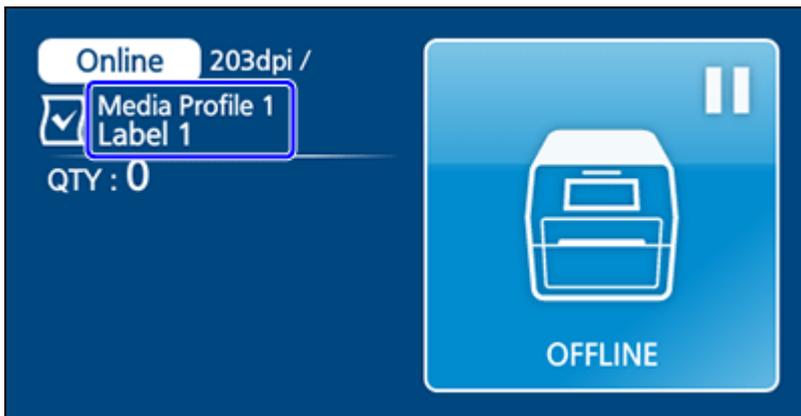


Tap the icon, and tap  in the confirmation message to apply the settings to the product.



- If values that cannot be applied to the product settings at that time are included in the media profile you are trying to apply, those values are not reflected.

When a media profile is applied to the product, the name of the registered media profile appears on the Online/Offline screen.



- When even one of the following settings is changed, the name of the media profile disappears from the Online/Offline screen.
  - Setting items displayed in [Media Profiles Registration]
  - [Printing] > [Auto-mode]
  - [Printing] > [Print Mode]
- To edit a registered media profile, tap the item with the profile's name in the [Media Profiles Registration] screen, and follow the on-screen instructions to do the settings.
- If you edited a media profile that is currently applied, the name of that media profile disappears from the Online/Offline screen. To apply the edited settings to the product, tap the icon on the Home screen again to access the settings.

## Print Method (Combined Direct Thermal/Thermal Transfer Model Only)

For the combined direct thermal/thermal transfer model, you can select from two types of print methods.

### Thermal transfer

Prints using a ribbon.

### Direct thermal

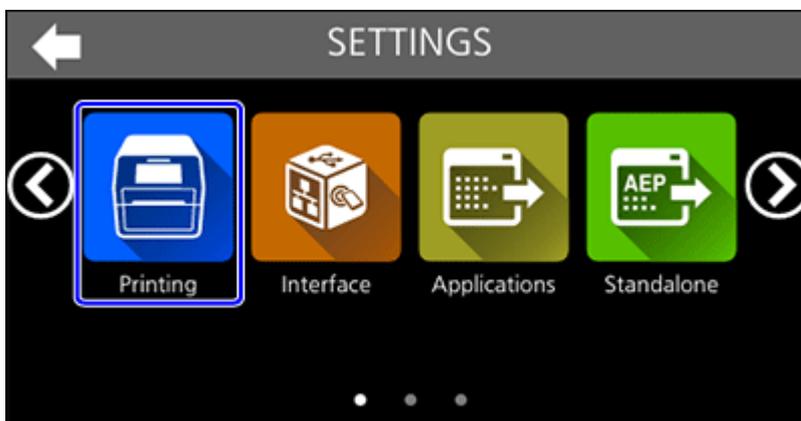
Prints using direct thermal media.



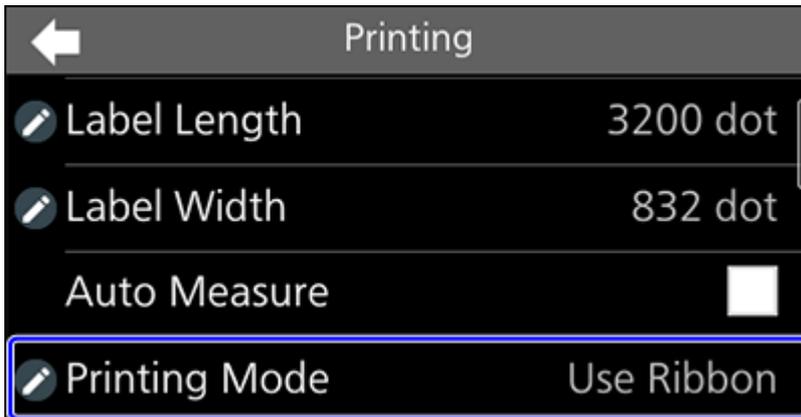
- Ribbon is not necessary if you are using direct thermal media.
- 

The print method can be set through the Startup Guide, Media Startup, and Media Profiles Registration. Alternatively, the following procedure can be used.

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Printing Mode].



5. Select the print method.



**[Use Ribbon]**

Prints using a ribbon.

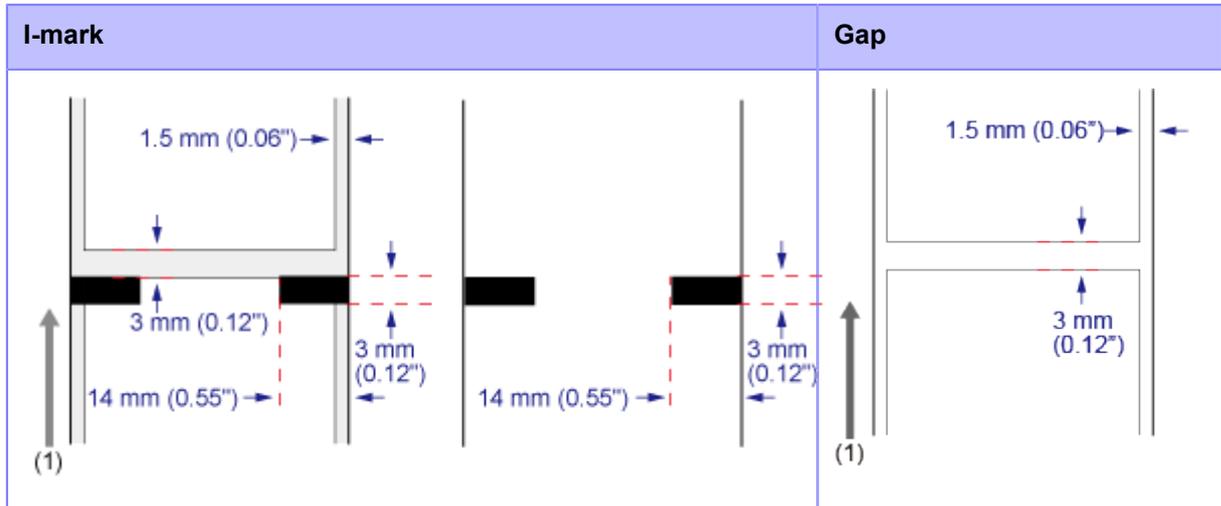
**[Direct Thermal]**

Prints using direct thermal 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:

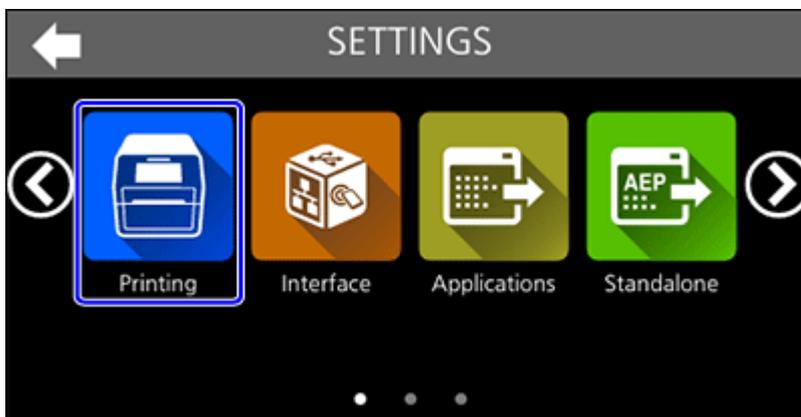


(1) Feed direction

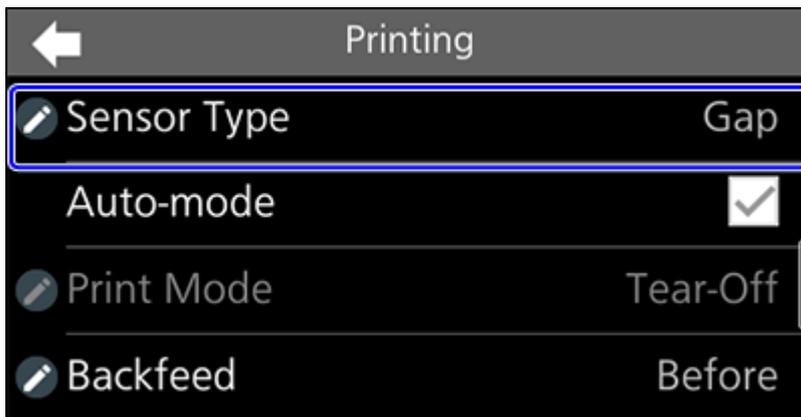
Set the sensor type to detect the print position according to the media to be used.

The sensor types can be set through the Startup Guide, Media Startup, and Media Profiles Registration. Alternatively, the following procedure can be used.

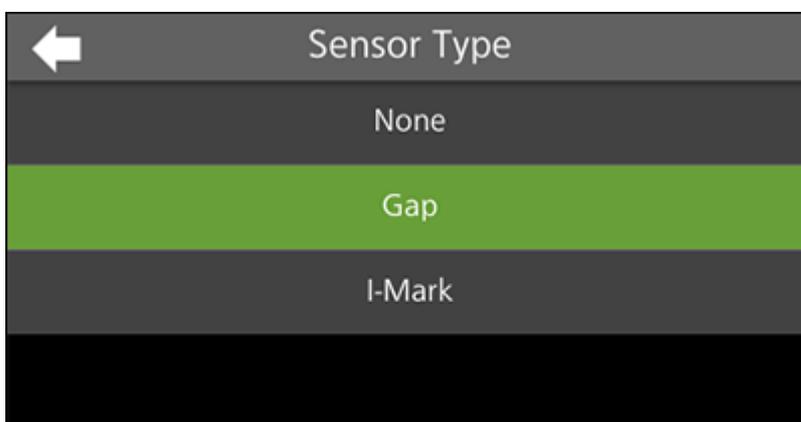
1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Sensor Type].



5. Tap the sensor type to detect the print position.



**[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.



- If you have selected [Dispenser] in the [Print Mode] menu, only [Gap] and [I-Mark] will be available.
- If you have selected [Linerless cutter] or [Linerless tearoff] in the [Print Mode] menu, only [None] and [I-Mark] will be available.
- Select something other than [None] to use the Label Waste Prevention function.
- Select something other than [None] to use RFID tags on an RFID model. If you set [None], you cannot use RFID tags.

## When to Replace Media and Ribbon

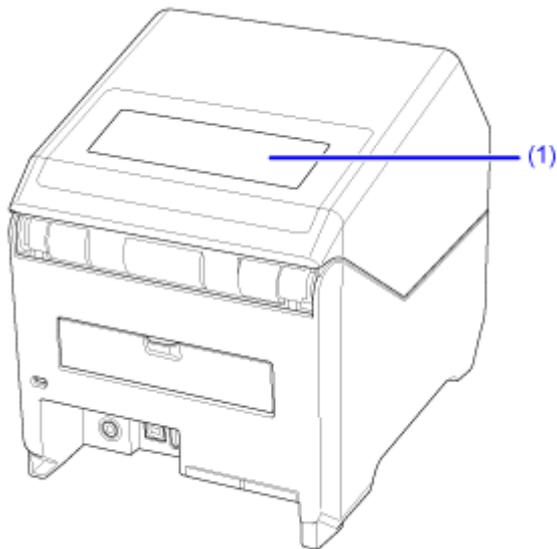
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### Checking the Remaining Amount of Media and Ribbon

You can check the remaining amount of media and ribbon according to the following procedure.

- **Checking through the window on top of the product**

You can visually check the remaining amount of media in the product through the window (1) on top of the product.



- **Checking through the notifications of the product**

The product has near-end and end detection functions for the ribbon.

With icons and error messages on the display of the product, you can check if you need to replace the ribbon soon, or if there is no ribbon remaining.

## Conditions That Trigger Paper End

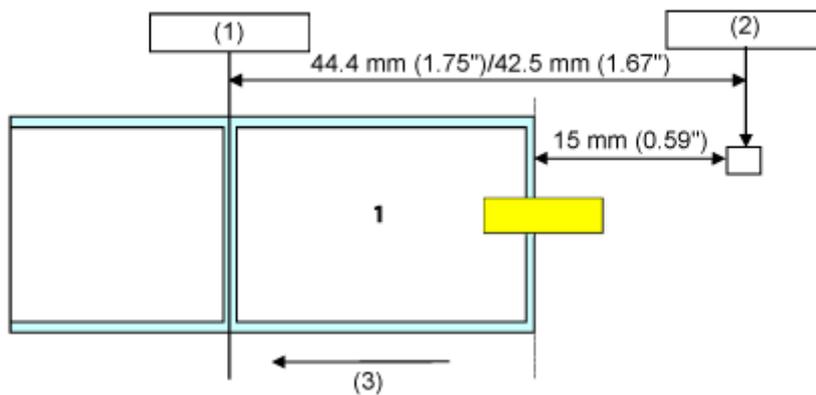
The conditions that trigger paper end vary depending on media specifications and the operation of the product.

Media specifications are selected in the [System] > [Compatible] > [SBPL] > [Media Specification] menu in the Settings mode, or specified by command.

### For [Adhesive Label] (Media Roll)

#### Conditions That Trigger Paper End in the Feeding Operation

A paper end error occurs while paper is being fed when the paper end sensor detects there is no paper and continues to detect no paper for 15 mm (0.59") of continuous feeding.



(1) Print head position

(2) Paper end sensor: I-mark sensor/Gap sensor

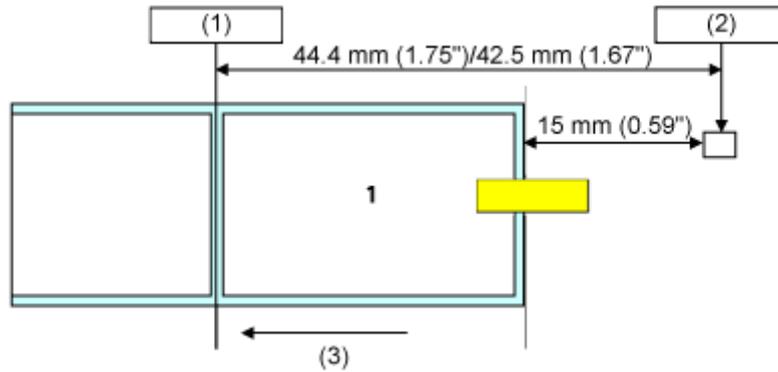
Select in [Advanced] > [Paper End] in the [Printing] menu, or specify by command.

(3) Feed direction

#### Conditions That Trigger Paper End in the Printing Operation

1. The paper end sensor detects a no-paper condition at the position where 15 mm (0.59") has been fed.

2. If the amount of printing remaining is less than the distance between the print head position and paper end sensor - 20 mm (0.79"), a paper end error occurs after completing the output of 1.
- If the amount of printing remaining is more than the distance between the print head position and paper end sensor - 20 mm (0.79"), a paper end error occurs right after detecting the paper end, and the product will reprint after clearing the paper end error.



- (1) Print head position
- (2) Paper end sensor: I-mark sensor/Gap sensor

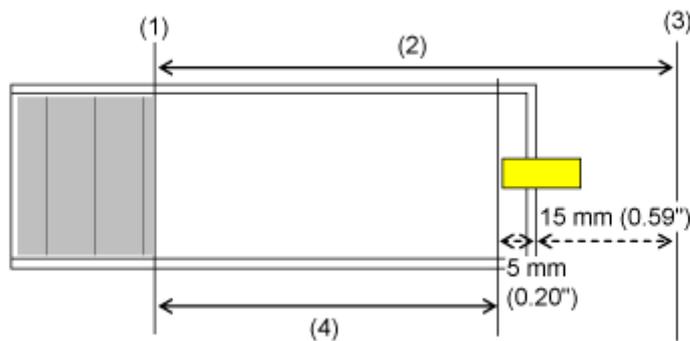
Select in [Advanced] > [Paper End] in the [Printing] menu, or specify by command.

- (3) Feed direction

If a paper end error is detected while printing, operation varies depending on the amounts of printing and media remaining when the error was detected.

The amount of media remaining can be calculated as follows: Printing is done so as to reach 5 mm (0.20") before the end of the media.

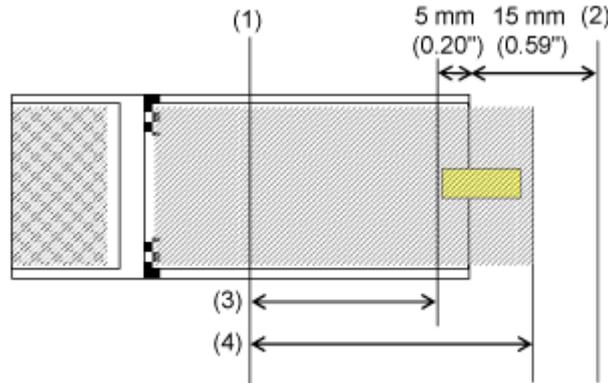
Amount of media remaining = distance between print head position and paper end sensor - (5 mm + 15 mm (0.20" + 0.59"))



- (1) Print head position
- (2) Distance between the print head position and paper end sensor
- (3) Paper end sensor
- (4) Amount of media remaining

- **When the Amount of Printing Remaining Is More Than the Amount of Media Remaining**

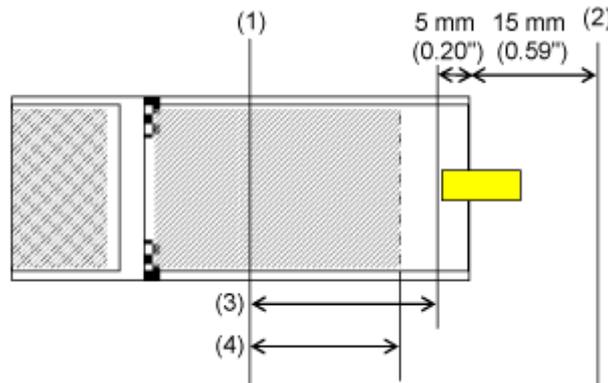
If the amount of printing remaining is more than the amount of media remaining when a paper end error is detected, the product cannot finish the print job. Printing stops immediately and a paper end error occurs.



- (1) Print head position
- (2) Paper end sensor
- (3) Amount of media remaining
- (4) Amount of printing remaining

- **When the Amount of Printing Remaining Is Less Than the Amount of Media Remaining**

If the amount of printing remaining is less than the amount of media remaining, the product will finish the print job and a paper end error will occur.

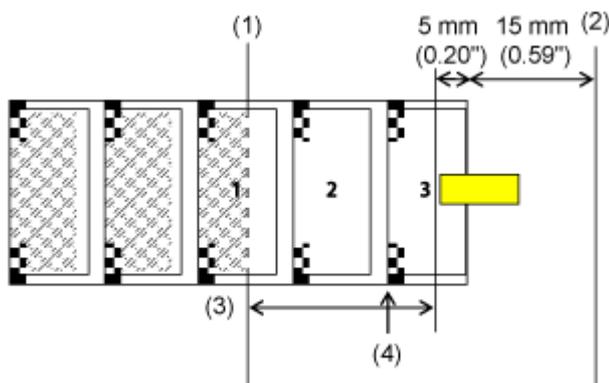


- (1) Print head position
- (2) Paper end sensor
- (3) Amount of media remaining
- (4) Amount of printing remaining

If there are multiple sheets between the print head and paper end sensor when a paper end error is detected, the paper end error occurs after feeding the media that is remaining.

A paper end error also occurs if the position of the last edge that was detected reaches the print head position while the remaining media is being fed.

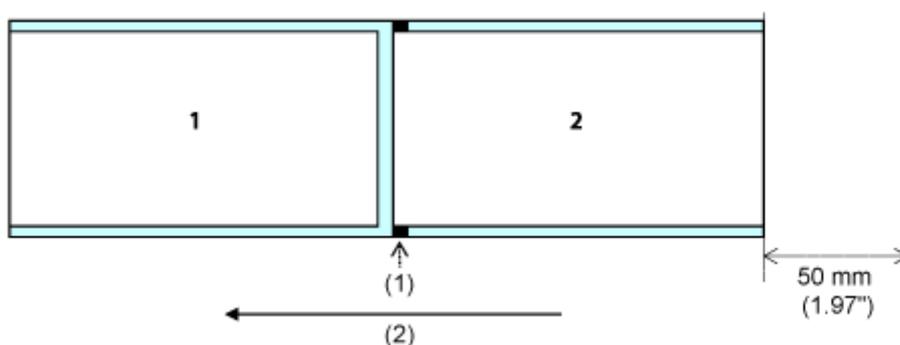
A paper end error occurs while printing, depending on the length of the labels, but reprinting is done after the error is cleared.



- (1) Print head position
- (2) Paper end sensor
- (3) Amount of media remaining
- (4) Position of last edge detected is saved

#### For [non-Adhesive Tag] (Fan-fold Media)

- A paper end error occurs when media is fed 50 mm (1.97") after 2 is printed.
- If an error occurs while printing, then 2 is reprinted after the error is cleared. If printing has finished when an error occurs, then 2 is not reprinted. (Also, if printing finishes while feeding the 50 mm (1.97"), then reprinting is not done.)
- In cutter mode, cutting is not done if a paper end error occurs.
- This cannot be used in dispenser mode or linerless mode.



- (1) I-mark
- (2) Feed direction

## Conditions That Trigger Ribbon End (Thermal Transfer Only)

Ribbon end error is detected by the ribbon sensor in the ribbon supply spindle. Ribbon end error occurs when the product detects that the ribbon in the ribbon supply spindle has not moved (rolled) more than 40 mm (1.57") after feeding the media.

## Conditions That Trigger Ribbon Near End (Thermal Transfer Only)

Ribbon near end is detected by the ribbon sensor in the ribbon supply spindle. Ribbon near end occurs when the amount of ribbon remaining is approximately less than 5 to 7 m (16.4 to 23.0 feet) (ribbon diameter: approximately 18 mm (0.71")).



- The amount of ribbon remaining (5 to 7 m (16.4 to 23.0 feet)) is only for reference. The timing of ribbon near end varies depending on the ribbon thickness and the reading status of the ribbon sensor.
-

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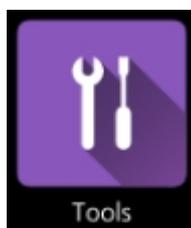
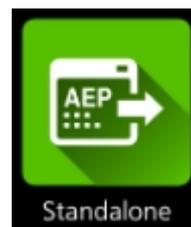
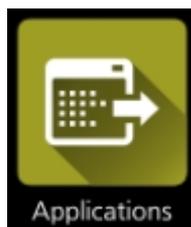
# Various Settings of the Product

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## The [SETTINGS] Menu

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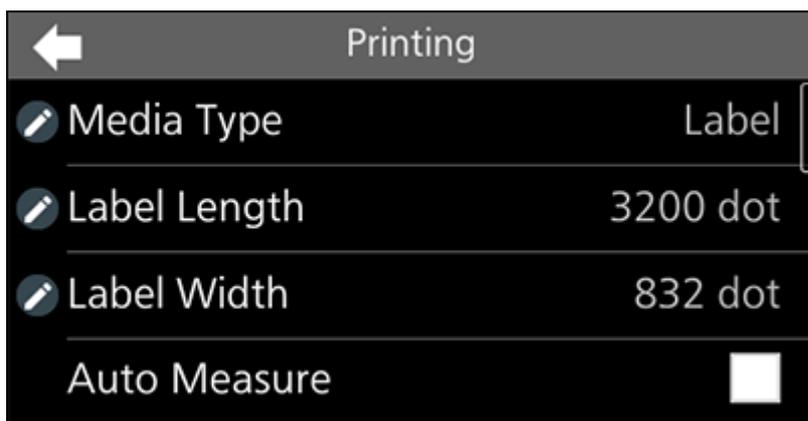
The following categories of menus are available for the [SETTINGS] menu of the product. Click the icon to jump to the description of each menu item.



- The [Language] menu appears if you enable it by going to the [System] > [Regional] > [Display Language Icon] menu.
  - The [Bluetooth] menu and [Wi-Fi] menu are shown only when the optional wireless LAN/Bluetooth kit is installed.
-



## [Printing] Menu



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

### [Media Type]

Set the media type.

The options are as follows:

- [Label]
- [Wristband]
- [koDakara]



- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.

### [Label Length]

Set the length of the media.

The setting range varies depending on the print resolution of the product.

The setting range of the label length is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	1 to 20000 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	1 to 18000 dots



- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- Set the label size to a value that includes the liner.

## [Label Width]

Set the width of the media.

The setting range varies depending on the print resolution of the product.

The setting range of the label width is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	1 to 832 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	1 to 1248 dots



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

Appears only if you have selected [Label] in the [Media Type] menu.

This can be executed if you select [Gap] or [I-Mark] in the [Sensor Type] menu.

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

1. Load the media.
2. Enable [Auto Measure].
3. Press the  (Power/Home) button to show the Home screen.
4. Press the  (Power/Home) button 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.
- 

## [Printing Mode]

Select whether to print using a ribbon or to print using direct thermal media.

Available only for the combined direct thermal/thermal transfer model.

The options are as follows:

### Use Ribbon

Prints using a ribbon.

### Direct Thermal

Prints using direct thermal media.



- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- 

## [Ribbon Near End]

When [Ribbon Near End] is enabled, the warning icon appears when the ribbon is about to run out. Printing does not stop even if the warning icon shows up.

Appears only if you have selected [Use Ribbon] in the [Printing Mode] menu on the combined direct thermal/thermal transfer model.



- The warning icon is shown in the status bar on the upper part of the screen.
- 

## [Speed]

Set the print speed.

The setting range varies depending on the print resolution of the product.

The setting range of the print speed is as follows:

Resolution	Setting range
203 dpi (8 dots/mm)	2 to 8 ips (inches/sec) (50.8 to 203.2 mm/sec)
305 dpi (12 dots/mm)	2 to 6 ips (inches/sec) (50.8 to 152 mm/sec)



- If the optional linerless cutter unit is installed, the setting range is 2 to 4 ips.
- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- Setting the print speed to a level that is too fast may affect the print quality.

## [Sensor Type]

Set the sensor type for detecting the media.

The options are as follows:

### 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.



- If you have selected [Dispenser] in the [Print Mode] menu, only [Gap] and [I-Mark] will be available.
- If you have selected [Linerless cutter] or [Linerless tearoff] in the [Print Mode] menu, only [None] and [I-Mark] will be available.
- Select something other than [None] to use the Label Waste Prevention function.
- Select something other than [None] to use RFID tags on an RFID model. If you set [None], you cannot use RFID tags.
- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.

## [Auto-mode]

When [Auto-mode] is enabled, the print mode changes automatically according to the status of the installed option.

Installed option	Print mode that is set by Auto-mode
None	Tear-Off
Dispenser unit	Dispenser
Cutter unit	Cutter
Linerless cutter unit	Linerless cutter

## [Print Mode]

Manually set the print mode.

Can be set if [Auto-mode] is disabled.

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]**

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]**

Peels the liner from the printed label as the label is fed. Once the printed label has been removed from the product, the next label is positioned for printing.

**[Cutter]**

Cuts each media while printing the specified number of media.

**[Cut & Print]**

Allows you to print the next data while the previous data is cut at the end position of the printed media. If no print data is received within the period specified for [Eject Cut], the product feeds the media to the cut position and cuts at the end position of the printed media.

**[Partial cutter]**

Cuts each media leaving a part of the media while printing the specified number of media.

**[Linerless cutter]**

Media is printed and cut 1 piece at time. Once the cut media has been removed, the next media returns to the print position.

**[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.



- Changing the print mode may link to and change [Sensor Type] and [Backfeed]. After changing the settings, confirm that the settings have become compatible with the media you are using.
  - When using RFID tags on an RFID model, do not select cutter mode with no backfeed, partial cutter mode, linerless cutter mode, or linerless tearoff mode. If these print modes are set, you cannot use RFID tags.
-



- The selectable print modes differ according to the installed options.

Installed option	Print mode
None	Continuous/Tear-Off
Dispenser unit	Continuous/Dispenser
Cutter unit	Continuous/Tear-Off/Cutter/Cut & Print/ Partial cutter
Linerless cutter unit	Linerless cutter/Linerless tearoff

## [Backfeed]

[Backfeed] is applicable only when the print mode is set to something other than continuous mode.

The options are as follows:

### None

Does not backfeed.

### After

After cut, backfeed the leading edge of the next media to the print head position.

For dispenser mode, backfeed the media to the leading edge of the next label after dispensing the label.

### Before

Before printing, backfeed the leading edge of the next media to the print head position.



- The selectable operations differ according to the print mode.

Print Mode	Backfeed operation		
	None	Before	After
Continuous	Possible	-	-
Tear-Off	-	Possible	-
Dispenser	Possible	Possible	Possible
Cutter	Possible	Possible	Possible
Cut & Print	-	-	Possible
Partial cutter	Possible	Possible	-
Linerless cutter	-	Possible	-
Linerless tearoff	-	Possible	-

## [Eject Cut]

In cut & print mode or backfeed before printing in partial cutter mode, set whether to do eject cut and the standby time when doing eject cut.

Eject cut does not print the next data, and ends the print operation after cutting the last printed media.

Appears only if you have selected [Cut & Print] in the [Print Mode] menu or if you have selected [Partial cutter] and then [Before] in [Backfeed].

The setting range is from 0 to 5 (sec). When set to 0, eject cut is not done.

## [Darkness Range]

Display the range of the print darkness.

The darkness range affects the print darkness. The range is from A to F. The product is set to A.

## [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.



- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- To further fine tune the print darkness, set [Printing] > [Advanced] > [Adjustments] > [Darkness Adjust].

## [Imaging]

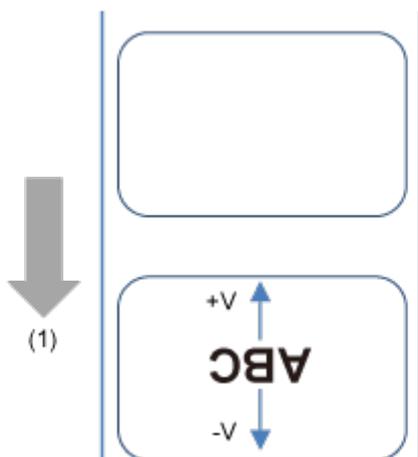
Set the print reference position in the vertical and horizontal directions.

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 varies depending on the print resolution of the product.

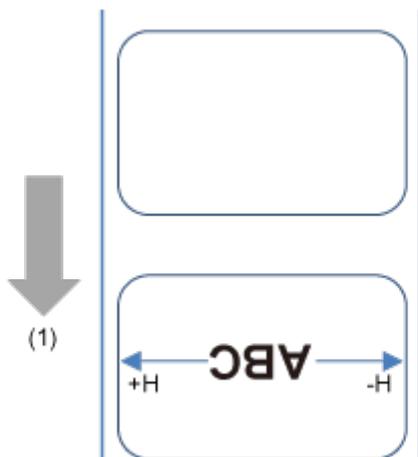
The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-19999 to +19999 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-17999 to +17999 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 right side and "+" to adjust to the left side.



(1) Feed direction

The setting range varies depending on the print resolution of the product.

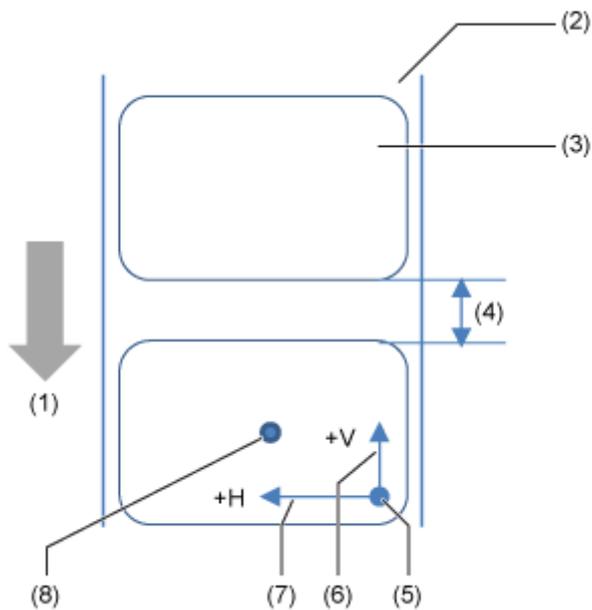
The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-831 to +831 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-1247 to +1247 dots



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

### 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 setting items are as follows:

### [Calibrate]

Adjust the media sensor level.

In instances of media detection malfunction, adjust the media sensor level.

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.

### Label Top

Adjust the label top sensor.



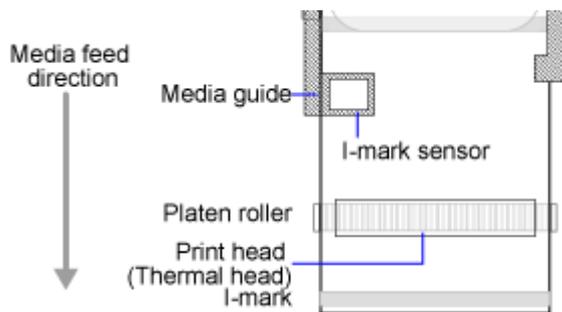
- [Label Top] is not displayed if the optional dispenser unit or linerless cutter unit is installed.
  - For media that has no liners, such as wristbands and koDakara, [Label Top] cannot be adjusted.
- 

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

1. Open the top cover.
2. Load the media.

- **For adjusting [Gap + I-Mark]/[Gap]/[I-Mark]**

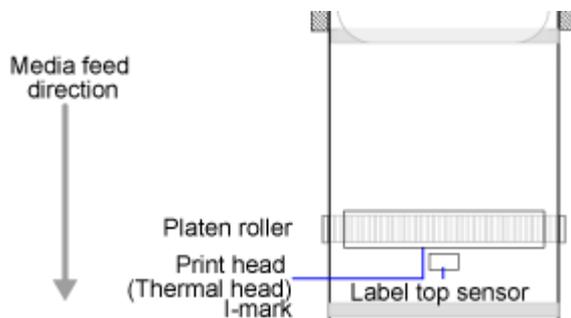
Remove the label from the liner and set the liner so the I-mark is not above the I-mark sensor.



For media without liners, such as wristbands or journal paper, load the media as is.

- **For adjusting [Label Top]**

Remove the label from the liner and set the liner so the I-mark is not above the label top sensor.



3. Close the top cover.
4. Tap the type of sensor from the list to be adjusted.
5. When the confirmation screen appears, tap .

If message indicating adjustment failed, load the media correctly and try again.

6. Tap .
7. Reload the media.
8. Confirm the results of adjusting the media sensor.
  - **If you adjusted [Gap + I-Mark]/[Gap]/[I-Mark]**  
Display the Offline screen, tap [FEED], and then confirm that the media is fed correctly.
  - **If you adjusted [Label Top]**  
Display the Online screen. Confirm that the media is correctly adjusted to the print start position by the Label Waste Prevention function.



- 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 I-mark sensor. Align it so that the I-mark sensor does not detect the I-mark (black mark).
3. Close the top cover. To get the correct adjustment result, adjust after you have closed the top cover.
4. Tap [GAP Levels] in the [Calibrate] menu.
5. 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, 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 I-mark sensor. Align it so that the I-mark sensor does not detect the I-mark (black mark).
2. Close the top cover.
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, tap  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)



- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- 

### [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. Tap [GAP Slice Level] in the [Calibrate] menu.
3. Change the slice level value. Set the slice level to the level calculated in step 1.
4. Tap  to confirm the value.



- If you set the slice level to 0.0 (V), the product sets the slice level automatically.
  - The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- 

### [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 I-mark sensor. Align it so that the I-mark sensor does not detect the I-mark (black mark).
2. Close the top cover. To get the correct adjustment result, adjust after you have closed the top cover.
3. Tap [I-Mark Levels] in the [Calibrate] menu.
4. 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, 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 I-mark sensor so that the I-mark sensor can detect the I-mark (black mark).
2. Close the top cover.

## 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, tap  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)



- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- 

**[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. Tap [I-Mark Slice Level] in the [Calibrate] menu.
3. Change the slice level value. Set the slice level to the slice level calculated in step 1.
4. Tap  to confirm the value.



- If you set the slice level to 0.0 (V), the product sets the slice level automatically.
  - The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- 

**[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. White voids may occur during printing and there may be some shift in the timing of the head error detection by the head check function.

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.

Appears only 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.

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

By enabling this function, "Media Error" is shown if either of the following conditions applies:

- If the media is more than 3 mm (0.12") longer than the media length specified with the media size <A1> command.
- If the current media feed length is more than 3 mm (0.12") longer than the media length fed for the first time after this function is enabled.

### [Adjustments]

Correct the offset position, print position, print darkness, and label top sensor position.

The setting items are as follows:

#### [Offset]

Correct the offset position.

Offset adjusts the backfeed amount and the media stop position for tear-off/cut/dispense operations.

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

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots

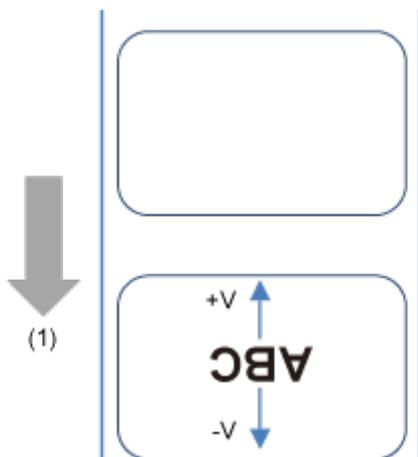


- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- The changes to this setting are linked and are changed with each of the test print settings in the [Tools] > [Test Print] menu.

### [Pitch]

By adjusting the print position, you can set the print start position to adjust the vertical print 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 varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots



- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- The changes to this setting are linked and are changed with each of the test print settings in the [Tools] > [Test Print] menu.

### [Darkness Adjust]

Fine tune the print darkness.

The setting range is from 0 to 99.

0 is the lightest and 99 is the darkest.



- The changes to this setting are linked and are changed with each of the test print settings in the [Tools] > [Test Print] menu.

### [Label Top Sensor]

Adjust position of the label top sensor.

This is not displayed if the optional dispenser unit or linerless cutter unit is installed.

Set the value '+' to correct the label top sensor in the direction opposite to the feed direction and '-' to correct in the feed direction.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots



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

### [Start Online]

Set whether to power on the product in Online mode.



- This setting is linked to [Initial Display at Start-Up] in the [Standalone] menu. By enabling [Start Online], [Application] is enabled in [Initial Display at Start-Up]. By disabling [Start Online], [Home Screen] is enabled in [Initial Display at Start-Up].

### [Feed After Error]

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

Can be set if [Label Waste Prevention] is disabled.



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



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 when the product is powered on.

Can be set if [Label Waste Prevention] is disabled.



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



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.

### [Label Waste Prevention]

Set the Label Waste Prevention function.

This is not displayed if the optional dispenser unit or linerless cutter unit is installed.

The setting items are as follows:

#### [Enable]

Enable or disable the Label Waste Prevention function.

Can be set if [Feed After Error] and [Feed At Power On] are disabled.



- To enable this, on the [SETTINGS] menu, use [Tools] > [Media Startup] or [Media Profiles Registration] to batch set the settings related to the Label Waste Prevention function.
- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
- When using linerless labels, journal paper, or RFID tags, you cannot use the Label Waste Prevention function.

### [Registered Label Length]

To accurately execute the Label Waste Prevention function, register the length of the media you are using. If you do not register the media length, the second and following labels may be fed blank.

Appears when the following conditions are met.

- [Label Waste Prevention] > [Enable] is enabled.
- On the [Printing] > [Media Type] menu, [Label] is selected.

- On the [Printing] > [Sensor Type] menu, [Gap] or [I-Mark] is selected.

Set a value for the media length that includes the liner.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	1 to 20000 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	1 to 18000 dots



- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- If you change to labels with a different length, do not forget to change [Registered Label Length] too. If [Registered Label Length] is different from the actual media length, printing may become misaligned.
- The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.

### [Finisher Feed]

Set the media feed amount for tear-off, cut 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 varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	0 to 2040 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	0 to 3060 dots



- 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 Home 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 the product's settings, set whether to give priority to settings done on the product or to settings done by 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.

If [Reprint] is enabled, you can tap [REPRINT] in the online screen to print the previous data again.



- The previous data is lost if the product is powered off.

**[Print End Position]**

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

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

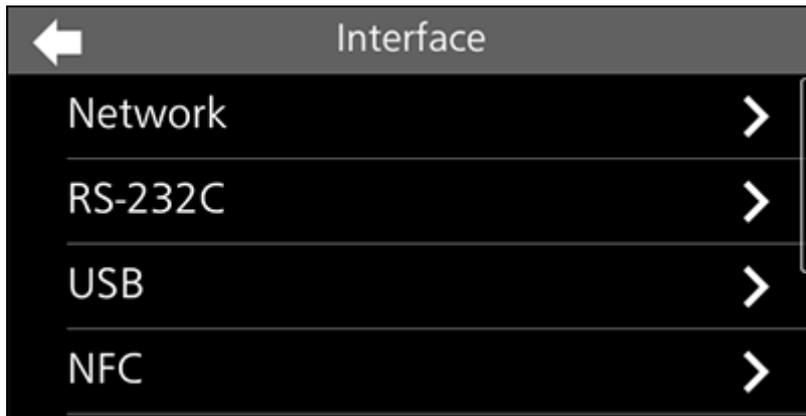
Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	0 to 20000 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	0 to 18000 dots



- 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:



- The [RS-232C] menu appears only if the optional RS-232C kit is installed.
- The [RFID] menu appears only for the RFID models.

## [Network]

This menu is to use LAN for the interface between the computer and the product.

The setting items are as follows:

### [Settings]

Set the LAN.

The setting items are as follows:

### [LAN]

Set IPv4 or IPv6, the TCP/IP port number, and a proxy for the LAN.

The setting items are as follows:

### [IPv4 (LAN)]

Set the IPv4 for the LAN.

- 
-  After finishing the settings, tap . After a message asking you whether to save the settings appears, tap .
  - Tap  to discard the changes. Tap  on the message to confirm you want to discard the changes.
- 

-  You cannot change [IP Address], [Netmask], [Gateway], or [DNS] if [Mode] is [DHCP].
- 

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.

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

### [IP Address]

Set and check the IP address.

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

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]

Set and check the subnet mask address.

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

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

You can set each group of the address from among 0, 128, 192, 224, 240, 248, 252, 254 and 255.

The setting range is as follows:

128.000.000.000 to 255.255.255.254

## [Gateway]

Set and check the default gateway address.

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

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

The setting range is as follows:

000.000.000.000 to 255.255.255.255



- The gateway address set here is shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [IPv4 (Wi-Fi)].
- 

## [DNS]

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.
  - The DNS server address set here is shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [IPv4 (Wi-Fi)].
- 

## [IPv6 (LAN)]

Set the IPv6 for the LAN.



- After finishing the settings, tap . After a message asking you whether to save the settings appears, tap .
  - Tap  to discard the changes. Tap  on the message to confirm you want to discard the changes.
- 



- You cannot change [IP Address], [Prefix Length], [Gateway], or [DNS] if [Mode] is anything other than [Static].
- 

The setting items are as follows:

## [Mode]

Select the IP address assignment method or disable IPv6.

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:

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

## [Prefix Length]

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 to ffff:ffff:ffff:ffff:ffff:ffff:ffff



- The gateway address set here is shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [IPv6 (Wi-Fi)].
- 

## [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 you 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 to ffff:ffff:ffff:ffff:ffff:ffff:ffff



- You can register only one IP address for the DNS server for IPv6.
- The DNS server address set here is shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [IPv6 (Wi-Fi)].

## [Ports]

Set the TCP/IP port number.

If AEP mode is enabled, there are only two ports available for LAN and wireless LAN connections.

If AEP mode is enabled and the wireless LAN interface is being used, set the port settings in this menu. The [Wi-Fi] > [Wi-Fi Setting] > [Ports] menu becomes unavailable under this condition.

### Roles of Port1 to Port3

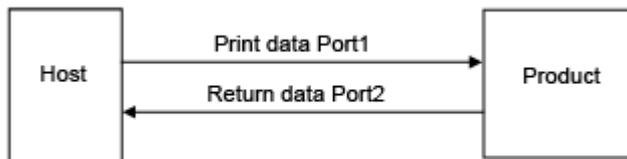
In the socket server function of TCP/IP, either of the following connection methods can be used.

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

#### Two-port connection

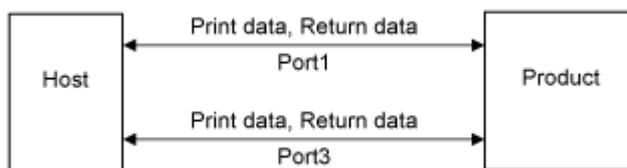
- If AEP mode is disabled (initial value)

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.



- If AEP mode is enabled

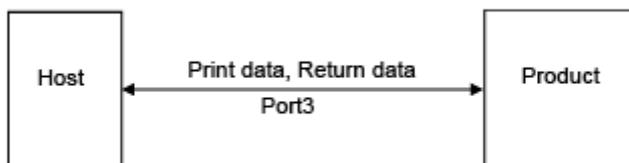
Port1 and Port3 can be used for both receiving print data and returning the product status. Port2 cannot be used.



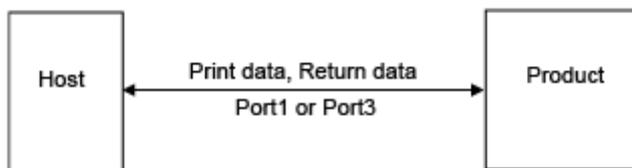
#### One-port connection

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 or STATUS5, Port1 or Port3 is used.



- AEP does not support STATUS3, STATUS4, or STATUS5.
- 

The setting items are as follows:

### [Port1]

Set the port number for Port1.

If AEP mode is disabled, and while in the two-port connection of STATUS4, this port is used for receiving print data. While in the one-port connection of STATUS3/STATUS5, this port is used for both receiving print data and returning the product status.

While in the two-port connection in AEP mode, this port can be used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- AEP does not support STATUS3, STATUS4, or STATUS5.
- 

### [Port2]

Set the port number for Port2.

While in the two-port connection of STATUS4, this port is used for returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- The setting is disabled if [AEP] is enabled.
- 

### [Port3]

Set the port number for Port3.

If AEP mode is disabled, and while in the one-port connection of STATUS3/STATUS4/STATUS5, this port is used for both receiving print data and returning the product status.

While in the two-port connection in AEP mode, this port can be used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- You can change the return status format of Port3 to compatible mode by enabling [Legacy Status for Port 9100].
  - AEP does not support STATUS3, STATUS4, or STATUS5.
- 

### [Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS4]
- [STATUS4 ENQ]
- [STATUS3]
- [STATUS5]
- [NONE]

### [TCP Connection Queue]

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



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.



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



- When you have enabled the setting, be sure to use one port connection for STATUS3, STATUS4, and STATUS5. 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 compatible mode.

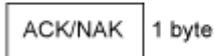
Does not appear if you have selected [NONE] in the [Flow Control] menu.

In compatible mode, the return status format of Port3 becomes as follows:

**STATUS3**

(Compatible mode)

ACK/NAK Reply

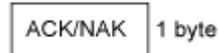


Status Reply

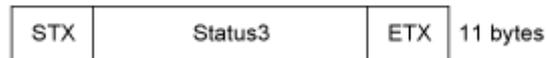


(Standard mode)

ACK/NAK Reply



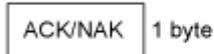
Status Reply



### STATUS4

(Compatible mode)

ACK/NAK Reply

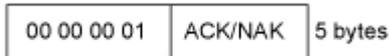


Status Reply



(Standard mode)

ACK/NAK Reply



Status Reply



### STATUS5

(Compatible mode)

ACK/NAK Reply

No Reply

Status Reply



(Standard mode)

ACK/NAK Reply

No Reply

Status Reply

STX	Status5	ETX	22 bytes
-----	---------	-----	----------

### [BCC]

Enable or disable the BCC check function.

Available only if you have selected [STATUS5] in the [Flow Control] menu.

### [Delay Reply ENQ]

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

This can be set only if you have selected anything other than [STATUS4] in the [Flow Control] menu.

The setting range is from 0 to 9999 ms.



- Normally, keep this setting at the initial value.
- 

### [Status4 Cyclic Response]

Set the interval for the cyclic status response.

This can be set only if you have selected [STATUS4] in the [Flow Control] menu.

The setting range is from 100 to 999 ms.

### [Proxy (LAN)]

Set a proxy.



- The proxy set here is shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [Proxy (Wi-Fi)].
- 

The setting items are as follows:

### [Enabled]

Enable or disable use of proxy.



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

### [Server]

Set the name or IP address of the proxy server.

Example: http://192.168.1.11



- Server should be set with a valid name or IP address.
  - Hold "." to input a colon (:).
-

### [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.
- 

### [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.

### [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.
- 

### [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.
- 

### [Services]

Set the NTP, LPD, FTP, SNMP, or SOS (SATO Online 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.

#### [Error]

Set to show the NTP error message if detected.

#### [Time Server IP]

Set the IPv4 address, IPv6 address, or DNS name of the NTP server.

This item should normally be set to 0.0.0.0 (the initial value). It means that the global NTP servers will be assigned automatically. Set to a valid address or name if the time synchronization is requested for a specific server.

#### [LPD]

Set the functions for LPD.

The setting items are as follows:

##### [Enable]

Enable or disable the LPD function.

##### [DNS Lookup]

Enable or disable the DNS Lookup function.

#### [FTP]

Set the functions for FTP.

The setting items are as follows:

##### [Enable]

Enable or disable the functions for FTP.

##### [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.

#### [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.

[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.

### [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:

4

Set the IP version to IPv4.

6

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 created from the MAC address.

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.

<https://www.sato-sos.com/en/>

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 LAN/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 LAN/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. A proxy server cannot be used.

**[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](https://www.sato-sos.com/en/support/#print_preparation_manual)

---

**[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 have enabled the NTP function or installed the optional RTC kit.

#### Weekly

Displays the notification screen every week at the specified day of week and time.

Appears only if you have enabled the NTP function or installed the optional RTC kit.

#### Monthly

Displays the notification screen every month at the specified day and time.

Appears only if you have enabled the NTP function or installed the optional RTC kit.

#### 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)

You can select the counter for the print head, cutter, or both 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.

The options are as follows:

- [Thermal Head]
- [Cutter]
- [Thermal Head+Cutter]

### [Head] (SOS users only)

You can specify or check the print distance of the print head for the timing to perform the periodic notification.

Appears only if you have selected [Thermal Head] or [Thermal Head+Cutter] 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.

**[Cutter] (SOS users only)**

You can specify or check the number of cut times of the cutter for the timing to perform the periodic notification.

Appears only if you have selected [Cutter] or [Thermal Head+Cutter] for [Counter] in the [Type] menu.

The setting items are as follows:

Cuts

Specifies the number of cut times of the cutter for the timing to perform the periodic notification. You will be notified for each number of cut times you specify.

The setting range is from 1 to 1,000,000.

Last Update

Shows the number of cut times of the cutter for the last periodic notification.

Next Update

Shows the number of cut times of the cutter for the next periodic notification.

Current Value

Shows the current number of cut times of the cutter.

**[Notifications] (SOS users only)**

Specifies the number of periodic notifications to be sent per day.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if 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.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if you have selected [Daily] in the [Type] menu.

**[Time 2] (SOS users only)**

Specifies the time to perform the second periodic notification.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if you have set [Daily] in the [Type] menu and have set twice or more in [Notifications].

**[Time 3] (SOS users only)**

Specifies the time to perform the third periodic notification.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if you have set [Daily] in the [Type] menu and have set three times in [Notifications].

#### **[Weekday] (SOS users only)**

Specifies the day of the week to perform the periodic notification.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if 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.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if you have selected [Monthly] in the [Type] menu.

The setting range is from 1 to 28.

#### **[Time] (SOS users only)**

Specifies the time of the specified day or date to perform periodic notifications.

Appears only if you have enabled the NTP function or installed the optional RTC kit, and if 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. Tap [PRINT] to print the QR code.

To print the QR code, use media of more than 40 mm (1.57") in length and more than 40 mm (1.57") 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.

Available only if you have selected [Print] in the [Update Screen] menu.

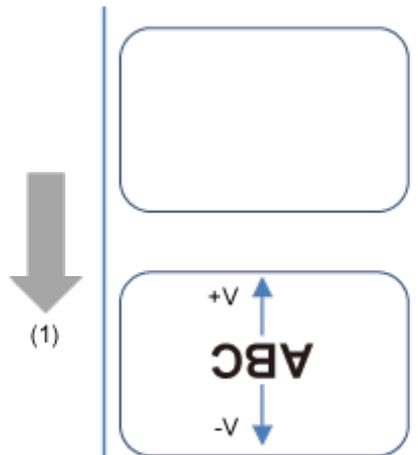
The setting items are as follows:

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.

The setting range is from -792 to +792 dots.

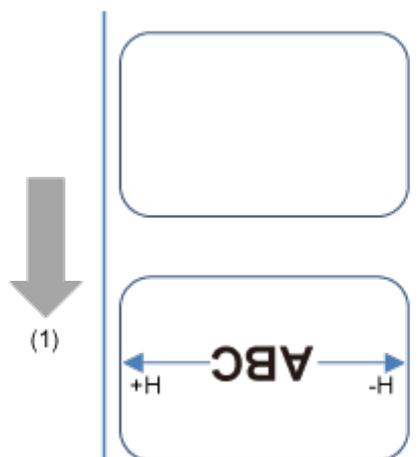


(1) Feed direction

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 right side and "+" to adjust to the left side.



(1) Feed direction

The setting range is from -792 to +792 dots.



- The length of 1 dot varies depending on the print resolution of the product.
    - 203 dpi : 1 dot = 0.125 mm (0.0049")
    - 305 dpi : 1 dot = 0.083 mm (0.0033")
  - 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], tap [PRINT] to print the QR code.

To print the QR code, use media of more than 40 mm (1.57") in length and more than 40 mm (1.57") in width (not including the liner).

### [Advanced]

Set the advanced function for the interface.

The setting items are 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 setting items are as follows:

#### [Additional]

Set the additional ARP announcement.



Enable the additional ARP announcement. The ARP is sent at 1, 2, 4, 8 and 16 seconds after the link up/DHCP assignment.



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 is 0 seconds.



- The function is disabled if you set it to 0.
- 

## [RS-232C]

Sets the RS-232C connection.

This appears only if the optional RS-232C kit is installed.

The setting items are as follows:

## [Baudrate]

Set the baudrate (bps).

The options are as follows:

- [2400]
- [4800]
- [9600]
- [19200]
- [38400]
- [57600]
- [115200]

## [Parameters]

Set the data parameters.

The options are as follows:

Refer to the table below for the parameter configurations.

- [8-N-1]
- [8-O-1]
- [8-E-1]
- [8-N-2]
- [8-O-2]
- [8-E-2]
- [7-N-1]
- [7-O-1]
- [7-E-1]
- [7-N-2]
- [7-O-2]
- [7-E-2]

### Parameter Configurations List

Parameters	Data length (bit)	Parity	Stop bit (bit)
8-N-1	8	None	1
8-O-1	8	ODD	1
8-E-1	8	EVEN	1
8-N-2	8	None	2
8-O-2	8	ODD	2
8-E-2	8	EVEN	2
7-N-1	7	None	1
7-O-1	7	ODD	1
7-E-1	7	EVEN	1
7-N-2	7	None	2
7-O-2	7	ODD	2
7-E-2	7	EVEN	2

#### [Flow Control]

Set the communication protocol.

The options are as follows:

- [READY/BUSY Multi]
- [XON/XOFF Multi]
- [STATUS3]
- [STATUS4]
- [STATUS5]
- [None]

#### [BCC]

Enable or disable the BCC check function.

Available only if you have selected [STATUS5] in the [Flow Control] menu.

#### [USB]

Set the USB connection.

The setting items are as follows:

#### [Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS4]
- [STATUS5]
- [NONE]

### [BCC]

Enable or disable the BCC check function.

Available only if you have selected [STATUS5] in the [Flow Control] menu.

### [Change USB Serial]

Set the type of the USB serial number that the product returns.



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.



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.
- 

### [NFC]

Sets the NFC connection.

The setting items are as follows:

#### I/F Enable

Enables or disables the NFC interface.

### [Ignore CR/LF]

Set whether to ignore the CR/LF code (0x0D / 0x0A) in the received data.

### [Ignore CAN/DLE]

Set whether to ignore the CAN/DLE code (0x18 / 0x10) in the received data.



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

## [RFID]

Set the RFID.

Appears only for the RFID models.

The setting items are as follows:

## [Antenna Position]

Follow the Inlay Configuration Guide to select an RFID antenna to use. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, contact your SATO sales representative or reseller.

### **If the installed module is UHF**

The options are as follows:

#### Normal

Use a standard antenna (adjustable).

With the SATO RF Analyze function, you can automatically adjust the position of the standard antenna to suit the RFID tag you are using. You can record the results of the automatic adjustment in [RFID Tag Model]. Or, you can manually adjust the position of the standard antenna with [RFID Tag Model].

#### Front

Use a short pitch antenna (fixed position).

### **If the installed module is HF**

Use a standard antenna. Specify the position on the standard antenna in the vertical direction.

The options are as follows:

- [Forward]
- [Center]
- [Backward]

## [Write Power]

Set radio power level used to write information to inlays according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, contact your SATO sales representative or reseller.

Appears only if the module is UHF.

The setting range is from 0 to 27 dBm.

The setting range differs depending on where the product is being operated.



- The changes to this setting are linked and are changed with the settings in the [SATO RF Analyze] > [Write Power] menu.

### [Read Power] **UHF** **HF**

Set radio power level used to read information from inlays according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, contact your SATO sales representative or reseller.

Appears only if the module is UHF.

The setting range is from 0 to 27 dBm.

The setting range differs depending on where the product is being operated.



- The changes to this setting are linked and are changed with the settings in the [SATO RF Analyze] > [Read Power] menu.

### [Tag Offset] **UHF** **HF**

Set the offset value and the writing operation for when data is written to an inlay.

The setting items are as follows:

#### [Tag Offset] **UHF** **HF**

Set the position at which to start writing data to the inlay. Data is written to an inlay on each tag at the point where the inlay passes over the product's RFID antenna, which is at the distance, from the print start position, specified in this setting.

This setting will be used when inlays are not compatible with the product's antenna positions. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, contact your SATO sales representative or reseller.

The setting range is from 0 to +240 mm (9.45").

#### [Encoding Action] **UHF** **HF**

Set the product's operations when writing data to an inlay in the position specified in [Tag Offset].

Appears when [Tag Offset] is set to something other than 0 mm (0").

The product is set to [Normal Action]. Temporarily stops printing in the position specified in [Tag Offset], and then writes data to the inlay.

White streaks may occur in the stopped position. Adjust the print layout so that objects, such as barcodes or text, do not overlap at the stopped position.

### [Reader Model] **UHF** **HF**

Shows the RFID module model.

[Reader Version] **U<sub>HF</sub>** **H<sub>F</sub>**

Shows the RFID module firmware version.

[View] **U<sub>HF</sub>** **H<sub>F</sub>**

Reads and shows the data in the selected memory area of the inlay.

The setting items are as follows:

[Memory Bank] **U<sub>HF</sub>** **H<sub>F</sub>**

Set the memory area of the inlay to read.

The readable memory areas are as follows:

**If the installed module is UHF**

- [EPC]
- [TID]
- [USER]
- [PC]
- [RSSI]

**If the installed module is HF**

- [USER]
- [UID]

[Data Reading] **U<sub>HF</sub>** **H<sub>F</sub>**

Tapping [Data Reading] displays up to 192 characters of the data read from the inlay.

Tapping [FEED] feeds media, and displays the data read from the inlay in the next tag.



- If you write an EPC of 64 digits or more, you cannot load TID, USER, PC, or RSSI.
- 

[Filter Function] **U<sub>HF</sub>** **H<sub>F</sub>**

Set the filter function according to the RSSI (Received Signal Strength Indication). If the RSSI value that is read while printing an RFID tag is lower than the specified threshold value, an RFID tag error occurs. An error message is printed on the inlay/RFID tag that caused the error.

Appears only if the module is UHF.

The setting items are as follows:

[RSSI Filter] **U<sub>HF</sub>** **H<sub>F</sub>**

Enable or disable the RSSI filter function.

[Threshold Value] **U<sub>HF</sub>** **H<sub>F</sub>**

Set the threshold of the RSSI filter.

Appears only if you enabled [RSSI Filter].

The setting range is from -99 to -1 dBm.

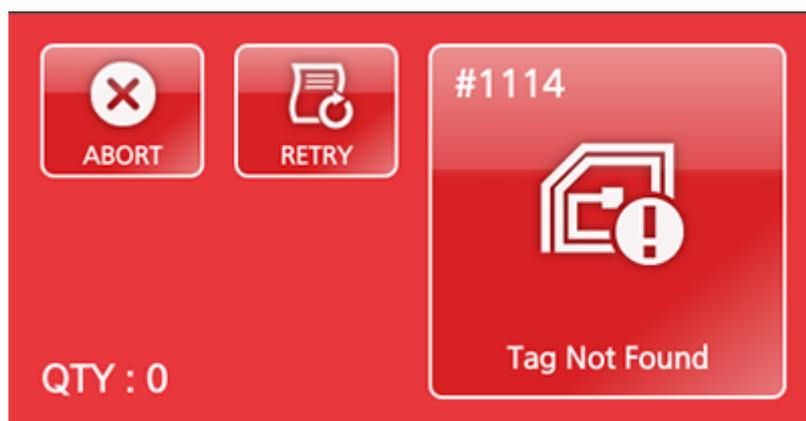
### [Retry Mode] U<sub>HF</sub> HF

Set the mode at the time of the RFID error outbreak.

The options are as follows:

#### Retry

If an RFID error occurs, the product will retry writing according to the number of times of [Retries]. If the RFID errors occur consecutively, printing stops after the number of retries in [Retries] plus one more retry occur, and the RFID error screen opens.



Tapping [RETRY] retries writing the number of times in [Retries].

Tapping [ABORT] deletes one current item.

#### Release

If an RFID error occurs, the next data is written, without trying to write the same data again. If the RFID errors occur consecutively, printing stops after the number of retries in [Retries] occurs, and the RFID error screen opens.

Tapping [RETRY] deletes one copy of the current print data, and then starts printing the next.

Example:

- If one copy each of 10 items are being printed, the current item is deleted, and the remaining items are printed.
- If 10 copies of one item are being printed, the current print data is deleted, and the remaining copies are printed.

Tapping [ABORT] deletes the one current item, and then starts printing the next.

Example:

- If one copy each of 10 items are being printed, the current item is deleted, and the remaining items are printed.
- If 10 copies of one item are being printed, the current item is deleted, and then printing stops.



- To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].
-

### [Retries]

Set the number of times the retry/release operations as set in [Retry Mode] are repeated before printing stops and the RFID error screen opens, when an RFID error occurs.

The setting range is from 0 to 9.

### [Mark bad tags]

Set whether to enable error printing when an RFID tag error occurs.

### [RFID Undetected Warning]

To prevent wasting RFID tags, set whether to stop printing and display an RFID undetected warning error if there is no RFID command in the print job.

The RFID commands that are detected by this function are EPC code write <IP0> and UID/EPC/IDm print <TU> commands.

The options are as follows:

#### Disable

The RFID undetected warning error is not displayed. Printing continues.

#### RFID Tag

Printing stops and an RFID undetected warning error is displayed if there is no RFID command in the print job when an RFID tag is loaded.

The error is no longer displayed if the media is replaced with normal labels.

#### RFID Command

Printing stops and an RFID undetected warning error is displayed if there is no RFID command in the print job.



- An RFID undetected warning is displayed even when using an RFID command that is intended to be detected in the print job, if it is written in the data that caused the command error.
- 

### [Log RFID Data]

Enable or disable the log function that records information about the written RFID data.

The log data can record up to 100 inlays of information. When the log file reaches its maximum size, the new log data overwrites the older log data.

All the log data will be lost if the product is powered off.



- UID data is recorded if the module is HF.
- 

### [Data To Record]

Set the data to record the log when [Log RFID Data] is enabled.

Appears only if the module is UHF.

The options are as follows:

#### EPC and TID

Store the EPC and TID data.

#### EPC

Store the EPC data.

#### TID

Store the TID data.

### [Counters]

Shows the RFID counter.

RFID writing operations by the following commands are counted.

- RFID write: EPC code write <IP0> command and RFID write <RK> command
- Tag data print: UID/EPC/IDm print <TU> command

However, writing that is not accompanied by printing and media feeding is not counted.

The setting items are as follows:

### [Life]

Shows the number of RFID write successes, failures, and total attempts.

The items are as follows:

#### Count Success

Shows the total number of successful times you have written to an RFID tag.

#### Count Failure

Shows the total number of RFID write errors.

#### Count Total

Shows the total number of times you have written to an RFID tag.

This is the total number including [Count Success] and [Count Failure].

### [User]

Shows the number of RFID write successes, failures, and total attempts after the RFID counter was cleared.

The items are as follows:

#### Count Success

Shows the total number of successful times you have written to an RFID tag after the RFID counter is cleared.

#### Count Failure

Shows the total number of RFID write errors after the RFID counter is cleared.

### Count Total

Shows the total number of times you have written to an RFID tag after the RFID counter is cleared.

This is the total number including [Count Success] and [Count Failure].



- You can reset the counter by tapping [Clear Counters] when the counter is 1 or higher.
- 

### [Paper]

Set the print reference position in the vertical direction for RFID tags.

The setting item is as follows:

### [Starting Point]

Set the print reference position in the vertical direction for RFID tags.

Set the print reference position by using '+' to move in the feed direction and '-' to move opposite to the feed direction.

The setting range is from -200 to +200 dots.



- The length of 1 dot varies depending on the print resolution of the product.
    - 203 dpi : 1 dot = 0.125 mm (0.0049")
    - 305 dpi : 1 dot = 0.083 mm (0.0033")
  - You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- 

### [SATO RF Analyze]

Set and execute the SATO RF Analyze function, and save the results of the measurements. SATO RF Analyze is a function of the product that allows you to adjust the read/write conditions in accordance with the RFID tags you are using after configuring them according to the Inlay Configuration Guide.

#### **Setting Measurement Conditions**

Before executing measurement, set the search level, writing/reading power, and name for saving as an RFID tag model.

Set the writing/reading power according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, use the initial values.

Appears only if the module is UHF.

The setting items are as follows:

### [Search Start]

Execute SATO RF Analyze.

Set the measurement conditions as needed in [Search Level], [Write Power], [Read Power], and [Save settings] before executing.

Load RFID tags into the product, and tap [Search Start]. Measurement of the RFID tag starts, and the state of the measurement appears on the screen. Complete the measurement according to the on-screen instructions.



- The length from the leading edge of the tag to the inlay should be 15 mm (0.59") or more.
  - The tag length should be 42 mm (1.65") or more (including liner) to execute SATO RF Analyze.
- 

### [Search Level] **U<sub>HF</sub>** H<sub>F</sub>

Set the search level for SATO RF Analyze.

The options are as follows:

- [Quick]
- [Standard]
- [Full]

If the measurement is not successful using [Quick], which is the initial setting, try [Standard] and [Full], which require more time and are more precise measurements.

### [Write Power] **U<sub>HF</sub>** H<sub>F</sub>

Set radio power level used to write information to inlays according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, use the initial values. If a SATO RF Analyze fails, a message to adjust the power output value by +1 dBm or -1 dBm, according to the cause, appears. Tap  to execute adjustment, and then do the measurement again.

The setting range is from 0 to 27 dBm.

The setting range differs depending on where the product is being operated.



- Keep the setting value 24dBm or less.
  - The changes to this setting are linked and are changed with the settings in the [RFID] > [Write Power] menu.
- 

### [Read Power] **U<sub>HF</sub>** H<sub>F</sub>

Set radio power level used to read information from inlays according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, use the initial values. If a SATO RF Analyze fails, a message to adjust the power output value by +1 dBm or -1 dBm, according to the cause, appears. Tap  to execute adjustment, and then do the measurement again.

The setting range is from 0 to 27 dBm.

The setting range differs depending on where the product is being operated.



- Keep the setting value 24dBm or less.
  - The changes to this setting are linked and are changed with the settings in the [RFID] > [Read Power] menu.
- 

[Save settings] **UHF** **HF**

Name the results of the SATO RF Analyze and save them as an RFID tag model.

The setting items are as follows:

[Model Name] **UHF** **HF**

Specify a model name when saving the results of the SATO RF Analyze.

You can enter a maximum of 32 characters. Alphabets, numbers and symbols can be used.

Tap  on the on-screen keyboard to confirm.

[Save] **UHF** **HF**

Save the results of the SATO RF Analyze as an RFID tag model.

A confirmation screen appears when you tap [Save]. If the name you specify in [Model Name] is the same as an RFID tag model that is already registered, an overwrite confirmation message appears.

Tap  to save it.

[RFID Tag Model] **UHF** **HF**

Register, edit, read, and delete RFID tag models. The RFID tag model is a registered combination of the optimal antenna position, writing/reading power, and tag offset value for each type of RFID tag.

If you save the results of the SATO RF Analyze as an RFID tag model, you can manage them from this menu. Also, you can register RFID tag models manually from [Edit] in this menu.

You can register a maximum of 10 RFID tag models.



- You can select the registered RFID tag models from the [Media Startup] menu or [Media Profiles Registration] menu in the [Tools] menu.
- 

The setting items are as follows:

[Load] **UHF** **HF**

Read a registered RFID tag model and apply the settings to the product.

You can use this if more than one RFID tag model has been registered.

Tap the RFID tag model to read, and then tap  in the confirmation message.

The name of the RFID tag model that was read appears on the right side of the [Load] menu.



- After you save the results of the SATO RF Analyze as an RFID tag model, their name appears on the right side of the [Load] menu as the current settings of the product.
  - The changes to this setting are linked and are changed with the settings in the [Tools] > [Media Startup] menu.
-

[Edit]  

Register a new RFID tag model or edit registered RFID tag models.

To edit registered RFID tag models, read the targeted RFID tag model in advance in the [Load] menu.

For information needed for these settings, refer to the Inlay Configuration Guide. To view the Inlay Configuration Guide, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

To use inlays that are not in the Inlay Configuration Guide, contact your SATO sales representative or reseller.

The setting items are as follows:

#### Antenna Position

##### Antenna X Pos. (only for UHF)

Adjust the position of the RFID standard antenna in the horizontal direction.

The setting range is from 0 to 28 mm (0 to 1.10").

##### Antenna Y Pos. (only for UHF)

Adjust the position of the RFID standard antenna in the vertical direction.

The setting range is from 0 to 24 mm (0 to 0.94").

##### Write Power (only for UHF)

##### Read Power (only for UHF)

##### Tag Offset

##### Pitch Size (only for UHF)

Set the length of the RFID tag.

The setting range varies depending on the print resolution of the product.

The setting range of the RFID tag length is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	8 to 1,920 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	12 to 2,880 dots



- You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
- Set a value that includes the liner.

When the settings are complete, tap [Save as], and input a name.

You can enter a maximum of 32 characters. Alphabets, numbers and symbols can be used.

Tap  on the on-screen keyboard to confirm.

If you specify a name that is the same as a registered RFID tag model, a confirmation message appears. To overwrite the settings, tap .

[Delete] UHF HF

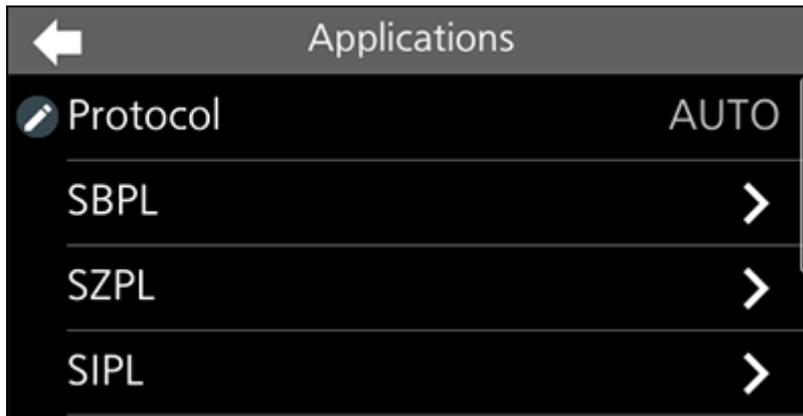
Delete registered RFID tag models.

You can use this if more than one RFID tag model has been registered.

Tap the RFID tag model to delete, and then tap  in the confirmation message.



## [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.

#### SZPL

Set when you use the SZPL printer language.

#### SIPL

Set when you use the SIPL printer language.

#### SDPL

Set when you use the SDPL printer language.

#### STCL

Set when you use the STCL printer language.

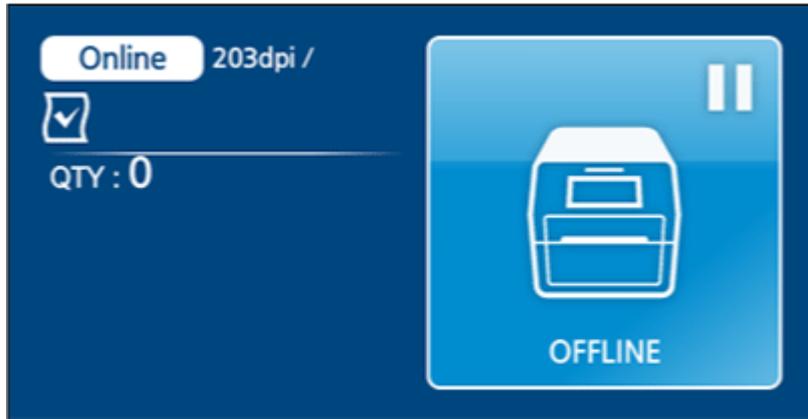
#### SEPL

Set when you use the SEPL printer language.



(When [AUTO] is selected in the [Protocol] menu)

- A message prompting you to restart the product appears on the Home 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 used for the common commands 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.



Enable the command error indication. The command error is shown and the print operation is paused when incorrect command or parameter is detected in the print data.



Disable the command error indication.

### [Standard Code]

Set the protocol code.



Use a standard code.



Use a non-standard code.



- A message prompting you to restart the product will appear on the Home screen if you have made any changes. In such a case, reboot the product to apply the settings. When [AUTO] is selected in the [Protocol] menu while this setting is disabled, this setting will become enabled.
- 

### [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, XL, X20, X21, X22, X23, X24



Print zero with a slash.



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.



Print each character with a proportional pitch.



Print all characters with a fixed pitch.

### [Code Page]

Select the code page to be used from the list.

### [€]

Set the European currency symbol to the ASCII code.

The setting range is from 0 to FF (hexadecimal).

### [SZPL]

To use SZPL as a printer command, set the following items:

#### [Label]

Set the print position.

The setting items are as follows:

#### [Shift]

Set the shift offset position of the label.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-832 to +832 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-1248 to +1248 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.



- The length of 1 dot varies depending on the print resolution of the product.
  - 203 dpi : 1 dot = 0.125 mm (0.0049")
  - 305 dpi : 1 dot = 0.083 mm (0.0033")
- 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 of rotation.

The options are as follows:

#### 0 degree

Labels are printed in portrait orientation.

#### 180 degree

Labels are printed in 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 from 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:

- [(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]**

If you are using the multilingual fonts in the product, select a default font from the list.

**[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.



Print each character with a proportional pitch.



Print all characters with a fixed pitch.

#### [Zero Slash]

Set whether to print the number zero (0) with or without a slash (/).



Print zero with a slash.



Print zero without a slash.

#### [Format Save]

Set whether to save the user format data registered at printing in the product.



Save the user format data registered at printing in the product.



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.

#### [STCL]

To use STCL as a printer command, set the following items:

#### [Command Head]

Set the command head.

The setting items are as follows:

#### [Control Code]

Set the control code.

The options are as follows:

##### Auto

Perform the protocol detection automatically.

##### ESC|LF|NUL

Set the control code to ESC|LF|NUL.

##### 7B|7C|7D

Set the control code to 7B|7C|7D.

## Custom

Change the first to third byte codes.

### [1st Byte Code]

Set the first byte code.

You can change the code only if you have selected [Custom] in the [Control Code] menu.

The setting range is from 0 to 255.



- Each code must be set to different values.
- 

### [2nd Byte Code]

Set the second byte code.

You can change the code only if you have selected [Custom] in the [Control Code] menu.

The setting range is from 0 to 255.



- Each code must be set to different values.
- 

### [3rd Byte Code]

Set the third byte code.

You can change the code only if you have selected [Custom] in the [Control Code] menu.

The setting range is from 0 to 255.



- Each code must be set to different values.
- 

## [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 (/).



Print zero with a slash.



Print zero without a slash.

### [€]

Set the European currency symbol to the ASCII code.

The setting range is from 0 to FF (hexadecimal).

### [Code Page]

Select the code page to be used from the list.

### [Half-width Symbol]

Set whether to print symbols with half-width characters.

### [Rotation]

Set the page orientation for label printing.

The options are as follows:

#### 0 degree

Labels are printed in portrait orientation.

#### 90 degree

Labels are printed in landscape orientation.

### [Ignore Paper Size Command]

Set whether to ignore a paper size command in the print data.

### [300DPI Head Compatibility]

When you are using a product with 305 dpi resolution, enable or disable 300 dpi head compatibility.

When it is enabled, print data for 300 dpi resolution is printed at 305 dpi.

### [SDPL]

To use SDPL as a printer command, set the following items:



- The items below the [Prioritize] menu can be set only if you have selected [Settings] in the [Prioritize] menu.
- 

### [Control Code]

Set the control code.

The setting items are as follows:

### [Code Type]

Set the type of the control code.

The options are as follows:

- [Standard]
- [Alternate 1]
- [Alternate 2]
- [Custom]

**[SOH]**

Set the SOH code.

You can change the code only if you have selected [Custom] in the [Code Type] menu.

The setting range is from 0 to FF (hexadecimal).

---



- Each code must be set to different values.
- 

**[STX]**

Set the STX code.

You can change the code only if you have selected [Custom] in the [Code Type] menu.

The setting range is from 0 to FF (hexadecimal).

---



- Each code must be set to different values.
- 

**[CR]**

Set the CR code.

You can change the code only if you have selected [Custom] in the [Code Type] menu.

The setting range is from 0 to FF (hexadecimal).

---



- Each code must be set to different values.
- 

**[CNTBY]**

Set the CNTBY code.

You can change the code only if you have selected [Custom] in the [Code Type] menu.

The setting range is from 0 to FF (hexadecimal).

---



- Each code must be set to different values.
- 

**[Label Rotation]**

Set the page orientation for label printing.

The label size set in the product is used as a reference of rotation.

The options are as follows:

0 degree

Labels are printed in portrait orientation.

90 degree

Labels are printed in landscape orientation.

180 degree

Labels are printed in inverse-portrait orientation.

## 270 degree

Labels are printed in inverse-landscape orientation.

### [SOP Emulation]

Set the SOP emulation.

The options are as follows:

- [Disabled]
- [Prodigy Plus - 110]
- [Allegro - 220]
- [Prodigy - 250]
- [Auto]

### [Compatible Mode]

Set the compatible mode for SDPL.

The setting items are as follows:

#### [TTF]

Enable or disable TrueType font compatible mode.



Enable TrueType font compatible mode. The bold TrueType fonts are printed in smaller pitch.



Disable TrueType font compatible mode.

### [Graphics]

Set whether to allow the registration of graphic data even if a line feed code is omitted.

### [Compression]

Set whether to support graphic data created using unique compression formats.

### [Right-to-Left print]

Set the Right-to-Left printing function.

The options are as follows:

#### Disabled

All texts are printed from left to right.

#### Auto

When an Arabic font is detected, the Arabic text is printed from right to left.

**[Receive TimeOut]**

Set the time period that the product stays in the mode to receive binary data.

When the specified time period has passed, the product's binary reception mode ends, and the SDPL commands are scanned.

The setting range is from 0 (off) to 9,999 ms.

**[Blank Item Feed]**

Set whether to feed a label with nothing printed on it when the product receives label formatting commands that do not generate any printable image.

**[Prioritize]**

Select the settings to be prioritized for each setting item of the SDPL command. You can set whether to prioritize settings through the product or through commands.

When you select [Settings] for an item, the setting specified in the [SDPL] menu of the product will be used.

The setting items are as follows:

**[Format Attribute]**

Set whether to prioritize the settings through the product or through commands for the format attribute setting.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

**[Pause Mode]**

Set whether to prioritize the settings through the product or through commands for the pause mode setting.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

**[1 Byte Codepage]**

Set whether to prioritize the settings through the product or through commands for the 1 byte code page setting.

The options are as follows:

#### Commands

Prioritize the settings through commands.

#### Settings

Prioritize the settings through the product.

### **[SDPL Measure Unit]**

Set whether to prioritize the settings through the product or through commands for the measurement unit setting.

The options are as follows:

#### Commands

Prioritize the settings through commands.

#### Settings

Prioritize the settings through the product.

### **[Scalable Font Style]**

Set whether to prioritize the settings through the product or through commands for the scalable font style settings.

The options are as follows:

#### Commands

Prioritize the settings through commands.

#### Settings

Prioritize the settings through the product.

### **[Sensor Type]**

Set whether to prioritize the settings through the product or through commands for the sensor type setting.

The options are as follows:

#### Commands

Prioritize the settings through commands.

#### Settings

Prioritize the settings through the product.

### **[Feedback Character]**

Set whether to prioritize the settings through the product or through commands for the feedback character setting.

The options are as follows:

#### Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

**[SOH Commands]**

Set whether to prioritize the settings through the product or through commands for the SOH command settings.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

**[Module Selection]**

Set whether to prioritize the settings through the product or through commands for the module selection setting.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the product.

**Others**

The option selected in the [Printing] > [Advanced] > [Prioritize] menu is applied to the following settings and shown on the screen.

- [Darkness]
- [Factory Offset]
- [Speed]

**[Format Attribute]**

Set the format attribute.

You can change this setting if you have selected [Settings] in the [Prioritize] > [Format Attribute] menu.

The options are as follows:

- [XOR]
- [Transparent]
- [Opaque]
- [Inverse]

**[Pause Mode]**

Enable or disable the pause mode.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [Pause Mode] menu.

### [1 Byte Codepage]

Select the code page to be used for one-byte characters from the list.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [1 Byte Codepage] menu.

### [SDPL Measure Unit]

Set the measurement unit.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [SDPL Measure Unit] menu.

The options are as follows:

- ["] (inch)
- [Millimeter]

### [Scalable Font Style]

Set the style of the scalable fonts.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [Scalable Font Style] menu.

The setting items are as follows:

#### [Bold]

Set whether to use bold for the scalable fonts.

#### [Italic]

Set whether to use italics for the scalable fonts.

### [Feedback Character]

Enable or disable the <STX>a command.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [Feedback Character] menu.

### [SOH Commands]

Set the SOH commands.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [SOH Commands] menu.

The setting items are as follows:

#### [All Commands]

Enable or disable all SOH commands. Or, make it possible to do settings for each command.

The options are as follows:

##### Disabled

Disable all the SOH commands.

**Enabled**

Enable all the SOH commands.

**Custom**

You can enable or disable each type of SOH command.

**[SOH-B Command]**

Enable or disable the SOH-B command.

You can change this setting only if you have selected [Custom] in the [All Commands] menu.

**[SOH-C Command]**

Enable or disable the SOH-C command.

You can change this setting only if you have selected [Custom] in the [All Commands] menu.

**[Others]**

Enable or disable the SOH commands, except for the SOH-B and SOH-C commands.

You can change this setting only if you have selected [Custom] in the [All Commands] menu.

**[Module Selection]**

Select a location to save the settings of the product.

You can change this setting only if you have selected [Settings] in the [Prioritize] > [Module Selection] menu.

You can select from A, B, C (Assigned by <STX> X), D, F, G, H, I, J, X, Y, or Z.

**[SEPL]**

To use SEPL as a printer command, set the following items:

**[Home Reference]**

Adjust the print reference position by specifying the offset position in the horizontal and vertical directions.

The setting items are as follows:

**[Horz. Offset]**

Specify the offset position in the horizontal direction.

The setting range is from 0 to 400 dots.



- The length of 1 dot varies depending on the print resolution of the product.
    - 203 dpi : 1 dot = 0.125 mm (0.0049")
    - 305 dpi : 1 dot = 0.083 mm (0.0033")
  - You can change the units to dots, " (inches), or mm in the [System] > [Regional] > [Unit] menu.
-

### [Vert. Offset]

Specify the offset position in the vertical direction.

The setting range is from 0 to 400 dots.



- The length of 1 dot varies depending on the print resolution of the product.
    - 203 dpi : 1 dot = 0.125 mm (0.0049")
    - 305 dpi : 1 dot = 0.083 mm (0.0033")
  - 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 of rotation.

The options are as follows:

#### 0 degree

Labels are printed in portrait orientation.

#### 180 degree

Labels are printed in inverse-portrait orientation.

### [Memory Device]

Select the product's memory space in which to store forms, graphics and fonts.

The options are as follows:

#### Internal RAM

Use the product's internal RAM. The data will be lost if the product is powered off.

#### Internal FLASH

Use the product's internal ROM.

#### Rear USB

Use the USB connector on the back of the product.

#### Internal USB

Use the internal USB connector.



- 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.
- 

### [Sim. 300 DPI Head]

When you are using the product with 305 dpi resolution, enable or disable 300 dpi simulation mode.



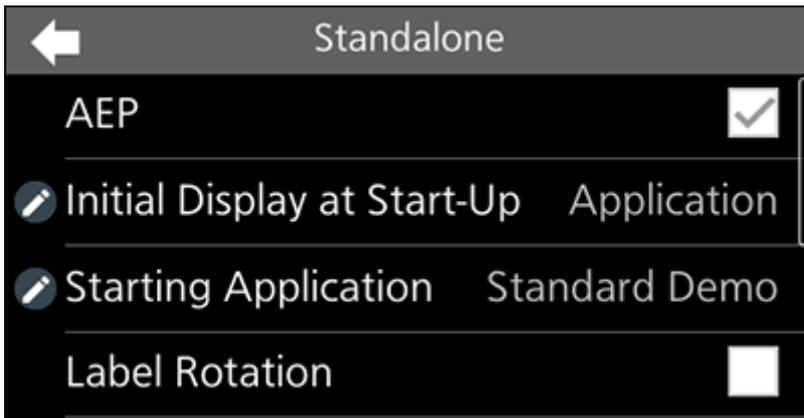
Enable 300 dpi simulation mode. The sizes and positions of objects such as lines, boxes and barcodes in the print data are automatically adjusted to the equivalent 300 dpi sizes and positions for printing.



Disable 300 dpi simulation mode.



## [Standalone] Menu



- Only [Home Key Confirmation] and [Delete Application] appear when the [AEP] menu is disabled.
- AEP does not support RFID.

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

## [AEP]

Enable or disable AEP (Application Enabled Printing) mode.

AEP mode allows you to use the product as a standalone printer by running applications within the product.

In AEP mode, you can use USB keyboards and barcode scanners to input data.



- Contact your SATO sales representative for more information about the use of AEP mode.
- A message prompting you to restart the product will appear on the Home screen if you have made any changes. In such a case, reboot the product to apply the settings.
- Online printing is not available when [AEP] is enabled. Disable [AEP] to perform online printing.
- The available menus and port specifications in the [Interface] > [Network] > [Settings] > [LAN] > [Ports] menu and the [Wi-Fi] > [Wi-Fi Setting] > [Ports] menu change depending on whether [AEP] is set to enabled or disabled.

## [Initial Display at Start-Up]

Select the screen to show at product startup in AEP mode.

Appears only if [AEP] menu is enabled.

The options are as follows:

- [Home Screen]
- [Application]



- This setting is linked to the [Printing] > [Advanced] > [Start Online] menu. When [Application] is selected, [Start Online] is enabled. When [Home Screen] is selected, [Start Online] is disabled.
- 

### [Starting Application]

Select the application to start at product startup in AEP mode.

Appears only if [AEP] menu is enabled.

### [Label Rotation]

Set whether to rotate the page orientation for label printing.

Appears only if [AEP] menu is enabled.



Rotates the page orientation 180 degrees.



Does not rotate the page orientation.

### [Divider Label]

Set whether to print a label with a slanted line.

Appears only if [AEP] menu is enabled.

### [Show On-Screen Keyboard]

Set whether to show the on-screen keyboard on the application screen.

Appears only if [AEP] menu is enabled.

The options are as follows:

#### When Required

The on-screen keyboard is shown.

#### Never

The on-screen keyboard is not shown.

### [Home Key Confirmation]

From the application screen in AEP mode, the Online screen, or the Offline screen, set whether to show a confirmation message or enable password input before returning to the Home screen.

The options are as follows:

### None

No confirmation message is shown and no password is required before returning to the Home screen.

### Home Key Confirmation Dialog

A confirmation message is shown before returning to the Home screen.

### Home Key Password Lock

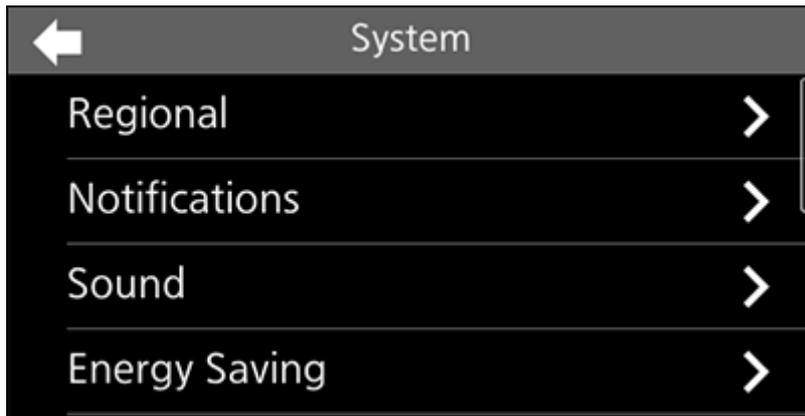
You need to enter the password set in the [Password] menu before returning to the Home screen.

## **[Delete Application]**

Delete the installed applications.



## [System] Menu



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

### [Regional]

Set the display language, time zone, calendar (option), 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.

Select the external keyboard layout from Western European languages, Eastern European languages, Japanese, Chinese, and Korean.



- 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.

### [On-Screen Keyboard]

Set the language for the on-screen keyboard.

### [Unit]

Set the unit of length for indication.

The options are as follows:

- [dot]
- ["'] (inch)
- [mm]

### [Time]

Set the time.

You can set the time only if you have installed the optional RTC kit and the NTP function is disabled.

1. Set the current time by tapping  / , and then tap .
2. On the confirmation message, tap  to cancel, or tap  to confirm the setting.

### [Date]

Set the date.

You can set the date only if you have installed the optional RTC kit and the NTP function is disabled.

1. Set the current date by tapping  / , and then tap .
2. On the confirmation message, tap  to cancel, or tap  to confirm the setting.

### [Time Zone]

Set the time zone.

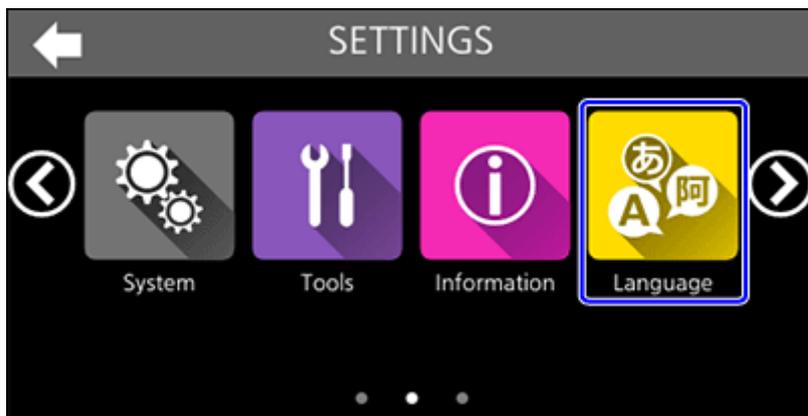
First select the region from the map.

Then select the city from the list.

### [Display Language Icon]

Set whether to display the [Language] icon on the [SETTINGS] menu.

By enabling this function, 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.

#### [Cleaning Interval]

Set the notification interval about when the print head needs to be cleaned.

You can change the setting only if you enabled the [Clean Printhead] menu.

The product shows the print distance as a setting value. The setting range is from 10 to 1,000 m.

#### [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.

#### [Printhead Interval]

Set the notification interval about when the print head needs to be replaced.

You can change the setting only if you enabled the [Change Printhead] menu.

The product shows the print distance as a setting value. The setting range is from 10 to 100 km.

### **[Printhead Count]**

Shows the current print distance.

### **[Change Cutter]**

Notify when the cutter unit needs to be replaced.

The setting items are as follows:

### **[Change Cutter]**

Enable or disable the notification function about when the cutter unit needs to be replaced.

### **[Cutter Life]**

Set the notification interval about when the cutter unit needs to be replaced.

You can change the setting only if you enabled the [Change Cutter] menu.

The product shows the cutter count as the setting value. The setting range is from 10,000 to 1,000,000.

### **[Cutter Count]**

Shows the current number of cuts by the cutter.

### **[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.

### **[Platen Interval]**

Set the notification interval about when the platen roller needs to be replaced.

You can change the setting only if you enabled the [Change Platen] menu.

The product shows the fed distance as the setting 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 sounds and operating sounds of the product.

The setting items are as follows:

### **[Volume]**

Set the volume.

Does not appear while a Bluetooth device, such as a headset, is connected.

The setting range is from 0 to 8.

0 is the lowest and 8 is the highest.

If you set the volume to 0, it mutes the sound.



- You can set this item from the panel that is displayed by swiping the screen as well.
- 

### [Bluetooth Volume]

Set the volume.

Appears while a Bluetooth device, such as a headset, is connected.

The setting range is from 0 to 15.

0 is the lowest and 15 is the highest.

If you set the volume to 0, it mutes the sound.



- You can set this item from the panel that is displayed by swiping the screen as well.
- 

### [Touch/Key Sound]

Set the type of sounds when the touch panel and  (Power/Home) button are operated.

The options are as follows:

None

Mute key sounds.

Sound1

Sound2

Sound3

### [Energy Saving]

The setting item is as follows:

#### [Auto Power Off]

Set the period before the product powers off automatically when no operation is performed for a certain period of time.

The setting range is from 0 to 999 minutes.



- The Auto Power Off function is disabled if you set it to 0.
- 

Conditions Not to Transit to the Auto Power-Off Mode

- While the Home screen is shown or during Settings mode
- When the temperature in the product exceeds the tolerance range (Error 1022)
- While the product receives the print data
- While the product is executing package update

## [LCD Brightness]

Set the brightness of the screen.

The setting range is from 1 to 10.

1 is the darkest and 10 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.
  - You can set this item from the panel that is displayed by swiping the screen as well.
- 

## [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.



- Shows the total print count from the time the product is turned on until it is off. When you turn off the product, the count is reset to [0].
- 

## [Password]

The setting items are as follows:

### [Password Enable]

Enable or disable the password setting.

If you have enabled the password input, you must enter the password set in the [Password] menu before the [SETTINGS] menu will open.



- The default password is 0310. You can change the password in [Password] > [Change Password] > [level1].
- 

### [Password Required After]

Set the period of time until password is required to enter the Settings mode again after once logging in.

If you set it to 0, a password is required every time you enter the Settings mode or you select a Settings menu item.

The setting range is from 0 to 99 minutes.



- The login status is maintained while the Settings mode or Home screen is displayed. If you switch to the Online/Offline screen, you are logged out regardless of the [Password Required After] setting.
-

### [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] menu 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.



- The password used for installing a pkg file can be any passwords set in the [System] > [Password].

Contact your SATO reseller or technical support for more information of the pkg file.

---

### [NFC Security]

Set whether to show the confirmation message or enable the password input before settings are written to the product from an Android device with the NFC interface.

To use the NFC Security function, the settings must be written from the Android device while the product is powered off. The confirmation message or password input screen is shown when the product is powered on.

The options are as follows:

#### None

No confirmation message is shown and no password is required before the settings are written to the product.

#### Confirm

The confirmation message is shown before the settings are written to the product.

#### Password

You need to enter the password set in the [Password] menu before the settings are written to the product.

### [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

This is the setting item 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.

### rfid

This is the setting item for factory.

Appears only for the RFID models.

Strictly for SATO authorized service personnel use.



- Passwords other than [level1] are exclusively for factory and maintenance personnel. You cannot change these passwords.
- 

## [Start on AC]

Set whether to power on/off the product by powering on/off the main power source.



Power on/off the product by powering on/off the main power source.



Power on/off the product by pressing the  (Power/Home) button on the product.



- Do not repeatedly power on/off the product.
  - If you power the main power source off and then on again quickly, the product may not be powered on because it is still in the powering off process. In such a case, press the  (Power/Home) button to power on the product.
  - 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 power cord 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.
- 

## [Compatible]

Set the compatible mode.

The setting items are as follows:

**[SBPL]**

Set the compatible mode 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.



Allow odd digits and print the barcode with zero-filling.



Do not allow odd digits. A command error occurs and the data will not be printed.

**[Kanji Command]**

Set the product behavior when the received data includes the Kanji command <K5>, <K6>, or <K7>.



Change the Kanji commands <K5>, <K6>, and <K7> in the received data to the proper commands, and then print.

- <K5>: 16 x 16 dots Kanji in horizontal line with one-byte character
- <K6>: 24 x 24 dots Kanji in horizontal line with one-byte character
- <K7>: 22 x 22 dots Kanji in horizontal line



Do not change the Kanji commands <K5>, <K6>, or <K7> in the received data. The product behavior when it receives these commands is as follows:

- <K5>: Print with 40 x 40 dots Kanji in horizontal line.
- <K6>: A command error occurs and barcode is not printed.
- <K7>: A command error occurs and barcode is not printed.

**[Call Font/Logo]**

Set how to process the character code specified in recall font & logo <RF> command.



Character codes are processed in little-endian format.



Character codes are processed in big-endian format.

### [OCR Font]

Set whether to print old OCR-B font characters.



Print using OCR-B font for old characters.



Print using OCR-B font for new characters.

### [Jornal Font]

Set whether to use X21 font for journal printing.



Use X21 font.



Use S font.

### [Character pitch]

Set whether the parameter specified by the character pitch <P> command is enabled until the next specification is made.



The specified parameter is enabled until the next specification is made.



The specified parameter is enabled in the field.

### [Volatilize Parameters]

Set whether to return the setting values specified by the following commands to their current values when the product's power is turned off.

- Print mode <PM>
- Print speed <CS>
- Print darkness <#E>
- Base reference point <A3> (without (+/-) sign)
- Sensor type <IG>
- Print method <PH>
- Paper specification <YE>



The set values are returned to their current setting values when the product's power is turned off.



The set values specified by commands are retained even when the product's power is turned off.

### [Chinese character]

Set whether to allow use of the print Chinese command.

The print Chinese commands are as follows:

- 24 x 24 dots, print Chinese horizontal writing <C2>
- 24 x 24 dots, print Chinese vertical writing <c2>
- 24 x 24 dots, print Chinese horizontal writing using both two-byte and one-byte characters <C9>
- 24 x 24 dots, print Chinese vertical writing using both two-byte and one-byte characters <c9>



- To use the print Chinese command, you need to set the kanji set and character codes in advance. Set [Kanji Set] and [Character Code] in the [Applications] > [SBPL] > [Font Settings] > [Kanji] menu, or include the kanji code <KC> command and the kanji set <KS> command in the print data.

### [Human Readable Overwrite]

When you are printing the human readable information for barcodes over a graphic, set whether to not leave a white background for the human readable information and just print over the graphic.



Print human readable information to cover graphic.



Print human readable information so each character has white background.

### [Obsolete Command Error]

Set whether to finish processing a command without issuing a command error if the product receives a command it does not support.



Finish processing command without doing anything.



Issue a command error.

### [Media Specification]

Set the media specifications.

The timing at which operation stops after the product detects the paper end changes depending on the media specifications.

The options are as follows:

#### Adhesive Label

Stops while the last sheet of media remains on the platen roller.

### non-Adhesive Tag

Stops after the last sheet of media is ejected.

### [Option Wait Time Command]

Set whether to apply parameters specified by option waiting time <TW> command for eject cut time in cut & print mode and partial cutter mode.



- You can set the eject cut time in the [Printing] > [Eject Cut] menu too.
- The setting range for the parameters of the option waiting time <TW> command are 000, or 005 to 200 (in units of 100 ms), but the setting range for the eject cut time is 1 to 5 seconds (in units of 1 second), so the parameters are converted as follows:
  - 000: No eject cut
  - 005 to 014: 1 second
  - 015 to 024: 2 seconds
  - 025 to 034: 3 seconds
  - 035 to 044: 4 seconds
  - 045 to 200: 5 seconds

---

### [BT Command Matrix2of5]

Set the type of barcode to register when Matrix2of5 is specified by the barcode ratio registration <BT> command.

On this product, Matrix2of5 is registered regardless of whether this setting is enabled/disabled.

### [X20 Font Compatible]

Set whether to make it possible to select proportional pitch for X20 fonts. This setting also allows you to switch compatibility with old models when proportional pitch is selected for XU fonts.



You can select fixed pitch or proportional pitch for X20 fonts. Also, when proportional pitch is selected for XU fonts, the character widths are the same as with old models.



Fixed pitch is used for X20 fonts. Also, when proportional pitch is selected for XU fonts, the character widths are different from the old models.

### [Partial Copy]

Set whether the sequential numbering is reflected to the copy destination and printed when sequential number <F> command is included in the copy area of the partial copy <WD> command.



Sequential numbering is reflected to copy destination and then printed.



Print results are the same in copy source and copy destination.

### [Printable Area]

Enable or disable the compatible mode in relation to printable area.



Enable compatible mode.

- The print area is the landscape label size specified by the media size <A1> command plus the correction value.
- When data that exceeds the printable area is being printed, printing is done up to the maximum print areas for portrait and landscape.
- If the final part of the barcode extends out of the print area, the barcode and human readable information inside the print area are not printed.



Disable compatible mode.

- The print area is the landscape label size as specified by the media size <A1> command.
- When data that exceeds the printable area is being printed, printing may not be done up to the maximum print areas for portrait and landscape.
- If the final part of the barcode extends out of the print area, the barcode and human readable information inside the print area are printed.



- Specify the media size <A1> command only one time in a single item. If you set it multiple times in a single item, you may not get correct print results.
- 

### [Network]

Set the compatible mode for LAN.

The setting item is as follows:

### [Socket Cancel]

Set whether to cancel any other connection requests when the product has already been connected by the socket.

### [Wi-Fi]

Set the compatible mode for WLAN.

Appears only when the optional wireless LAN/Bluetooth kit is installed.

The setting item is as follows:

### [Wi-Fi Socket Cancel]

Set whether to cancel any other connection requests when the product has already been connected by the socket.

### [USB]

Set the compatible mode for USB.

The setting item is as follows:

### [Device ID]

Set whether to return the device ID for the old product.

The options are as follows:

- [Disabled]
- [L'espritV/CT4i ID]
- [ETER400/CT4i ID]



- This setting supports only compatibility of device IDs. Compatibility with commands sent by a printer driver for an old product is not supported.
  - Regarding compatibility with CT4i, whether or not serial numbers are returned varies depending on the selection. If you select [L'espritV/CT4i ID], serial numbers are returned with the device ID. If you select [ETER400/CT4i ID], serial numbers are not returned.
- 

### [RFID]

Enable or disable the compatible mode for RFID.

Appears only if you have set [SBPL] in the [Applications] > [Protocol] menu on RFID models.

### [RS-232C]

Set the compatible mode for RS-232C.

This appears only if the optional RS-232C kit is installed.

The setting item is as follows:

### [ENQ Reply]

Set the status returned for STATUS3 when a receive buffer full error occurs.



Returns "Buffer over (a)".



Returns "Other error (k)".

### [Theme]

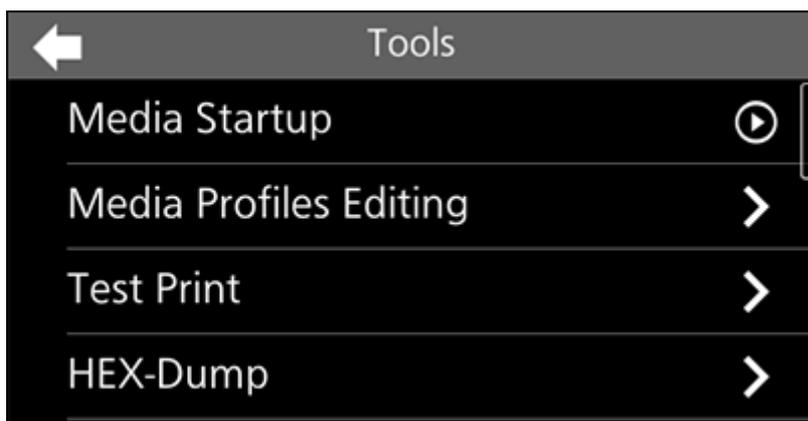
Set the theme of the display.

The options are as follows:

- [Soft Gray]
- [Dark]



## [Tools] Menu



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

### [Media Startup]

You can do batch settings for print settings that are appropriate for the type of media you are using.

Tap [Media Startup] and do the settings according to the on-screen instructions. In the final screen, tap [Apply] to apply the settings to the product.

The items that can be set are as follows: The results of executing Media Startup are reflected in each of the setting items.

- [Printing] > [Media Type]
- [Printing] > [Printing Mode]
- [Printing] > [Speed]
- [Printing] > [Sensor Type]
- [Printing] > [Darkness]
- Setting items under [Printing] > [Advanced] > [Calibrate]
- Setting items under [Printing] > [Advanced] > [Label Waste Prevention]
- [Interface] > [RFID] > [RFID Tag Model] > [Load] (RFID models only)



- To cancel the settings, press the  (Power/Home) button while you are doing the settings, or tap [Cancel] in the final screen.

### [Media Profiles Editing]

Print settings can be registered as media profiles for each type of media so they can be easily accessed from the Home screen.

The setting items are as follows:

### [Media Profiles Registration]

Register print settings as media profiles for each type of media. You can register a maximum of 5 media profiles.

The setting items that can be registered to media profiles are as follows:

- [Printing] > [Media Type]
- [Printing] > [Printing Mode]
- [Printing] > [Speed]
- [Printing] > [Sensor Type]
- [Printing] > [Darkness]
- Setting items under [Printing] > [Advanced] > [Calibrate]
- Setting items under [Printing] > [Advanced] > [Label Waste Prevention]
- [Interface] > [RFID] > [RFID Tag Model] > [Load] (RFID models only)

To register a new profile, tap the items shown as [Non-registered]. To edit a registered media profile, tap the items that show that profile's name. Do the settings according to the on-screen instructions. Tap [Register] in the final confirmation screen to register the media profile.

An icon is added to the Home screen for the media profile that was registered. Tap the icon to apply the settings to the product.



- To cancel the settings, press the  (Power/Home) button while you are doing the settings, or tap [Cancel] in the final screen.
  - If values that cannot be applied are included in the product settings at the time you are trying to apply a media profile, those values are not reflected.
- 

### [Delete Media Profiles]

Delete a registered media profile.

Tap the media profile to delete, and then tap  in the confirmation message.

Deleting a media profile also deletes the icon for the media profile that is displayed on the Home screen.

### [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. Tap  to start the test print. Tap  to pause the print.

To stop the test print, first pause the print and then tap .

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 varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting Range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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 tear-off position/cut position/dispense stop position.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting Range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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.

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. Tap  to start the test print. Tap  to pause printing.

To stop the test print, pause printing, and then tap .

The setting items are as follows:

Category

Select the category of the list to print.

The options are as follows:

- [All]
- [Information]
- [Printing]
- [Interface]
- [Applications]
- [System]

Label Width

Shows the necessary media width of the test print.

The necessary media width is 50.8 mm (2") for [Small].

Label Length

Set the length of one piece of the media used for the test print.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	400 to 1,600 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	600 to 2,400 dots

Pitch

Set the print position in the vertical direction.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots

Resolution	Setting range
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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 tear-off position/cut position/dispense stop position.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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.

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 product setting information with a QR code.

1. Check and set the items as listed on the [Configure QR] menu.
2. Tap  to start the test print. Tap  to pause printing.

To stop the test print, pause printing, and then tap .

The setting items are as follows:

#### Category

Select the category of the list to print.

The options are as follows:

- [All]
- [Information]
- [Printing]
- [Interface]
- [Applications]
- [System]

#### Label Width

Shows the necessary media width of the test print.

The necessary media width is 50.8 mm (2") for [Small].

#### Label Length

Set the length of one piece of the media used for the test print.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	400 to 1,600 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	600 to 2,400 dots

#### Pitch

Set the print position in the vertical direction.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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 tear-off position/cut position/dispense stop position.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots

Resolution	Setting range
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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.

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.

1. Check and set the items as listed on the [Paper Sensor] menu.
2. Tap  to start the test print. Tap  to pause printing.

To stop the test print, pause printing, and then tap .

The setting items are as follows:

#### Label Width

Shows the necessary media width of the test print.

The necessary media width is 50.8 mm (2") for [Small].

#### Label Length

Set the length of one piece of the media used for the test print.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	400 to 1,600 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	600 to 2,400 dots

### Pitch

Set the print position in the vertical direction.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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 tear-off position/cut position/dispense stop position.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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.

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]

Print the BD address.

1. Check and set the items as listed on the [BD Address] menu.
2. Tap  to start the test print. Tap  to pause printing.

To stop the test print, pause printing, and then tap .

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 varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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 tear-off position/cut position/dispense stop position.

The setting range varies depending on the print resolution of the product.

The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 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.

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]

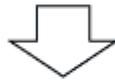
Enable or disable the Hex Dump mode.

If you enable [Hex Dump Mode], the product prints the received data and at the same time creates a file of the received data inside "hexdump/".

If you return the setting to disabled, you can check the file on the screen.



- 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 files created inside "hexdump/" of the product are as follows:

**BT00xx.bin**

Received data through Bluetooth.

**LAN00xx.bin**

Received data through LAN.

**NFC00xx.bin**

Received data through NFC.

**PIPE00xx.bin**

Received data through pipe.

**SCI00xx.bin**

Received data through RS-232C.

**USB00xx.bin**

Received data through USB.

**WIFI00xx.bin**

Received data through wireless LAN.

- Even if you enable [Hex Dump Mode], it is disabled when you reboot the product.

### [Buffer Dump]

Save the receive buffer data to the product.

You can use this if you have disabled the [Hex Dump Mode] menu.

Tap [START] on the startup screen to save the data to the product.

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.

#### **LAN0001.bin**

The contents of the receive buffer for LAN.

#### **NFC0001.bin**

The contents of the receive buffer for NFC.

#### **PIPE0001.bin**

The contents of the receive buffer for pipe.

#### **SCI0001.bin**

The contents of the receive buffer for RS-232C.

#### **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.
- 

### [Log Files]

The setting items are as follows:

#### [Copy]

Copy the log files of the product to the USB memory.

Available only if you have connected the USB memory to the USB connector (Type A) on the back of 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 procedure to copy the log files is as follows:

1. Tap the file type from the list to copy.

- **buff/**  
The buffer data saved after you perform the [Buffer Dump].
  - **hexdump/**  
The received data created through [Hex Dump Mode].
2. Tap the file to copy. The selected file name is highlighted.
  3. Tap  to copy the selected file to the USB memory.



- When [Hex Dump Mode] is enabled, it may take some time before the files appear.
- 

### [Remove]

Delete the log files of the product.

The procedure to delete the log files is as follows:

1. Tap the file type from the list to delete.
  - **buff/**  
The buffer data saved after you perform the [Buffer Dump].
  - **hexdump/**  
The received data created through [Hex Dump Mode].
2. Tap the file to delete. The selected file name is highlighted.
3. Tap  to delete the selected file.



- When [Hex Dump Mode] is 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. Tap the file type from the list to print.
  - **buff/**  
The buffer data saved after you perform the [Buffer Dump].
  - **hexdump/**  
The received data created through [Hex Dump Mode].
2. Tap the file to print. The Offline screen appears.
3. Tap [ONLINE] to start printing.



- Printing the contents of the file may use a lot of media.
- 



- When [Hex Dump Mode] is enabled, it may take some time before the files appear.
- 

## [Reset]

Initialize the settings or data of the product.

The setting items are as follows:

## [Data]

Initialize the data saved in the product.

The data that is initialized is the fonts and graphics registered in the product.

When you select [Data], a screen to confirm initialization appears.

Tap  to execute the initialization. When the initialization is complete, the product restarts.



- Normally, it is not necessary to perform the initialization. Doing so could change the print conditions.
- 

## [Data & Settings]

Initialize the product's data and setting values.

The data that is initialized is 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, 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 data and setting values for the interface settings.

### Printing

Initialize the data and setting values in the [Printing] menu.

When you select which items to initialize, a screen to confirm initialization appears.

Tap  to execute the initialization.

When the initialization is complete, the product restarts.

## [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, 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.

When you select which items to initialize, a screen to confirm initialization appears.

Tap  to execute the initialization.

Restart the product after the initialization.

## [Profiles]

Manage the customized profile of the product settings.

The current profile name is shown in the [Load] and [Save] menus.

The setting items are as follows:

### [Delete]

Delete a registered profile.

Not available if no profile is registered.

The procedure is as follows:

1. Tap the profile to be deleted.
2. Tap  on the message.  
The profile name is deleted from the list.

### [Load]

Import a registered profile.

Not available if no profile is registered.

The procedure is as follows:

1. Tap the profile to be loaded.
2. Tap  on the message.

### [Save]

Overwrite and save the current product settings to a registered profile.

Not available if no profile is registered.

The screen shows a list of the profiles registered in the product.

The procedure is as follows:

1. Tap the profile to be overwritten.
2. Tap  on the message.

### [Save as]

Register the current product settings as a new profile.

Enter a name for the profile to be registered as.

You can enter a maximum of 32 characters. You can use alphabet (capital and small letters), numbers and symbols.

Tap  on the on-screen keyboard to confirm.

The new profile name appears on the [Save], [Load] and [Start with] lists.

### [Start with]

Select the profile to be loaded at product startup.

Not available if no profile is registered.

The procedure is as follows:

1. Tap the profile to be loaded at product startup.
2. Tap  on the message.

### [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.

This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

The options are as follows:

### SiteSurveyDisp.

Shows the wave strength for each access point.

### SiteSurveyPrint

Prints the wave strength for each access point.

## [Install Certificates]

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

Available only if you have connected the USB memory to the USB connector (Type A) on the back of 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 setting item is 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.

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. Insert the USB memory into the USB connector (Type A) on the back of the product.
  3. Go to the [SETTINGS] > [Tools] > [Install Certificates] menu.
  4. Tap the certificate you want to install. Refer to the item description above.
  5. Tap 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.

The procedure to delete the certificates and PAC files is as follows:

1. Go to the [SETTINGS] > [Tools] > [Delete Certificates] menu.
2. Tap the certificate you want to delete. Refer to the item description above.
3. Tap  on the message.

## [Clone]

Copy the current product settings and installed data to a USB memory.

Available only if you have connected the USB memory to the USB connector (Type A) on the back of 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.
-

This function is used for taking the settings of an existing product and installing them in a new product, or when you are setting up multiple products with the same settings.

The options are as follows:

#### Excl. LAN/Wi-Fi/IP

Copy the product settings and data, excluding network information, to the USB memory. Select this when you are setting up multiple products, which have been connected via a network, with the same product settings.

#### Incl. LAN/Wi-Fi

Copy the product settings and data, including network information (excluding the IP address), to the USB memory. Select this when you are setting up multiple products, which are to be connected to the same network, with the same product settings.

#### Incl. LAN/Wi-Fi/IP

Copy the product settings and data, including network information (including the IP address), to the USB memory. Select this to take the settings of a product, that is being replaced, and install them in a new product.



- The settings are saved in a .pkg file format. You cannot open it in a text editor to check or edit the data.
  - To apply the settings to a product, save the .pkg file in the root folder of a USB memory, and then insert it into the product.
- 

## [AutoClone Setting]

The auto-clone function automatically saves the product's settings and installed data, to the USB memory, whenever the settings are changed. Insert this USB memory into the intended product to recover the saved settings and data.

Use the USB connector (Type A) inside the product to execute this function (to save the settings and data). Use the USB connector (Type A) on the back of the product to recover the saved settings and data.



- We recommend a USB memory with a capacity of 4 GB or more.
  - The .pkg file that was created using this function cannot be copied to another USB memory and used.
- 

The setting items are as follows:

### [Enable]

Enable or disable the auto-clone function.

This can only be set when a USB memory, which has been formatted by using the [Format USB drive] menu is installed to the USB connector (Type A) inside the product.

### [Format USB drive]

Format the USB memory that is installed to the USB connector (Type A) inside the product so you can use the auto-clone function.

Not available when [AutoClone Setting] > [Enable] is enabled.



- 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.
  - Formatting a USB memory deletes all the data on the USB memory. Save any necessary data to a separate location in advance.
- 

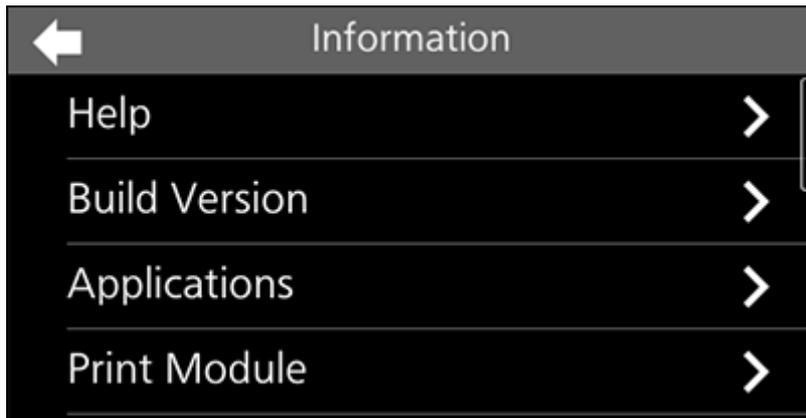
## [Startup Guide]

Enable or disable the startup guide.

When this is enabled, the startup guide appears when you power on the product.



## [Information] Menu



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

### [Help]

Shows the guidance video.

You can view the video for loading the media and ribbon, the cleaning method and replacement method of consumables.

The items 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:

#### Standard

Shows the video for loading the media roll (standard specifications).

#### Cutter

Shows the video for loading the media roll (cutter specifications).

#### Dispenser

Shows the video for loading the media roll (dispenser specifications).

### [Fanfold]

Shows the video for loading the fan-fold media.

The items are as follows:

#### Standard

Shows the video for loading the fan-fold media (standard specifications).

#### Cutter

Shows the video for loading the fan-fold media (cutter specifications).

### [Label Waste Prevention]

Shows the video for loading media when the Label Waste Prevention function is enabled.

The items are as follows:

### [Use Ribbon]

Shows the video for loading media when the Label Waste Prevention function is enabled for thermal transfer mode.

The items are as follows:

#### Standard

Shows the video for loading media when the Label Waste Prevention function is enabled (standard specifications).

#### Cutter

Shows the video for loading media when the Label Waste Prevention function is enabled (cutter specifications).

### [Direct Thermal]

Shows the video for loading media when the Label Waste Prevention function is enabled for direct thermal mode.

The items are as follows:

#### Standard

Shows the video for loading media when the Label Waste Prevention function is enabled (standard specifications).

#### Cutter

Shows the video for loading media when the Label Waste Prevention function is enabled (cutter specifications).

### [Install Ribbon]

Shows the video for loading the ribbon.

### [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:

##### Standard

Shows the video for replacing the media roll (standard specifications).

##### Cutter

Shows the video for replacing the media roll (cutter specifications).

##### Dispenser

Shows the video for replacing the media roll (dispenser specifications).

#### **[Fanfold]**

Shows the video for replacing the fan-fold media.

The items are as follows:

##### Standard

Shows the video for replacing fan-fold media (standard specifications).

##### Cutter

Shows the video for replacing fan-fold media (cutter specifications).

#### **[Replace Ribbon]**

Shows the video for replacing the ribbon.

#### **[Replace Head]**

Shows the video for replacing the print head.

#### **[Replace Platen]**

Shows the video for replacing the platen roller.

The items are as follows:

##### Standard

Shows the video for replacing the platen roller (standard specifications).

##### Linerless

Shows the video for replacing the platen roller (linerless specifications).

#### **[Cleaning]**

Shows the video for cleaning the product.

The items are as follows:

Standard

Shows the video for cleaning procedures (standard specifications).

Linerless

Shows the video for cleaning procedures (linerless specifications).

**[Build Version]**

Shows the product's version and other information.

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.

The setting items are as follows:

Press the [CLEAR] to clear the selected log data.



- This screen does not appear if there is no log data in the product.
- 

**[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 a pkg-file is installed that makes it impossible to do panel operations on the product.

## [Print Module]

Shows information related to the print module in the product.

The item is as follows:

### Main

Shows the Main firmware information.

## [Sensor Module]

Shows information related to the sensor module in the product.

The items are as follows:

### Boot

Shows the Boot firmware information.

### Main

Shows the Main firmware information.

## [FPGA Version]

Shows the FPGA version of the product.

## [Counters]

Shows information about the product's counter.



- Only SATO authorized service personnel are permitted to clear the counter.
- 

The setting items are as follows:

## [Head]

Shows information about the counter for the product's head.

The items are as follows:

### 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, 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.

### [Cutter]

Shows the current number of cuts.

### [LAN]

Shows the address of the LAN interface.

The items are as follows:

#### LAN IPv4 Address

Shows the IPv4 address of the LAN.

#### LAN IPv6 Address

Shows the IPv6 address of the LAN.

#### LAN MAC

Shows the MAC address of the LAN.

### [Wi-Fi]

Shows the address of the wireless LAN interface.

This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

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 when the optional wireless LAN/Bluetooth kit is installed and you are connected using Wi-Fi Direct.

### **[Wi-Fi Versions]**

Shows the version of the wireless LAN.

This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

### **[Bluetooth]**

Shows the information of the Bluetooth connection.

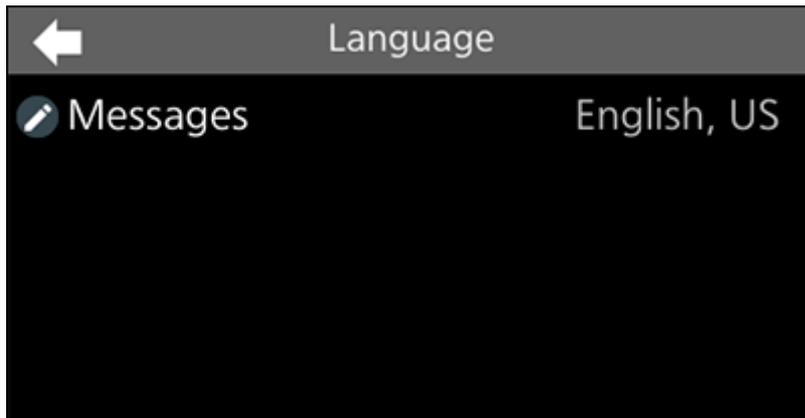
This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

### **[Regulatory]**

Shows information about authentication of the product.



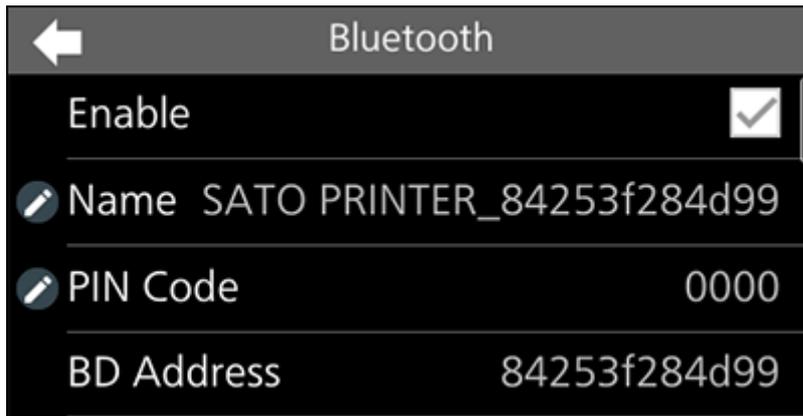
## [Language] Menu



Appears if the [System] > [Regional] > [Display Language Icon] menu is enabled.  
A shortcut to the [Messages] menu is displayed.



## [Bluetooth] Menu



This information is shown only when the optional wireless LAN/Bluetooth kit is installed.



- By disabling the [Enable] menu, only [Paired devices] in the [Pairing] menu is shown.

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

### [Enable]

Enable or disable the functions for Bluetooth.

### [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.

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 delete from the list.



- Only devices with an HFP, HSP, or HID Bluetooth profile appear in [Available devices]. For example, a headset, keyboard, or barcode scanner.
- 

### [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 performs 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 more 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 more than the PSW communication parameter setting value.

### [PSW]

Set the PSW communication parameter.

The setting range is 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.

## [Flow Control]

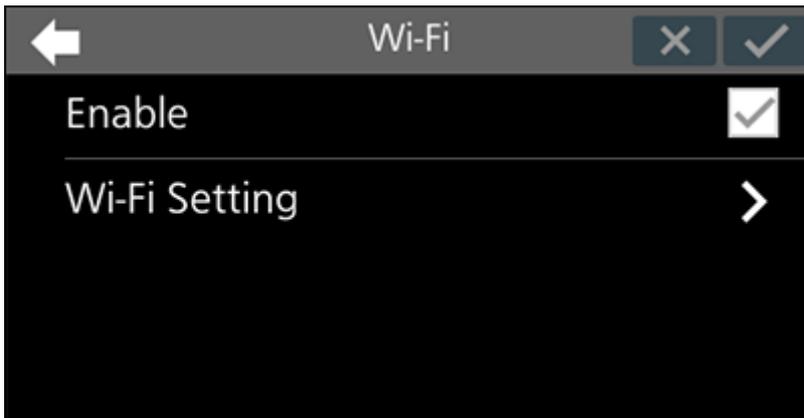
Set the communication protocol.

The options are as follows:

- [STATUS3]
- [STATUS4 MULTI]
- [NONE]



## [Wi-Fi] Menu



This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

- 
-  After finishing the settings, tap . After a message asking you whether to save the settings appears, tap .
  - Tap  to discard the changes. Tap  on the message to confirm whether you want to discard the changes.
- 

The following settings are available in the [Wi-Fi] menu:

### [Enable]

Enable or disable the Wi-Fi connection.

### [Wi-Fi Setting]

Set the wireless LAN.

Appears only when the [Enable] menu is enabled.

The setting items are as follows:

### [IPv4 (Wi-Fi)]

Configure IPv4 for Wi-Fi.



- After doing the settings, press the (Power/Home) button.

After a message asking you whether to save the settings appears, tap .

If there are any errors with the input information, a message asking you whether to discard changes appears. Tap to discard the changes. Tap to redo the settings.

The setting items are as follows:

### [Mode]

Select the IP address assignment method.

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

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]

Set and check the IP address.

Cannot be changed when [Wi-Fi Direct] is enabled.

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

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]

Set and check the subnet mask address.

Cannot be changed when [Wi-Fi Direct] is enabled.

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

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

You can set each group of the address from among 0, 128, 192, 224, 240, 248, 252, 254 and 255.

The setting range is as follows:

128.000.000.000 to 255.255.255.254

## [Gateway]

Set and check the default gateway address.

Cannot be changed when [Wi-Fi Direct] is enabled.

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

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

The setting range is as follows:

000.000.000.000 to 255.255.255.255



- The gateway address set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv4 (LAN)].
- 

## [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.
  - The DNS server address set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv4 (LAN)].
- 

## [IPv6 (Wi-Fi)]

Configure IPv6 for Wi-Fi.

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



- After doing the settings, press the  (Power/Home) button.

After a message asking you whether to save the settings appears, tap .

If there are any errors with the input information, a message asking you whether to discard changes appears. Tap  to discard the changes. Tap  to redo the settings.

---

The setting items are as follows:

## [Mode]

Select the IP address assignment method or disable IPv6.

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:

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

**[Prefix Length]**

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 to ffff:ffff:ffff:ffff:ffff:ffff:ffff



- The gateway address set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv6 (LAN)].
- 

**[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 to ffff:ffff:ffff:ffff:ffff:ffff:ffff



- You can register only one IP address for the DNS server for IPv6.
- The DNS server address set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv6 (LAN)].

## [Ports]

Set the TCP/IP port number.

If AEP mode is enabled, there are only two ports available for LAN and wireless LAN connections.

If AEP mode is enabled and the wireless LAN interface is being used, this menu becomes unavailable. Set the port in the [Interface] > [Network] > [Settings] > [LAN] > [Ports] menu.

### Roles of Port1 to Port3

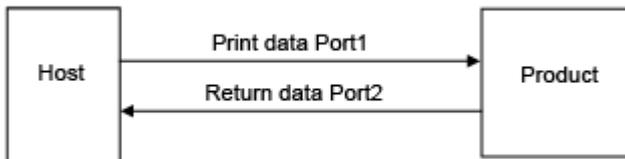
In the socket server function of TCP/IP, either of the following connection methods can be used.

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

#### Two-port connection

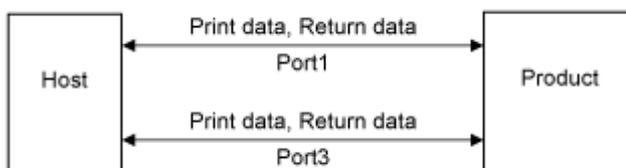
- If AEP mode is disabled (initial value)

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.



- If AEP mode is enabled

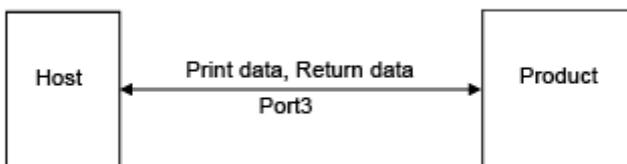
Port1 and Port3 can be used for both receiving print data and returning the product status. Port2 cannot be used.



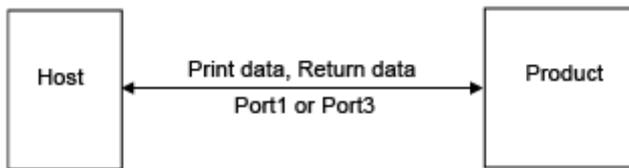
#### One-port connection

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 or STATUS5, Port1 or Port3 is used.



- AEP does not support STATUS3, STATUS4, or STATUS5.
- 

The setting items are as follows:

### [Port1]

Set the port number for Port1.

If AEP mode is disabled, and while in the two-port connection of STATUS4, this port is used for receiving print data. While in the one-port connection of STATUS3/STATUS5, this port is used for both receiving print data and returning the product status.

While in the two-port connection in AEP mode, this port can be used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- AEP does not support STATUS3, STATUS4, or STATUS5.
- 

### [Port2]

Set the port number for Port2.

While in the two-port connection of STATUS4, this port is used for returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- The setting is disabled if [AEP] is enabled.
- 

### [Port3]

Set the port number for Port3.

If AEP mode is disabled, and while in the one-port connection of STATUS3/STATUS4/STATUS5, this port is used for both receiving print data and returning the product status.

While in the two-port connection in AEP mode, this port can be used for both receiving print data and returning the product status.

The setting range is from 1 to 65535.



- Set different values for each port (1, 2, and 3).
  - Set a value other than 20, 21, 22, 53, 80, 123, 443, 465, 515, 546, 547, 587, 8080, or 8883. These values duplicate other port numbers, so that correct communications would be impossible.
- 



- You can change the return status format of Port3 to compatible mode by enabling [Legacy Status for Port 9100].
  - AEP does not support STATUS3, STATUS4, or STATUS5.
- 

### [Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS4]
- [STATUS4 ENQ]
- [STATUS3]
- [STATUS5]
- [NONE]

### [TCP Connection Queue]

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



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.



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



- When you have enabled the setting, be sure to use one port connection for STATUS3, STATUS4, and STATUS5. 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 compatible mode.

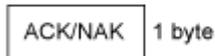
Does not appear if you have selected [NONE] in the [Flow Control] menu.

In compatible mode, the return status format of Port3 becomes as follows:

**STATUS3**

(Compatible mode)

ACK/NAK Reply

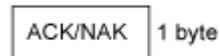


Status Reply

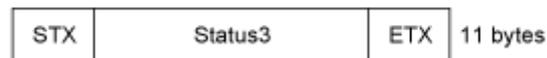


(Standard mode)

ACK/NAK Reply



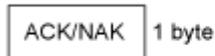
Status Reply



### STATUS4

(Compatible mode)

ACK/NAK Reply



Status Reply



(Standard mode)

ACK/NAK Reply



Status Reply



### STATUS5

(Compatible mode)

ACK/NAK Reply

No Reply

Status Reply



(Standard mode)

ACK/NAK Reply

No Reply

Status Reply

STX	Status5	ETX	22 bytes
-----	---------	-----	----------

### [BCC]

Enable or disable the BCC check function.

Available only if you have selected [STATUS5] in the [Flow Control] menu.

### [Delay Reply ENQ]

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

This can be set only if you have selected anything other than [STATUS4] in the [Flow Control] menu.

The setting range is from 0 to 9999 ms.



- Normally, keep this setting at the initial value.
- 

### [Status4 Cyclic Response]

Set the interval for the cyclic status response.

This can be set only if you have selected [STATUS4] in the [Flow Control] menu.

The setting range is from 100 to 999 ms.

### [Proxy (Wi-Fi)]

Set a proxy.

The setting items are as follows:



- The proxy set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [Proxy (LAN)].
- 

### [Enabled]

Enable or disable use of proxy.



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

### [Server]

Set the name or IP address of the proxy server.

Example: http://192.168.1.11



- Server should be set with a valid name or IP address.
  - Hold "." to input a colon (:).
-

**[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.
- 

**[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.

**[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.
- 

**[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.
- 

**[Wi-Fi Protected Setup(WPS)]**

Set the wireless LAN connection using the push button or PIN code method.



- Refer to the manual of the access point device for its operation.
  - Not available when [Wi-Fi Direct] is active.
- 

The setting items are as follows:

**[Button (PBC)]**

Set the wireless LAN connection using the push button method.

1. Tap [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.

**[PIN]**

Set the wireless LAN connection using the PIN code method.

1. Tap [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.

## [Wi-Fi Direct]

Set the Wi-Fi Direct function.

The Wi-Fi Direct function is enabled only if you have selected [Infrastructure] in the [Wi-Fi Connection Setting] > [Mode] menu. If you have changed the setting from [Ad-hoc] to [Infrastructure] in the [Wi-Fi Connection Setting] > [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 16 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). Tap the device name you want to connect.
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. Tap [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 the product is not connected to a Wi-Fi Direct network.
  - [Disconnect] is shown only if the product is 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.
- 

## [Wi-Fi Connection Setting]

Set the wireless LAN settings.

The setting items are as follows:

### [SSID]

Set the SSID.

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

Tap the name of the Wi-Fi network you want to connect.

To register a Wi-Fi network manually, tap  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).

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

#### [Mode]

Set the communication method of the wireless LAN.

The options are as follows:

- [Infrastructure]
- [Ad-hoc]

#### [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 of 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.

Available only 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 access point, 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 access point to 0.
- 

#### [Key #1] to [Key #4]

Set the WEP key #1 - key #4.

You can enter alphabet (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: 13 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.

Available 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 [Wi-Fi Connection Setting] > [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 inner method is set to [AUTO].
- If you have selected [PEAP] in the [EAP Mode] menu, the inner method is set to [MSCHAPv2].
- 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 only 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 only if you have selected anything other than [LEAP] in the [EAP Mode] menu.

#### [Private Key P/W]

Set the Private Key password.

Available 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.

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

#### [PAC Password]

Set the PAC password.

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

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

# 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 an Ethernet LAN or WLAN connection, users can remotely get information from the product or perform the product settings.



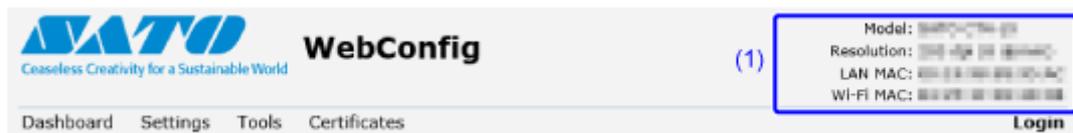
- You need the product's IP address to access the web configuration page. The product IP address can be checked in [SETTINGS] > [Information] > [LAN] or [Wi-Fi] menus.

### 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.

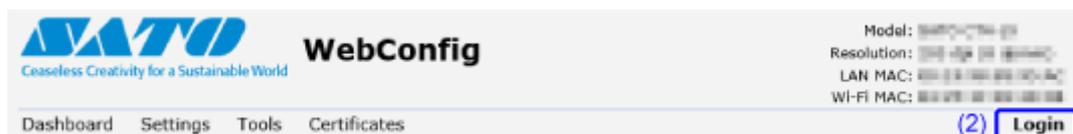
The web configuration page for the product appears. On the upper right (1) of each page, the model name, current resolution and MAC address are shown.



### 2. Log in to view the [Settings] and [Tools] pages.

You can view [Dashboard] and [Certificates] pages without logging in.

- Click [Login] (2).



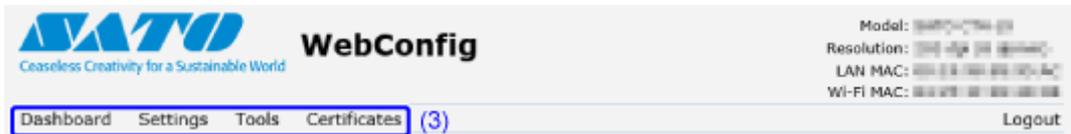
- b. Select [settings] for the user, enter the password, and click [Login].



A login dialog box titled "Login" with a close button (X) in the top right corner. It contains two input fields: "User:" with a dropdown menu showing "settings" and a downward arrow, and "Password:" with an empty text box. A "Login" button is located at the bottom right of the dialog.

The default user is [settings], and the default password is "0310".

- 3. Click on the page (3) you want to view.



## Dashboard

[Dashboard] is the default page for the web configuration page. Each section shows specific information or the current status of the product.



- You can view the [Dashboard] page without logging in.

### (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) [Network]

Shows the current IP address and MAC address of the active interface.

### (5) [System]

Shows the current firmware version, uptime, SNMP contact, name and location.

### (6) [Wi-Fi]

Shows the current Wi-Fi setting.



- 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.
-

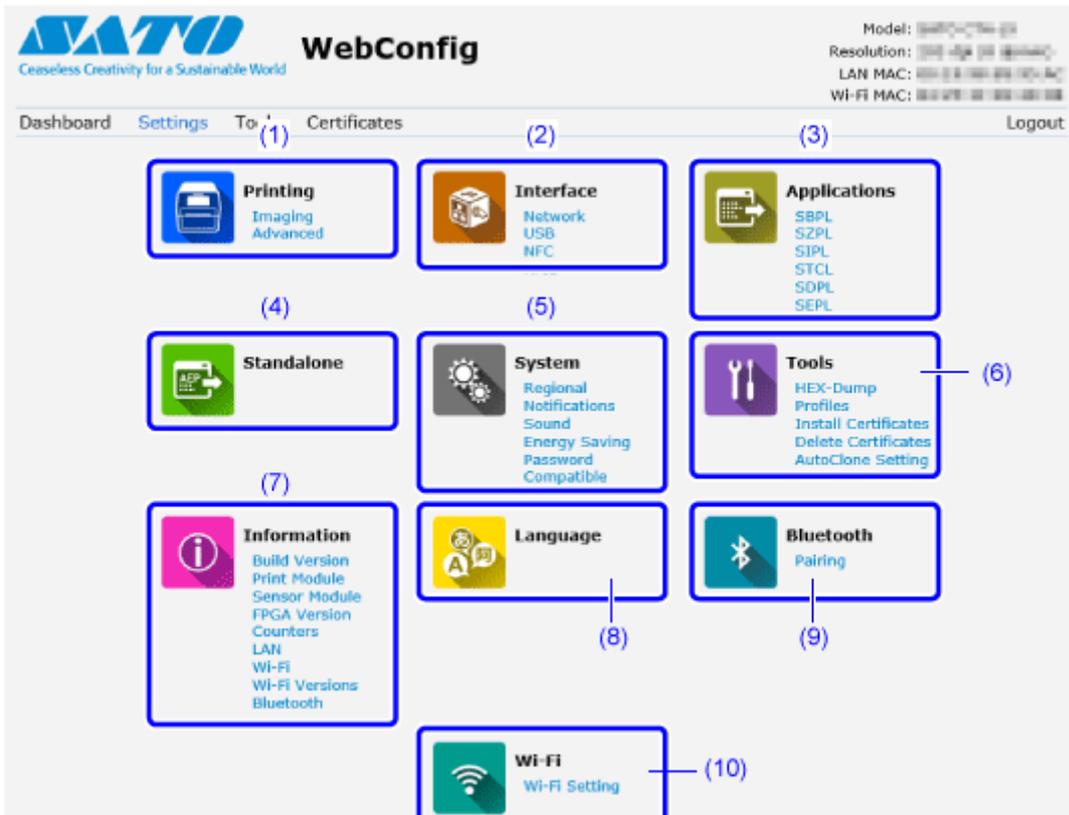
## Settings

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 user is [settings], and the default password is "0310".



(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) [Standalone]

You can do the settings equivalent to the [Standalone] menu in the Settings mode.

(5) [System]

You can do the settings equivalent to the [System] menu in the Settings mode.

(6) [Tools]

You can do the settings equivalent to the [Tools] menu in the Settings mode.

(7) [Information]

You can do the settings equivalent to the [Information] menu in the Settings mode.

## (8) [Language]

You can do the settings equivalent to the [Language] menu in the Settings mode.



- Appears if the [System] > [Regional] > [Display Language Icon] menu is enabled.

## (9) [Bluetooth]

You can do the settings equivalent to the [Bluetooth] menu in the Settings mode.



- This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

## (10) [Wi-Fi]

You can do the settings equivalent to the [Wi-Fi] menu in the Settings mode.



- This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

The screen below is the example of [Printing] page.



- If you have changed the RFID antenna position in the [Interface] > [RFID] > [Antenna Position] menu on the Web Configuration Page, restart the product. Just changing the setting values does not affect the position of the antenna.
- 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 user is [settings], and the default password is "0310".



### (1) [Upload]

You can do the setting equivalent to [Tools] > [Install Certificates] in the Settings mode.

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

Click [Browse] 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.



The screenshot shows the WebConfig interface with the following details:

- Logo:** SATO WebConfig, Ceaseless Creativity for a Sustainable World
- System Info:** Model: SATO F34-EX, Resolution: 1024x768, LAN MAC: 00:00:00:00:00:00, WI-FI MAC: 00:00:00:00:00:00
- Navigation:** Dashboard, Settings, Tools, Certificates, Logout
- Section:** Installed Certificates
- Header:** HTTPS (Pre-installed)
- Certificate Data:**

```
Certificate:
Data:
  Version: 3 (0x2)
  Serial Number:
    a0:0e:9d:f7:05:2e:c6:34
  Signature Algorithm: sha256WithRSAEncryption
  Issuer: C=SE, ST=Vastergotland, L=Gothenburg, O=SATO Techno Lab Europe AB
  Validity
    Not Before: Mar 24 08:31:09 2016 GMT
    Not After : Mar 24 08:31:09 2026 GMT
  Subject: C=SE, ST=Vastergotland, L=Gothenburg, O=SATO Techno Lab Europe AB
  Subject Public Key Info:
    Public Key Algorithm: rsaEncryption
    Public-Key: (2048 bit)
    Modulus:
      00:a4:00:01:c4:76:c0:b4:3d:2f:47:b9:e0:71:0b:
      c1:06:60:14:27:76:dd:7e:97:71:4f:f7:35:fc:1f:
```



- The client certificate that is a PFX (PKCS #12) file will not be shown.

---

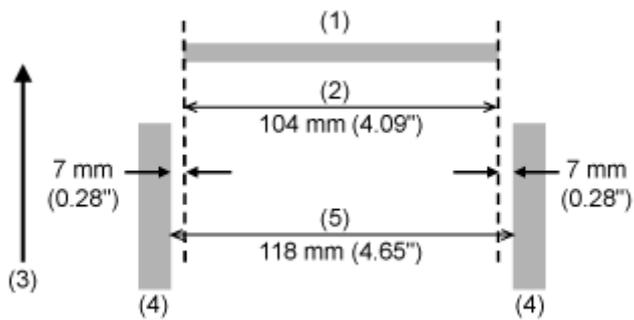
# Adjusting the Product

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## Printable Area

---

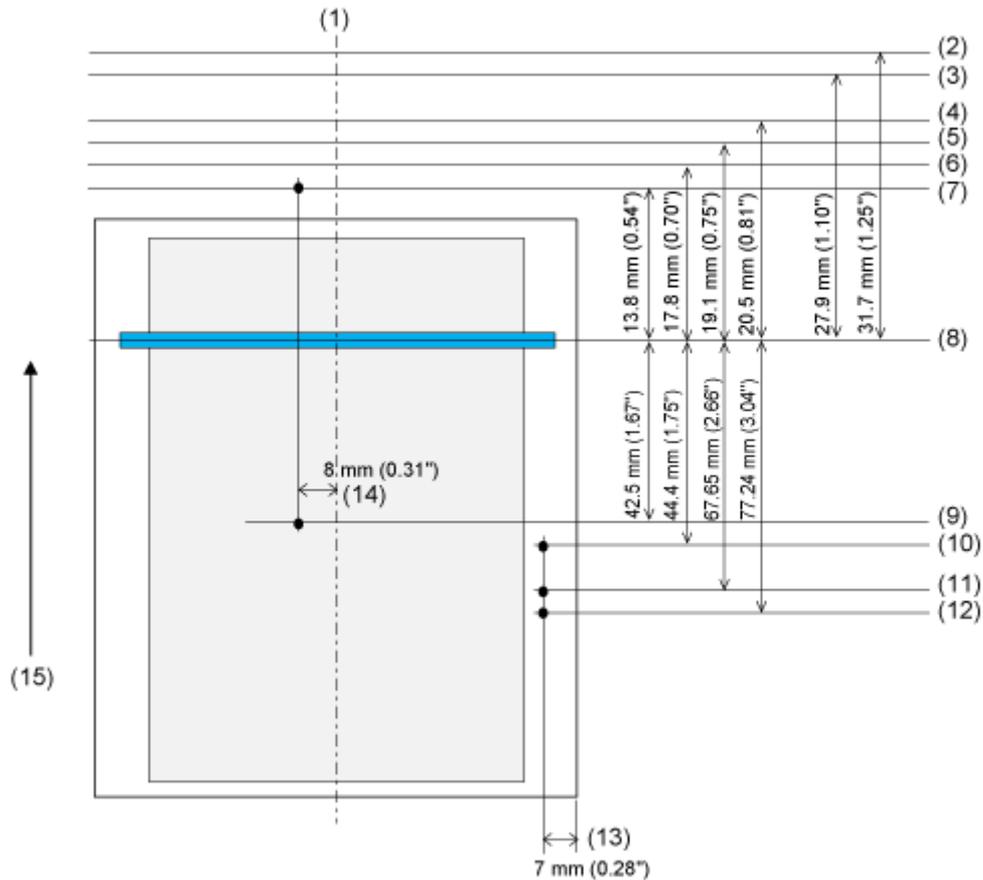
The printable area of the product is shown in the figure below.



- (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) Linerless cutter tear-off position
- (3) Cutter tear-off position
- (4) Cutter/linerless cutter position
- (5) Dispensing stop position
- (6) Tear-off position
- (7) Label top sensor position
- (8) Print head position
- (9) Gap sensor position
- (10) I-mark sensor position
- (11) I-mark sensor position (RFID models)
- (12) Gap sensor position (RFID models)
- (13) I-mark sensor position (from edge of label)
- (14) Gap sensor/label top sensor position (from center position)

(15) Feed direction

## Flow of Printing Operations

---

### Printing Operations

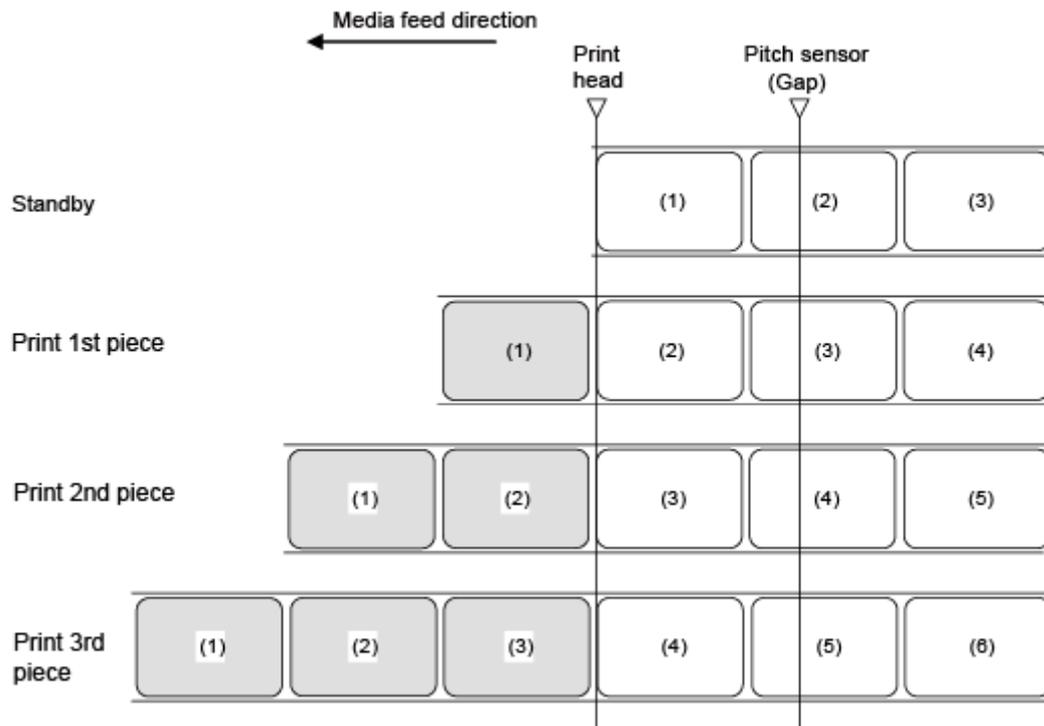
The product's printing operations vary depending on the combination of the following settings.

- Print mode
- Enabled/disabled media sensor
- Backfeed operation
- Enabled/disabled head check

## Operations in Continuous Mode

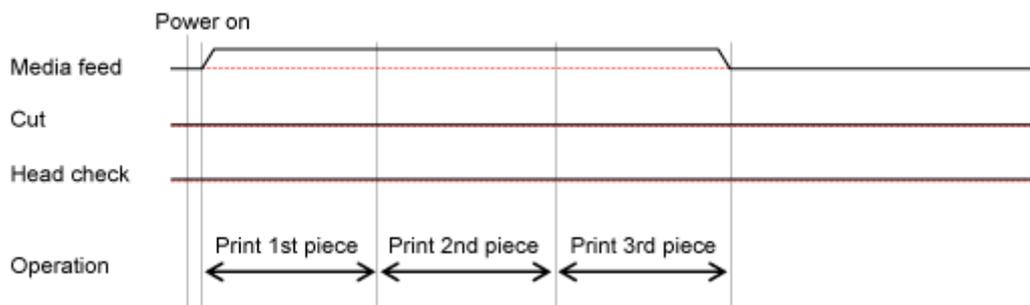
### Continuous Mode (Head Check Disabled)

#### Operation



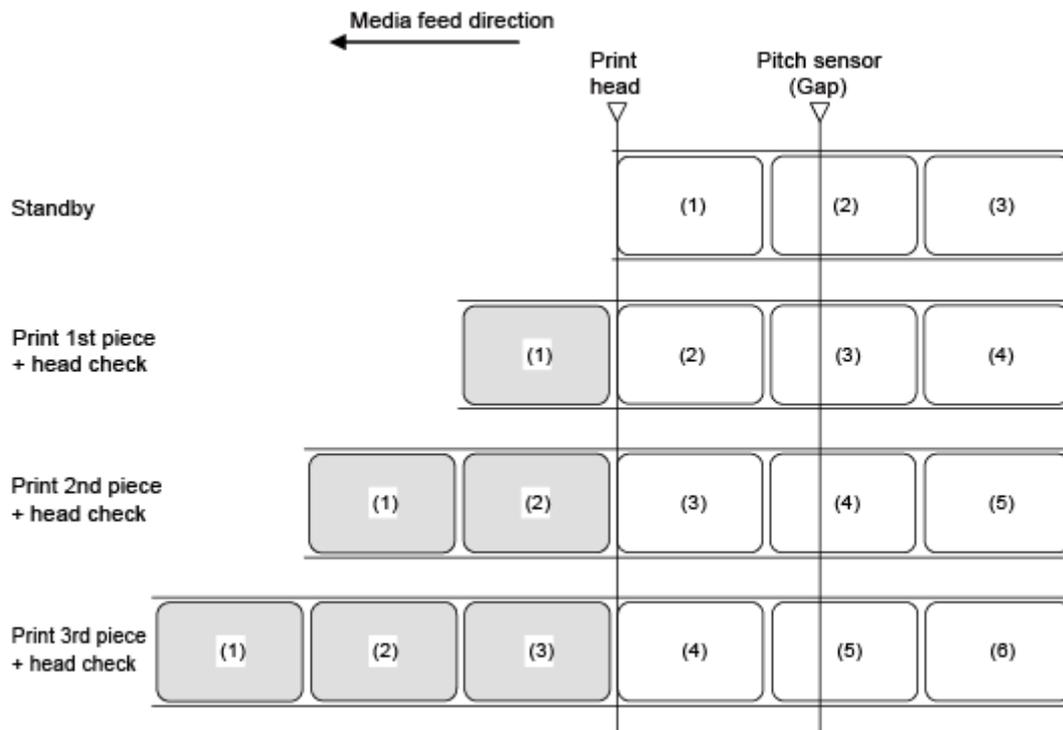
- The figure above shows the reference position when the Gap sensor is used.

#### Timing Chart



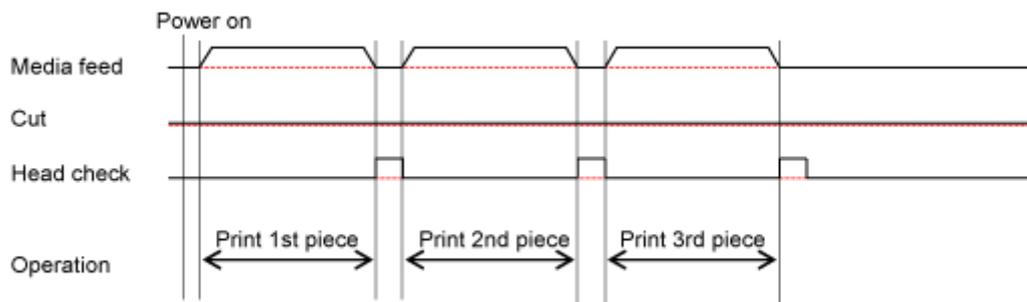
## Continuous Mode (Head Check Enabled)

### Operation



- The figure above shows the reference position when the Gap sensor is used.

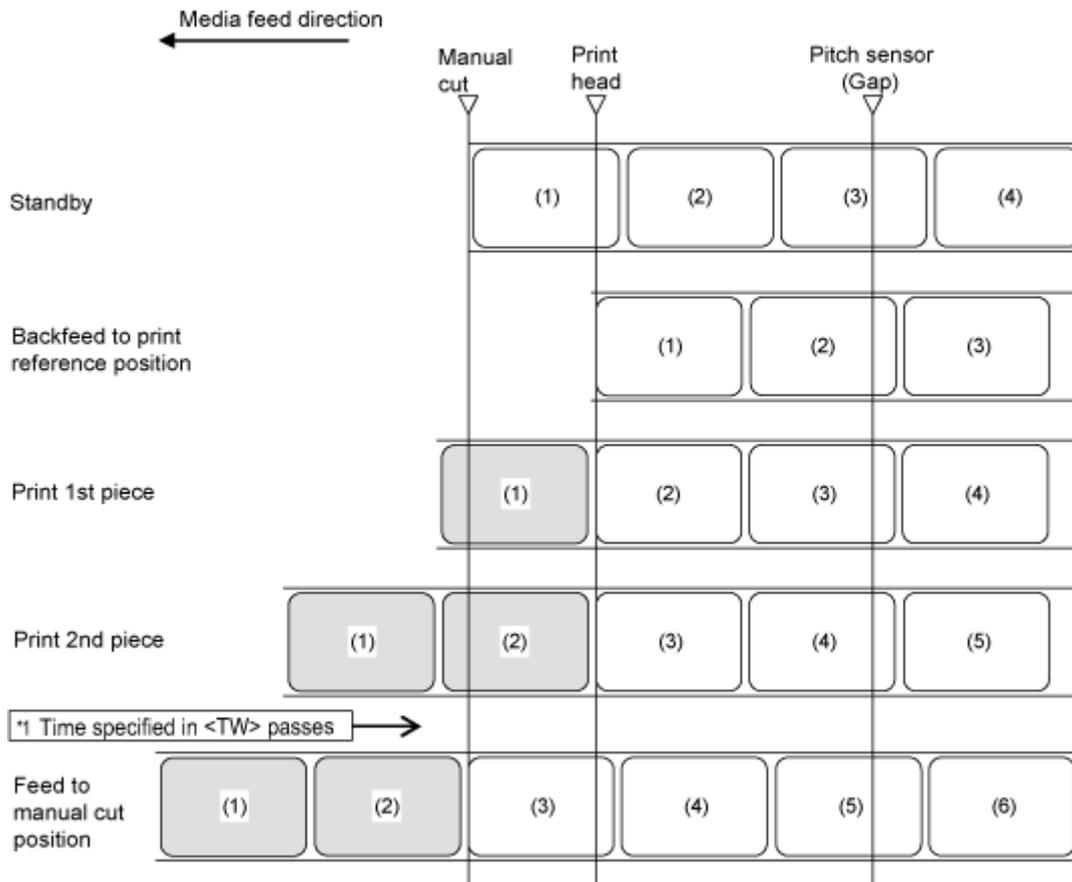
### Timing Chart



## Operations in Tear-Off Mode

### Tear-Off Mode (Head Check Disabled)

#### Operation

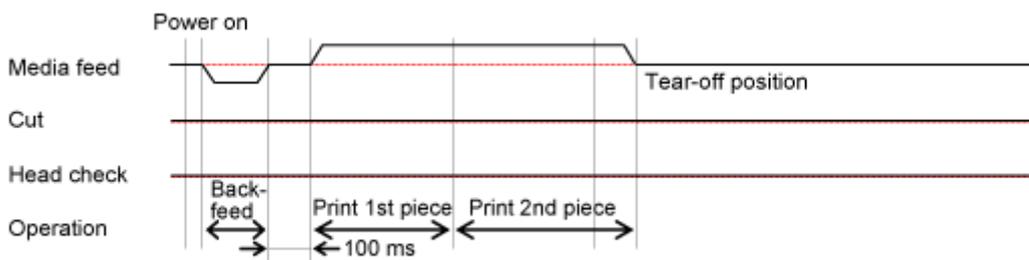


\*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the product will feed the media to the position for manual cutting.

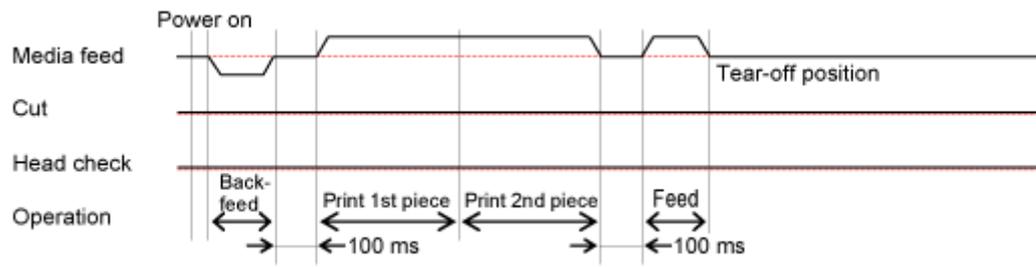


- The figure above shows the reference position when the Gap sensor is used.

#### Timing Chart (When <TW> is 0)

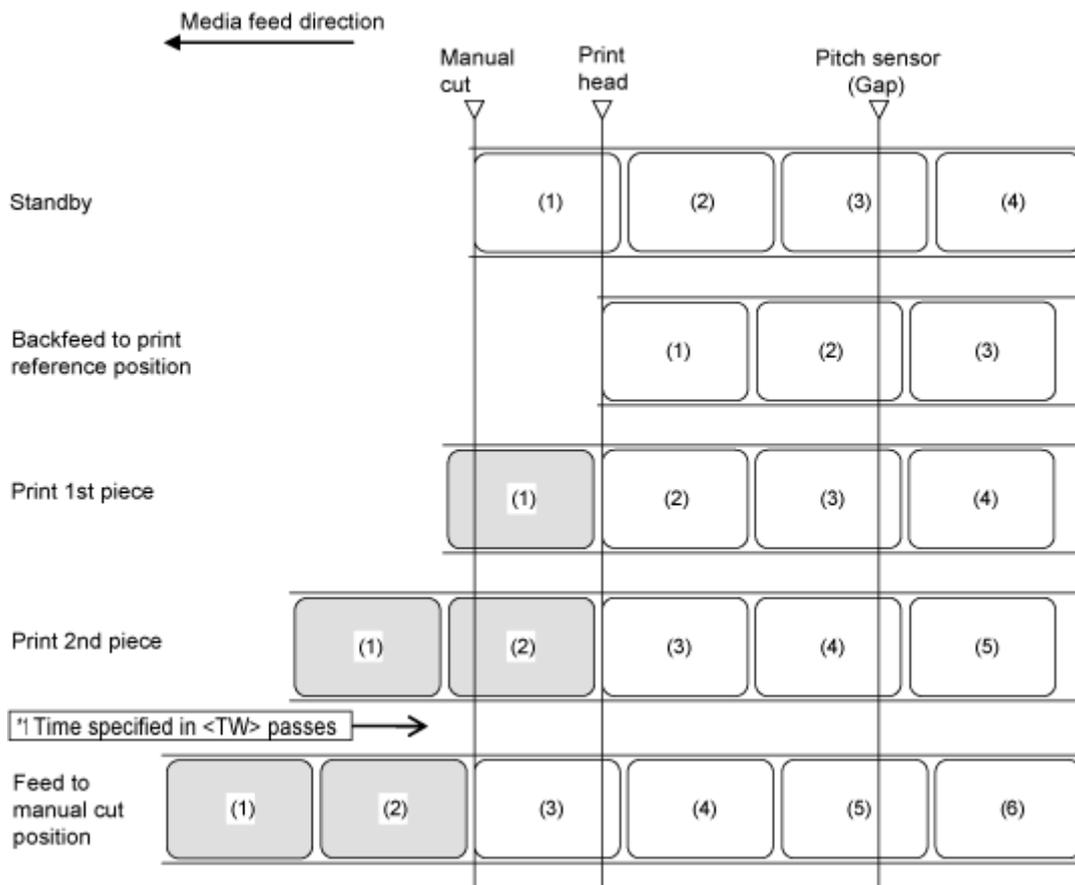


### Timing Chart (When <TW> is 10)



## Tear-Off Mode (Head Check Enabled)

### Operation

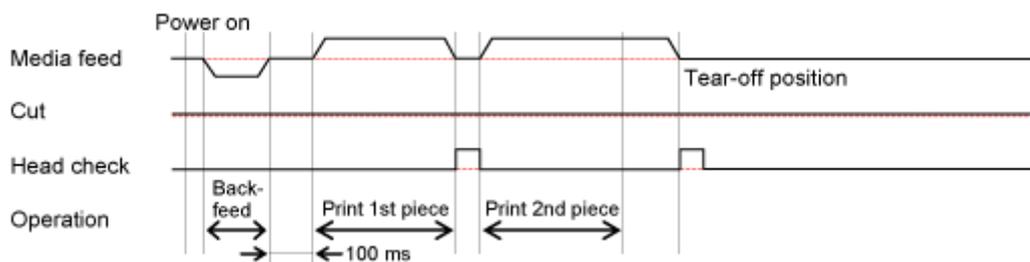


\*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the product will feed the media to the position for manual cutting.

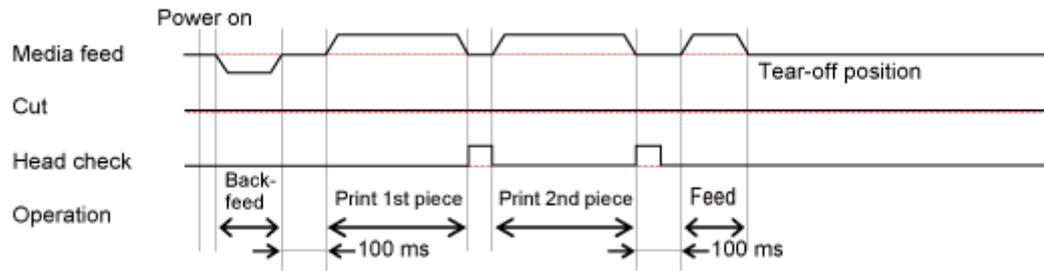


- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart (When <TW> is 0)



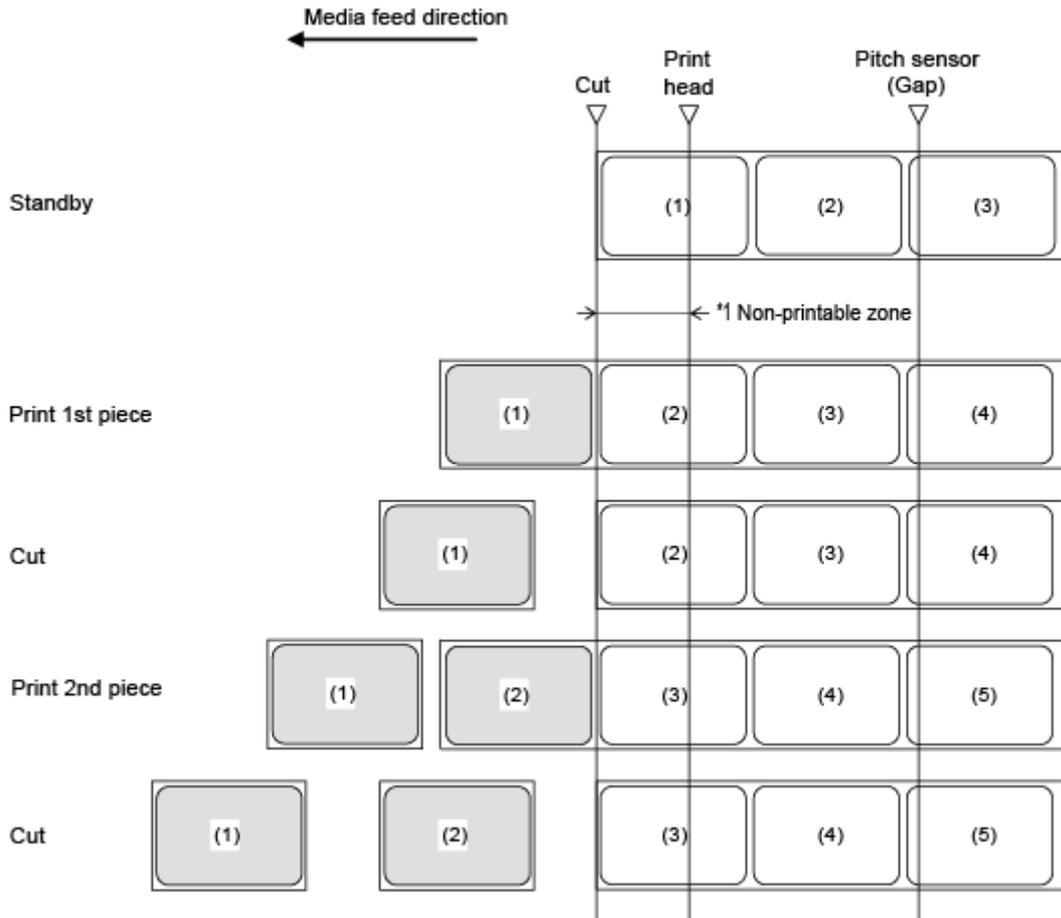
### Timing Chart (When <TW> is 10)



## Operations in Cutter Mode

### Cutter Mode and No Backfeed (Head Check Disabled)

#### Operation

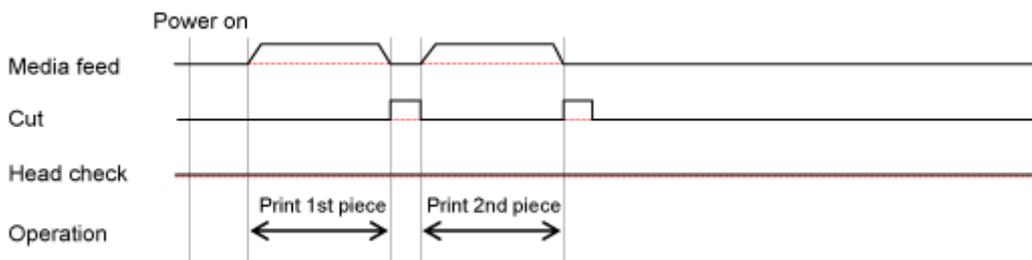


\*1 Because backfeeding is not done, the media in the head area becomes non-printable.



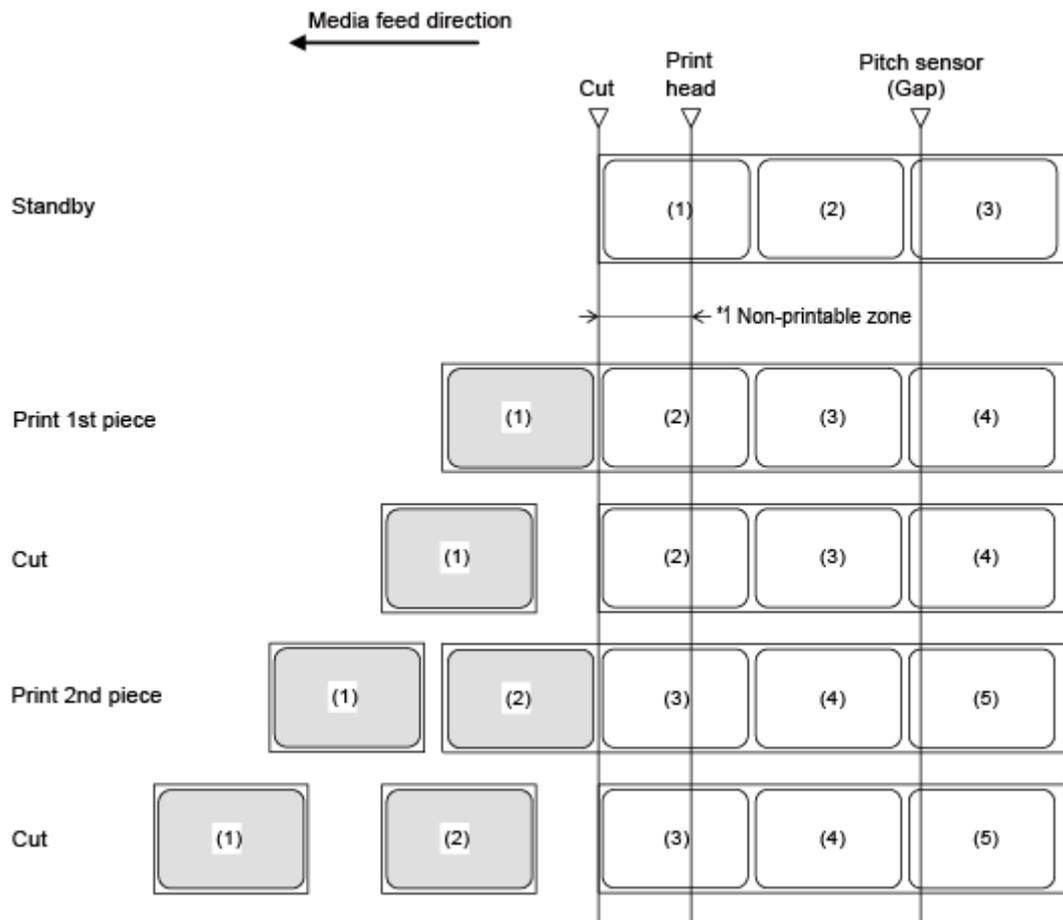
- The figure above shows the reference position when the Gap sensor is used.

#### Timing Chart



## Cutter Mode and No Backfeed (Head Check Enabled)

### Operation

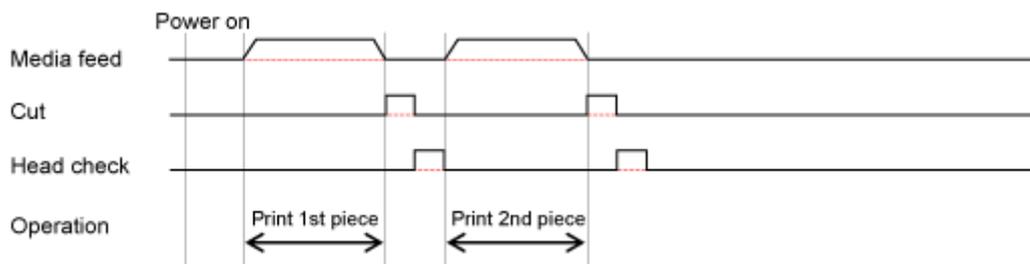


\*1 Because backfeeding is not done, the media in the head area becomes non-printable.



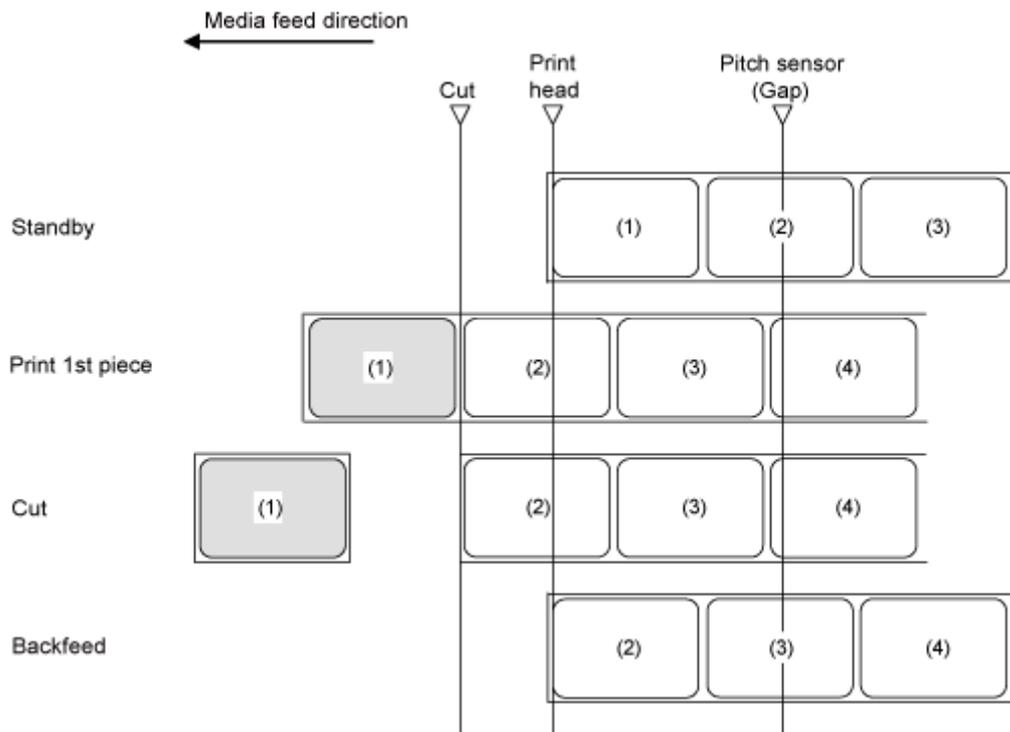
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



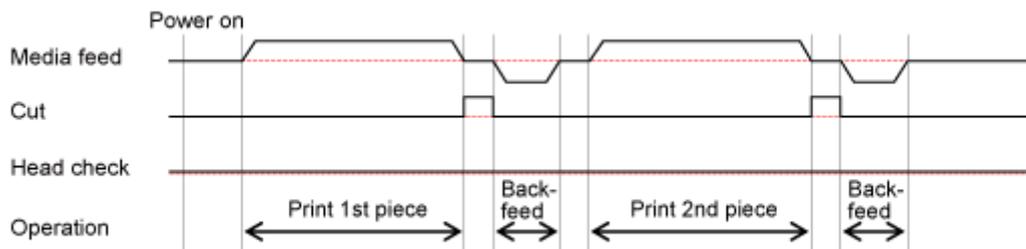
## Cutter Mode and Backfeed After Printing (Head Check Disabled)

### Operation



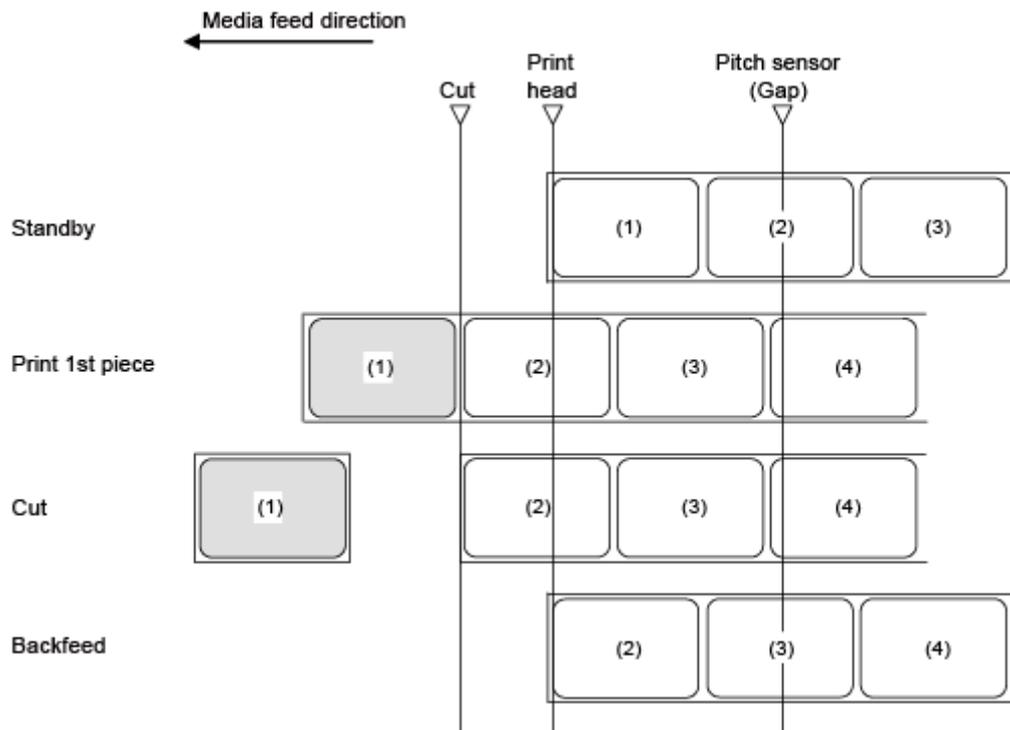
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



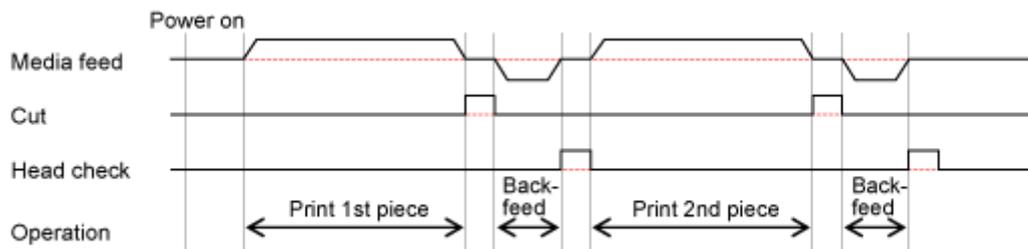
## Cutter Mode and Backfeed After Printing (Head Check Enabled)

### Operation



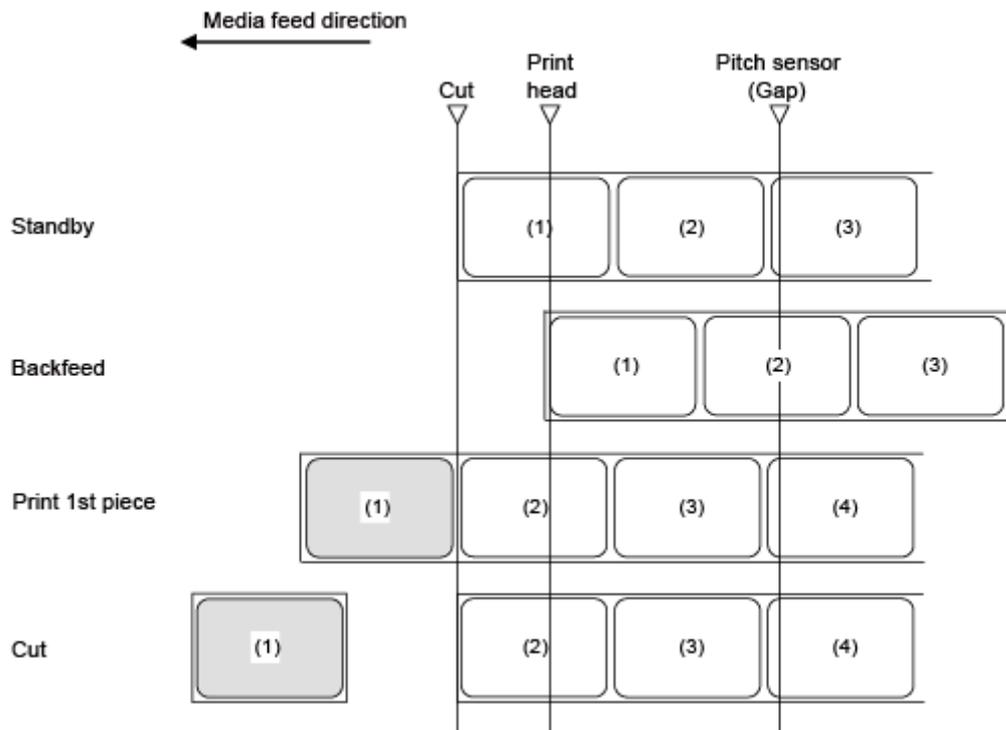
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



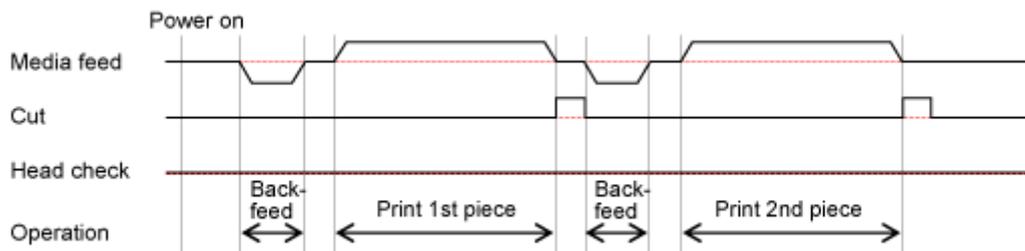
## Cutter Mode and Backfeed Before Printing (Head Check Disabled)

### Operation



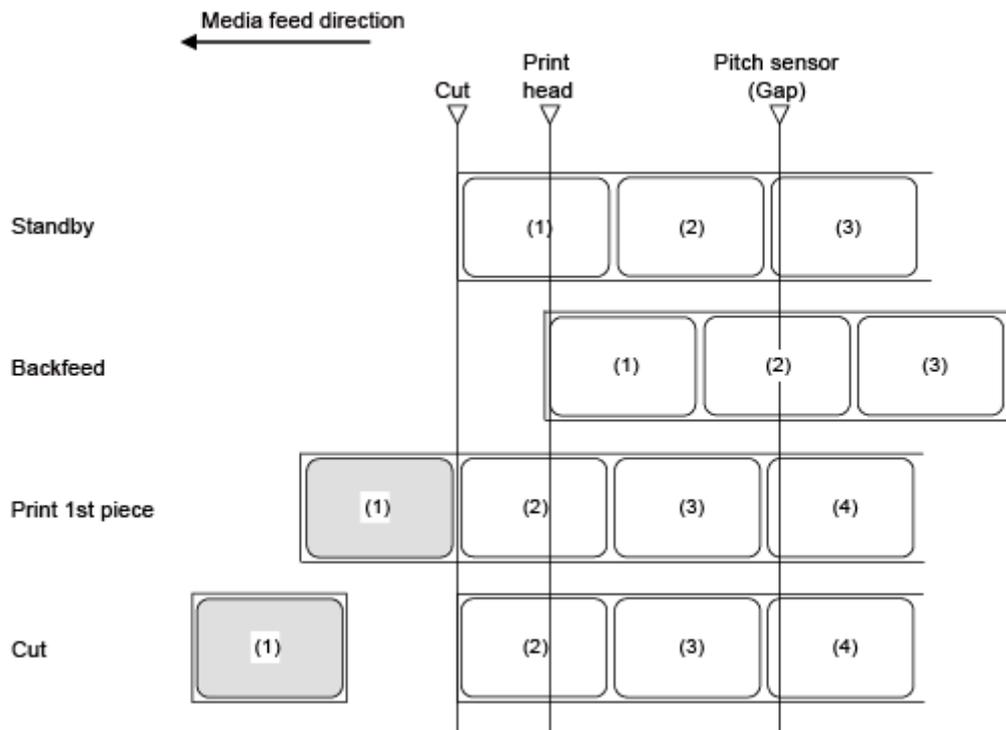
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



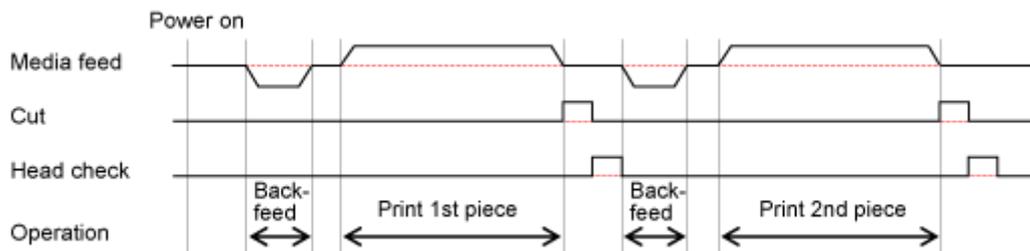
## Cutter Mode and Backfeed Before Printing (Head Check Enabled)

### Operation



- The figure above shows the reference position when the Gap sensor is used.

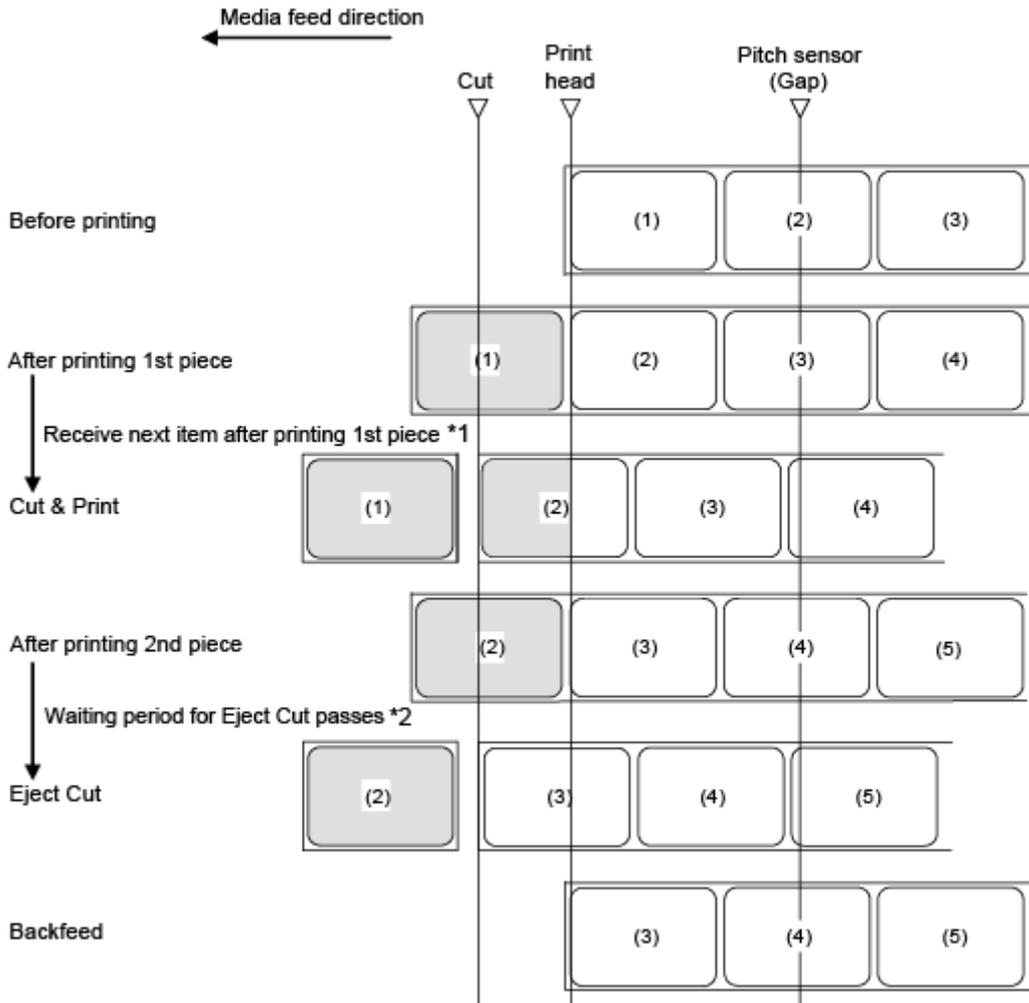
### Timing Chart



## Operations in Cut & Print Mode

### Cut & Print Mode (Head Check Disabled)

#### Operation



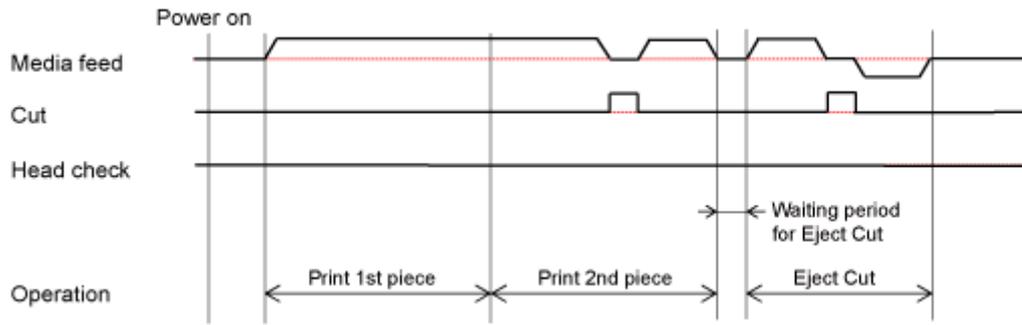
\*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

\*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.



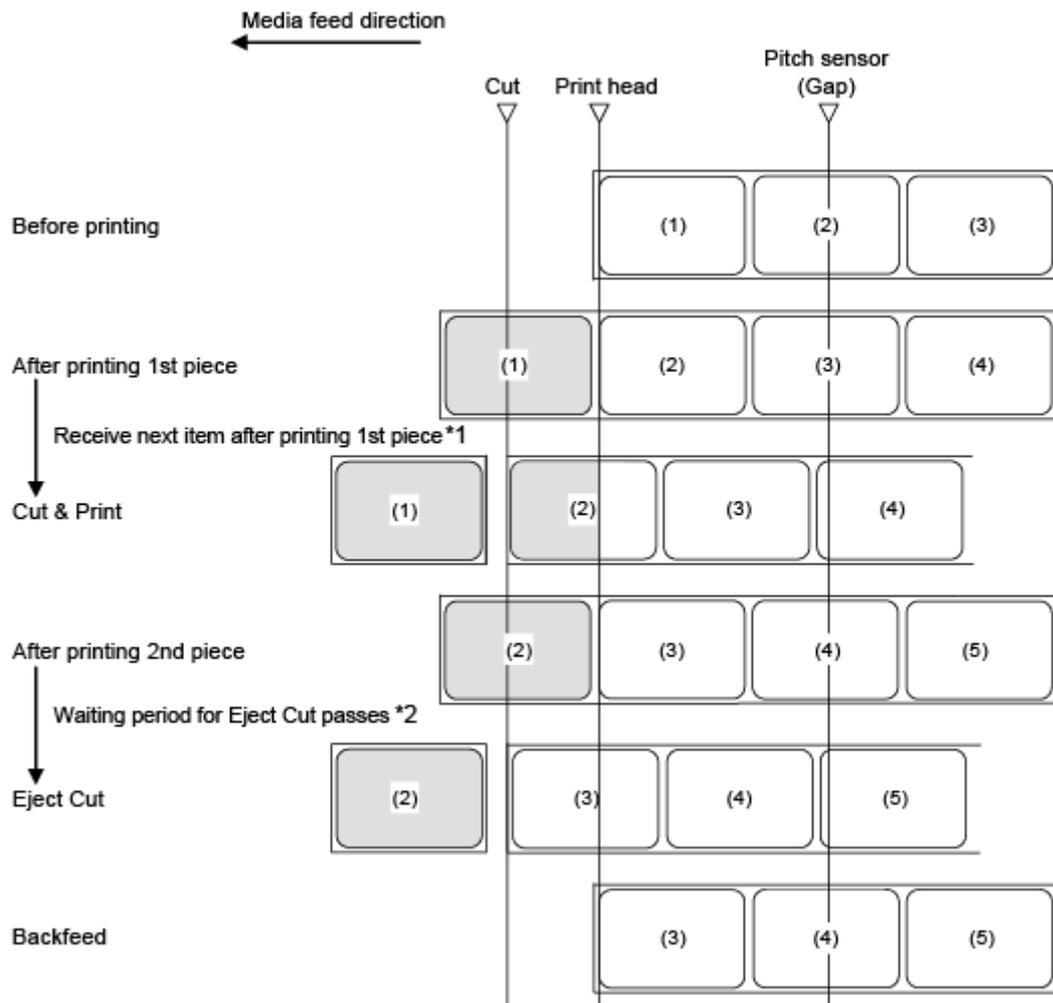
• The figure above shows the reference position when the Gap sensor is used.

# Timing Chart



## Cut & Print Mode (Head Check Enabled)

### Operation



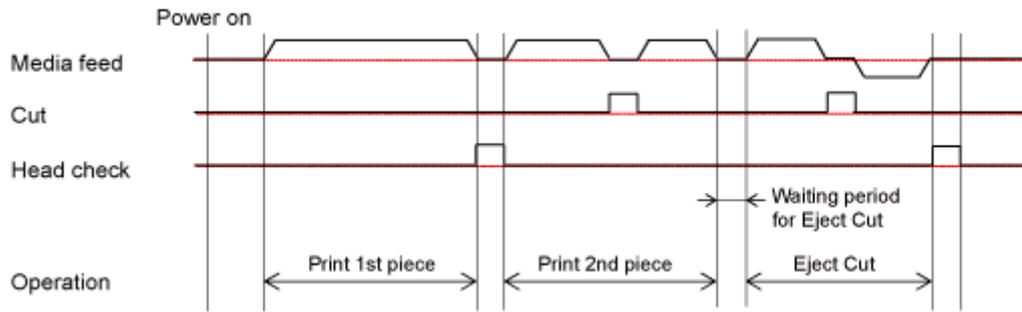
\*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

\*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.



- The figure above shows the reference position when the Gap sensor is used.

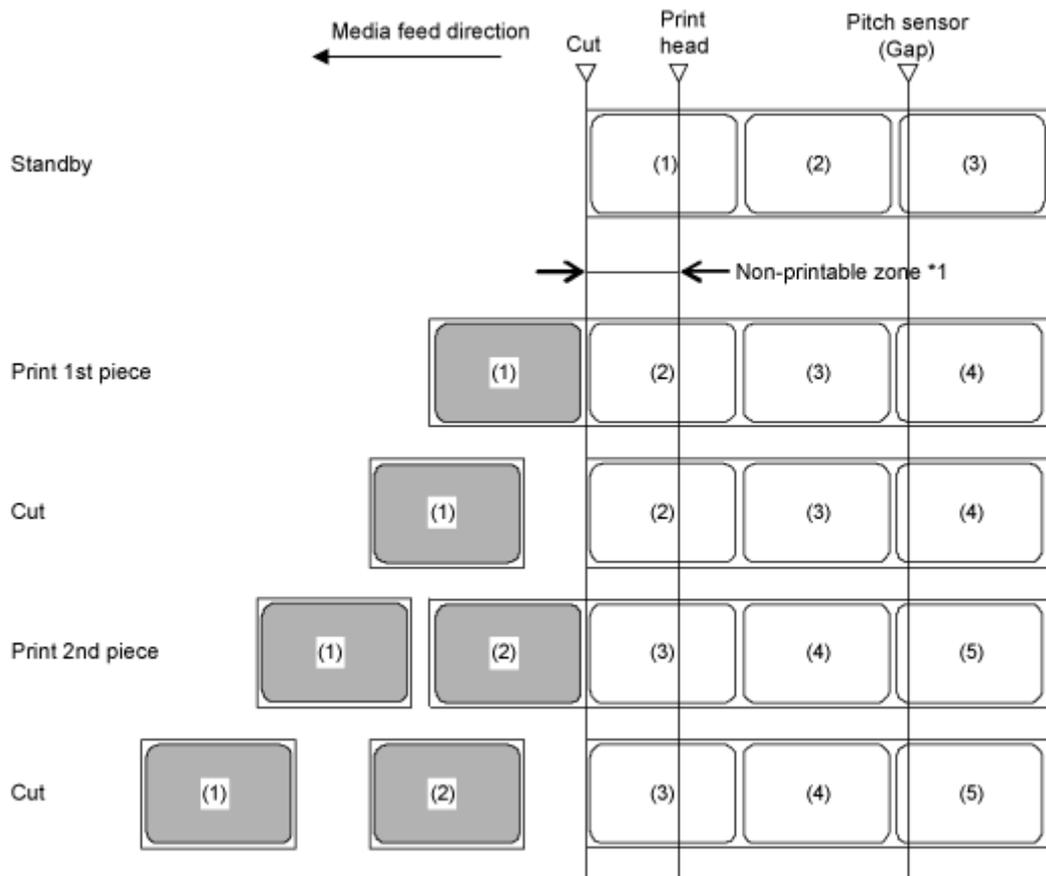
## Timing Chart



## Operations in Partial Cutter Mode

### Partial Cutter Mode and No Backfeed (Head Check Disabled)

#### Operation

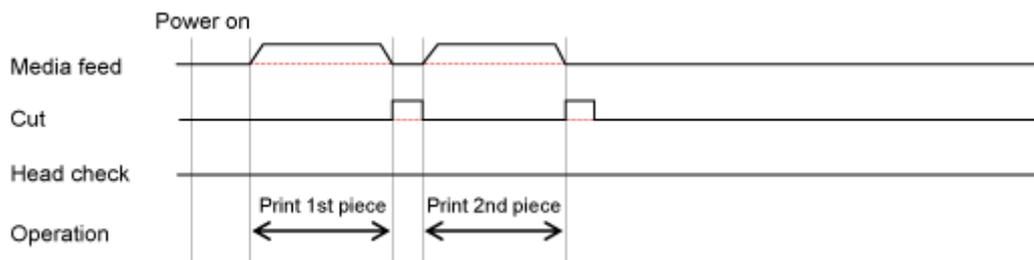


\*1 Because backfeeding is not done, the media in the head area becomes non-printable.



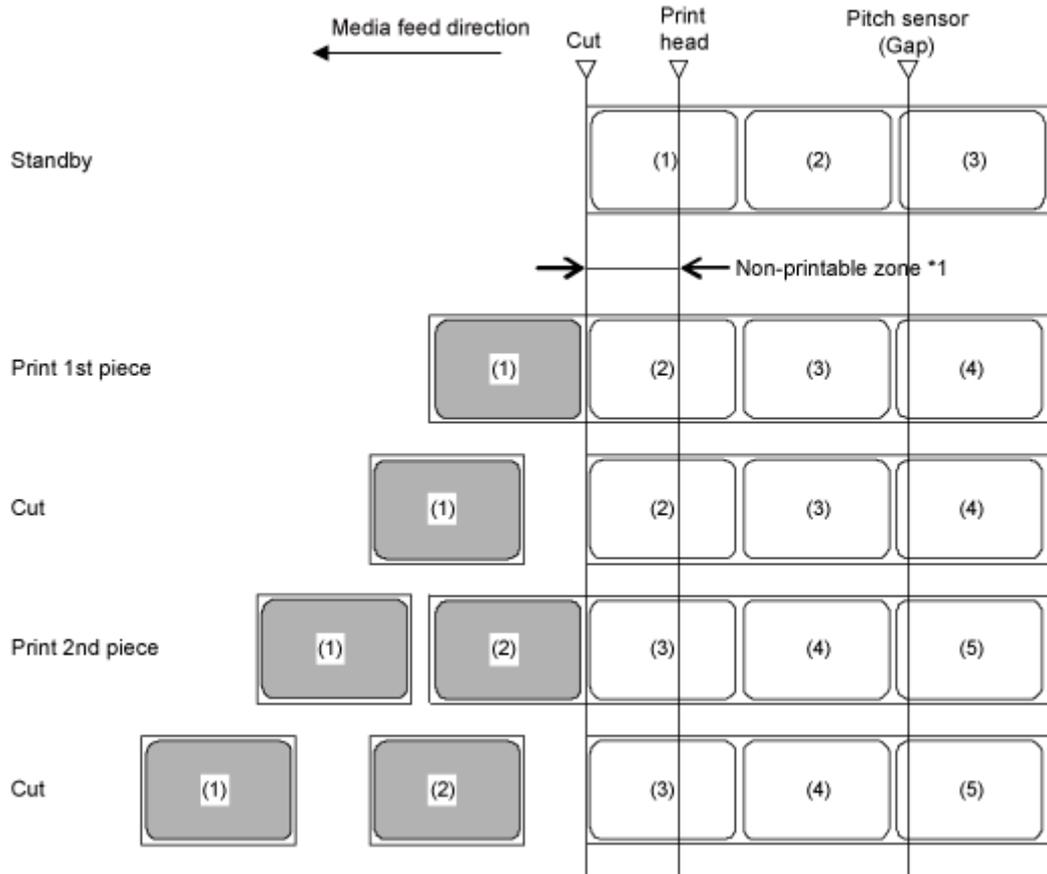
• The figure above shows the reference position when the Gap sensor is used.

#### Timing Chart



## Partial Cutter Mode and No Backfeed (Head Check Enabled)

### Operation

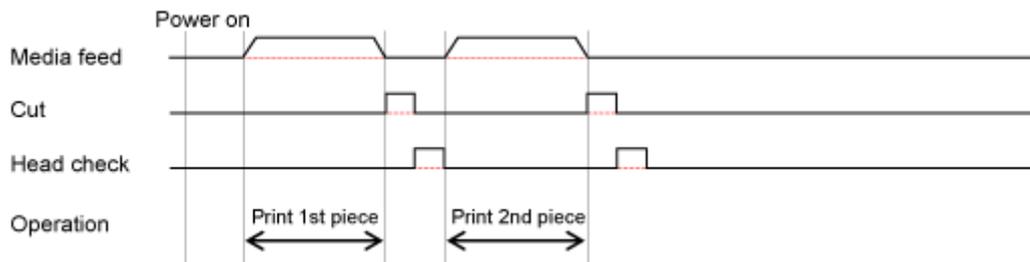


\*1 Because backfeeding is not done, the media in the head area becomes non-printable.



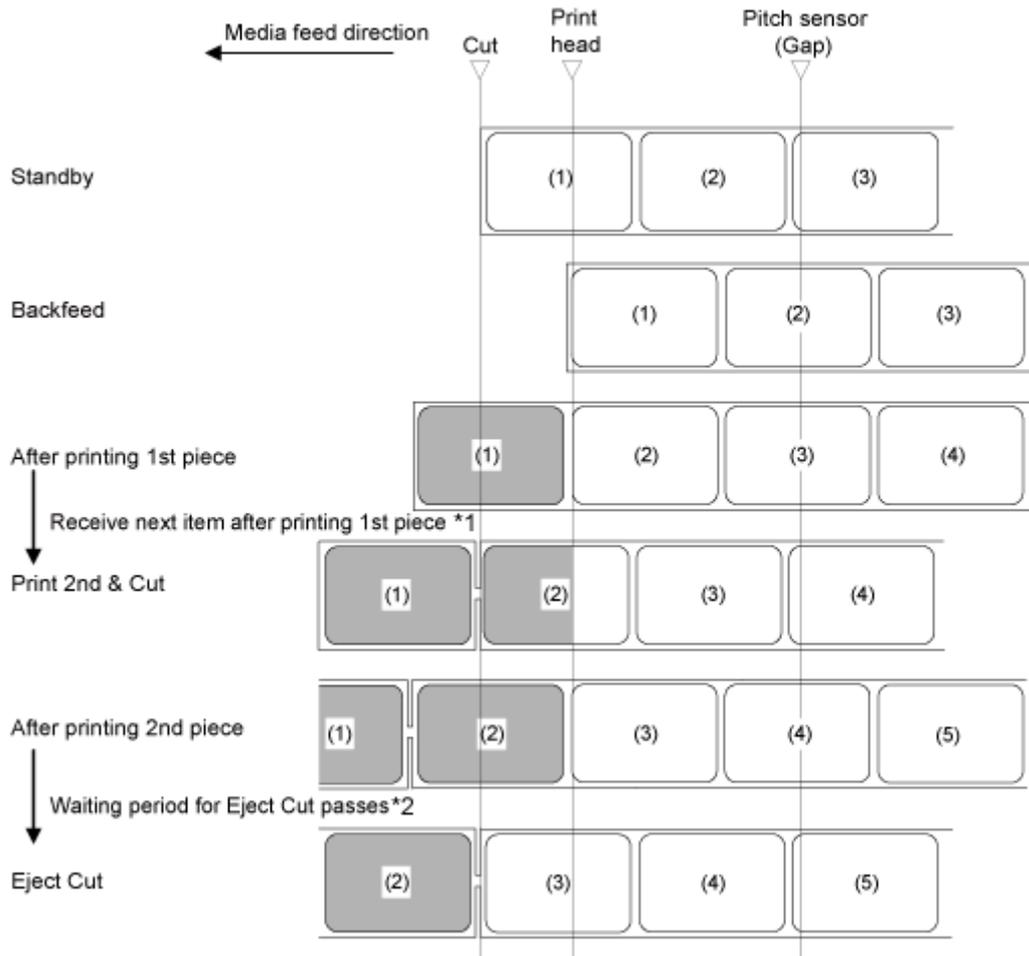
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Partial Cutter Mode and Backfeed Before Printing (Head Check Disabled)

### Operation



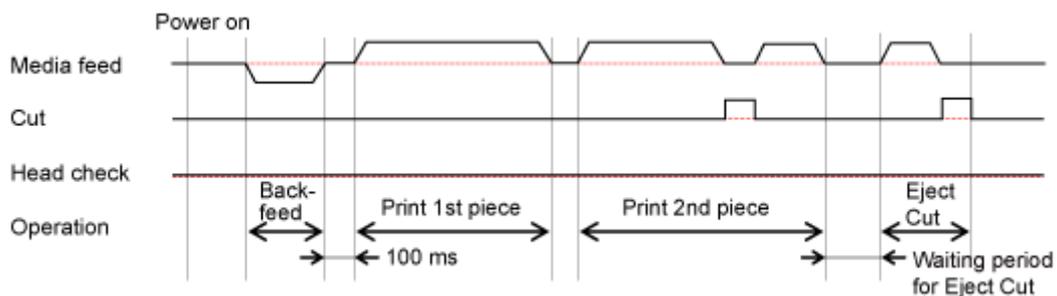
\*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

\*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.



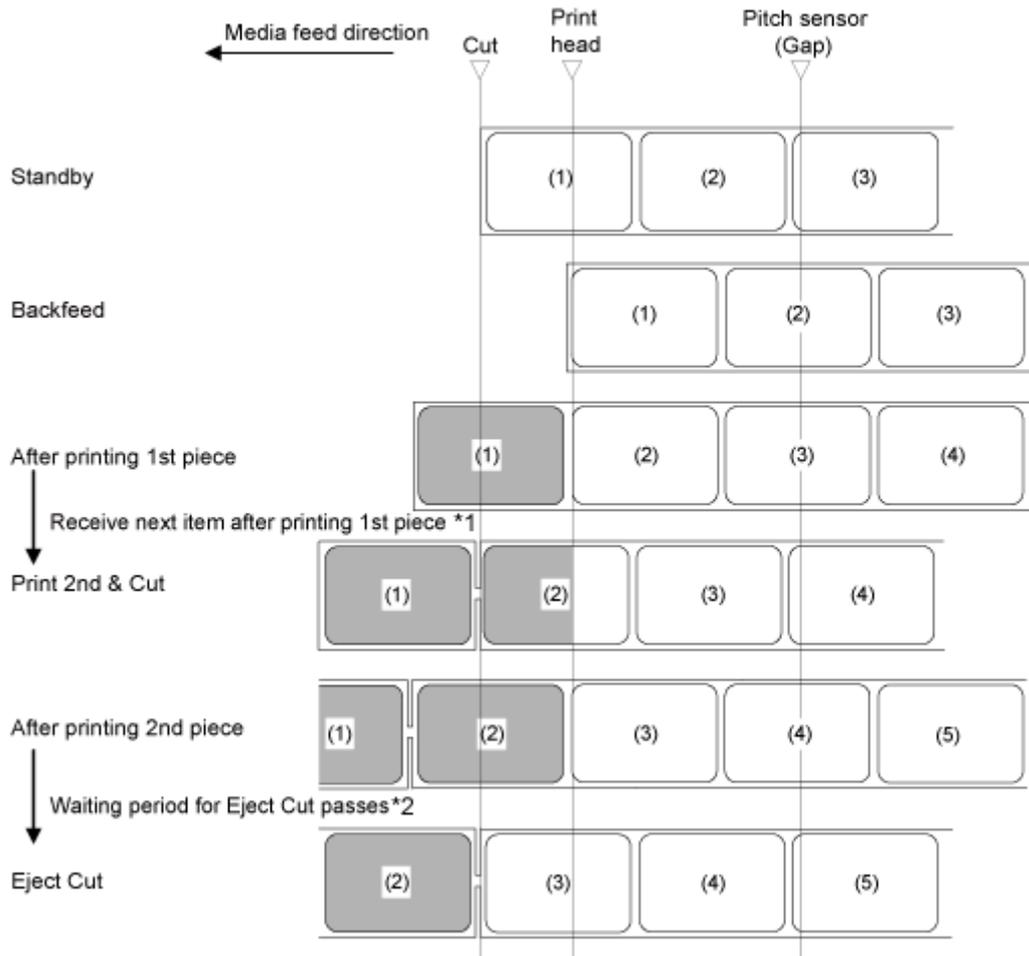
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Partial Cutter Mode and Backfeed Before Printing (Head Check Enabled)

### Operation



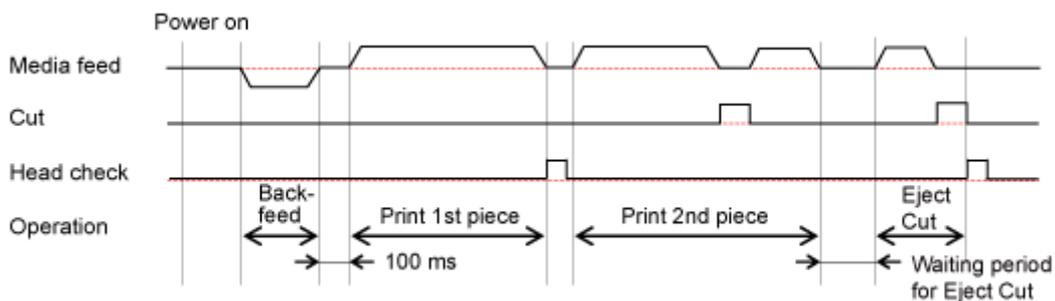
\*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

\*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.



- The figure above shows the reference position when the Gap sensor is used.

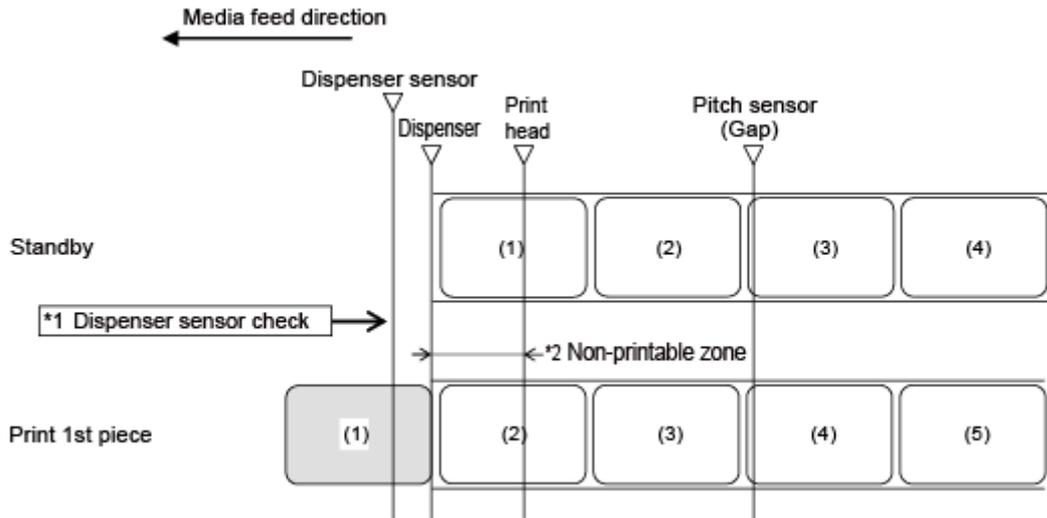
### Timing Chart



## Operations in Dispenser Mode

### Dispenser Mode and No Backfeed (Head Check Disabled)

#### Operation



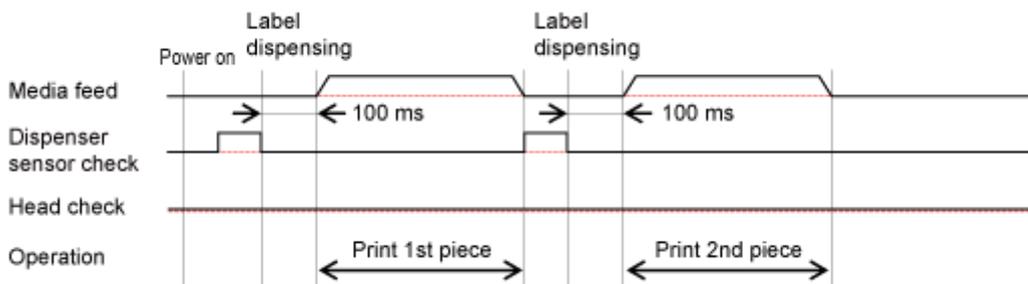
\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 Because backfeeding is not done, the media in this area is non-printable.



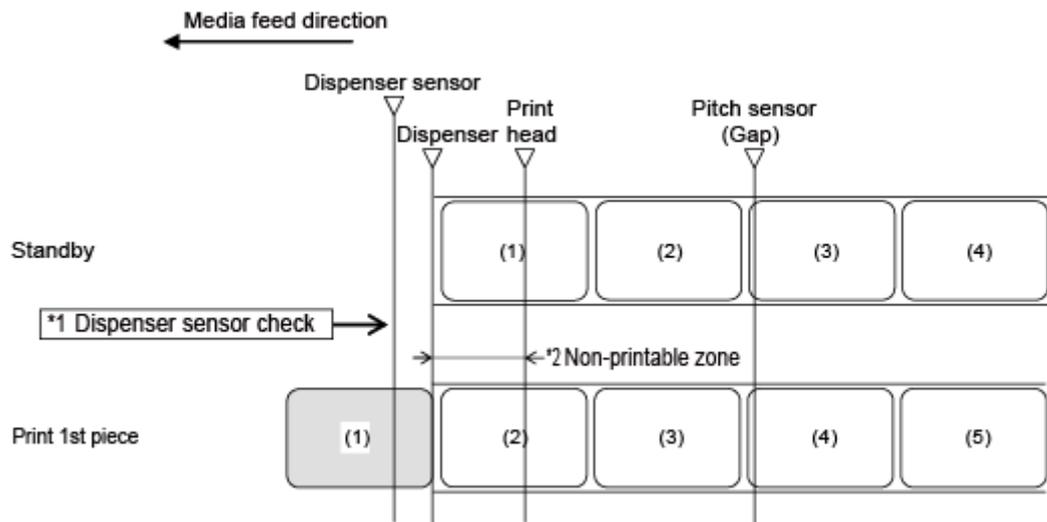
• The figure above shows the reference position when the Gap sensor is used.

#### Timing Chart



## Dispenser Mode and No Backfeed (Head Check Enabled)

### Operation



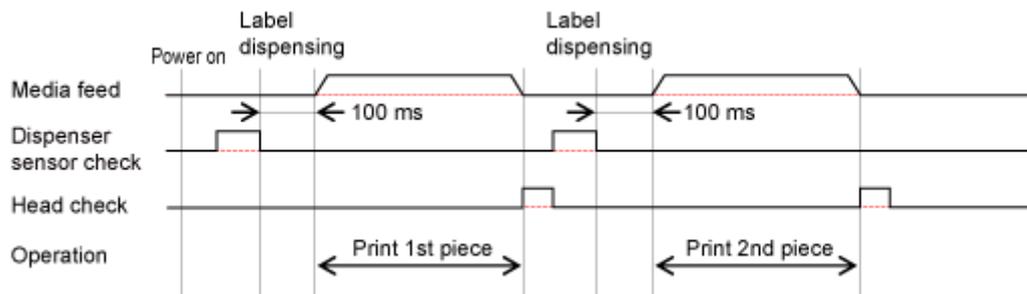
\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 Because backfeeding is not done, the media in this area is non-printable.



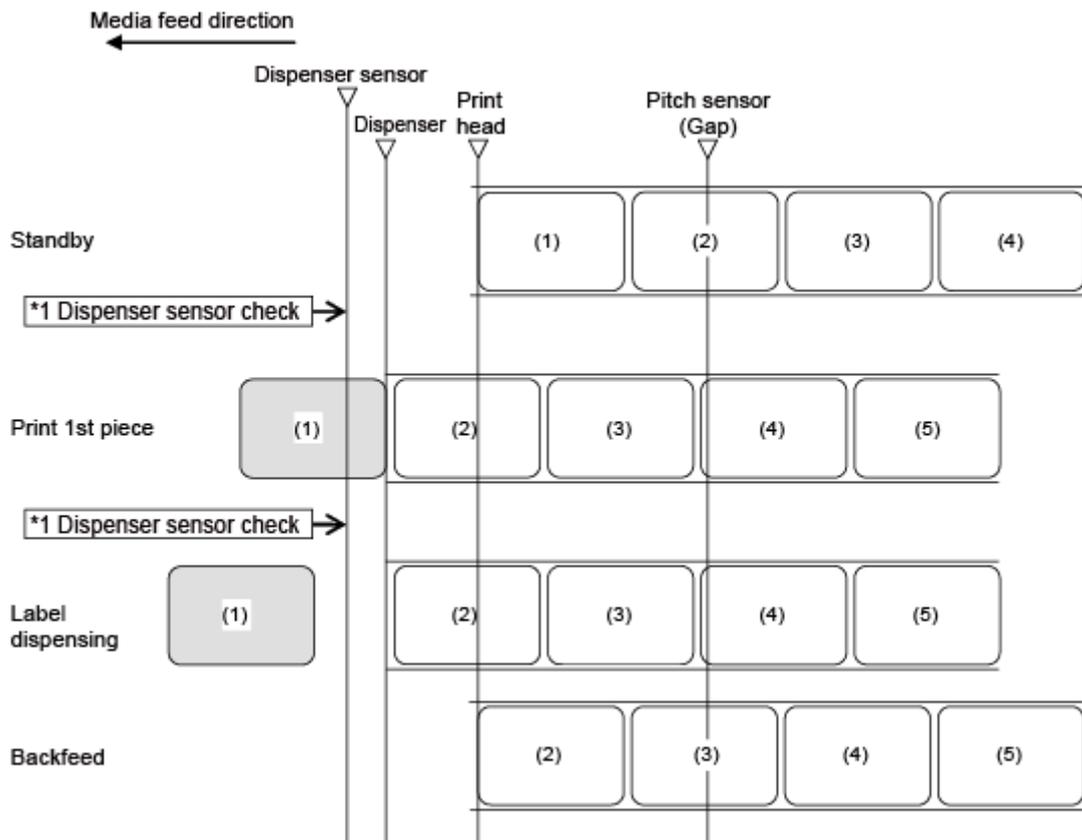
• The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Dispenser Mode and Backfeed After Printing (Head Check Disabled)

### Operation

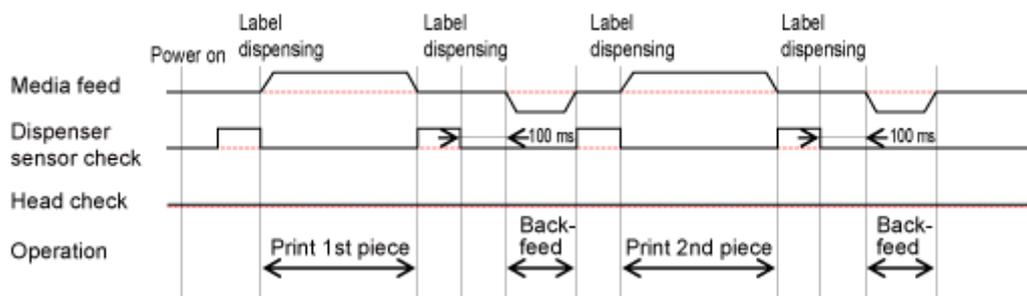


\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.



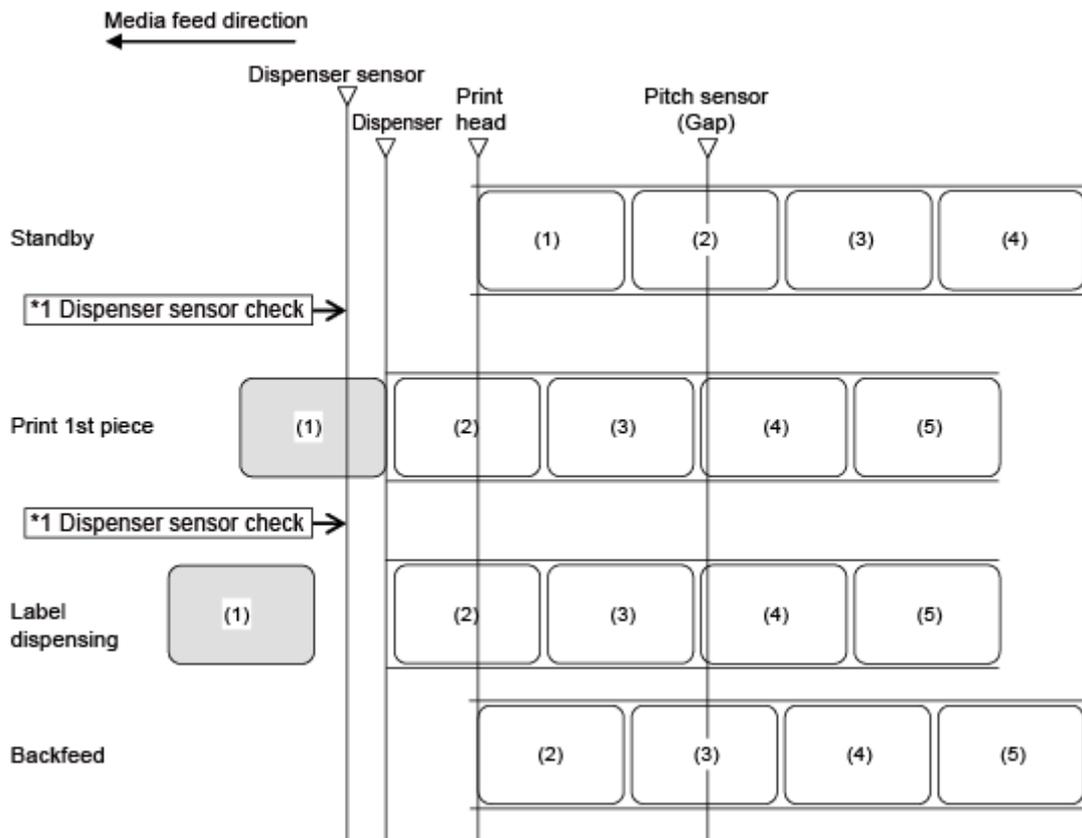
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Dispenser Mode and Backfeed After Printing (Head Check Enabled)

### Operation

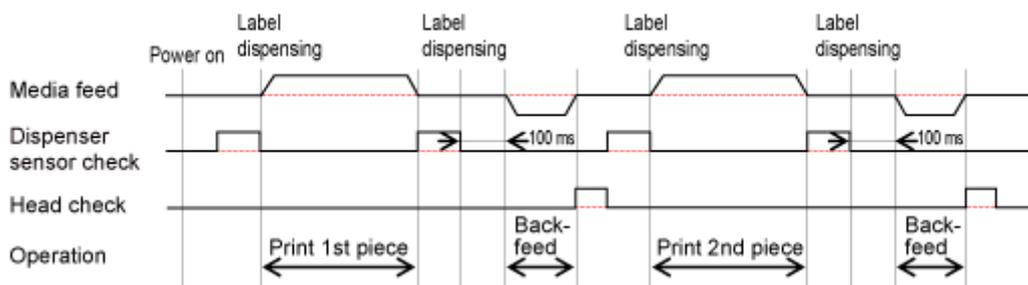


\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.



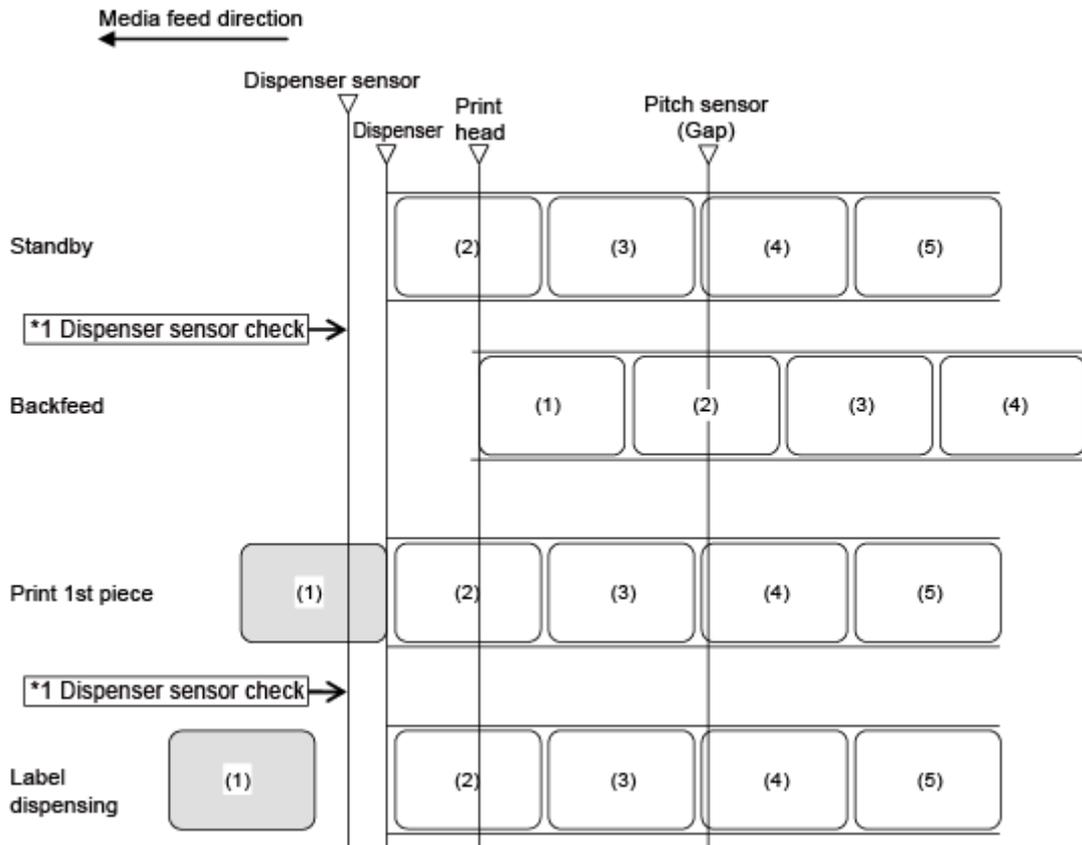
• The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Dispenser Mode and Backfeed Before Printing (Head Check Disabled)

### Operation

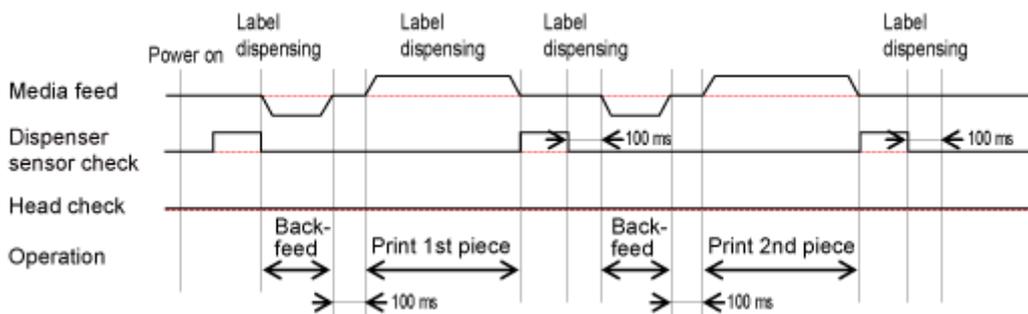


\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.



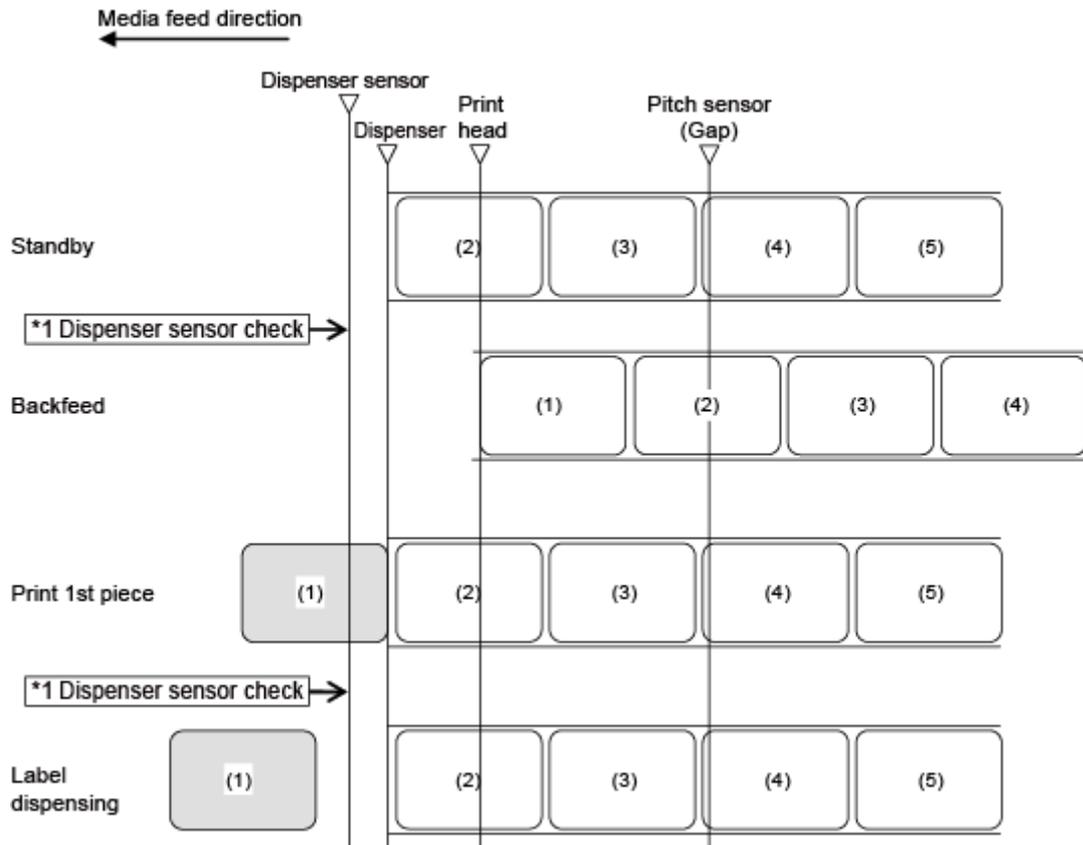
- The figure above shows the reference position when the Gap sensor is used.

### Timing Chart



## Dispenser Mode and Backfeed Before Printing (Head Check Enabled)

### Operation

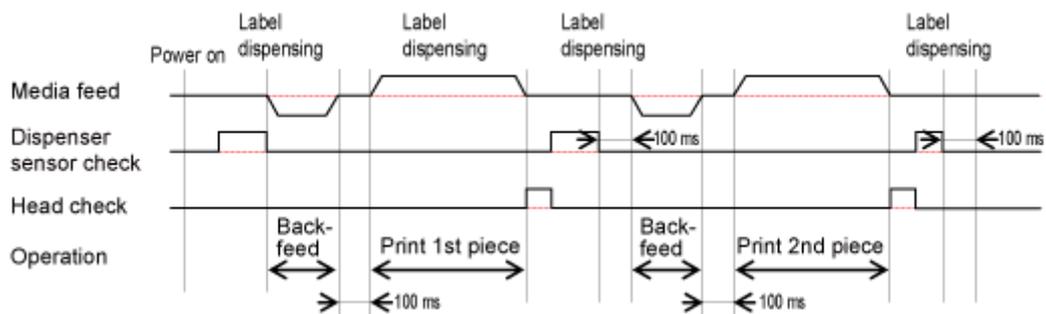


\*1 The dispenser sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.



- The figure above shows the reference position when the Gap sensor is used.

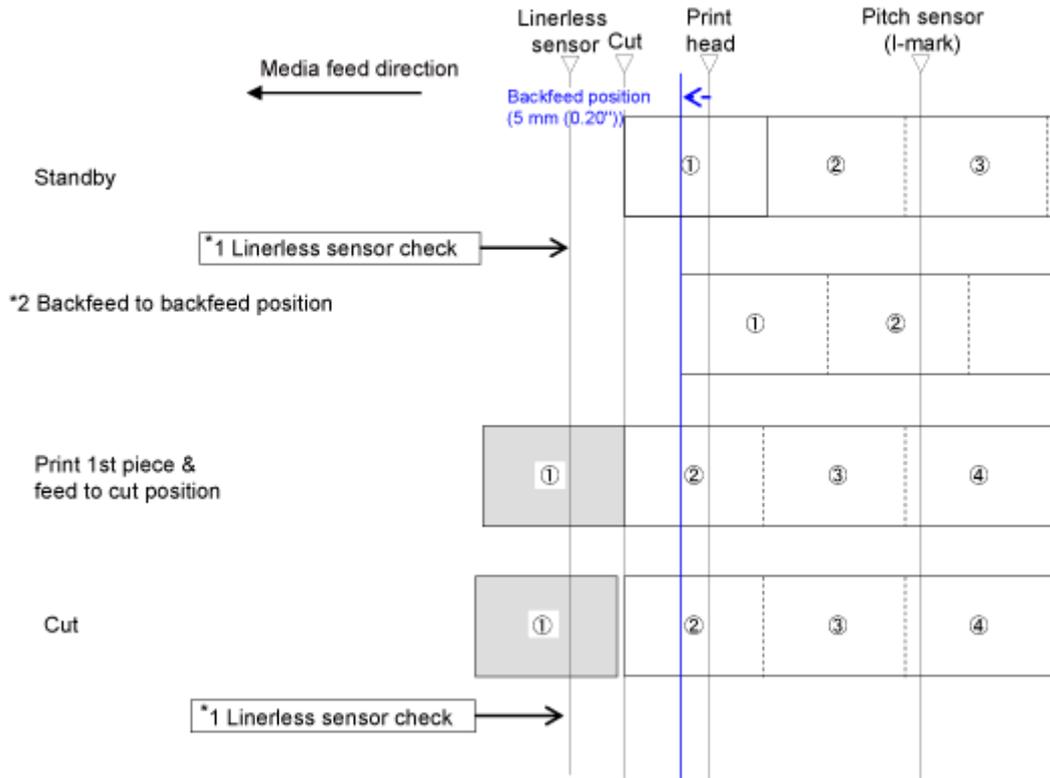
### Timing Chart



## Operations in Linerless Cutter Mode

### Linerless Cutter Mode and Backfeed After Printing (Head Check Disabled)

#### Operation



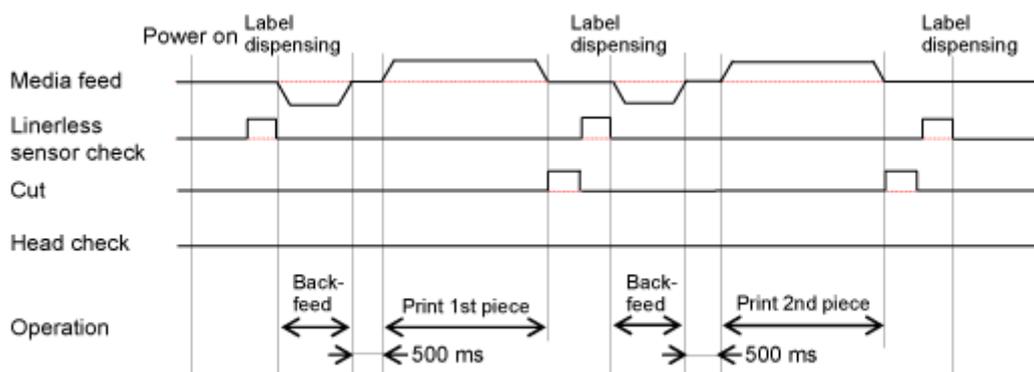
\*1 The linerless sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 The backfeed speed becomes 2 inches/sec immediately after powering on the product, or more than 1 hour after completing a print operation or after completing a feed operation.



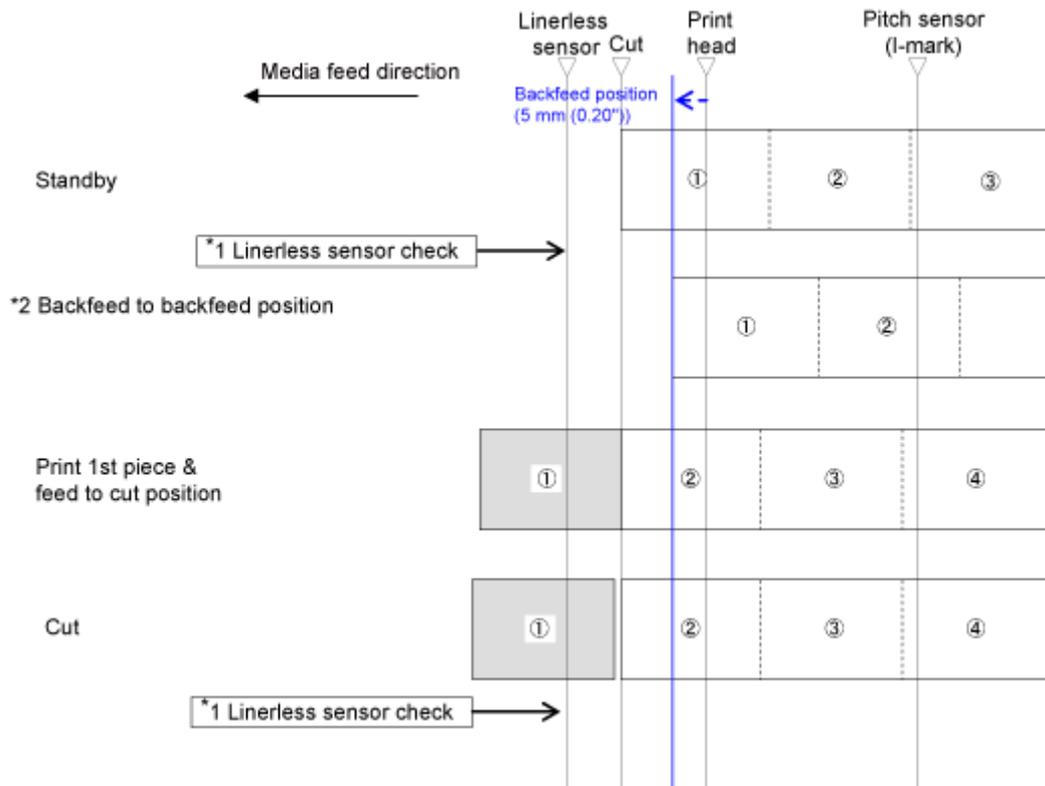
• The figure above shows the reference position when the I-mark sensor is used.

#### Timing Chart



## Linerless Cutter Mode and Backfeed After Printing (Head Check Enabled)

### Operation



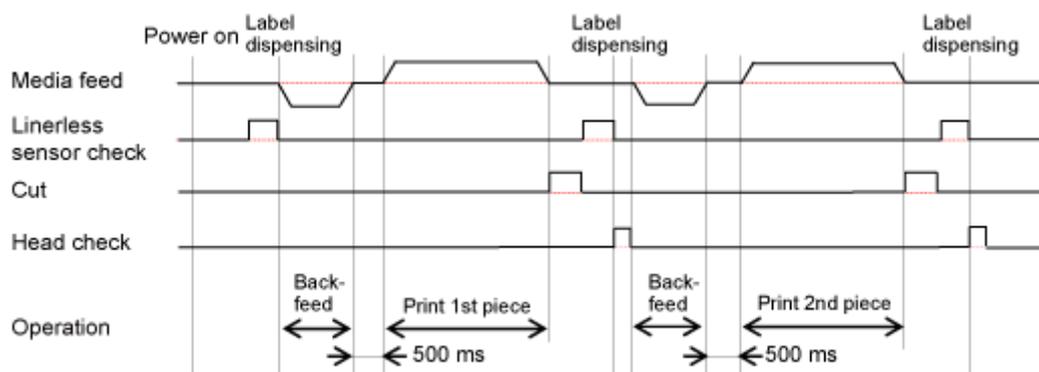
\*1 The linerless sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 The backfeed speed becomes 2 inches/sec immediately after powering on the product, or more than 1 hour after completing a print operation or after completing a feed operation.



• The figure above shows the reference position when the I-mark sensor is used.

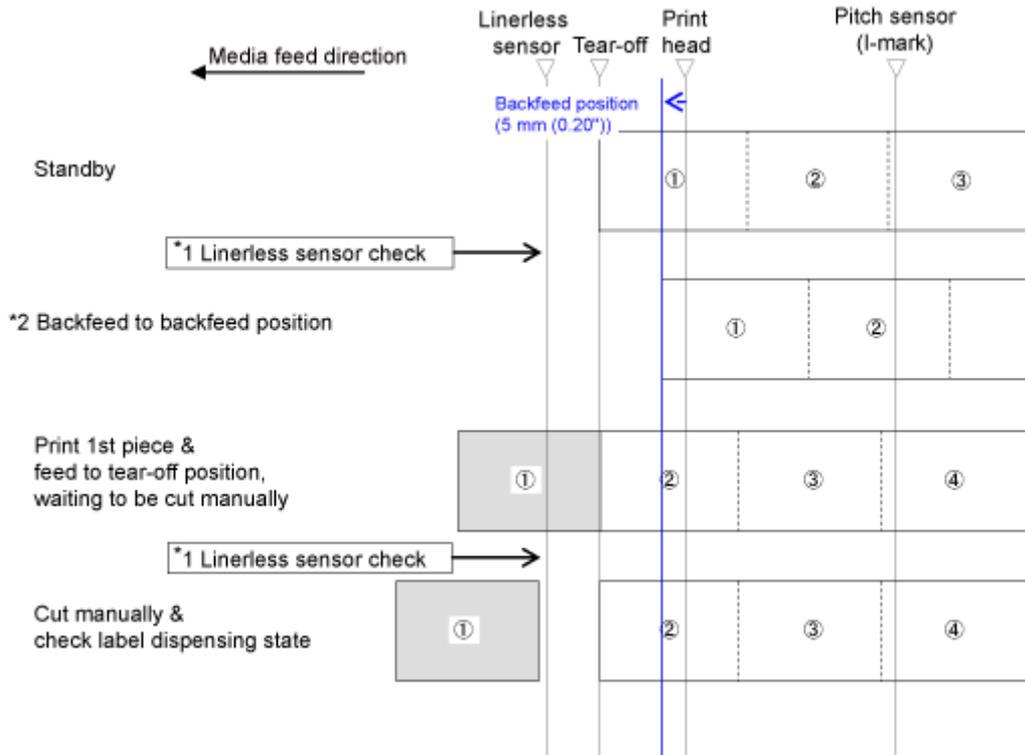
### Timing Chart



## Operations in Linerless Tearoff Mode

### Linerless Tearoff Mode (Head Check Disabled)

#### Operation



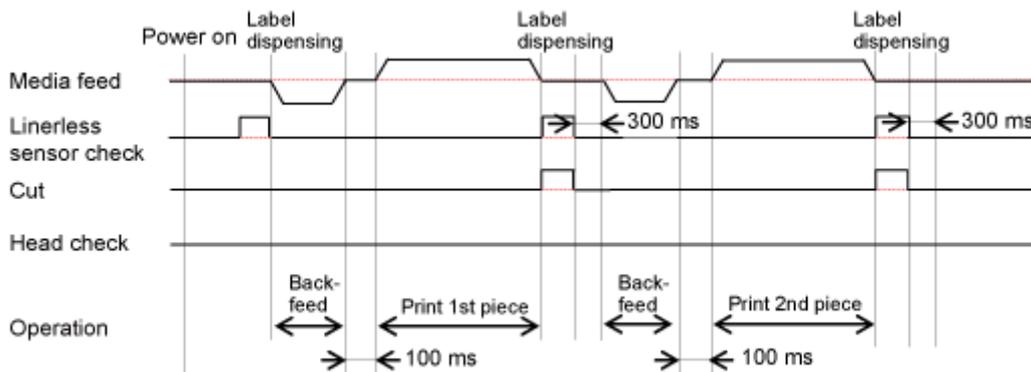
\*1 The linerless sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 The backfeed speed becomes 2 inches/sec immediately after powering on the product, or more than 1 hour after completing a print operation or after completing a feed operation.



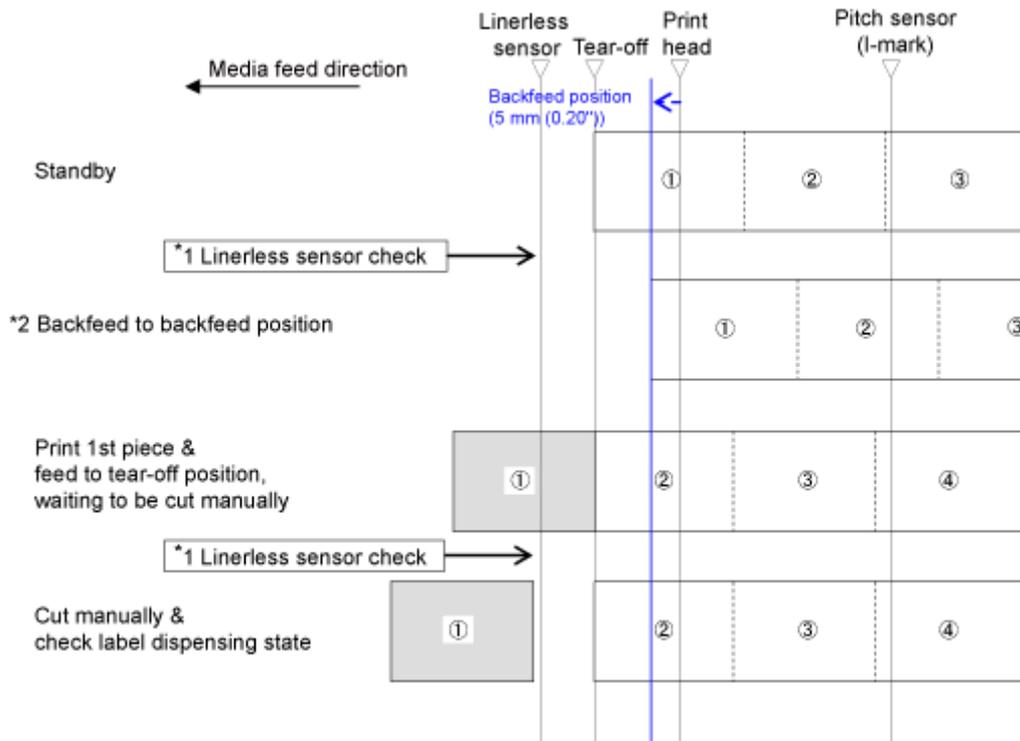
- The figure above shows the reference position when the I-mark sensor is used.

#### Timing Chart



## Linerless Tearoff Mode (Head Check Enabled)

### Operation



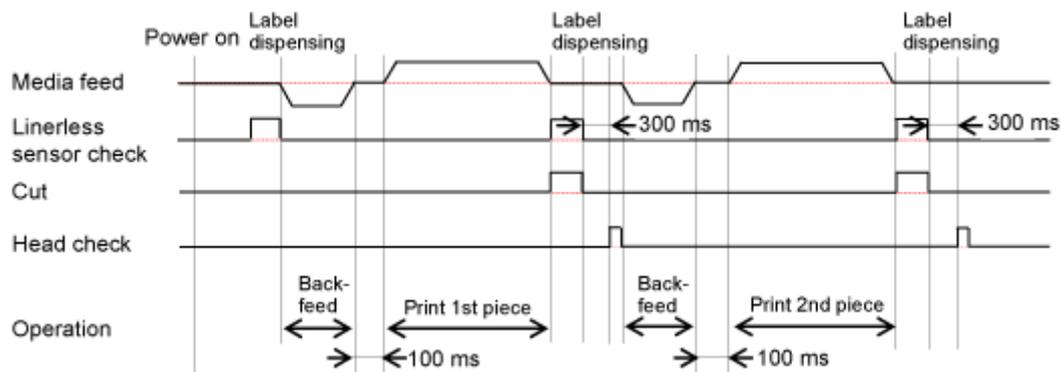
\*1 The linerless sensor confirms the dispensing condition and the product does not perform the next operation until the label is dispensed.

\*2 The backfeed speed becomes 2 inches/sec immediately after powering on the product, or more than 1 hour after completing a print operation or after completing a feed operation.



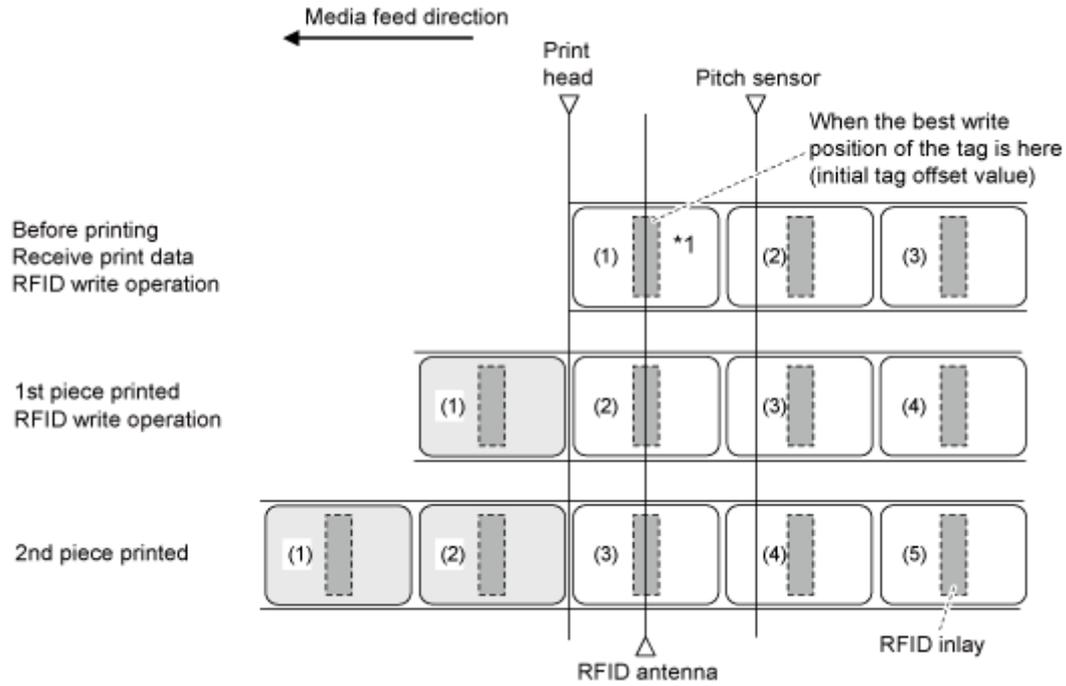
• The figure above shows the reference position when the I-mark sensor is used.

### Timing Chart



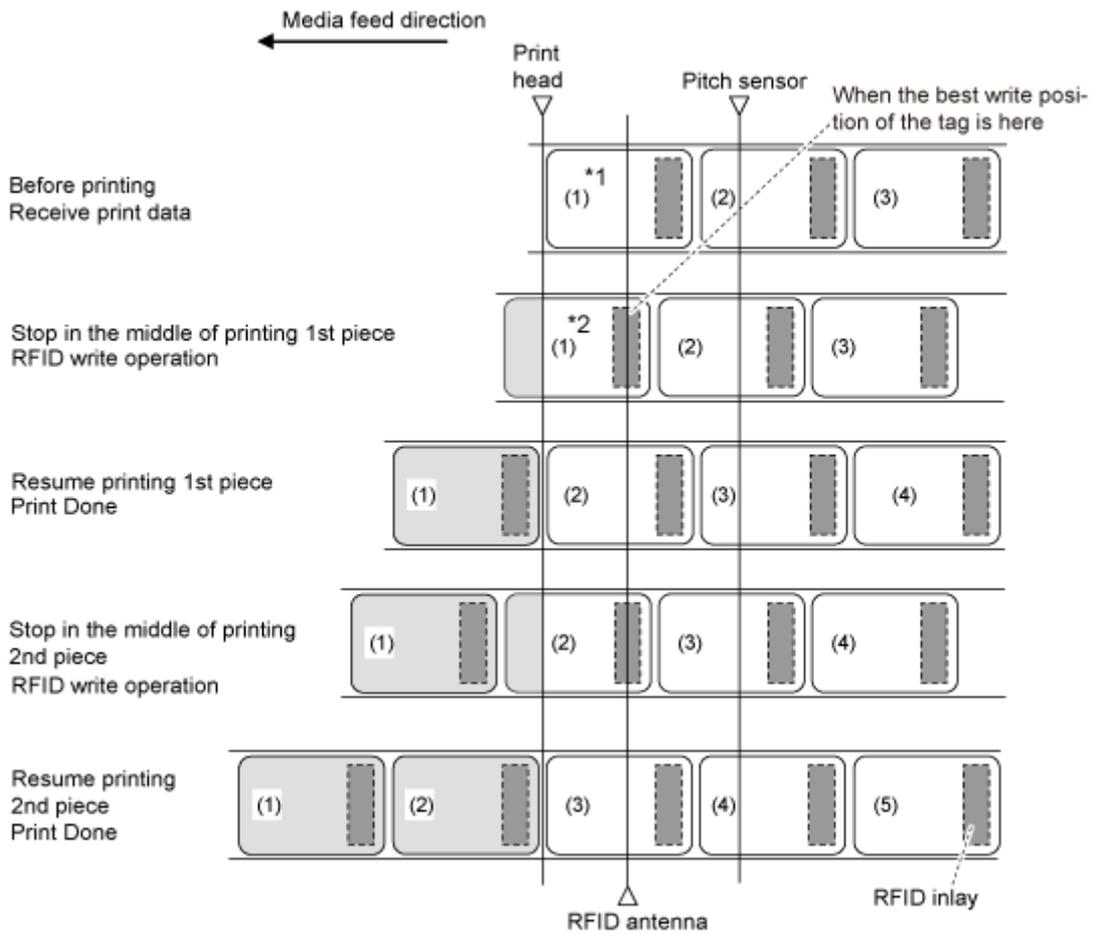
## Operations for RFID Write (RFID Models Only)

### RFID Write with Continuous Mode (Tag Offset = 0)



\*1 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, RFID read [DC2]PJ, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Continuous Mode (Tag Offset > 0)

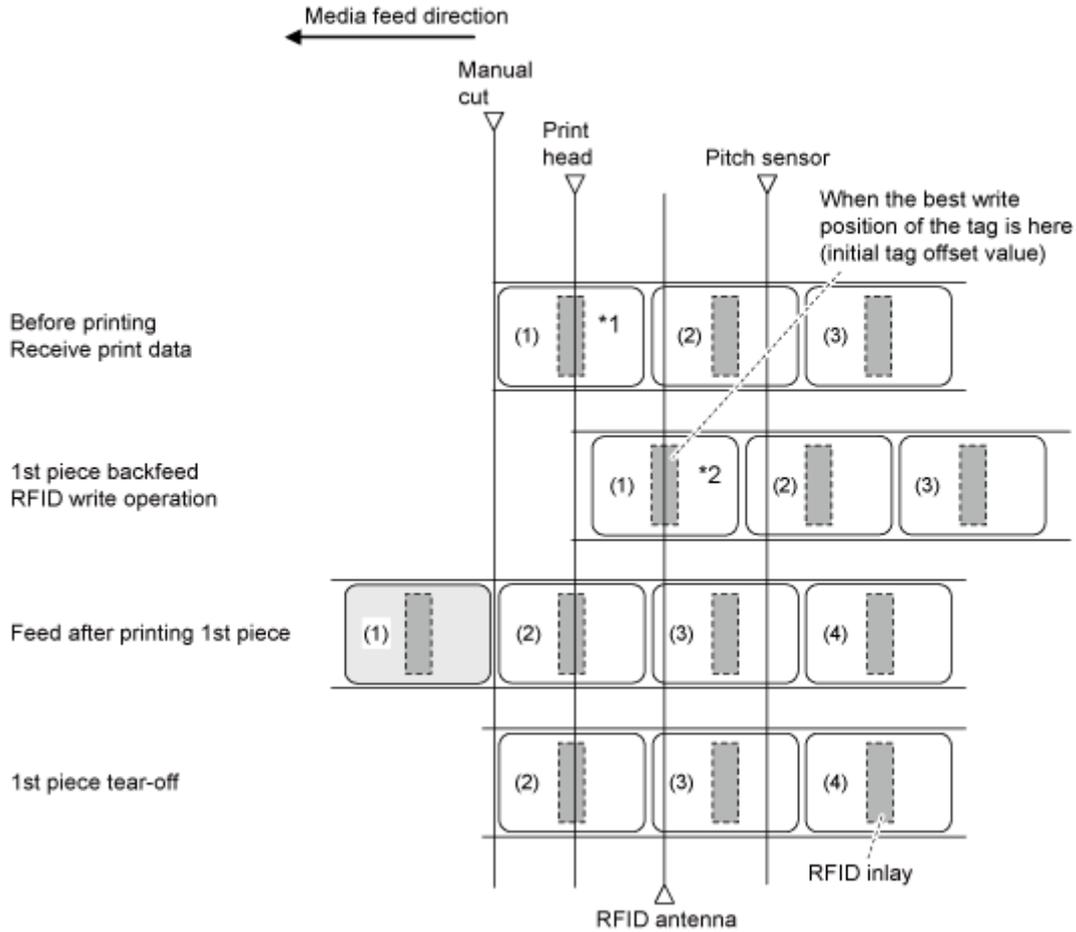


\*1 Because the EPC code read, RFID read [DC2]PJ, and UID/EPC/IDm print <TU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Tear-Off Mode (Tag Offset = 0)

When tear-off mode is selected, the tag backfeeds before printing and stops at the manual cut position after printing.

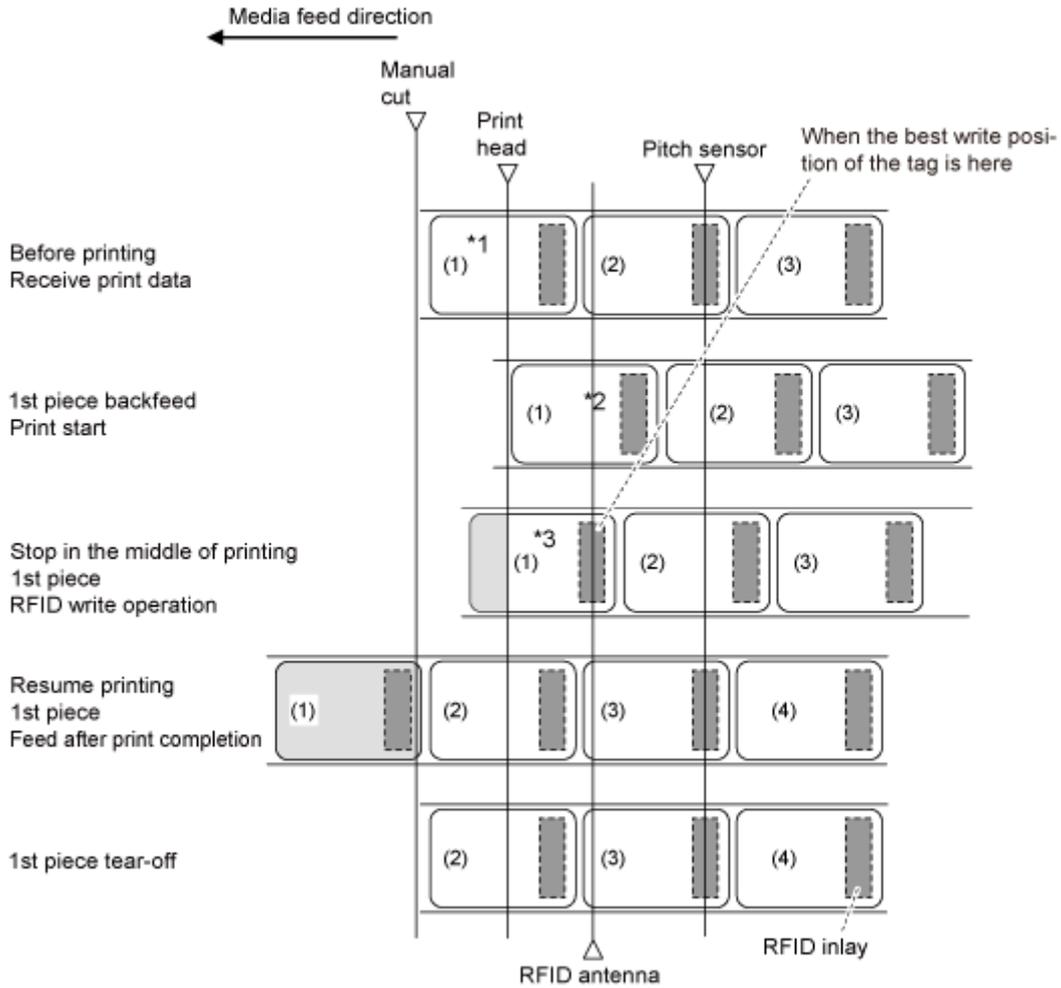


\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Tear-Off Mode (Tag Offset > 0)

When tear-off mode is selected, the tag backfeeds before printing and stops at the manual cut position after printing.



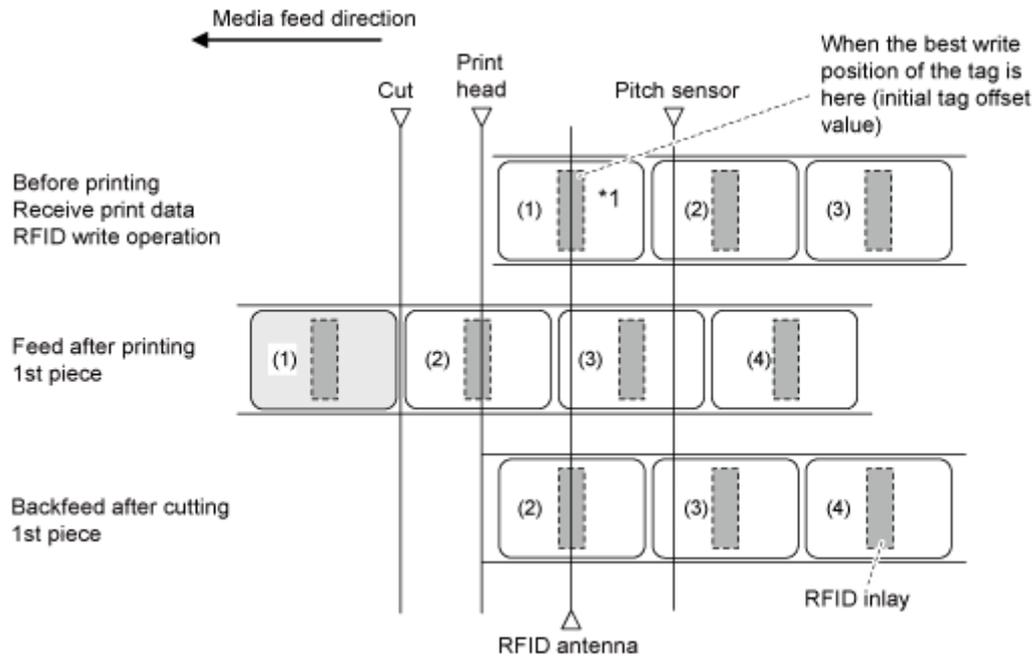
\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

\*2 Because the EPC code read and UID/EPC/IDm print <TU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

\*3 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Cutter Mode and Backfeed After Printing (Tag Offset = 0)

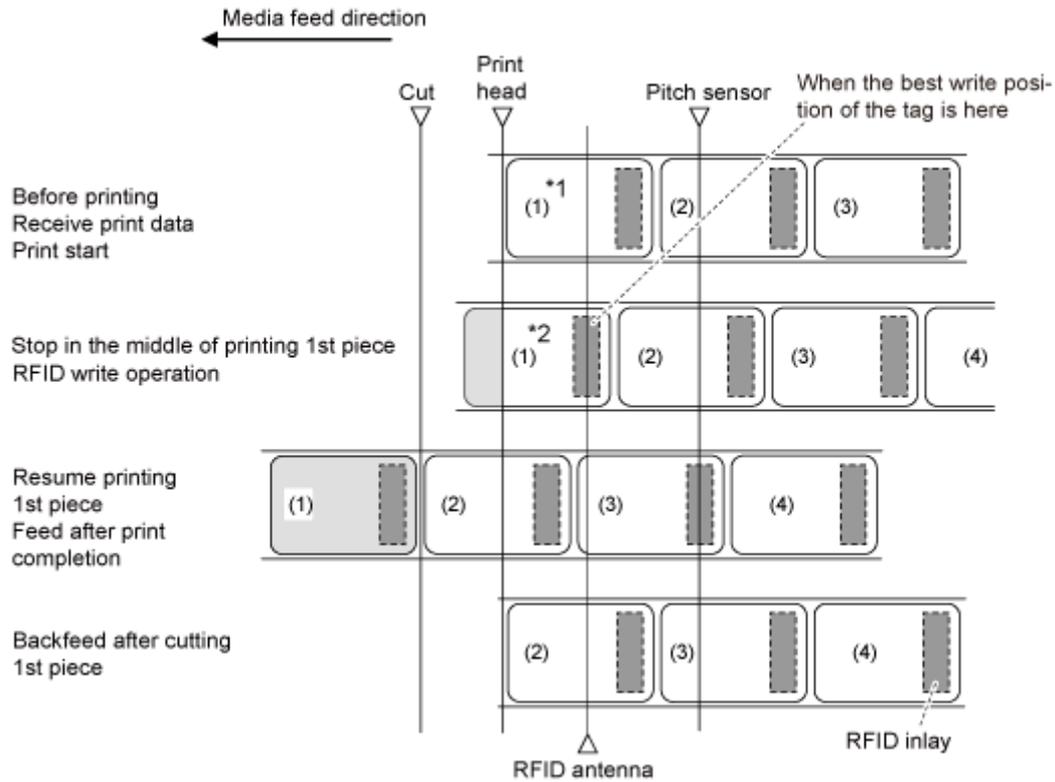
When cutter mode with backfeed after printing is selected, the tag backfeeds after the cut and stops at the print head position.



\*1 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, RFID read [DC2]PJ, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Cutter Mode and Backfeed After Printing (Tag Offset > 0)

When cutter mode with backfeed after printing is selected, the tag backfeeds after the cut and stops at the print head position.

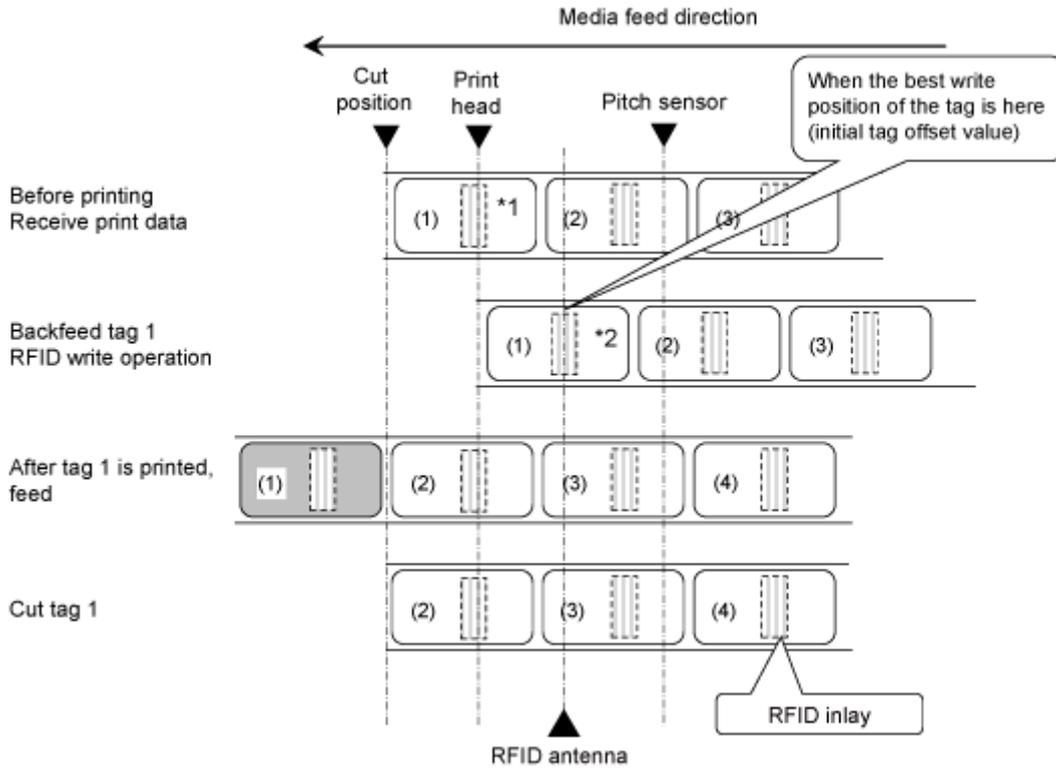


\*1 Because the EPC code read, RFID read [DC2]PJ, and UID/EPC/IDm print <TU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Cutter Mode and Backfeed Before Printing (Tag Offset = 0)

When cutter mode with backfeed before printing is selected, the tag backfeeds before printing, and stops at the cut position after printing.

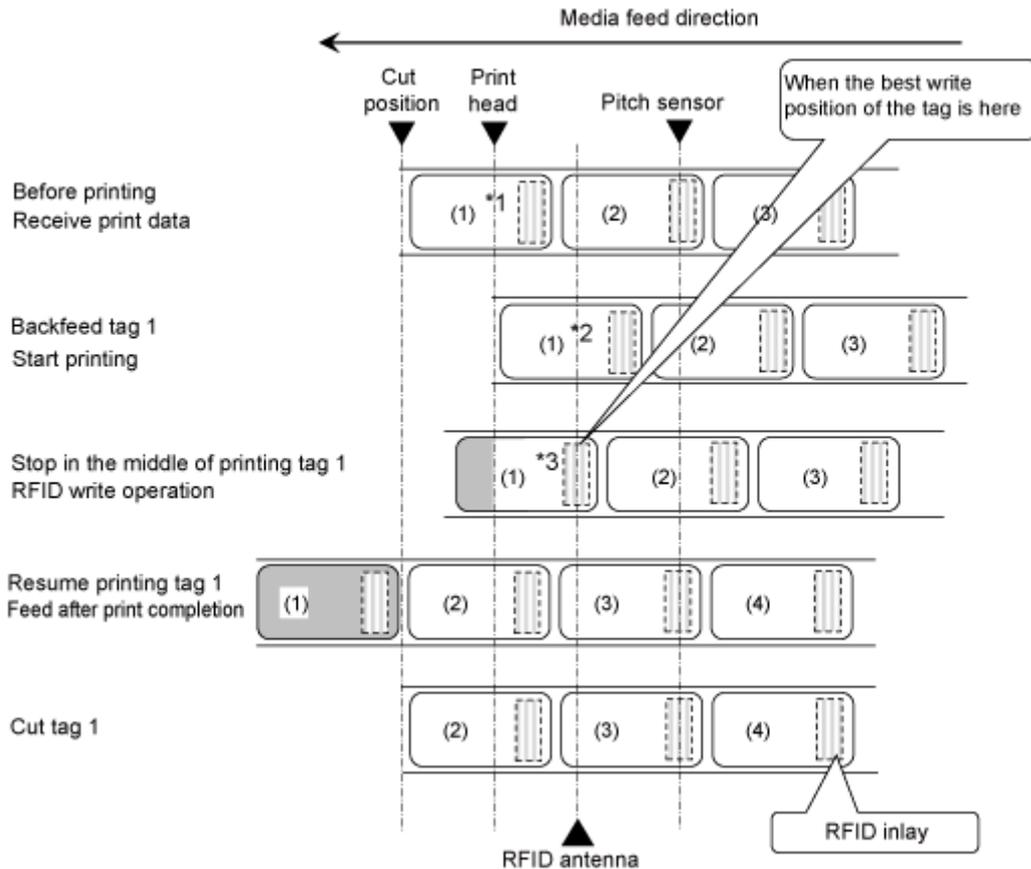


\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Cutter Mode and Backfeed Before Printing (Tag Offset > 0)

When cutter mode with backfeed before printing is selected, the tag backfeeds before printing, and stops at the cut position after printing.



\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

\*2 Because the EPC code read and UID/EPC/IDm print <TU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

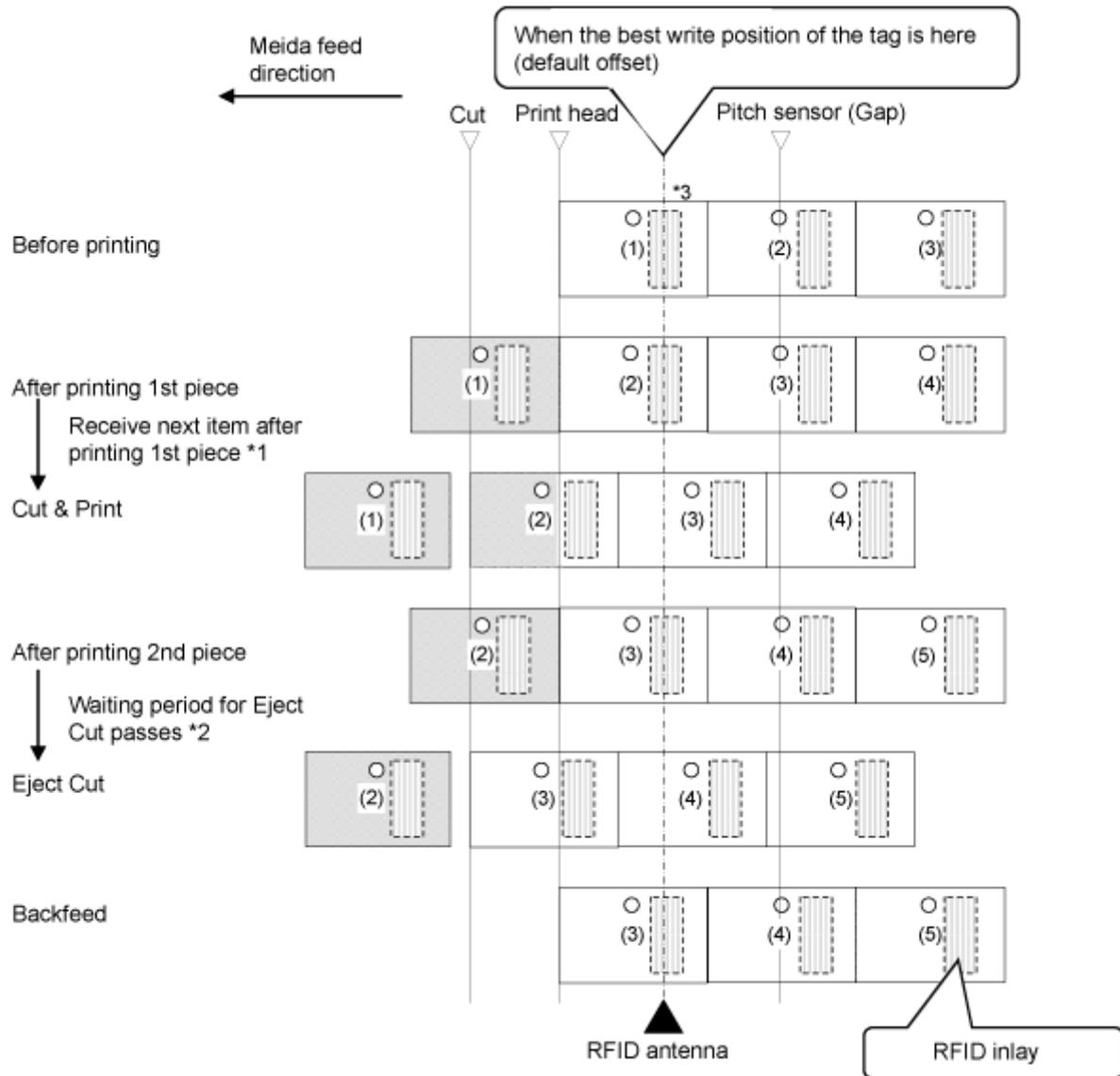
\*3 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Writing with Cut & Print Mode

If you selected cut & print mode, the RFID is encoded before printing while printing is stopped at the print head position.

When in cut & print mode, you cannot use the RFID Tag Offset. Even if you have set the Tag Offset, the set value is ignored.

Furthermore, when cut & print mode is set, the RFID tag error print is same as the error print in continuous and cutter mode.



\*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

\*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.

\*3 The EPC code write <IP0> command writes data at this inlay position. In addition, the RFID read [DC2]PJ, print tag data <TU>, and EPC/TID return <RU> commands acquire information at this inlay position.



- The figure above shows the operation when the Gap sensor is used and the reference position is adjusted with <#> on side hole tags.
- 

### Print Error Sample

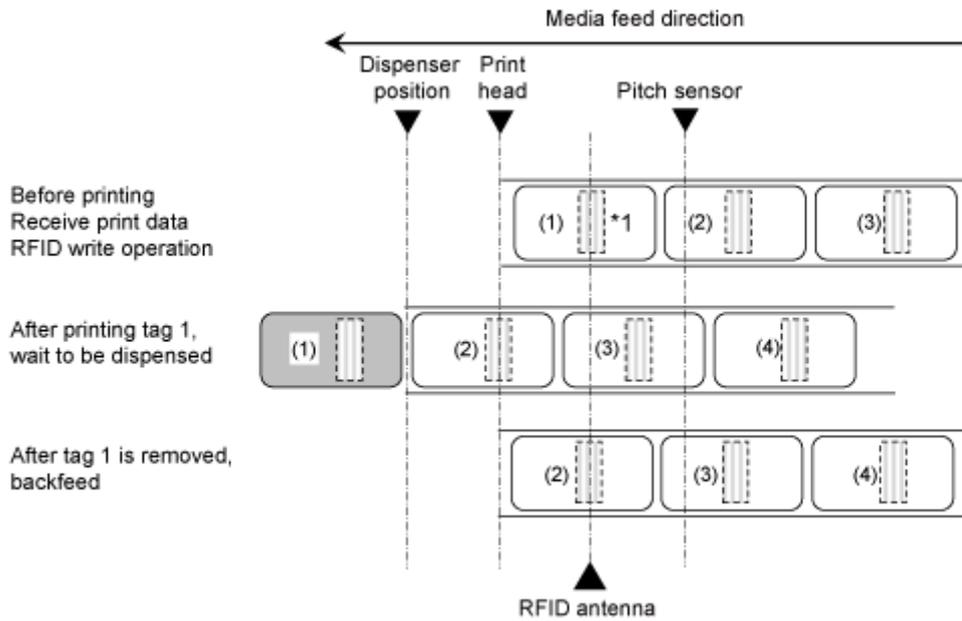
Printing RFID tag errors when cut & print mode is set



Be careful of white streaks.

## RFID Write with Dispenser Mode and Backfeed After Printing (Tag Offset = 0)

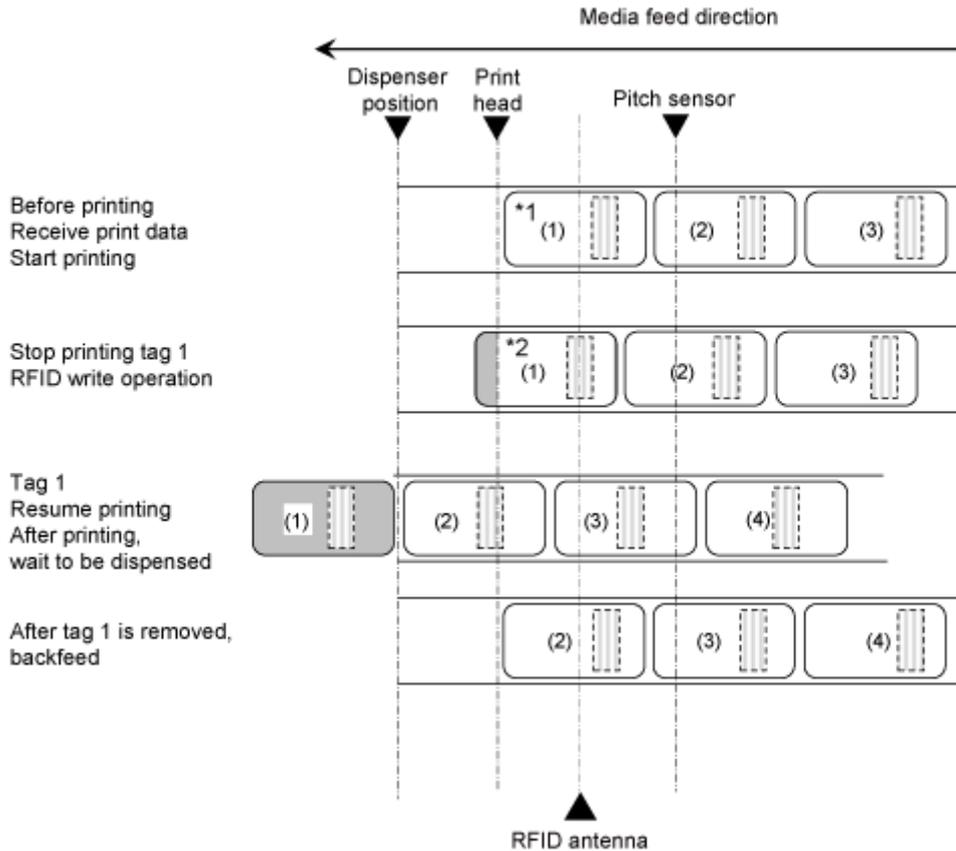
When dispenser mode with backfeed after printing is selected, the tag backfeeds after the tag is removed and stops at the print head position.



\*1 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, RFID read [DC2]PJ, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Dispenser Mode and Backfeed After Printing (Tag Offset > 0)

When dispenser mode with backfeed after printing is selected, the tag backfeeds after dispensing and the tag is removed, and stops at the print head position, and then the next item is analyzed and printing is executed.

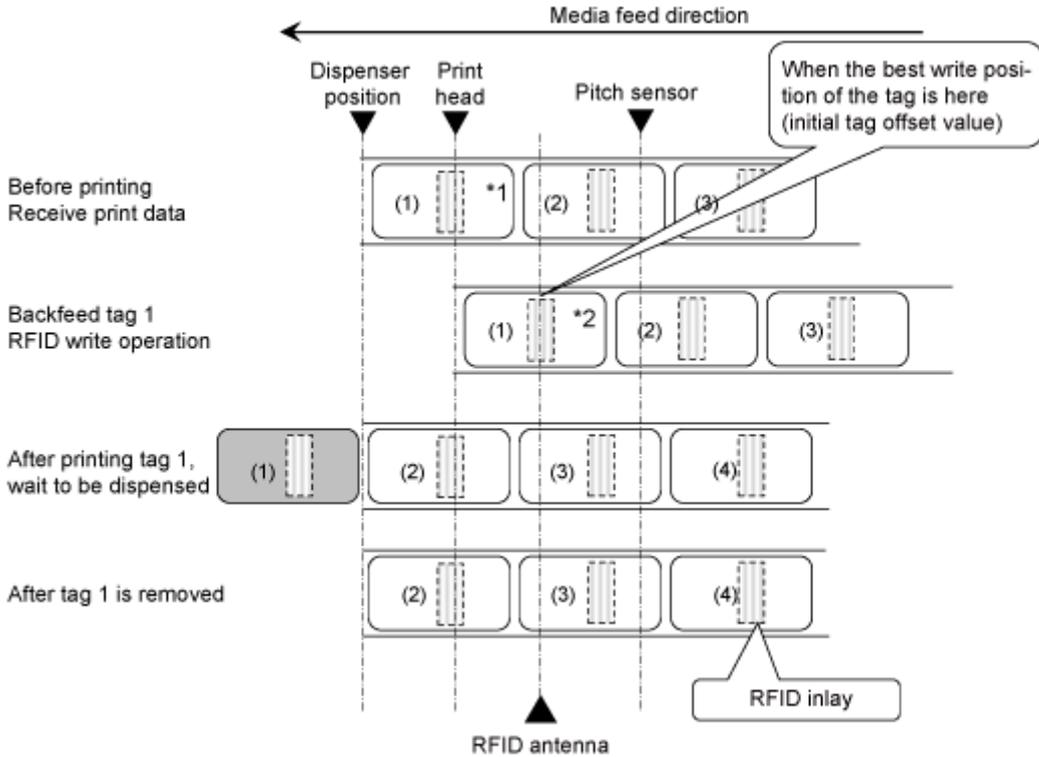


\*1 Because the EPC code read, RFID read [DC2]PJ, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Dispenser Mode and Backfeed Before Printing (Tag Offset = 0)

When dispenser mode with backfeed before printing is selected, the tag backfeeds before printing, and stops at the dispensing position after printing.

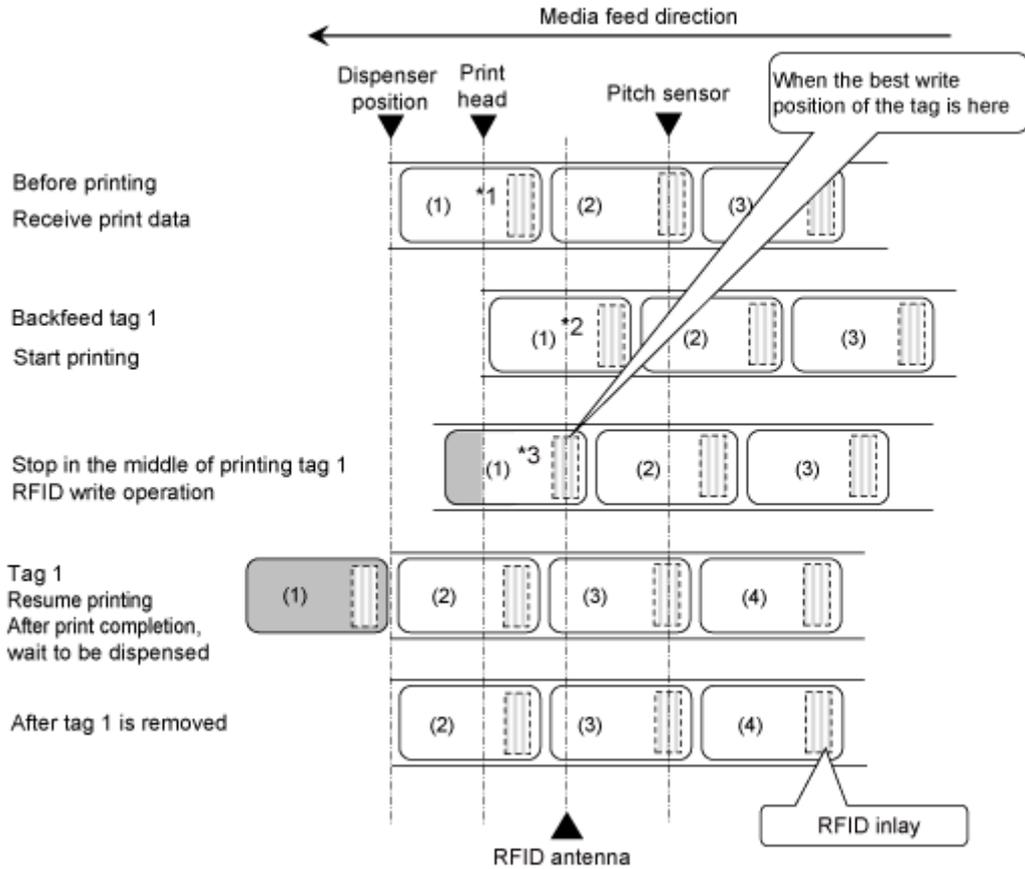


\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

\*2 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## RFID Write with Dispenser Mode and Backfeed Before Printing (Tag Offset > 0)

When dispenser mode with backfeed before printing is selected, the tag backfeeds before printing, and stops at the dispensing position after printing.



\*1 Because the EPC code read and RFID read [DC2]PJ commands acquire the information at this inlay position, do not use them.

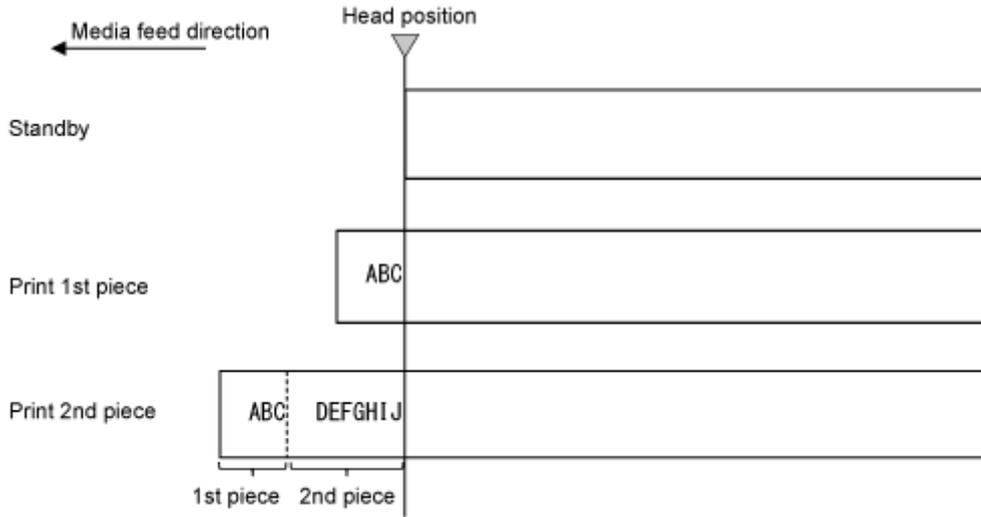
\*2 Because the EPC code read and UID/EPC/IDm print <TU> commands acquire the information at this inlay position, do not use them if the Tag Offset is set to other than an initial value.

\*3 The EPC code write <IP0> command and RFID write <RK> command write the data at this inlay position. The EPC code read, UID/EPC/IDm print <TU>, and UID/EPC/IDm return <RU> commands acquire the information at this inlay position.

## Operations When the Media Sensor Is Disabled

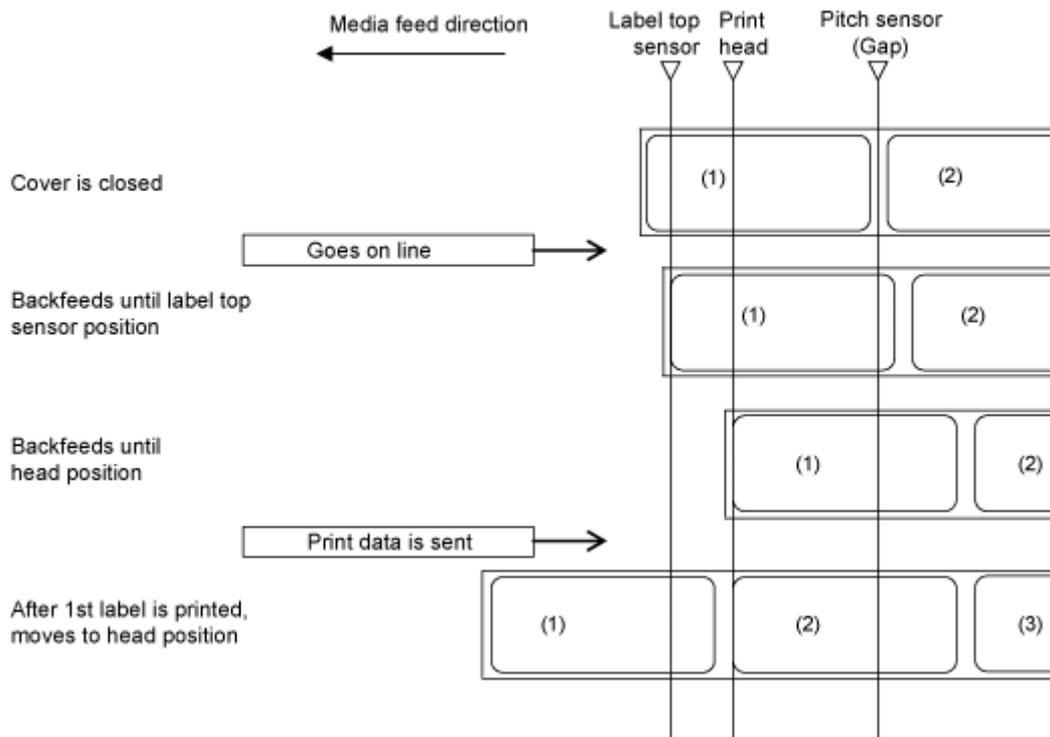
### Media Sensor Disabled

When the media sensor is disabled, media stops at the specified print end line.



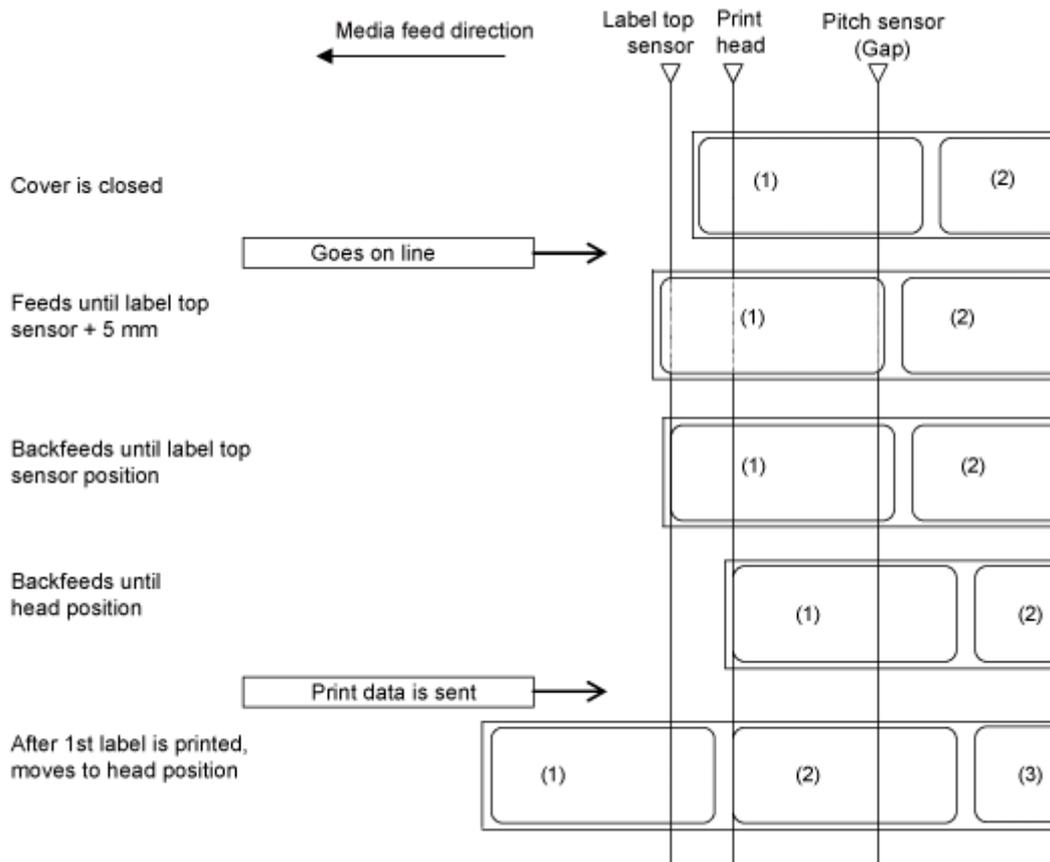
## Operations When the Label Waste Prevention Function Is Enabled

### Continuous Mode (When the Top Cover Is Closed, and There Is a Label Above the Label Top Sensor)



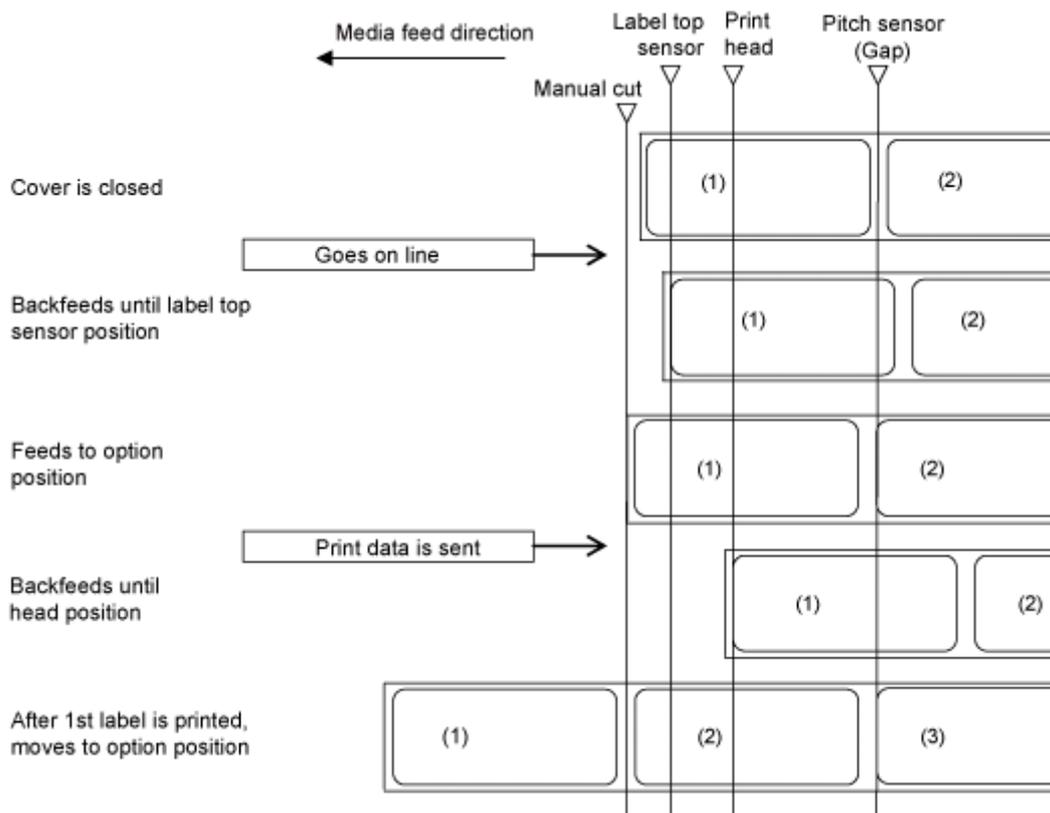
- The top of the label (first label) moves in the same way in the following print modes.
  - Cut & print mode and backfeed after printing (when the top cover is closed, and there is a label above the label top sensor)

## Continuous Mode (When the Top Cover Is Closed, and There Is No Label Above the Label Top Sensor)

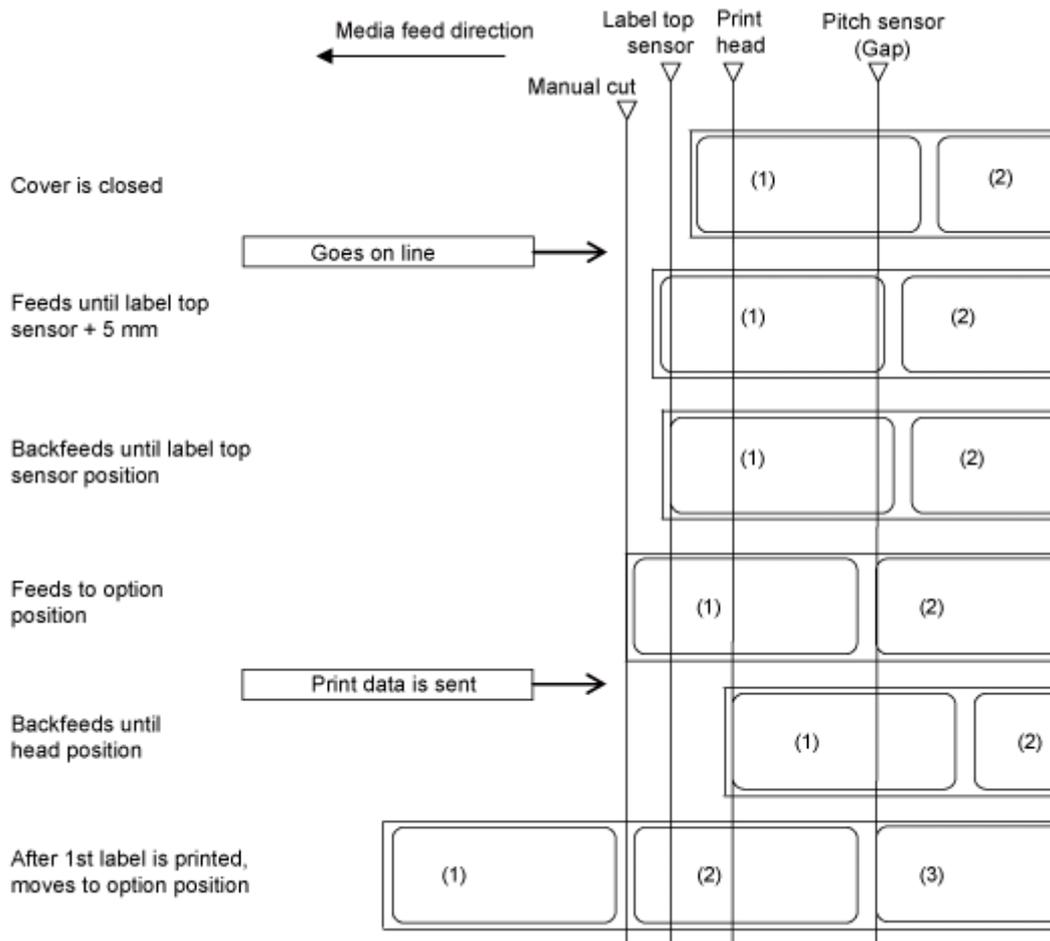


- The top of the label (first label) moves in the same way in the following print modes.
  - Cut & print mode and backfeed after printing (when the top cover is closed, and there is no label above the label top sensor)

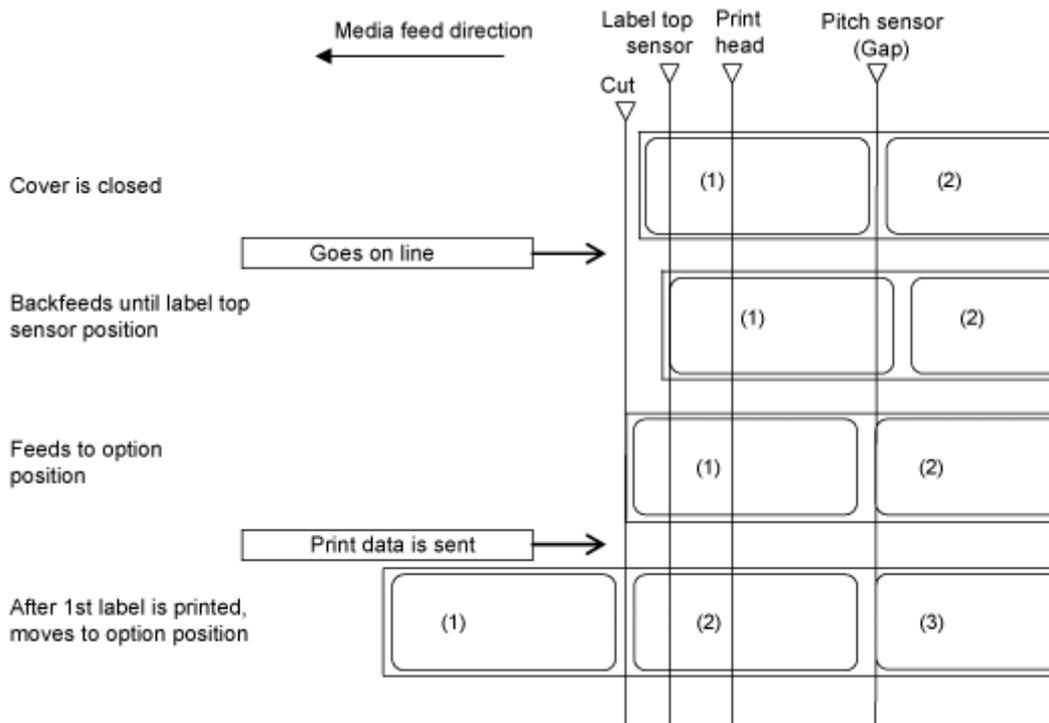
## Tear-Off Mode (When the Top Cover Is Closed, and There Is a Label Above the Label Top Sensor)



## Tear-Off Mode (When the Top Cover Is Closed, and There Is No Label Above the Label Top Sensor)

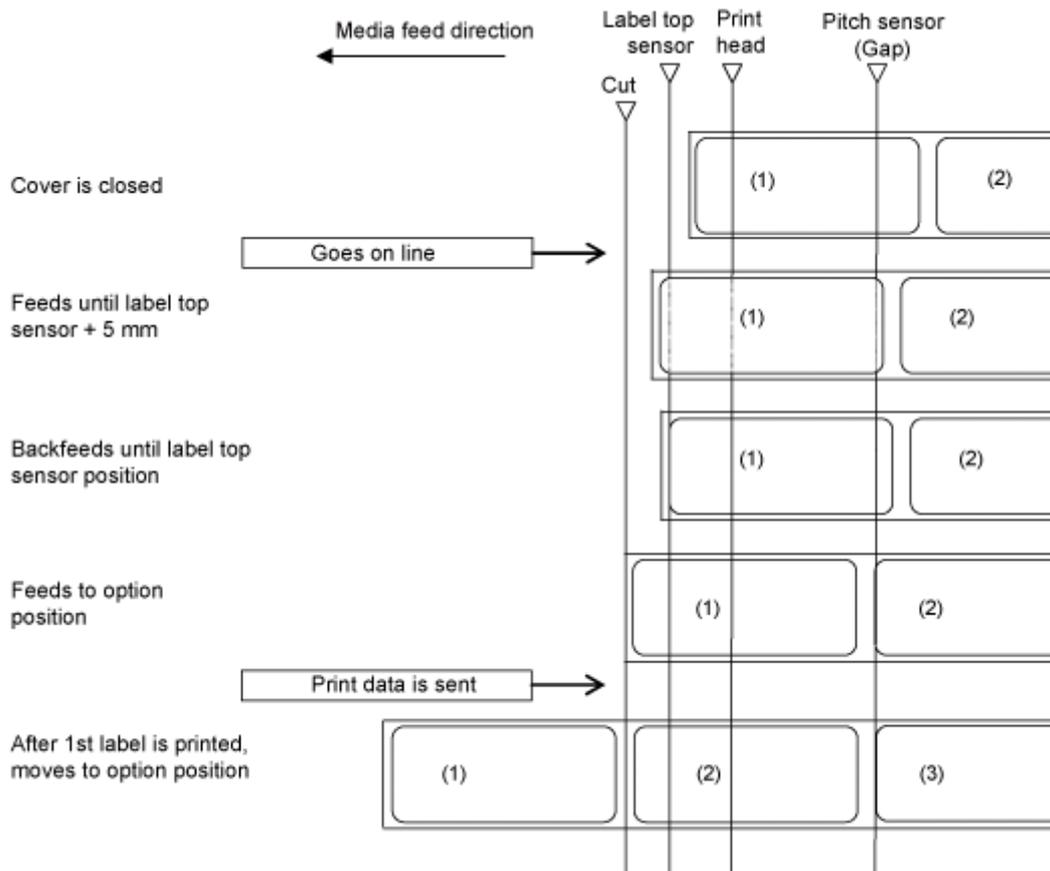


## Cutter Mode and No Backfeed (When the Top Cover Is Closed, and There Is a Label Above the Label Top Sensor)



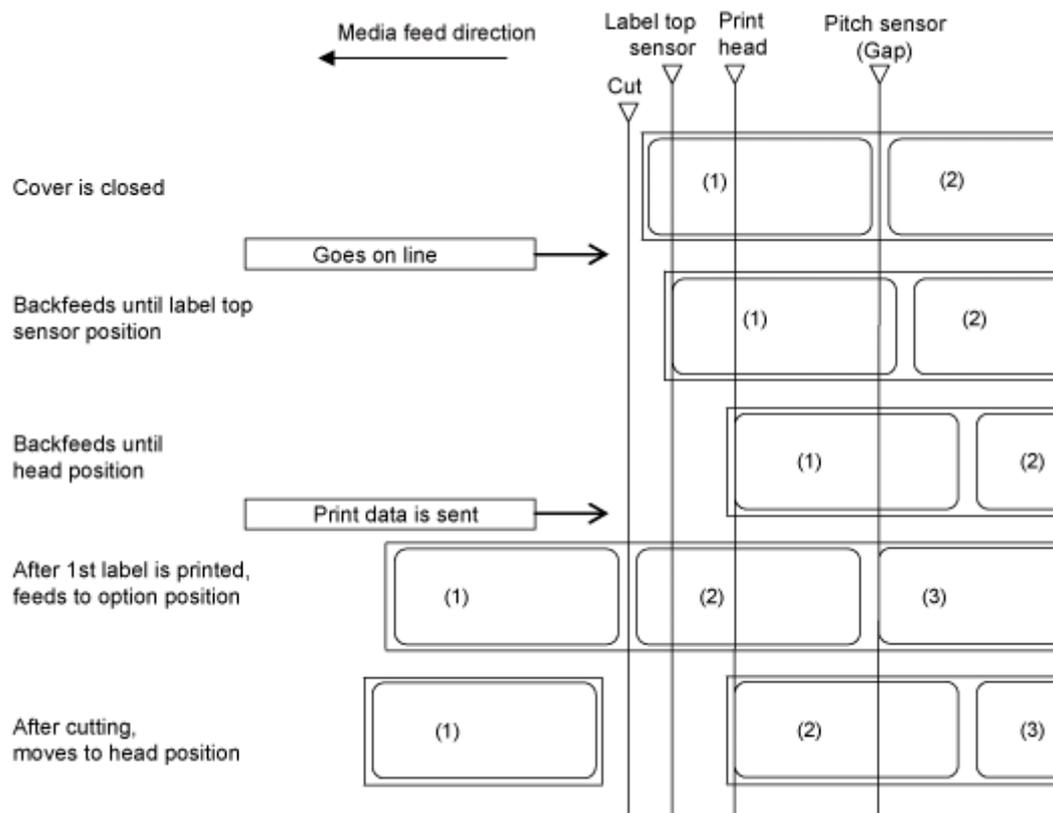
- The top of the label (first label) moves in the same way in the following print modes.
  - Cutter mode and backfeed before printing (when the top cover is closed, and there is a label above the label top sensor)
  - Partial cutter mode and no backfeed (when the top cover is closed, and there is a label above the label top sensor)
  - Partial cutter mode and backfeed before printing (when the top cover is closed, and there is a label above the label top sensor)

## Cutter Mode and No Backfeed (When the Top Cover Is Closed, and There Is No Label Above the Label Top Sensor)

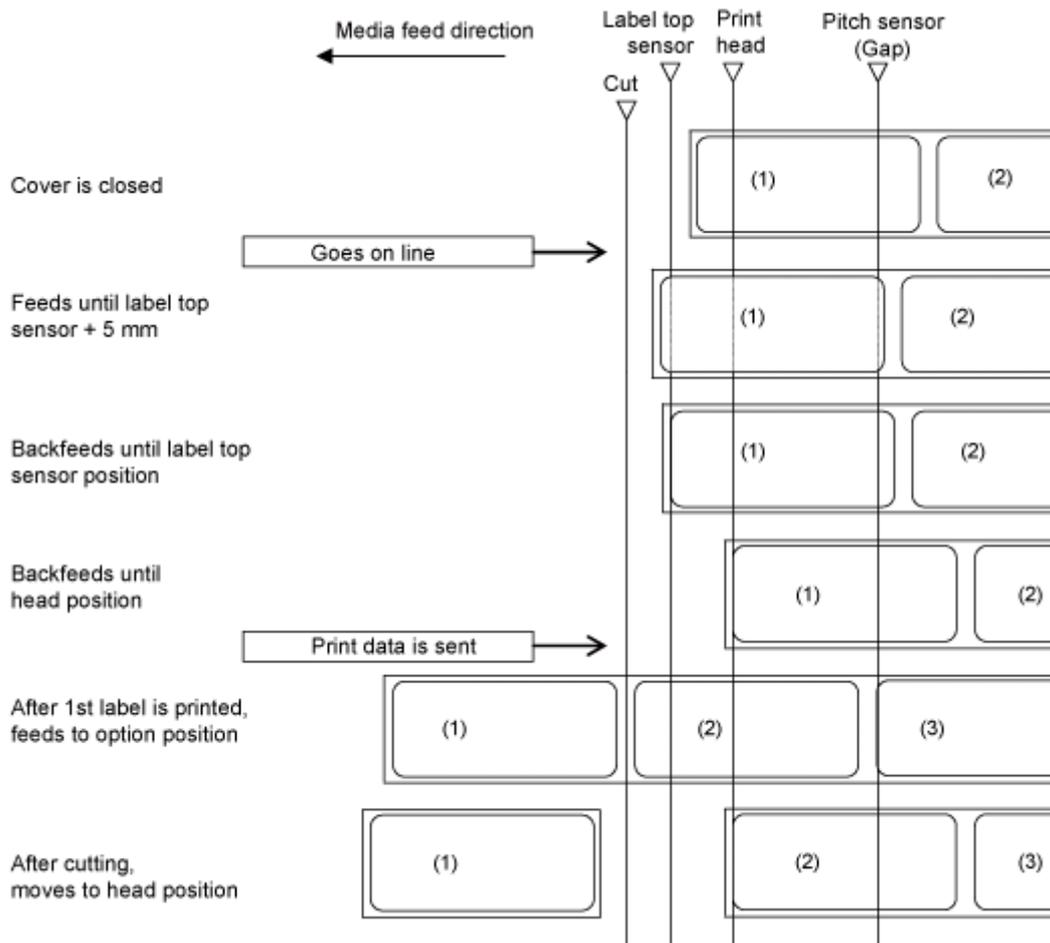


- The top of the label (first label) moves in the same way in the following print modes.
  - Cutter mode and backfeed before printing (when the top cover is closed, and there is no label above the label top sensor)
  - Partial cutter mode and no backfeed (when the top cover is closed, and there is no label above the label top sensor)
  - Partial cutter mode and backfeed before printing (when the top cover is closed, and there is no label above the label top sensor)

## Cutter Mode and Backfeed After Printing (When the Top Cover Is Closed, and There Is a Label Above the Label Top Sensor)



## Cutter Mode and Backfeed After Printing (When the Top Cover Is Closed, and There Is No Label Above the Label Top Sensor)



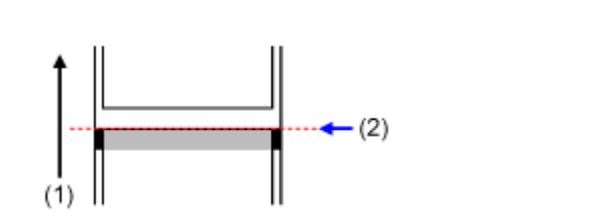
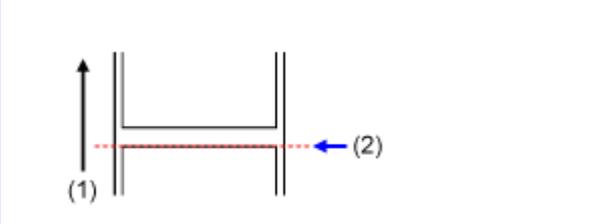
# Adjusting the Base Reference Point

## About the Base Reference Point

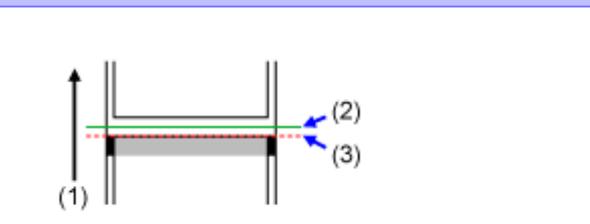
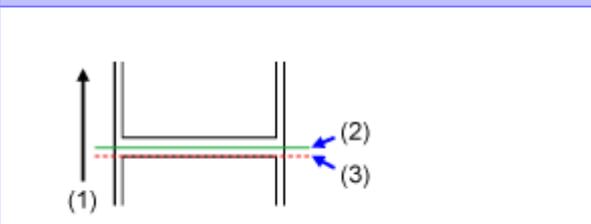
The base reference point is the point at which one determines the print position and stop/cut/dispensing position.

The base reference point differs depending on the print mode or media sensor you use.

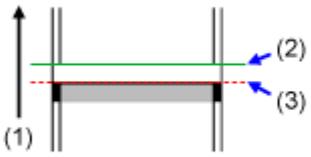
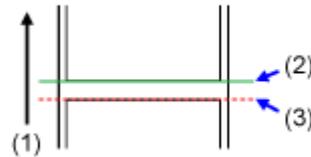
### Continuous Mode

I-mark label	Gap label
 <p>The diagram shows a label with a grey rectangular print area. A vertical arrow labeled (1) points upwards from the left edge of the label. A horizontal dashed red line labeled (2) points to the right edge of the print area.</p>	 <p>The diagram shows a label with a gap in the middle. A vertical arrow labeled (1) points upwards from the left edge of the label. A horizontal dashed red line labeled (2) points to the right edge of the gap.</p>
(1) Feed direction (2) Print position	(1) Feed direction (2) Print position

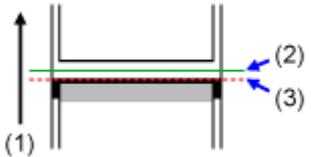
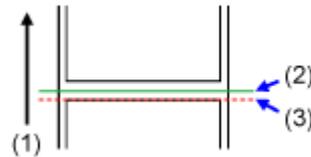
### Tear-Off Mode

I-mark label	Gap label
 <p>The diagram shows a label with a grey rectangular print area. A vertical arrow labeled (1) points upwards from the left edge. A horizontal green line labeled (2) points to the right edge of the label. A horizontal dashed red line labeled (3) points to the right edge of the print area.</p>	 <p>The diagram shows a label with a gap in the middle. A vertical arrow labeled (1) points upwards from the left edge. A horizontal green line labeled (2) points to the right edge of the label. A horizontal dashed red line labeled (3) points to the right edge of the gap.</p>
(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
 <p>(1) Feed direction                  (2) Dispensing position                  (3) Print position</p>	 <p>(1) Feed direction                  (2) Dispensing position                  (3) Print position</p>

**Cutter/Partial Cutter Mode**

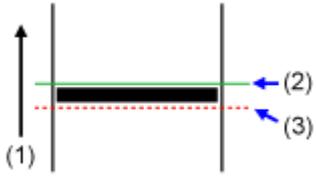
I-mark label	Gap label
 <p>(1) Feed direction                  (2) Cut position                  (3) Print position</p>	 <p>(1) Feed direction                  (2) Cut position                  (3) Print position</p>

**Linerless Cutter Mode**

I-mark Linerless Label
 <p>(1) Feed direction                  (2) Cut position                  (3) Print position</p>

## Linerless Tearoff Mode

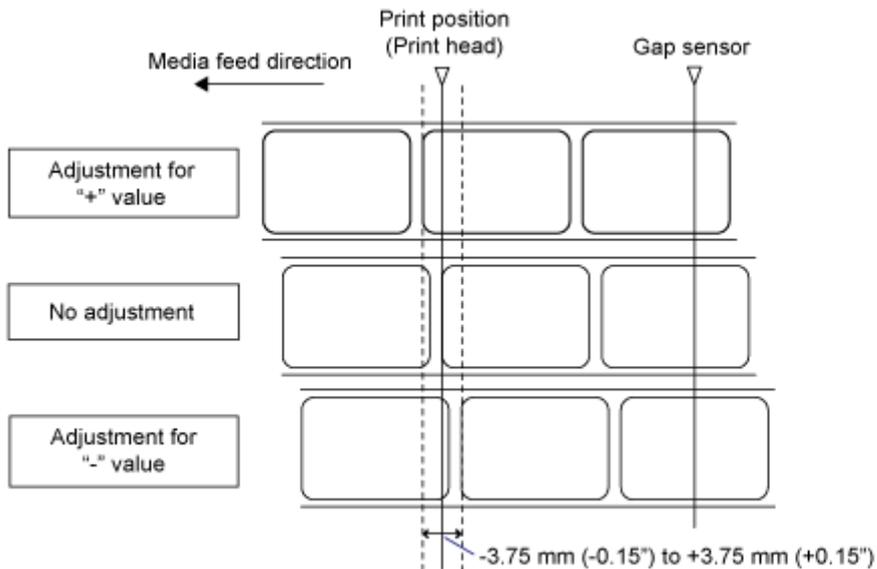
### I-mark Linerless Label



- (1) Feed direction
- (2) Tear-off position
- (3) Print position

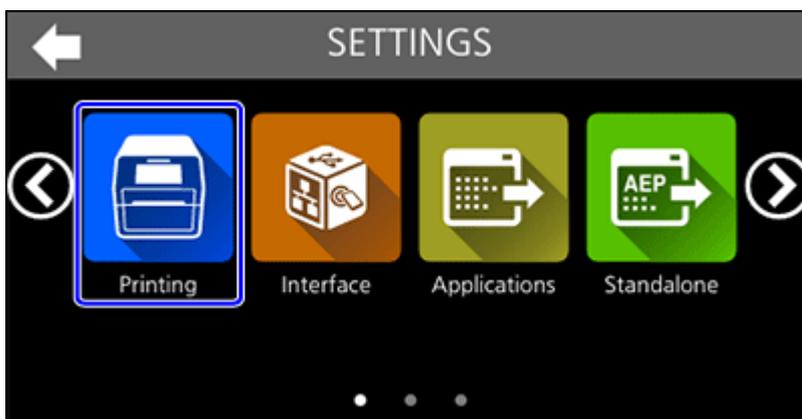
## Adjusting the Print Position

Set the [Pitch] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the print position.



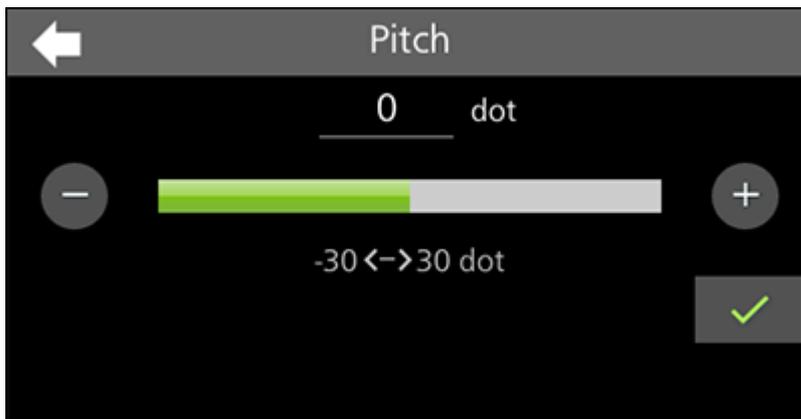
- The above base reference position (print position) becomes the stop position when the sensor type is set to transmissive (Gap).

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Advanced] > [Adjustments] > [Pitch].

5. Change the setting value.

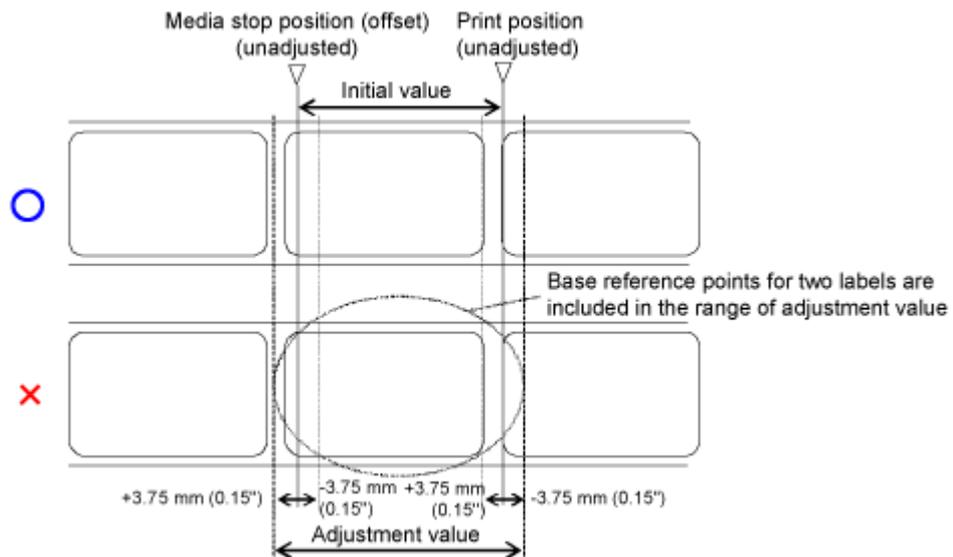


The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots



- Do not allow the distance between [Pitch] and [Offset] after adjustments to exceed the size of 1 label (including liner).



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

6. Tap  to save the setting value.

7. Press the  (Power/Home) button to show the Home screen.

**8. Press the  (Power/Home) button to go to Online mode.**

You can print to check the adjusted print position.

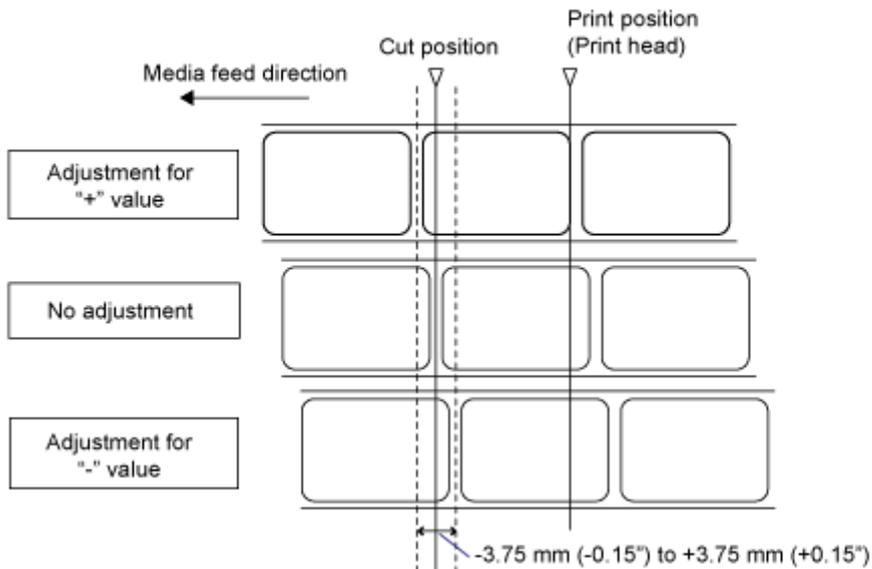


- While the print job is paused, the [Adjustments] menu will appear instead of the [SETTINGS] menu and you can adjust the print position.
-

## Adjusting the Media Stop Position

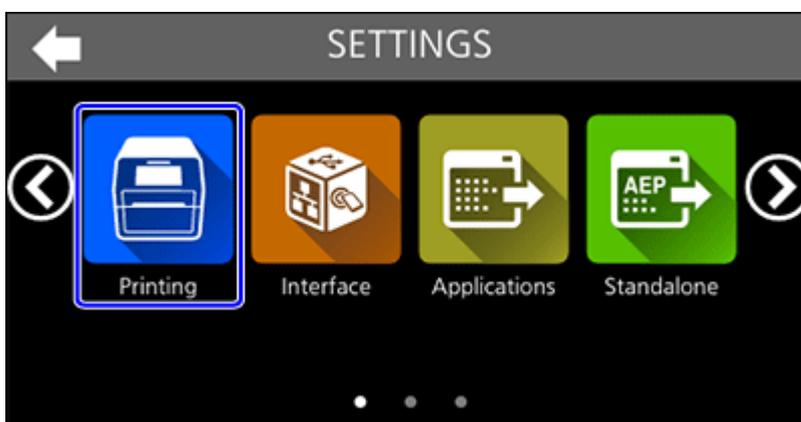
Set the [Offset] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the media stop position (for cutter/dispenser/tear-off mode).

When Adjusting the Cut Position



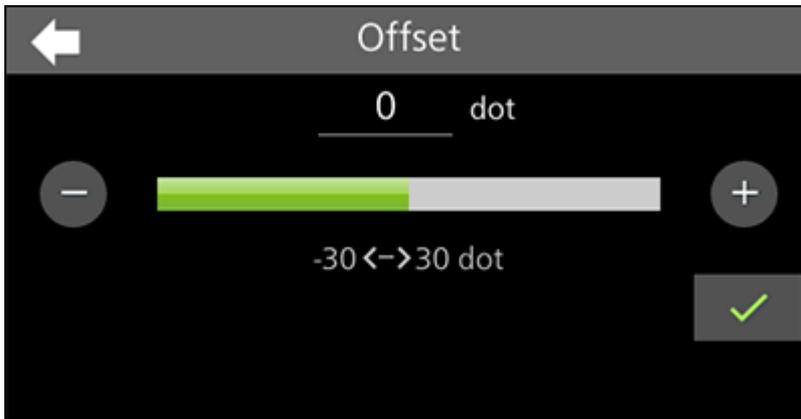
- The above cut position becomes the stop position when the sensor type is set to transmissive (Gap).
- You can also adjust when the print mode is specified to tear-off or dispenser.

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Advanced] > [Adjustments] > [Offset].

5. Change the setting value.

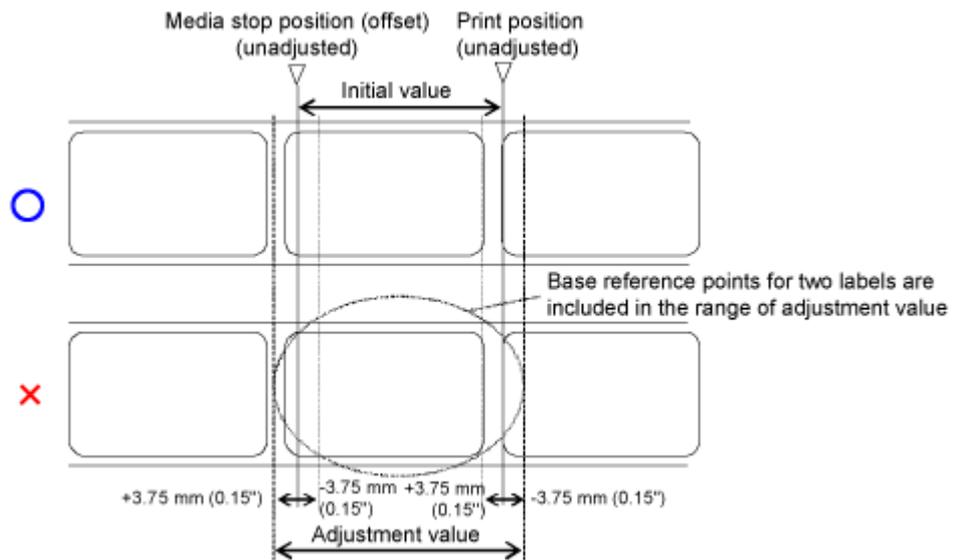


The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots



- Do not allow the distance between [Pitch] and [Offset] after adjustments to exceed the size of 1 label (including liner).



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

6. Tap  to save the setting value.

7. Press the  (Power/Home) button to show the Home screen.

**8. Press the  (Power/Home) button to go to Online mode.**

You can print to check the adjusted stop position.

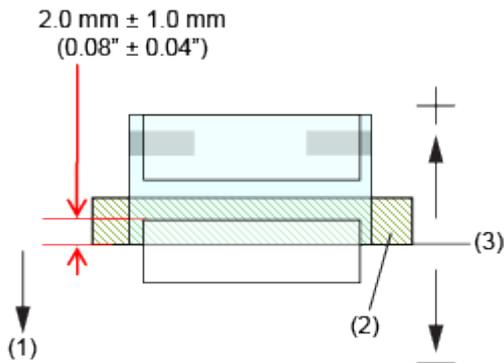


- While the print job is paused, the [Adjustments] menu appears instead of the [SETTINGS] menu and you can adjust the media stop position.
-

## 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  $2 \pm 1$  mm ( $0.08" \pm 0.04"$ ) on the liner.

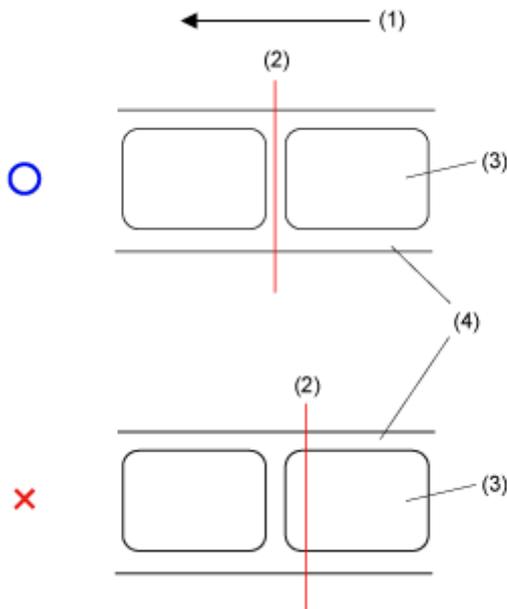


- (1) Feed direction
- (2) Dispenser bar
- (3) Stop position

### Cut Position When Using the Label in Tear-Off/Cutter Modes

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.



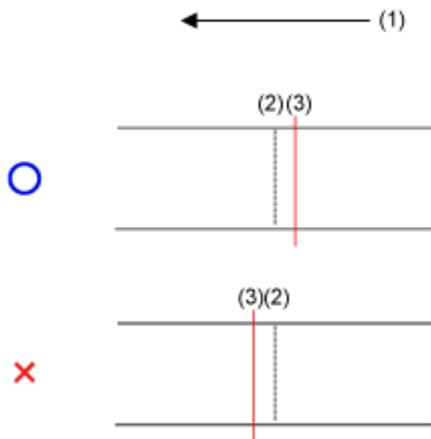
- (1) Feed direction
- (2) Cut position (I-mark sensor/Gap sensor)
- (3) Label

(4) Liner

### Cut Position When Using the Media with Perforated Line in Tear-Off/Cutter Modes

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

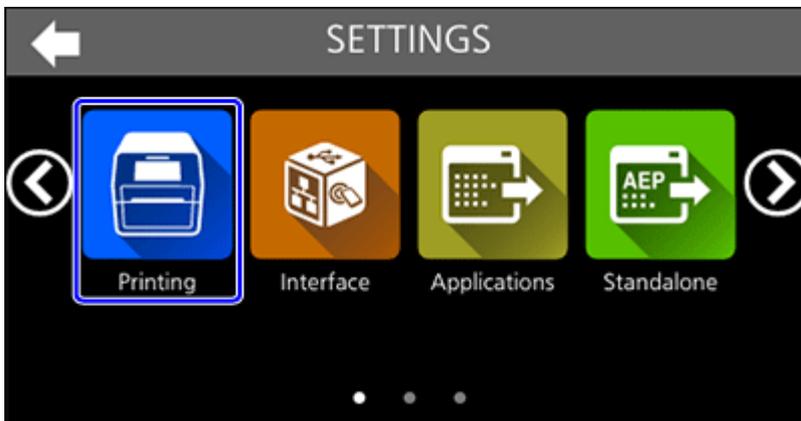
(3) Cut position

## Adjusting the Position of the Label Top Sensor

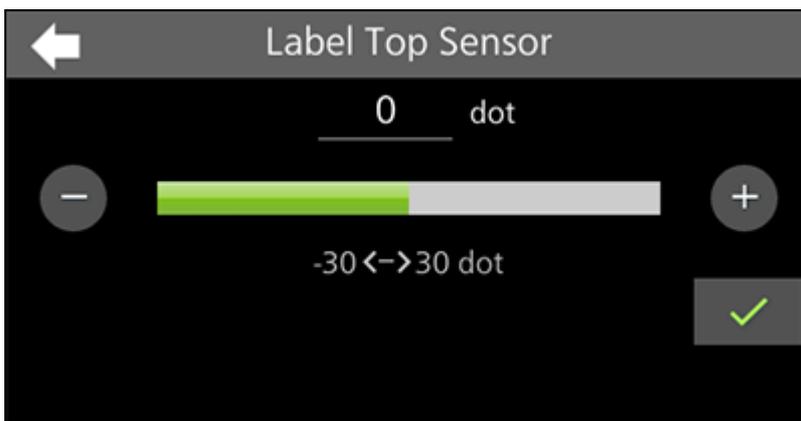
When the Label Waste Prevention function is enabled, the label top sensor, which is located at the media discharge outlet, detects the leading edge of the media and aligns the media to the print start position.

The print start position may be misaligned because of the media width or media type. Adjust [Label Top Sensor] in the [Printing] > [Advanced] > [Adjustments] menu.

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Advanced] > [Adjustments] > [Label Top Sensor].
5. Change the setting value.



The setting range is as follows:

Resolution	Setting range
203 dpi (1 dot = 0.125 mm (0.0049"))	-30 to +30 dots

Resolution	Setting range
305 dpi (1 dot = 0.083 mm (0.0033"))	-45 to +45 dots



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

6. Tap  to save the setting value.

7. Press the  (Power/Home) button to show the Home screen.

8. Press the  (Power/Home) button to go to Online mode.

Execute printing so you can check the adjusted print start position.



- While the print job is paused, the [Adjustments] menu appears instead of the [SETTINGS] menu and you can adjust the position of the label top sensor.
-

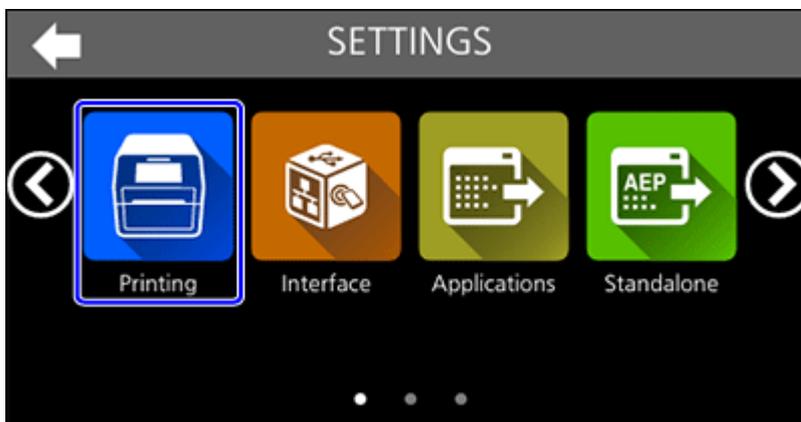
## Adjusting the Print Quality

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### Adjusting the Print Darkness

The adjustment procedure for the print darkness is as follows:

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Darkness].
5. Change the setting value.



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

6. Tap  to save the setting value.
7. Press the  (Power/Home) button to show the Home screen.

**8. Press the  (Power/Home) button to go to Online mode.**

You can print to check the print quality.



- You can fine tune the print darkness by setting [Darkness Adjust] in the [Printing] > [Advanced] > [Adjustments] menu.
  - When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands], the data will be printed with the print darkness specified by command.
  - While the print job is paused, the [Adjustments] menu will appear instead of the [SETTINGS] menu and you can adjust the print darkness.
-

## Adjusting the Print Speed

The adjustment of the print speed not only changes the speed of printing but also affects the print quality.

The setting range varies depending on the print resolution of the product.

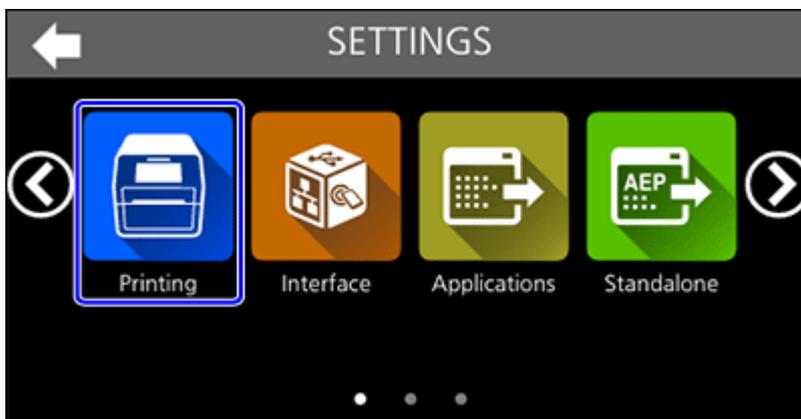
The setting range of the print speed is as follows:

Resolution	Setting range
203 dpi (8 dots/mm)	2 to 8 ips (inches/sec) (50.8 to 203.2 mm/sec)
305 dpi (12 dots/mm)	2 to 6 ips (inches/sec) (50.8 to 152.4 mm/sec)



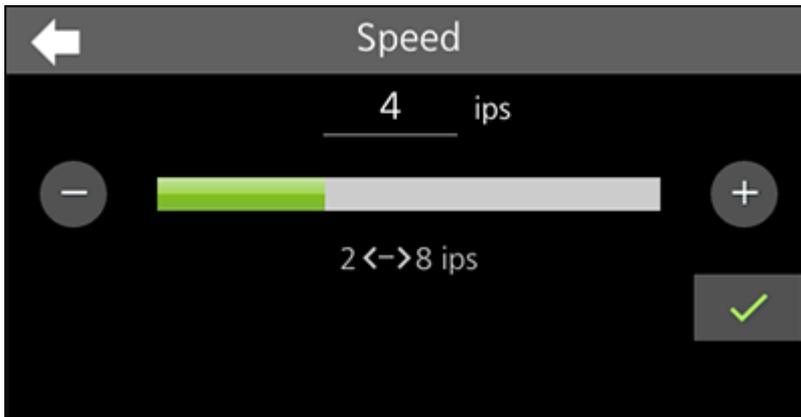
- If the optional linerless cutter unit is installed, the setting range is 2 to 4 ips.

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [Printing].



4. Tap [Speed].

5. Change the setting value.



6. Tap  to save the setting value.

7. Press the  (Power/Home) button to show the Home screen.

8. Press the  (Power/Home) button to go to Online mode.

You can print to check the print quality.



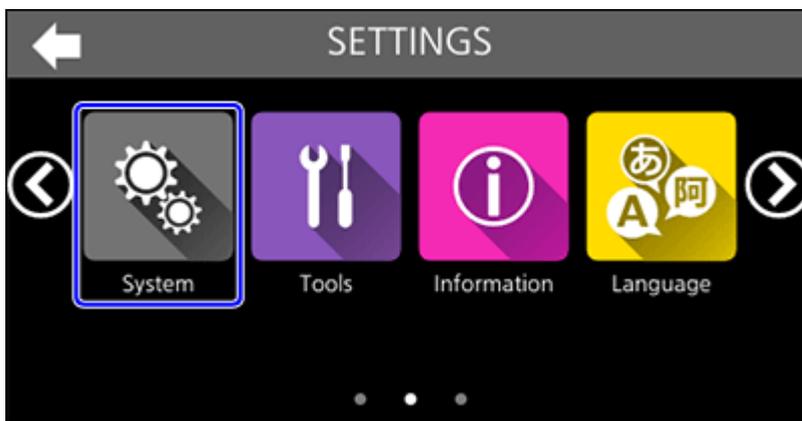
- When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands], the data will be printed with the print speed specified by command.
  - While the print job is paused, the [Adjustments] menu will appear instead of the [SETTINGS] menu and you can adjust the print speed.
-

## Adjusting the Buzzer Volume

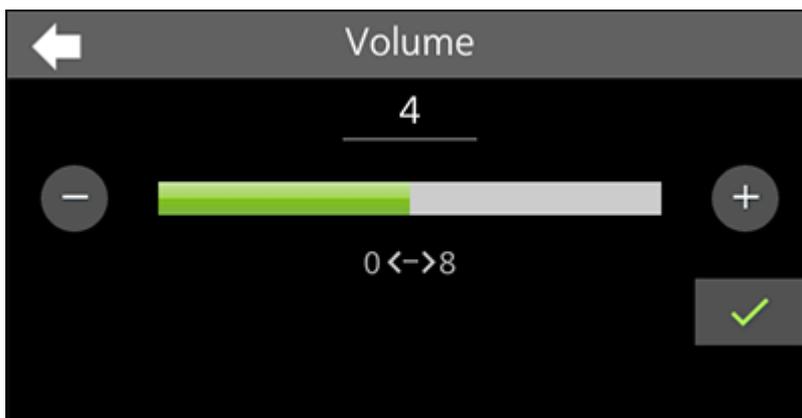
The adjustment procedure for the buzzer volume when an error occurs is as follows:

1. Tap [SETTINGS] on the Home screen or Offline screen.
2. Input the password if it is enabled.
3. Tap [System].

You can switch the screen by tapping   or sliding the screen to the left or right.



4. Tap [Sound] > [Volume].
5. Change the setting value.



The setting range is from 0 to 8.

0 is the lowest and 8 is the highest.

If you set the volume to 0, it mutes the sound.

6. Tap  to save the setting value.



- You can set this item from the panel that is displayed by swiping the screen as well.
  - You can adjust the volume in [System] > [Sound] > [Bluetooth Volume] when a Bluetooth device, such as a headset, is connected.
-

## RFID Settings (RFID Models Only)

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### Usable RFID Standards

The RFID standards that can be used with the RFID module are as follows:

RFID Standard	UHF (920 MHz)	HF (13.56 MHz)
ISO/IEC18000-63	Available	-
ISO/IEC 15693 <ul style="list-style-type: none"> <li>• ICODE SLI/SLIX/SLIX-S</li> <li>• Tag-it HF-I</li> <li>• my-d</li> </ul>	-	Available
ISO/IEC 14443 Type A <ul style="list-style-type: none"> <li>• NTAG203</li> <li>• NTAG210/213/215/216</li> <li>• MIFARE UltraLight</li> <li>• MIFARE UltraLight C</li> <li>• my-d move NFC</li> </ul>	-	Available
ISO/IEC18092 <ul style="list-style-type: none"> <li>• FeliCa Lite-S</li> </ul>	-	Available

## Setting Write/Read Conditions Appropriate for RFID Tags

### Using the SATO RF Analyze Function to Measure RFID Tags

Use the SATO RF Analyze function after configuring an RFID tag according to the Inlay Configuration Guide in order to adjust the read/write conditions in accordance with the RFID tags you are using.

This function automatically moves the product's RFID standard antenna to measure RFID tags, and determine the conditions to consistently write and read them. The results of the measurement are immediately applied to the product. Furthermore, by saving them as an RFID tag model, you can easily access the settings when using the same RFID tags.



- The length from the leading edge of the tag to the inlay should be 15 mm (0.59") or more.
  - The tag length should be 42 mm (1.65") or more (including liner) to execute SATO RF Analyze.
  - Keep the setting value of the radio power level 24 dBm or less.
- 

### Setting Measurement Conditions

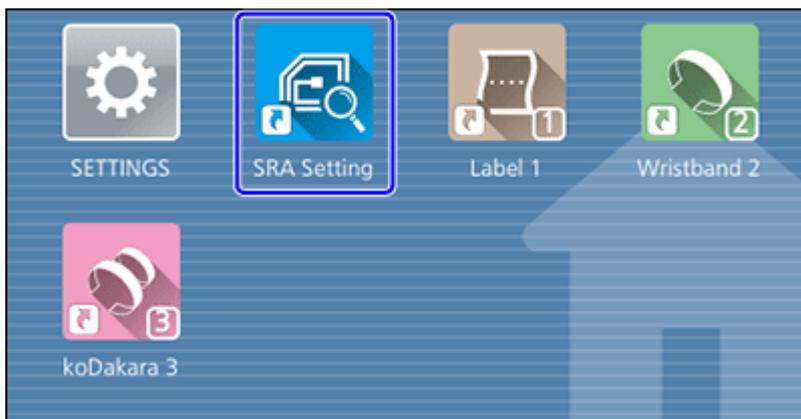
Before executing measurement, set the search level, writing/reading power, and name for saving as an RFID tag model.

Set the writing/reading power according to the Inlay Configuration Guide. For details, access the following URL:

<https://www.sato-global.com/rfid/guide.html>

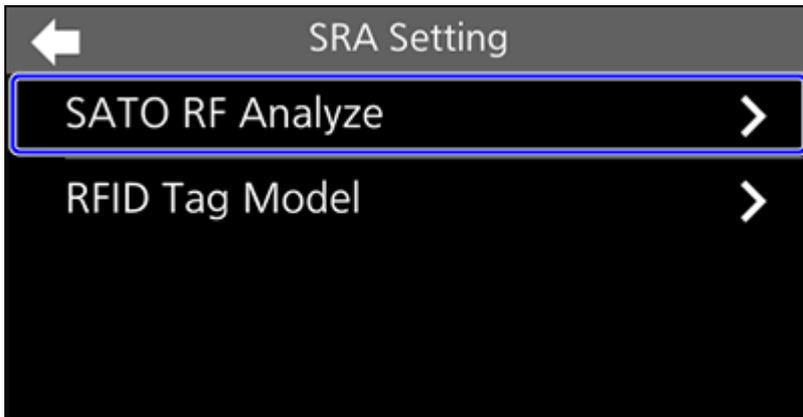
To use inlays that are not in the Inlay Configuration Guide, use the initial values.

#### 1. Tap [SRA Setting] on the Home screen.

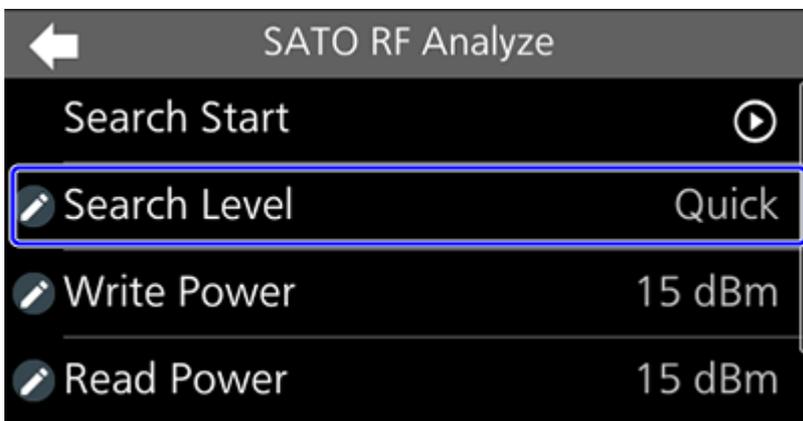


- You can also access the SRA settings from the [Interface] > [RFID] menu in the Settings mode.
-

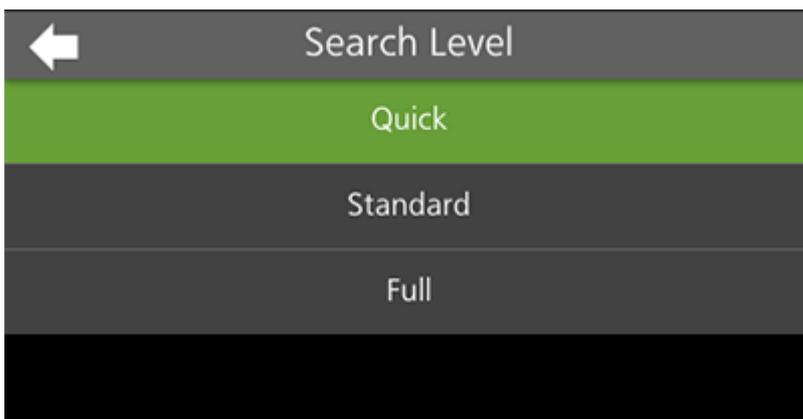
2. Tap [SATO RF Analyze].



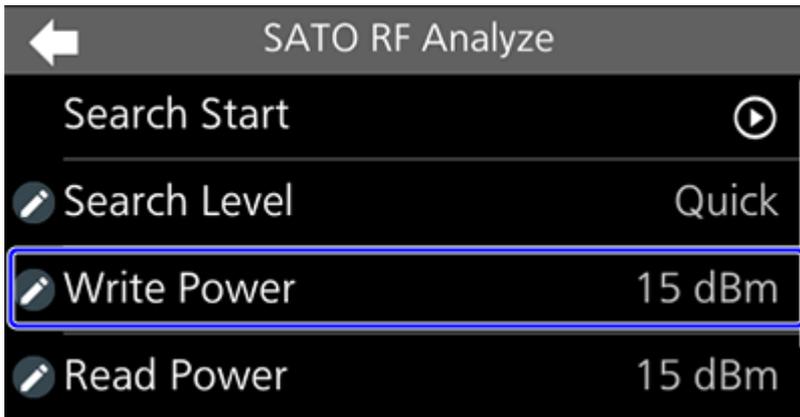
3. Tap [Search Level].



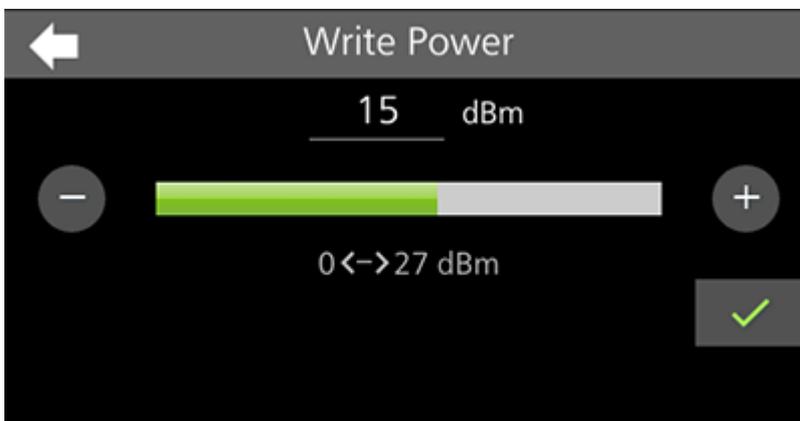
4. Tap the search level to execute.



5. Tap [Write Power].

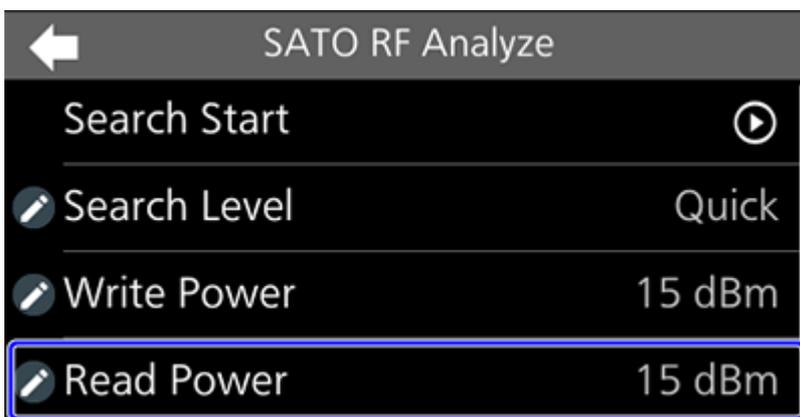


6. Set the writing power, and then tap .

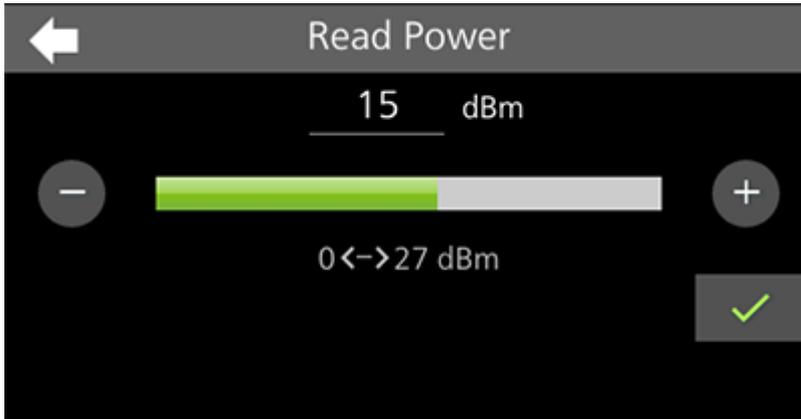


• Keep the setting value 24 dBm or less.

7. Tap [Read Power].

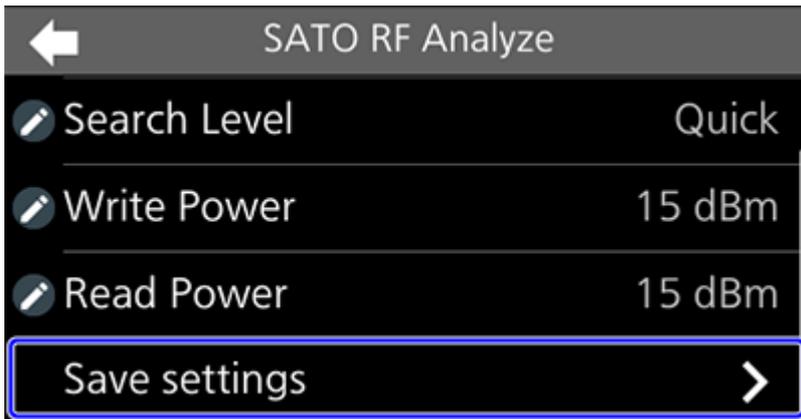


8. Set the reading power, and then tap .

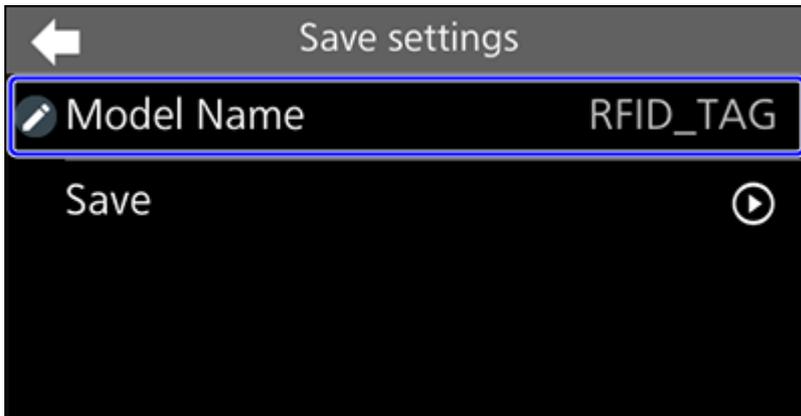


 • Keep the setting value 24 dBm or less.

9. Tap [Save settings].



10. Tap [Model Name].



11. Edit the name of the model under which to save the measurement results, and then tap  on the on-screen keyboard.

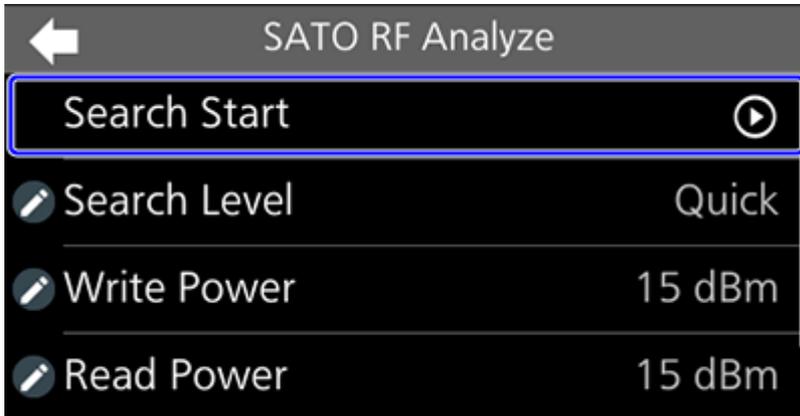
You can enter a maximum of 32 characters. You can use alphabet (capital and small letters), numbers and symbols.



#### Executing SATO RF Analyze

Execute SATO RF Analyze using the measurement conditions that you set.

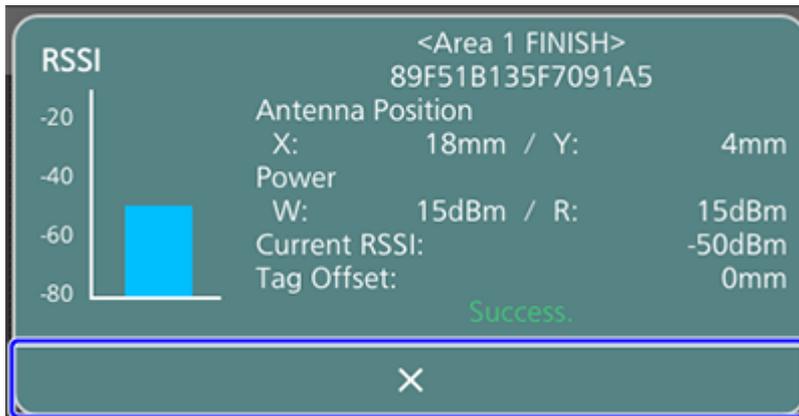
12. Set the RFID tag to the product.
13. Tap [Search Start] on the [SATO RF Analyze] screen.



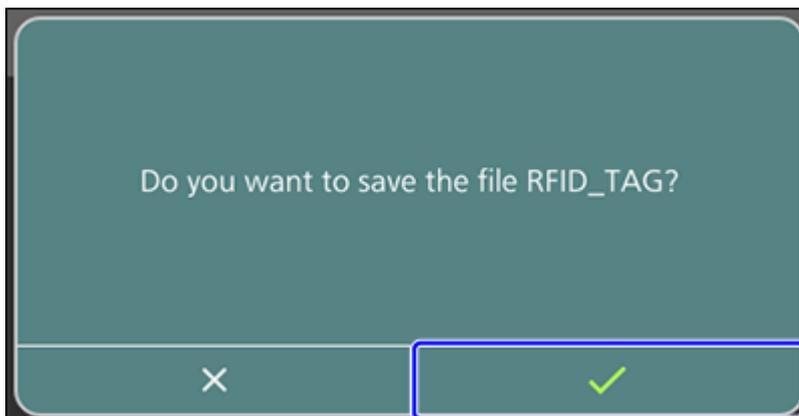
Measurement starts, and the state of the measurement appears on the screen.



14. When the measurement is complete and [FINISH] is displayed, tap .



15. To save the measurement results as an RFID tag model, tap . To not save them, tap .



- If a measurement fails, a message to adjust the [Write Power] and [Read Power] values by +1 dBm or -1 dBm, according to the cause, appears. Tap  to execute adjustment, and then do the measurement again.
- Do not open the top cover while measuring. If you open the top cover before you close the message asking you whether to save the settings, you will need to do the measurement again.
- Do not send a DC2 command to the product while measuring. If the radio power setting or reset command is received, the measurement will not finish correctly.
- Do not do more than 10 measurements consecutively. If you need to do 11 or more measurements, allow the RFID module to cool before doing so.

## Loading the Saved RFID Tag Model

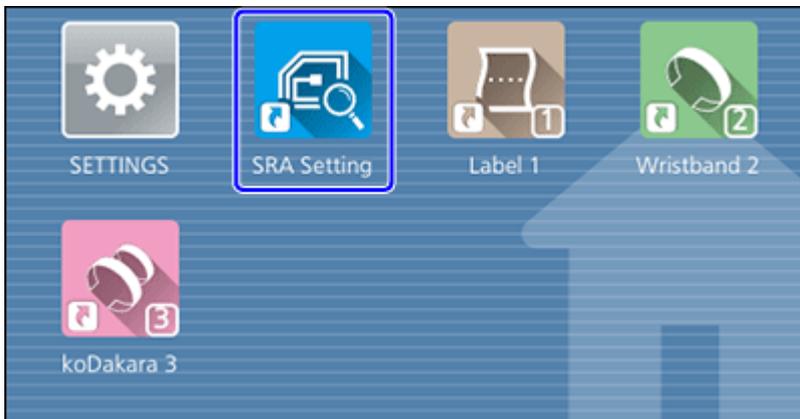
By saving SATO RF Analyze results as RFID tag models for each RFID tag you are using, you can easily change the product's settings when you switch RFID tags.

RFID tag models can be selected from the following menu and applied to the product.

- To apply only an RFID tag model to the product  
[Interface] > [RFID] > [RFID Tag Model] > [Load] Menu
- To apply an RFID tag model and other media settings to the product  
[Tools] > [Media Startup] Menu
- To register an RFID tag model and other media settings to the product as a profile  
[Tools] > [Media Profiles Editing] > [Media Profiles Registration] Menu

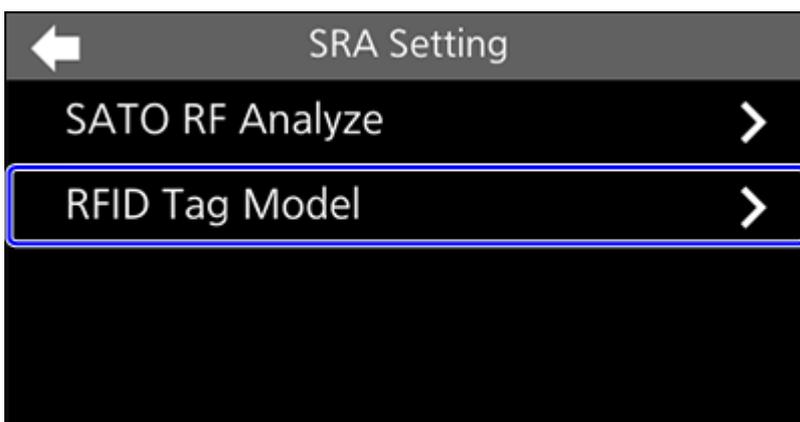
This topic explains the procedure for reading RFID tag models from the [RFID Tag Model] > [Load] menu.

### 1. Tap [SRA Setting] on the Home screen.

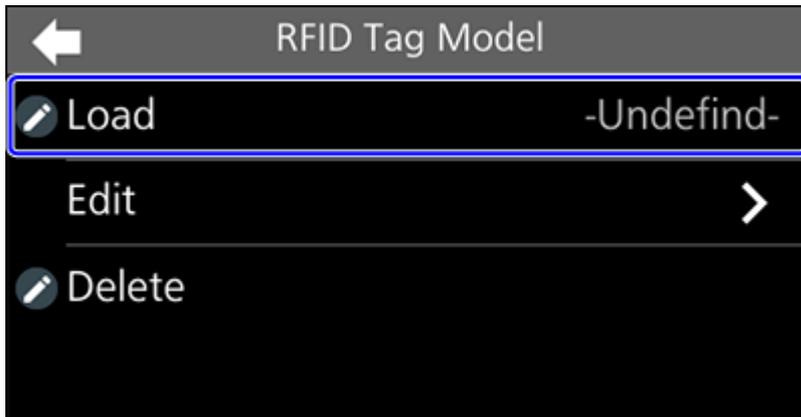


- You can also access the SRA settings from the [Interface] > [RFID] menu in the Settings mode.

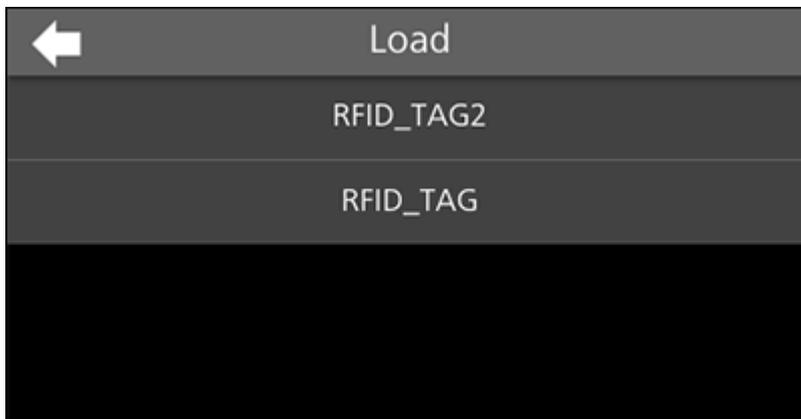
### 2. Tap [RFID Tag Model].



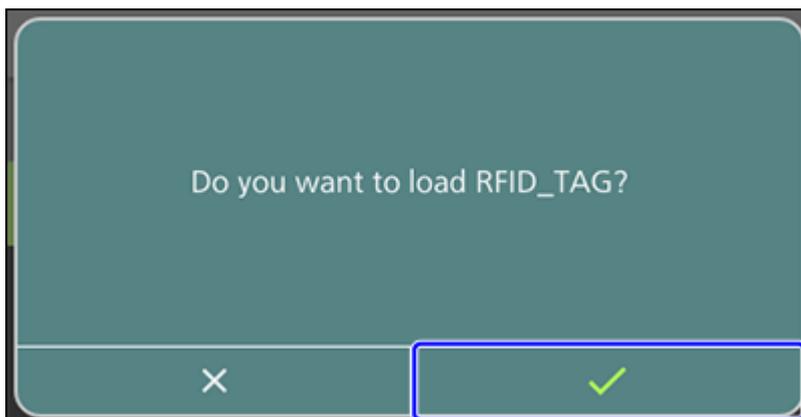
3. Tap [Load].



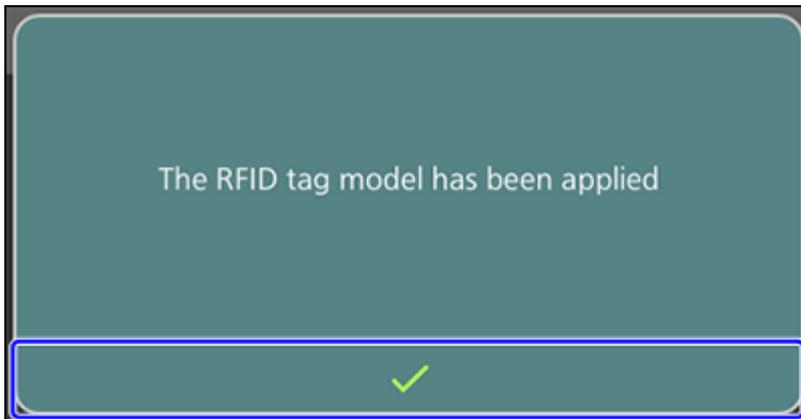
4. Tap the RFID tag model to load.



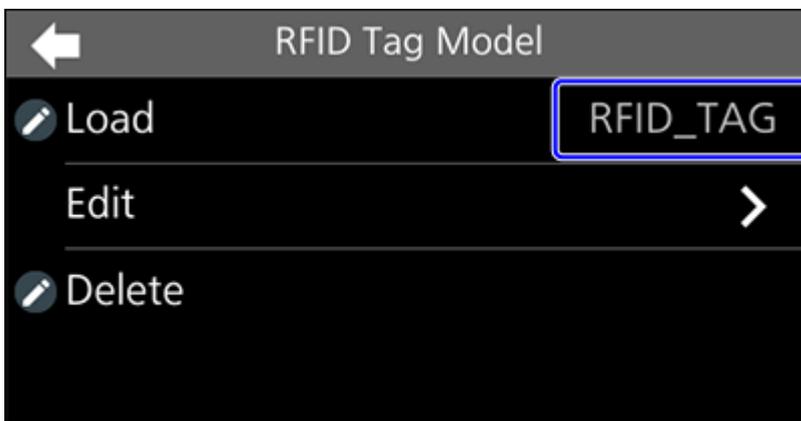
5. Tap  on the confirmation screen.



6. Tap  on the completion screen.



The settings loaded from the RFID tag model are applied to the product. The name of the loaded RFID tag model appears on the right side of [Load] on the [RFID Tag Model] menu.



- From the [RFID Tag Model] > [Edit] menu, you can change settings in registered RFID tag models or manually register new RFID tag models.
-

## Printing RFID Tag Errors

If the recorded data is incomplete, for some reasons such as writing to a defective tag, the product will print an RFID tag error to the defective media. This function is to prevent the distribution of defective media with a tag error.

When an RFID tag error occurs, the product prints a slash and the error message, such as "WRITE TAG ERROR" or "TAG NOT FOUND". The position to print the message and slash is determined according to the media size specified in the media size <A1> command.

For a write error such as "WRITE TAG ERROR", the product continues to print the first 16 or 32 bytes of the write data.

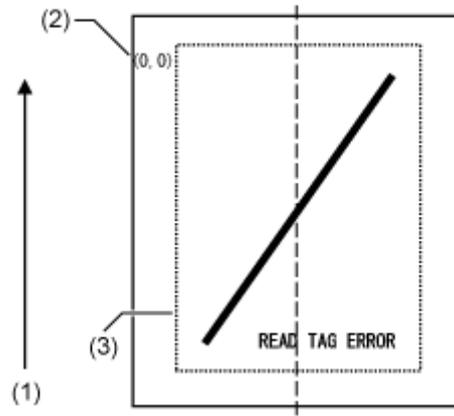
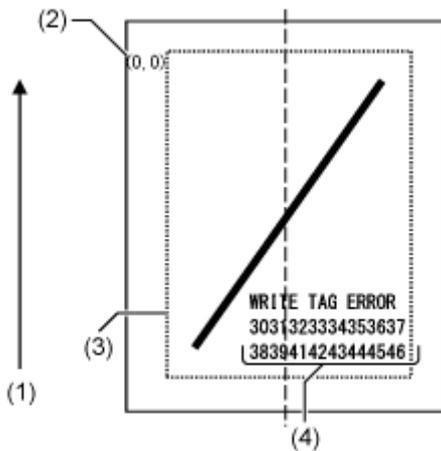
The diagram below shows the message and slash printed on the position based on the media size specified by the normal print.



- If the installed module is HF, a hex dump of UID may be printed depending on the tag type and the timing of error occurring.

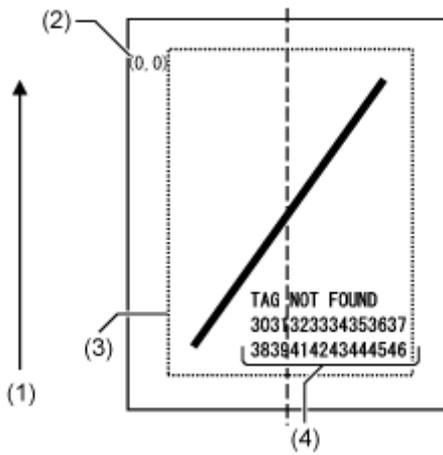
### WRITE TAG ERROR in RFID Write Command

### Read Error in UID/EPC/IDm Print specified by the <TU> command or TAG NOT FOUND Error



For other errors, the product prints the error message accordingly.

## TAG NOT FOUND Error in RFID Write Command



- (1) Feed direction
- (2) The origin of the range specified by the media size <A1> command
- (3) The range specified with the media size <A1> command
- (4) The dump for the first 16 or 32 bytes of the write data

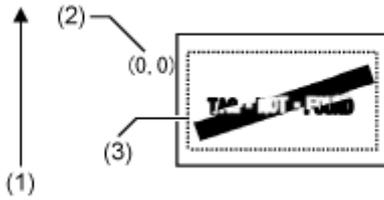


- When a character overlaps with the slash, the character will inverse from black to white.



When using a small-size tag (about the size of P30 X W40 mm (P1.18" X W1.57"), for example) or not enough for setting margin, the slash and error message are printed overlap on each other. The overlapped area are inverse from black to white. There is no dump printing.

**TAG NOT FOUND Error in RFID Write Command**

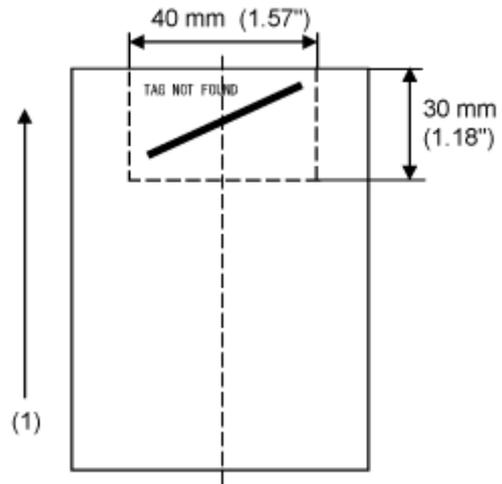
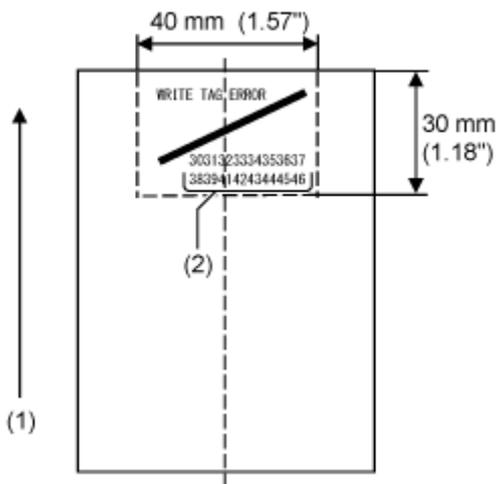


- (1) Feed direction
- (2) The origin of the range specified by the media size <A1> command
- (3) The range specified with the media size <A1> command

If the range is not specified by the media size <A1> command, the product prints the RFID error using a fixed size of P30 X W40 mm (P1.18" X W1.57"). When a character overlaps with the slash, the character will inverse from black to white.

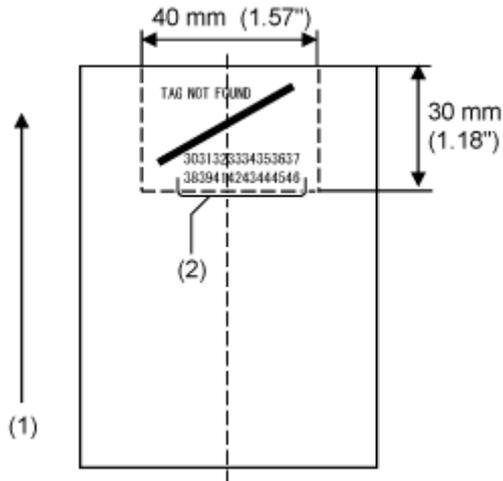
**WRITE TAG ERROR in RFID Write Command**

**Read Error in UID/EPC/IDm Print specified by the <TU> command or TAG NOT FOUND Error**



For other errors, the product prints the error message accordingly.

## TAG NOT FOUND Error in RFID Write Command



- (1) Feed direction  
 (2) The dump for the first 16 or 32 bytes of the write data

The types of errors to print are as follows:

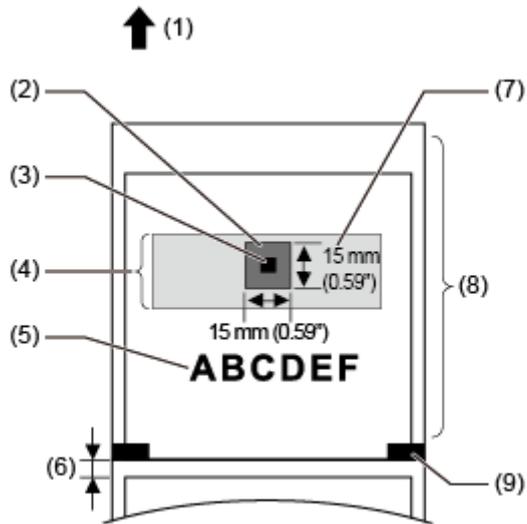
Message	Cause and Countermeasure
TAG NOT FOUND	 <a href="#">Error Message 1114 (Tag not Found)</a>
WRITE TAG ERROR	 <a href="#">Error Message 1115 (Write Tag Error)</a>
READ TAG ERROR	 <a href="#">Error Message 1116 (Failed to Read the Tag Data)</a>
PROTECT TAG ERR	 <a href="#">Error Message 1117 (Write Tag Error)</a>
VERIFY TAG ERR.	 <a href="#">Error Message 1118 (Write/Read Values Are not Consistent)</a>
LOCKING ERROR	 <a href="#">Error Message 1119 (Failed to Lock the Data)</a>
WRONG TID ERROR	 <a href="#">Error Message 1120 (Wrong Tag UID Is Read)</a>
MULTI TAGS ERROR	 <a href="#">Error Message 1121 (Multiple Tags Are Detected)</a>
DIFFER EPC ERR.	 <a href="#">Error Message 1122 (EPC Does not Match)</a>
READ ONLY ERROR	 <a href="#">Error Message 1123 (Write Tag Error)</a>
DIFFER TAG KIND	 <a href="#">Error Message 1124 (Wrong Tag Type)</a>

Message	Cause and Countermeasure
LOST HANDLE ERR	 <a href="#">Error Message 1125 (Internal Error)</a>
POWER NOT ENOUGH	 <a href="#">Error Message 1126 (Not Enough Power)</a>
ADDRESS EXCEED	 <a href="#">Error Message 1131 (Exceed Address Error)</a>

## RFID Printing Tips

### Recommended Non-printable Zone

Avoid printing barcodes or characters directly on top of an RFID chip. The uneven surface will negatively affect the print quality.



- (1) Feed direction
- (2) Recommended non-printable zone
- (3) IC chip
- (4) Inlay
- (5) Print object
- (6) Gap
- (7) Antenna
- (8) RFID tag/label
- (9) I-mark

## Automatically Backing Up the Product's Settings and Data

By enabling the auto-clone function, the product's settings and installed data are automatically saved to the USB memory, whenever the settings are changed. This allows you to constantly back up the newest settings and data.

When you replace or initialize a product, because it is damaged or some other reason, you can recover the previous settings and data by inserting this USB memory into the intended product.

To enable this function, you need to format the USB memory to be used for this function. Do the following procedure.



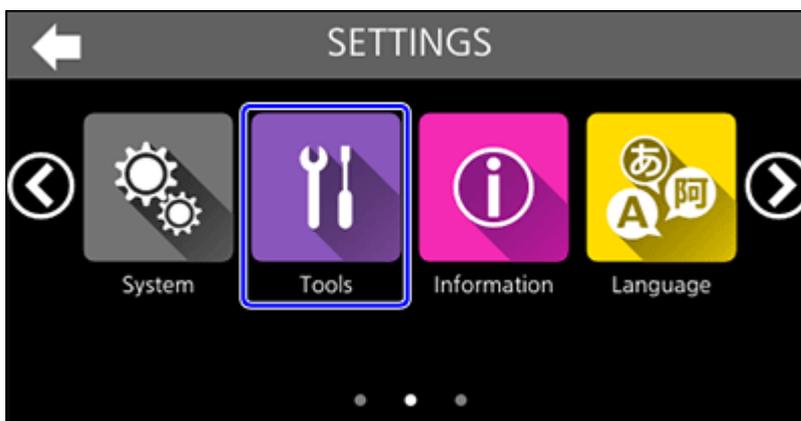
- Be sure to perform a virus check on the USB memory before connecting it to the product. SATO Corporation shall not be held responsible for any product malfunctions caused by a virus spread via USB memory.
- Formatting a USB memory deletes all the data on the USB memory. Save any necessary data to a separate location in advance.



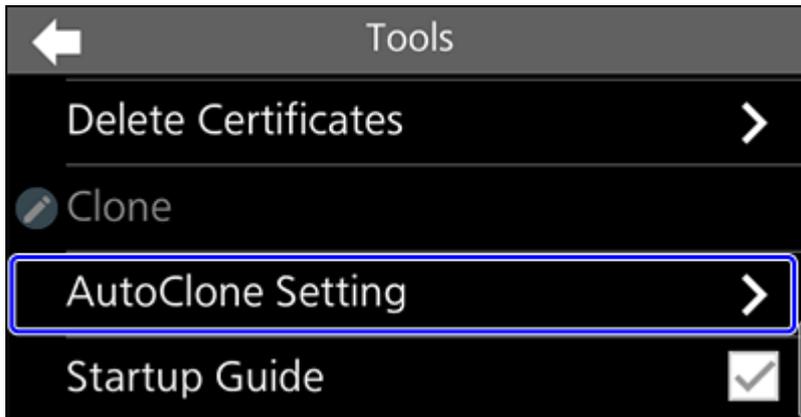
- We recommend a USB memory with a capacity of 4 GB or more.
- Use the USB connector (Type A) inside the product to execute the auto-clone function (to save the settings and data). Use the USB connector (Type A) on the back of the product to recover the saved settings and data.

1. Install the USB memory to the USB connector (Type A) inside the product.
2. Tap [SETTINGS] on the Home screen or Offline screen.
3. Input the password if it is enabled.
4. Tap [Tools].

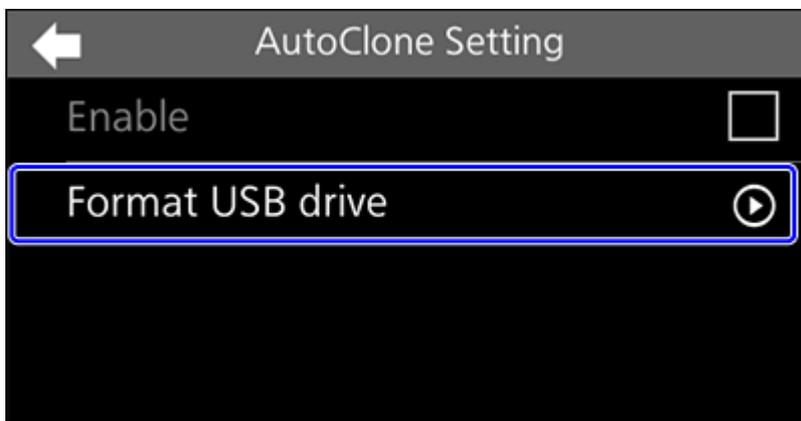
You can switch the screen by tapping   or sliding the screen to the left or right.



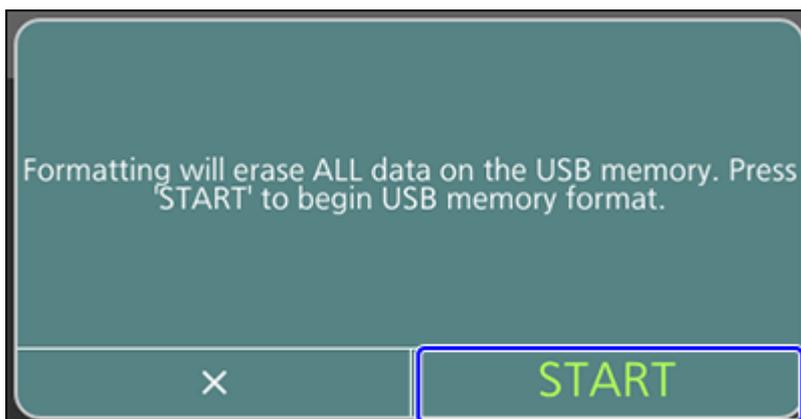
5. Tap [AutoClone Setting].



6. Tap [Format USB drive].

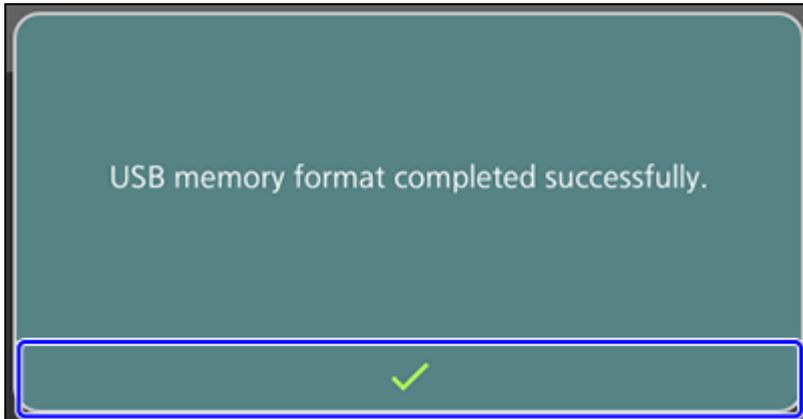


7. Tap [START].

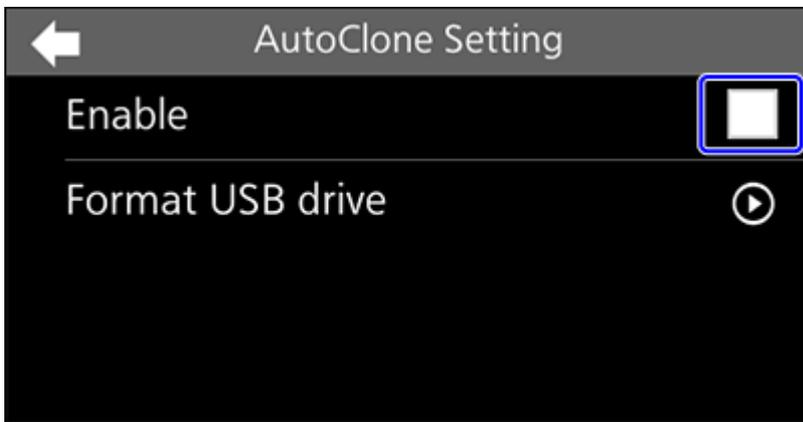


Formatting starts.

8. Tap .



9. Tap [Enable] check box.



The auto-clone function is enabled.



- When the auto-clone function is enabled, an error occurs if the USB memory is removed or replaced with an unformatted one.

# 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 one of the following functions 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.
  - [AutoClone Setting]: By installing a USB memory inside the product, the product's data and setting values are automatically saved whenever the settings are changed. To recover the data and setting values, insert this USB memory into the back of the product.

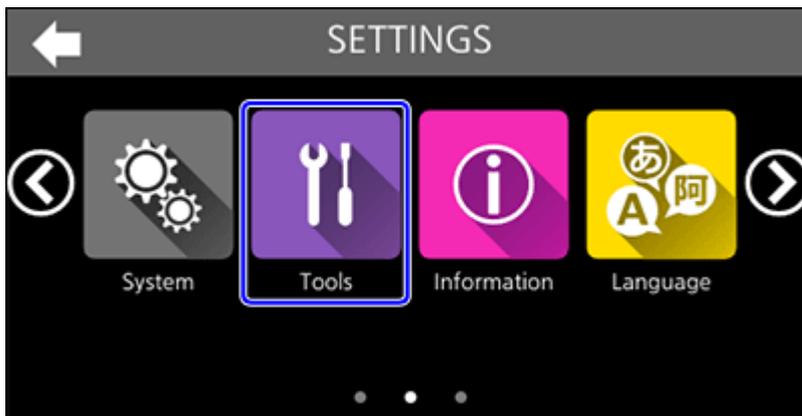


- The data that is initialized is the fonts and graphics registered in the product.

1. Tap [SETTINGS] on the Home screen or Offline screen.

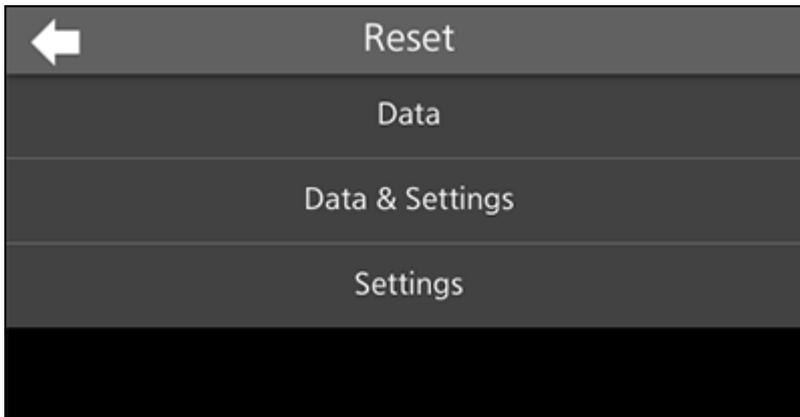
2. Tap [Tools].

You can switch the screen by tapping   or sliding the screen to the left or right.



3. Tap [Reset].

#### 4. Select a type of reset.



##### [Data]

Initialize the data saved in the product.

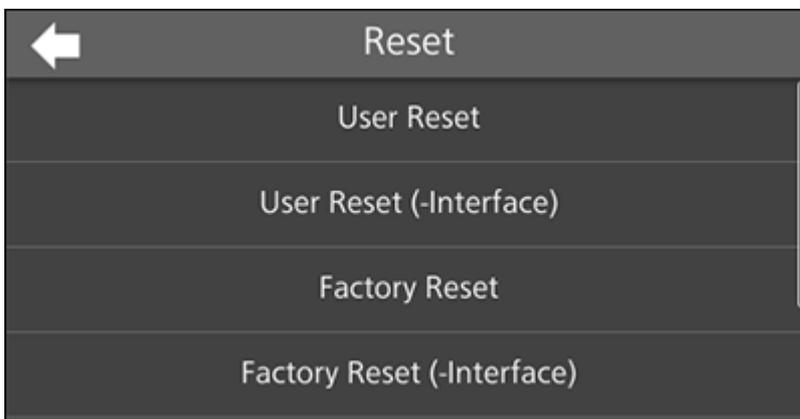
##### [Data & Settings]

Initialize the product's data and setting values.

##### [Settings]

Initialize the product's setting values.

#### 5. 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]**

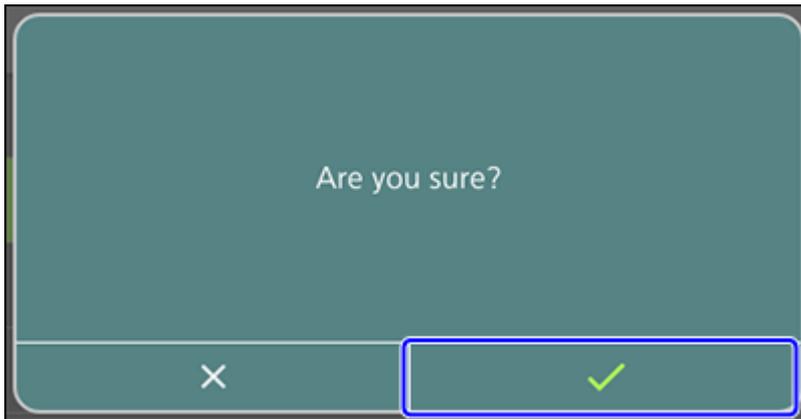
Initialize the setting values for the interface settings.

**[Printing]**

Initialize the setting values in the [Printing] menu.

6. Tap  to do the initialization.

Tap  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

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Media Type]	Label	Yes
[Label Length]	<b>203 dpi</b> 3200 dots <b>305 dpi</b> 4800 dots	Yes
[Label Width]	<b>203 dpi</b> 832 dots <b>305 dpi</b> 1248 dots	Yes
[Auto Measure]	Disabled	Yes
[Printing Mode]	Use Ribbon	Yes
[Ribbon Near End]	Enabled	Yes
[Speed]	4 ips	Yes
[Sensor Type]	<b>If [Print Mode] is set to [Dispenser], [Tear-Off], [Continuous], [Cutter], [Cut &amp; Print] or [Partial cutter]</b> Gap <b>If [Print Mode] is set to [Linerless cutter] or [Linerless tearoff]</b> None	Yes
[Auto-mode]	Enabled	Yes

Setting Item	Initial Value	User Reset/ Factory Reset	
[Print Mode]	<p><b>If no option is installed</b> Tear-Off</p> <p><b>If dispenser unit is installed</b> Dispenser</p> <p><b>If cutter unit is installed</b> Cutter</p> <p><b>If linerless cutter unit is installed</b> Linerless cutter</p>	Yes	
[Backfeed]	<p><b>If [Print Mode] is set to [Continuous]</b> None</p> <p><b>If [Print Mode] is set to [Tear-Off], [Cutter], [Partial cutter], [Linerless cutter], or [Linerless tearoff]</b> Before</p> <p><b>If [Print Mode] is set to [Dispenser] or [Cut &amp; Print]</b> After</p>	Yes	
[Eject Cut]	Off	Yes	
[Darkness Range]	A	Yes	
[Darkness]	5	Yes	
[Imaging]			
	[Vertical]	0 dot	Yes
	[Horizontal]	0 dot	Yes
[Advanced]			
	[Calibrate]		
	[Auto-calibration]	-	-
	[GAP Levels]	Value adjusted by the factory	No
	[GAP Slice Level]	Auto	No

Setting Item		Initial Value	User Reset/ Factory Reset
	[I-Mark Levels]	Value adjusted by the factory	No
	[I-Mark Slice Level]	Auto	No
	[Head Check]	Off	Yes
	[Head Check Mode]	Always	Yes
	[Every Page]	1	Yes
	[Check Media Size]	Disabled	Yes
[Adjustments]			
	[Offset]	0 dot	No
	[Pitch]	0 dot	No
	[Darkness Adjust]	50	No
	[Label Top Sensor]	0 dot	No
	[Start Online]	Enabled	Yes
	[Feed After Error]	Disabled	Yes
	[Feed At Power On]	Disabled	Yes
[Label Waste Prevention]			
	[Enable]	Disabled	Yes
	[Registered Label Length]	<b>203 dpi</b> 3200 dots <b>305 dpi</b> 4800 dots	Yes
	[Finisher Feed]	0 dot (Standard)	Yes
	[Paper End]	Using I-mark	Yes
	[Prioritize]	Commands	Yes
	[Reprint]	Disabled	Yes
	[Print End Position]	0 dot	Yes

## [Interface] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.

- [\[Network\]](#) > [\[Settings\]](#) > [\[LAN\]](#)
- [\[Network\]](#) > [\[Services\]](#) > [\[NTP\]/\[LPD\]/\[FTP\]/\[SNMP\]](#)
- [\[Network\]](#) > [\[Services\]](#) > [\[Online Services\]](#)
- [\[Network\]](#) > [\[Advanced\]](#)
- [\[RS-232C\]/\[USB\]/\[NFC\]/\[Ignore CR/LF\]/\[Ignore CAN/DLE\]](#)
- [\[RFID\]](#)



- Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

- **[Network] > [Settings] > [LAN]**

Setting Item	Initial Value	User Reset/ Factory Reset
[IPv4 (LAN)]		
[Mode]	DHCP	Yes
[DHCP]	-	-
[IP Address]	0.0.0.0	Yes
[Netmask]	255.255.255.0	Yes
[Gateway]	0.0.0.0	Yes
[DNS]	0.0.0.0, 0.0.0.0, 0.0.0.0	Yes
[IPv6 (LAN)]		
[Mode]	Disable	Yes
[DHCP]	-	-
[IP Address]	::	Yes
[Prefix Length]	64	Yes
[Gateway]	::	Yes
[DNS]	::	Yes
[Ports (LAN)]		

Setting Item	Initial Value	User Reset/ Factory Reset
[Port1]	1024	Yes
[Port2]	1025	Yes
[Port3]	9100	Yes
[Flow Control]	STATUS4 ENQ	Yes
[TCP Connection Queue]	Enabled	Yes
[Legacy Status for Port 9100]	Disabled	Yes
[BCC]	Disabled	Yes
[Delay Reply ENQ]	0 ms	Yes
[Status4 Cyclic Response]	500 ms	Yes
[Proxy (LAN)]		
[Enabled]	Disabled	Yes
[Server]	-	Yes
[Port No.]	-	Yes
[Username]	-	Yes
[Password]	-	Yes
[Exclude]	-	Yes

- [Network] > [Services] > [NTP]/[LPD]/[FTP]/[SNMP]

Setting Item	Initial Value	User Reset/ Factory Reset
[NTP]		
[Enable]	Disabled	No/Yes
[Error]	Disabled	No/Yes
[Time Server IP]	0.0.0.0	No/Yes
[LPD]		
[Enable]	Enabled	Yes
[DNS Lookup]	Disabled	Yes
[FTP]		

Setting Item		Initial Value	User Reset/ Factory Reset
	[Enable]	Disabled	Yes
	[FTP Timeout]	300 sec	Yes
[SNMP]			
	[sysContact]	-	Yes
	[sysName]	-	Yes
	[sysLocation]	-	Yes
	[prtMarkerCounterUnit]	meters	Yes
[Agent]			
	[Enable]	Enabled	Yes
[Read-Only]			
	[SNMP Version]	1 2c 3	Yes
	[Community]	public	Yes
	[User]	rouser	Yes
	[User Security]	None	Yes
	[Authentication Protocol]	MD5	Yes
	[Authentication Passphrase]	mypassword	Yes
	[Privacy Protocol]	DES	Yes
	[Privacy Passphrase]	mypassword	Yes
[Read-Write]			
	[SNMP Version]	Disabled	Yes
	[Community]	private	Yes
	[User]	rwuser	Yes
	[User Security]	None	Yes
	[Authentication Protocol]	MD5	Yes
	[Authentication Passphrase]	mypassword	Yes
	[Privacy Protocol]	DES	Yes
	[Privacy Passphrase]	mypassword	Yes

Setting Item	Initial Value	User Reset/ Factory Reset
[Traps]		
[Enable]	Disabled	Yes
[SNMP Version]	1	Yes
[IP Version]	4	Yes
[Destinations]	1	Yes
[Destination 1]	0.0.0.0	Yes
[Destination 2]	0.0.0.0	Yes
[Destination 3]	0.0.0.0	Yes
[Community]	trapcom	Yes
[User]	trapuser	Yes
[Engine ID]	Hex string generated from MAC address	Yes
[Security]	None	Yes
[Authentication Protocol]	MD5	Yes
[Authentication Passphrase]	mypassword	Yes
[Privacy Protocol]	DES	Yes
[Privacy Passphrase]	mypassword	Yes

- **[Network] > [Services] > [Online Services]**

Setting Item	Initial Value	User Reset/ Factory Reset
[SOS Mode]	Disabled	No
[Allow Remote Control]	Always	No
[MQTT Protocol]	MQTT	No
[Add Device]	-	-
[Contact Information]		
[Phone Number]	-	-
[Periodic Notification]		

Setting Item		Initial Value	User Reset/ Factory Reset
	[Type]	Disabled	No
	[Counter]	Thermal Head	No
	[Head]		
	[Meters]	1000	No
	[Last Update]	0.0 km	-
	[Next Update]	1.0 km	-
	[Current Value]	0.0 km	-
	[Cutter]		
	[Cuts]	10000	No
	[Last Update]	0	-
	[Next Update]	10000	-
	[Current Value]	0	-
	[Notifications]	1	No
	[Time 1]	00:00	No
	[Time 2]	00:00	No
	[Time 3]	00:00	No
	[Weekday]	Monday	No
	[Day]	1	No
	[Time]	00:00	No
	[Update Screen]	Normal	No
	[QR code offset]		
	[Vertical]	0 dot	No
	[Horizontal]	0 dot	No
	[Daily Checkup]	-	-

- **[Network] > [Advanced]**

Setting Item	Initial Value	User Reset/ Factory Reset
[ARP Announcement]		
[Additional]	Enabled	Yes
[Periodic]	Off	Yes

- **[RS-232C]/[USB]/[NFC]/[Ignore CR/LF]/[Ignore CAN/DLE]**

Setting Item	Initial Value	User Reset/ Factory Reset
[RS-232C]		
[Baudrate]	115200	Yes
[Parameters]	8-N-1	Yes
[Flow Control]	STATUS4	Yes
[BCC]	Disabled	Yes
[USB]		
[Flow Control]	STATUS4	Yes
[BCC]	Disabled	Yes
[Change USB Serial]	Disabled	No/Yes
[NFC]		
[I/F Enable]	Enabled	Yes
[Ignore CR/LF]	Disabled	Yes
[Ignore CAN/DLE]	Disabled	Yes

- **[RFID]**

Setting Item	Initial Value	User Reset/ Factory Reset
[Antenna Position]	<b>If the RFID module is UHF</b> Normal	Yes

Setting Item	Initial Value	User Reset/ Factory Reset
	<b>If the RFID module is HF</b> Foward	
[Write Power]	15 dBm	Yes
[Read Power]	15 dBm	Yes
[Tag Offset]		
[Tag Offset]	0 mm	Yes
[Encoding Action]	Normal Action	Yes
[Reader Model]	-	-
[Reader Version]	-	-
[View]		
[Memory Bank]	<b>If the RFID module is UHF</b> EPC <b>If the RFID module is HF</b> USER	Yes
[Data Reading]	-	-
[Filter Function]		
[RSSI Filter]	Disabled	Yes
[Threshold Value]	-50 dBm	Yes
[Retry Mode]	Retry	Yes
[Retries]	1	Yes
[Mark bad tags]	Enabled	Yes
[RFID Undetected Warning]	Disable	Yes
[Log RFID Data]	Disabled	Yes
[Data To Record]	EPC and TID	Yes
[Counters]		
[Life]		

Setting Item		Initial Value	User Reset/ Factory Reset
	[Count Success]	0	No/Yes
	[Count Failure]	0	No/Yes
	[Count Total]	0	No/Yes
[User]			
	[Count Success]	0	Yes
	[Count Failure]	0	Yes
	[Count Total]	0	Yes
[Paper]			
	[Starting Point]	0 dot	Yes
[SATO RF Analyze]			
	[Search Start]	-	-
	[Search Level]	Quick	Yes
	[Write Power]	15 dBm	Yes
	[Read Power]	15 dBm	Yes
[Save settings]			
	[Model Name]	RFID_TAG	Yes
	[Save]	-	-
[RFID Tag Model]			
	[Load]	-Undefined-	Yes
[Edit]			
	[Antenna Position]	<b>If the RFID module is UHF</b> Normal <b>If the RFID module is HF</b> Foward	Yes
	[Antenna X Pos.]	14 mm	Yes
	[Antenna Y Pos.]	5 mm	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Write Power]	15 dBm	Yes
	[Read Power]	15 dBm	Yes
	[Tag Offset]		
	[Tag Offset]	0 mm	Yes
	[Encoding Action]	Normal Action	Yes
	[Pitch Size]	<b>203 dpi</b> 8 dots <b>305 dpi</b> 12 dots	Yes
	[Save as]	RFID_TAG	Yes
	[Delete]	-	-

## [Applications] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.

- [\[Protocol\]/\[SBPL\]](#)
- [\[SZPL\]/\[SIPL\]/\[STCL\]](#)
- [\[SDPL\]/\[SEPL\]](#)



- Normally, it is not necessary to perform the initialization. Doing an initialization removes all the product's settings that the customer changed.

- [\[Protocol\]/\[SBPL\]](#)

Setting Item		Initial Value	User Reset/ Factory Reset
	[Protocol]	AUTO	Yes
	[SBPL]		
	[Show Error]	Disabled RFID models: Enabled	Yes
	[Standard Code]	Enabled	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Orientation]	Portrait	Yes
[Font Settings]			
	[Zero Slash]	Enabled	Yes
[Kanji]			
	[Kanji Set]	GB18030	Yes
	[Character Code]	GB18030	Yes
	[Kanji Style]	Gothic	Yes
	[Proportional]	Enabled	Yes
	[Code Page]	858	Yes
	[€]	D5	Yes

- [SZPL]/[SIPL]/[STCL]

Setting Item		Initial Value	User Reset/ Factory Reset
[SZPL]			
	[Label]		
	[Shift]	0 dot	Yes
	[Top]	0 dot	Yes
	[Label Rotation]	0 degree	Yes
	[Caret]	94 (^)	Yes
	[Delimiter]	44 (,)	Yes
	[Tilde]	126 (~)	Yes
	[Clock Format]	(none)	Yes
	[Default Font]	(none)	Yes
[SIPL]			
[Font Settings]			
	[Code Page]	1252	Yes
	[New Font Encoding]	Disabled	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Proportional]	Disabled	Yes
	[Zero Slash]	Disabled	Yes
	[Format Save]	Enabled	Yes
[STCL]			
	[Command Head]		
	[Control Code]	Auto	Yes
	[1st Byte Code]	27	Yes
	[2nd Byte Code]	10	Yes
	[3rd Byte Code]	0	Yes
[Font Settings]			
	[Zero Slash]	Disabled	Yes
	[€]	D5	Yes
	[Code Page]	850	Yes
	[Half-width Symbol]	Enabled	Yes
	[Rotation]	0 degree	Yes
	[Ignore Paper Size Command]	Disabled	Yes
	[300DPI Head Compatibility]	Disabled	Yes

- [SDPL]/[SEPL]

Setting Item		Initial Value	User Reset/ Factory Reset
[SDPL]			
	[Control Code]		
	[Code Type]	Standard	Yes
	[SOH]	01	Yes
	[STX]	02	Yes
	[CR]	0D	Yes
	[CNTBY]	5E	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Label Rotation]	0 degree	Yes
	[SOP Emulation]	Auto	Yes
[Compatible Mode]			
	[TTF]	Disabled	Yes
	[Graphics]	Disabled	Yes
	[Compression]	Disabled	Yes
	[Right-to-Left print]	Auto	Yes
	[Receive TimeOut]	0 (Off)	Yes
	[Blank Item Feed]	Enabled	Yes
[Prioritize]			
	[Format Attribute]	Commands	Yes
	[Pause Mode]	Commands	Yes
	[1 Byte Codepage]	Commands	Yes
	[SDPL Measure Unit]	Commands	Yes
	[Scalable Font Style]	Commands	Yes
	[Sensor Type]	Commands	Yes
	[Feedback Character]	Commands	Yes
	[SOH Commands]	Commands	Yes
	[Module Selection]	Commands	Yes
	[Darkness]	Commands	-
	[Factory Offset]	Commands	-
	[Speed]	Commands	-
	[Format Attribute]	XOR	Yes
	[Pause Mode]	Disabled	Yes
	[1 Byte Codepage]	CP 850	Yes
	[SDPL Measure Unit]	"	Yes
	[Scalable Font Style]		

Setting Item		Initial Value	User Reset/ Factory Reset
	[Bold]	Disabled	Yes
	[Italic]	Disabled	Yes
	[Feedback Character]	Enabled	Yes
	[SOH Commands]		
	[All Commands]	Enabled	Yes
	[SOH-B Command]	Enabled	Yes
	[SOH-C Command]	Enabled	Yes
	[Others]	Enabled	Yes
	[Module Selection]	A	Yes
[SEPL]			
	[Home Reference]		
	[Horz. Offset]	0 dot	Yes
	[Vert. Offset]	0 dot	Yes
	[Label Rotation]	0 degree	Yes
	[Memory Device]	Internal FLASH	Yes
	[Sim. 300 DPI Head]	Disabled	Yes

## [Standalone] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
	[AEP]	Disabled	No
	[Initial Display at Start-Up]	Application	-
	[Starting Application]	Standard Demo	No/Yes
	[Label Rotation]	Disabled	Yes

Setting Item	Initial Value	User Reset/ Factory Reset
[Divider Label]	Disabled	Yes
[Show On-Screen Keyboard]	When Required	Yes
[Home Key Confirmation]	None	Yes
[Delete Application]	-	-

## [System] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Regional]		
[Messages]	English, US	Yes
[External Keyboard]	English, US	Yes
[Locale]	English, US	Yes
[On-Screen Keyboard]	English, US	Yes
[Unit]	dot	Yes
[Time]	00:00	No
[Date]	(2000-01-01)	No
[Time Zone]	-	Yes
[Region]	Europe	Yes
[City]	London	Yes
[Display Language Icon]	Enabled	Yes
[Notifications]		
[Clean Printhead]		
[Clean Printhead]	Disabled	Yes
[Cleaning Interval]	400 m	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
[Change Printhead]			
	[Change Printhead]	Disabled	Yes
	[Printhead Interval]	100 km	Yes
[Change Cutter]			
	[Change Cutter]	Disabled	Yes
	[Cutter Life]	1000 K cuts	Yes
[Change Platen]			
	[Change Platen]	Disabled	Yes
	[Platen Interval]	100 km	Yes
[Sound]			
	[Volume]	4	Yes
	[Bluetooth Volume]	-	Yes
	[Touch/Key Sound]	None	Yes
[Energy Saving]			
	[Auto Power Off]	0 (Off)	Yes
	[LCD Brightness]	5	No/Yes
	[Show Total Count]	Disabled	Yes
[Password]			
	[Password Enable]	Disabled	No/Yes
	[Password Required After]	10 min	Yes
	[Install Security]	None	No/Yes
	[NFC Security]	None	Yes
	[Start on AC]	Disabled	No/Yes
[Compatible]			
[SBPL]			
	[CODE128(C) Zero Fill]	Disabled	Yes
	[Kanji Command]	Disabled	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Call Font/Logo]	Disabled	Yes
	[OCR Font]	Disabled	Yes
	[Jornal Font]	Disabled	Yes
	[Character pitch]	Disabled	Yes
	[Volatilize Parameters]	Disabled	Yes
	[Chinese character]	Disabled	Yes
	[Human Readable Overwrite]	Disabled	Yes
	[Obsolete Command Error]	Disabled	Yes
	[Media Specification]	Adhesive Label	Yes
	[Option Wait Time Command]	Disabled	Yes
	[BT Command Matrix2of5]	Disabled	Yes
	[X20 Font Compatible]	Disabled	Yes
	[Partial Copy]	Disabled	Yes
	[Printable Area]	Disabled	Yes
[Network]			
	[Socket Cancel]	Disabled	Yes
[Wi-Fi]			
	[Wi-Fi Socket Cancel]	Disabled	Yes
[USB]			
	[Device ID]	Disabled	Yes
	[RFID]	Disabled	Yes
[RS-232C]			
	[ENQ Reply]	Disabled	Yes
	[Theme]	Dark	Yes

## [Tools] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The

table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Media Startup]	-	-
[Media Profiles Editing]	-	-
[Media Profiles Registration]		
[Media Profile 1] to [Media Profile 5]	Non-registered	No/Yes
[Delete Media Profiles]		
[Media Profile 1] to [Media Profile 5]	Non-registered	No/Yes
[Test Print]		
[Factory]		
[Label Width]	Large	-
[Pitch]	0 dot	No
[Offset]	0 dot	No
[Darkness Adjust]	50	No
[Configure List]		
[Category]	All	Yes
[Label Width]	Small	-
[Label Length]	<b>203dpi</b> 800 dots <b>305dpi</b> 1200 dots	Yes
[Pitch]	0 dot	No
[Offset]	0 dot	No
[Darkness Adjust]	50	No
[Configure QR]		
[Category]	All	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Label Width]	Small	-
	[Label Length]	<b>203dpi</b> 800 dots <b>305dpi</b> 1200 dots	Yes
	[Pitch]	0 dot	No
	[Offset]	0 dot	No
	[Darkness Adjust]	50	No
[Paper Sensor]			
	[Label Width]	Small	-
	[Label Length]	<b>203dpi</b> 800 dots <b>305dpi</b> 1200 dots	Yes
	[Pitch]	0 dot	No
	[Offset]	0 dot	No
	[Darkness Adjust]	50	No
[BD Address]			
	[Label Width]	Large	-
	[Pitch]	0 dot	No
	[Offset]	0 dot	No
	[Darkness Adjust]	50	No
[HEX-Dump]			
	[Hex Dump Mode]	Disabled	Yes
[Reset]		-	-
[Profiles]		-	No
	[Start with]	-	Yes
[Service]			

Setting Item	Initial Value	User Reset/ Factory Reset
[Factory]		
[Wi-Fi Site Survey]	-	-
[Install Certificates]	-	Yes
[Delete Certificates]	-	Yes
[Clone]	-	-
[AutoClone Setting]		
[Enable]	Disabled	Yes
[Startup Guide]	Enabled	No/Yes

## [Information] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Help]	-	-
[Build Version]	-	-
[Applications]	-	-
[Installation Log]	-	-
[Print Module]	-	-
[Sensor Module]	-	-
[FPGA Version]	-	-
[Counters]		
[Head]		
[Life]	Measured value	No
[Head 1]	Measured value	No
[Head 2]	Measured value	No

Setting Item	Initial Value	User Reset/ Factory Reset
[Head 3]	Measured value	No
[Cutter]	0	No
[LAN]	-	-
[Wi-Fi]	-	-
[Wi-Fi Direct]	-	-
[Wi-Fi Versions]	-	-
[Bluetooth]	-	-
[Regulatory]	-	-

## [Bluetooth] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Enable]	Enabled	Yes
[Name]	SATO PRINTER_XXXXXXXXXX (BD address)	Yes
[PIN Code]	0000	Yes
[BD Address]	XXXXXXXXXX	Yes
[Firm Version]	-	Yes
[Host BD Address]	-	Yes
[Pairing]		
[Paired devices]	-	No
[IAP Ready]	Enabled	No
[iOS Reconnect]	Disabled	Yes
[Authentication]	Level 4	Yes

Setting Item	Initial Value	User Reset/ Factory Reset
[ISI]	2048	Yes
[ISW]	18	Yes
[PSI]	2048	Yes
[PSW]	18	Yes
[CRC Mode]	Disabled	Yes
[Flow Control]	STATUS4 MULTI	Yes

## [Wi-Fi] Menu

The initial value refers to the setting value of the product when it was shipped from the factory. If you reset the product, the setting values of the product will change back to the factory default values. The table below shows the initial value of each setting item and type of reset that changes the value back to the initial value.



- 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	User Reset/ Factory Reset
[Enable]	Enabled	Yes
[Wi-Fi Setting]		
[IPv4 (Wi-Fi)]		
[Mode]	DHCP	Yes
[DHCP]	-	-
[IP Address]	0.0.0.0	Yes
[Netmask]	255.255.255.0	Yes
[Gateway]	0.0.0.0	Yes
[DNS]	0.0.0.0, 0.0.0.0, 0.0.0.0	Yes
[IPv6 (Wi-Fi)]		
[Mode]	Disable	Yes
[DHCP]	-	-
[IP Address]	::	Yes

Setting Item		Initial Value	User Reset/ Factory Reset
	[Prefix Length]	64	Yes
	[Gateway]	::	Yes
	[DNS]	::	Yes
[Ports (Wi-Fi)]			
	[Port1]	1024	Yes
	[Port2]	1025	Yes
	[Port3]	9100	Yes
	[Flow Control]	STATUS4 ENQ	Yes
	[TCP Connection Queue]	Enabled	Yes
	[Legacy Status for Port 9100]	Disabled	Yes
	[BCC]	Disabled	Yes
	[Delay Reply ENQ]	0 ms	Yes
	[Status4 Cyclic Response]	500 ms	Yes
[Proxy (Wi-Fi)]			
	[Enabled]	Disabled	Yes
	[Server]	-	Yes
	[Port No.]	-	Yes
	[Username]	-	Yes
	[Password]	-	Yes
	[Exclude]	-	Yes
	[Wi-Fi Protected Setup(WPS)]	-	-
[Wi-Fi Direct]			
	[Device Name]	SATO_PRINTER	Yes
	[Connect]	-	-
	[Start Group]	-	Yes
	[Remove Group]	-	-
	[Disconnect]	-	-

Setting Item		Initial Value	User Reset/ Factory Reset
	[SSID]	DIRECT-xx	-
	[IP Address]	x.x.x.x	-
	[Passphrase]	xxxxxxx	-
	[Channel]	-	-
[Wi-Fi Connection Setting]			
	[SSID]	SATO_PRINTER	Yes
	[Hidden SSID]	Enabled	Yes
	[Mode]	Ad-hoc	Yes
	[Channel]	6	Yes
	[Security]	None	Yes
[WEP Conf.]			
	[Authentication]	Open System	Yes
	[Key Index]	1	Yes
	[Key #1] to [Key #4]	-	Yes
[WPA Conf.]			
	[WPA Authentication]	Personal (PSK)	Yes
	[PSK]	-	Yes
[EAP Conf.]			
	[EAP Mode]	FAST	Yes
	[Inner Method]	AUTO	Yes
	[Username]	-	Yes
	[Password]	-	Yes
	[Anon. Outer ID]	-	Yes
	[Verify Server Cert.]	Enabled	Yes
	[Private Key P/W]	-	Yes
	[PAC Auto Provisioning]	Disabled	Yes

Setting Item				Initial Value	User Reset/ Factory Reset
			[PAC Password]	-	Yes

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# Maintenance

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## Cleaning the Product

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### 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 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 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.
  - Be careful not to touch the cutter blade when cleaning the product.
  - Use our recommended cleaning products for cleaning. Do not clean with a hard object. Doing so could cause damage.
  - Remove the media and ribbon 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 every media roll or after printing 50 m (164.0 feet) of print media

Use a cotton swab or cotton cloth dampened with cleaning liquid to clean the following parts:

- Print head
- Platen roller

Use the cleaning kit to clean following parts:

- Media sensors
- Media guide
- Media route

- After every 6 media rolls or after printing 300 m (984.3 feet) of print media

Use the cleaning sheet to clean the following parts:

- Print head

Cleaning guidelines for when the optional linerless cutter kit is installed are as follows:

- After you print one media roll or whenever there is any glue residue or paper dust on the media route

Use a cotton swab or cotton cloth dampened with cleaning liquid, and the cleaning kit to clean the following parts:

- Linerless platen roller
- Print head
- Media guide
- Media sensors
- Media route

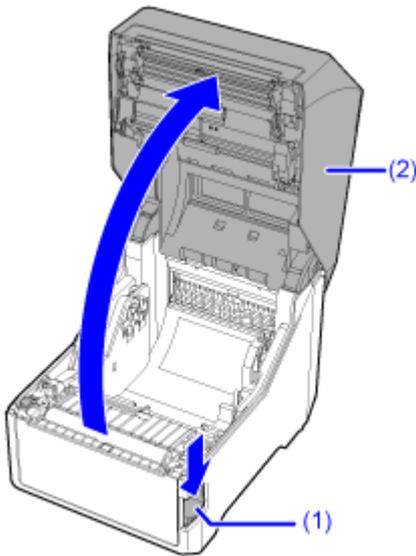
## Cleaning the Inside of the Product

This topic explains how to clean the inside of the product.



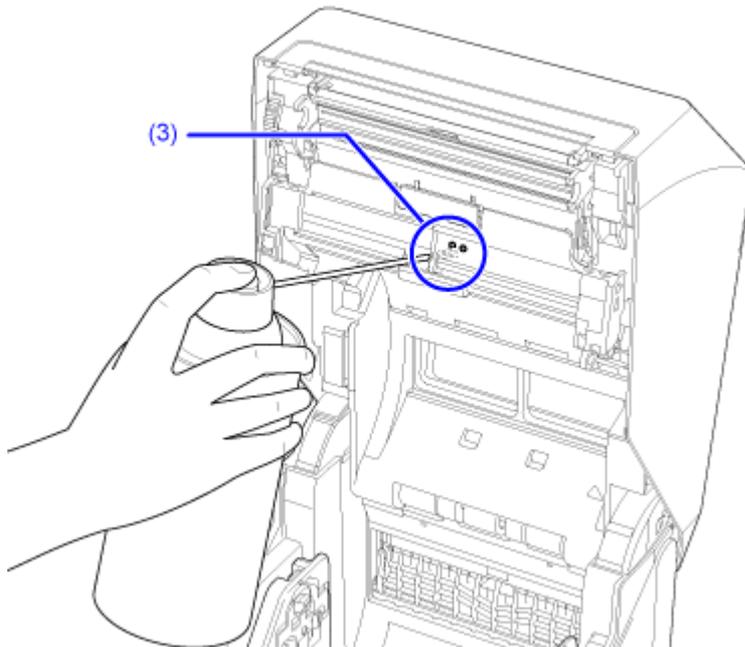
- Never use organic solvents, such as thinner and benzine to clean the product.
- 

1. Make sure that the product is powered off, and disconnect the power cord from the AC outlet.
2. Press the cover open latch (1) to open the top cover (2).



3. Remove the media and ribbon if they are already loaded.

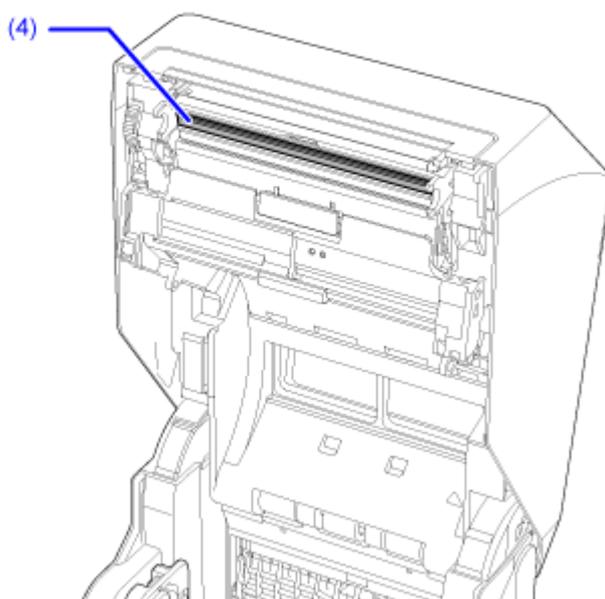
**4. Clean the sensor (3) by using an air duster.**



**5. Use a cotton swab or cotton cloth dampened with cleaning liquid to wipe the print head (4).**

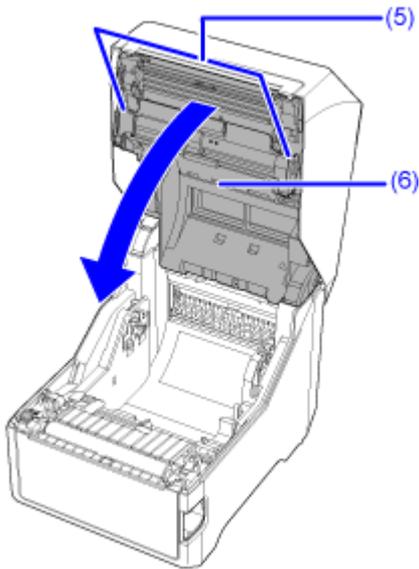


- The print head and its surroundings are hot after printing. Wait until the product cools down.
- Touching the edge of the print head with your bare hand could cause injury.

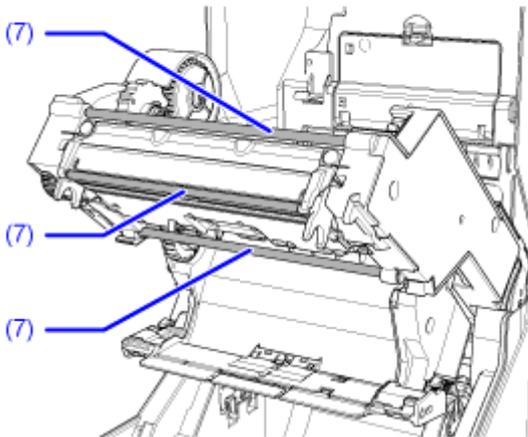


**6. On the combined direct thermal/thermal transfer model, clean the ribbon route.**

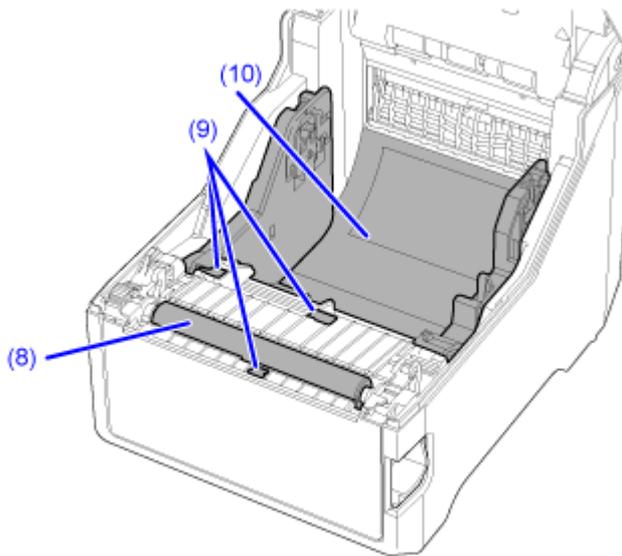
- a. Pull the ▼ (ribbon cover open) marks (5) toward the front to open the ribbon unit (6) toward the front.



- b. Clean the dirt off of the three ribbon shafts (7) using a cotton cloth dampened with cleaning liquid.



7. Use a cotton cloth dampened with cleaning liquid to wipe the platen roller (8), the three sensors (9), and the media holder (10).



8. Load the media and ribbon back if you remove them in step 3.
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.
-

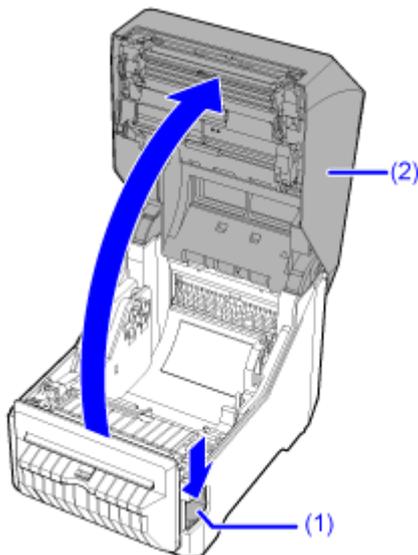
## Cleaning the Inside of the Product (When Optional Linerless Cutter Unit Is Installed)

This topic explains how to clean the inside of the product when the optional linerless cutter kit is installed.



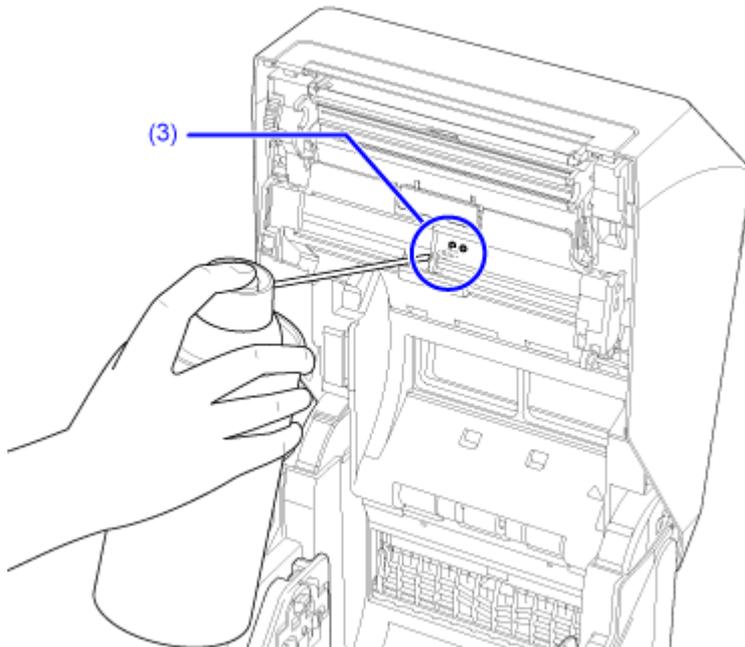
- Never use organic solvents, such as thinner and benzene to clean the product.
- 

1. Make sure that the product is powered off, and disconnect the power cord from the AC outlet.
2. Press the cover open latch (1) to open the top cover (2).



3. Remove the media and ribbon if they are already loaded.

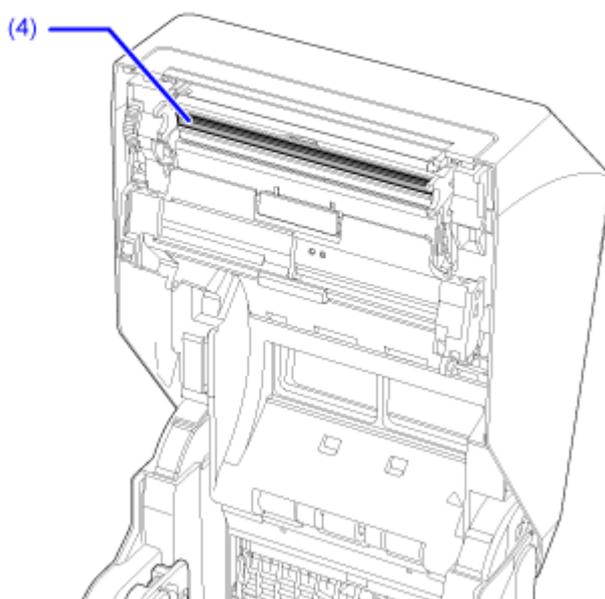
**4. Clean the sensor (3) by using an air duster.**



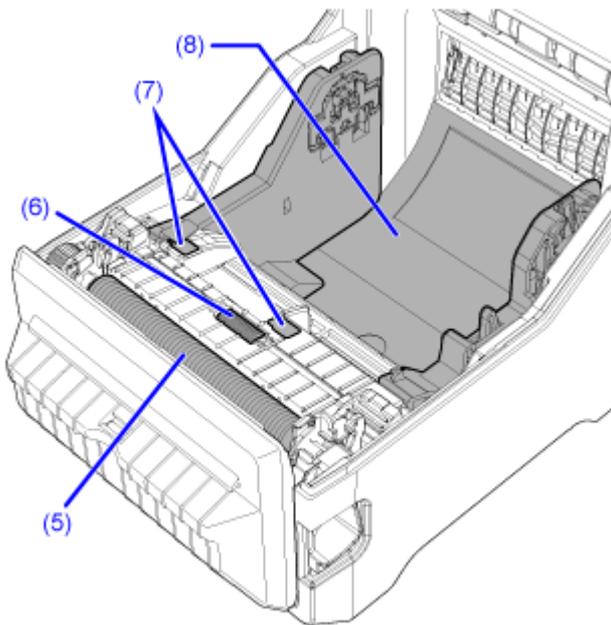
**5. Use a cotton swab or cotton cloth dampened with cleaning liquid to wipe the print head (4).**



- 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.



6. Use a cotton swab or cotton cloth dampened with cleaning liquid to wipe the platen roller (5), the roller (6), the two sensors (7), and the media holder (8).



7. Load the media and ribbon back if you remove them 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.
-

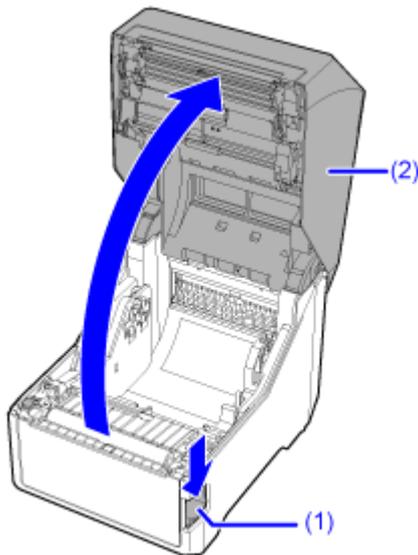
## Cleaning the Print Head with a Cleaning Sheet

The cleaning procedure using the cleaning sheet is as follows:



- You cannot clean with a cleaning sheet while the optional cutter unit or linerless cutter unit is installed.
- 

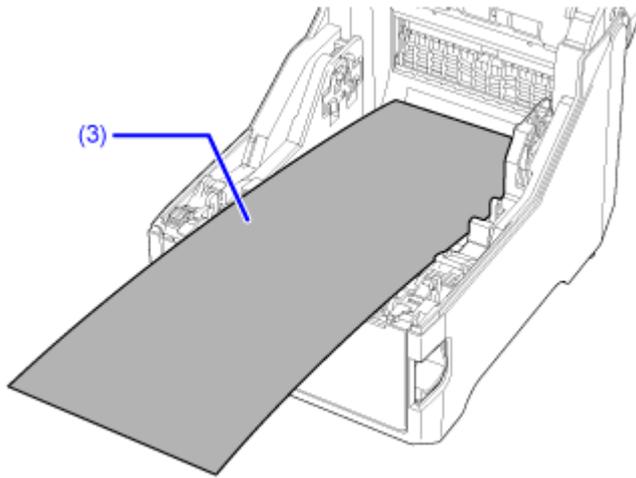
1. **Make sure that the product is powered off, and disconnect the power cord from the AC outlet.**
2. **Press the cover open latch (1) to open the top cover (2).**



3. **Remove the media and ribbon if they are already loaded.**
4. **Cut the cleaning sheet to a width of about 10cm (4").**
5. **Place the cleaning sheet (3) on the platen roller.**



- Align the rough side of the cleaning sheet adjacent to the top cover.
- 



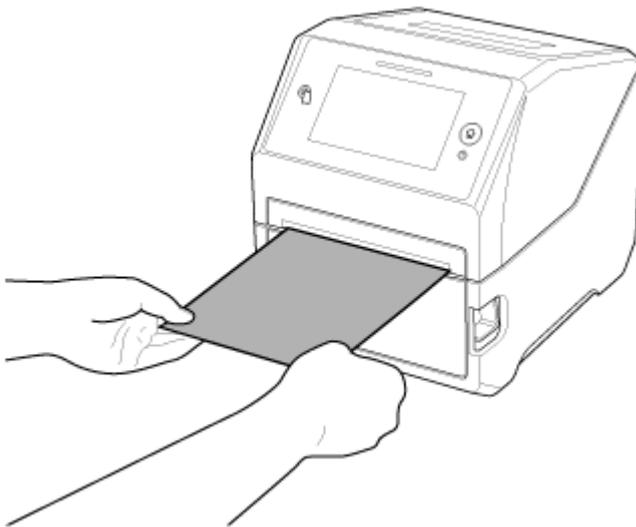
**6. Close the top cover.**

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.
- 

**7. Using two hands, pull the cleaning sheet away from the product.**

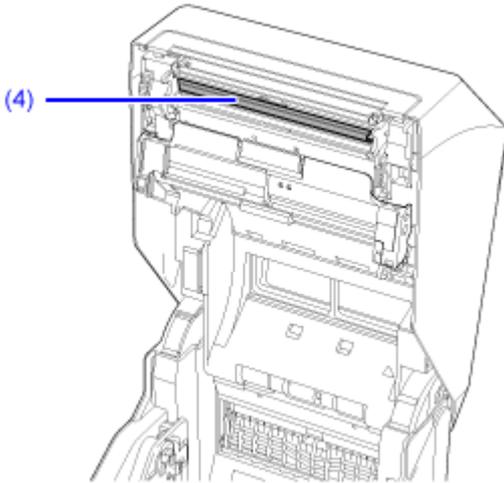


**8. After you pull out the cleaning sheet, repeat steps 2 through 7, two or three more times.**

When no more dirt appears on the cleaning sheet after you have pulled it out, stop repeating these steps.

**9. Press the cover open latch to open the top cover.**

10. Clean the dirt off of the print head (4) using a cotton swab or cotton cloth dampened with cleaning liquid.



11. Load the media and ribbon back if you remove them in step 3.

## Replacing Consumable Parts

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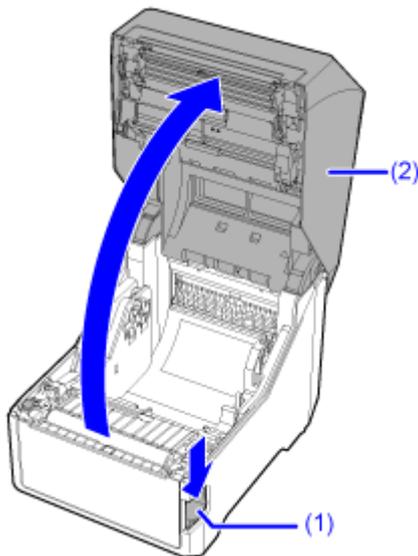
### Replacing the Print Head

You can easily remove and replace a damaged or worn print head.



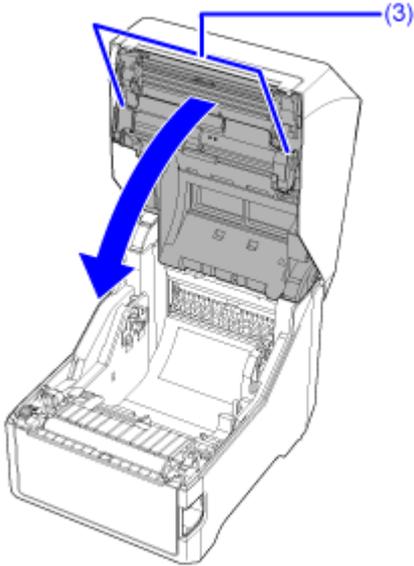
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
  - Disconnect the power cord from the AC outlet before you replace the print head.
  - Wear gloves before replacing the print head, to prevent damage to the print head.
- 

1. Make sure that the product is powered off, and disconnect the power cord from the AC outlet.
2. Press the cover open latch (1) to open the top cover (2).



3. Pull out the parts (3), on which  are engraved.

The parts (3) are indicated by the ▼ (ribbon cover open) marks on the combined direct thermal/thermal transfer model.

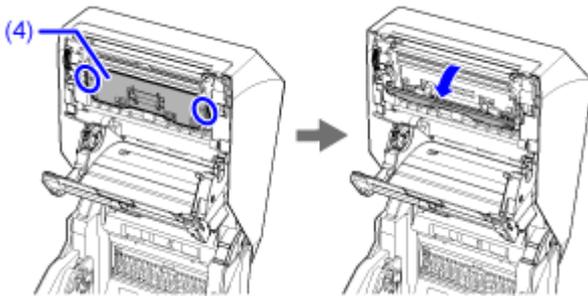


4. On the combined direct thermal/thermal transfer model, remove the ribbon if it is loaded.
5. Put your fingers on the 2 tabs, on the left and right sides, on the head cover (4) and open it toward the front.

The head cover opens in 2 stages. Open it so the opening is about 45 degrees.



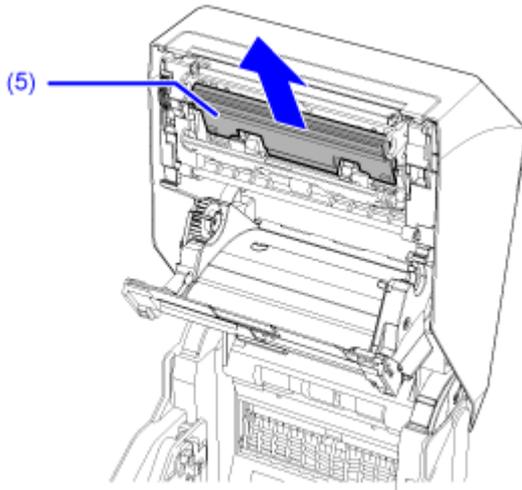
- The print head and its surroundings are hot after printing. Wait until the product cools down.
- Touching the edge of the print head with your bare hand could cause injury.



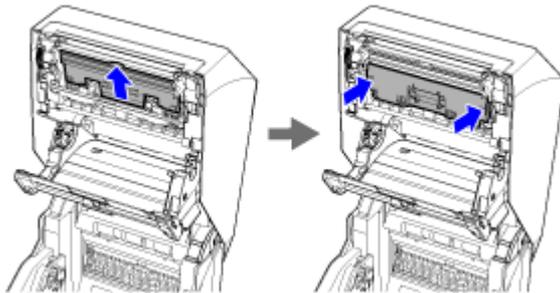
6. Take out the print head (5).



- Do not touch the heating unit and terminals of the print head.
- 



**7. Insert the new print head, tilt it upward, and close the head cover.**



- Handle the print head with care. Do not contaminate or scratch the sensitive print head surface.
- 

**8. Load the ribbon back 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.
-

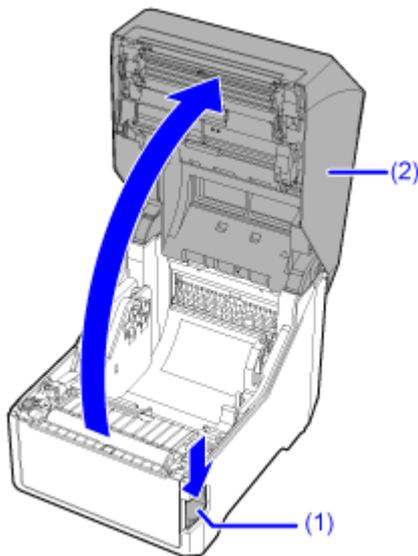
## Replacing the Platen Roller

You can easily remove and replace a damaged or worn platen roller.

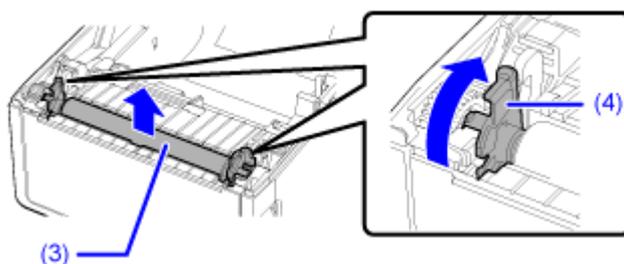


- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
- Disconnect the power cord from the AC outlet before you replace the platen roller.

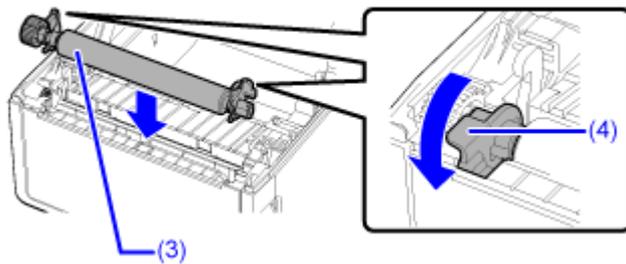
1. Make sure that the product is powered off, and disconnect the power cord from the AC outlet.
2. Press the cover open latch (1) to open the top cover (2).



3. Remove the media if it is already loaded.
4. Raise the 2 levers (4) of the platen roller (3) to remove the platen roller.



- 5. Install the new platen roller (3) and lower the 2 levers (4) toward the front.**



- 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.
-

## Replacing the Optional Linerless Platen Roller

You can easily remove and replace a damaged or worn linerless platen roller.



- Do not 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 before you replace the platen roller.

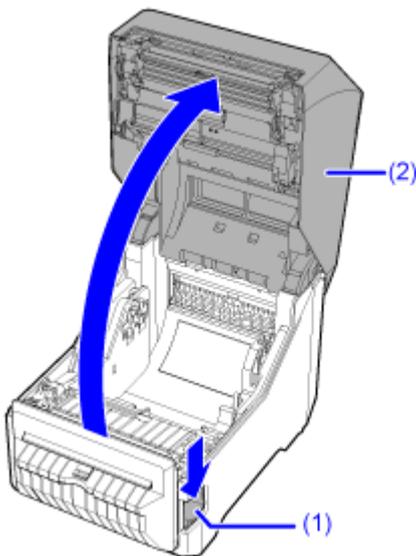
### Guideline to Replace the Linerless Platen Roller

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.



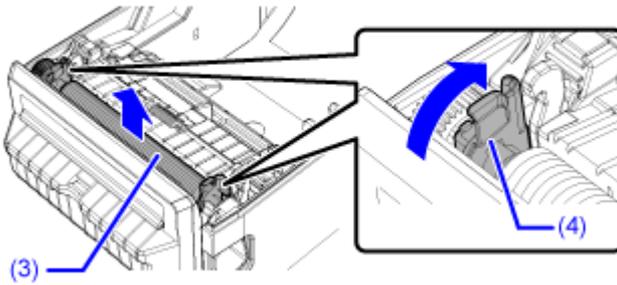
- This is only a general guideline. The condition in which the linerless platen roller wears out varies depending on the media that is used. In any case, replace the worn linerless platen roller when it affects the printing quality of the product.

1. **Make sure that the product is powered off, and disconnect the power cord from the AC outlet.**
2. **Press the cover open latch (1) to open the top cover (2).**

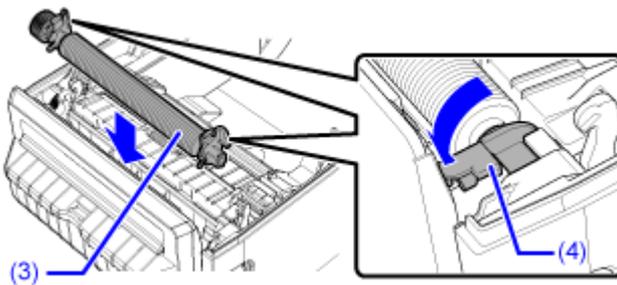


3. **Remove the media if it is already loaded.**

4. Raise the 2 levers (4) of the platen roller (3) to remove the platen roller.



5. Install the new platen roller (3) and lower the 2 levers (4) toward the front.



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.
-

## 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. 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 specialized application using a tablet or a smartphone.

The following shows how to operate the notification screen. The buttons on the screen change according to the settings in [Update Screen].

### When [Update Screen] Is Set to [Normal]



By tapping **X**, the display returns to the Offline screen without resetting the QR code for periodic notification.

The status icon remains **SOS!**.

By tapping **✓**, the QR code displayed 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 tapping , the QR code displayed for periodic notification is reset and the display returns to the Offline screen.

The status icon changes to .

By tapping [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)

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When the SOS (SATO Online Services) mode is enabled on the product, a QR code is displayed on the screen at the time of the error outbreak or the timing that is set to perform periodic notification. By scanning the QR code with a tablet or a smartphone, you can check how to clear the error according to the current product information in the QR code. You can also contact your SATO technical support directly from this specialized application by phone or e-mail.

Also, the product information can be acquired via NFC and sent to the SOS cloud.

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](https://www.sato-sos.com/en/support/#sos_use_manual)

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# When You Are in Trouble

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## When an Error Message Appears

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### Error Message 1001 (Machine Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Power off the product.

Cause and Countermeasure	Reference
<p><b>Cause</b> A defect has occurred in the product.</p> <p><b>Countermeasure</b> Power the product off and then on again.</p>	<p> <a href="#">Powering On/Off the Product</a></p>

Contact your SATO technical support if the error cannot be resolved.

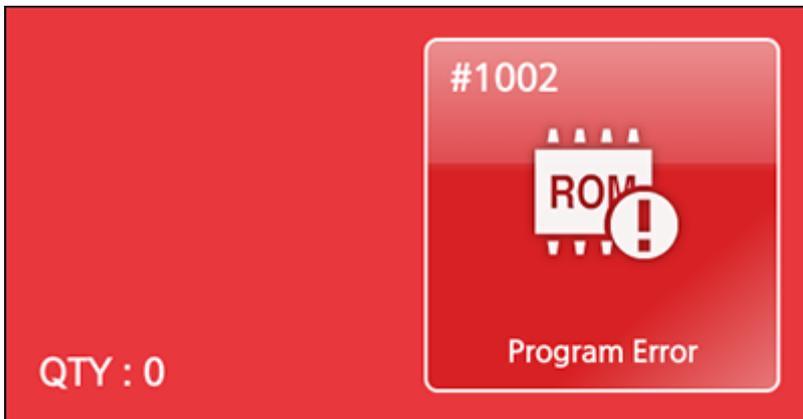
 [Contact Information for When You Are in Trouble](#)

## Error Message 1002 (Program Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Power off the product.

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>A program error occurred in the memory.</p> <p><b>Countermeasure</b></p> <p>Power the product off and then on again.</p>	<p> <a href="#">Powering On/Off the Product</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)

## Error Message 1003 (Parity Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR] or tap [SETTINGS] to adjust the settings.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> RS-232C settings are incorrect.</p> <p><b>Countermeasure (1)</b> Set the interface settings of the product again.</p>	<p> <a href="#">RS-232C</a></p>
<p><b>Cause (2)</b> The RS-232C cable is not connected correctly.</p> <p><b>Countermeasure (2)</b> Power off the product, connect the RS-232C cable correctly, and then power on the product again.</p>	<p> <a href="#">Powering On/Off the Product</a></p> <p> <a href="#">RS-232C Interface Connection (Optional)</a></p>

Contact your SATO technical support if the error cannot be resolved.

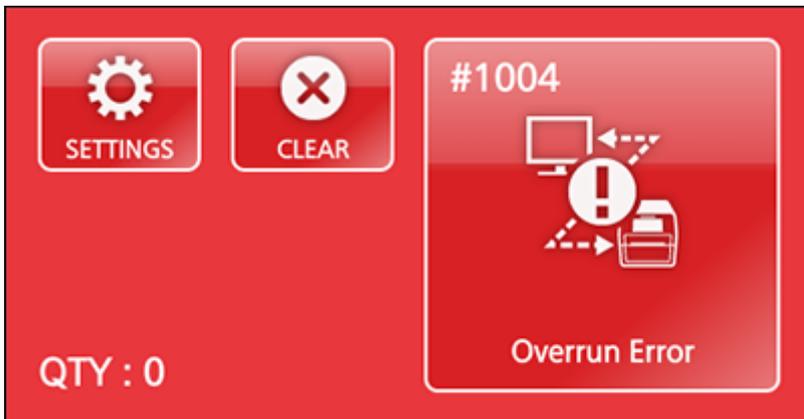
 [Contact Information for When You Are in Trouble](#)

## Error Message 1004 (Overrun Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR] or tap [SETTINGS] to adjust the settings.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> RS-232C settings are incorrect.</p> <p><b>Countermeasure (1)</b> Set the interface settings of the product again.</p>	<p> <a href="#">RS-232C</a></p>
<p><b>Cause (2)</b> The RS-232C cable is not connected correctly.</p> <p><b>Countermeasure (2)</b> Power off the product, connect the RS-232C cable correctly, and then power on the product again.</p>	<p> <a href="#">Powering On/Off the Product</a></p> <p> <a href="#">RS-232C Interface Connection (Optional)</a></p>

Contact your SATO technical support if the error cannot be resolved.

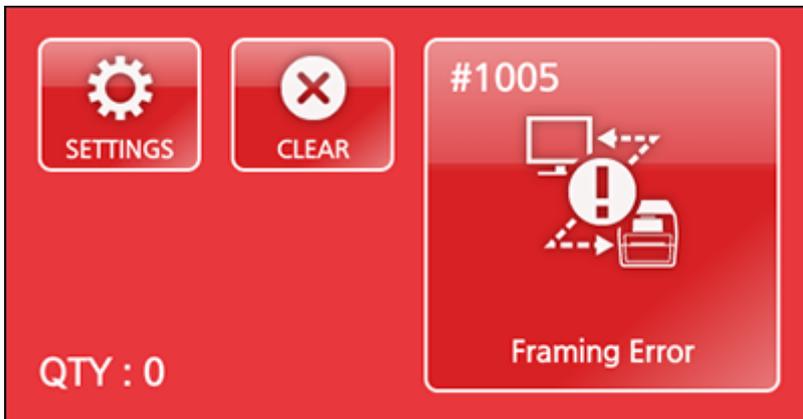
 [Contact Information for When You Are in Trouble](#)

## Error Message 1005 (Framing Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR] or tap [SETTINGS] to adjust the settings.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> RS-232C settings are incorrect.</p> <p><b>Countermeasure (1)</b> Set the interface settings of the product again.</p>	<p> <a href="#">RS-232C</a></p>
<p><b>Cause (2)</b> The RS-232C cable is not connected correctly.</p> <p><b>Countermeasure (2)</b> Power off the product, connect the RS-232C cable correctly, and then power on the product again.</p>	<p> <a href="#">Powering On/Off the Product</a></p> <p> <a href="#">RS-232C Interface Connection (Optional)</a></p>

Contact your SATO technical support if the error cannot be resolved.

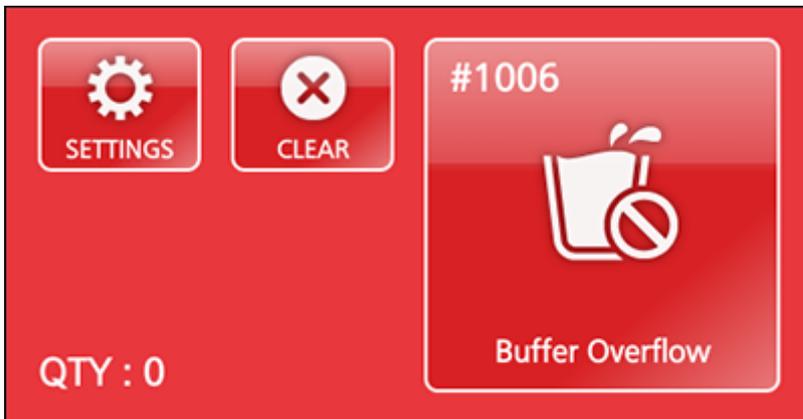
 [Contact Information for When You Are in Trouble](#)

## Error Message 1006 (Buffer Overflow)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR] or tap [SETTINGS] to adjust the settings.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b></p> <p>The size of the received data from the host exceeds the size of the receive buffer.</p> <p><b>Countermeasure (1)</b></p> <p>Change the settings on the host so that data that exceeds the size of the receive buffer cannot be sent.</p>	-
<p><b>Cause (2)</b></p> <p>The interface settings between the product and the host are incorrect.</p> <p><b>Countermeasure (2)</b></p> <p>Set the interface settings of the product and host again.</p> <p>Refer to the Printer Driver Manual regarding the printer driver settings.</p>	<p> <a href="#">RS-232C</a></p> <p> <a href="#">Go to your local SATO website</a></p>

Contact your SATO technical support if the error cannot be resolved.

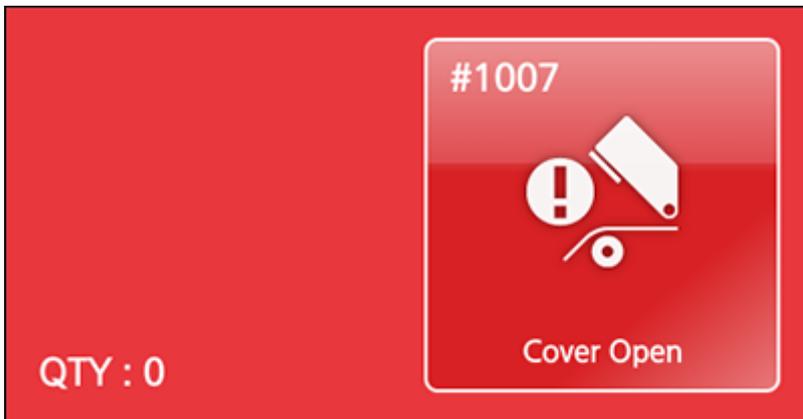
 [Contact Information for When You Are in Trouble](#)

## Error Message 1007 (Cover Open)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details 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)

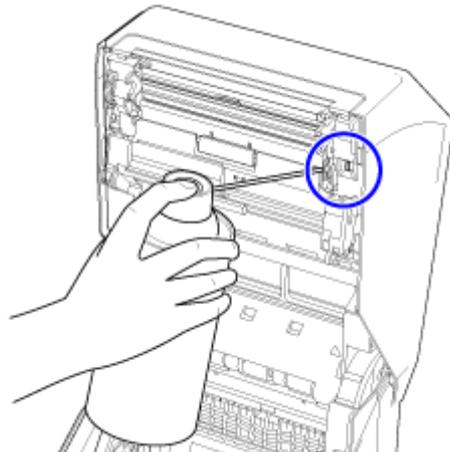
Close the top cover so that it clicks when locked.

#### Cause (2)

The sensor for detecting the open/close status of the top cover is defective.

#### Countermeasure (2)

Clean the sensor using an air duster.



Contact your SATO technical support if the error cannot be resolved.



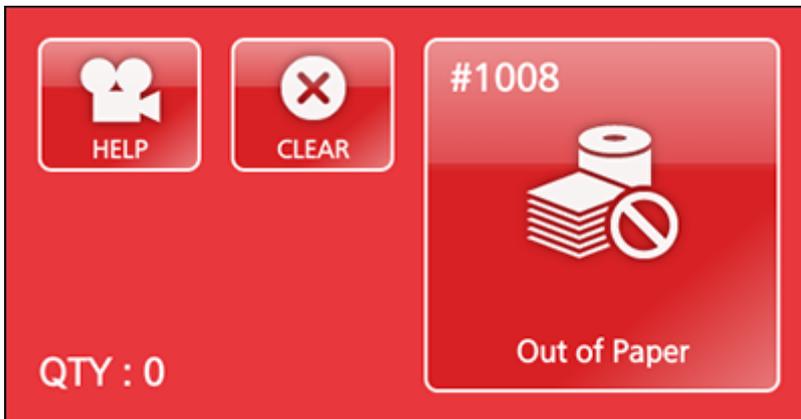
[Contact Information for When You Are in Trouble](#)

## Error Message 1008 (Out of Paper)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open the top cover and load media or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> The media is not loaded.</p> <p><b>Countermeasure (1)</b> Load the media.</p>	<p> <a href="#">Loading Media</a></p>
<p><b>Cause (2)</b> The media is not loaded correctly.</p> <p><b>Countermeasure (2)</b> Load the media correctly.</p>	<p> <a href="#">Loading Media</a></p>
<p><b>Cause (3)</b> The media sensor level is not set correctly.</p> <p><b>Countermeasure (3)</b> Adjust the media sensor level.</p>	<p> <a href="#">Calibrate</a></p>
<p><b>Cause (4)</b> The media has jammed.</p>	<p> <a href="#">Loading Media</a></p>

Cause and Countermeasure	Reference
<p><b>Countermeasure (4)</b></p> <p>Remove the jammed media.</p> <p>Refer to the video for loading the media, for the media path, and for the operation of each part inside the product.</p>	
<p><b>Cause (5)</b></p> <p>The media sensor is not operating correctly.</p> <ul style="list-style-type: none"> <li>◦ The media sensor is dirty, or there is a label attached to it.</li> <li>◦ The media sensor has poor sensitivity.</li> </ul> <p><b>Countermeasure (5)</b></p> <p>Clean the media sensor.</p>	<p> <a href="#">Cleaning the Inside of the Product</a></p>

Contact your SATO technical support if the error cannot be resolved.

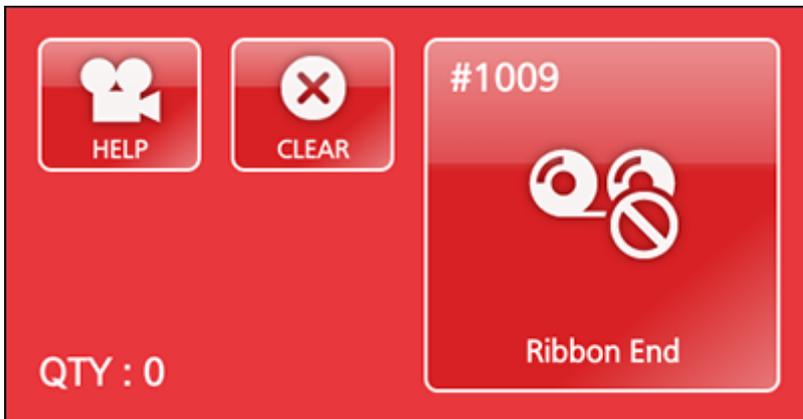
 [Contact Information for When You Are in Trouble](#)

## Error Message 1009 (Ribbon End)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open the top cover and load the ribbon or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> The ribbon is not loaded.</p> <p><b>Countermeasure (1)</b> Load the ribbon.</p>	<p> <a href="#">Loading Ribbon (Thermal Transfer Only)</a></p>
<p><b>Cause (2)</b> The ribbon is not loaded correctly.</p> <p><b>Countermeasure (2)</b> Load the ribbon and the media correctly.</p>	<p> <a href="#">Loading Ribbon (Thermal Transfer Only)</a></p> <p> <a href="#">Loading Media</a></p>
<p><b>Cause (3)</b> There is no ribbon.</p> <p><b>Countermeasure (3)</b> Clean the ribbon's route and adjust it.</p>	<p> <a href="#">Cleaning the Inside of the Product</a></p>
<p><b>Cause (4)</b> The ribbon sensor is not operating correctly.</p> <ul style="list-style-type: none"> <li>◦ The ribbon sensor is dirty.</li> <li>◦ The ribbon sensor has poor sensitivity.</li> </ul>	<p> <a href="#">Powering On/Off the Product</a></p>

Cause and Countermeasure	Reference
<b>Countermeasure (4)</b> Power on the product again.	

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.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open and close the top cover or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b></p> <p>The media size of the print data and the actual media size are different.</p> <p><b>Countermeasure (1)</b></p> <p>Check the media size of the print data and the actual media size again.</p> <p>If the error is not solved, power on the product again.</p>	-
<p><b>Cause (2)</b></p> <p>The media size of the print data is longer than the actual media size.</p> <p><b>Countermeasure (2)</b></p> <p>Check the print data.</p> <p>If the error is not solved, power on the product again.</p>	-
<p><b>Cause (3)</b></p> <p>The media is fed a longer distance due to the incorrect sensor level.</p>	 <a href="#">Calibrate</a>

Cause and Countermeasure	Reference
<b>Countermeasure (3)</b> 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.



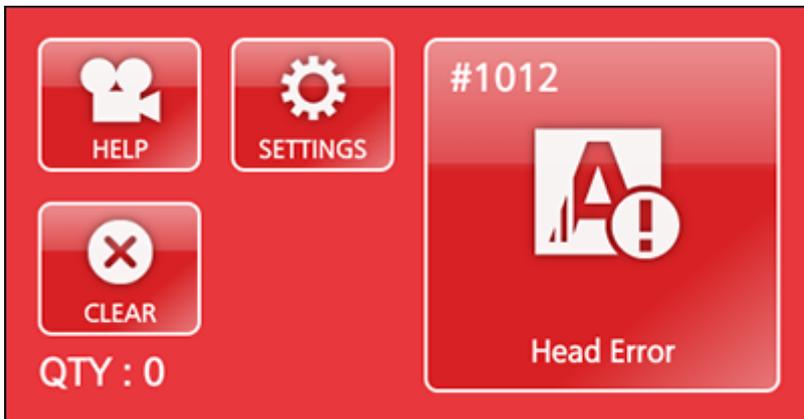
[Contact Information for When You Are in Trouble](#)

## Error Message 1012 (Head Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Power off the product, or tap [SETTINGS] to change the print head check conditions.

 [Head Check](#)

Touch and hold the [CLEAR] button until it becomes completely blue to switch the product to Offline mode and temporarily disable the head check until the product is powered off.

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The print head is worn or damaged.</p> <p><b>Countermeasure</b></p> <p>Replace the print head.</p>	<p> <a href="#">Replacing the Print Head</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [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.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

Cause and Countermeasure
<p><b>Cause (1)</b></p> <p>The USB memory is disconnected while writing.</p> <p><b>Countermeasure (1)</b></p> <p>Connect the USB memory.</p>
<p><b>Cause (2)</b></p> <p>The copy area in the USB memory is not sufficient.</p> <p><b>Countermeasure (2)</b></p> <p>Make sure that the USB memory has sufficient copy area.</p>
<p><b>Cause (3)</b></p> <p>Writing to the USB memory fails.</p> <p><b>Countermeasure (3)</b></p> <p>Replace the USB memory.</p>
<p><b>Cause (4)</b></p> <p>The USB memory is not formatted.</p> <p><b>Countermeasure (4)</b></p> <p>Format the USB memory to FAT32 format.</p>

Contact your SATO technical support if the error cannot be resolved.



[Contact Information for When You Are in Trouble](#)

## Error Message 1014 (USB Memory Full)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Insert a USB memory that has sufficient available space, or tap [CLEAR].

### Cause and Countermeasure

#### Cause

The space in the USB memory is not sufficient.

#### Countermeasure

Delete unwanted data from the USB memory or insert a USB memory with sufficient space.

Contact your SATO technical support if the error cannot be resolved.

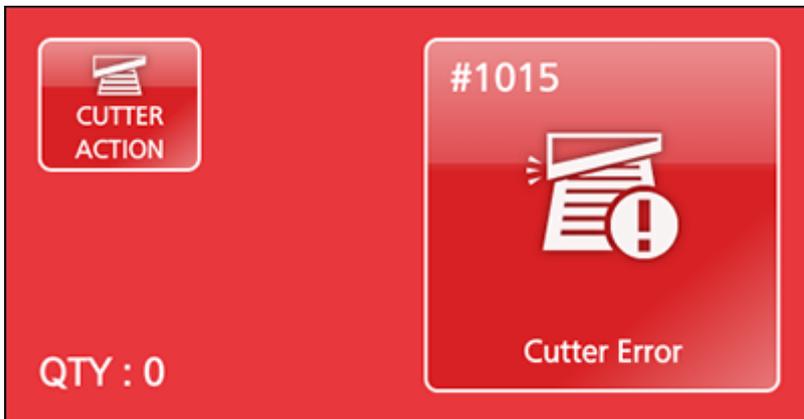
 [Contact Information for When You Are in Trouble](#)

## Error Message 1015 (Cutter Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CUTTER ACTION].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> A media jam has occurred in the cutter.</p> <p><b>Countermeasure (1)</b> Remove the jammed media from the cutter. Refer to the video for loading the media, for the media path, and for the operation of each part inside the product.</p> <hr/> <p> • Be careful not to cause injury with the cutter blade when removing the media.</p> <hr/> <p>If the error is not solved, power on the product again.</p>	<p> <a href="#">Loading a Media Roll (When the Optional Cutter Unit Is Installed)</a></p>
<p><b>Cause (2)</b> The cutter blade does not return to the specified position.</p>	<p>-</p>

Cause and Countermeasure	Reference
<b>Countermeasure (2)</b> Tap [CUTTER ACTION] to move the cutter blade back to the specified position. If the error is not solved, power on the product again.	

Contact your SATO technical support if the error cannot be resolved.



[Contact Information for When You Are in Trouble](#)

## Error Message 1017 (SBPL Command Error)

When there is an error with the product, the error message appears on the screen.

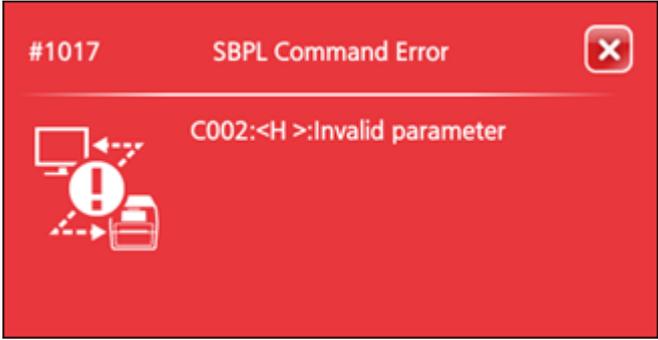
Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>Incorrect command or parameter in the print data.</p> <p>For details about the error, check the "Caaa: &lt;bb&gt;: cc" on the error message details screen.</p>  <ul style="list-style-type: none"> <li>◦ Caaa: position of error occurrence</li> <li>◦ &lt;bb&gt;: error command name</li> <li>◦ cc: error content</li> </ul> <p><b>Countermeasure</b></p> <p>Check the print data.</p> <p>If the error is not solved, power on the product again.</p>	<p> <a href="#">How to See the Command Error Information</a></p> <p> <a href="#">Show Error</a></p>

Cause and Countermeasure	Reference
 <ul style="list-style-type: none"> <li>The command error appears when [Show Error] in [SBPL] under the [Applications] menu is set to [Enabled].</li> </ul>	

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.

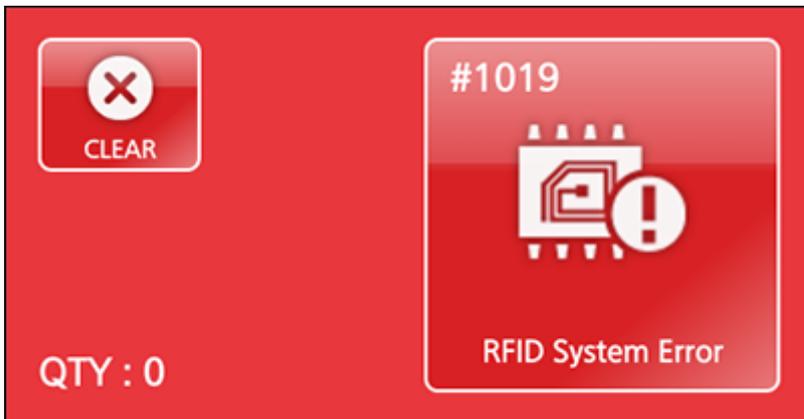
Description ("cc")	Cause
Invalid registration area	<ul style="list-style-type: none"> <li>• Specified memory area (card slot) is inappropriate.</li> <li>• Tried to write to a write-protected media.</li> </ul>
This number is already registered.	Number specified by registration command has already been 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)
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 1019 (RFID System Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Power off the product.

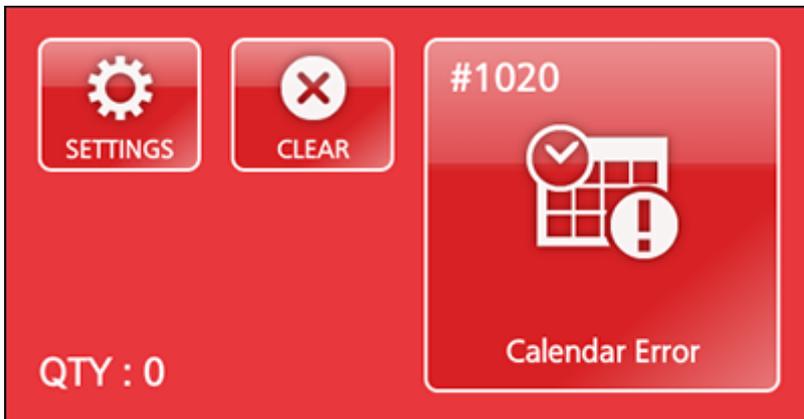
Cause and Countermeasure	Reference
<p><b>Cause (1)</b> RFID module is not operating correctly.</p> <p><b>Countermeasure (1)</b> Repair or replacement of the RFID module is required. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>
<p><b>Cause (2)</b> The setting of the SATO RF Analyze (SRA) board is incorrect.</p> <p><b>Countermeasure (2)</b> The setting of the SRA board needs to be changed. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1020 (Calendar Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [SETTINGS] to change the calendar settings, or tap [CLEAR], or power off the product.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b></p> <p>The date and time of the calendar are incorrect.</p> <p><b>Countermeasure (1)</b></p> <p>Set the calendar again.</p>	<p> <a href="#">Regional</a></p>
<p><b>Cause (2)</b></p> <p>The battery for the calendar is running low.</p> <p><b>Countermeasure (2)</b></p> <p>The battery for the calendar needs to be changed. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1021 (BCC Check Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CANCEL] or [PRINT].

### Cause and Countermeasure

#### Cause

The BCC code of the transmitted data (one item) is incorrect.

#### Countermeasure

Check the transmitted data and interface settings.

- [PRINT]: Continue printing from the print data where the BCC error occurred.
- [CANCEL]: Cancel the print data where the BCC error occurred and continue printing from the next item.
- Send the SUB command: Clear the BCC error and continue printing from where it stopped.
- Send the CAN command: Cancel the print data where the BCC 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 1022 (Print Head Overheated)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details 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.

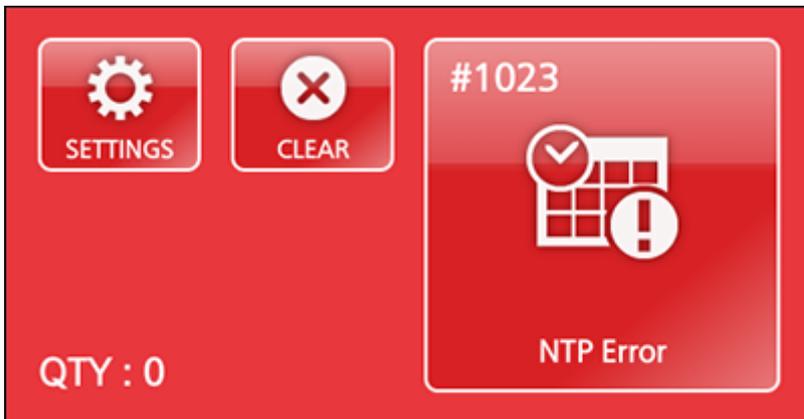
 [Contact Information for When You Are in Trouble](#)

## Error Message 1023 (NTP Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR], or tap [SETTINGS] to change the connection settings for the time server.

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>Could not connect to the time server and set the date and time.</p> <p><b>Countermeasure</b></p> <ul style="list-style-type: none"><li>◦ Confirm that the address of the time server is correct.</li><li>◦ Confirm that there is a connection to the time server.</li><li>◦ If RTC kit is attached, the date and time can be set manually and operation resumed without NTP functionality.</li></ul>	<p> <a href="#">Time Server IP</a></p> <p> <a href="#">Regional</a></p>

Contact your SATO technical support if the error cannot be resolved.

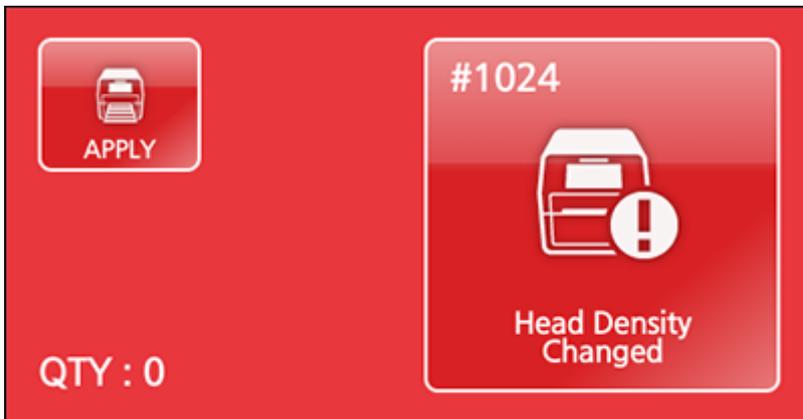
 [Contact Information for When You Are in Trouble](#)

## Error Message 1024 (Head Density Changed)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Check the message that appeared on the screen.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> The print head is not installed.</p> <p><b>Countermeasure (1)</b> Install the print head.</p>	 <a href="#">Replacing the Print Head</a>
<p><b>Cause (2)</b> A new print head with a different resolution has been installed.</p> <p><b>Countermeasure (2)</b> Install a print head with the same resolution as the old print head.</p>	 <a href="#">Replacing the Print Head</a>

Contact your SATO technical support if the error cannot be resolved.

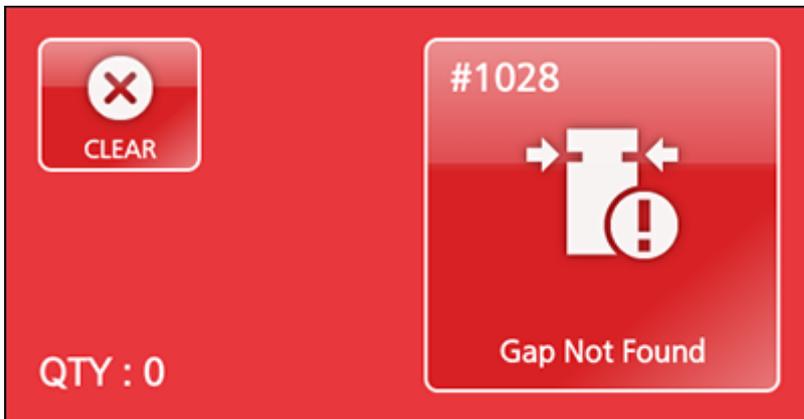
 [Contact Information for When You Are in Trouble](#)

## Error Message 1028 (Gap Not Found)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open and close the top cover or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> Meandering media.</p> <p><b>Countermeasure (1)</b> Load the media correctly.</p>	<p> <a href="#">Loading Media</a></p>
<p><b>Cause (2)</b> A label is attached to the media sensor.</p> <p><b>Countermeasure (2)</b> Clean the media sensor.</p>	<p> <a href="#">Cleaning the Inside of the Product</a></p>
<p><b>Cause (3)</b> The media sensor type is incorrect.</p> <p><b>Countermeasure (3)</b> Set the media sensor type which is compatible with the media you use.</p>	<p> <a href="#">Media Sensor Type</a></p>
<p><b>Cause (4)</b> The media sensor level is incorrect.</p>	<p> <a href="#">Calibrate</a></p>

Cause and Countermeasure	Reference
<b>Countermeasure (4)</b> 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.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open and close the top cover or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> Meandering media.</p> <p><b>Countermeasure (1)</b> Load the media correctly.</p>	<p> <a href="#">Loading Media</a></p>
<p><b>Cause (2)</b> A label is attached to the media sensor.</p> <p><b>Countermeasure (2)</b> Clean the media sensor.</p>	<p> <a href="#">Cleaning the Inside of the Product</a></p>
<p><b>Cause (3)</b> The media sensor type is incorrect.</p> <p><b>Countermeasure (3)</b> Set the media sensor type which is compatible with the media you use.</p>	<p> <a href="#">Media Sensor Type</a></p>
<p><b>Cause (4)</b> The media sensor level is incorrect.</p>	<p> <a href="#">Calibrate</a></p>

Cause and Countermeasure	Reference
<b>Countermeasure (4)</b> Adjust the media sensor level.	

Contact your SATO technical support if the error cannot be resolved.



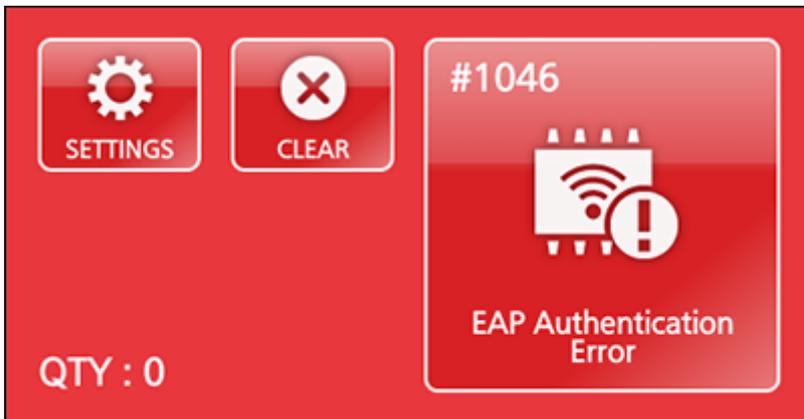
[Contact Information for When You Are in Trouble](#)

## Error Message 1046 (EAP Authentication Error (EAP Failure))

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [SETTINGS] to change the Wi-Fi settings or tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause</b> EAP Authentication failure.</p> <p><b>Countermeasure</b> Use the correct Wi-Fi settings.</p>	<p> <a href="#">EAP Conf.</a></p>

Contact your SATO technical support if the error cannot be resolved.

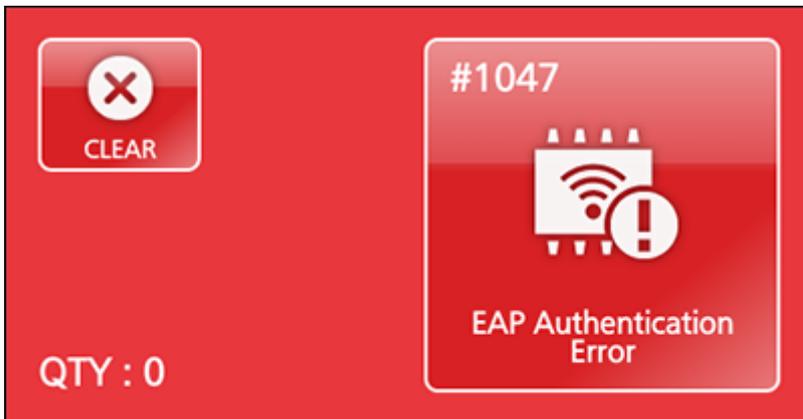
 [Contact Information for When You Are in Trouble](#)

## Error Message 1047 (EAP Authentication Error (EAP Timeout))

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>EAP Authentication failure.</p> <hr/> <p> • 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.</p> <hr/> <p><b>Countermeasure</b></p> <p>Use the correct Access Point (AP) and authentication server settings.</p>	<p> <a href="#">EAP Conf.</a></p>

Contact your SATO technical support if the error cannot be resolved.

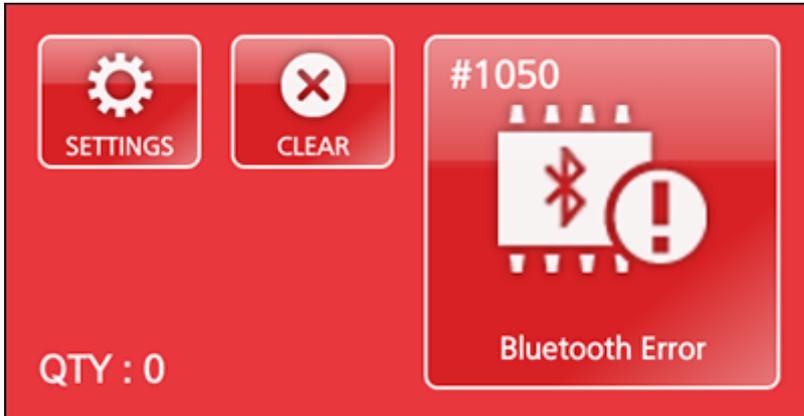
 [Contact Information for When You Are in Trouble](#)

## Error Message 1050 (Bluetooth Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [SETTINGS] to change the Bluetooth settings or tap [CLEAR].

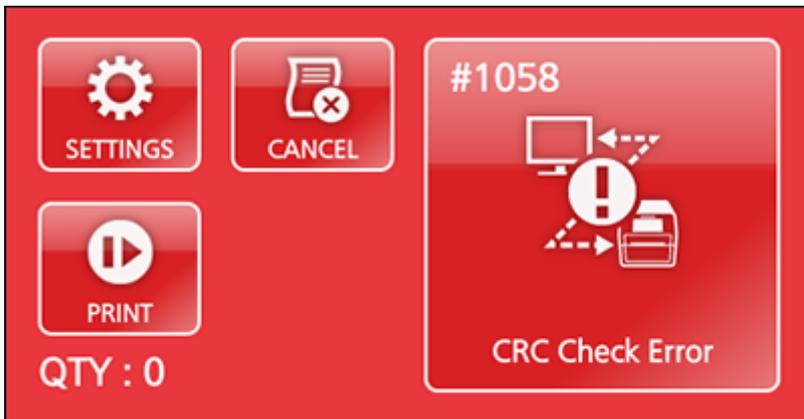
Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>Bluetooth module is defective.</p> <p><b>Countermeasure</b></p> <p>Repair of the Bluetooth module is required. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1058 (CRC Check Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [SETTINGS] to change the CRC check settings or tap [CANCEL] or [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 1066 (Paper Jam)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details 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
<p><b>Cause (1)</b> The media has jammed.</p> <p><b>Countermeasure (1)</b> 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.</p>	<p> <a href="#">Loading Media</a></p>
<p><b>Cause (2)</b> The media is not loaded correctly.</p> <p><b>Countermeasure (2)</b> Load the media correctly. Load the media so its leading edge is further forward than the cutter blade.</p>	<p> <a href="#">Loading a Media Roll (When the Optional Linerless Cutter Unit Is Installed)</a></p>

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.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

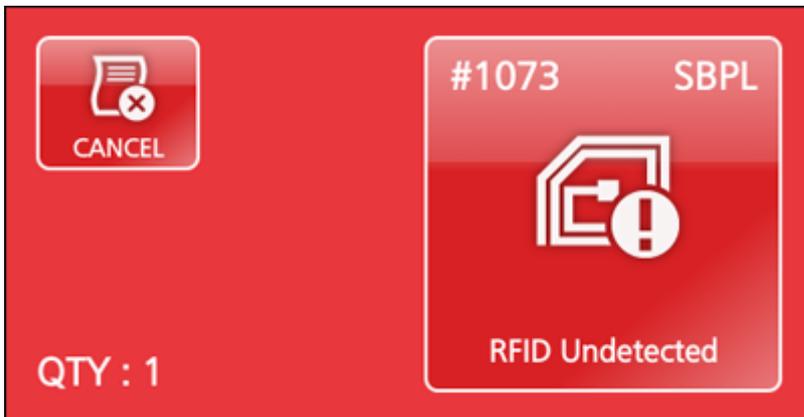
Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The wireless LAN module is damaged.</p> <p><b>Countermeasure</b></p> <p>The wireless LAN module needs to be replaced. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1073 (RFID Undetected)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>A print job that does not have an RFID command was transmitted for RFID tags while [RFID Undetected Warning] was enabled.</p> <p><b>Countermeasure</b></p> <ul style="list-style-type: none"><li>◦ Add an RFID issue command to the print job.</li><li>◦ Disable [RFID Undetected Warning].</li><li>◦ Replace with normal media.</li></ul>	<p> <a href="#">RFID Undetected Warning</a></p>

Contact your SATO technical support if the error cannot be resolved.

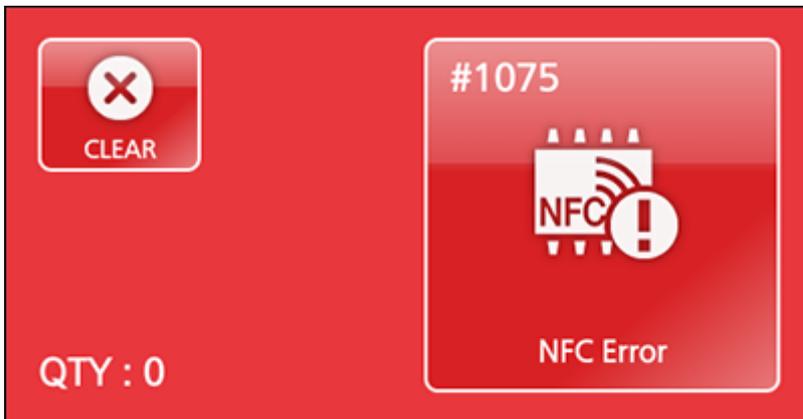
 [Contact Information for When You Are in Trouble](#)

## Error Message 1075 (NFC Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The NFC module is not operating correctly.</p> <p><b>Countermeasure</b></p> <p>A replacement of the NFC module is required. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1076 (Invalid command in NFC)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [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.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The power was cut off in an inappropriate way, such as the power cord was pulled out while the power was on.</p> <p><b>Countermeasure</b></p> <ul style="list-style-type: none"><li>◦ Power off the product correctly.</li><li>◦ Reset the product in the Settings menu.</li></ul>	<p> <a href="#">Powering Off the Product</a></p> <p> <a href="#">The SETTINGS Menu</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)

## Error Message 1111 (Label Waste Prevention Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Open the top cover, load the media so the leading edge is aligned with the media discharge outlet, and then close the top cover.

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> The position in which the media is loaded is incorrect.</p> <p><b>Countermeasure (1)</b> Load the media so the leading edge is aligned with the media discharge outlet.</p>	<p> <a href="#">About the Label Waste Prevention Function</a></p>
<p><b>Cause (2)</b> The media is not detected correctly.</p> <p><b>Countermeasure (2)</b> Use [Auto-calibration] to adjust the media sensor level.</p>	<p> <a href="#">Auto-calibration</a></p>

Contact your SATO technical support if the error cannot be resolved.

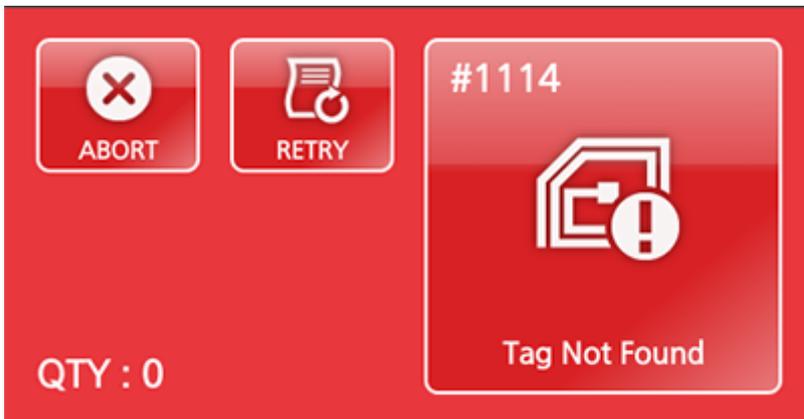
 [Contact Information for When You Are in Trouble](#)

## Error Message 1114 (Tag not Found)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<b>Cause</b> Did not find the tag, or failed to read the tag.	 <a href="#">RFID Settings (RFID Models Only)</a>
<b>Countermeasure</b> Confirm the inlay and check the product and antenna settings.	 <a href="#">RFID</a>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1115 (Write Tag Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<b>Cause</b> Failed to write the inlay.	 <a href="#">RFID Settings (RFID Models Only)</a>
<b>Countermeasure</b> Confirm the inlay and check the product and antenna settings.	 <a href="#">RFID</a>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



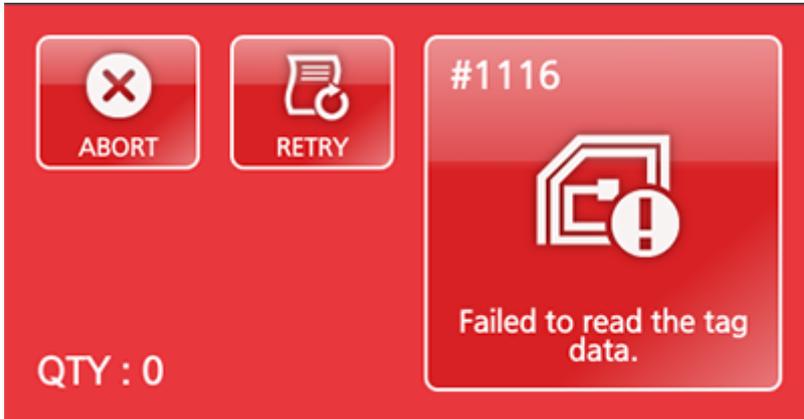
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1116 (Failed to Read the Tag Data)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>Failed to read the tag by using the tag data print &lt;TU&gt; command.</p> <p><b>Countermeasure</b></p> <ul style="list-style-type: none"><li>◦ Confirm the inlay and check the product and antenna settings.</li><li>◦ Confirm that an address that exceeds the inlay volume has not been specified.</li></ul>	<p> <a href="#">RFID Settings (RFID Models Only)</a></p> <p> <a href="#">RFID</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1117 (Write Tag Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### ISO/IEC 15693, FeliCa only

##### Cause (1)

Tried to write to a write-locked inlay.

##### Countermeasure (1)

Use tags that are not locked.

#### ISO/IEC 15693, FeliCa only

##### Cause (2)

Tried to write to an address to which writing is impossible.

##### Countermeasure (2)

Use tags that are not locked.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1118 (Write/Read Values Are not Consistent)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>Except FeliCa</b></p> <p><b>Cause (1)</b></p> <p>The written value and read value do not match.</p> <p><b>Countermeasure (1)</b></p> <p>Confirm the inlay and check the product and antenna settings.</p>	<p> <a href="#">RFID Settings (RFID Models Only)</a></p> <p> <a href="#">RFID</a></p>
<p><b>FeliCa only</b></p> <p><b>Cause (2)</b></p> <p>The written value and read value do not match. A value greater than original data was written to subtraction register.</p> <p><b>Countermeasure (2)</b></p> <p>Write an appropriate value to subtraction register.</p>	<p>-</p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



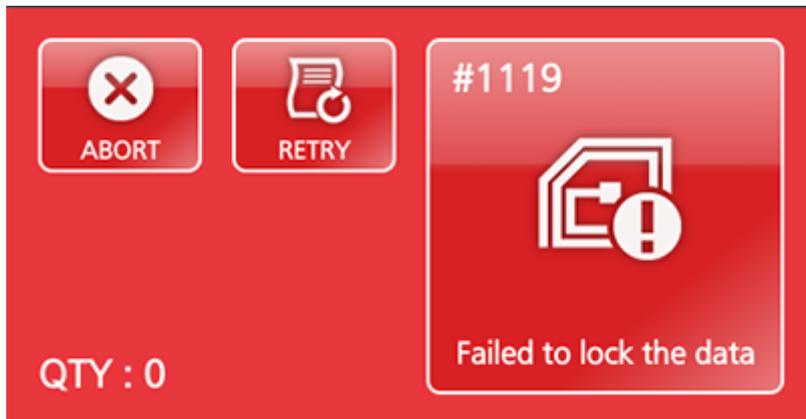
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.
-

## Error Message 1119 (Failed to Lock the Data)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### Cause

Failed to lock the inlay.

#### Countermeasure

Check the inlay.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



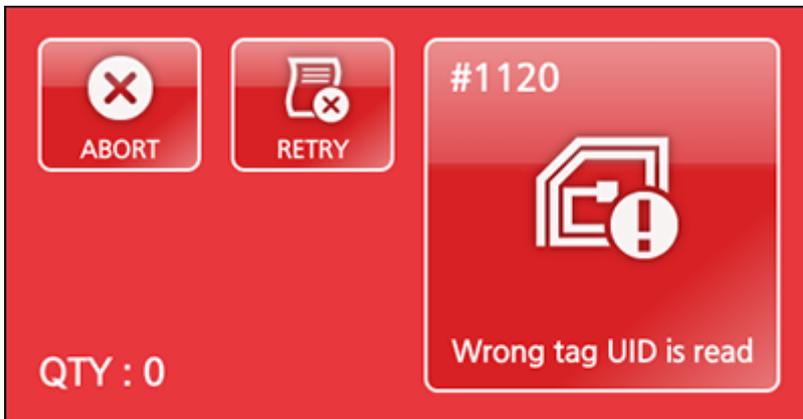
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1120 (Wrong Tag UID Is Read)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### ISO/IEC 15693, ISO/IEC 14443 Type A only

##### Cause

Read the UID of a tag other than the specified tag.

##### Countermeasure

Check that the tags you are using are the specified types of tags.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1121 (Multiple Tags Are Detected)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>Except FeliCa</b></p> <p><b>Cause (1)</b></p> <p>Multiple inlays captured at same time.</p> <p><b>Countermeasure (1)</b></p> <p>Confirm the inlay and check the product and antenna settings.</p>	<p> <a href="#">RFID Settings (RFID Models Only)</a></p> <p> <a href="#">RFID</a></p>
<p><b>FeliCa only</b></p> <p><b>Cause (2)</b></p> <p>The IDms of the cards captured between processes are not the same (tried to write unintended card).</p> <p><b>Countermeasure (2)</b></p> <p>Confirm the inlay and check the product and antenna settings.</p>	<p> <a href="#">RFID Settings (RFID Models Only)</a></p> <p> <a href="#">RFID</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



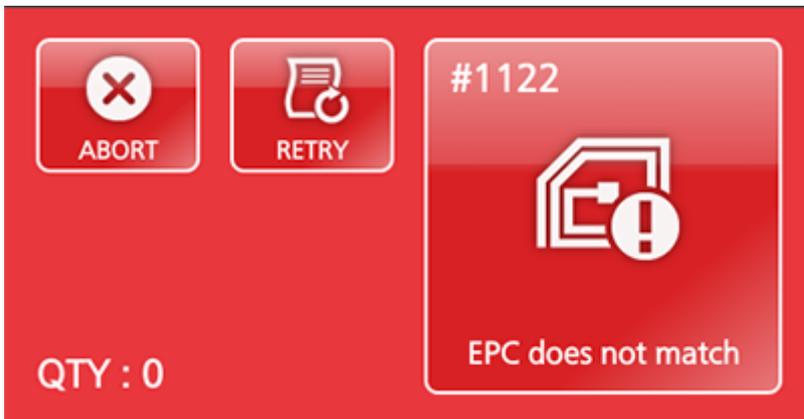
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.
-

## Error Message 1122 (EPC Does not Match)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### UHF only

##### Cause

Detected inconsistent different EPCs during a series of processes.

##### Countermeasure

Check the tags.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1123 (Write Tag Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>UHF only</b></p> <p><b>Cause (1)</b></p> <p>Tried to write to an inlay that was write-locked or to an inlay that had more than 64 digits of EPC written to it.</p> <p><b>Countermeasure (1)</b></p> <p>Use tags that are not locked.</p>	-
<p><b>UHF only</b></p> <p><b>Cause (2)</b></p> <p>Tried to write to an inlay when the writing power is low.</p> <p><b>Countermeasure (2)</b></p> <p>Adjust [Write Power]/[Read Power].</p>	<p> <a href="#">Write Power</a></p> <p> <a href="#">Read Power</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



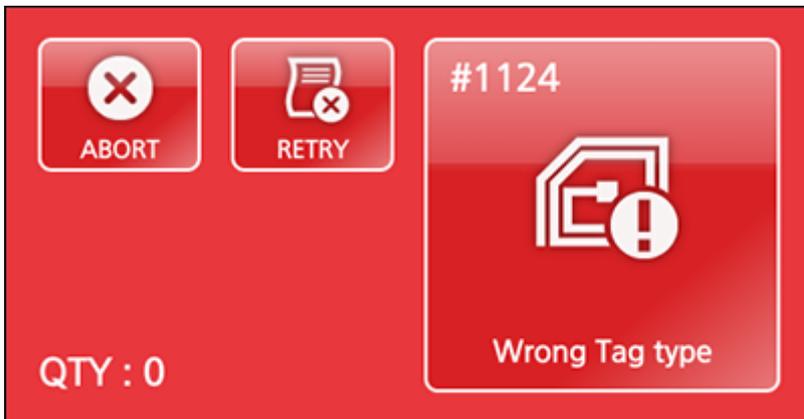
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.
-

## Error Message 1124 (Wrong Tag Type)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### ISO/IEC 15693, ISO/IEC 14443 Type A only

##### Cause

Incorrect tag type is specified.

##### Countermeasure

Check the tag type, and specify the correct tag type.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



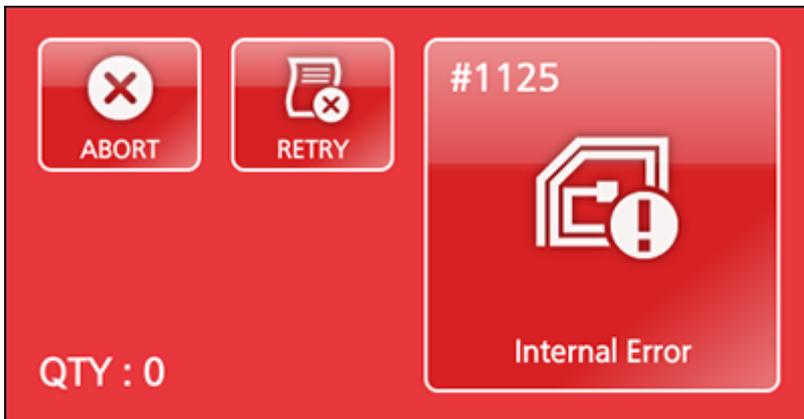
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1125 (Internal Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### ISO/IEC 15693, ISO/IEC 14443 Type A, FeliCa only

##### Cause

Failed to acquire the ID.

##### Countermeasure

The radio wave condition needs to be improved.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



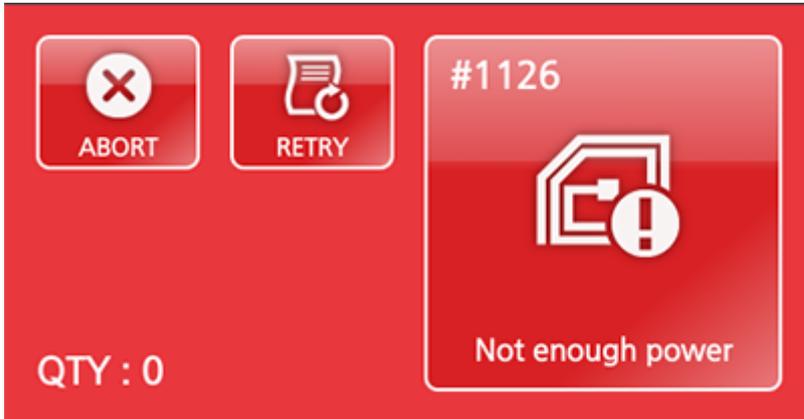
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1126 (Not Enough Power)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

Cause and Countermeasure	Reference
<p><b>UHF only</b></p> <p><b>Cause</b></p> <p>The [RSSI Filter] function is enabled, and the RSSI value of the inlay is lower than the values set in [Threshold Value].</p> <p><b>Countermeasure</b></p> <ul style="list-style-type: none"> <li>◦ Check the tags. Or, check the [Threshold Value] settings.</li> <li>◦ Adjust [Write Power]/[Read Power].</li> </ul>	<p> <a href="#">Threshold Value</a></p> <p> <a href="#">Write Power</a></p> <p> <a href="#">Read Power</a></p>

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



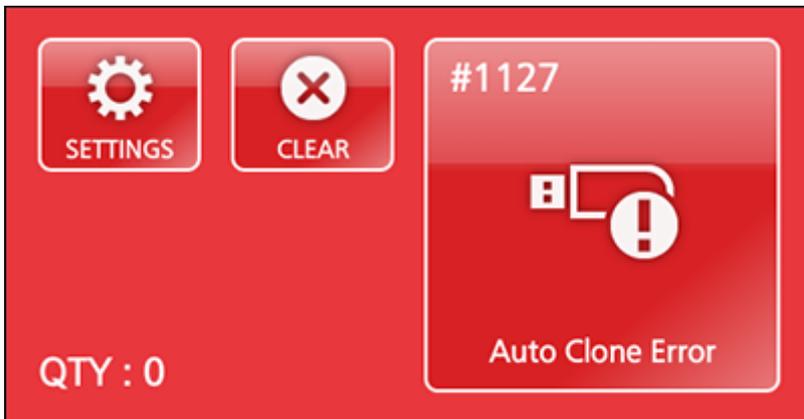
- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1127 (Auto Clone Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [SETTINGS] to disable the auto-clone function, or execute USB formatting. Alternatively, tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause (1)</b> The USB memory is not inserted.</p> <p><b>Countermeasure (1)</b> Insert a USB memory into the USB connector (Type A) inside the product.</p>	-
<p><b>Cause (2)</b> The USB memory is not formatted.</p> <p><b>Countermeasure (2)</b> In the [Format USB drive] menu, format the USB memory.</p>	 <a href="#">Format USB drive</a>
<p><b>Cause (3)</b> The USB memory is not correctly recognized.</p> <p><b>Countermeasure (3)</b> Replace the USB memory.</p>	-

Contact your SATO technical support if the error cannot be resolved.

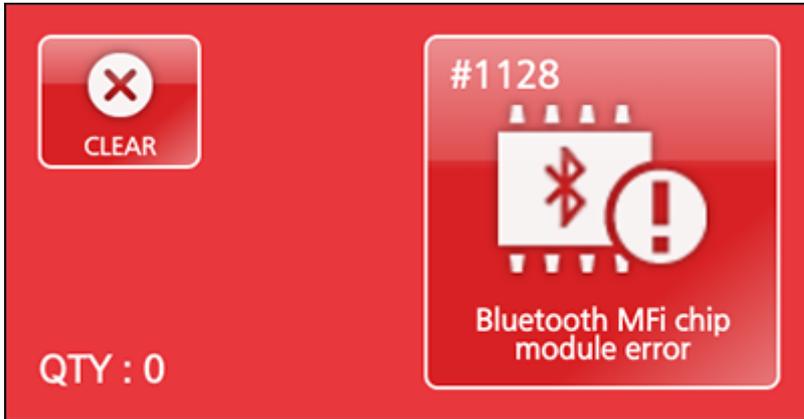
 [Contact Information for When You Are in Trouble](#)

## Error Message 1128 (Bluetooth MFi Chip Module Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

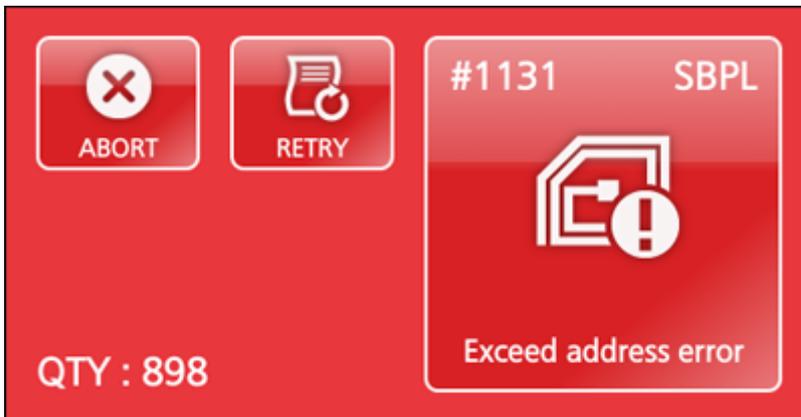
Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The MFi chip in the Bluetooth module is damaged.</p> <p><b>Countermeasure</b></p> <p>The Bluetooth module needs to be replaced. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1131 (Exceed Address Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [RETRY], and then execute the retry/release operation set in [Retry Mode], or tap [ABORT].

 [Retry Mode](#)

To cancel an entire print job, open and close the top cover to switch the product to Offline mode, and then tap [CANCEL].

### Cause and Countermeasure

#### ISO/IEC 15693 only

##### Cause

- Tried to write the data to the memory which exceeds the address range.
- The memory does not exist in the memory block address where the data should be written.

##### Countermeasure

- Check if the address size exceeds the maximum inlay capacity.
- Check the data size.

Contact your SATO technical support if the error cannot be resolved.

 [Contact Information for When You Are in Trouble](#)



- You cannot use an RFID tag that has caused an RFID tag error. An error message is printed on the RFID tag that caused the error.

## Error Message 1132 (RTC Module Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The RTC module or the product's RTC module's connection port is damaged.</p> <p><b>Countermeasure</b></p> <p>The RTC module or some part of the product needs to be replaced. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1133 (SRA Motor Unit Error)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Tap [CLEAR].

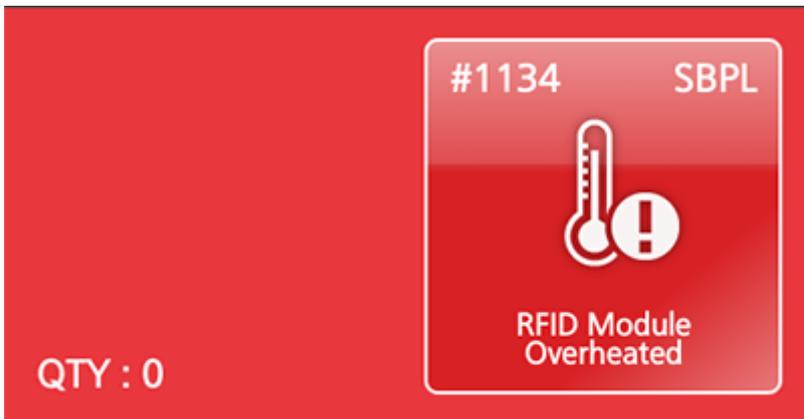
Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>SATO RF Analyze (SRA) motor unit is not operating correctly.</p> <p><b>Countermeasure</b></p> <p>A replacement of the RFID module is required. Contact your SATO technical support.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Error Message 1134 (RFID Module Overheated)

When there is an error with the product, the error message appears on the screen.

Tap the error number button to show the details screen.

Check the cause and countermeasure, and then take appropriate action.



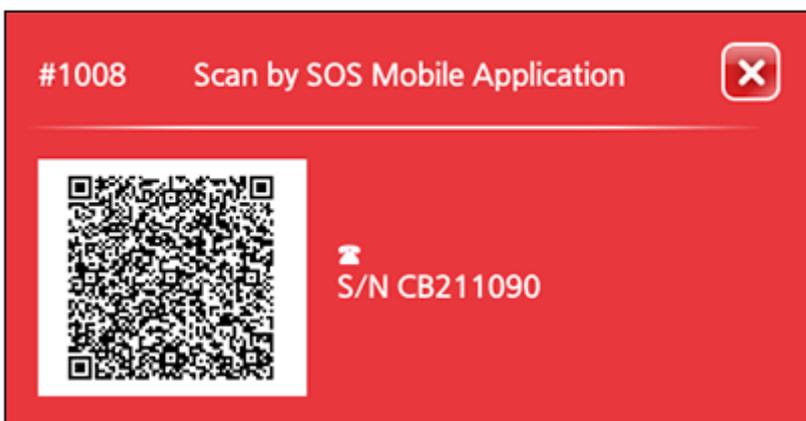
To clear the error:

Stop operation of the product for 15 minutes to let the temperature decrease.

Cause and Countermeasure	Reference
<p><b>Cause</b></p> <p>The temperature of the RFID module has exceeded its tolerance value.</p> <p><b>Countermeasure</b></p> <p>Stop operation of the product for 15 minutes to let the temperature decrease.</p>	<p> <a href="#">Contact Information for When You Are in Trouble</a></p>

## Appearance of Error Messages and Operating Procedure When 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 tap the SOS icon, a QR code containing the error information and the contact telephone number appears.



The menu for the specialized application for SOS appears after scanning the QR code or the NFC mark on the product with a tablet device or smartphone. A specialized application is required for scanning.

## Contact Information for When You Are in Trouble

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### Contact Us

Access the following site to send us your questions or comments.

 <https://www.sato-global.com/contact/>

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# Product Specifications

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## Hardware

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### Dimensions and Weight

Item	Description
External dimensions	178 mm (7.01") (width) x 238 mm (9.37") (depth) x 214 mm (8.43") (height) (includes feet/excludes projections)
Weight	<b>Direct thermal model</b> Approximately 3.3 kg (7.28 lbs.) (excludes media and options) <b>Combined direct thermal/thermal transfer model</b> Approximately 3.4 kg (7.50 lbs.) (excludes media and options) <b>RFID models (combined direct thermal/thermal transfer)</b> Approximately 3.6 kg (7.94 lbs.) (excludes media and options)

### Power Supply

Item	Description
Input Voltage	AC 100 - 240 V
Output Voltage	DC 24 V $\pm$ 5.0% 2.7 A
Frequency	50 / 60 Hz
Power Consumption	Input voltage conditions: AC 100 - 240 V, 50 - 60 Hz <b>At peak</b> 155 VA/95 W (AC 100 V, print ratio 30%) 187 VA/88 W (AC 240 V, print ratio 30%) <b>Standby</b> 18 VA/8 W (AC 100 V) 24 VA/8 W (AC 240 V)

### Processing

Item	Description
Flash ROM	4 GB
SDRAM	1 GB

Item	Description
User Registration Area	Maximum 1 GB
Receive Buffer	<b>Buffer full</b> 2.95 MB <b>Buffer near full</b> Occurrence: 2 MB, Release: 1 MB

### Operation

Item	Description
LCD	TFT color 4.3-inch
LED	<b>STATUS</b> Blue/Red
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	<b>Other than Linerless Cutter Mode</b> 0 to 40°C (32 to 104°F) <b>Linerless Cutter Mode</b> 5 to 35°C (41 to 95°F)
Storage temperature (without supply products)	-10 to 60°C (14 to 140°F)
Operating Humidity	<b>Other than Linerless Cutter Mode</b> 30 to 80% RH (Non-condensing) <b>Linerless Cutter Mode</b> 30 to 75% RH (Non-condensing)
Storage humidity (without supply products)	15 to 90% RH (Non-condensing)

## Print

Item	Description
Print Method	Direct thermal, combined direct thermal/thermal transfer
Print Speed	<p><b>203dpi</b> 2 to 8 inches/sec (50.8 to 203.2 mm/sec)</p> <p><b>305dpi</b> 2 to 6 inches/sec (50.8 to 152.4 mm/sec)</p> <p><b>Linerless Cutter Mode</b> 2 to 4 inches/sec (50.8 to 101.6 mm/sec)</p>
Resolution (Head Density)	<ul style="list-style-type: none"> <li>• 203 dpi (8 dots/mm)</li> <li>• 305 dpi (12 dots/mm)</li> </ul>
Non-printable Area	<p>Pitch direction (Excludes liner)</p> <p><b>Top</b> 1.5 mm (0.06") Linerless label: 5 mm (0.20")</p> <p><b>Bottom</b> 1.5 mm (0.06")</p> <p>Width direction (Excludes liner)</p> <p><b>Left</b> 1.5 mm (0.06")</p> <p><b>Right</b> 1.5 mm (0.06")</p>
Printable Area	<p><b>203dpi</b> Length 2,500 mm (98.43") x Width 104 mm (4.09")</p> <p><b>305dpi</b> Length 1,500 mm (59.06") x Width 104 mm (4.09")</p>
Print End Position	<p><b>203 dpi (1 dot = 0.125 mm (0.0049"))</b> 0 to 20,000 dots (2,500 mm (98.43"))</p> <p><b>305 dpi (1 dot = 0.083 mm (0.0033"))</b> 0 to 18,000 dots (1,500 mm (59.06"))</p>
Print darkness	<p><b>Darkness level</b> 1 to 10</p>

Item	Description
	<b>Darkness range</b> A

### Sensors

Item	Description
I-mark (Reflective)	Adjustable (auto and manual)
Gap (Transmissive)	Adjustable (auto and manual)
Label top sensor (Transmissive)	Adjustable (auto only)
Head Open/Cover Open (Transmissive)	Fixed
Paper End Sensor	Detect with I-mark sensor or Gap sensor
Ribbon End/Ribbon Near End (Transmissive)	Fixed
Linerless (Reflective)	Fixed <ul style="list-style-type: none"> <li>If optional linerless cutter unit is installed.</li> </ul>
Dispenser (Reflexive)	Fixed <ul style="list-style-type: none"> <li>If optional dispenser unit is installed.</li> </ul>



- Specifications are subject to change without notice.
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# Interface

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## Supported Interfaces

For data communication with the host, the product supports the following interfaces.

### Standard (Built-in)

- USB Interface (Type B)
- LAN Interface (Ethernet)
- NFC Interface

### Option

- RS-232C Interface (DB 9 pins, female)
- Wireless LAN Interface
- Bluetooth Interface



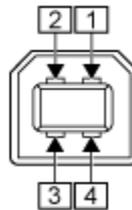
- You can set the interface settings of the product through [Interface], [Bluetooth], or [Wi-Fi] in the [SETTINGS] menu.
-

## USB Interface

This interface complies with the USB 2.0 standard.

Install the USB driver to the computer before use.

Basic Specifications	
Connector	USB Type B connector
Protocol	<ul style="list-style-type: none"> <li>STATUS4</li> <li>STATUS5</li> </ul>
Power Supply	BUS Power through cable



Pin Assignments	
Pin No.	Description
1	VBus
2	-Data
3	+Data
4	GND

Cable Specifications	
Cable Connector	USB Type B connector
Cable Length	5 m (16.4 feet) or less



• 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.
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## LAN Interface

Basic Specifications	
Connector	RJ-45 Receptacle
Protocol	<ul style="list-style-type: none"> <li>• Status3</li> <li>• Status4</li> <li>• Status5</li> </ul>
IP Address	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>
Subnet Mask / Prefix Length	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>
Gateway Address	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>

Cable Specifications	
Cable	10BASE-T/100BASE-TX/1000BASE-T Category 5 or better
Cable Length	100 m (328 feet) or less

Software Specifications	
Supported Protocol	TCP/IP
Network Layer	<ul style="list-style-type: none"> <li>• IP</li> <li>• ICMP</li> </ul>
Session Layer	<ul style="list-style-type: none"> <li>• TCP</li> <li>• UDP</li> </ul>
Application Layer	<ul style="list-style-type: none"> <li>• LPR</li> <li>• FTP</li> <li>• DHCP</li> <li>• HTTP/HTTPS</li> <li>• SNMP</li> <li>• NTP</li> </ul>



- Specifications are subject to change without notice.

## Bluetooth Interface

This interface complies with the Bluetooth 4.1 standard.

Basic Specifications	
Signal Level	Class 2
Communication Distance	10 m (32.8 feet)
Profile	<ul style="list-style-type: none"><li>• Serial Port Profile (SPP)</li><li>• Human Interface Device Profile (HID)</li><li>• Headset Profile (HSP)</li><li>• Hands-Free Profile (HFP)</li></ul>
Security Level	<ul style="list-style-type: none"><li>• None</li><li>• level 2-1</li><li>• level 2-2</li><li>• level 3</li><li>• level 4</li></ul>
PIN Code	4 to 16 characters consisting of ASCII code (20H, 21H, 23H to 7EH)
Disconnect Timeout (LMP Layer)	60 seconds

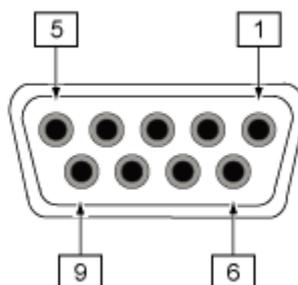


- Specifications are subject to change without notice.
-

## RS-232C Interface

This interface complies with the RS-232C standard.

Basic Specifications	
Asynchronous ASCII	Half-duplex communication Bi-directional communication
Data Transmission Rate	2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Transmission Form	Start, b1, b2, b3, b4, b5, b6, b7, b8, Stop   • "b8" will be omitted if using 7 bit oriented.
Data Length	7 or 8 bits (Selected)
Stop Bit	1 or 2 bits (Selected)
Parity Bit	ODD, EVEN, NONE (Selected)
Codes Used	<b>ASCII Character Codes</b> 7 bits <b>Graphics</b> 8 bits
Control Codes	STX (02H), ETX (03H), ACK (06H), NAK (15H)
Connector	DB-9 Female or equivalent
Signal Level	High = +5 to +12 V, Low = -5 to -12 V
Protocol	<ul style="list-style-type: none"> <li>• READY/BUSY Multi</li> <li>• XON/XOFF Multi</li> <li>• STATUS3</li> <li>• STATUS4</li> <li>• STATUS5</li> </ul>



Connector Pin Specifications		
Pin No.	I/O	Description
1	-	Data Carrier Detect
2	Input	Receive Data
3	Output	Transmit Data
4	Output	Data Terminal Ready
5	Reference	Signal Ground
6	Input	Data Set Ready
7	Output	Request To Send
8	Input	Clear To Send
9	-	Not connected

Cable Specifications	
Cable Connector	DB-9 Male or equivalent
Cable Length	5 m (16.4 feet) or less



- When using the READY/BUSY control, make sure that the product is in power on mode before you send the data from the host.
- With communication protocols such as XON/XOFF, STATUS3, STATUS4 or STATUS5, a receive buffer full error will occur when the received data is more than the receive buffer size (2.95 MB). When sending data, monitor the status of the product and keep the size of the data that is sent to less than 2.95 MB.
- A parity error is detected when an error occurs after receiving the start code <A> command.
- 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	<ul style="list-style-type: none"> <li>• STATUS3</li> <li>• STATUS4</li> <li>• STATUS5</li> </ul>
IP Address	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>
Subnet Mask / Prefix Length	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>
Gateway Address	<ul style="list-style-type: none"> <li>• IPv4</li> <li>• IPv6</li> </ul>
Data Transfer Method	<p><b>802.11a</b> Max 54 Mbps</p> <p><b>802.11n</b> Max 135 Mbps</p> <p><b>802.11b</b> Max 11 Mbps</p> <p><b>802.11g</b> Max 54 Mbps</p> <p><b>802.11ac</b> Max 433.3 Mbps</p> <hr/> <p> • These are the theoretical values based on the wireless LAN specifications and are not the actual data transfer speeds.</p> <hr/>
Frequency Band	<ul style="list-style-type: none"> <li>• 2.4 GHz (2.412 to 2.472 GHz)</li> <li>• 5 GHz (5.180 to 5.825 GHz)</li> </ul>
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)

Basic Specifications	
Authentication	<ul style="list-style-type: none"> <li>• Open System</li> <li>• Shared Key</li> <li>• WPA/WPA2</li> <li>• Perform the RADIUS server authentication using 802.1x (EAP-TLS, LEAP, EAP-TTLS, EAP-PEAP, EAP-FAST protocol)</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>• None</li> <li>• WEP (64 bits/128 bits)</li> <li>• TKIP (WPA-PSK, WPA-802.1x)</li> <li>• AES (WPA2-PSK, WPA2-802.1x)</li> </ul>
Communication Mode	<ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• Ad Hoc</li> </ul>

Software Specifications	
Supported Protocol	TCP/IP
Network Layer	<ul style="list-style-type: none"> <li>• IP</li> <li>• ICMP</li> </ul>
Session Layer	<ul style="list-style-type: none"> <li>• TCP</li> <li>• UDP</li> </ul>
Application Layer	<ul style="list-style-type: none"> <li>• LPR</li> <li>• FTP</li> <li>• HTTP/HTTPS</li> <li>• SNMP</li> <li>• DHCP</li> <li>• NTP</li> </ul>



• Specifications are subject to change without notice.

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## Printer Languages

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- SBPL
- SZPL
- SDPL
- SIPL
- STCL
- SEPL



- The RFID command can only be used with SBPL and SZPL.
-

## Standards

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Item	Description
Environmental Standard	Compatible with the RoHS directive
Energy Saving	<ul style="list-style-type: none"><li>• The adapter used complies with the ErP Directive's level VI efficiency standards.</li></ul>



- Specifications are subject to change without notice.
-

## Usable Media

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- Use our specified supply products.
- 

### Type

- Media roll (Face-in wound/face-out wound)
- Fan-fold media
- Rolls of wristbands (face-out)

### RFID models:

- Media roll (face-out)
- Fan-fold media

### Size (Label Type)

- Continuous

Item	Description
Media Length	7 to 397 mm (0.28" to 15.63") RFID tag: 25 to 397 mm (0.98" to 15.63")
Media Length (With Liner)	10 to 400 mm (0.39" to 15.75") RFID tag: 28 to 400 mm (1.10" to 15.75")
Media Width	22 to 115 mm (0.87" to 4.53")
Media Width (With Liner)	25 to 118 mm (0.98" to 4.65")



- Above media length and width are valid for die-cut labels. For media without liner like tags, refer to the value 'with liner'.
- 

- Tear-Off

Item	Description
Media Length	22 to 397 mm (0.87" to 15.63") RFID tag: 25 to 397 mm (0.98" to 15.63")
Media Length (With Liner)	25 to 400 mm (0.98" to 15.75") RFID tag: 28 to 400 mm (1.10" to 15.75")
Media Width	22 to 115 mm (0.87" to 4.53")
Media Width (With Liner)	25 to 118 mm (0.98" to 4.65")



- Above media length and width are valid for die-cut labels. For media without liner like tags, refer to the value 'with liner'.

- Tear-Off (when cutter unit is installed)

Item	Description
Media Length	32 to 397 mm (1.26" to 15.63") RFID tag: Same as above
Media Length (With Liner)	35 to 400 mm (1.38" to 15.75") RFID tag: Same as above
Media Width	22 to 115 mm (0.87" to 4.53")
Media Width (With Liner)	25 to 118 mm (0.98" to 4.65")



- Above media length and width are valid for die-cut labels. For media without liner like tags, refer to the value 'with liner'.

- Tear-Off (when linerless cutter unit is installed)

Item	Description
Media Length	41 to 100 mm (1.61" to 3.94")
Media Width	25 to 110 mm (0.98" to 4.33")

- Cutter/Dispenser

Item	Description
Media Length	20 to 397 mm (0.79" to 15.63") RFID tag: 25 to 397 mm (0.98" to 15.63")
Media Length (With Liner)	23 to 400 mm (0.91" to 15.75") RFID tag: 28 to 400 mm (1.10" to 15.75")
Media Width	22 to 115 mm (0.87" to 4.53")
Media Width (With Liner)	25 to 118 mm (0.98" to 4.65")



- Above media length and width are valid for die-cut labels. For media without liner like tags, refer to the value 'with liner'.

- Linerless cutter

Item	Description
Media Length	25 to 100 mm (0.98" to 3.94")
Media Width	25 to 110 mm (0.98" to 4.33")

### Size (Non-Adhesive Type)

- Continuous

Item	Description
Media Length	10 to 399 mm (0.39" to 15.71") RFID tag: 25 to 399 mm (0.98" to 15.71")
Media Width	25 to 118 mm (0.98" to 4.65")

- Tear-Off

Item	Description
Media Length	25 to 399 mm (0.98" to 15.71") RFID tag: Same as above
Media Width	25 to 118 mm (0.98" to 4.65")

- Cutter

Item	Description
Media Length	20 to 399 mm (0.79" to 15.71") RFID tag: 25 to 399 mm (0.98" to 15.71")
Media Width	25 to 118 mm (0.98" to 4.65")



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

### Roll Diameter (Media Roll)

- Media roll  
Maximum  $\phi$ 128 mm ( $\phi$ 5.0")
- Rolls of wristbands  
Maximum  $\phi$ 115 mm ( $\phi$ 4.5")

RFID models:

- Media roll /wristband roll  
Maximum  $\phi$ 115 mm ( $\phi$ 4.5")



- Contact your SATO sales representative for more information about RFID tag specifications.
- 

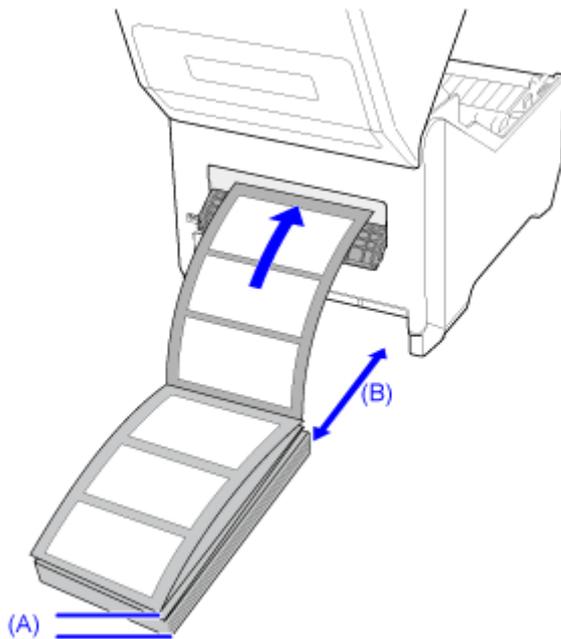
### Core Diameter (Media Roll)

- Media roll/wristband roll  
 $\phi$ 40 mm ( $\phi$ 1.5")
- RFID tag media roll  
 $\phi$ 76.2 mm ( $\phi$ 3")
- RFID tag media roll/wristband roll  
 $\phi$ 40 mm ( $\phi$ 1.5")



- Contact your SATO sales representative for more information about RFID tag specifications.
- 

### Height (Fan-fold Media)



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

(B) Distance between the back side of the product and the media: The size of 1 label, or more/the size of 2 RFID tags, or more



- 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**

- 80 to 190  $\mu\text{m}$  (0.08 to 0.19 mm (0.0031" to 0.0075"))

## Usable Ribbon



- Use our specified supply products.

Item	Description
Size	<p><b>Length</b> Maximum 100 m (328 feet) (maximum outside diameter <math>\phi</math>39 mm (1.54"))</p> <p><b>Width</b> 45 – 111 mm (core width: 45 mm (1.77"), 76 mm (2.99"), 111 mm (4.37"))</p> <hr/> <p> • The maximum length of the ribbon varies depending on the ribbon type.</p> <p>• Use the ribbon that is wider than the media.</p> <hr/>
Wind Direction	Face-out
Winding Method	Winding on core

## Usable Fonts

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### Bitmap Fonts

Item	Description
<a href="#">X20</a>	9 dots H x 5 dots W
<a href="#">X21</a>	17 dots H x 17 dots W
<a href="#">X22</a>	24 dots H x 24 dots W
<a href="#">X23</a>	48 dots H x 48 dots W
<a href="#">X24</a>	48 dots H x 48 dots W
<a href="#">U</a>	9 dots H x 5 dots W
<a href="#">S</a>	15 dots H x 8 dots W
<a href="#">M</a>	20 dots H x 13 dots W
<a href="#">WB</a>	30 dots H x 18 dots W
<a href="#">WL</a>	52 dots H x 28 dots W
<a href="#">XU</a>	9 dots H x 5 dots W
<a href="#">XS</a>	17 dots H x 17 dots W
<a href="#">XM</a>	24 dots H x 24 dots W
<a href="#">XB</a>	48 dots H x 48 dots W
<a href="#">XL</a>	48 dots H x 48 dots W
<a href="#">OCR-A</a>	<b>203 dpi</b> 22 dots H x 15 dots W <b>305 dpi</b> 33 dots H x 22 dots W
<a href="#">OCR-B</a>	<b>203 dpi</b> 24 dots H x 20 dots W <b>305 dpi</b> 36 dots H x 30 dots W
JIS X 208 Kanji Fonts (Mincho/Gothic)	<ul style="list-style-type: none"> <li>• 16 dots H x 16 dots W</li> <li>• 24 dots H x 24 dots W</li> <li>• 22 dots H x 22 dots W</li> <li>• 32 dots H x 32 dots W</li> </ul>

Item	Description
	<ul style="list-style-type: none"> <li>• 40 dots H x 40 dots W</li> </ul>
JIS X 0213 Kanji Fonts (Gothic)	<ul style="list-style-type: none"> <li>• 16 dots H x 16 dots W</li> <li>• 24 dots H x 24 dots W</li> <li>• 22 dots H x 22 dots W</li> <li>• 32 dots H x 32 dots W</li> <li>• 40 dots H x 40 dots W</li> </ul>
Compatible Kanji Fonts (Mincho/Gothic)	<ul style="list-style-type: none"> <li>• 16 dots H x 16 dots W</li> <li>• 24 dots H x 24 dots W</li> </ul>
Compatible Kanji Fonts (Gothic)	<ul style="list-style-type: none"> <li>• 22 dots H x 22 dots W</li> </ul>
Simplified Chinese	<ul style="list-style-type: none"> <li>• 16 dots H x 16 dots W</li> <li>• 24 dots H x 24 dots W</li> </ul>
Traditional Chinese	<ul style="list-style-type: none"> <li>• 24 dots H x 24 dots W</li> </ul>
Korean Fonts	<ul style="list-style-type: none"> <li>• 16 dots H x 16 dots W</li> <li>• 24 dots H x 24 dots W</li> </ul>

### Scalable Fonts

Item	Description
<a href="#">Rasterized Fonts</a>	<ul style="list-style-type: none"> <li>• SATO CG Sleek</li> <li>• SATO CG Stream</li> <li>• SATO 0</li> <li>• SATO Alpha Bold Condensed</li> <li>• SATO Beta Bold Italic</li> <li>• SATO Folio Bold</li> <li>• SATO Futura Medium Condensed</li> <li>• SATO Gamma</li> <li>• SATO OCR-A</li> <li>• SATO OCR-B</li> <li>• SATO Sans</li> <li>• SATO Serif</li> <li>• SATO Symbol Set</li> <li>• SATO Vica</li> <li>• SATO WingBats</li> </ul>
<a href="#">Rasterized Fonts (Multilingual)</a>	<ul style="list-style-type: none"> <li>• SATO UD Mincho Japanese</li> </ul>

Item	Description
	<ul style="list-style-type: none"> <li>• SATO UD Gothic Japanese</li> <li>• SATO UD Song Simplified Chinese</li> <li>• SATO UD Hei Simplified Chinese</li> <li>• SATO UD Ming Traditional Chinese</li> <li>• SATO UD Hei Traditional Chinese</li> <li>• SATO UD Batang Korean</li> <li>• SATO UD Dotum Korean</li> <li>• SATO UD Serif</li> <li>• SATO UD Sans</li> <li>• SATO UD Naskh Arabic</li> <li>• SATO UD Kufic Arabic</li> <li>• SATO UD Serif Hebrew</li> <li>• SATO UD Sans Hebrew</li> <li>• SATO UD Serif Thai</li> <li>• SATO UD Sans Thai</li> <li>• SATO UD Serif Hindi</li> <li>• SATO UD Sans Hindi</li> </ul>
<a href="#">Outline Fonts</a>	<ul style="list-style-type: none"> <li>• Helvetica Outline Font</li> <li>• JIS0208 Kanji Outline Fonts</li> </ul>



- 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 the 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
<b>0</b>		0	@	P		p				-	ヲ	ヰ		
<b>1</b>	!	1	A	Q	a	q				ア	チ	ム		
<b>2</b>	"	2	B	R	b	r				イ	ツ	ヌ		
<b>3</b>	#	3	C	S	c	s				ウ	テ	モ		
<b>4</b>	\$	4	D	T	d	t				エ	ト	セ		
<b>5</b>	%	5	E	U	e	u			・	オ	ナ	ユ		
<b>6</b>	&	6	F	V	f	v			ヨ	カ	ニ	ヨ		
<b>7</b>	'	7	G	W	g	w				キ	ヌ	ラ		
<b>8</b>	<	8	H	X	h	x				ク	ネ	リ		
<b>9</b>	>	9	I	Y	i	y				ケ	ノ	ル		
<b>A</b>	*	:	J	Z	j	z				コ	ハ	レ		
<b>B</b>	+	;	K	φ	k	-				サ	ヒ	ロ		
<b>C</b>	,	<	L	¥	l	-				シ	フ	ク		
<b>D</b>	-	=	M		m					ス	ヘ	ン		
<b>E</b>	.	>	N		n					セ	ホ	ン		
<b>F</b>	/	?	O		o					ソ	マ	ク		

## 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				ー	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	ソ		
E	.	>	N	^	n	~			ヨ	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.

## 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				一	夕	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	¥	!	!			ヤ	シ	フ	ワ		
D	—	=	M	]	m	}			ユ	ス	ヘ	ン		
E	.	>	N	^	n	~			ヨ	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				一	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.

## 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				一	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	¥	!	!			ヤ	シ	フ	フ		
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.

## U Font

The U font is a bitmap font with a basic size of 9 dots H x 5 dots W.

This supports fixed pitch only.

The figure below is a font sample when the code 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		ø	ó	-
1	!	1	Á	Q	a	q	Ü	æ	í			Ð	β	±
2	"	2	B	R	b	r	é	Æ	ó			È	ò	=
3	#	3	C	S	c	s	á	ô	Ú			Ë	ó	≠
4	\$	4	D	T	d	t	ä	ö	Ñ			È	ø	¶
5	%	5	E	U	e	u	à	ò	Ñ	á		€	ø	§
6	&	6	F	V	f	v	á	ú	æ	â	ã	í	µ	÷
7	'	7	G	W	g	w	ç	ù	ø	à	ã	î	þ	,
8	<	8	H	X	h	x	é	ÿ	ú	Ø		ï	þ	°
9	>	9	I	Y	i	y	ë	ö	»				ú	¨
A	*	:	J	Z	j	z	è	ü	¬				û	+
B	+	;	K	[	k	{	ï	ø	¼				ü	
C	,	<	L	\	l		î	£	¼				ý	≡
D	-	=	M	]	m	}	ì	§	;	¢		í	ý	≡
E	.	>	N	^	n	~	ÿ	×	◀	¥		ì	~	
F	/	?	O	_	o	⌘	À	f	»		※		'	



- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specified with a command.

## 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 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		ö	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		€	ö	ø
6	&	6	F	V	f	v	à	û	â	Â	ã	í	μ	÷
7	'	7	G	W	g	w	ç	ù	ó	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	¡
C	,	<	L	\	l	!	î	£	¼				ý	³
D	-	=	M	]	m	}	ì	ø	¡	¢		ì	ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		ì	'	
F	/	?	O	_	o	■	À	f	»		ø		'	



- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specified with a command.

## 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 page 858 is used.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		O	@	P	'	p	Ç	É	á	Ø		ö	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		€	Ö	§
6	&	6	F	V	f	v	å	û	æ	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				Ü	¡
C	,	<	L	\	l		î	£	¼				Ý	³
D	-	=	M	]	m	}	ì	Ø	ì	∅		ı	Ý	²
E	.	>	N	^	n	~	Ä	X	«	¥		ì	'	
F	/	?	O	_	o	■	Å	f	»		α		'	



- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specified with a command.

## 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 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			Ð	β	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	ô	_
3	#	3	C	S	c	s	â	ô	ú			Ë	ò	¼
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	â	û	ä	Â	ã	í	μ	÷
7	'	7	G	W	g	w	ç	ù	ó	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	¬				Ó	•
B	+	;	K	[	k	{	ÿ	ø	½				Ù	¡
C	,	<	L	\	l	¡	î	£	¼				Ý	³
D	-	=	M	]	m	}	ì	Ø	¡	¢		!	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		ì	-	
F	/	?	O	_	o	■	Å	f	»		¤		'	



- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specified with a command.

## 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 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		ø	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	ä	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	ƒ	°
9	)	9	I	Y	i	y	ë	ö	®				Ú	”
A	*	:	J	Z	j	z	è	ü	™				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ü	¹
C	,	<	L	\	l		î	£	¼				Ý	³
D	-	=	M	]	m	}	ì	Ø	¡	ø		ì	Ý	²
E	.	>	N	^	n	~	Ä	x	«	¥		Ì	˘	
F	/	?	O	_	o	■	Å	f	»		α		˘	



- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu, or specified with a command.

## 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 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		ø	ó	-
1	!	1	Á	Q	a	q	Ü	æ	í			Ð	β	±
2	"	2	B	R	b	r	é	Æ	ó			È	ò	=
3	#	3	C	S	c	s	á	ô	ú			Ë	ó	≠
4	\$	4	D	T	d	t	ä	ö	ñ			È	ø	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	ø	§
6	&	6	F	V	f	v	á	ú	æ	á	ã	í	µ	÷
7	'	7	G	W	g	w	ç	ù	ø	à	ã	î	þ	,
8	<	8	H	X	h	x	é	ÿ	ú	Ø		ï	þ	°
9	>	9	I	Y	i	y	ë	ö	æ				ú	¨
A	*	:	J	Z	j	z	è	ü	¬				û	+
B	+	;	K	[	k	{	ï	ø	¼				ù	
C	,	<	L	\	l		î	£	¼				ý	≡
D	-	=	M	]	m	}	ì	ø	;	¢			ì	¥
E	.	>	N	^	n	~	ÿ	×	◄	¥			ì	~
F	/	?	O	_	o	⌘	Á	f	»		※		'	



- 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 specified with a command.

## 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 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		Š	Ó	-
1	!	1	A	Q	a	q	ü	æ	í			Đ	ß	±
2	''	2	B	R	b	r	é	Æ	ó			È	Ò	=
3	#	3	C	S	c	s	â	ô	ú			É	Ó	¾
4	\$	4	D	T	d	t	ä	ö	ñ			Ê	Õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	À		€	Ö	§
6	&	6	F	V	f	v	â	û	à	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	ó	À	Ã	Ì	þ	,
8	(	8	H	X	h	x	ê	ÿ	ç	©		Ï	ƒ	°
9	)	9	I	Y	i	y	ë	ö	®			Ù	¨	
A	*	:	J	Z	j	z	è	ü	¬			Ú	•	
B	+	;	K	[	k	{	ï	ø	½			Û	¹	
C	,	<	L	\	l	!	î	£	¼			Ý	³	
D	-	=	M	]	m	}	ì	ø	ı	€		ı	Ÿ	²
E	.	>	N	^	n	~	Ä	X	<<	¥		ı	'	
F	/	?	O	_	o	■	Â	f	>>		α		'	



- 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 specified with a command.

## 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 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			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	ã	û	à	Â	ã	Í	μ	÷
7	'	7	G	W	g	w	ç	ù	ó	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			■	Ü	¹
C	,	<	L	\	l	!	î	£	¼				ý	³
D	—	=	M	]	m	}	ì	Ø	ì	¢			ÿ	²
E	.	>	N	^	n	~	Ä	x	<<	¥			ì	´
F	/	?	O	_	o	■	Å	f	>>		α		´	



- 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 specified with a 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 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		ø	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	à	Â	ã	Í	μ	÷
7	'	7	G	W	g	w	ç	ù	ó	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			Ü	¹	
C	,	<	L	\	l	!	î	£	¼			Ý	³	
D	-	=	M	]	m	}	ì	ø	ì	¢		ÿ	²	
E	.	>	N	^	n	~	Ä	×	«	¥		ÿ	-	
F	/	?	O	_	o	■	Å	f	»		α		´	



- 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 specified with a command.

## 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 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			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	ã	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	φ	½			■	Ü	¹
C	,	<	L	\	l	!	î	£	¼			▒	Ý	³
D	-	=	M	]	m	}	ì	Ø	ì	¢			Ý	²
E	.	>	N	^	n	~	Ä	x	«	¥		ì	'	
F	/	?	O	_	o	■	Å	f	»		α	≡	'	



- 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 specified with a command.

## OCR-A Font

The OCR-A font is a bitmap font. The basic size varies depending on the print resolutions as follows:

Print Resolution	Basic Font Size
203 dpi (8 dots/mm)	22 dots H x 15 dots W
305 dpi (12 dots/mm)	33 dots H x 22 dots W

This supports fixed pitch only.

The figure below is a font sample when the print resolution is 305 dpi (12 dots/mm).

	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	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	/		◇											

## OCR-B Font

The OCR-B font is a bitmap font. The basic size varies depending on the print resolutions as follows:

Print Resolution	Basic Font Size
203 dpi (8 dots/mm)	24 dots H x 20 dots W
305 dpi (12 dots/mm)	36 dots H x 30 dots W

This supports fixed pitch only.

The figure below is a font sample when the print resolution is 305 dpi (12 dots/mm).

	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											

## Scalable Fonts

The product contains various scalable fonts.

The figure below is a sample of some scalable fonts.



## Multilingual Font

The product contains various multilingual fonts.

The figure below is a sample of some of the multilingual fonts.

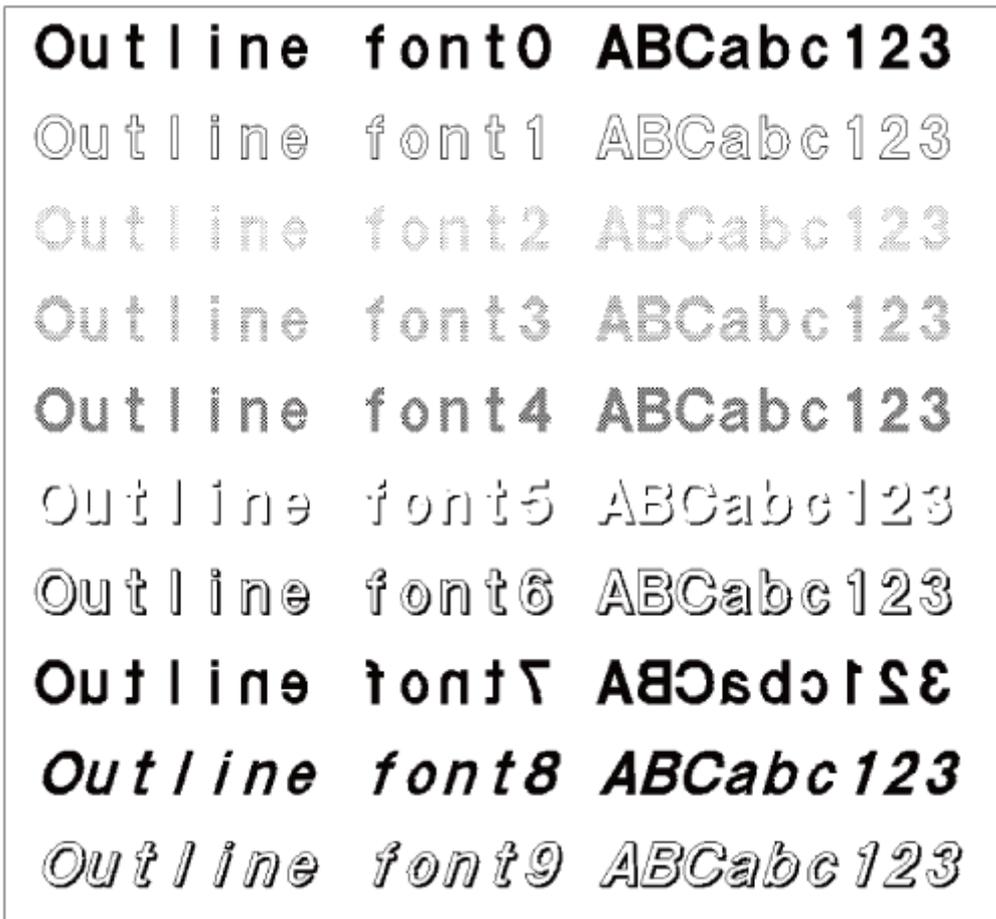
b= 0:	This is fontsample.
b= 8:	<b>This is fontsample.</b>
b= 1:	هذه عينة من الخط.
b=13:	هذه عينة من الخط.
b= 2:	นี่คือตัวอย่างของตัวอักษร
b= 3:	इस फॉन्ट का एक नमूना है
b=14:	זוהי דוגמה של הגופן.
b= 4:	這是字體的樣本。
b= 9:	這是字體的樣本。
b= 6:	这是字体的样本。
b=11:	这是字体的样本。
b= 5:	これはフォントのサンプルです。
b=10:	これはフォントのサンプルです。
b= 7:	이것은 글꼴의 샘플입니다.
b=12:	이것은 글꼴의 샘플입니다.

## 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.



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	ø	À	Ã	Î	þ	.
8	(	8	H	X	h	x	ê	ÿ	ı	©		İ	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®			Ú	”	
A	*	:	J	Z	j	z	è	Ü	¬			Û	•	
B	+	;	K	[	k	{	ï	ø	½			Ü	'	
C	,	<	L	\	l		î	£	¼			Ý	²	
D	-	=	M	]	m	}	ì	Ø	ı	¢		Ý	²	
E	.	>	N	^	n	~	Ä	×	«	¥		ì	—	
F	/	?	O	_	o		Å	f	»				'	



- 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.

## Usable Barcodes

Code Type	Description
Barcodes	<ul style="list-style-type: none"> <li>• UPC-A/UPC-E</li> <li>• JAN/EAN</li> <li>• CODE39, CODE93, CODE128</li> <li>• GS1-128(UCC/EAN128)</li> <li>• CODABAR(NW-7)</li> <li>• ITF</li> <li>• Industrial 2 of 5</li> <li>• Matrix 2 of 5</li> <li>• MSI</li> <li>• Customer Barcode</li> <li>• POSTNET</li> <li>• UPC add-on code</li> <li>• BOOKLAND</li> <li>• USPS code</li> <li>• GS1 DataBar Omnidirectional</li> <li>• GS1 DataBar Truncated</li> <li>• GS1 DataBar Stacked</li> <li>• GS1 DataBar Stacked Omnidirectional</li> <li>• GS1 DataBar Limited</li> <li>• GS1 DataBar Expanded</li> <li>• GS1 DataBar Expanded Stacked</li> </ul>
2D Codes	<ul style="list-style-type: none"> <li>• QR Code</li> <li>• Micro QR Code</li> <li>• PDF417</li> <li>• Micro PDF</li> <li>• Maxi Code</li> <li>• GS1 Data Matrix</li> <li>• Data Matrix (ECC200)</li> <li>• Aztec Code</li> <li>• GS1 QR code</li> </ul>
Composite Symbols	<ul style="list-style-type: none"> <li>• EAN-13 Composite (CC-A/CC-B)</li> <li>• EAN-8 Composite (CC-A/CC-B)</li> <li>• UPC-A Composite (CC-A/CC-B)</li> <li>• UPC-E Composite (CC-A/CC-B)</li> </ul>

Code Type	Description
	<ul style="list-style-type: none"><li>• GS1 DataBar Composite (CC-A/CC-B)</li><li>• GS1 DataBar Truncated Composite (CC-A/CC-B)</li><li>• GS1 DataBar Stacked Composite (CC-A/CC-B)</li><li>• GS1 DataBar Expanded Stacked Composite (CC-A/CC-B)</li><li>• GS1 DataBar Expanded Composite (CC-A/CC-B)</li><li>• GS1 DataBar Stacked Omnidirectional Composite (CC-A/CC-B)</li><li>• GS1 DataBar Limited Composite (CC-A/CC-B)</li><li>• GS1-128 Composite (CC-A/CC-B/CC-C)</li></ul>



• Specifications are subject to change without notice.

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# Support and Warranty

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## SOS (SATO Online Services) (SOS users only)

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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.

 <http://www.sato-sos.com/en>

## Warranty Period for Consumables

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For information on the warranty period for print heads, platen rollers and cutters, refer to the SATO Global Warranty Program.

 <https://www.sato-global.com/warranty/>

