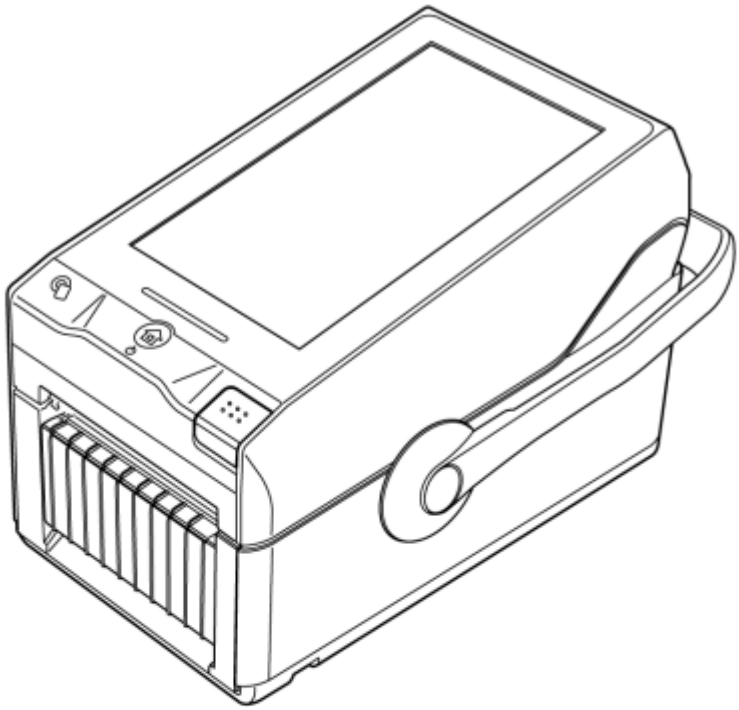
Operator Manual

For printer model:

FX3-LX



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Before You Start

About This Manual

Thank you for purchasing this SATO FX3-LX printer (hereafter referred to as "the printer").

This manual supplies basic information on how to operate the FX3-LX. Read the manual carefully to understand each function of FX3-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 document is prohibited.
- The contents of this document may be changed without prior 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 center.

Features of the Product

FX3-LX is an All-in-One printing solution which offers intuitive printing applications and can be customized to meet the customer's requirements. This printer optimizes business processes in a wide range of markets like food, retail, healthcare, event ticketing and manufacturing. The main features are as follows:

- 7 inch full color resistive touch screen
- Adapted to the user environment:
  - Small foot print and an optional space saving wall mount kit
  - Optimal portability with the optional battery mount kit and cradle kit.
  - Splash proof (IPx2) for operation in the proximity of water
  - IK06 compliancy (protection against mechanical impact)
  - Anti-bacterial coating for usage in a kitchen and hospital environment.

- 3 inch print width, 305 dpi for high quality printing
- Supports 31 display languages and 47 printable languages
- Onboard guidance videos and user uploadable training and promo videos
- Supports both PC less printing and printing from a host (PC, tablet, smart phone)
- Supports various communication interfaces
- Certified by Wi-Fi alliance

- MFi certified (optional Bluetooth only)

  Made for:
  iPhone 7, iPhone SE, iPhone 6s, iPhone 5s, iPhone 4s, 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.

- Conforms to international ENERGY STAR® program

  FX3-LX complies with the requirements of the ENERGY STAR. As an ENERGY STAR Partner, SATO Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Safety Precautions

This topic describes how to use the product safely.

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

Pictographic Symbols

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

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

Example Pictographs

The △ pictograph means "Caution is required". A specific warning symbol is contained inside this pictograph (The symbol at left is for electric shock).

The ⃠ pictograph means "Should not be done". What is specifically prohibited is contained in or near the pictograph (The symbol at left means "Disassembly prohibited").

The ● pictograph means "Must be done". What is specifically to be done is contained in the pictograph (The symbol at left means "Unplug the power cord from the outlet").

⚠ Warning

 Do not set on an unstable area	• Do not set on an unstable area, such as a wobbly table or slanted area or an area subject to strong vibration. If the product falls off or topples over, it could injure someone.
 Do not place containers full of water or other liquid on the product	• Do not place flower vases, cups, or other containers holding liquids, such as water or chemicals, or small metal objects near the product. If they are spilled and get inside the product, immediately turn off the power switch, unplug the power cord from the outlet, and contact your SATO reseller or technical support center. Using the product in this condition could cause a fire or electric shock.
 Do not put objects inside the product	• Do not insert or drop in metal or burnable objects inside the product's openings (cable outlets, etc.). If foreign objects do get inside the product, immediately turn off the power switch, unplug the power cord from the outlet, and contact your SATO reseller or technical support center. Using the product in this condition could cause a fire or electric shock.
 Do not use other than the specified voltage	• Do not use other than the specified voltage. Doing so could result in fire or electric shock.

Handling the power cord	• Do not damage, break, or modify the power cord. Also, do not place heavy objects on the power cord, heat it, or pull it because doing so could damage the power cord and cause a fire or electric shock. • If the power cord becomes damaged (core is exposed, wires broken, etc.), contact your SATO reseller or technical support center. Using the power cord in this condition could cause a fire or electric shock. • Do not modify, excessively bend, twist, or pull the power cord. Using the power cord in such a condition could cause a fire or electric shock. • The power cord set that comes with the product is designed especially for this product. Do not use it with any other electrical devices.
When the product has been dropped or broken	• If the product is dropped or broken, immediately turn off the power switch, unplug the power cord from the outlet, and contact your SATO reseller or technical support center. Using the product in this condition could cause a fire or electric shock.
Do not use the product when something is abnormal about it	• Continuing to use the product in the event something is abnormal about it, such as smoke or unusual smells coming from it, could result in fire or electric shock. Immediately turn off the power switch, unplug the power cord from the outlet, and contact your SATO reseller or technical support center for repairs. It is dangerous for the customer to try to repair it, so absolutely do not attempt repairs on your own.
Do not disassemble the product	• Do not disassemble or modify the product. Doing so could result in fire or electric shock. Ask your SATO reseller or technical support center to conduct internal inspections, adjustments, and repairs. • Never try to take apart the AC adapter or modify it in any way such as with a solder iron.
Do not operate with wet hands	• Do not replace the battery pack or unplug the AC adapter or battery charger with wet hands. Doing so increases the risk of electric shock.

   Using the head cleaning fluid	• Use of flame or heat around the head cleaning fluid is prohibited. Absolutely do not heat it or subject it to flames. • 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.
 Laser beam	• Do not look into the laser radiation window, and do not direct the laser beam at someone. If the laser beam hits eyes, it may cause visual disturbance.
     Print head	• The print head is hot after printing. Be careful not to get burned when replacing media or cleaning immediately after printing. • Touching the edge of the print head with bare hands could result in injury. Be careful not to become injured when replacing media or cleaning.
 Regarding the cutter	• Do not touch the cutter with your hands or do not put something into the cutter. Doing so could result in an injury.
   Handling the AC Adapter	• Do not damage, break, or change the AC adapter. If you place a heavy object on the AC adapter or heat, bend too much, twist, or pull the AC adapter, the AC adapter may be damaged, which may cause fire or electric shock. • If the AC adapter is damaged (the wires exposed or broken), contact your SATO reseller or technical support center. If you operate the product in this condition, it may cause fire or electric shock.
       Battery Pack	• Never try to take apart the battery pack or modify it in any way such as with a solder iron. • When charging the battery pack, make sure to use the product or the specified battery charger. • Do not allow the battery to get wet with water or any liquid. • Do not throw or drop the battery, subjecting it to strong impacts or shocks. Also, never use a damaged or deformed battery. Doing so may lead to abnormal overheating or fire. • Do not rub your eyes if the battery liquid leaks and comes into contact with your eyes. Rinse well with clean water such as tap water, and seek medical attention immediately. • If charging is not completed after the specified time elapses, stop charging immediately.

	• If you notice any unusual odor, deformation, fluid leakage or other unusual conditions during use, charging or storage, stop using the battery to avoid risk of fire, personal injury and electric shock. • If you notice any leakage or unusual odor, keep the battery away from fire immediately. • Never expose the battery to direct flame, throw it into fire, or take any actions that may lead to shorting. • Do not act anything may cause short-circuiting of terminals of battery.
 AC Adapter/Battery Charger	• Do not wet or immerse the AC adapter in water. Doing so could result in a failure or electric shock. • Use only the specified AC adapter/battery charger. Using a different one may create the danger of fire or electric shock. • Never use the battery charger with any other battery pack except for the specified one. Doing so can rupture the battery, cause leakage, fire or electric shock.
 Do not use in hazardous locations	• The product is not explosion proof certified. • Do not use in a potentially explosive environment or atmosphere.

Caution

 Do not place in areas with high humidity	• Do not place the product in areas with high humidity or where condensation forms. If condensation forms, immediately turn off the power switch and do not use the product until it dries. Using the product while condensation is on it could result in electric shock.
 Carrying the product	• When moving the product, always unplug the power cord from the outlet and check to make sure all external wires are disconnected before moving it. Moving the product with the wires still connected could damage the cords or connecting wires and result in a fire or electric shock. • Do not carry the product with media loaded in it. The media could fall out and cause an injury. • When setting the product on the floor or a stand, be sure not to get your fingers or hands pinched under the product feet.

 Top cover	• Be careful not to get your fingers pinched when opening or closing the top cover. Also be careful that the top cover does not slip off and drop.
 Loading media	• When loading a media roll, be careful not to get your fingers pinched between the media roll and the supply unit.
 When not using the product for a long time	• When not using the product for a long time, remove the battery pack from the product and unplug the AC adapter from the outlet to maintain safety.
 During maintenance and cleaning	• When maintaining and cleaning the product, remove the battery pack from the product and unplug the AC adapter from the outlet to maintain safety.
 AC adapter	• An AC adapter may become hot. Be careful not to get burned. • The AC adapter set provided for this product is specific to this product. Do not use it for other electric equipment. • When disconnecting the AC adapter from the outlet, be sure to grip it by the plug. Pulling on the cord may expose or break the wires and possibly cause fire or electric shock. • Do not put the AC adapter near a hot device. Leaving the AC adapter near a hot device could cause the adapter's housing to melt and possibly cause fire or electric shock.
 Handling the AC adapter when moving	• On the occasion of carrying, first disconnect the AC adapter from the outlet. If the AC adapter is not disconnected, it may be damaged, which may cause fire or electric shock.
 Battery pack	• If the battery pack leaks and gets on your skin or clothes, immediately rinse well with clean water, such as tap water. It may cause skin rashes. • If you notice any rust, unusual odor, overheating, or other unusual conditions during your first use after purchase, stop using the battery pack and contact your SATO reseller or technical support center.

 Replacing the Battery Pack	• Be sure to charge the battery pack before its first use or when it has not been used for a long time. • When not using the battery pack, store it in a location with low humidity to avoid the battery from leaking or rusting. • Clean the terminals of the battery pack with a dry cloth before use since dirty terminals may cause an unstable connection, battery exhaustion or an inability to charge. • Use only the specified battery pack. • When replacing the battery pack, make sure to install the pack in the correct orientation. Incorrectly replacing the battery creates the danger of injury or damage to surrounding areas, or causes explosion. • Replace with a small-size rechargeable battery (Lithium ion battery). Apply insulation treatment to the old battery pack by sealing the contact with tape or the like and ask our sales representative or service center for the measures to be taken to recycle the reusable materials. Do not place the battery pack together with other batteries such as dry batteries. • The life expectancy of the lithium ion battery pack varies depending on usage. We recommend that you replace the battery after 300 charge cycles or 3 years from the date of first use, whichever comes first. • If you notice any dents or cracks on your battery crust caused by strong impacts or shocks, stop using the battery immediately and replace it with a new one. Continued use under these conditions may lead to abnormal overheating or fire.
 Power cords and cables	• Grab power cords and cables by their plug when removing from electrical outlets or connector ports. Removing power cords and cables by grabbing the cord/cable may result in exposure of wires, breakage, fire, or electric shock. • Do not place power cords and cables near heaters or other sources of heat. Placing power cords and cables near heaters or other sources of heat may result in melting of the power cord/cable sheathing, fire, or electric shock.
 Opening and closing the print head	• When opening and closing the print head, be careful not to insert foreign materials, other than media, in the print head. Otherwise, it may result in injury or damage.

Safety Precautions for the Battery Pack

Always observe the following safety precautions for battery use.

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

Pictographic Symbols

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

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

Example Pictographs

The ⃠ pictograph means "Should not be done".

The ● pictograph means "Must be done".

⚠ Warning

	• The life expectancy of the lithium ion battery pack ("battery") varies depending on usage. We recommend that you replace the battery after 300 charge cycles or 3 years from the date of first use, whichever comes first.
	• If you notice any dents or cracks on your battery crust caused by strong impacts or shocks, stop using the battery immediately and replace it with a new one. Continued use under these conditions may lead to abnormal overheating or fire.
	• Do not disassemble or modify the battery.
	• Do not place the battery in fire, or apply heat to the battery.
	• Do not place the battery near fires, stoves, or other high-temperature locations (above 60°C) such as inside closed cars in hot weather.
	• Do not charge or discharge the battery near flammable materials.
	• Do not connect the positive (+) and negative (-) terminal of the battery with any conductive materials such as metal wires. Do not carry or store the battery together with necklaces, hairpins, or other metal objects to prevent accidental short-circuiting of the battery.
	• Do not wet or immerse the battery in water, seawater, or other liquids.
	• Do not throw or drop the battery, subjecting it to strong impacts or shocks.
	• Do not pierce the battery with sharp objects such as nails, strike the battery with a hammer, or step on the battery.
	• When charging the battery as fitted in the product, use an AC adapter specified by SATO Corporation.
	• When connecting the battery to an AC outlet, a car cigarette lighter outlet or the like, always use the dedicated charger.

	• Do not rub your eyes if the battery liquid leaks and comes into contact with your eyes. Rinse well with clean water such as tap water, and seek medical attention immediately.
	• If charging is not completed after the specified time elapses, remove the battery from the product or charger and stop charging.
	• If you notice any unusual odor, heat, discoloration, deformation, fluid leakage or any other characteristic apart from what you are used to while using, charging or storing the battery, then perform the following immediately. ◦ Unplug the power cord from the AC outlet. ◦ Power off the product. ◦ Remove the battery from the product or charger. Keep the battery away from fire and avoid using it. Otherwise, there may result in fire, burn, injury, or electric shock.

Caution

 	• Store the battery in a location out of reach of young children. Ensure that the battery is not placed in the mouth or swallowed accidentally.
	• Charge the battery in the recommended temperature range from 5°C to 35°C.
	• Occasionally clean the terminal by wiping with a dry cotton swab or the like.
	• When storing the battery, avoid storing in the following state. ◦ In a fully charged state (a state immediately following the completion of charging) ◦ In a state with no remaining capacity (the battery is so exhausted that it is even impossible to turn on the product) Doing so may result in a degraded battery performance or reduced lifetime. An optimal remaining capacity to store the battery is approximately 40%.

	• Even when the battery is expected not to be used for a long time, do the following about every six months to enable the battery to maintain its performance: fully charge the battery and use it to drive your product until its remaining capacity decreases to approximately 40%, then remove the battery from the product and store it in a cool room with low humidity.

A tip before use

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

Precautions for Installation and Handling

Select a Safe Location

Printer operation can be affected by the printer environment.

Refer to the following instructions for installation and handling of the FX3-LX printer.

- **Place the printer on a surface that is flat and level.**

  If the surface is not flat and level, this may cause bad print quality. This may also cause a malfunction and decrease the life span of the printer.

- **Do not place the printer on a location that produces vibration.**

  Giving serious vibration or shock to the printer may cause a malfunction and shorten the life span of the printer.

- **Keep the printer out of high temperature and humidity.**

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

- **Do not place the printer in a location subject to water or oil.**

  Although this printer is IPX2 (splash proof II type) certified, it is not completely waterproofed so water or oil entering inside the printer may cause a fire, electric shock, malfunction, or damage.

- **Avoid dust.**

  Dust build up may result in bad print quality.

- **Keep out of direct sunlight.**

  The printer has a built-in optical sensor. Exposure to direct sunlight will make the sensor less responsive and may cause the media to be detected incorrectly. Close the top cover when printing.

- **Do not place near cranes or press machines.**

  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. Machines that use large amounts of electricity, such as cranes and press machines, could cause electrical noise or voltage reduction. Do not place the printer near these machines as it could cause the printer to malfunction or become damaged.

- **Do not install the printer in a location that blocks the sides.**

  When installing the printer, keep space of 15 cm (5.91”) or more between the sides of the printer and the wall. Failure to do so could damage or shorten the printer’s life due to heat.

- **Do not place the printer sideways or upside down.**

  Due to the installation of the power unit, battery pack, etc., placing the printer sideways or upside down while the media is loaded may cause the media to come off the media roll holder and cause a paper jam. Also, the media may become torn or scratched, or it may affect the print quality.

- **Do not use in hazardous locations.**

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

Power Supply

Printer operation can be affected by the printer environment.

Refer to the following instructions for installation and handling of the FX3-LX printer.

- **The printer requires an AC power supply or a battery.**

  Connect the printer to an AC power supply or install the battery included with the optional battery mount kit .

- **Supply a stable source of electricity to the printer.**

  When using the printer, do not share its power outlet with other electrical devices. This could cause power fluctuations and performance issues with your printer.

Printing

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

Please sufficiently test the printer in your use 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

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 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, contact your local municipal organization, your household waste disposal service or the dealer where you purchased the product.

机器名称:条码打印机

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

本表格依据SJ/T 11364的规定编制。

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

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

环保使用期限

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

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

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

Environmentally Hazardous Materials

RoHS Directive

This printer restricts the use of the six hazardous materials listed below, as specified by RoHS directive.

Hexavalent chromium	Max. 0.1%
Lead and lead compounds	Max. 0.1%
Mercury and mercury compounds	Max. 0.1%
Cadmium and cadmium compounds	Max. 0.01%
Polybrominated biphenyls (PBB)	Max. 0.1%
Polybrominated diphenyl ethers (PBDE)	Max. 0.1%

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 printer

Currently, there has been no information communicated regarding SVHC that exceed 0.1% of the printer's weight. In the future, if SVHC that exceed 0.1% of the printer'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 for the USB memory before connecting it to the printer. SATO Corporation shall not be held responsible for any printer malfunctions caused by a virus spread via USB memory.
- This printer (excluding options and bundled accessories) conforms to the waterproof performance of IPX2 (splash-proof II type).

  However, it does not exhibit waterproof performance in the following conditions:

  - Flow rate or running water angle exceeding IPX2
  - Opening or closing the top cover while the exterior of the printer is wet
  - While the top cover is open
  - While the dispenser cover is open
  - While the interface covers are open
  - While the AC adapter is disconnected and the DC cover is open
  - When covers are damaged or deformed
  - While using the wall mount kit
  - While using the fan-fold media
  - When wet media is used
  - When the printer is in water deeper than 10 mm (0.39”)

- Various types of data registered in the printer and applications may be damaged. We recommend saving data separately in advance.

Trademarks

- SATO is a registered trademark of SATO Holdings Corporation and its subsidiaries in Japan, the U.S. and other countries.
- NiceLabel is a trademark or registered trademark of Euro Plus d.o.o. in the U.S.A and other countries.
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- Wi-Fi Direct™, Wi-Fi Protected Setup™, WPA™ and WPA2™ are trademarks of Wi-Fi Alliance.
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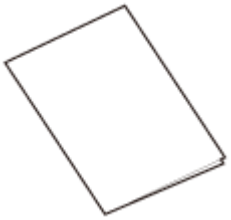
- IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.
- All other trademarks are the property of their respective owners.

Basic Information

Bundled Accessories

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

- User documents (Quick Guide, Safety Instructions, Global Warranty Program leaflet, and Biocidal Products Regulation Information)



- Power cord

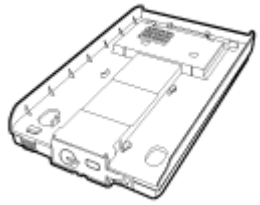
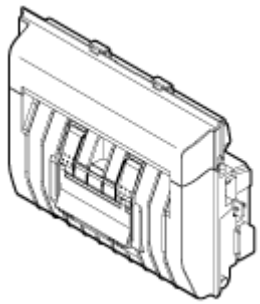
The shape of power plug varies depending on the region in which it was purchased.

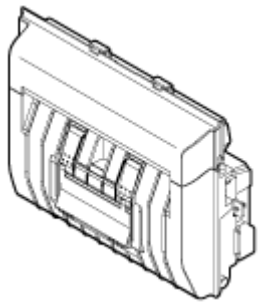
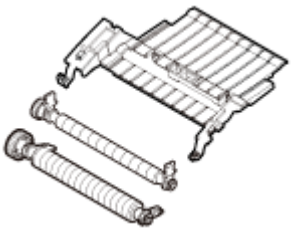
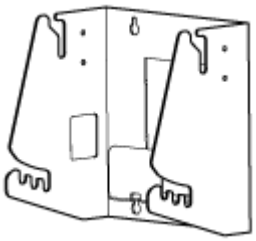
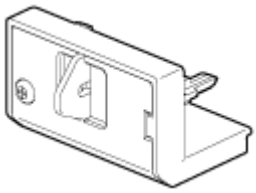
- AC adapter

- Keep the packaging box and cushioning material after installing the printer. You can pack the printer with this packaging box for shipment when requesting for repairs.

Optional Devices

The optional devices for the printer are as follows.

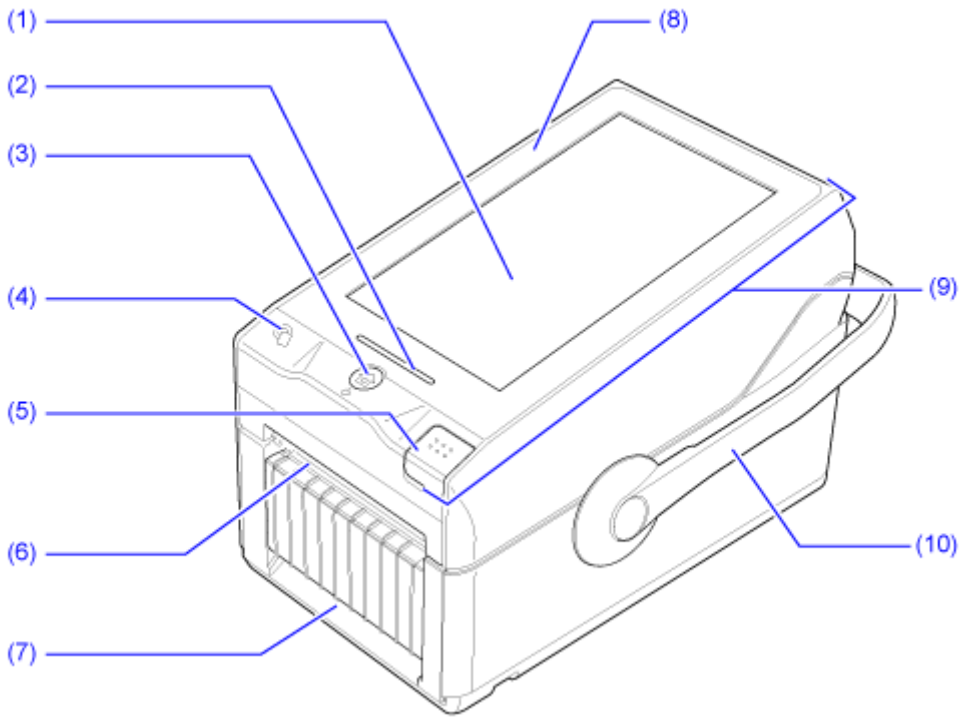
Optional Devices	Description
Battery 	Power can be supplied from the battery. Set to the battery mount kit for use.
Battery mount kit 	Power can be supplied from a charged battery without connecting an AC adapter. Install the battery for use.
1ch battery charger 	Can charge the battery.
Cutter kit 	Can automatically cut the media in the designated number of pages.
Partial cutter kit	Can cut and leave a part of the media.

Optional Devices	Description
	
Linerless kit 	The environmentally friendly linerless labels can be used.
Cradle kit 	The AC adapter supplied with the printer can be stored. You can set the printer on it, on which the battery mount kit is mounted, for easy charging.
Wall mount kit 	The printer can be installed on the wall for use.
Wireless LAN/Bluetooth kit 	Wireless LAN and Bluetooth interfaces can be used.

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

Parts Identification

Front View



(1) **LCD/Touch panel**

(2) **LED indicator**

(3) **/ (Standby/Home) button**

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

Press the / (Standby/Home) button when the printer is powered on to switch to the Home screen. (The Home screen does not appear when print jobs remain in the printer.)

To power off the printer, press the / (Standby/Home) button for more than two seconds and follow the on-screen instructions.

(4) **NFC built-in antenna**

(5) **Cover open button**

(6) **Media discharge outlet**

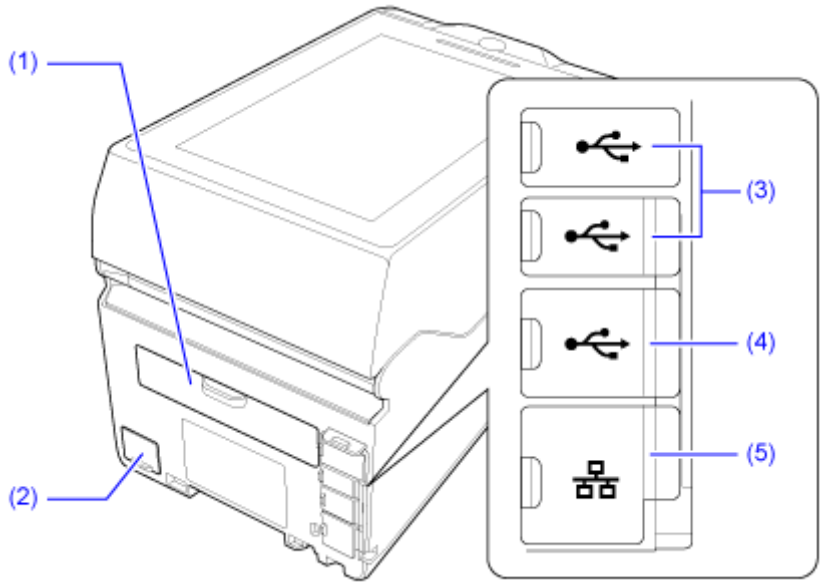
(7) **Liner discharge outlet**

(8) **Top cover**

(9) **Operator panel**

(10) **Handle**

Rear View



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

(2) **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.

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

Enable the storage of printer settings information with USB memory.

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 printer. SATO Corporation shall not be held responsible for any printer malfunctions caused by a virus spread via USB memory.

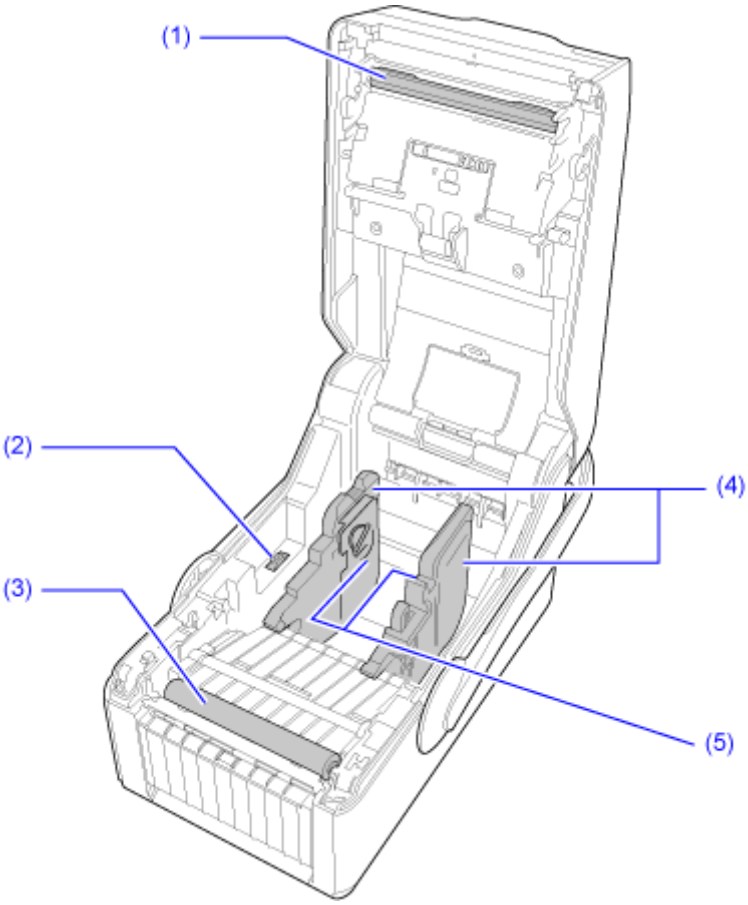
(4) **USB connector (Type B)**

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

(5) **LAN connector (USB+LAN model only)**

To connect the printer to the network using the LAN interface.

Internal View



(1) **Print head (Consumables)**

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

(2) **USB connector (Type A)**

Enable the storage of printer settings information with USB memory.

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

- The size of the USB memory that can be connected inside the printer is as follows.
  - Length: under 37 mm (1.46") (excludes the metal part of the connector)
  - Width: under 20 mm (0.79")
  - Thickness: under 8 mm (0.31")

(3) **Platen roller (Consumables)**

(4) **Media guide**

(5) **Flap**

Using the Operator Panel

Display and Operation of the Operator Panel

LED Indicator

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

LED Indicator	Color	Description
	Blue	Online mode
	(Light off)	Power off or Offline mode
	Red	Printer error (for example, when the media runs out), processing power off
Flashes at intervals of a second.	Blue	Startup
Flashes at intervals of two seconds.	Blue	Sleep mode (energy saving mode)

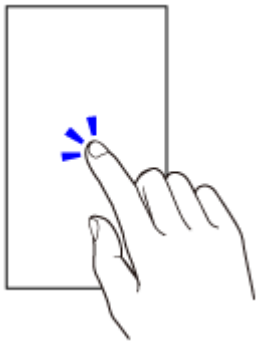
- If the printer enters sleep mode during a printer error status (LED lights red), the LED indicator will flash blue at intervals of two seconds.
- By default, if the optional battery is installed, the printer goes into sleep mode after 1 minute of inactivity. Use the [Energy Saving] menu to change the period before the printer enters sleep mode.

Operating the Touch Panel

This topic explains the basic operations of the touch panel.

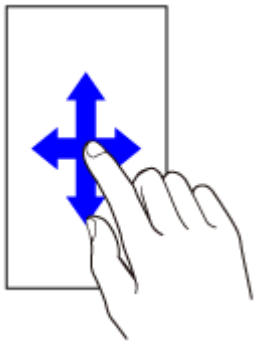
Tap

Lightly touch the screen, and then release your finger.



Swipe/Slide

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

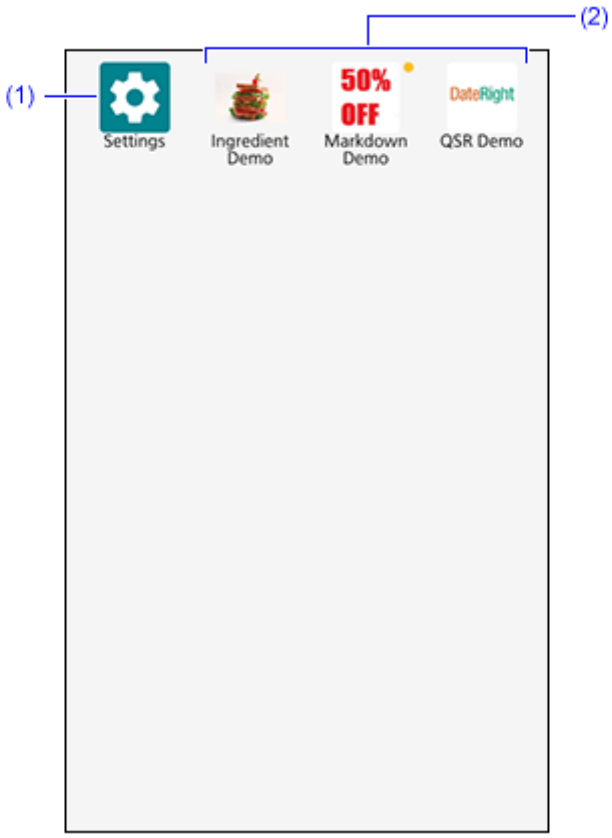


Operations in the Home Screen

You can enter the Settings mode or start installed custom applications from the Home screen.

The Home screen appears after you power on the printer. While the printer is powered on, you can switch to the Home screen by pressing the / (Standby/Home) button.

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



(1) Enters the Settings mode. Various settings of the printer can be operated here.

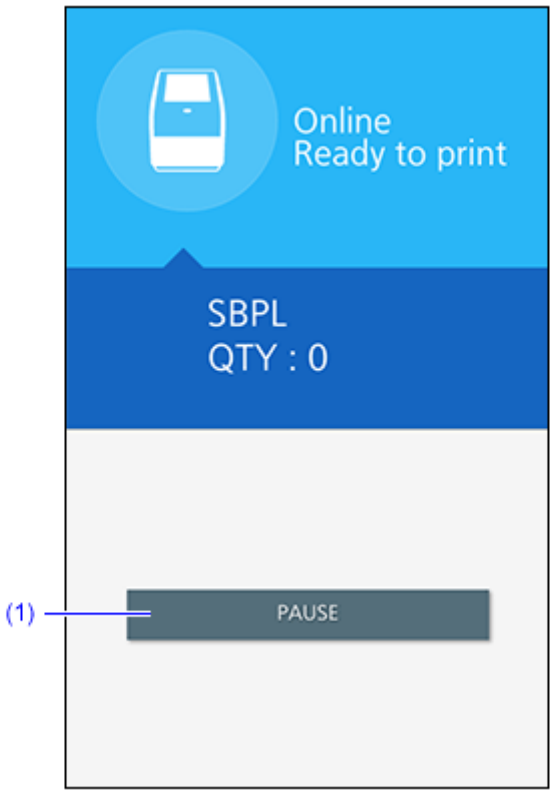
(2) Starts applications. Installed custom applications for AEP mode are added here.

Operations in Online/Offline Mode

Online Mode

In Online mode, you can execute the print job.

You can switch to Online mode from the Home screen by pressing the / (Standby/Home) button.



(1) Change to Offline mode.

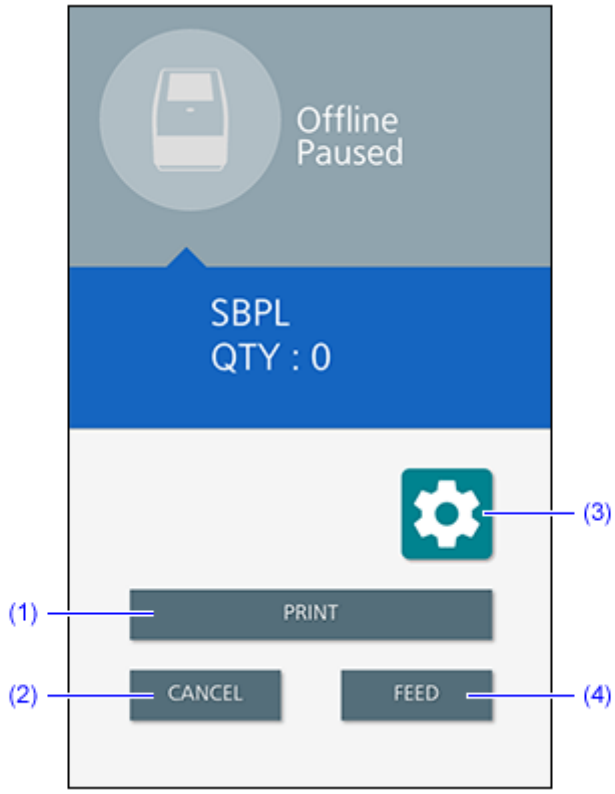
- When [Start Online] in the [Printing] menu is enabled and [AEP] in the [Standalone] menu is disabled, the Online screen appears after you power on the printer.

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) Change to Online mode.

(2) Cancel the print job.

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

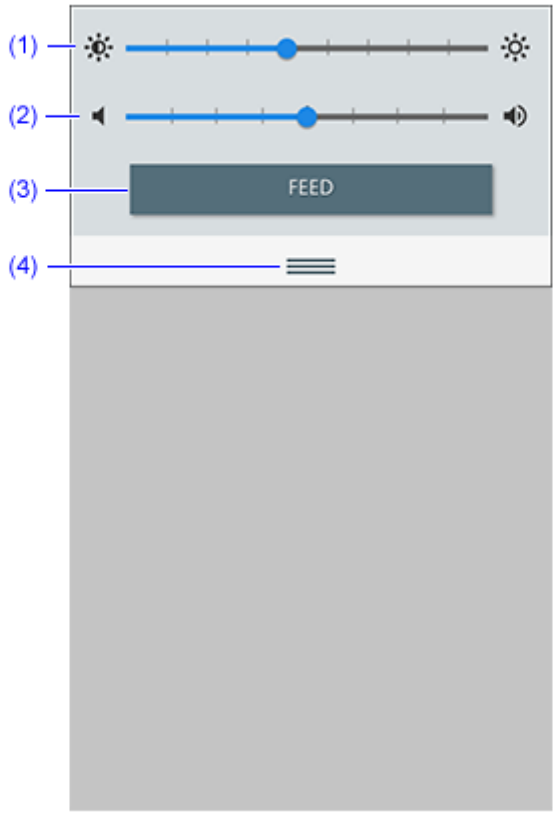
Shows the Settings mode when there are no print jobs.

(4) Feed the media.

Operations in the Swipe Down Menu

In the swipe down menu, you can adjust the volume and the brightness of the LCD, or feed the media.

To open the swipe down menu, swipe down the status bar at 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.

(3) Feed the media.

(4) Close the swipe down menu.

Status Icon

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

(1) Status bar

Communication Interface Status

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

Icon	Description
	Network link is enabled but not connected.
	Network link is enabled and connected.
	NFC is disabled.
	NFC is enabled and connected.
	Not connected to the NTP time server.
	Wi-Fi is enabled, but not connected.
	Wi-Fi is authenticated, but not connected.
	Wi-Fi startup failed.
	Wi-Fi is connected. Signal Level: 1

Icon	Description
	Wi-Fi is connected. Signal Level: 2
	Wi-Fi is connected. Signal Level: 3
	Wi-Fi is connected. Signal Level: 4
	Wi-Fi Direct is connected or the printer is set to act as an access point.
	Printer is connected to USB host.
	Standard code is disabled.
	The On-Demand mode of the SOS (SATO Online Services) is enabled.
	The Real Time mode of the SOS is enabled. The printer is connected to the SOS cloud.
	The Real Time mode of the SOS is enabled, but not connected to the SOS cloud. If LAN or Wi-Fi icon is grayed out, the printer is not connected to the network. If LAN or Wi-Fi icon is active, the Internet connection of the SOS cloud has a trouble.

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

USB Memory Status

Icon	Description
	USB memory is connected.
	Writing data from the USB memory stick.

Print Job Status

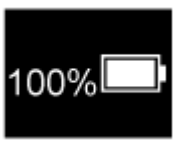
Icon	Description
	Waiting for media removal. Remove the media.
	Command error detected. Check the print data.
	Receive buffer is nearly full. Wait until the printer starts printing the previously sent data, and then send the next data.

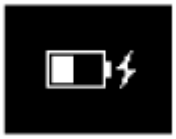
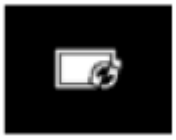
Icon	Description
	Defective print head is detected. Replace the print head.
	Incompatible print head is detected. Replace the print head.

Maintenance Status

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

Battery Status (When Eco Charge Function is Disabled)

Icon	Description
	Shows the remaining battery level in an icon and percent.

Icon	Description
	Shows that the battery is charging.
	Shows that the battery is not in a chargeable temperature range and cannot be charged.
	Shows that it is time to replace the battery.

Battery Status (When Eco Charge Function is Enabled)

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

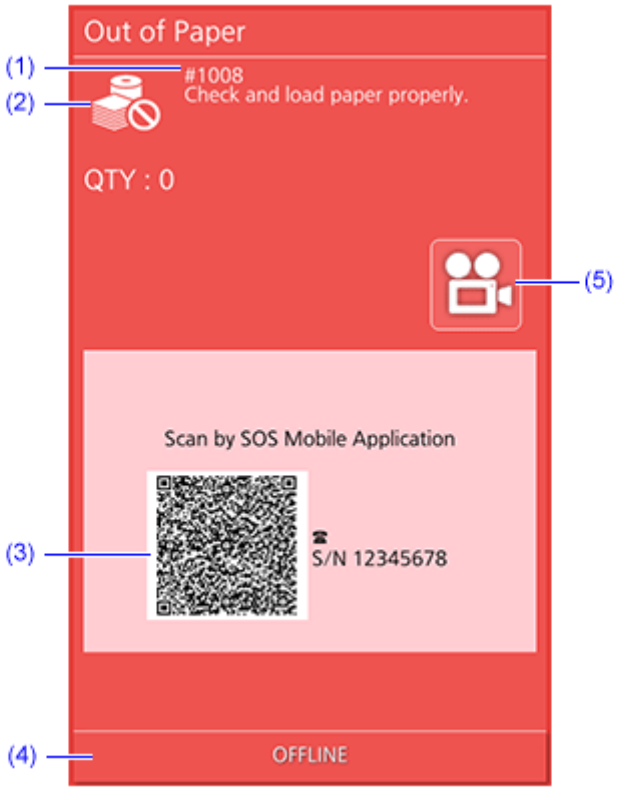
Icon	Description

Operations When Errors Occur

When a printer error occurs, the icon and message (the error and coping way) will be shown on the screen. When an error occurs, you can perform the following operations:

- Change to Offline mode.
- Cancel the error.
- Feed the media.
- Change to Settings mode.
- Play the guidance video.
- Scan the QR code for the SOS (SATO Online Services) or contact your SATO technical support center via their phone number.

- The available operations vary, depending on the situation.



(1) Error number

(2) Error Icon

(3) The QR code and phone number appears when the SOS is enabled.

(4) Perform possible operations for each error.

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

Error Icon

Icon	Description
	Paper end is detected.
	Print data is larger than the media size.
	Sensor error is detected.
	Top cover is open.
	Print head error is detected.
	• Communication error is detected. • BCC error is detected. • CRC error is detected.
	Cutter error is detected.
	• USB memory is not accessible. • There is no free space in the USB memory.

Icon	Description
	Calendar error is detected.
	• Wireless LAN setting error is detected. • Authentication with the server failed. • Authentication with the server timed out.
	• Printer error is detected. • The power cord was pulled out while printing. • A nonstandard AC power supply was used.
	The temperature of the printer has exceeded the tolerance range.
	Paper jam is detected.
	NFC error is detected.
	NFC command error is detected.
	A program error is detected in the memory.
	The battery is running low.

Icon	Description
	• The battery has deteriorated. • A defect is detected with the battery.
	The battery is exhausted.

Guidance Videos

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

List of the Guidance Videos

The printer contains the following guidance videos for visual reference of printer operations.

The onboard guidance videos are as follows:

No.	Guidance Videos	Show video from		
		Error screen	Startup Guide	[Information] Menu
1	Media roll loading (Continuous mode/Tear-Off mode)	-	Possible	Possible
2	Media roll loading (Dispenser mode)	-	Possible	Possible
3	Media roll loading (Cutter mode/Partial cutter mode)	-	Possible	Possible
4	Media roll loading (Linerless tear-off mode)	-	Possible	Possible
5	Media roll loading (Linerless cutter mode)	-	Possible	Possible
6	Fan-fold media loading	-	Possible	Possible
7	Wireless LAN/Bluetooth kit installation	-	-	Possible
8	Battery mount kit installation	-	-	Possible
9	Cradle kit installation (standard model)	-	-	Possible

No.	Guidance Videos	Show video from		
		Error screen	Startup Guide	[Information] Menu
10	Cradle kit installation (with the battery mount kit connected)	-	-	Possible
11	Print head replacement	Possible	-	Possible
12	Platen roller replacement	-	-	Possible
13	Battery replacement	Possible	-	Possible
14	Cleaning	-	-	Possible
15	Media roll replacement (Continuous mode/Tear-Off mode)	Possible	-	-

Playing the Guidance Video from the Error Screen

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

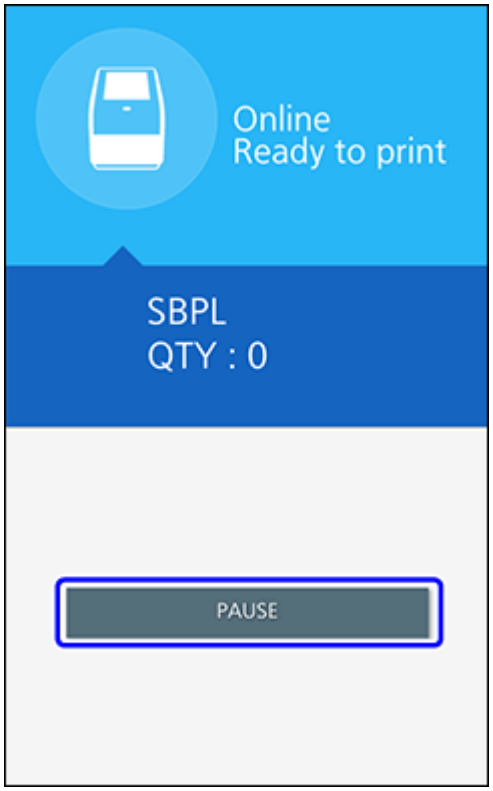
1. **On the error screen, tap to play the guidance video.**

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

Getting Access to the Guidance Video in Online Mode

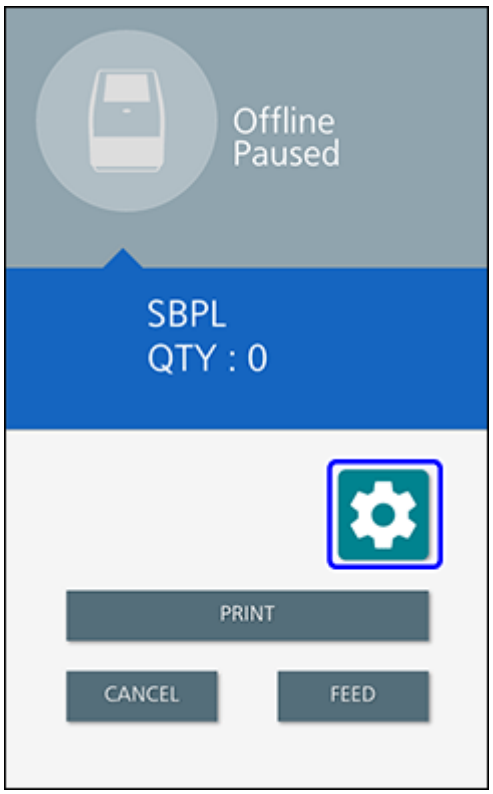
When in the Online mode, play the guidance video according to the following procedure.

1. Tap [PAUSE] in Online mode.



The printer enters Offline mode.

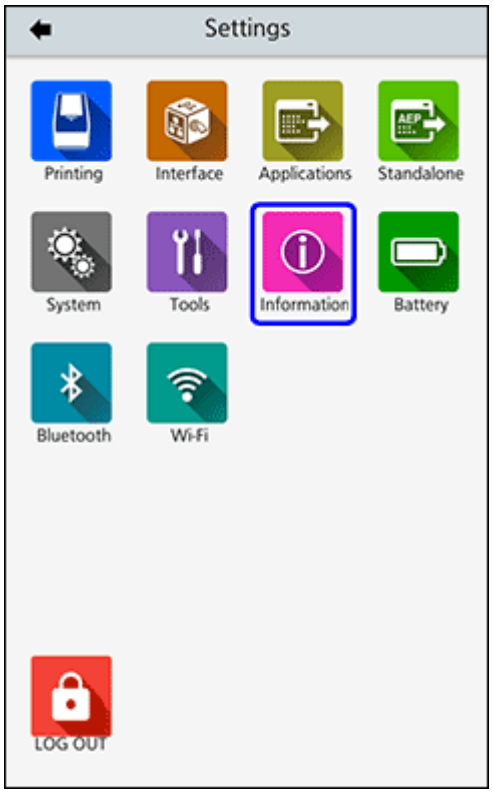
2. **Tap** .



The printer enters Settings mode.

3. **Input the password if it is enabled.**

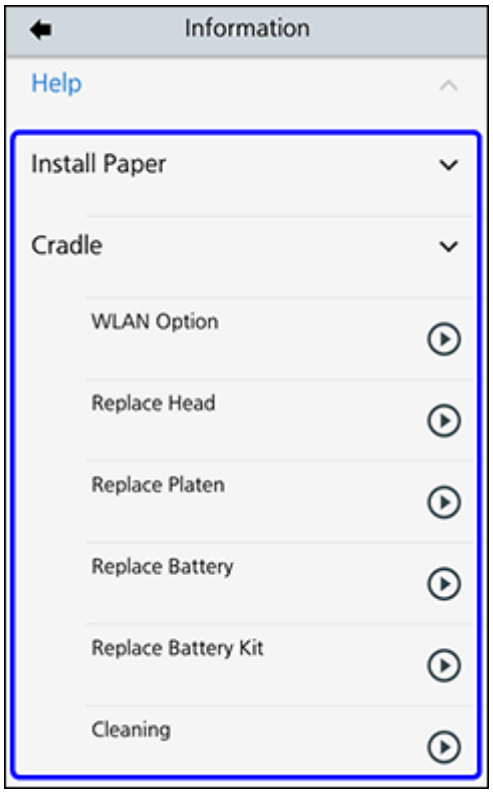
4. **Tap [Information].**



5. **Tap [Help].**

   The guidance video list appears.

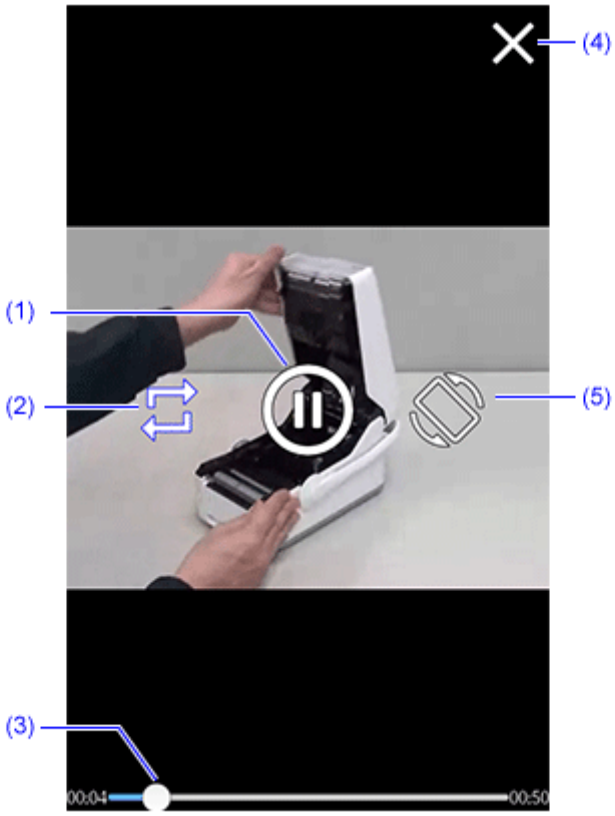
6. **Tap the video for playback.**



   The guidance video starts.

Operating the Guidance Video

Indication buttons appear when the video is tapped.



(1) Pause or playback the video.

(2) Tap to perform continuous playback.

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

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

(4) Close the video.

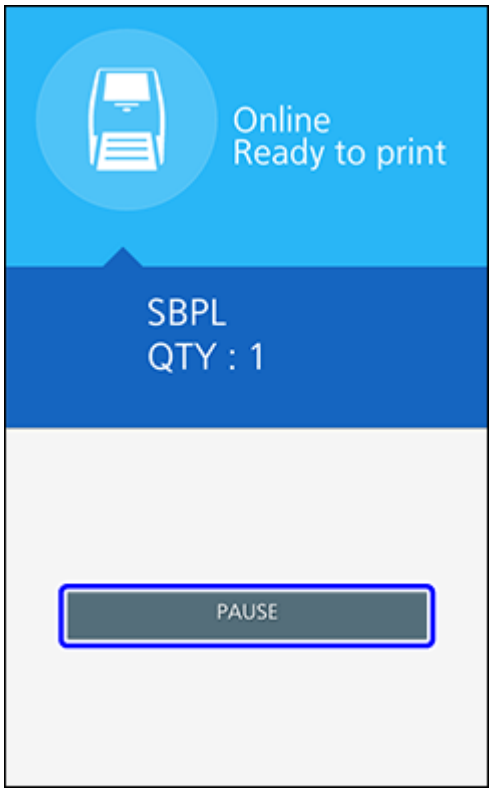
The video also can be closed by pressing the / (Standby/Home) button.

(5) Tap to switch between full-screen display and normal display.

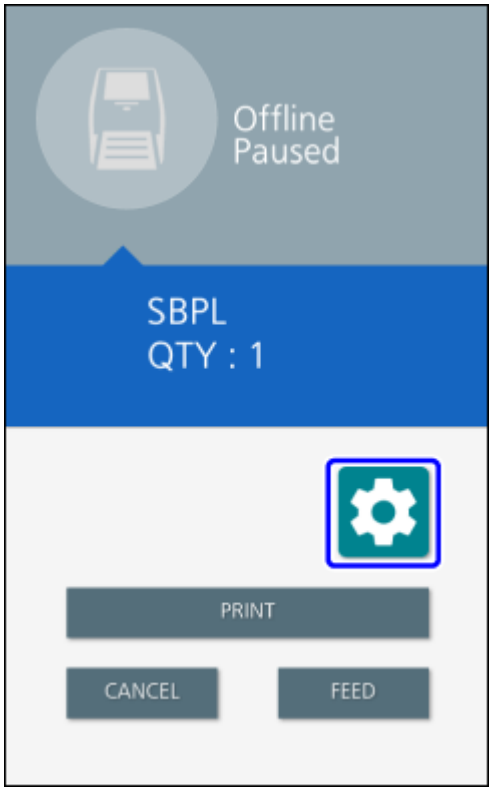
Adjusting the Print Settings During Printing

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

1. **Tap [PAUSE] to pause the print job and change the printer to Offline mode.**

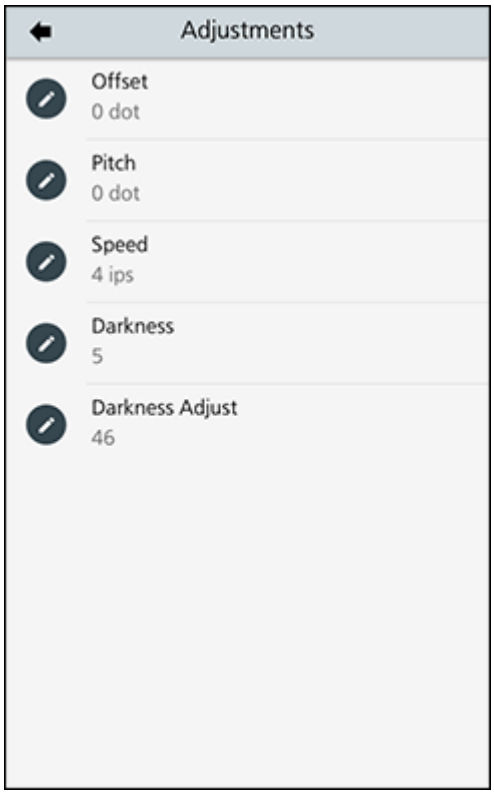


2. **Tap** **.**



The Adjustments mode appears.

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



4. **Tap or press the / (Standby/Home) button to return to Offline mode.**

5. **Tap [PRINT] or press the / (Standby/Home) button to change to Online mode.**

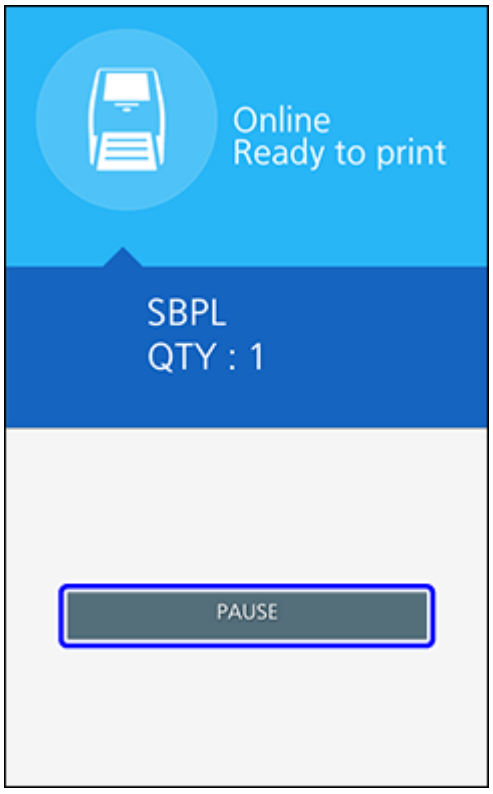
The print job resumes with the adjusted settings.

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

Canceling the Print Job

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

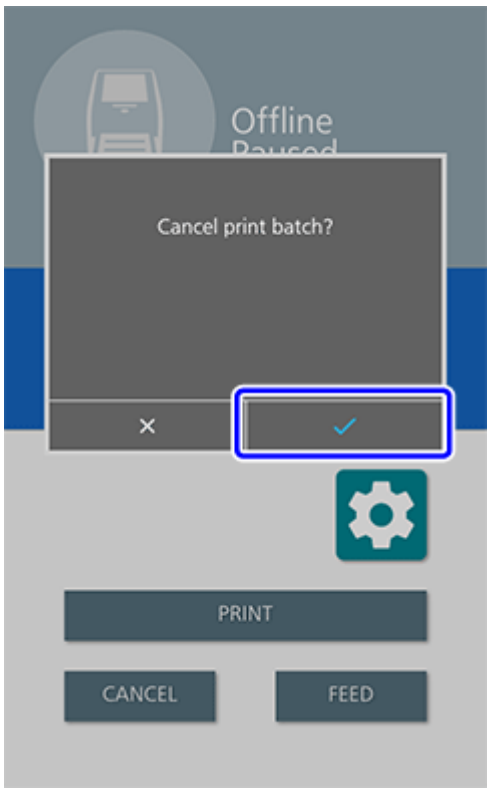
1. **Tap [PAUSE] to change the printer to Offline mode.**



2. **Tap [CANCEL].**

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

3. **Tap ✓.**



The print job is canceled.

Settings Mode

In the Settings mode, various setting of the printer can be operated. 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
Printing Menu	Access the settings related to printing.
Interface Menu	Access the settings related to the interfaces.
Applications Menu	Access the settings related to the printer's command.
Standalone Menu	Access the standalone printer settings.
System Menu	Access the settings related to the display language, volume etc.
Tools Menu	Access the test print and other settings.
Information Menu	Access the printer information and guidance videos.
Battery Menu	Access the battery condition information and charging settings. Appears only when the optional battery mount kit is installed.
Bluetooth Menu	Access the settings related to Bluetooth. Appears only when the optional wireless LAN/Bluetooth kit is installed.
Wi-Fi Menu	Access the settings related to Wi-Fi. Appears only when the optional wireless LAN/Bluetooth kit is installed.

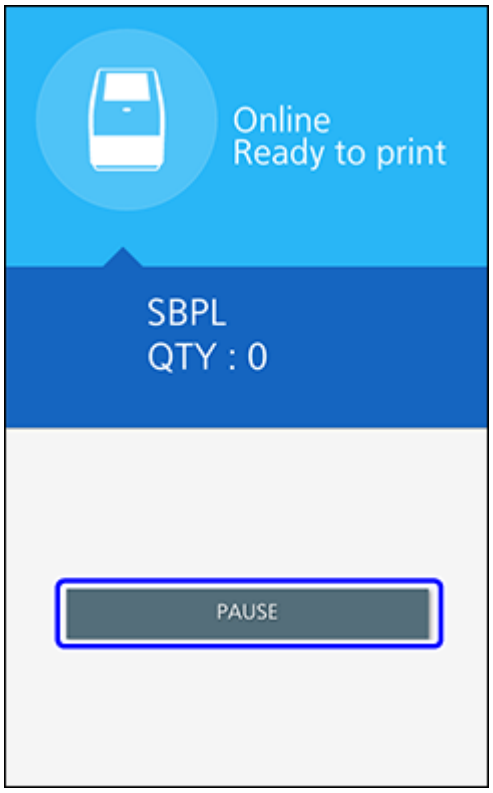
- The icon appears on the right side of the [Information] menu when the [System] > [Regional] > [Display Language Icon] menu is enabled. You can easily access the language selection menu.

Changing to the Settings Mode

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

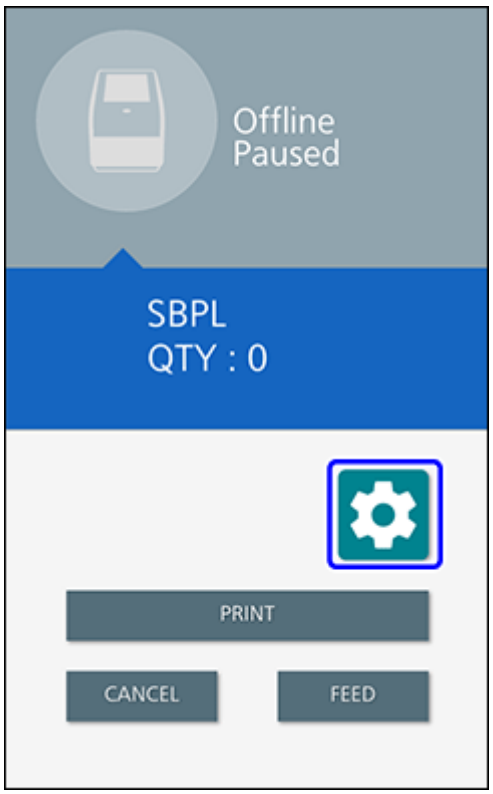
Change the printer to the Settings mode according to the following procedure:

1. Tap [PAUSE] in Online mode.



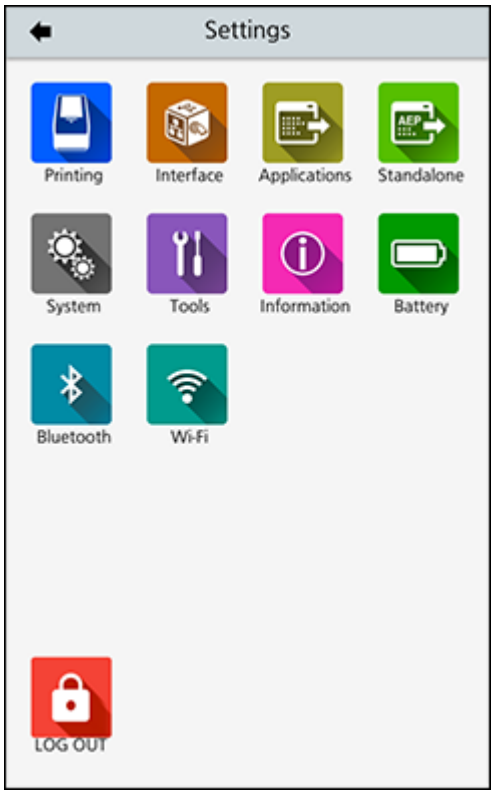
The printer enters Offline mode.

2. **Tap .**



3. **Input the password if it is enabled.**

The printer enters Settings mode.

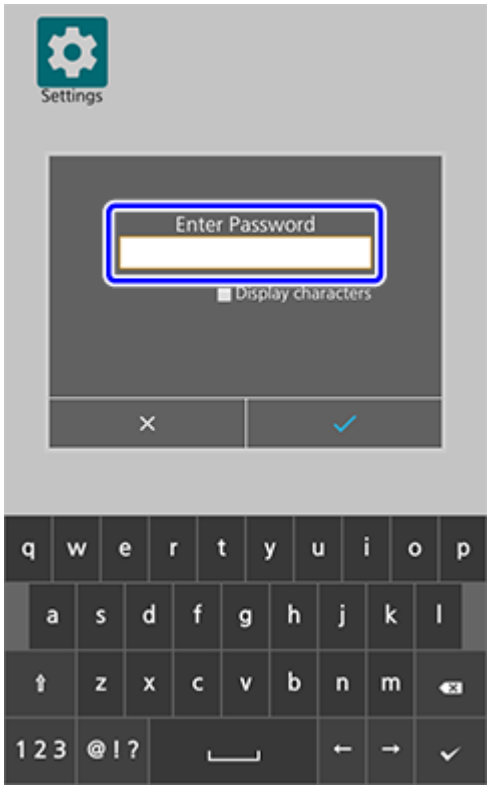


- You can also enter the Settings mode from the Home screen. Press the ⏻/⌂ (Standby/Home) button while in Online mode or Offline mode to show the Home screen.
- To exit the Settings mode, press the ⏻/⌂ (Standby/Home) button to show the Home screen, or tap ← to return to the previous screen.

Logging In to/Logging Out of the Settings Mode

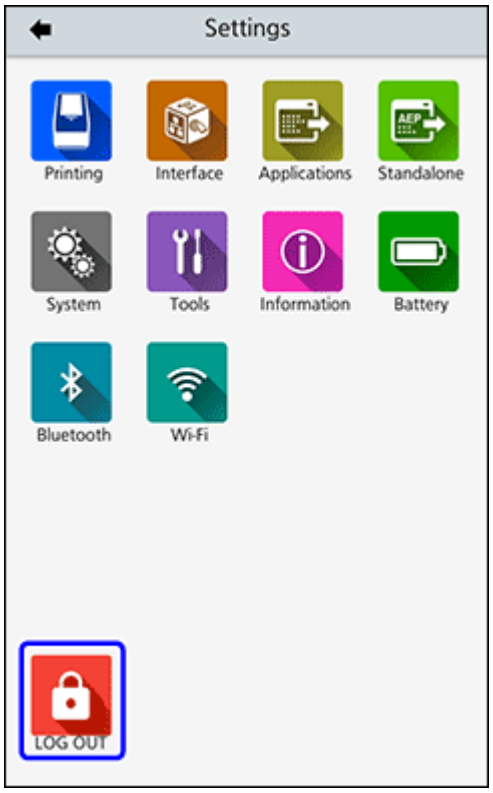
The Settings mode logs in and logs out by the following procedure, if the password is enabled.

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



When logged in to the Settings mode, 🔒 appears on the bottom left of the screen.

- **Tap to log out of the Settings mode.**

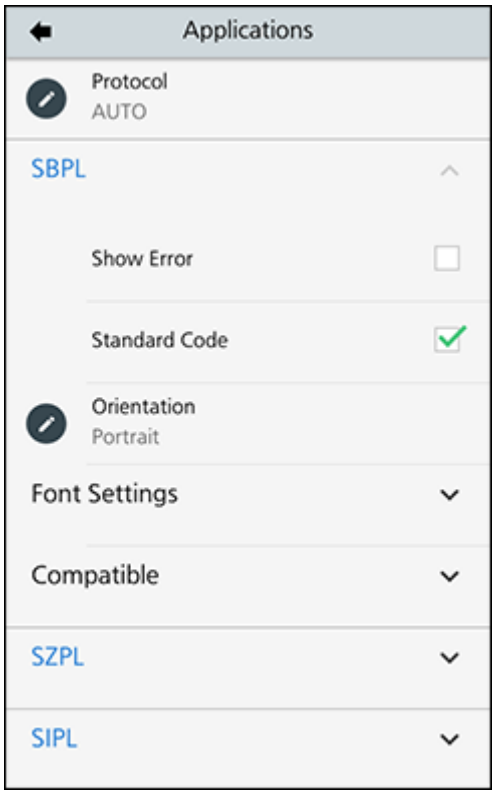


Password is required to enter the Settings mode again.

- 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.

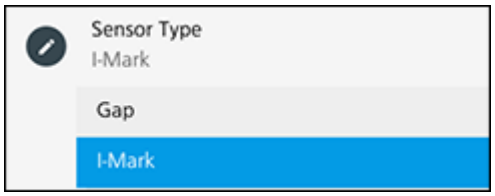
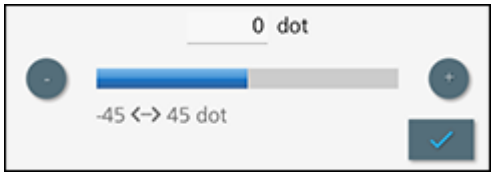
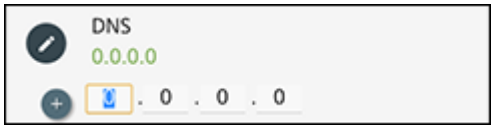
Settings Mode Operations

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
	Tap the item to open the hidden submenus. Then, changes to . Tap the item again to hide the submenus.
	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.

Display image	Description
	Tap an item from the list to select it. The selected item is highlighted in the list.
	There are three ways to adjust the setting value. • Tapping ⊖ / ⊕ • Inputting numbers from the on-screen keyboard Tap the text box to show the on-screen keyboard • Sliding the slide bar directly Tap ✓ to confirm the setting.
	Tap the text box to input values from the on-screen keyboard.
	Tap each text box to input numbers from the on-screen keyboard. For items with ⊕, setting values can be added by tapping ⊕.
	Tap ▷ to execute items.
	Tap 🖨 to print items such as test prints or configurations lists.
	Tap 🗑 to delete items.
	Items with no pencil icon are read-only items.

Setting Value Input

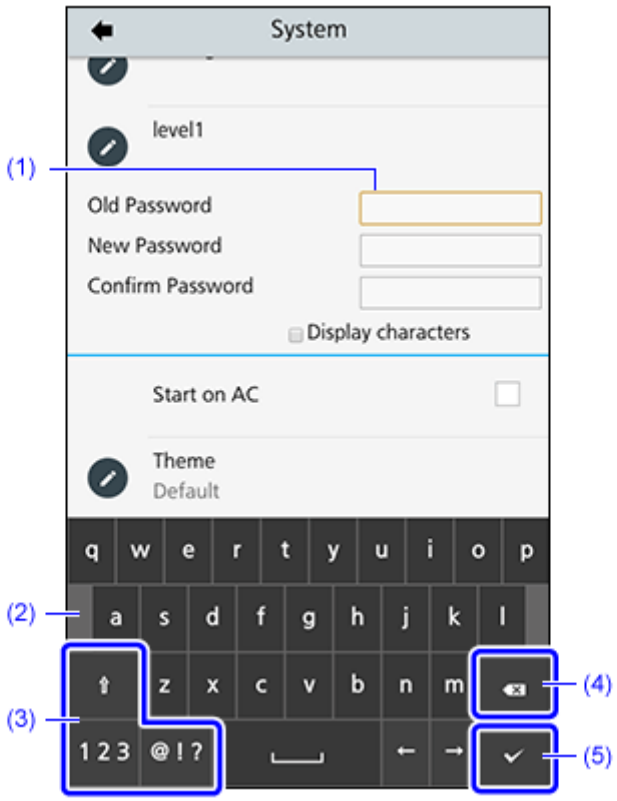
This topic describes the character and number input on the setting screen.

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

- Character Input

- Numeric Input
- IP Address Input

- **Character Input**



(1) Tap the text box to show the on-screen keyboard manually.

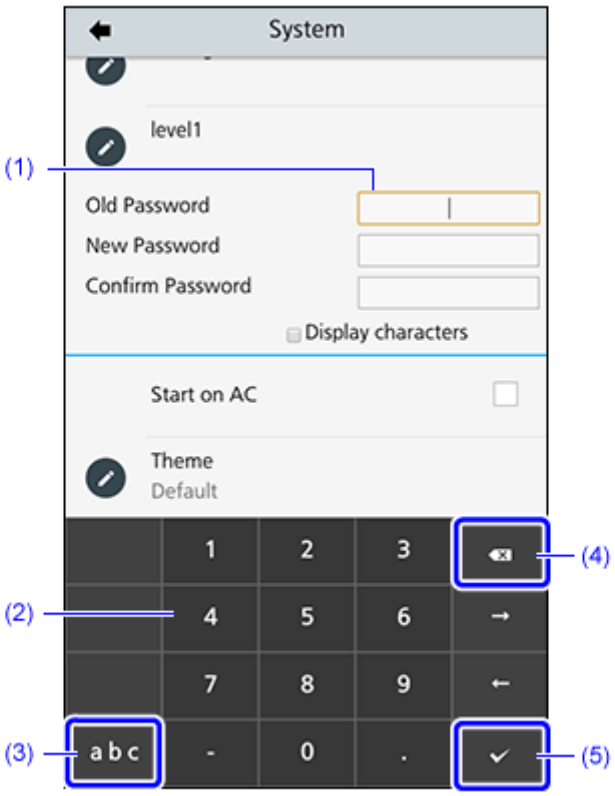
(2) Tap the on-screen keyboard to input characters. Hold the keys to show special characters.

(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) Tap the text box to show the on-screen keyboard manually.

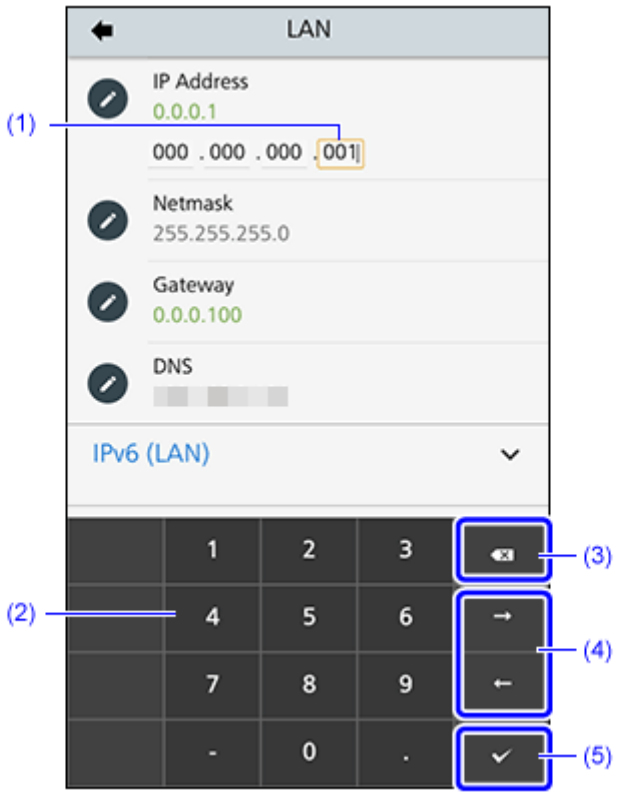
(2) Tap the on-screen keyboard to input numbers. Hold the keys to show special characters.

(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) Tap each text box for input. After three digits are input, the cursor moves to the next text box automatically.

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

(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 Printer

Printer Memory and USB Memory

The memory of the user area of the printer is a maximum of 1GB.

USB memory can be connected to the printer. There is no capacity limit for USB memory.

There are two USB connectors (Type A) at the back of the printer and one inside the printer. USB memory can be connected to any of these connectors.

What you can do with this printer while it is connected to USB memory is as follows:

- Get the HEX dump data
- Install certificates used for Wi-Fi authentication and for HTTPS
- Create clone data (copy the printer settings information)
- 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 printer. SATO Corporation shall not be held responsible for any printer malfunctions caused by a virus spread via USB memory.

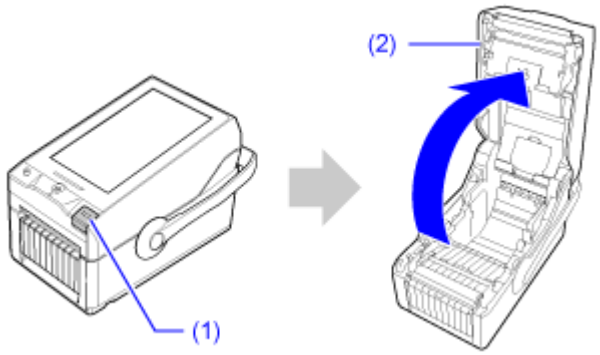
- The printer does not support USB memory with security functions such as fingerprint authentications.
- The printer does not support connection through the USB HUB.

Connecting the USB Memory Inside the Printer

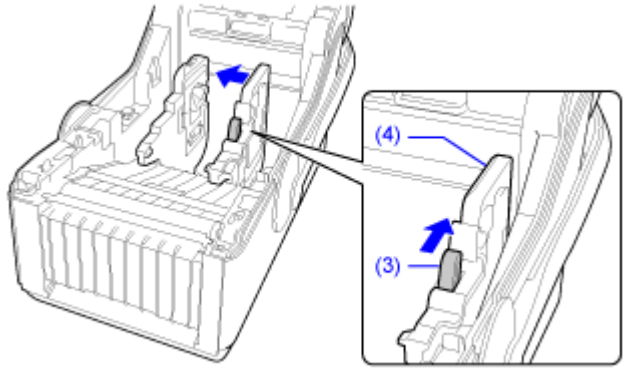
The USB memory can be connected not only at the back side of the printer but also inside the printer. When using the printer with the USB memory at all times, it is convenient to connect it inside the printer.

- The size of the USB memory that can be connected inside the printer is as follows.
  - Length: under 37 mm (1.46") (excludes the metal part of the connector)
  - Width: under 20 mm (0.79")
  - Thickness: under 8 mm (0.31")

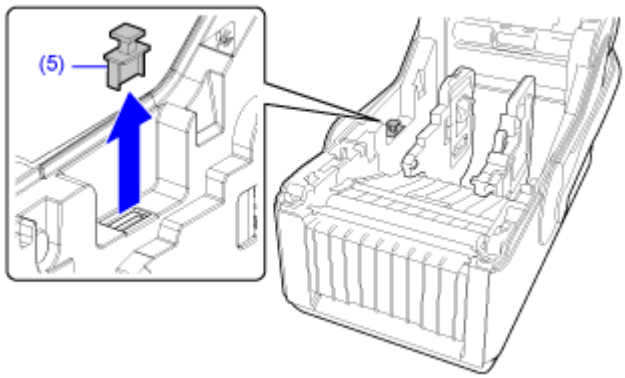
1. **Press the cover open button (1) to open the top cover (2).**



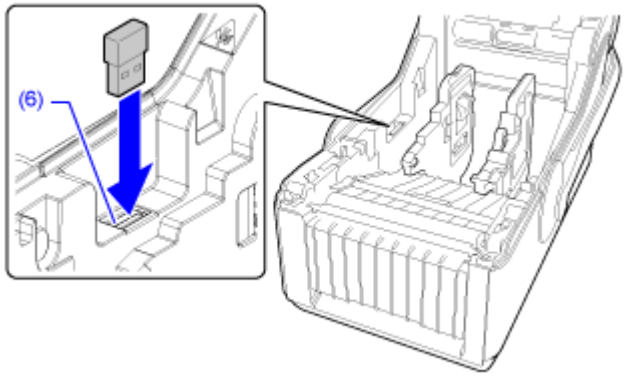
2. **Remove media if it is already loaded.**
3. **Move the media guide (4), which is on the right, inward while pressing the slide lever (3).**



4. **Disconnect the USB connector cover (5).**



5. **Insert the USB memory into the USB connector (6).**

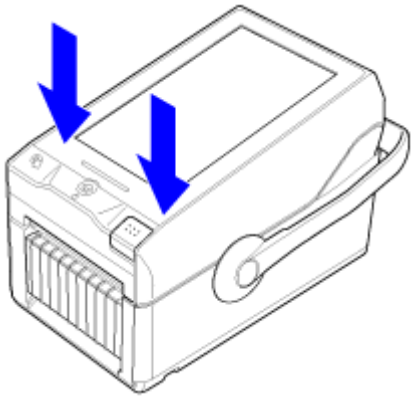


6. **Reload the media if you removed it in step 2.**

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.



- appears on the status bar.

Getting Started

What You Can Do with This Printer

PC less printing

FX3-LX is a portable All-in-One printing solution which offers intuitive printing applications and can be customized to meet the customer's requirements. This printer optimizes business processes in a wide range of markets like food, retail, healthcare, event ticketing and manufacturing.

Printing from a PC, tablet or smart phone

Apart from PC less printing, labels can also be printed directly from a PC, tablet or smart phone. The FX3-LX has an auto-detection functionality which allows using the same printer for PC less printing and printing from a host.

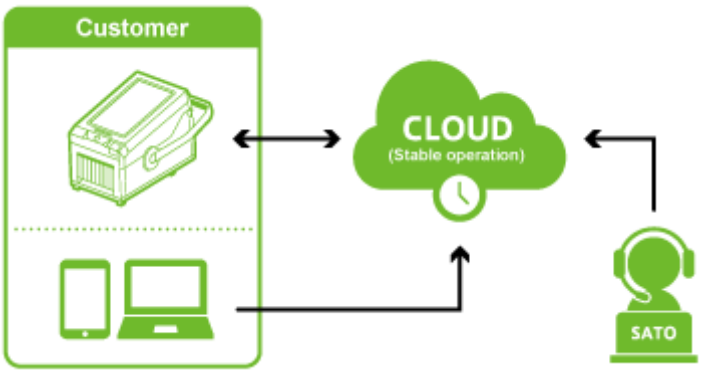
Videos

The FX3-LX has 14 preset help videos which instruct the user on how to load media, replace wear parts, install accessories and clean the printer. The customers can also upload and play their videos for training and promo purposes.

Equipped with SOS (SATO Online Services), which offer preventive maintenance to prevent problems.

The printer is monitored, ranging from its operation to maintenance status, via the IoT.

This provides maintenance support the same as if a customer engineer is right on site.



Installation

Installation Precautions

Install the printer in a location as follows:

- A location that is horizontal and stable.
- A location that has sufficient space for operating the printer.
- A location with a wall able to secure the mount bracket securely (when using the optional wall mount kit).

Do not install the printer in a location as follows. Doing so could cause the printer to malfunction.

- A location that is subject to vibration.

- A location with high temperature and humidity.

- A dusty location.

- A location exposed to direct sunlight.

- A location with a lot of electrical noise.

- A location with a large fluctuation in power.

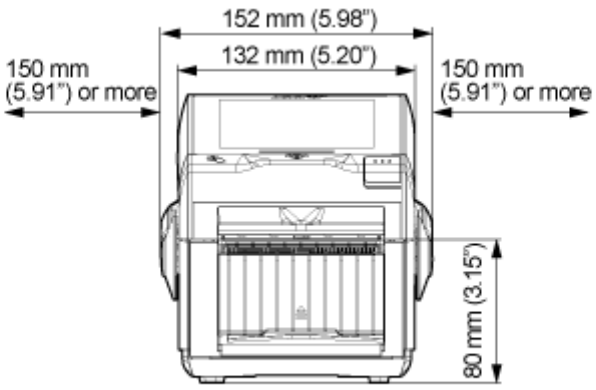
- A location that blocks the sides of the printer.
- A location with an explosive atmosphere (flammable gas or vapor).

Installation Space

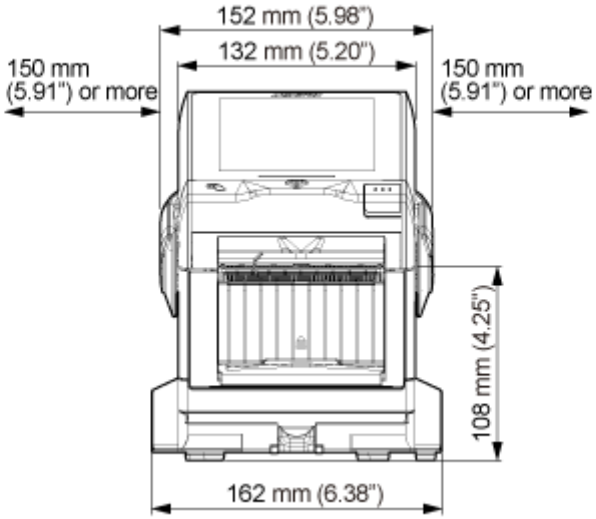
Front View

The dimensions of the front view of the printer are as follows:

Standard model



When the printer is mounted on the optional battery mount kit and cradle kit



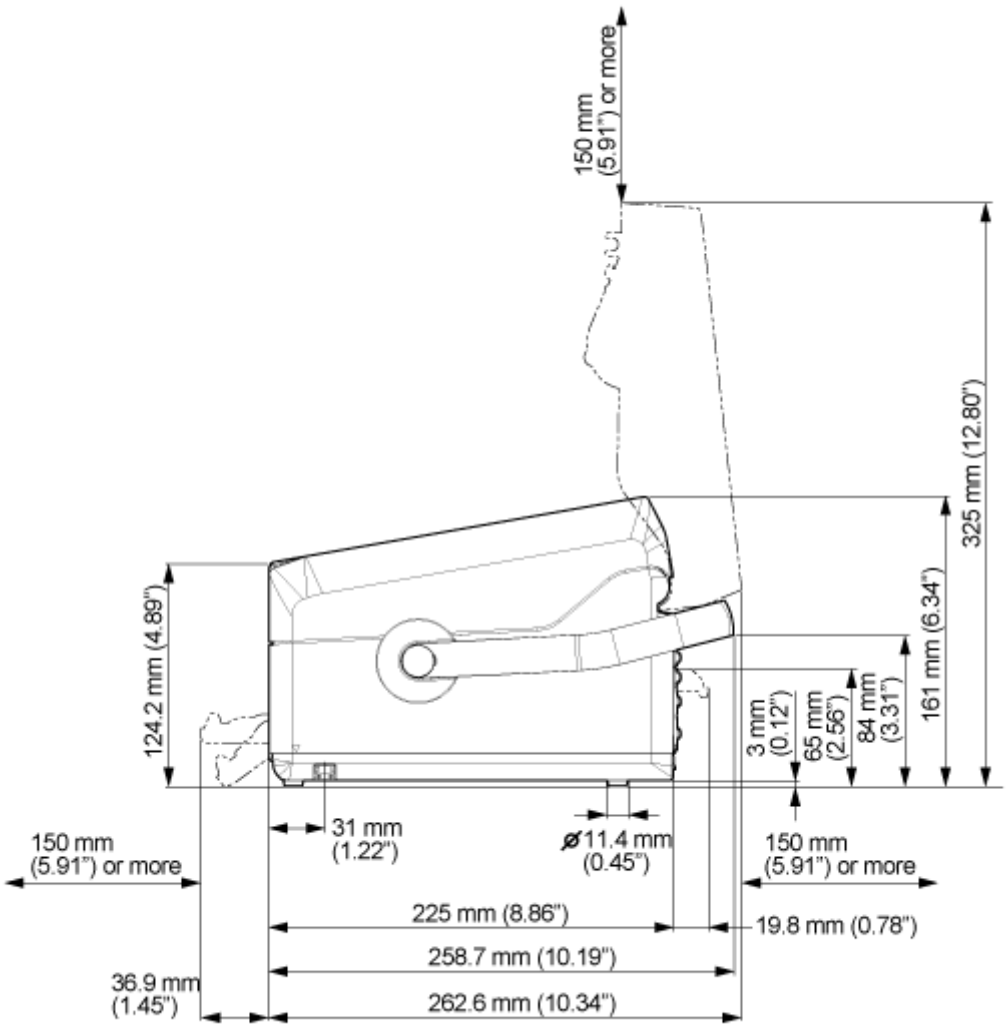
Side View

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

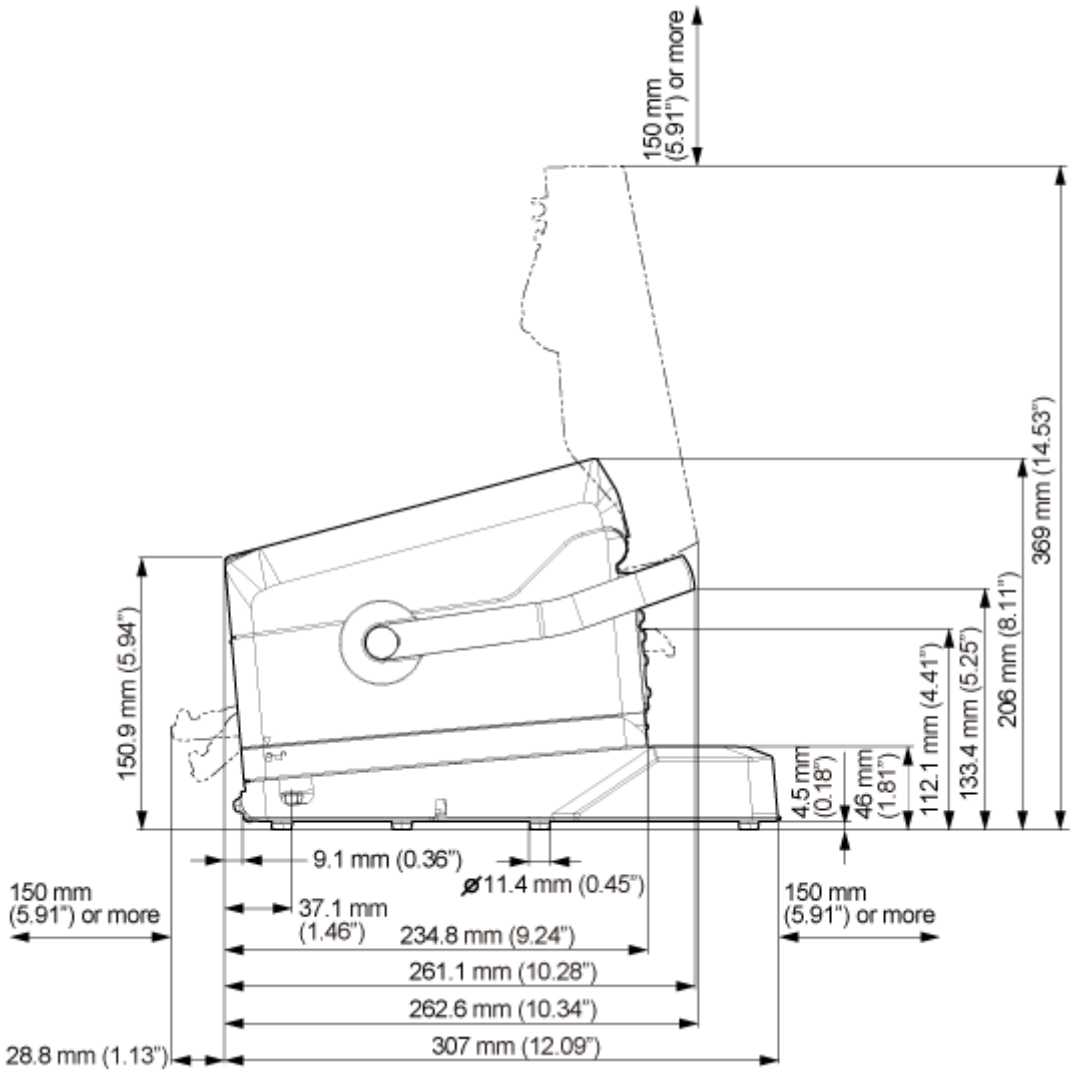
Make sure that there is sufficient space on the rear side of the printer so that no stress is applied to the power cord or cables connected to the printer.

The dimensions of the side view of the printer are as follows:

Standard model



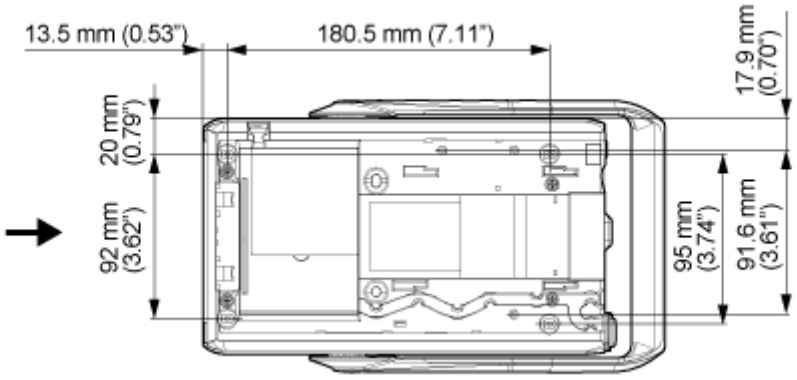
When the printer is mounted on the optional battery mount kit and cradle kit



Bottom View

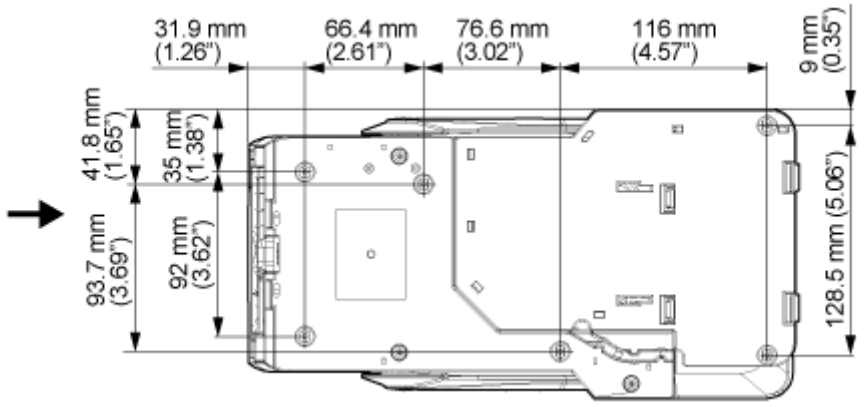
The bottom surface dimensions of the printer are as follows:

Standard model



- The arrow indicates the front of the printer.

When the printer is mounted on the optional battery mount kit and cradle kit



- The arrow indicates the front of the printer.

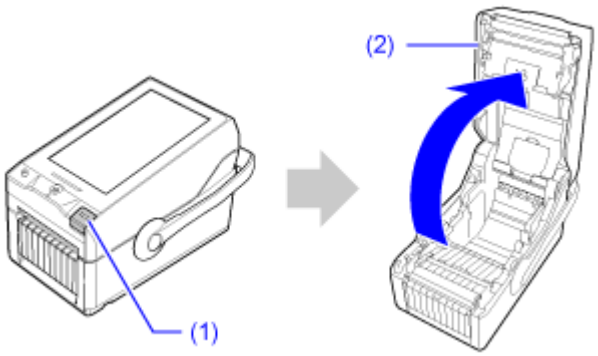
Installing the Options

Installing the Optional Cutter Kit/Partial Cutter Kit

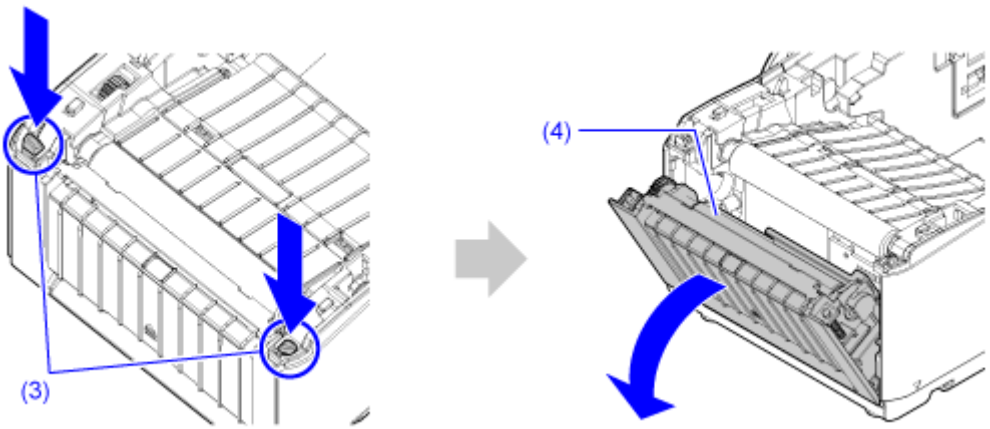
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

- Do not touch the terminals with wet hands.
- Touching the edge of the print head with your bare hand could cause injury.
- Be careful not to touch the cutter blade.

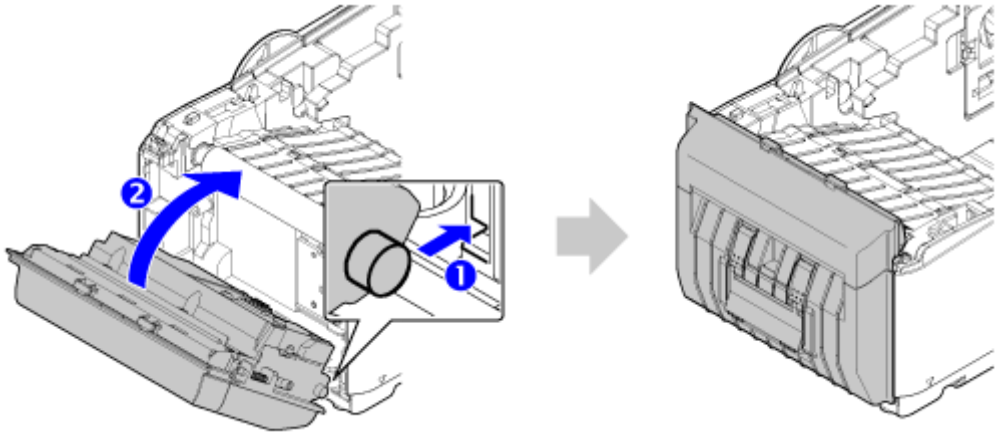
1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



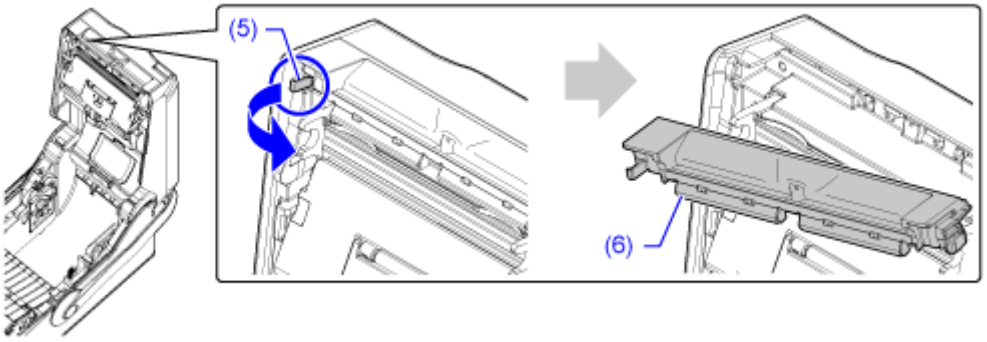
3. **While pushing the lock buttons (3) on both sides, tilt the dispenser kit (4) toward the front to remove it.**



4. **Insert the pins of the cutter kit so that they are aligned with the guides (❶), and attach the top of the cutter kit so that it fits onto the printer and the buttons on both sides click (❷).**



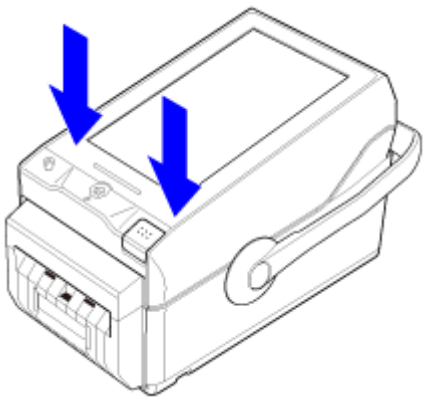
5. **Tilt the knob (5) on the left side toward the right to remove the front cover (6).**



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.



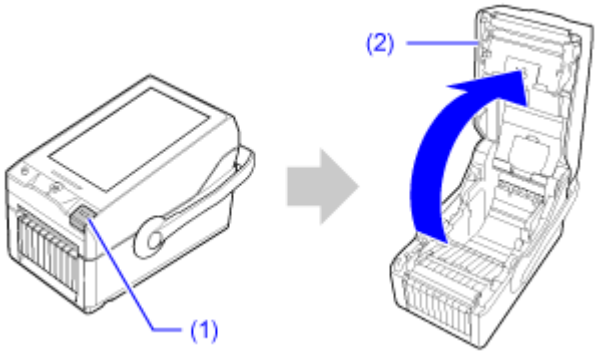
When the [Printing] > [Auto-mode] function in the Settings mode is enabled, the print mode is set automatically according to the status of the installed option. To select a print mode manually, disable [Auto-mode] and select the print mode in the [Printing] > [Print Mode] menu.

Installing the Optional Linerless Kit

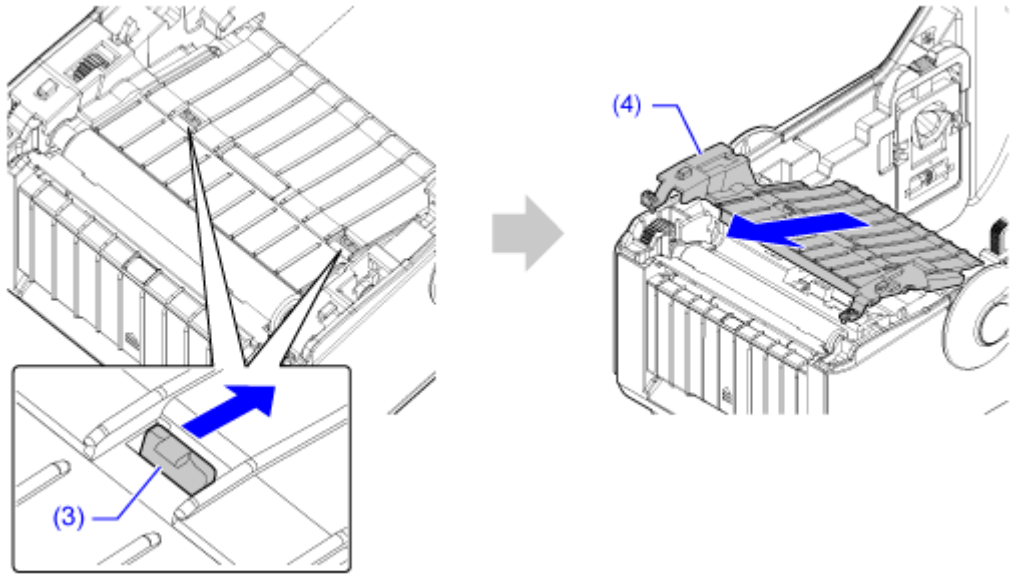
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

- The linerless platen roller and feed roller have protective stickers on them. Install the rollers after peeling off the stickers.

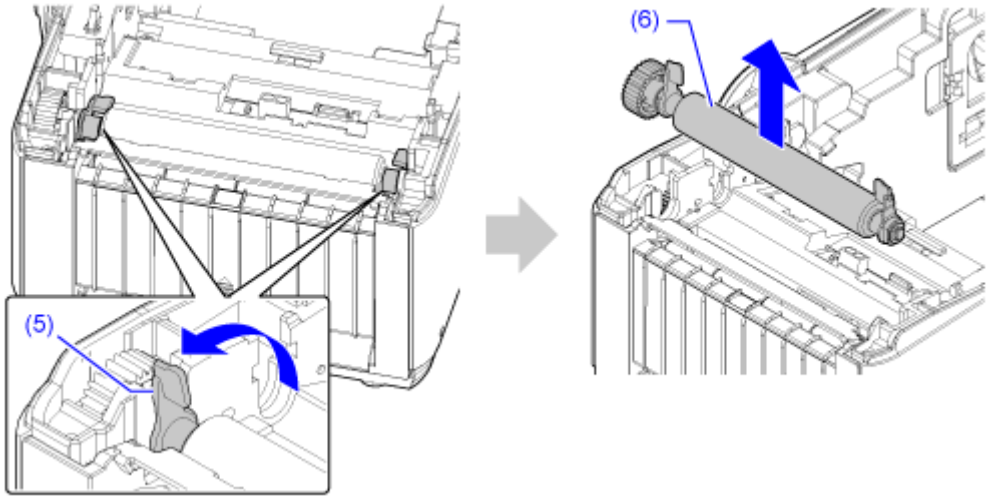
1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



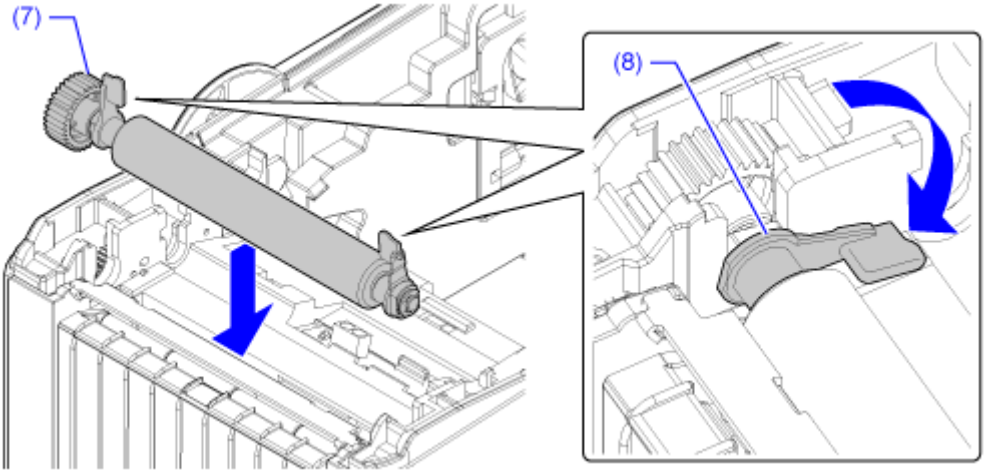
3. **Push the two tabs (3) toward the back to remove the inner cover (4).**



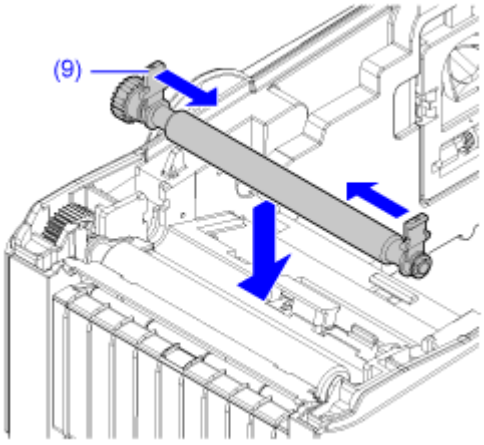
4. **Turn the levers (5) on both sides of the platen roller (6) toward the front and pull it out.**



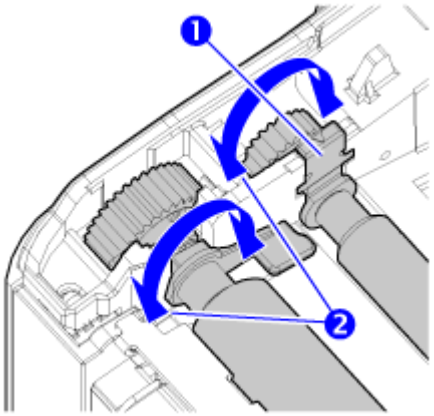
5. **Install the linerless platen roller (7) and turn the levers (8) on both sides toward the back.**



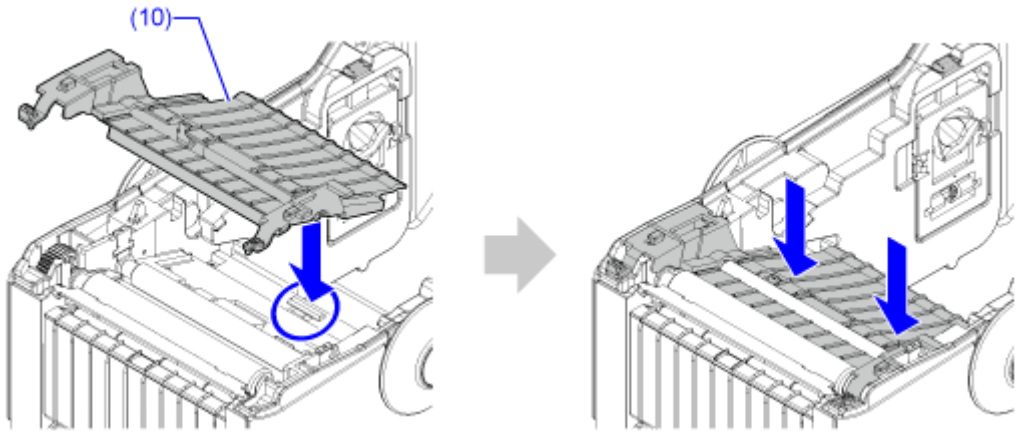
6. **Attach the feed roller (9) while tilting the levers on both sides toward the center.**



7. **Make sure the tabs are parallel to the printer's frame on both sides (❶) and the two rollers rotate in an interlocked manner (❷).**



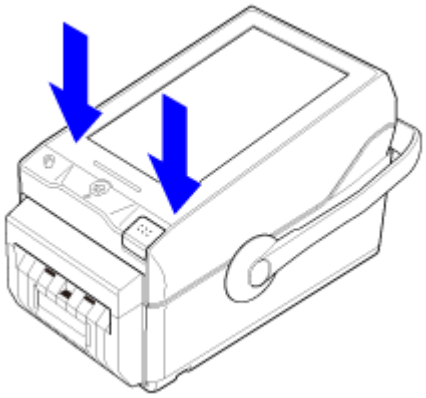
8. **Align the tab on the back of the inner cover for linerless kit (10) with the tab slot to attach the cover and press it in until it clicks.**



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.



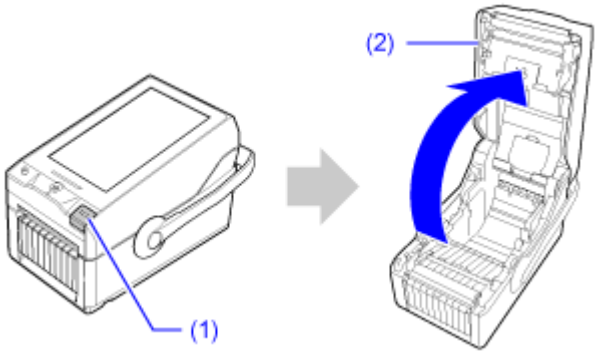
Set the print mode according to its usage. To select a print mode manually, disable [Auto-mode] and select the print mode in [Print Mode] in the [Printing] menu of the Settings mode.

Installing the Optional Wireless LAN/Bluetooth Kit

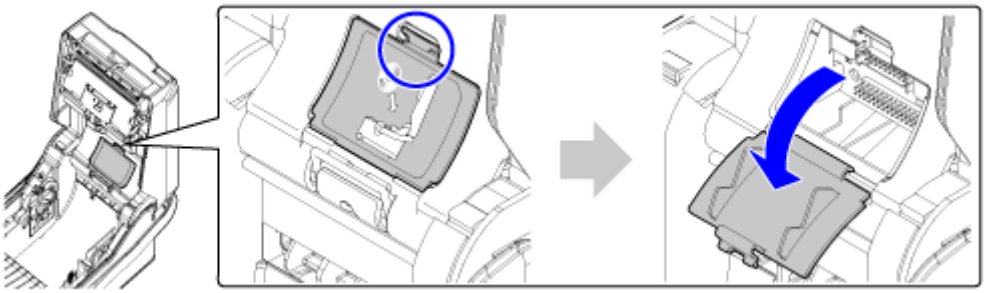
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

- Do not touch the terminals with wet hands.

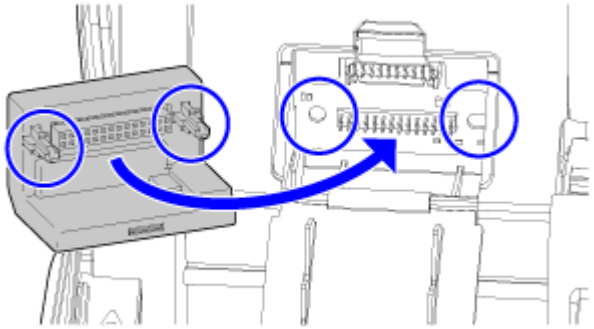
1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



3. **Pull down the hook to open the cover for the place where the wireless LAN/ Bluetooth kit is to be installed.**

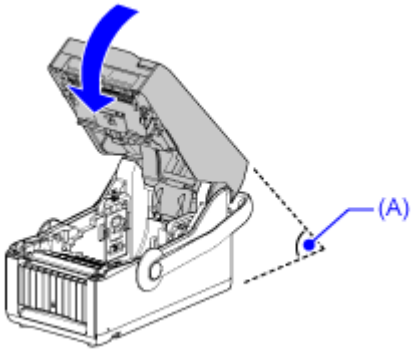


4. **Align the projections of the wireless LAN/Bluetooth kit to the position inside the cover.**

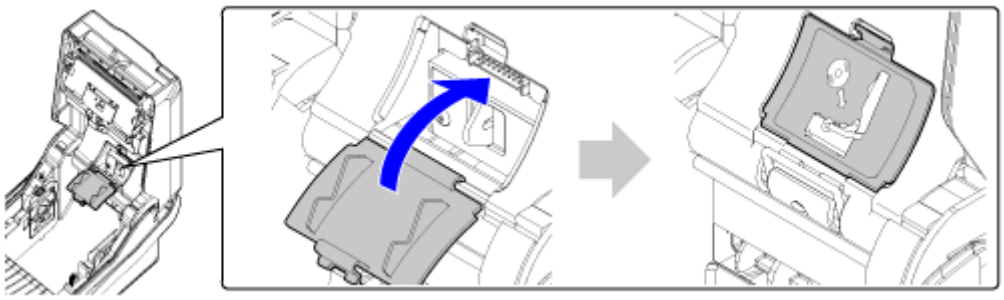


5. **Slightly tilt the top cover and insert the wireless LAN/Bluetooth kit.**

Make sure that the angle that the top cover is opened (A) is 50° or less.



6. **Open the top cover again and close the cover for the place where the wireless LAN/ Bluetooth kit is to be installed.**

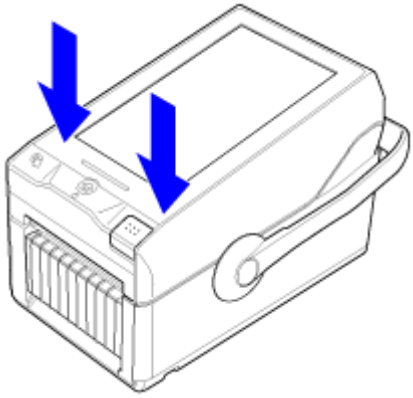


- If the cover does not close, open the top cover to an angle of 50° or less, pull out the wireless LAN/Bluetooth kit, and redo the procedures from step 4.

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.



- If the Wi-Fi icon ( ) and the Bluetooth icon ( ) icon do not appear in the Settings menu, try again.
- After installation, check that the printer is functioning properly and put the sticker that came with the wireless LAN/Bluetooth kit on the back of it.

Installing the Optional Wall Mount Kit

Preparation for Installing the Optional Wall Mount Kit

- We are not liable for the printer falling due to the installation not being strong enough. Confirming the condition of the wall and installing the printer is your responsibility.
- Handle the printer with care.

Required tools and screws

- Phillips screwdriver
- Screws for securing the mount bracket on the wall (x4)

Notes on the selection of screws to prepare

- Select four screws of which shear strength and pull-out strength are sufficient for a load of 22 kgf (216 N) or more. (Major diameter 3.5 mm (0.14") or larger)
- Select screws suitable for the wall to securely mount the printer on it.

Notes on the location of installation

- Choose a flat location not subject to water leaks or shock, and secure the mount bracket on it.
- Keep 150 mm (5.91") or more space around the printer.
- The battery mount kit and cradle kit cannot be used when the printer is mounted on the wall mount kit.

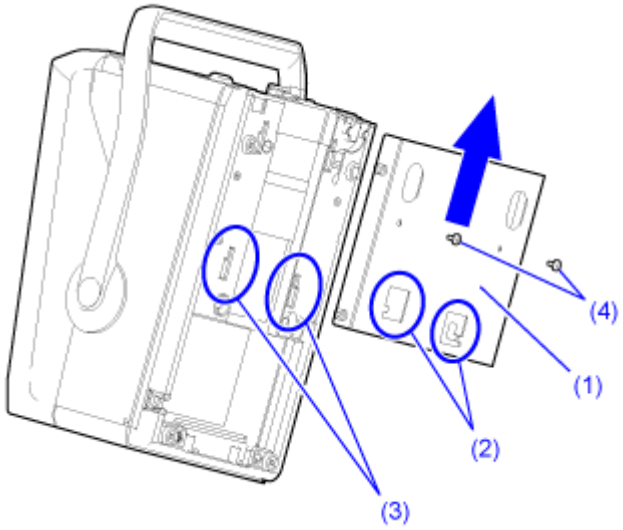
Installing the Wall Mount Kit

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

- Carefully handle the wall mount kit so that you may be not injured by its sharp edges.
- When mounting the printer on the wall mount kit, be cautious so that your fingers are not caught in between.
- When mounting the printer on the mount kit, hold the printer with both hands. Otherwise, you may be injured by the printer fallen.

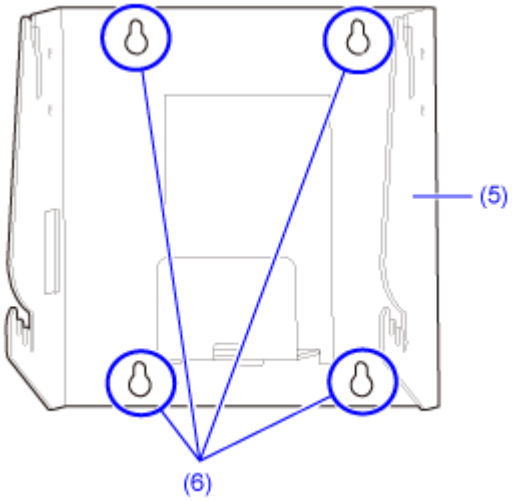
1. Attach the joint plate to the printer.

a. Turn over the printer on a clean level surface.
b. Insert the hooks (2) on the joint plate (1) into the hook slots (3) on the printer.
c. Slide the joint plate in the direction of the arrow shown in the illustration.
d. Secure the joint plate with the supplied screws (4).

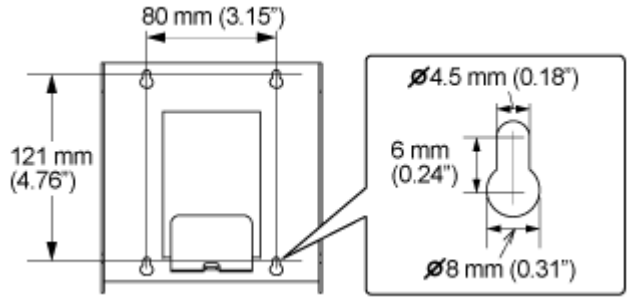


2. Attach the mount bracket to the wall.

a. Secure the four bracket mounting holes (6) of the mount bracket (5) to the wall by using the screws you prepared.
b. Make sure that the mount bracket is completely fixed and fastened to the wall.

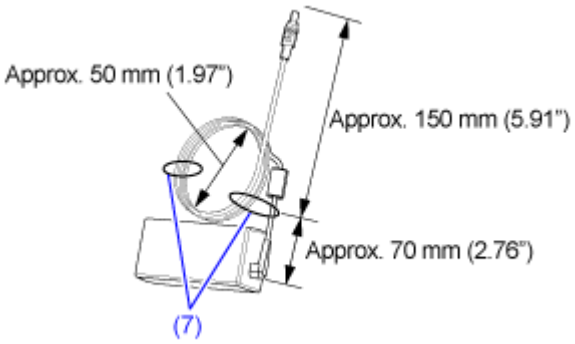


- Dimensions of the bracket mounting holes are as follows:

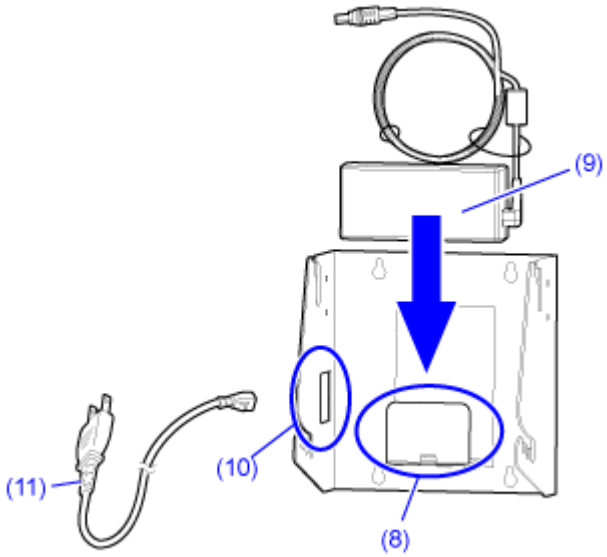


3. Attach the AC adapter to the mount bracket.

a. Wind the AC adapter cable in a circle with a diameter of about 50 mm (1.97").
b. Adjust the remaining length of the AC adapter cable to about 150 mm (5.91").
c. Bind the cable at two points (7) with cable straps.



d. Place the AC adapter (9) on the adapter holder (8).
e. Insert the AC cable (11) from the opening (10) and connect the AC cable to the AC adapter.

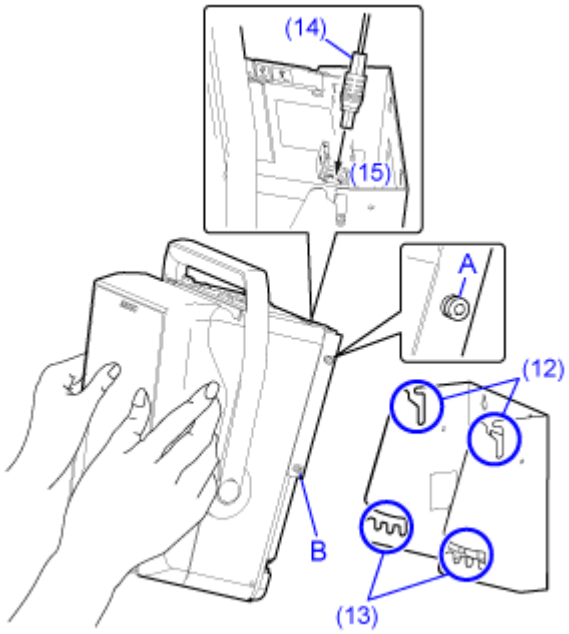


- Use the wire saddle for the AC adapter cable as necessary.

4. Load the media in the printer.

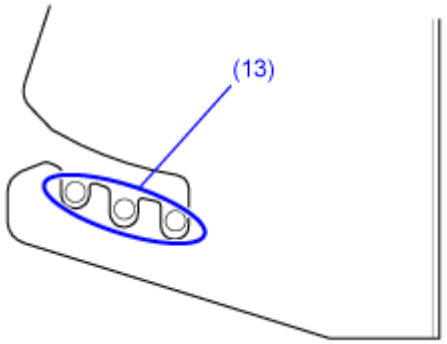
5. Install the printer to the mount bracket.

a. Put protrusions A on both sides of the joint plate into the guides (12) on the mount bracket.
b. Put protrusions B on both sides of the joint plate into the angle adjustment points (13) on the mount bracket.
c. Insert the AC adapter cable (14) into the DC input connector (15) of the printer.



6. Adjust the angle of the printer.

a. Set protrusions B on both sides of the joint plate into the angle adjustment points (13) on the mount bracket.
b. Power on the printer.
c. Move protrusions B and adjust the angle to the position for the easiest view.



Unmounting the Printer from the Mount Bracket

When opening the top cover to replace media, etc., unmount the printer from the mount bracket.

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

- When unmounting the printer from the mount kit, hold the printer with both hands. Otherwise, you may be injured by the printer fallen.
- Carefully handle the wall mount kit so that you may be not injured by its sharp edges.

1. Power off the printer.

- The print data will be cleared if the printer is powered off. Please reissue the print data again.

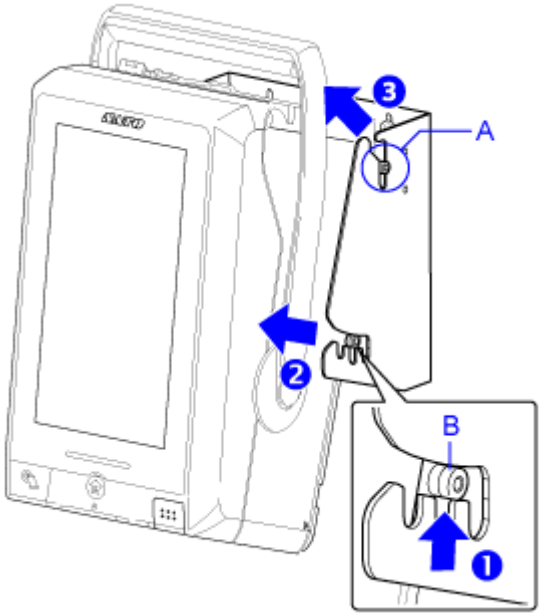
2. Remove the AC adapter cable from the printer.

3. Unmount the printer from the mount bracket.

a. Lift up the printer, and remove protrusions B from the groove of the angle adjustment part (❶).

b. By using protrusions A as a pivot, pull protrusions B forward and unmount them from the mount bracket (❷).

c. Lift up the printer, and unmount protrusions A from the mount bracket (❸).


A
B
1
2
3

Powering On/Off the Printer

Connecting to Power

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 center.

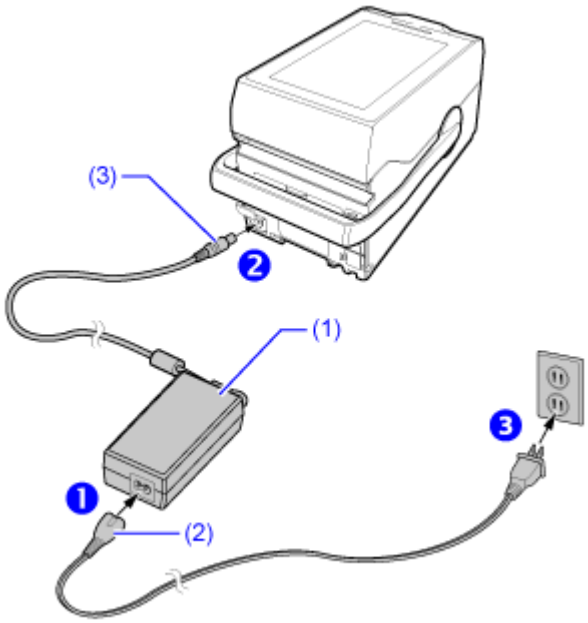
- The attached power cord and AC adapter are designed exclusively for this printer. Do not use them with other devices.

1. Connect the AC adapter and the power cord.

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

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

c. Insert the power plug into an AC outlet (❸).



- The shape of the power plug varies depending on the region in which it was purchased.
- This printer is also designed for IT power distribution system with phase-to-phase voltage 230 V.

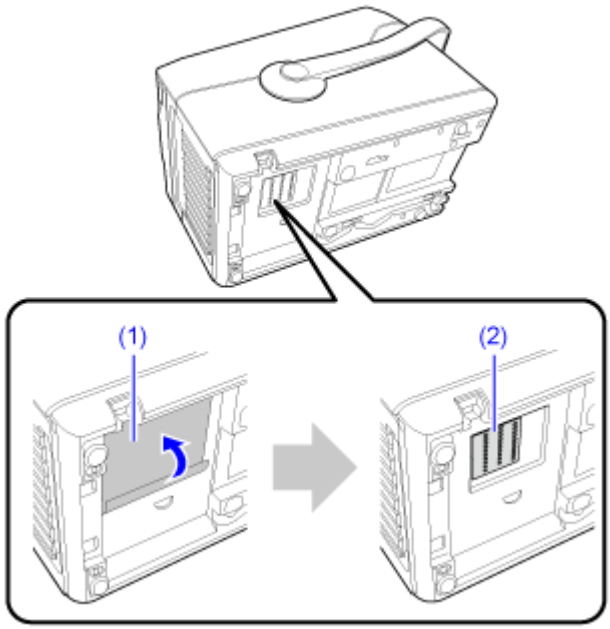
Using the Optional Battery Mount Kit/Battery

Connecting the Battery Mount Kit

1. **Remove the terminal protection seal (1) on the bottom of the printer.**

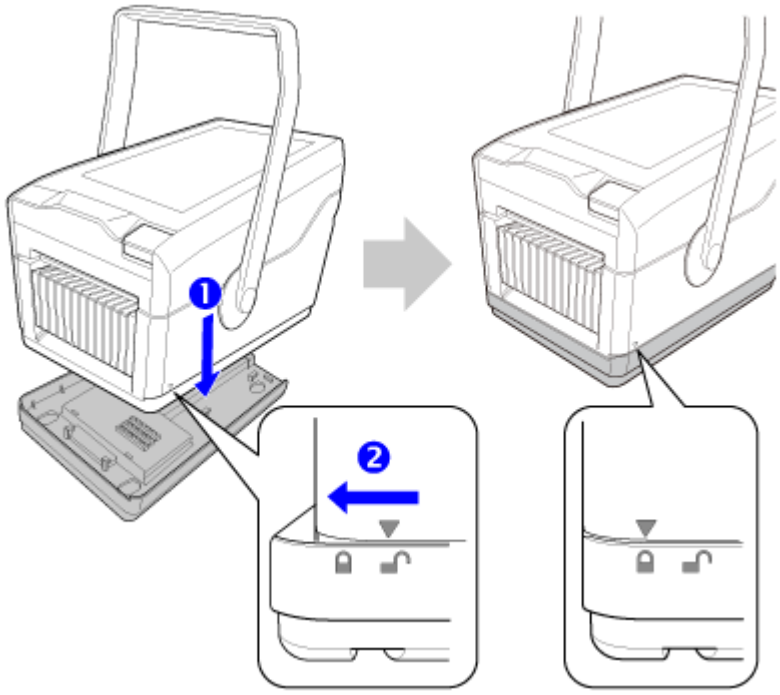
   You can now see the charging terminal (2).

- Do not touch the charging terminal with wet hands.
- If the charging terminal is dirty, clean the dirt using a dry cloth or a cotton swab.
- Do not remove the terminal protection seal on the bottom of the battery mount kit if you will not be using the optional cradle kit.



2. **Mount the printer on the battery mount kit and slide it as indicated by ❶ and ❷ in the illustration to lock it.**

- Be careful not to pinch your fingers when mounting the printer on the battery mount kit.

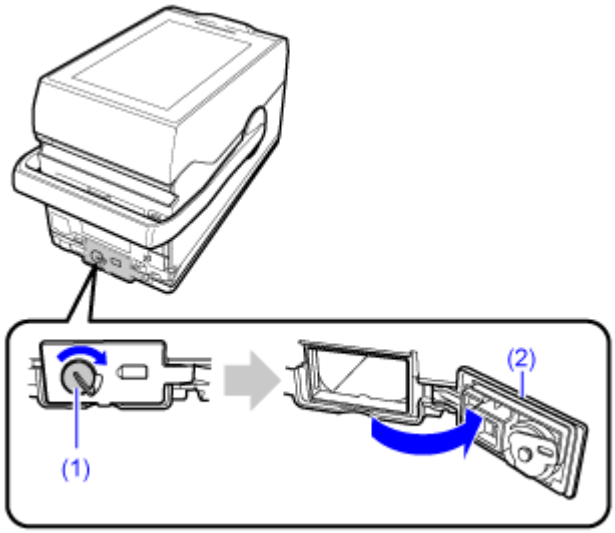


Inserting the Battery into the Battery Mount Kit

1. Open the battery cover of the battery mount kit.

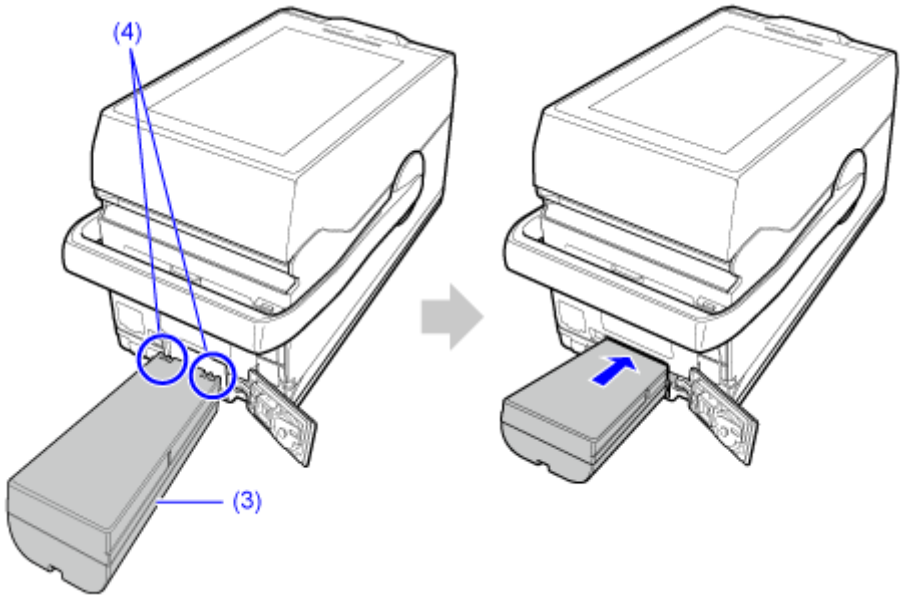
a. Turn the lever (1) clockwise.
b. Open the battery cover (2).

- The battery cover may come off if it is forced opened or if it is hit very hard. Be careful not to force it open.



2. Insert the battery (3).

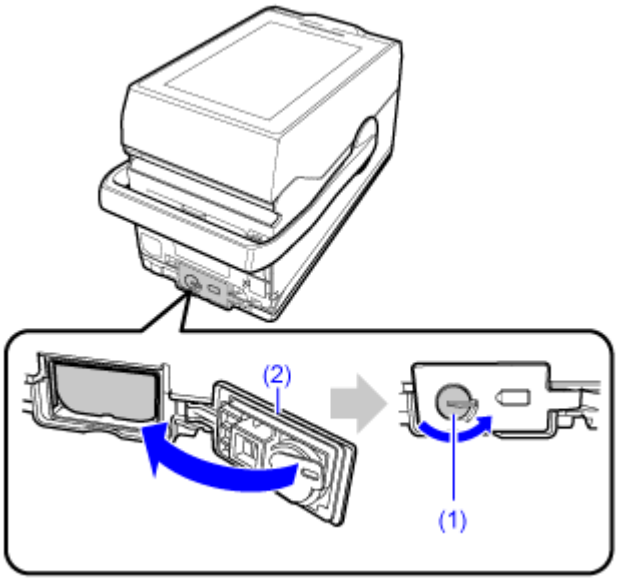
Face the battery terminal (4) upward, insert the terminal side of the battery first, and press it all the way in.



3. Close the battery cover.

a. Close the battery cover (2).
b. Turn the lever (1) counterclockwise.

- If you open the battery cover to remove the battery, the battery may fall out. Be careful not to injure yourself with the battery.

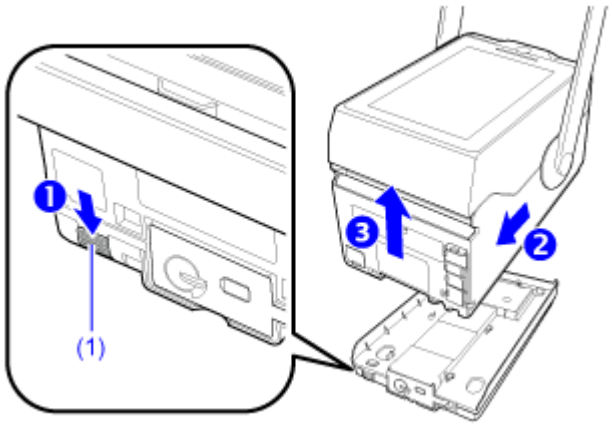


Releasing the Battery Mount Kit

1. Release the battery mount kit.

a. While holding down the release button (1) on the back of the battery mount kit (❶), slide the printer backward to unlock (❷).

b. Lift up the printer (❸).



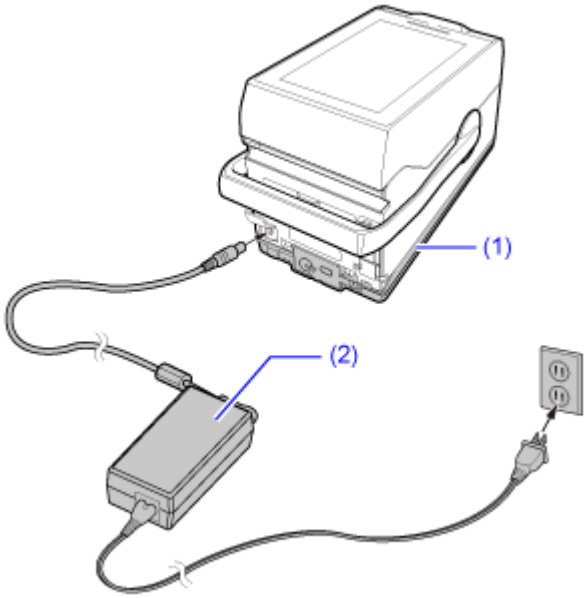
Charging the Battery by Connecting the AC Adapter

The AC adapter, supplied with the printer, charges the battery while the printer is mounted on the battery mount kit.

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

- The battery can also be charged with the optional 1ch battery charger. Refer to the operator manual of the 1ch battery charger for how to charge the battery.

1. **Connect the supplied AC adapter (2) to the printer mounted on the battery mount kit (1).**



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

Charging the Battery by Mounting the Printer on the Optional Cradle Kit

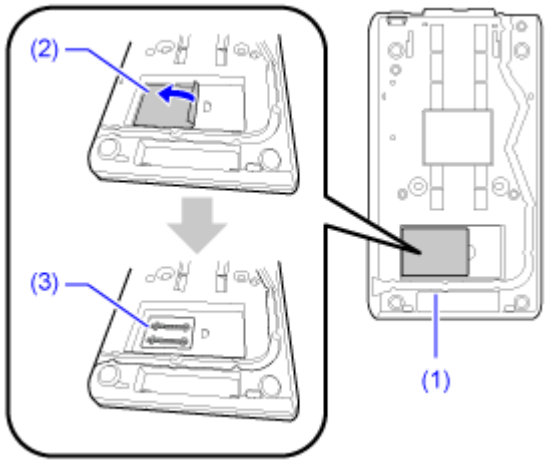
The optional cradle kit charges the battery while the printer is mounted on the battery mount kit.

- The battery can also be charged with the optional 1ch battery charger. Refer to the operator manual of the 1ch battery charger for how to charge the battery.

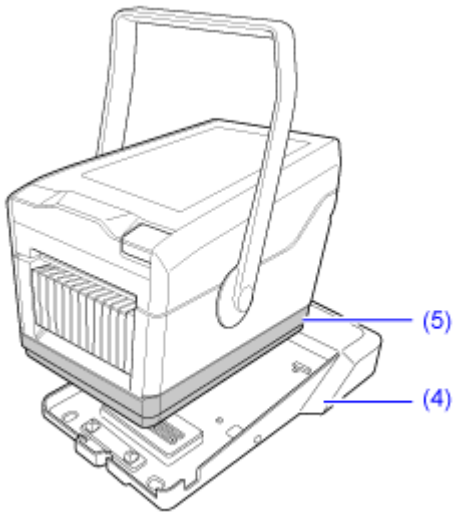
1. **Remove the terminal protection seal (2) on the bottom of the battery mount kit (1).**

   You can now see the charging terminal (3).

- Do not touch the charging terminal with wet hands.
- If the charging terminal is dirty, clean the dirt using a dry cloth or a cotton swab.
- Do not remove the terminal protection seal on the bottom of the battery mount kit if you will not be using the optional cradle kit.



2. **Mount the printer with the battery mount kit (5) on the cradle kit (4).**

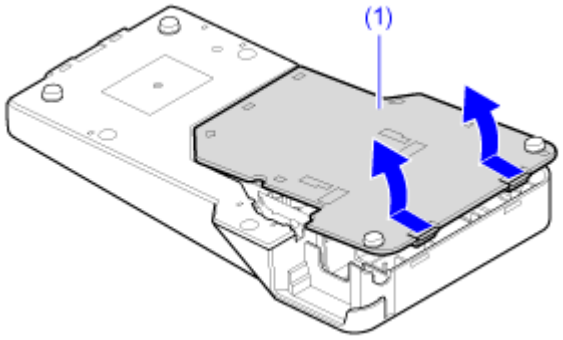


Using the Optional Cradle Kit

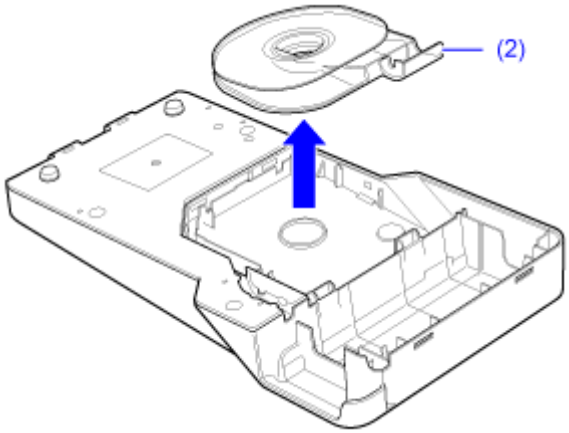
Storing the AC Adapter in the Cradle Kit

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

1. **Lift the cradle kit bottom cover (1) while holding the tabs pressed toward center, then remove it.**



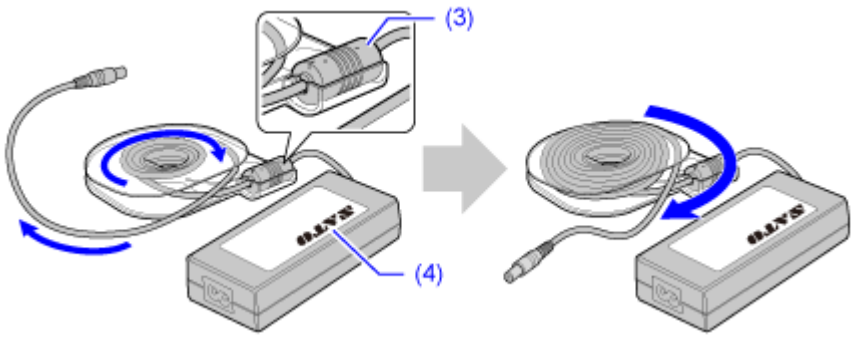
2. **Take the cable rewinder (2) from the cradle kit.**



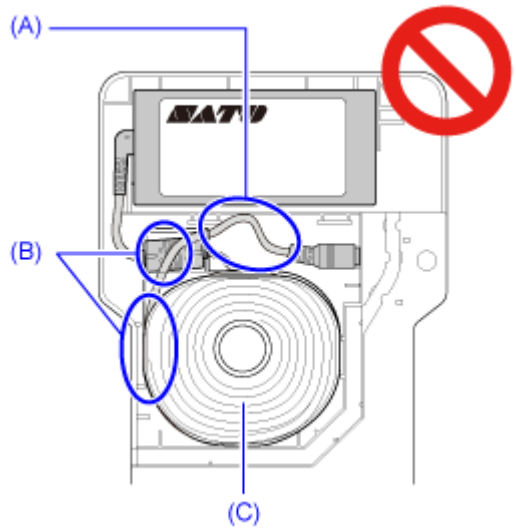
3. **Fix the ferrite core (3) of the AC adapter and wind the AC adapter cord around the cable rewinder.**

   Wind the cord in the direction of the engraved arrows on the cable rewinder and wind it firmly, leaving no space between cord lines.

   Place the AC adapter facing its SATO logo (4) upward.



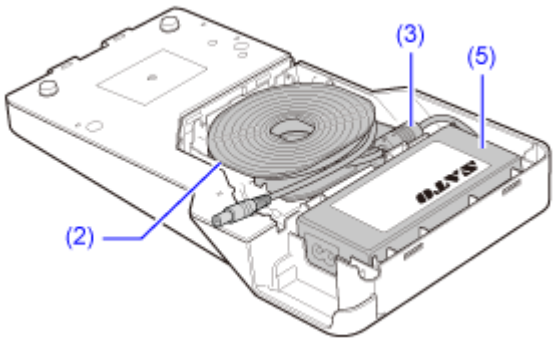
- Note the following when you wind the AC adapter cord around the cable rewinder.



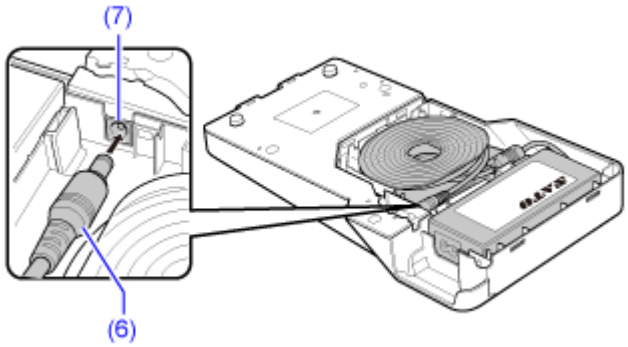
  - (A) Do not fold the cord forcibly near the DC output plug. This may damage the cord.
  - (B) Do not pass the cord over the ferrite core, and do not make the cord go outside the cable rewinder. If you close the cover forcibly, the cord may break by being pinched between the cover and body.
  - (C) Do not wind the cord loosely. Make sure the whole cord is wound to the cable rewinder.

4. Store the AC adapter (5) and the cable rewinder (2) wound with the AC adapter cord in the cradle kit.

Store the ferrite core (3) on the upper right of the AC adapter.



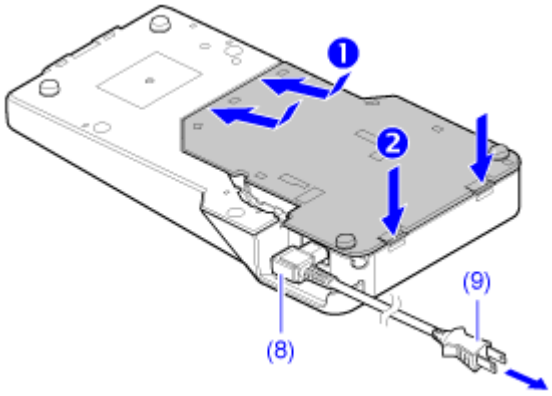
5. **Connect the DC outlet plug (6) to the DC input jack (7) of the cradle kit.**



6. **Insert the cover and connect the power cord.**

a. Insert the cover removed in step 1 (❶) and push the tabs downward to secure it in place (❷).

b. Make sure that the cover is closed properly. Then, connect the power cord to the cradle kit with the AC outlet plug (8) and to the wall outlet with the power plug (9).



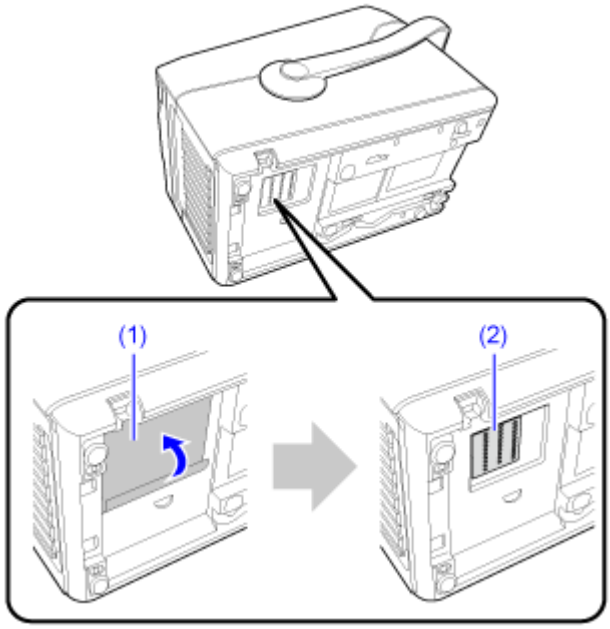
- The shape of the power plug varies depending on the region in which it was purchased.
- If the cord is caught between the cover and the main unit and the cover cannot be closed properly, perform the processes again from step 3.

Mounting the Printer on the Cradle Kit

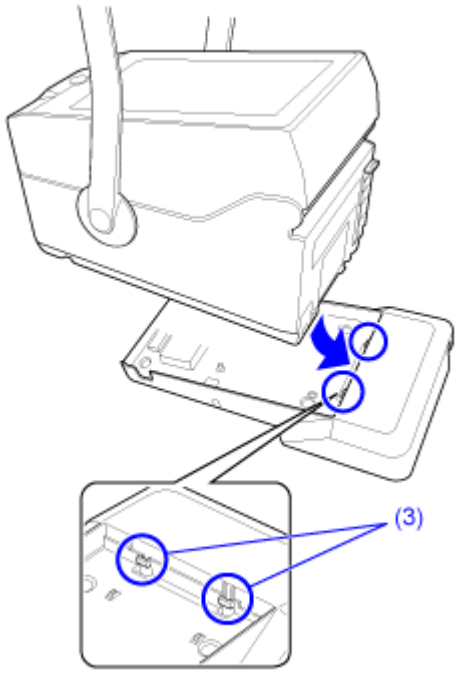
1. **Remove the terminal protection seal (1) on the bottom of the printer.**

You can now see the charging terminal (2).

- Do not touch the charging terminal with wet hands.
- If the charging terminal is dirty, clean the dirt using a dry cloth or a cotton swab.
- Do not remove the terminal protection seal on the bottom of the printer if you will not be using the optional battery mount kit or cradle kit.



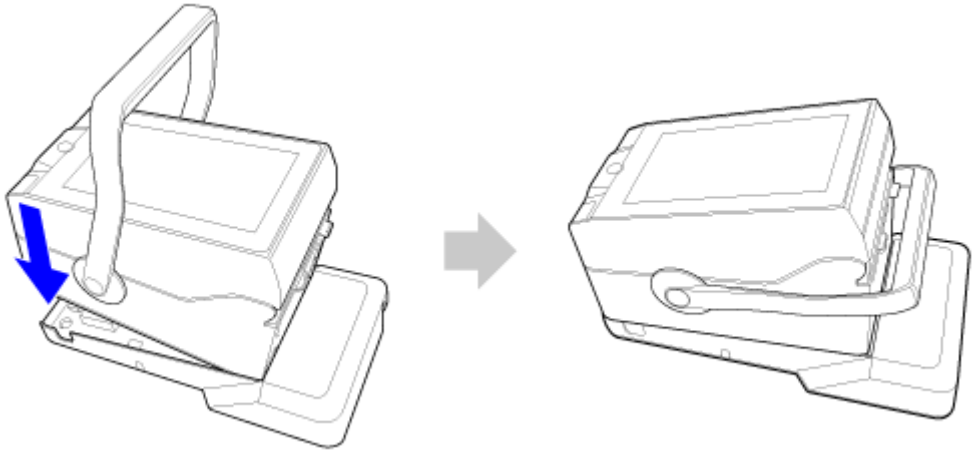
2. Attach the concave parts on the bottom of the printer to the protruding parts of the cradle kit (3).



3. Gently move the front side of the printer downwards to place it on the cradle kit.

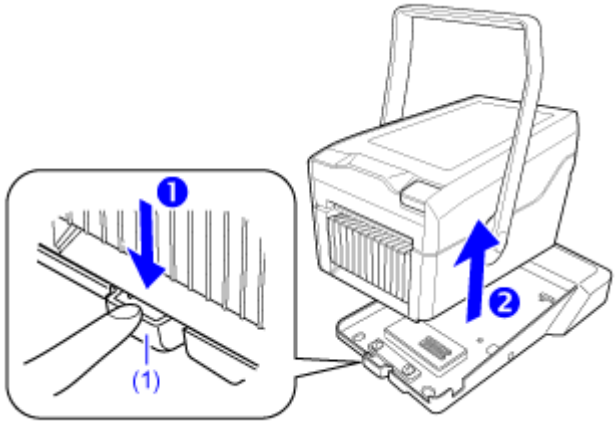
When the printer is placed properly, it is locked in place with a click.

- When mounting the printer on the cradle kit, be careful not to pinch your fingers.



Releasing the Printer from the Cradle Kit

1. **Make sure that the printer is powered off.**
2. **Hold the release button (1) pressed down on the front side of the cradle kit (❶) and lift the printer (❷).**



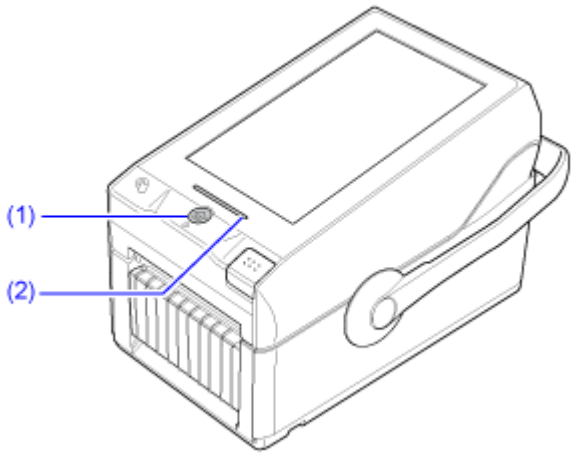
- The printer with the optional battery mount kit can be removed from the cradle kit without pushing down the release button.

Powering On the Printer

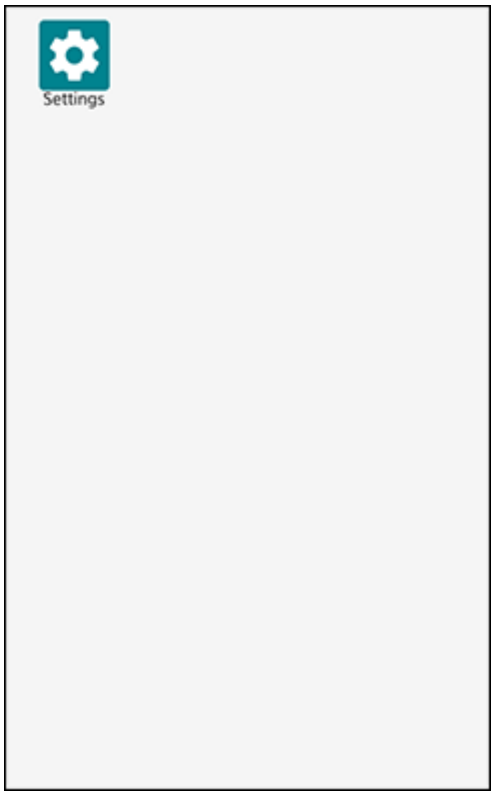
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.

- You can power on/off the printer from the main power source by enabling [Start on AC] in the [System] menu.

1. **Press the / (Standby/Home) button (1) of the operator panel until the LED (2) lights blue to power on the printer.**



The Home screen appears on the screen.



Powering Off the Printer

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

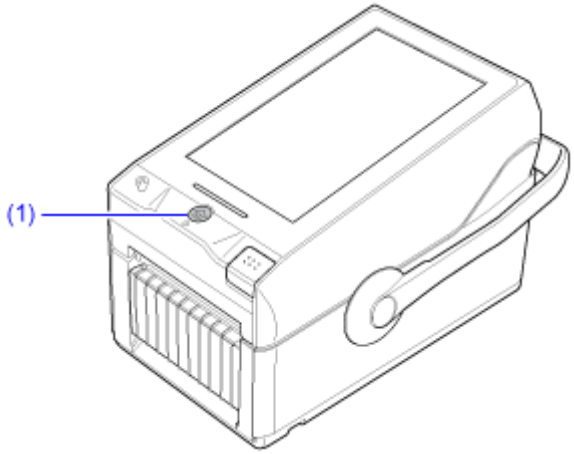
- Do not power off the printer during operation, such as when printing or updating. Doing so could cause a malfunction of the printer.
- Do not operate the printer or disconnect the power cord until the powering off process is completed on the printer.
- An incorrect power on/off operation may damage the printer settings. In such a case, the printer settings are reset to their initial values. It is always recommended to use the power button to allow proper shutdown of the printer and ensure changes made to menu settings are saved appropriately.

- You can power on/off the printer from the main power source by enabling [Start on AC] in the [System] menu.

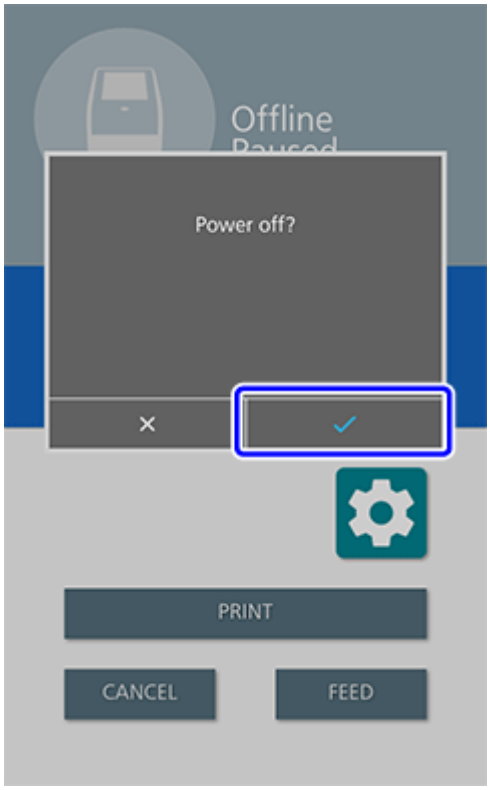
1. Make sure that the printer is in Offline mode before you power off.

If "Online" appears on the screen, tap [PAUSE] to change to Offline mode.

2. **Press the ⏻/⌂ (Standby/Home) button (1) for more than two seconds.**



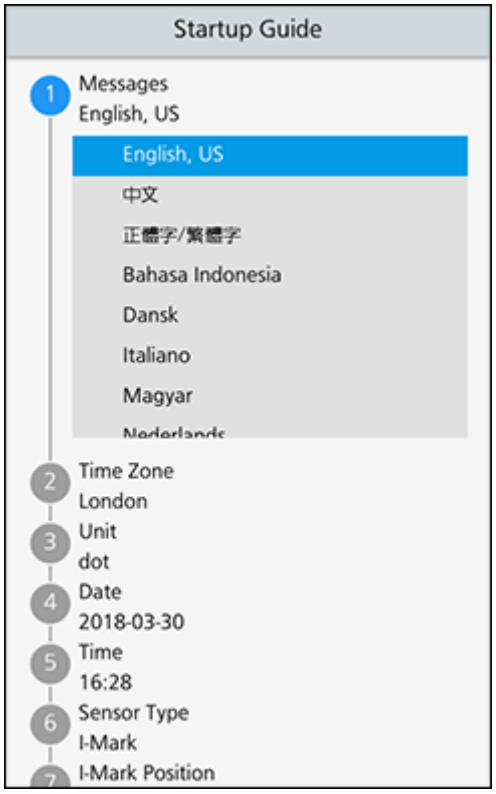
3. **Tap ✓ on the confirmation screen.**



Initial Setup (Startup Guide)

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

Startup Guide Flow



The startup guide is a function to help you through the initial printer settings, such as setting date and time, and loading the media.

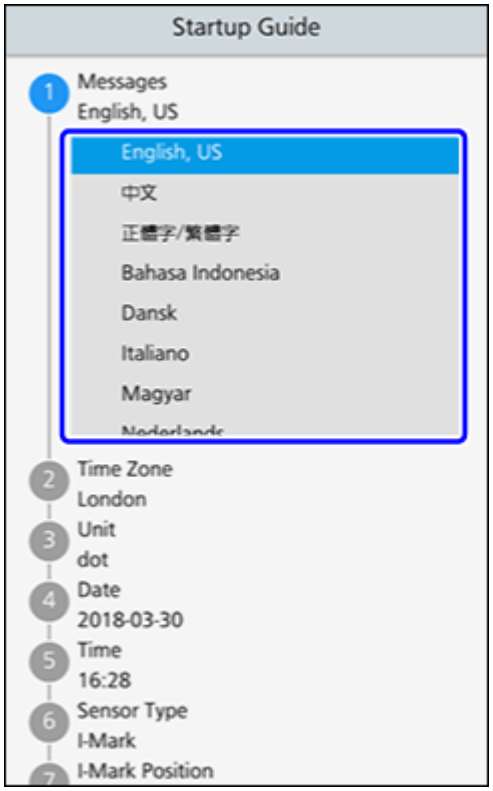
You can cancel the startup guide and perform the configuration later from the menu.

- The procedure icon indicated on the left changes to when the setting is confirmed.
- You can change the settings after it is confirmed by tapping .

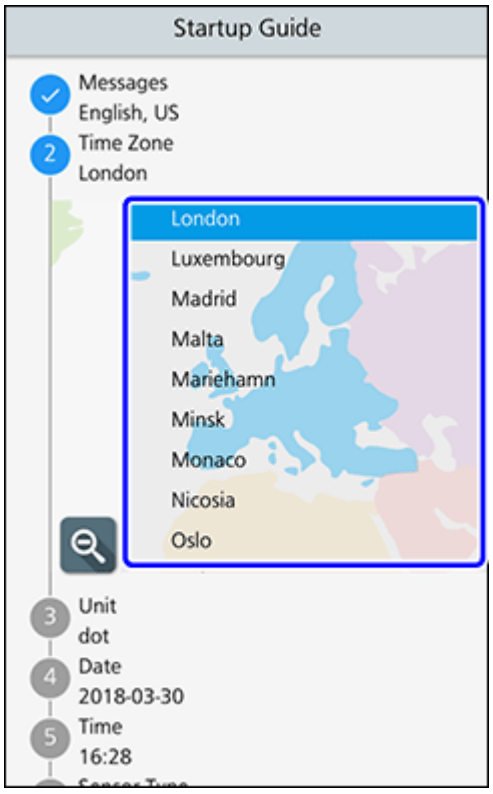
1. **Press the ⏻/⌂ (Standby/Home) button of the operator panel until the LED lights blue to power on the printer.**

The startup guide screen appears.

2. **Tap the language name from the list.**



3. **Tap the city from the list.**



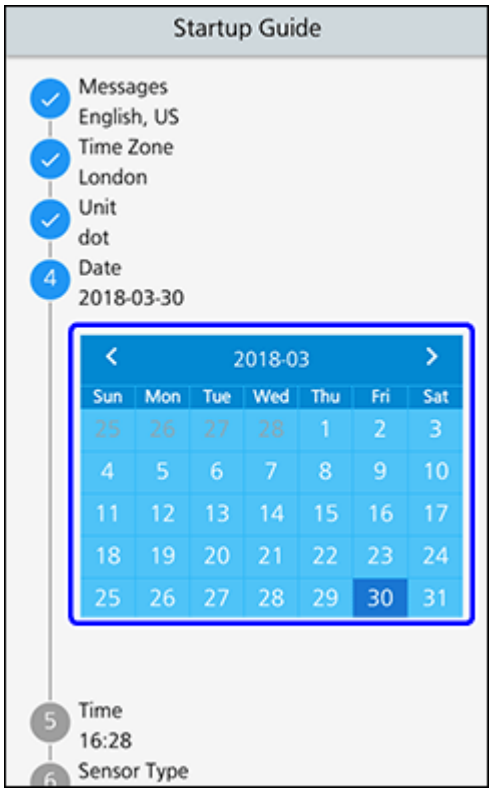
To change the region, tap and then tap the region on the world map.

4. **Tap the unit from the list.**

The options are as follows:

- dot
- " (inch)
- mm

5. Set the current date by tapping the date on the calendar.

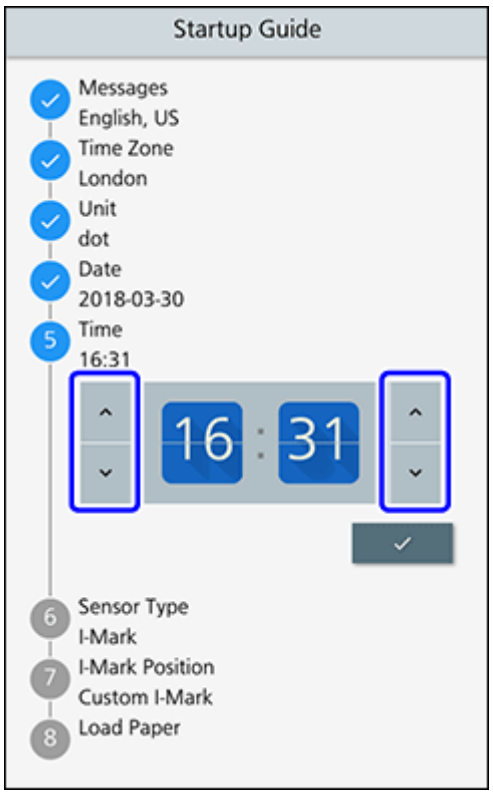


- To change the month, tap < / >.
- To change the year, tap "YYYY-MM" indicated on the upper part of the calendar, and then tap < / >.

The confirmation screen appears.

6. Tap ✓ on the message to confirm.

7. **Set the current time by tapping ^ / v.**



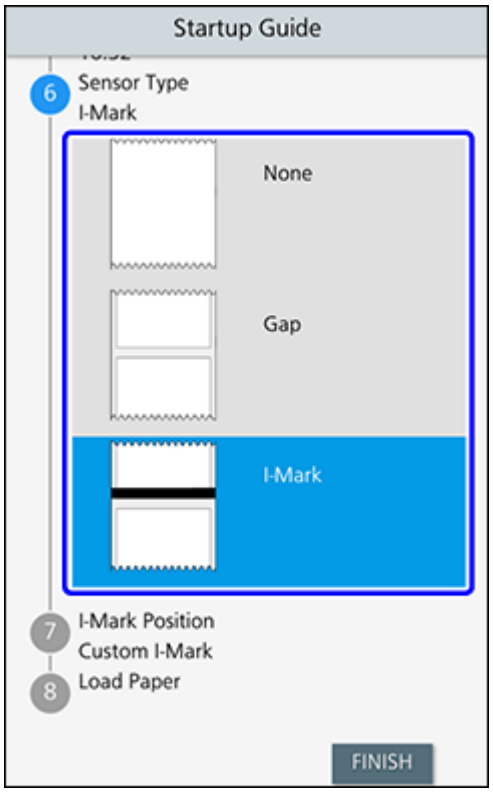
8. **Tap ✓.**

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

The confirmation screen appears.

9. **Tap ✓ on the message to confirm.**

10. Tap the media sensor type from the list.



[None]

Disable the media sensor.

[Gap]

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

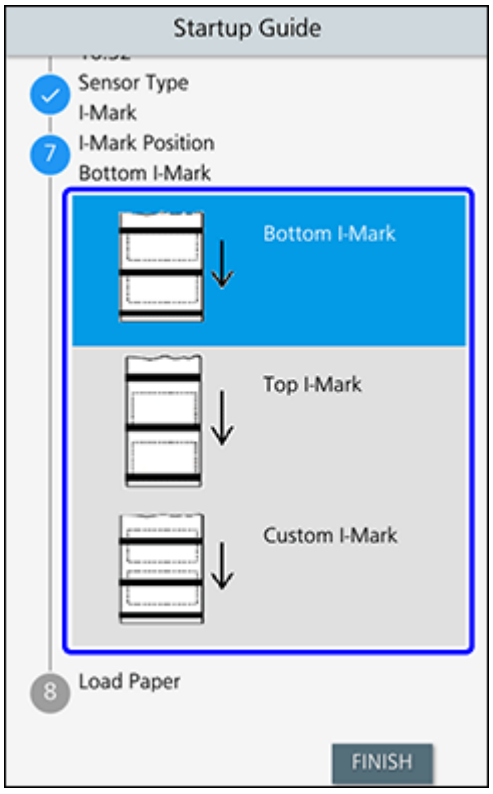
[I-Mark]

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

- The available options will vary depending on the [Print Mode] set on the printer. The initial value of [Print Mode] differs depending on the options installed on the printer and the way media is loaded.
  - If [Print Mode] is set to [Dispenser], only [Gap] and [I-Mark] will be available.
  - If [Print Mode] is set to [Linerless tearoff] or [Linerless cutter], only [None] and [I-Mark] will be available.

If you have selected something other than [I-Mark], proceed to step 12.

11. Tap the I-mark position from the list.



[Center I-Mark]

Select when the I-mark is positioned at the center.

The I-mark position is determined by the label size.

[Bottom I-Mark]

Select when the I-mark is positioned at the bottom.

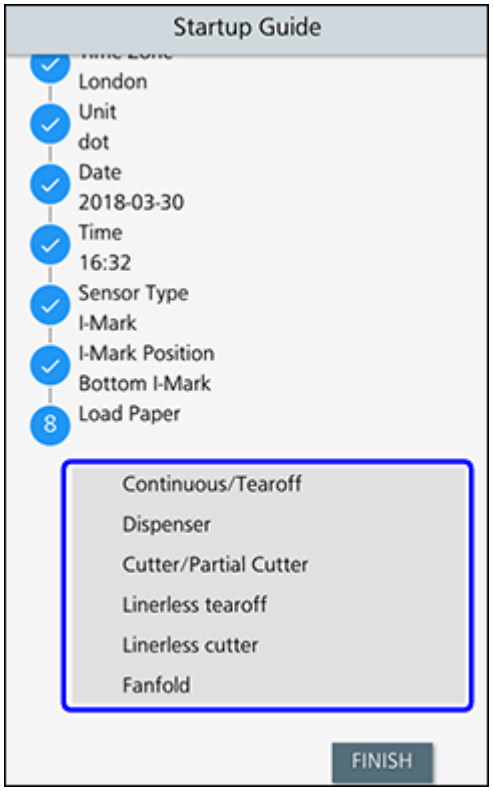
[Top I-Mark]

Select when the I-mark is positioned at the top.

[Custom I-Mark]

Custom I-mark allows using labels where the I-mark position does not correspond with [Center I-Mark], [Bottom I-Mark] and [Top I-Mark]. With the [I-Mark Offset] setting, you can set the position of the I-mark. The stop position and the printed image will be adjusted accordingly but the backfeed distance will not change.

12. Tap a video in the list to play the media loading procedures according to the print mode in which you want to print and the media you want to use.



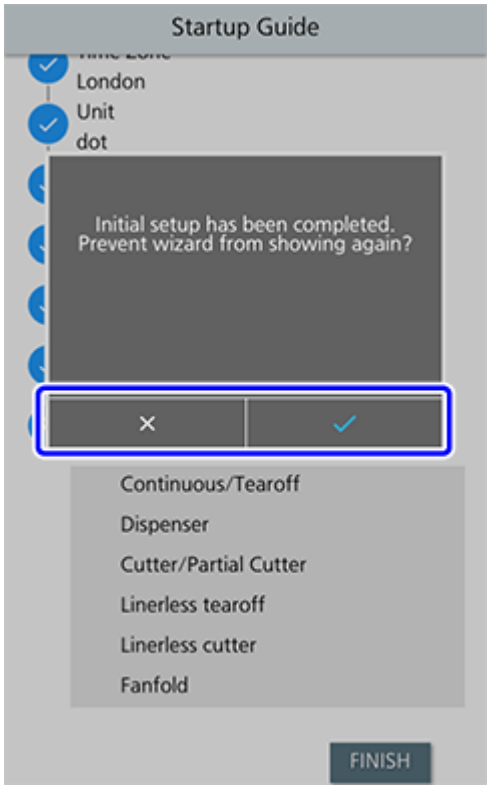
The video starts.

13. Load the media while checking the video.

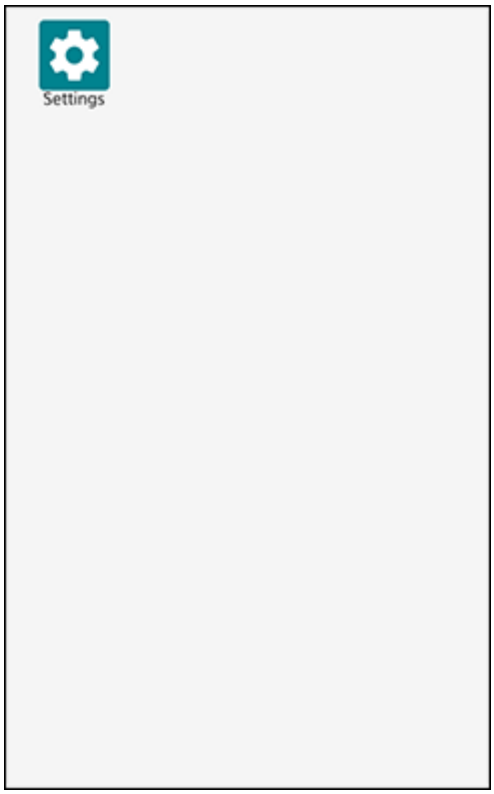
14. Tap [FINISH] to complete the initial setup.

The confirmation screen appears.

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



The Home screen appears.



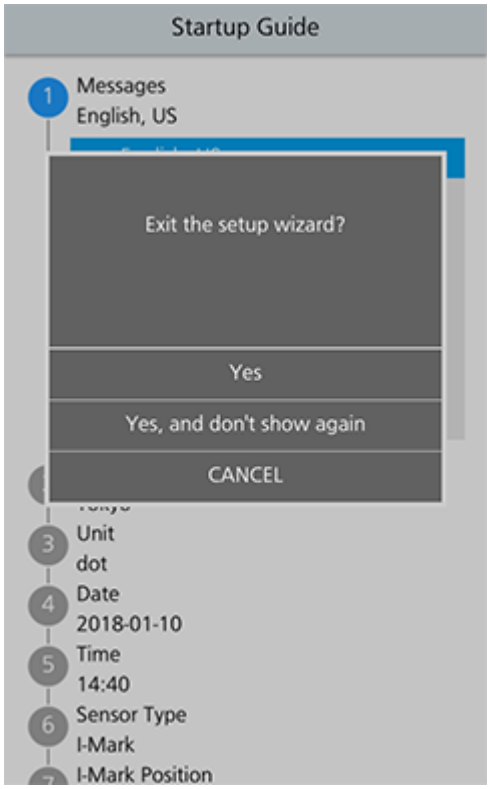
- If a message prompting you to restart the printer appears on the Home screen, reboot the printer to apply the settings.
- You can enable or disable the startup guide in [Startup Guide] in the [Tools] menu.

Startup Guide Cancelation

You can cancel the startup guide at any time.

1. **Press the / (Standby/Home) button while configuring the startup guide.**

   The screen to confirm whether or not to show the startup guide again appears.



2. **Select whether or not to show the startup guide during the next startup.**

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

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

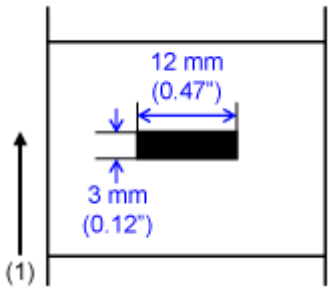
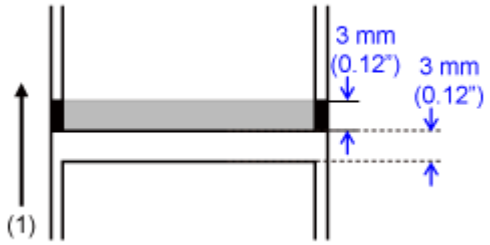
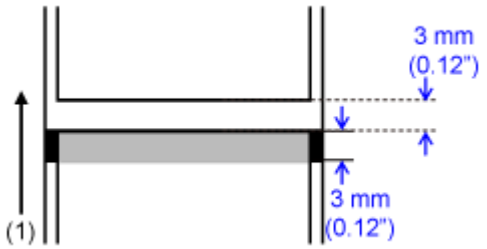
Configuring the Printer According to Media and Options

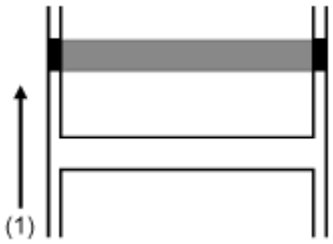
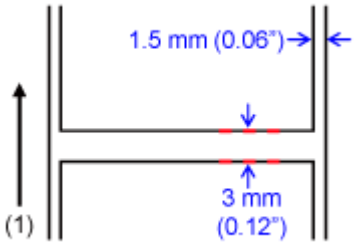
Before starting to print with the printer, configure the printer according to the media to be used and the installed options.

Media Sensor Type

The printer 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:

Label Type	Position
I-mark Label	Center I-mark  (1) Media feed direction
	Bottom I-mark  (1) Media feed direction
	Top I-mark  (1) Media feed direction
	Labels with I-marks other than our specifications (Custom I-mark)

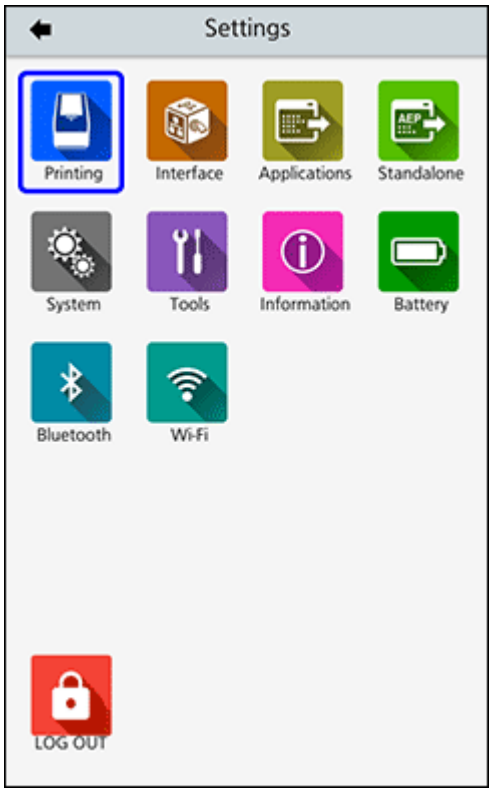
Label Type	Position
	 This I-mark position is an example. (1) Media feed direction
Gap label	 (1) Media feed direction
I-mark journal paper/linerless label	 (1) Media feed direction

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

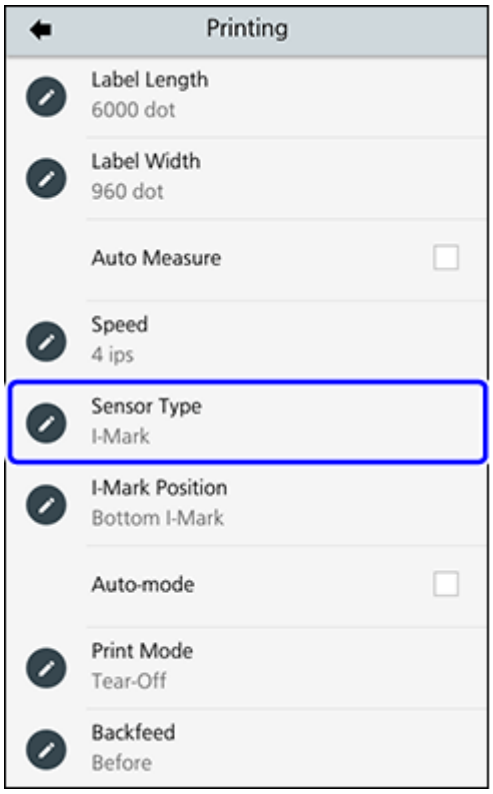
Set the sensor type according to the following procedure:

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**

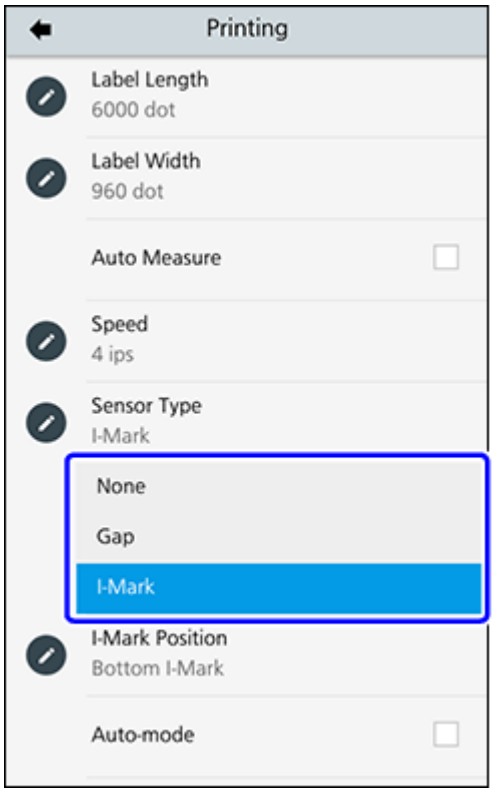
3. **Tap [Printing].**



4. **Tap [Sensor Type].**



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



[None]

Disables the media sensor.

[Gap]

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

[I-Mark]

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

Set the I-mark position in the [I-Mark Position] menu.

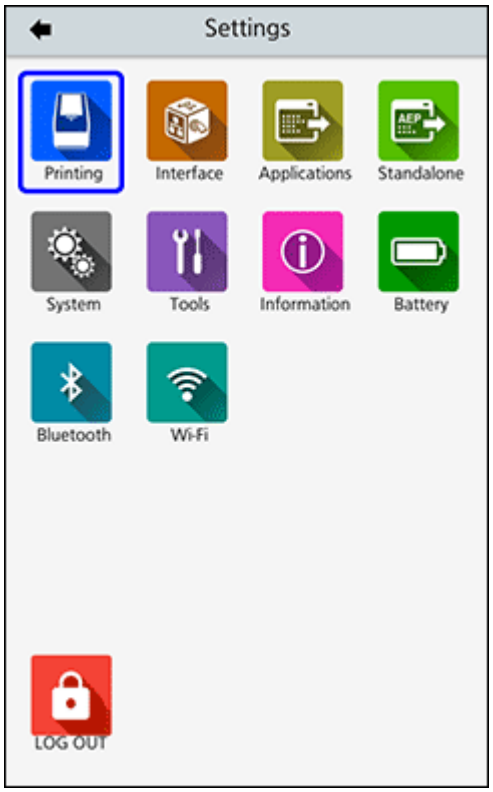
- If [Dispenser] is selected in the [Print Mode] menu, only [Gap] and [I-Mark] will be available.
- If you have selected [Linerless tearoff] or [Linerless cutter] in the [Print Mode] menu, only [None] and [I-Mark] will be available.

I-Mark Position

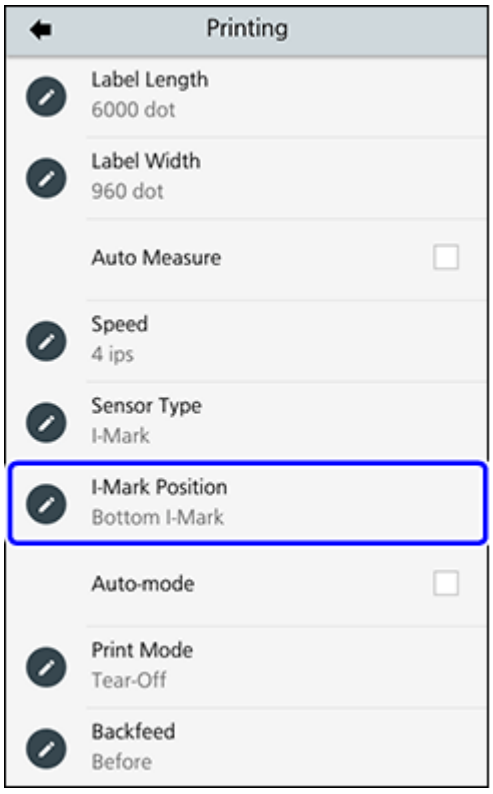
If you selected [I-Mark] in [Sensor Type], set the I-mark position.

Set the I-mark position according to the following procedure:

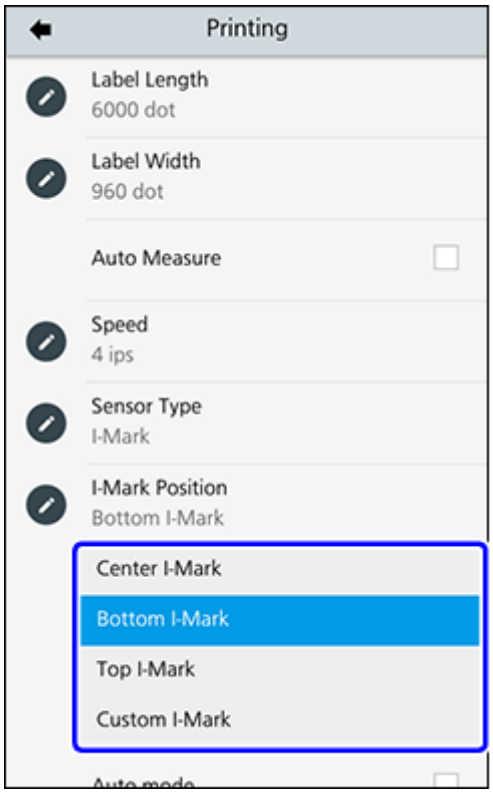
1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**
3. **Tap [Printing].**



4. **Tap [I-Mark Position].**



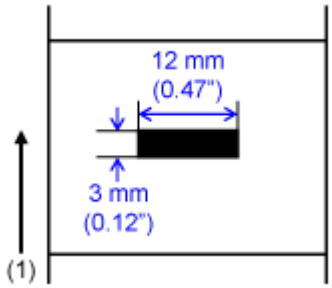
5. **Tap the I-mark position.**



[Center I-Mark]

Select when the I-mark is positioned at the center.

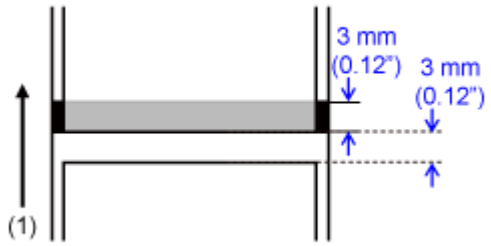
The I-mark position is determined by the label size.



(1) Media feed direction

[Bottom I-Mark]

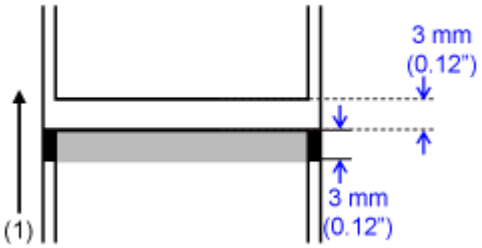
Select when the I-mark is positioned at the bottom.



(1) Media feed direction

[Top I-Mark]

Select when the I-mark is positioned at the top.

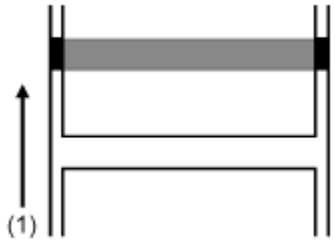


(1) Media feed direction

[Custom I-Mark]

Custom I-mark allows using labels where the I-mark position does not correspond with [Center I-Mark], [Bottom I-Mark] and [Top I-Mark]. With the [I-Mark Offset] setting, you can set the position

of the I-mark. The stop position and the printed image will be adjusted accordingly but the backfeed distance will not change.



This I-mark position is an example.

(1) Media feed direction

Print Mode

You can change the print mode of the printer according to its usage and installed options.

The printer has the following print modes:

[Continuous]

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

[Tear-Off]

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

[Linerless tearoff]

The printer feeds each printed media so that it is fully extended out of the printer's front for removal. After the printed media is torn off manually, the next media retracts and positions itself for printing. When using a linerless label, install the optional linerless kit and select [Linerless tearoff] instead of [Tear-Off].

[Dispenser]

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

[Cutter]

Cuts each media while printing the specified number of media. You can specify this option only if you have installed the cutter kit.

[Linerless cutter]

Prints and cuts each media. After the cut media is removed, the next media retracts and positions itself for printing. You can specify this option only if you have installed the cutter kit. When using a linerless label, install the optional linerless kit and select [Linerless cutter] instead of [Cutter].

[Partial cutter]

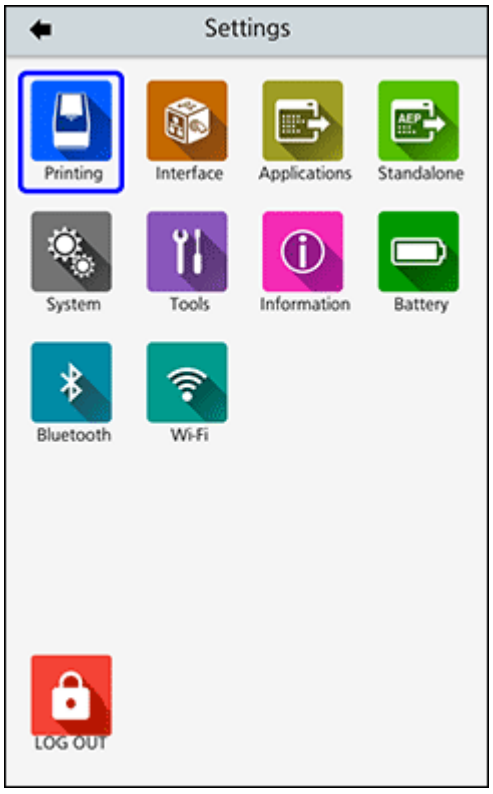
Cuts each media leaving a part of the media while printing the specified number of media. You can specify this option only if you have installed the partial cutter kit.

- You cannot set the [Print Mode] if [Auto-mode] is enabled.

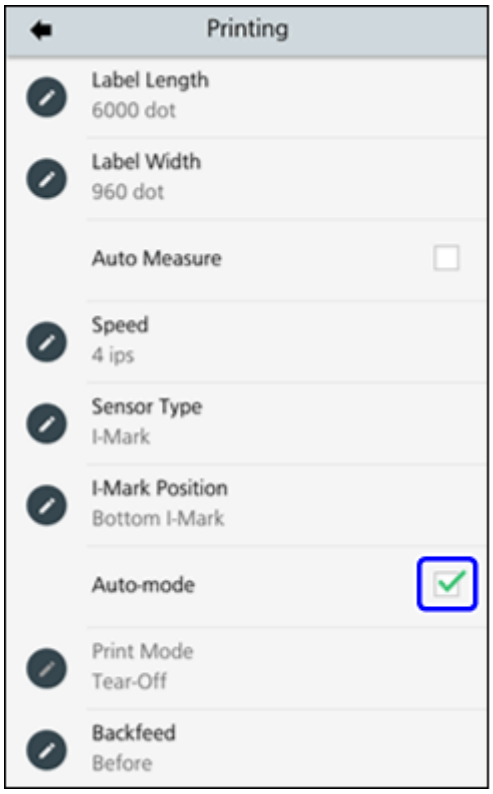
Change the print mode according to the following procedure:

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**

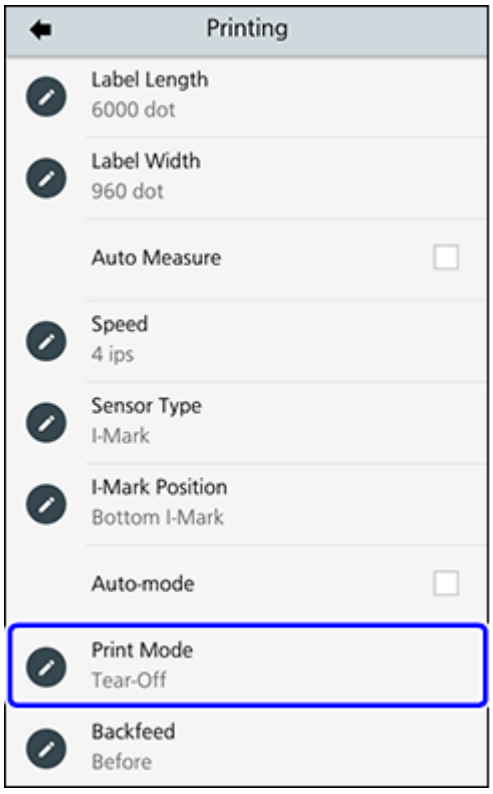
3. Tap [Printing].



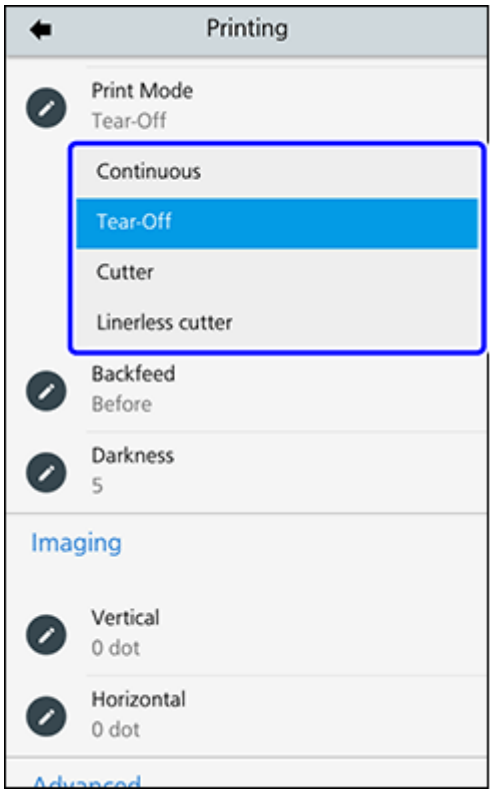
4. Disable [Auto-mode].



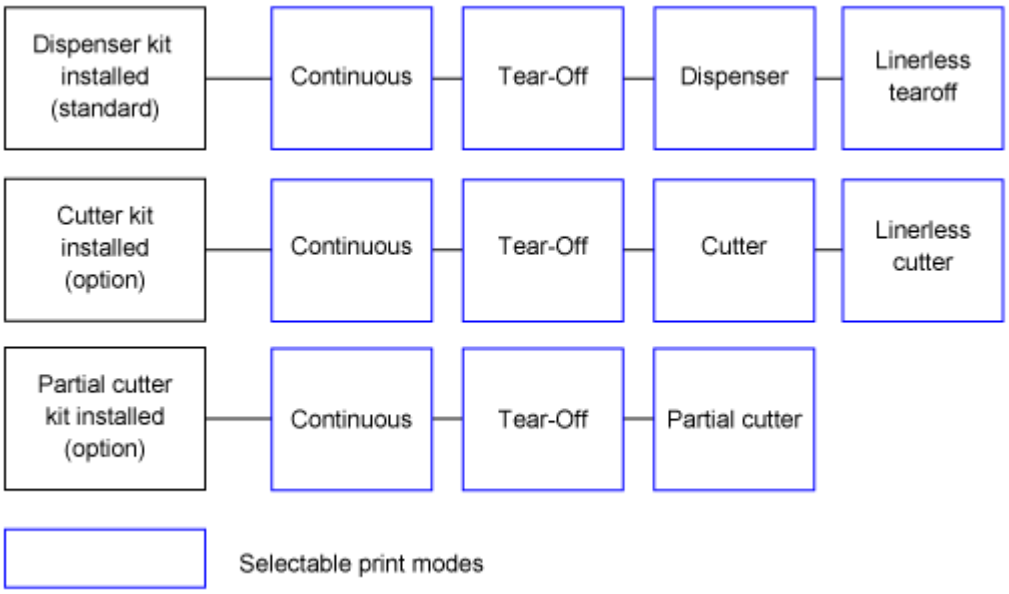
5. **Tap [Print Mode].**



6. **Tap the print mode.**



- The selectable print modes differ in accordance with the installed option.



Connecting the Printer to a Computer

The topics here explain how to connect the printer to a computer, and how to install the printer driver and the All-In-One Tool.

Procedure for Connecting the Printer to a Computer

The printer 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 printer.

The printer can be connected to a computer in the following ways.

1. Connecting Interfaces

2. Configuring the Interface Settings

   The interface of the printer can be configured. Access the [Interface] menu, [Bluetooth] menu, or [Wi-Fi] menu of the Settings menu from the display of the printer or from the web configuration page. It can also be accessed from the All-In-One Tool, which can be used by installing it to a computer.

   - When you connect them with LAN or wireless LAN interfaces, configure the communication conditions, such as the IP address of the printer.
   - 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 of the communication protocol for the printer's each interface is Status4.)

3. Installing the Printer Driver

   (Unnecessary when using commands)

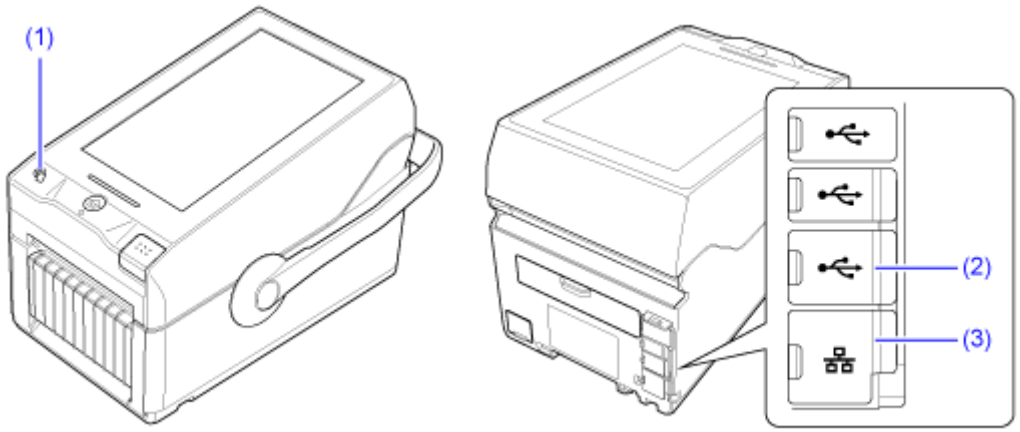
- Create a barcode by using barcode fonts. Sometimes the barcode may not be read by a scanner if it is created with tools for creating images (such as BMP) and printed from this printer. Because the tools create the barcode as an image only, the barcode may not be the correct data. Therefore, if the barcode cannot be read by a scanner, it is not a failure of the printer 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 printer supports the following interfaces.

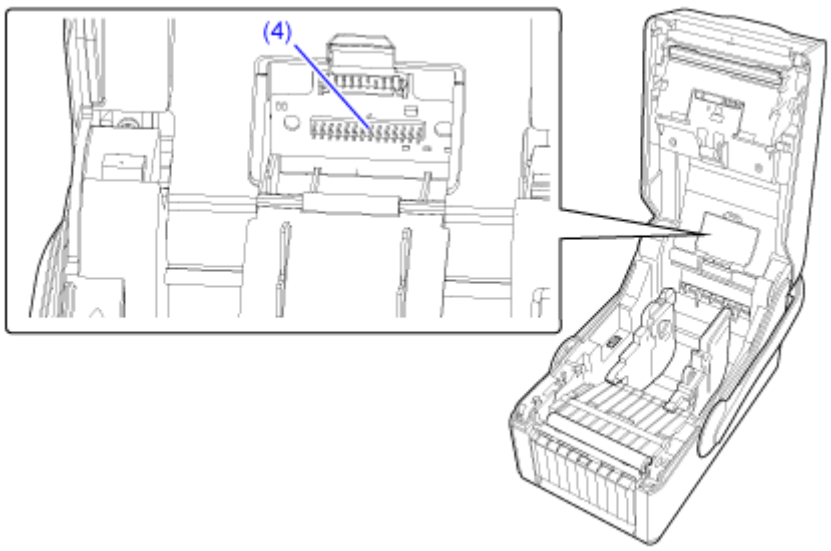
- A printer connected with multiple interface cables can continue to operate when receiving data. However, you cannot receive data from more than one interface at a time. Normally, do not use multiple interfaces at a time.
- The printer prints the received data in order of reception. The next received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



(1) NFC

(2) USB

(3) LAN (USB+LAN model only)



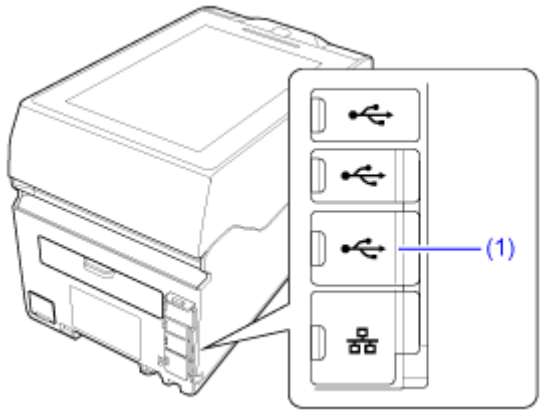
(4) Wireless LAN/Bluetooth (optional)

- 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 printer settings with an Android device while the printer is powered off and the power cord is not connected.

USB Interface Connection (Standard)

Connect the interface cable when the printer is powered off.

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



The USB interface is selected after connecting the USB cable to the computer and the printer, and powering on the printer while the computer is turned on.

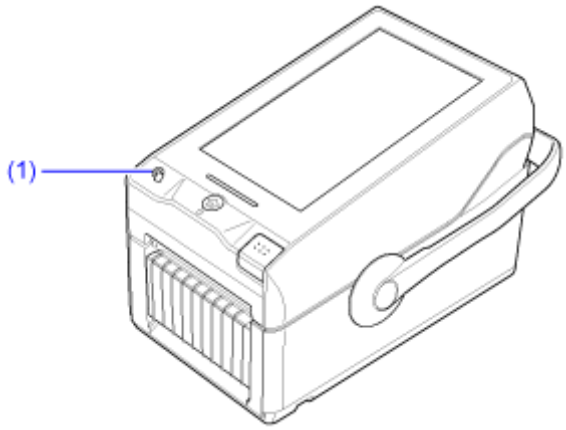
- If the printer is powered on without installing the printer driver, Windows' Plug & Play runs. When using the printer driver, do not power on the printer while the USB cable is connected until instructed in the procedure for installing the printer driver.
- The recommended USB cable is the one within 5 meters (16.4 feet) length.

NFC Interface Connection (Standard)

The NFC interface of the printer 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 printer while using NFC.

Touch the NFC antenna (1) of the printer with the NFC mark on the Android device.

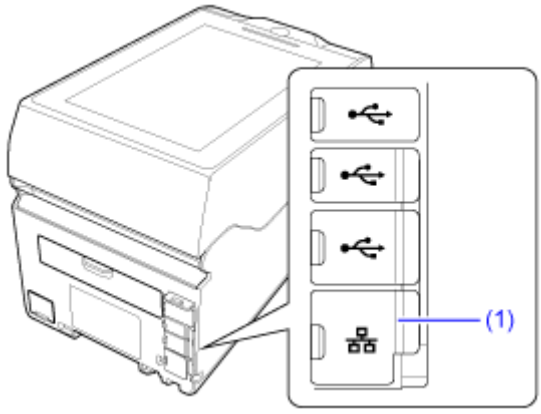


- If it does not communicate well, shift the Android device to the front, back, left and right, and then hold it up again.
- For the operation of the NFC for the Android device, refer to the user manual for the Android device.

LAN Interface Connection (USB+LAN Model Only)

Connect the interface cable when the printer is powered off.

Connect the LAN cable to the LAN connector (1) of the printer.



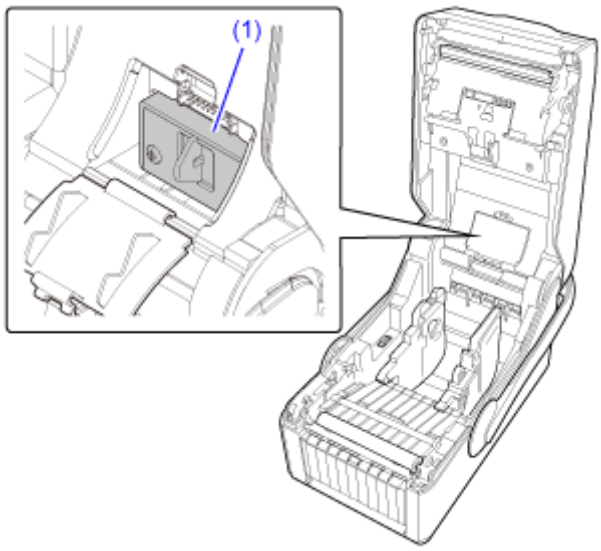
The communication condition settings must be configured according to your network environment. Set the IP address of the printer.

The IP address of the printer can be set through the printer'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 printer's LAN interface is Status4 ENQ.)

Wireless LAN Interface Connection (Optional)

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



The printer performs data communication using the wireless LAN/Bluetooth kit.

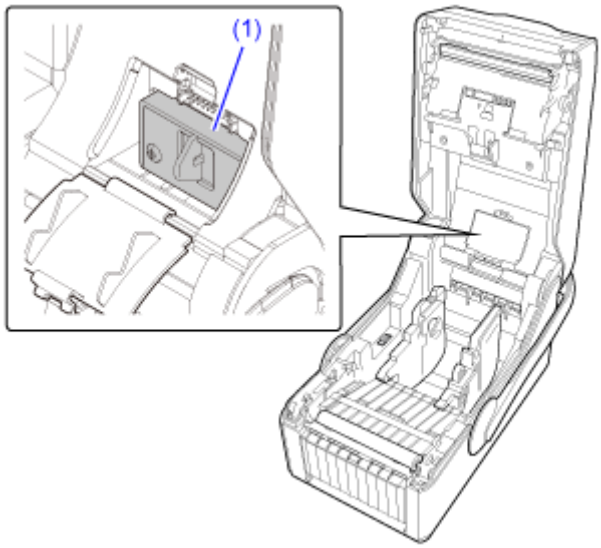
The communication condition settings must be configured according to your network environment. Set the IP address of the printer.

The IP address of the printer can be set through the printer'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 printer's wireless LAN interface is Status4 ENQ.)
- The printer does not support Atheros, SuperG, or XR functions.

Bluetooth Interface Connection (Optional)

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



The printer performs data communication using the wireless LAN/Bluetooth kit.

The printer can perform wireless communication with Bluetooth-compatible computers placed within about 10 meters (32.8 feet) from it.

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

The printer's Bluetooth function is enabled by default and can be configured from the [Bluetooth] 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 printer's Bluetooth interface is Status4 Multi.)

Configuring the Interface Settings

Interface Setting Methods

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

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

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

Configuring the Interface Settings from the Settings Mode of the Printer

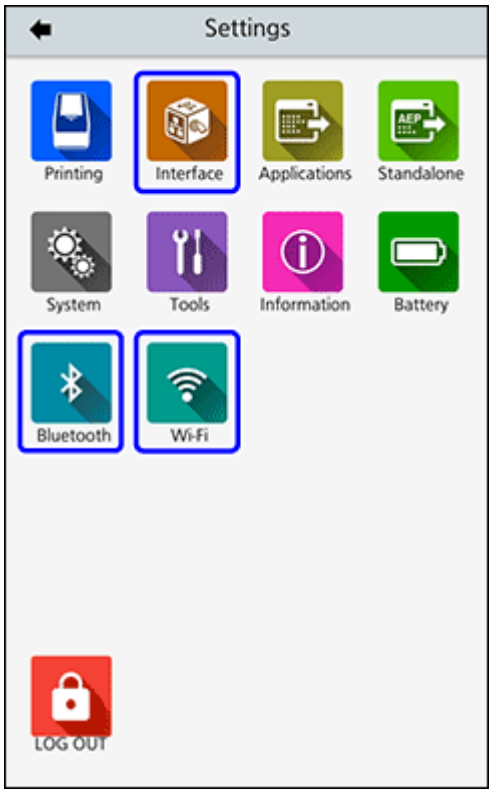
Configure the settings related to the interfaces from the [Interface] menu, [Bluetooth] menu, or [Wi-Fi] menu of the Settings mode of the printer.

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**
3. **Tap [Interface], [Bluetooth], or [Wi-Fi].**

   To configure settings related to LAN/USB/NFC 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 printer.

Download the All-In-One Tool and All-In-One Tool Manual from the SATO All-In-One Tool download site http://www.satoworldwide.com/software/all-in-one-tool.aspx, 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

Basic Information about the Printer Driver

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

Compatible OS

For OS compatible with the printer driver, access the SATO printer driver download site http://www.satoworldwide.com/software/gallerydriver.aspx and refer to the "Support OS" row of the SATO Windows printer driver.

- This manual uses the printer driver version Ver.7.8.01.13384 for description. Note that the screen layout may differ depending on the version of the printer driver.

Installing the Printer Driver (USB)

When the computer is connected to the Internet, the printer driver is automatically installed after connecting the USB cable between the computer and the printer and powering on the printer.

Do the following procedures to install the printer driver when the computer is not connected to the Internet. The following procedures use Windows 10 as an example.

- Before starting the installation, close all applications.
- Power off the printer and connect the interface cable to a computer.
- When you do the printer driver setup, the properties settings, or the print settings, log in with Administrator Privilege.
- When you use the printer driver, enable bi-directional communication.
- If the terminal service is being started with Windows Server 2008, or the remote desktop service is being started with Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016, change the terminal service or the remote desktop service to the install mode. However, it is not guaranteed that the printer driver can be used in the terminal service or the remote desktop service environment.
- When using multiple printers, it is necessary to install as many printer drivers as printers, to identify each printer.
- After installing the printer driver for the first printer, the printer driver for the second and additional printers will be automatically installed when the printers are connected to the computer and powered on. However, the name of the printer drivers will be "driver name (1)", "driver name (2)", and so on. To change the driver name, right-click the printer in [Devices and Printers], select [Printer properties], and change the name at the top of the [General] tab.

1. **Power off the printer and connect the USB cable to a computer.**
2. **Start Windows.**

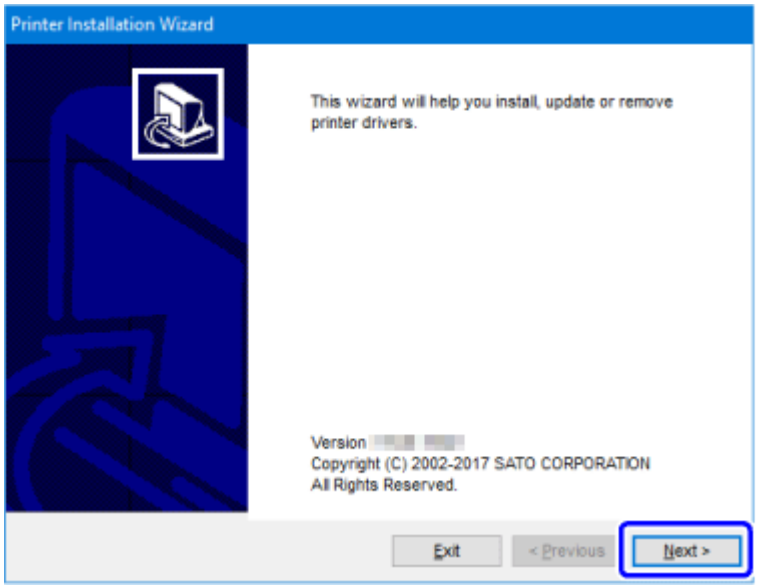
3. **Download the printer driver from the SATO printer driver download site. http://www.satoworldwide.com/software/gallerydriver.aspx**

4. **Extract the downloaded compressed file of the printer driver.**

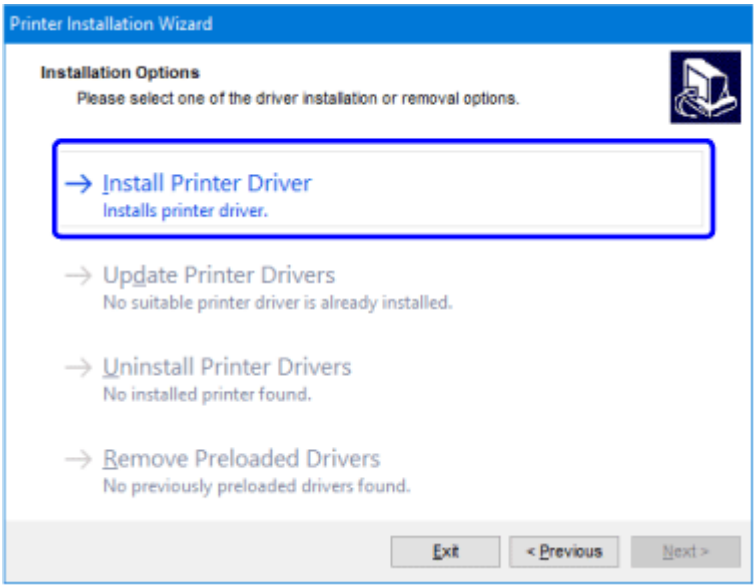
5. **Execute PrnInst.exe to start the installer.**

6. **If a user account control message appears, click [Yes] or [Continue].**

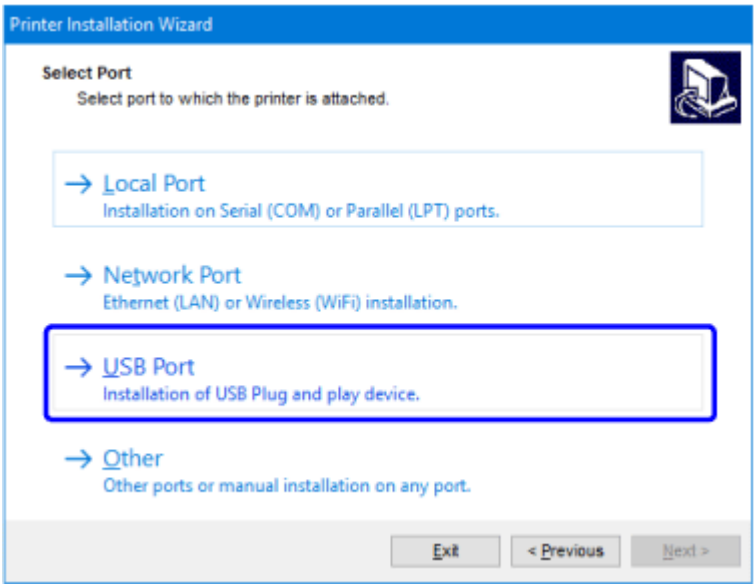
7. **Click [Next].**



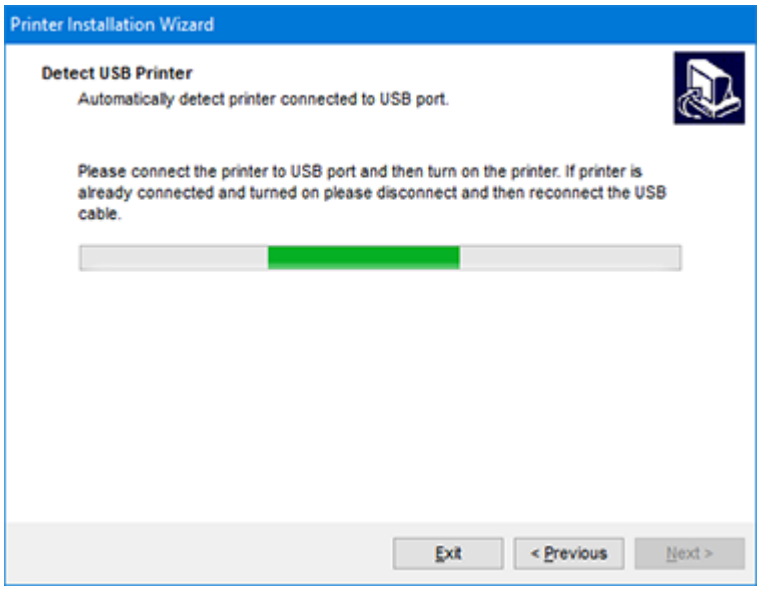
8. **Click [Install Printer Driver].**



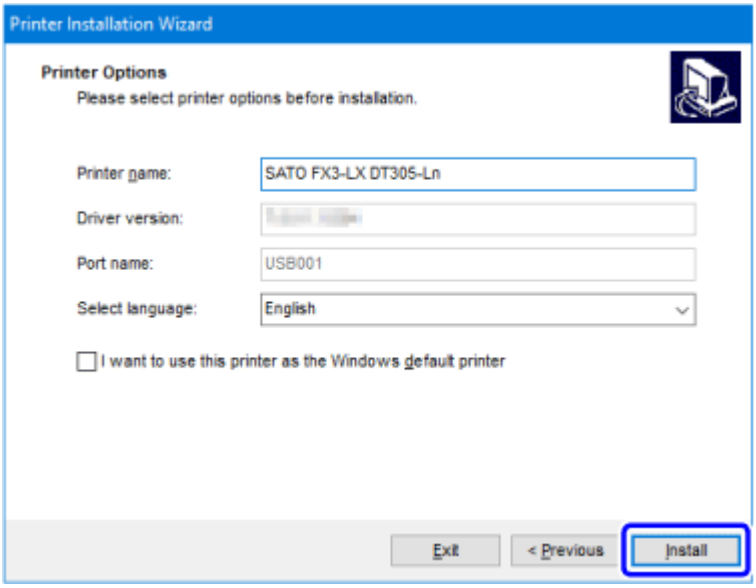
9. **Click [USB Port].**



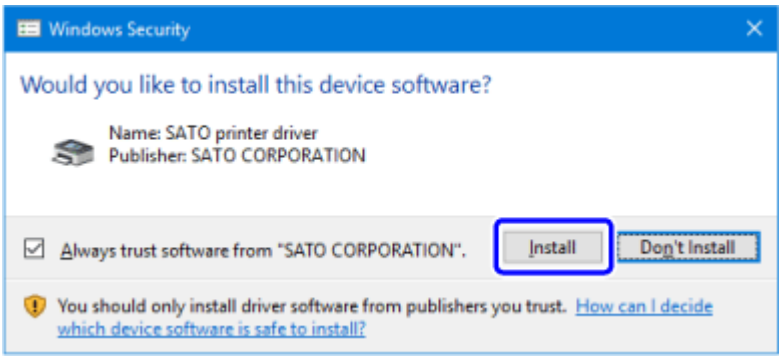
10. **Follow the instructions on the screen to power on the printer.**



11. Click [Install].



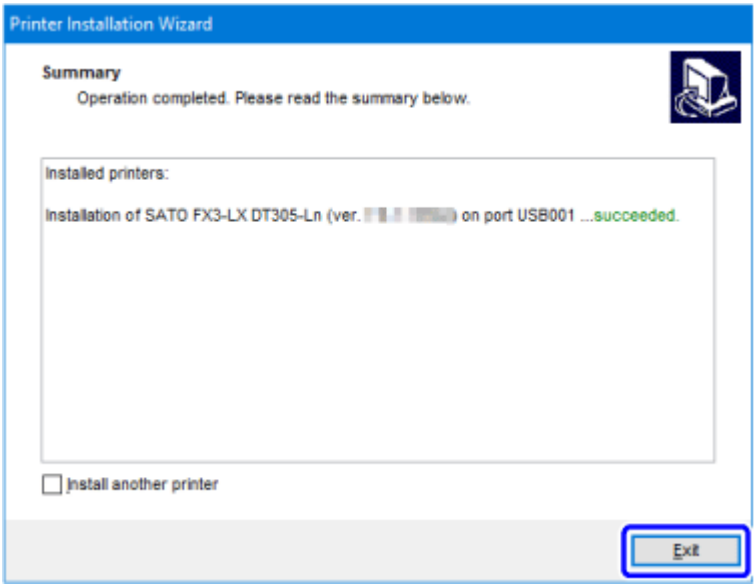
12. When the security warning screen appears, click [Install].



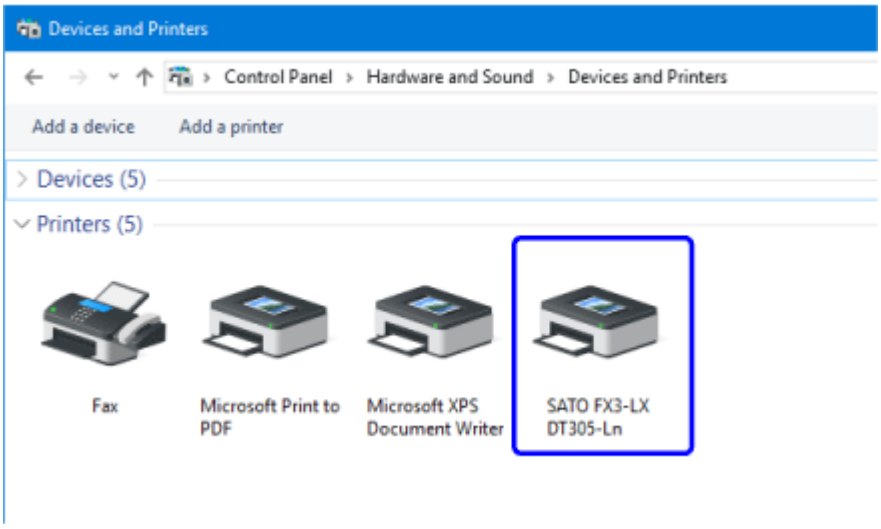
The printer driver is installed.

- The warning screen above may not appear depending on the version of the printer driver or your computer environment.
- If a security warning screen indicating that another process is blocking access appears, follow the steps on the screen, and click [Next].

13. Click [Exit] to complete the installation.



14. In [Devices and Printers], confirm that the printer is added to [Printers].



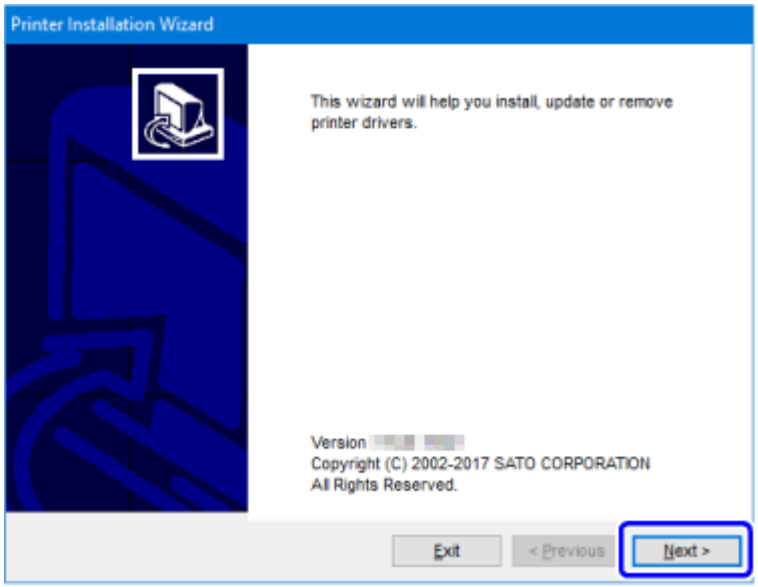
- The settings of the printer driver should be performed by the Administrator Privilege.

Installing the Printer Driver (LAN/Wireless LAN)

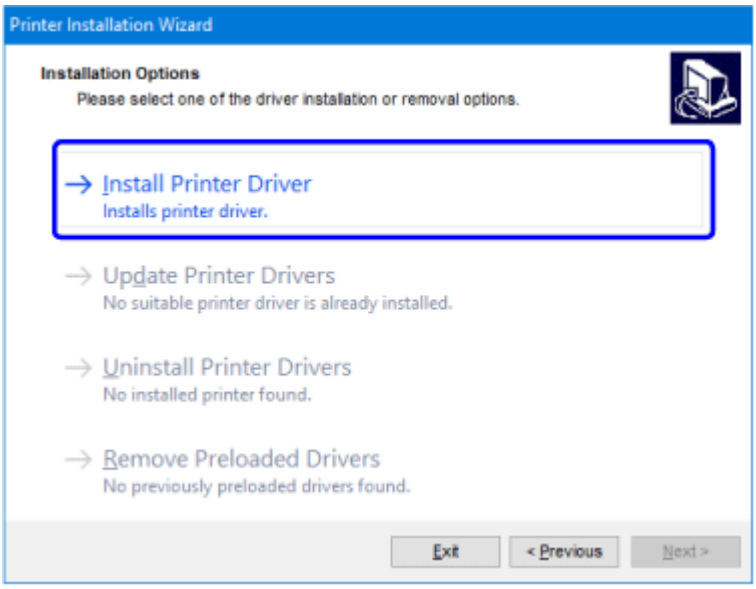
Do the following procedures to install the printer driver using a LAN/Wireless LAN. The following procedures use Windows 10 as an example.

- Before starting the installation, close all applications.
- Power off the printer and connect the interface cable to a computer.
- When you do the printer driver setup, the properties settings, or the print settings, log in with Administrator Privilege.
- When you use the printer driver, enable bi-directional communication.
- If the terminal service is being started with Windows Server 2008, or the remote desktop service is being started with Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016, change the terminal service or the remote desktop service to the install mode. However, it is not guaranteed that the printer driver can be used in the terminal service or the remote desktop service environment.
- When using multiple printers, it is necessary to install as many printer drivers as printers, to identify each printer.

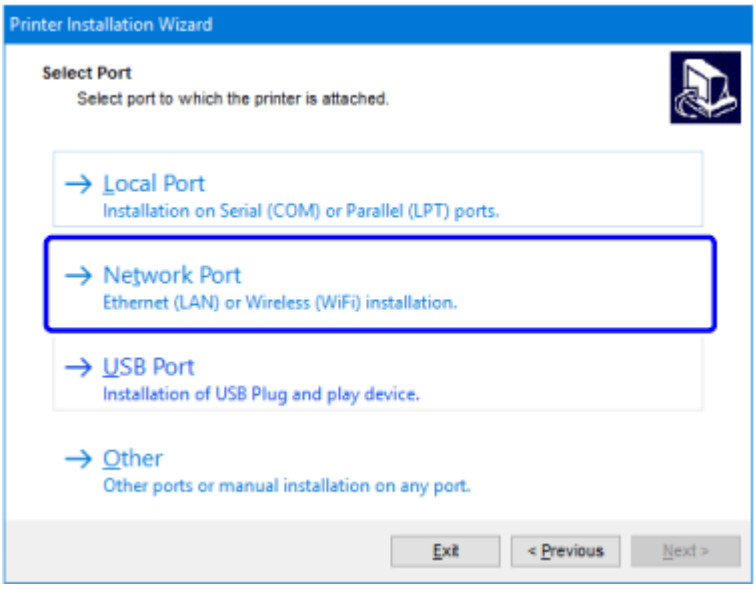
1. **Power on the printer, and confirm that the printer is connected to the network.**
2. **Start Windows.**
3. **Download the printer driver from the SATO printer driver download site. http://www.satoworldwide.com/software/gallerydriver.aspx**
4. **Extract the downloaded compressed file of the printer driver.**
5. **Execute PrnInst.exe to start the installer.**
6. **If a user account control message appears, click [Yes] or [Continue].**
7. **Click [Next].**



8. Click [Install Printer Driver].

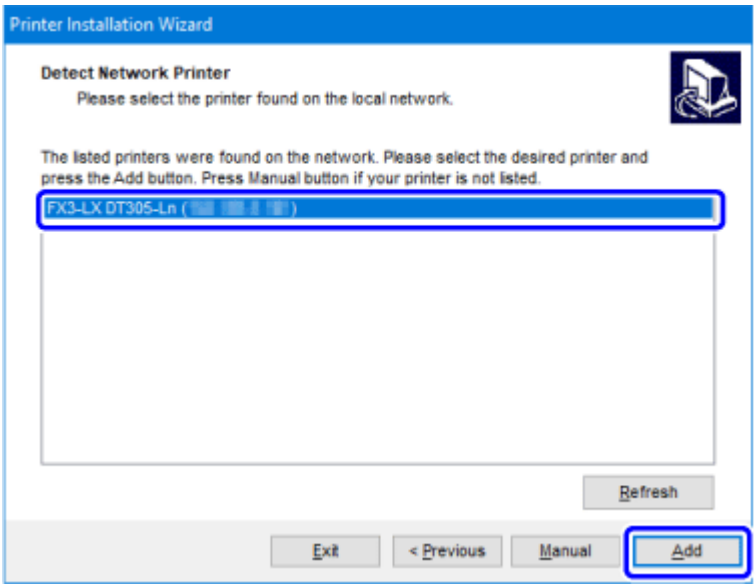


9. Click [Network Port].



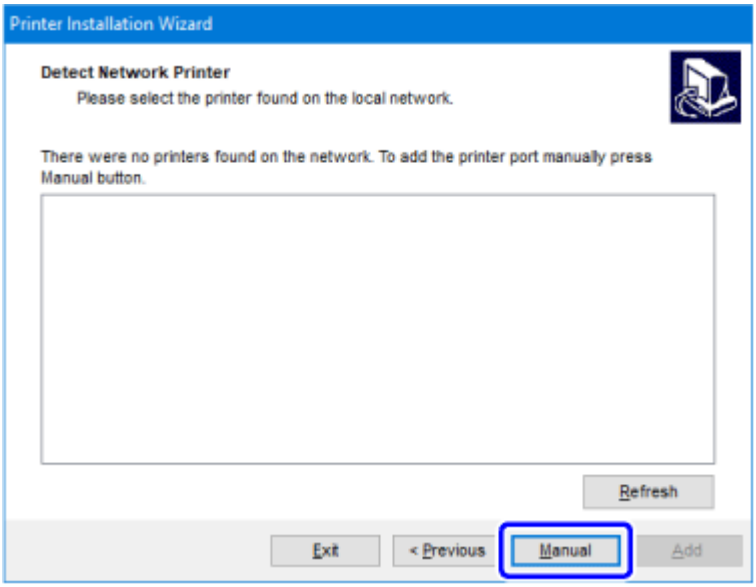
A list of the printers found on the network appears.

10. Select the printer to add and click [Add].

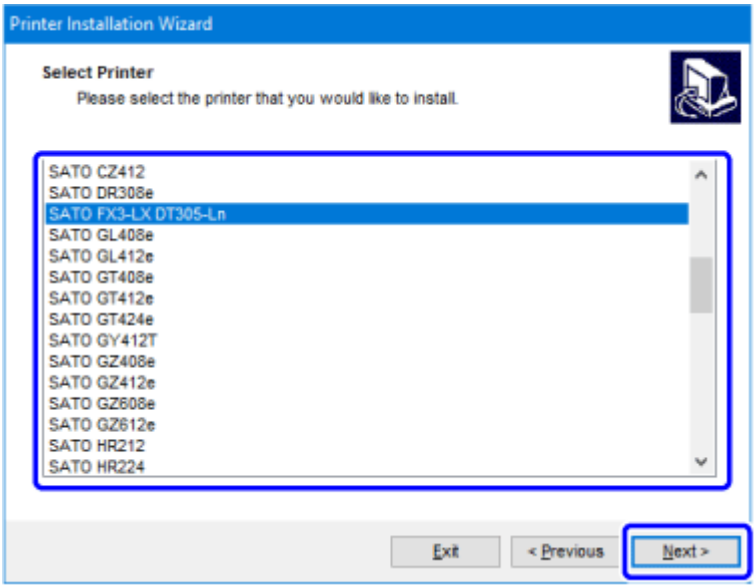


If the printer is not shown on the list, click [Refresh]. If the printer is still not shown on the list, add the printer using the following procedures.

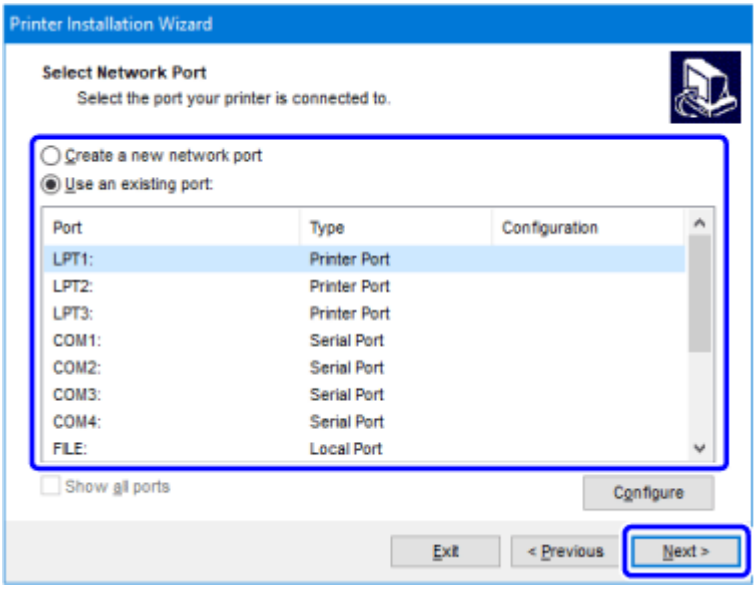
a. Click [Manual].



b. Select the model of the printer and click [Next].



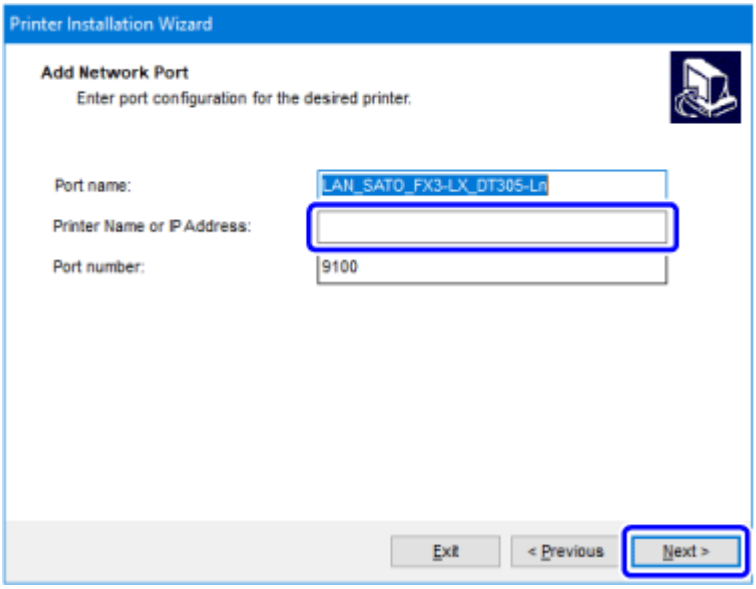
c. Select the network port, and click [Next].



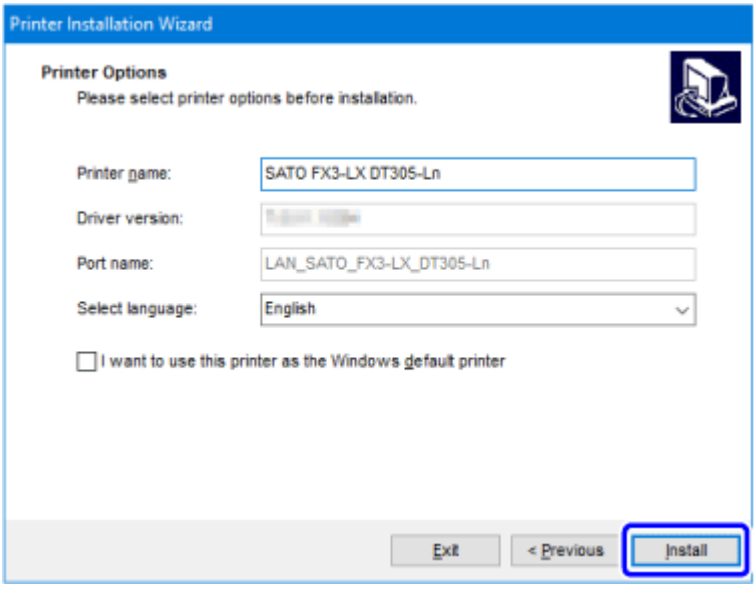
If you have selected [Create a new network port], proceed to step d.

If you have selected [Use an existing port] and then selected a port from the list, proceed to step 11.

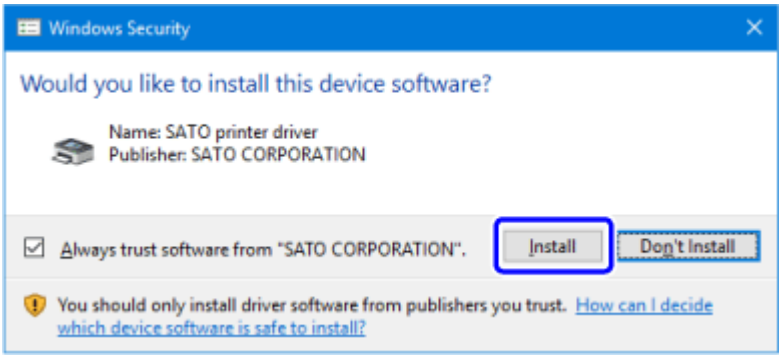
d. Enter the printer name or IP address, and click [Next].



11. Click [Install].



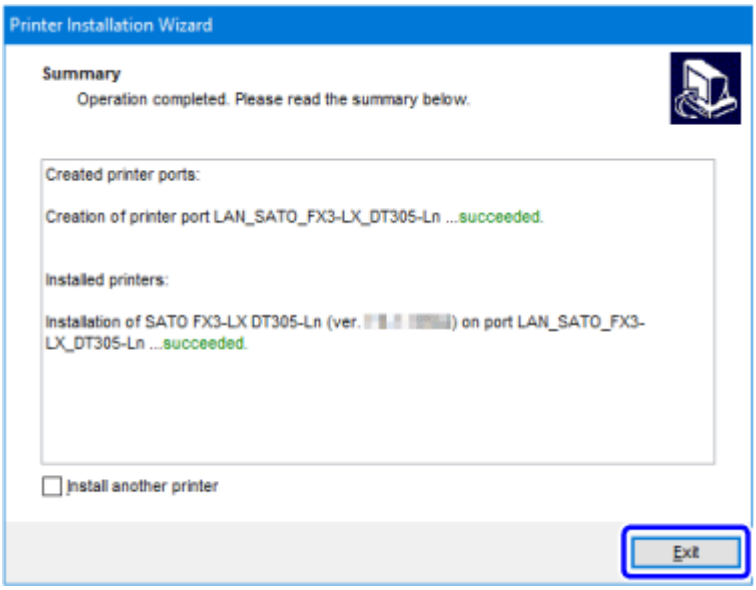
12. When the security warning screen appears, click [Install].



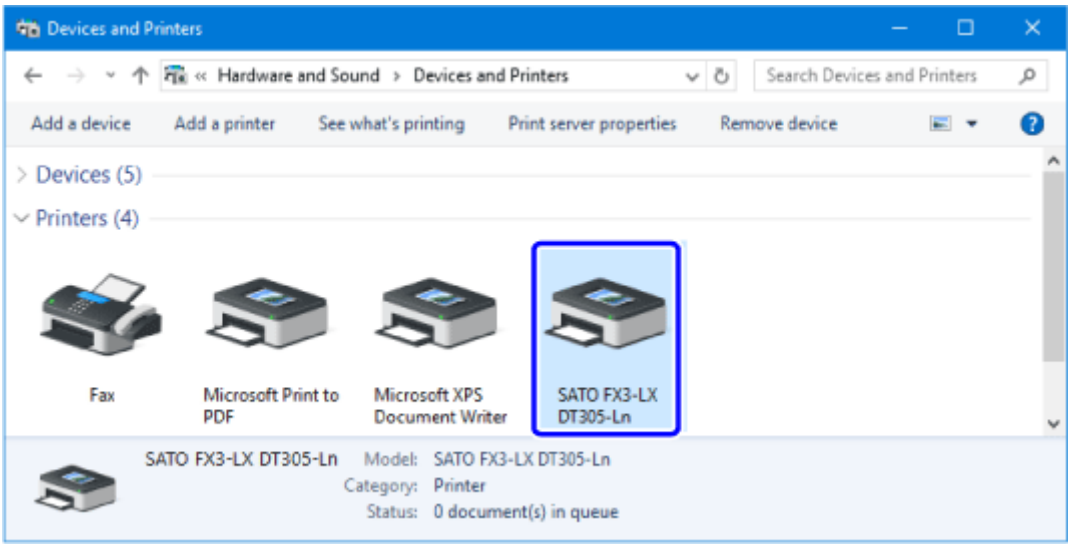
The printer driver is installed.

- The warning screen above may not appear depending on the version of the printer driver or your computer environment.
- If a security warning screen indicating that another process is blocking access appears, follow the steps on the screen, and click [Next].

13. Click [Exit] to complete the installation.



14. Open [Devices and Printers] and confirm that the printer driver is installed.



- The settings of the printer driver should be performed by the Administrator Privilege.

Installing the Printer Driver (Bluetooth)

To use the printer driver with the Bluetooth interface connection, add the printer to the computer as a Bluetooth device, and then install the printer driver. During the installation, it is necessary to match the port setting of the added Bluetooth device and the printer driver.

The procedure for adding (pairing) the Bluetooth device varies depending on the environment of your computer. The following procedure is an example of Windows 10. For details, refer to the user manual of your computer.

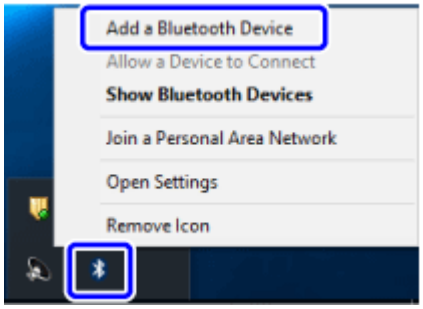
- Before starting the installation, close all applications.
- When you do the printer driver setup, the properties settings, or the print settings, log in with Administrator Privilege.
- When you use the printer driver, enable bi-directional communication.
- If the terminal service is being started with Windows Server 2008, or the remote desktop service is being started with Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016, change the terminal service or the remote desktop service to the install mode. However, it is not guaranteed that the printer driver can be used in the terminal service or the remote desktop service environment.
- When using multiple printers, it is necessary to install as many printer drivers as printers, to identify each printer.

1. **Start Windows.**
2. **Power on the printer.**
3. **Confirm that Bluetooth is enabled (initial value) in the [Bluetooth] menu of the printer.**
4. **Check the device name in [Bluetooth] > [Name] on the printer.**

   Note down this information because it is needed to connect to the printer.

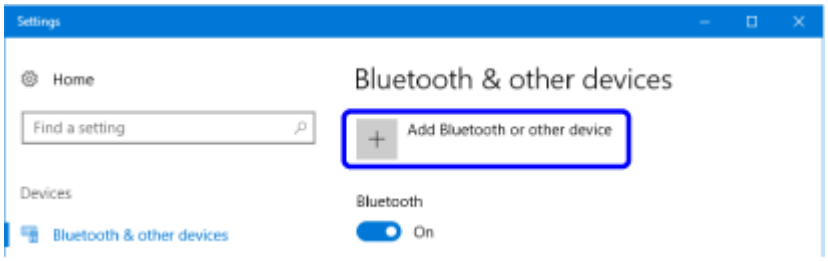
- The initial value of the device name for the printer is "SATO PRINTER_xxxxxxxxxxx (BD address)".

5. **Right-click the Bluetooth icon at the lower-right corner of the Windows desktop screen, and select [Add a Bluetooth Device].**

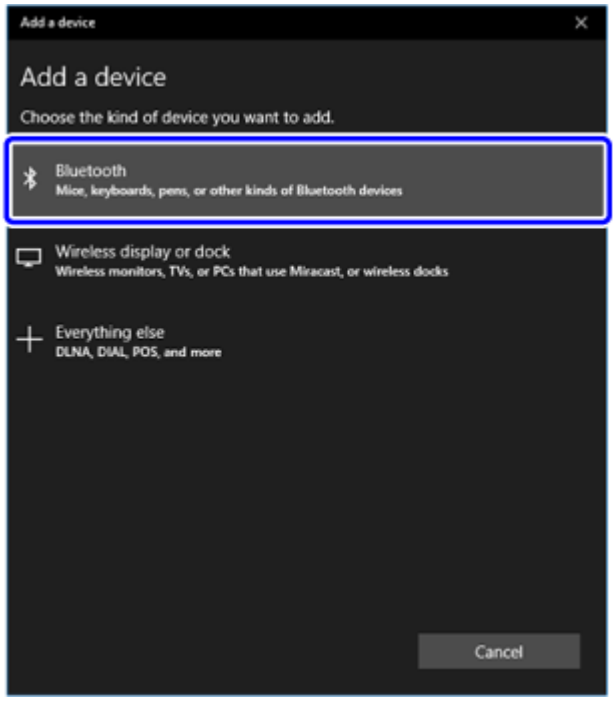


- The screen layout and the steps hereafter differ in versions before Windows 10 Creators Update.

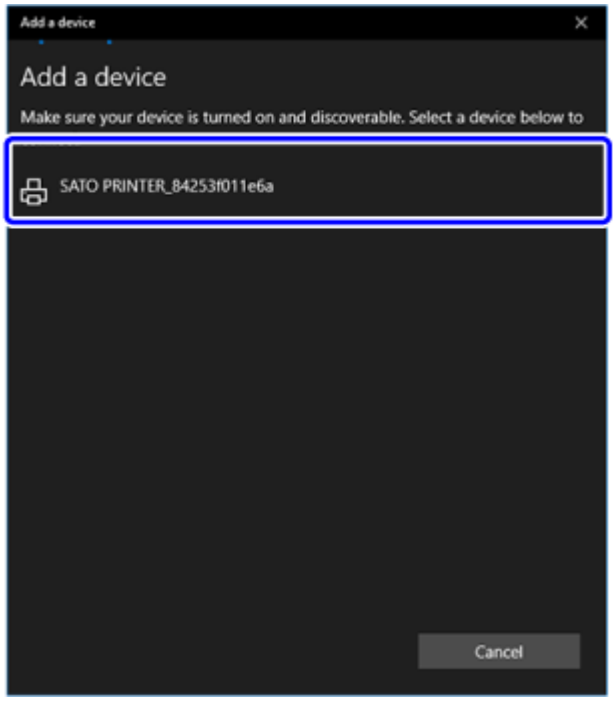
6. Click [Add Bluetooth or other device].



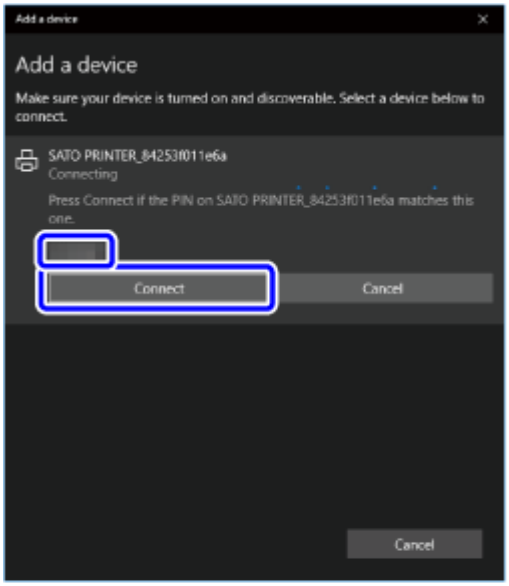
7. Click [Bluetooth].

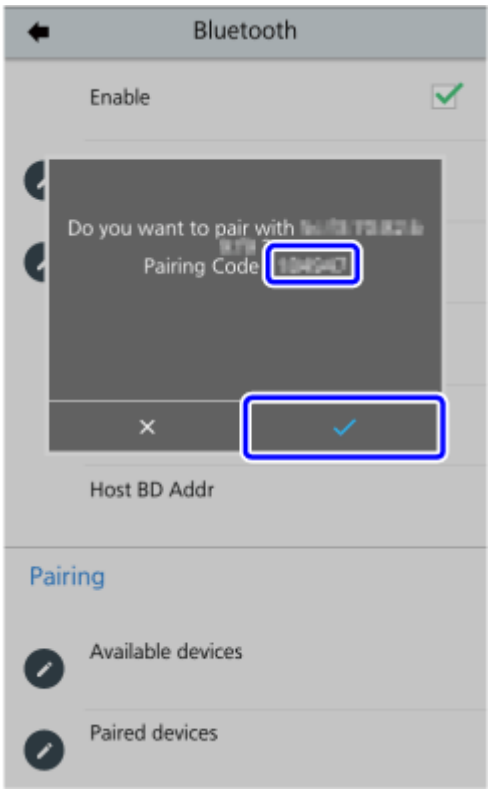


8. **Select the name of the device that you checked in step 4 in the search device list.**



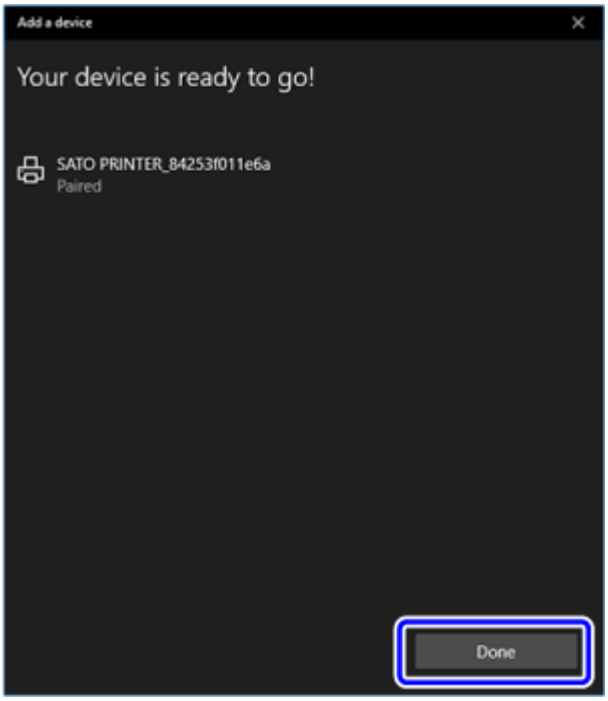
9. **Make sure the number displayed on the computer screen matches the pairing code on the printer's screen, and tap ✓ on the printer, and click [Connect] on the computer.**



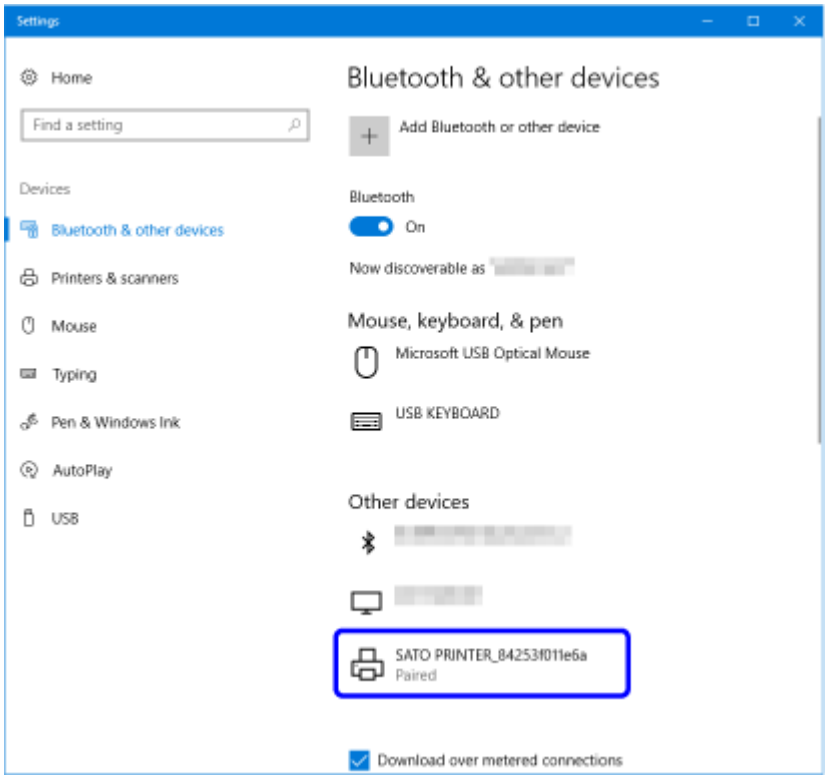


- The pairing code differs every time you pair the printer with a device.

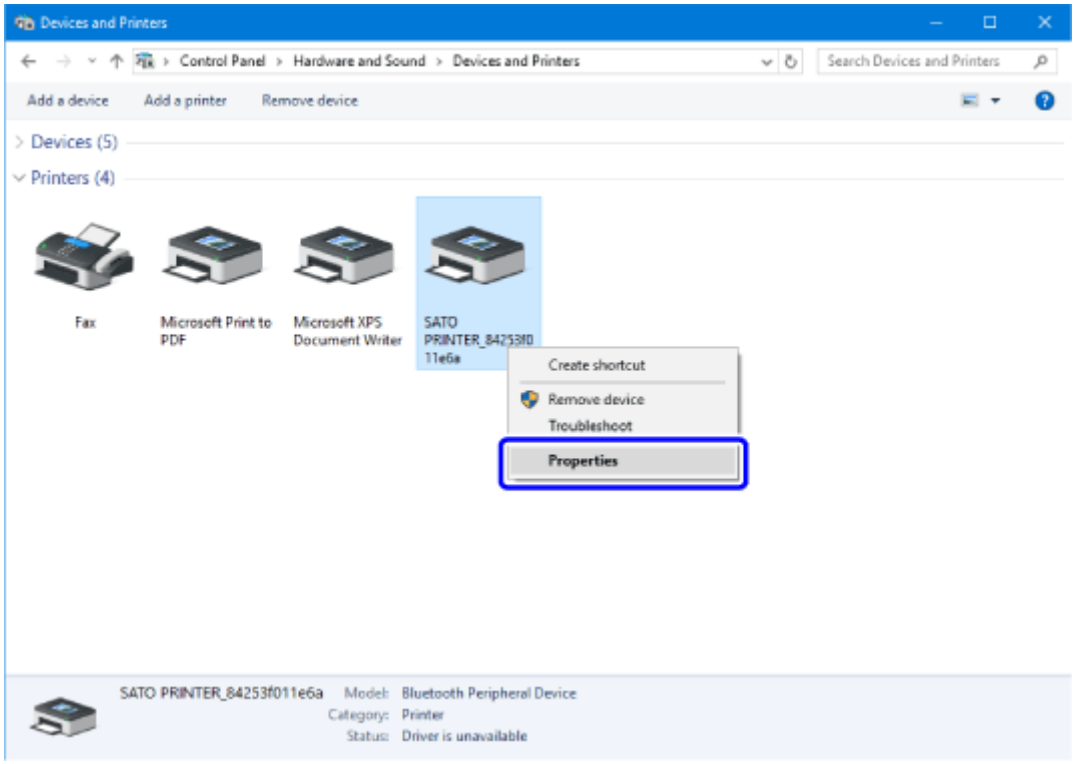
10. Click [Done].



The printer is added as a Bluetooth device.

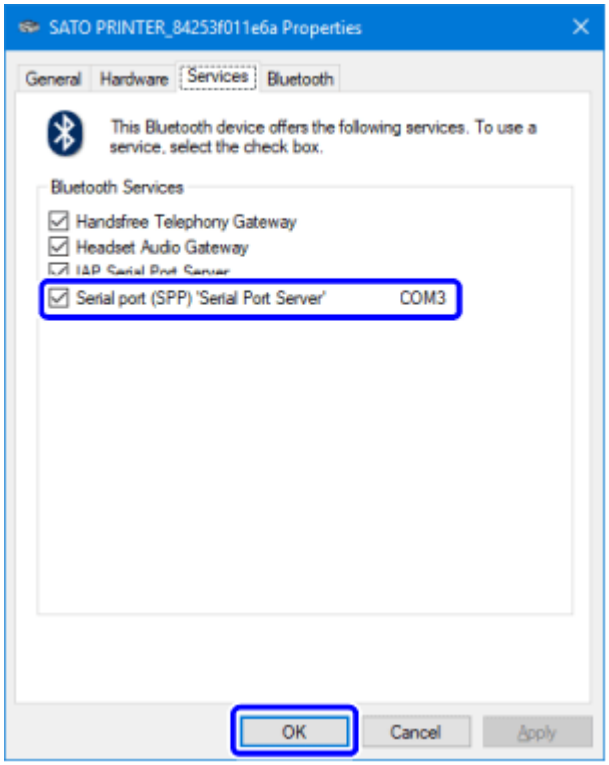


11. **Open [Devices and Printers], right-click the printer added as a Bluetooth device, and select [Properties].**



12. **Confirm the port assigned as the [Serial port (SPP)] in the [Services] tab, and click [OK].**

Note down this information as it will be necessary for the printer driver installation.



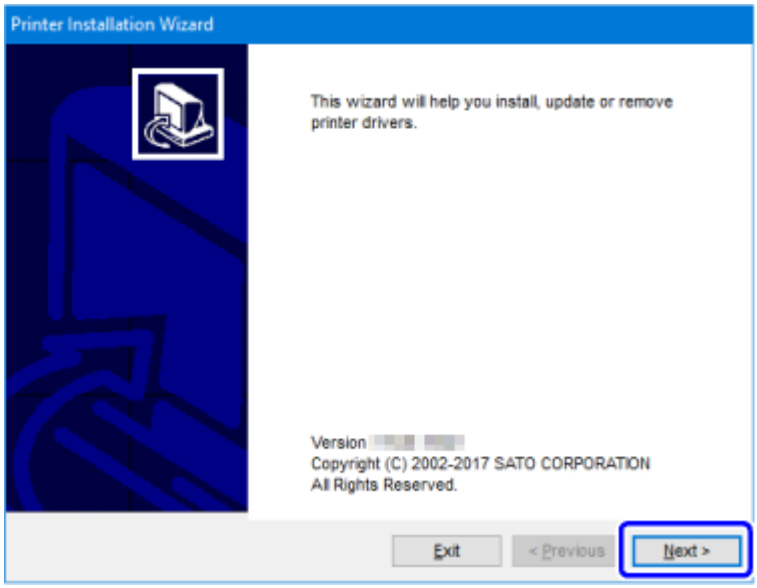
13. Download the printer driver from the SATO printer driver download site. http://www.satoworldwide.com/software/gallerydriver.aspx

14. Extract the downloaded compressed file of the printer driver.

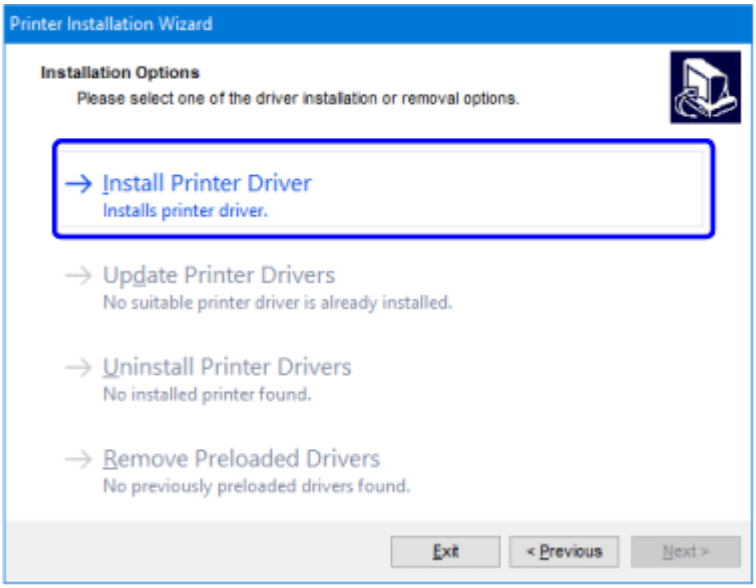
15. Execute PrnInst.exe to start the installer.

16. If a user account control message appears, click [Yes] or [Continue].

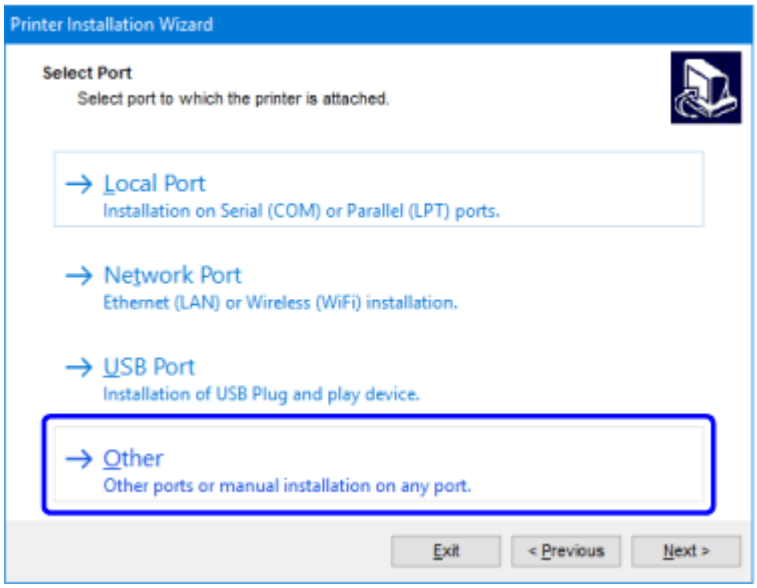
17. Click [Next].



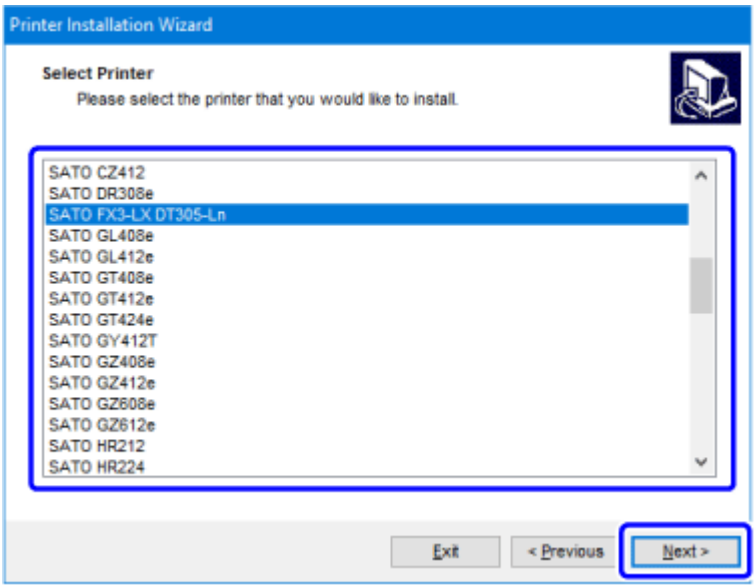
18. Click [Install Printer Driver].



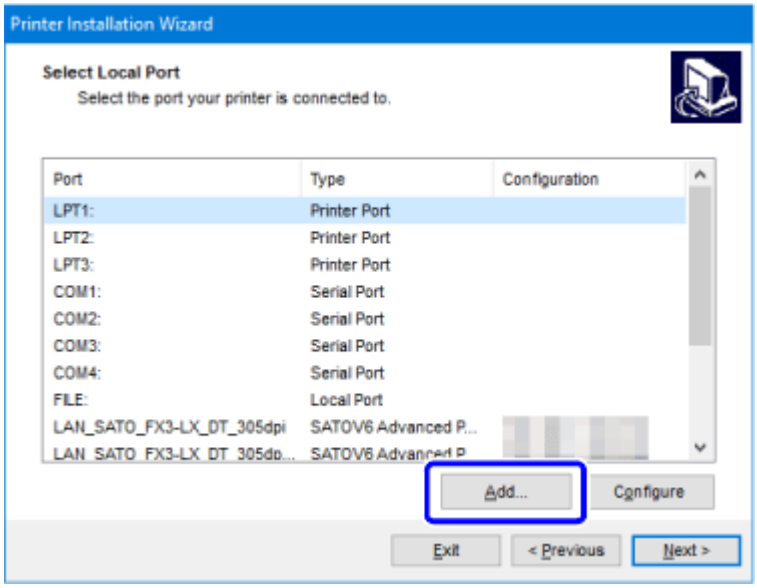
19. Click [Other].



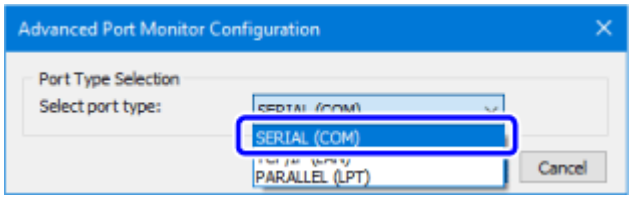
20. Select the model of the printer and click [Next].



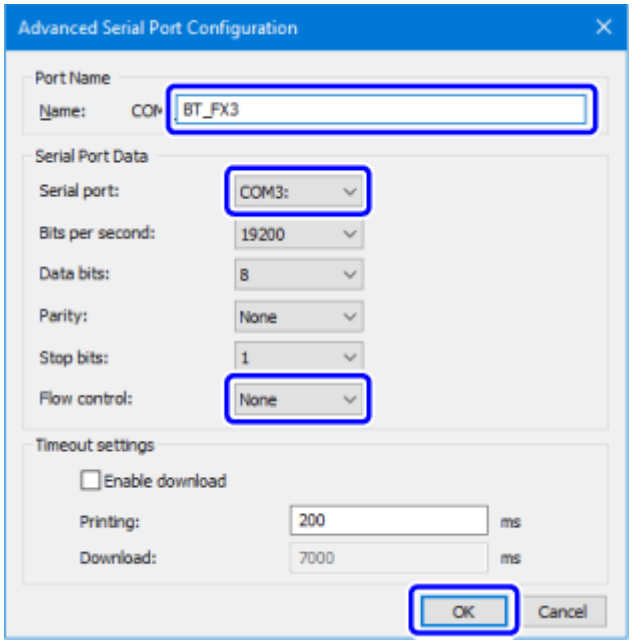
21. Click [Add] and add a port manually.



22. Select [SERIAL (COM)] from the [Select port type] drop down list and click [OK].



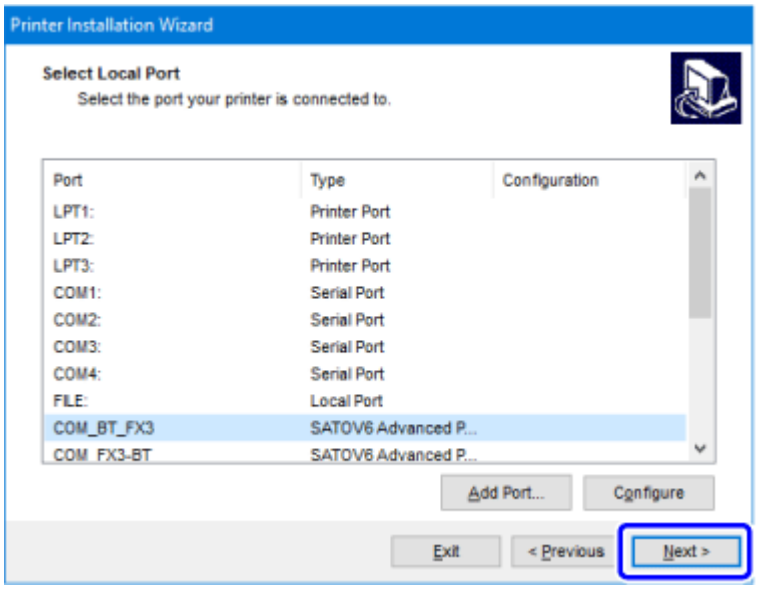
23. Configure the port setting.



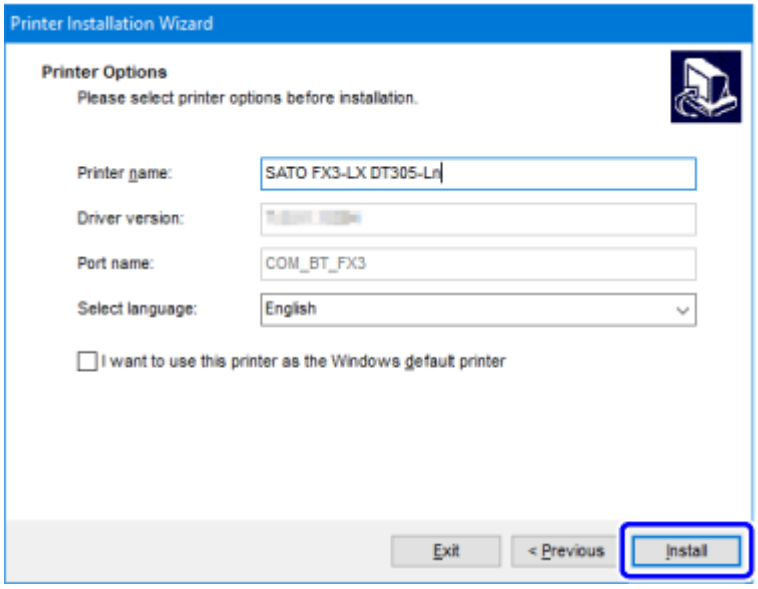
a. Enter the port name.
b. In [Serial port], select the port of the Bluetooth device checked in step 12.
c. In [Flow control], select [None].

d. Click [OK].

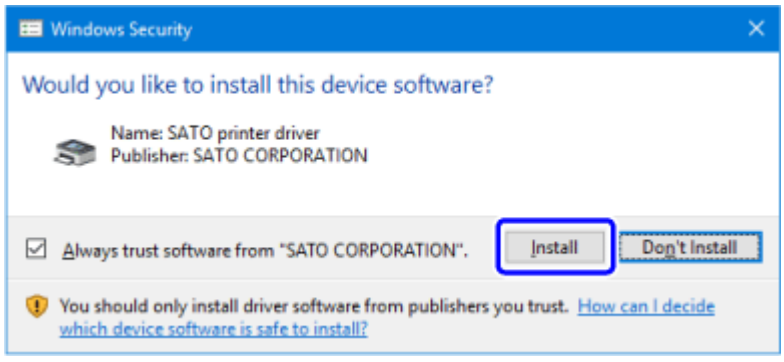
24. Click [Next].



25. Click [Install].



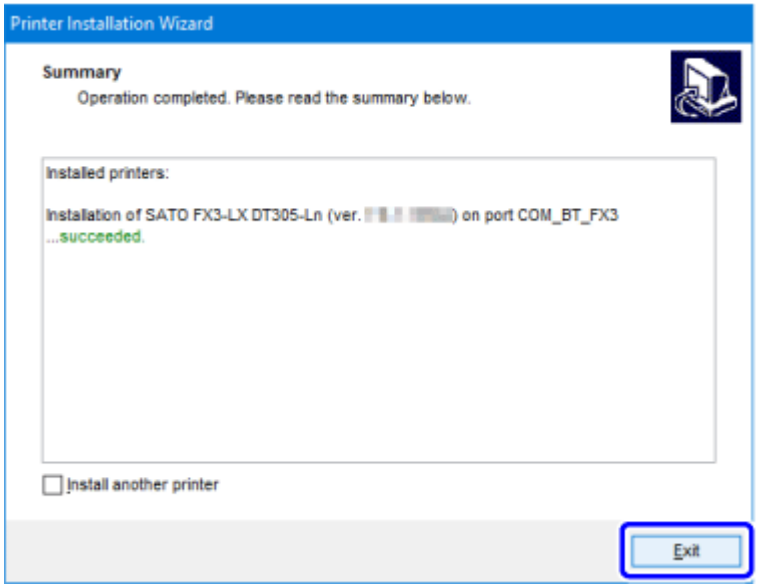
26. When the security warning screen appears, click [Install].



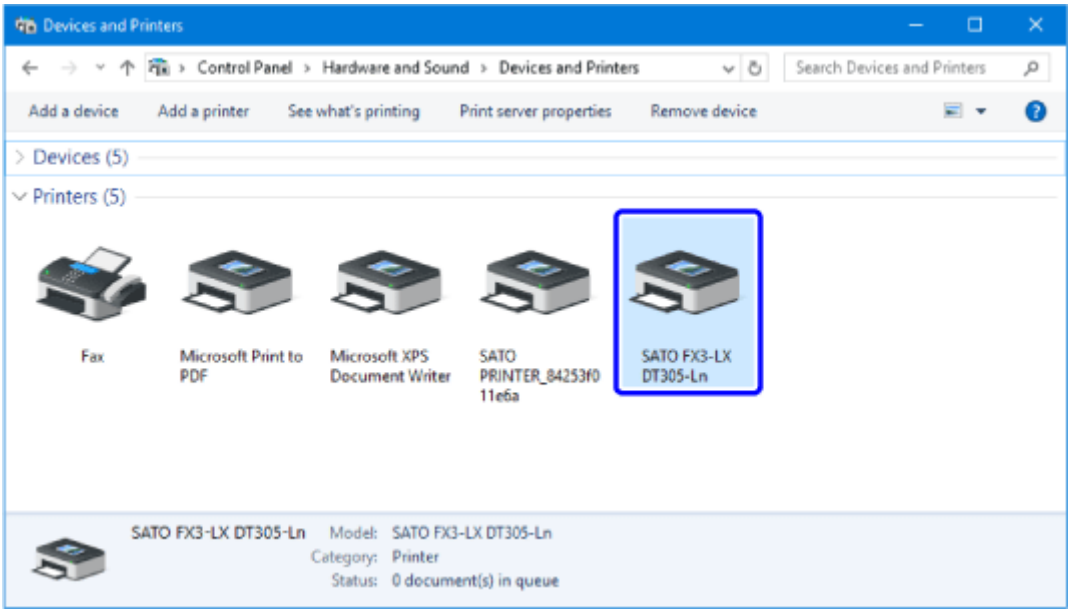
The printer driver is installed.

- The warning screen above may not appear, depending on the version of the printer driver or your computer environment.
- If a security warning screen indicating that another process is blocking access appears, follow the steps on the screen, and click [Next].

27. Click [Exit] to complete the installation.



28. Open [Devices and Printers] and confirm that the printer driver is installed.



The printer driver can be used with the Bluetooth interface connection.

When printing, use the printer added when the printer driver was installed, not the printer added as the Bluetooth device.

- The settings of the printer driver should be performed by the Administrator Privilege.

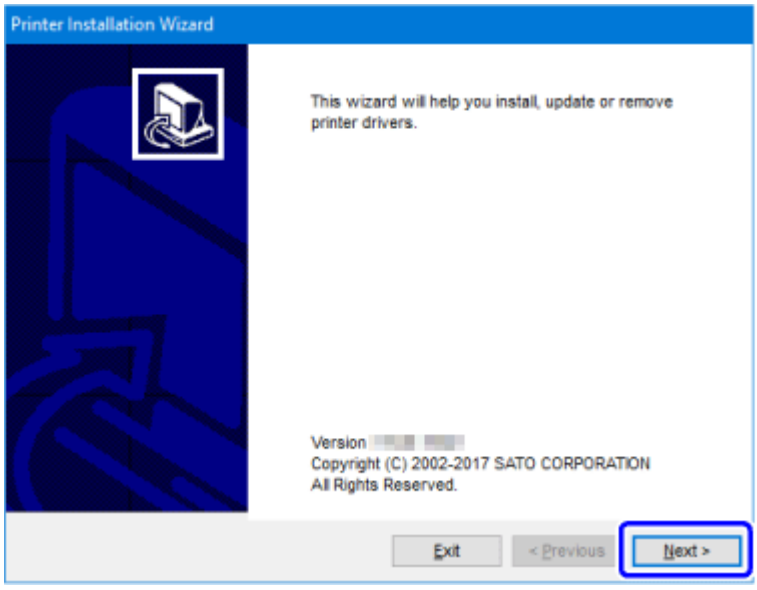
Uninstalling the Printer Driver

The printer driver is uninstalled using the installer with the following procedures. The following procedures use Windows 10 as an example.

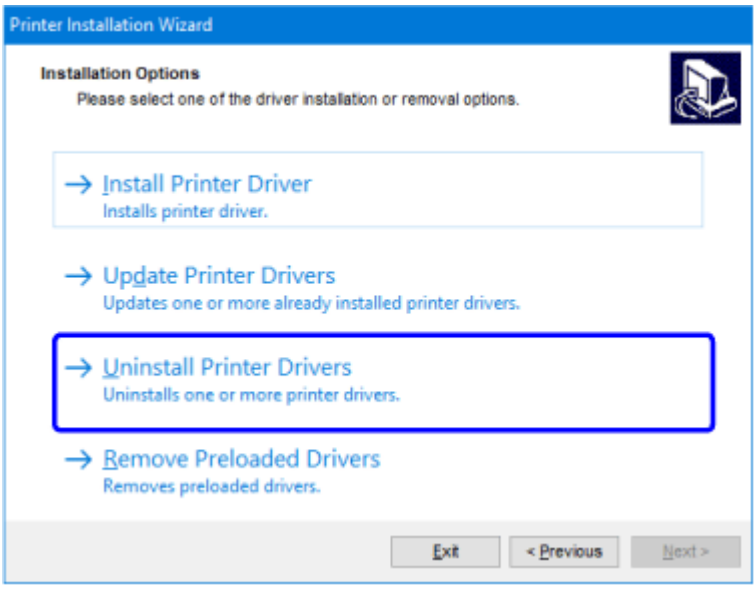
Do not remove the device from [Devices and Printers].

- Before starting the uninstallation, close all applications.
- When you do the printer driver setup, the properties settings, or the print settings, log in with Administrator Privilege.

1. **Power off the printer.**
2. **Start Windows.**
3. **Download the printer driver from the SATO printer driver download site. http://www.satoworldwide.com/software/gallerydriver.aspx**
4. **Extract the downloaded compressed file of the printer driver.**
5. **Execute PrnInst.exe to start the installer.**
6. **If a user account control message appears, click [Yes] or [Continue].**
7. **Click [Next].**

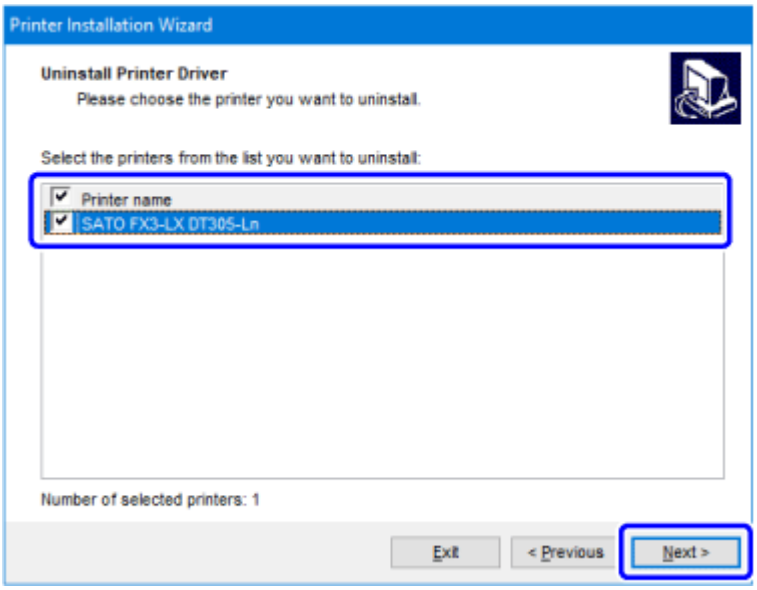


8. Click [Uninstall Printer Drivers].



9. Check the check box of the printer you want to uninstall and click [Next].

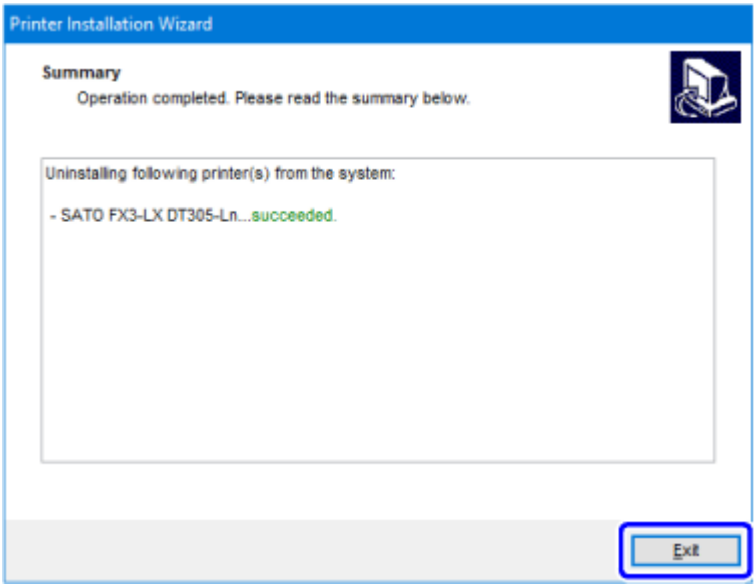
You can select multiple printers.



The printer driver is uninstalled.

- When the multiple printers are shown, as long as you do not remove all of the printers, the files related to the installed printer drivers are not removed. In that case, only the printer name is removed.
- If a security warning screen indicating that another process is blocking access appears, follow the steps on the screen, and click [Next].

10. Click [Exit].



Printer Driver Features

The topics here explain how to open the printer driver setting screens and provide an overview of the printer driver features.

Configuring the Printer Driver Settings as an Administrator

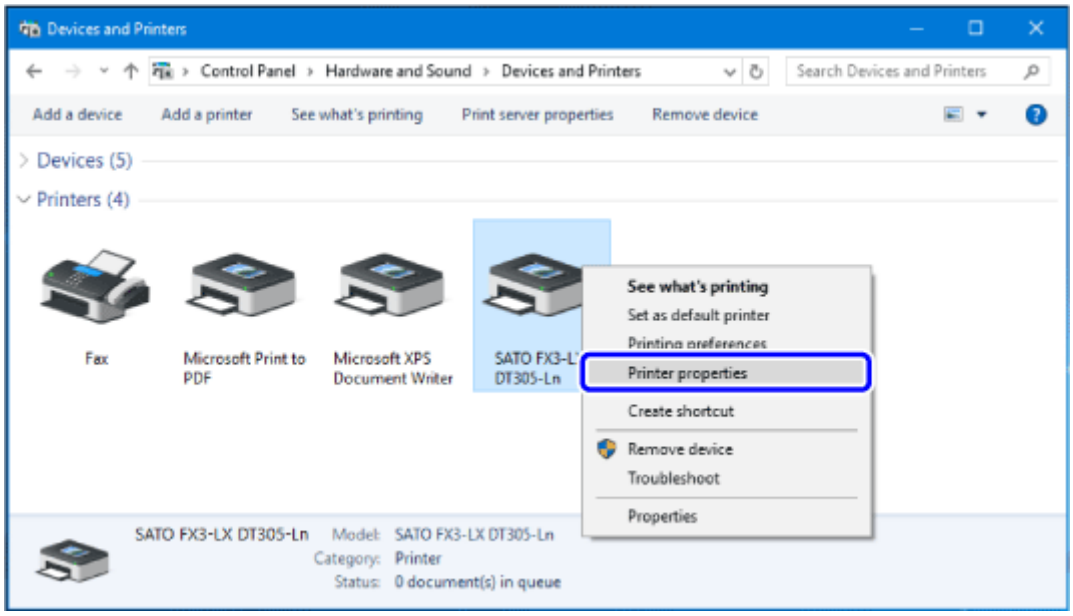
Configuring the Printer Driver Settings as an Administrator (Windows 7/8.1/10/Server 2008 R2/Server 2012/Server2012 R2/Server 2016)

When printing a layout created by an application software, configure the printer driver settings first.

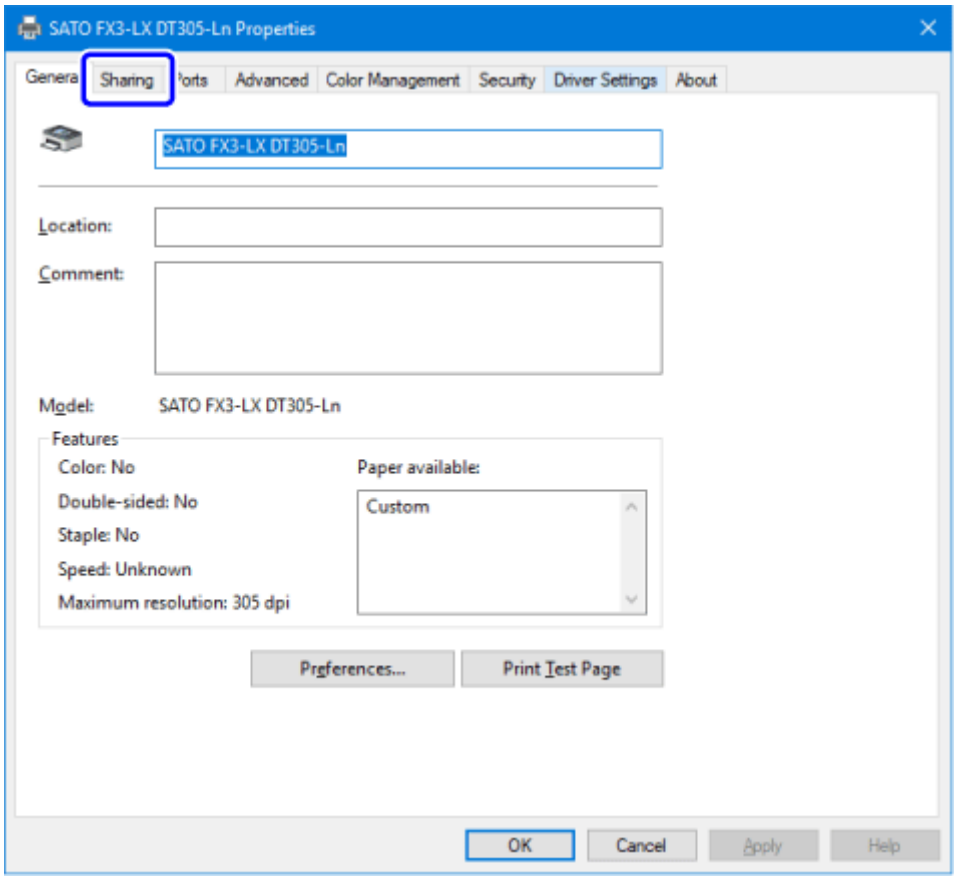
The settings of the printer driver should be done by the administrator. If you change a setting value or add a printer port through someone other than the administrator, an error screen appears and the processes you operated are not reflected.

In Windows 7/8.1/10/Server 2008 R2/Server 2012/Server2012 R2/Server 2016, open the properties screen of the printer driver as an administrator with the following procedures. The following procedures use Windows 10 as an example.

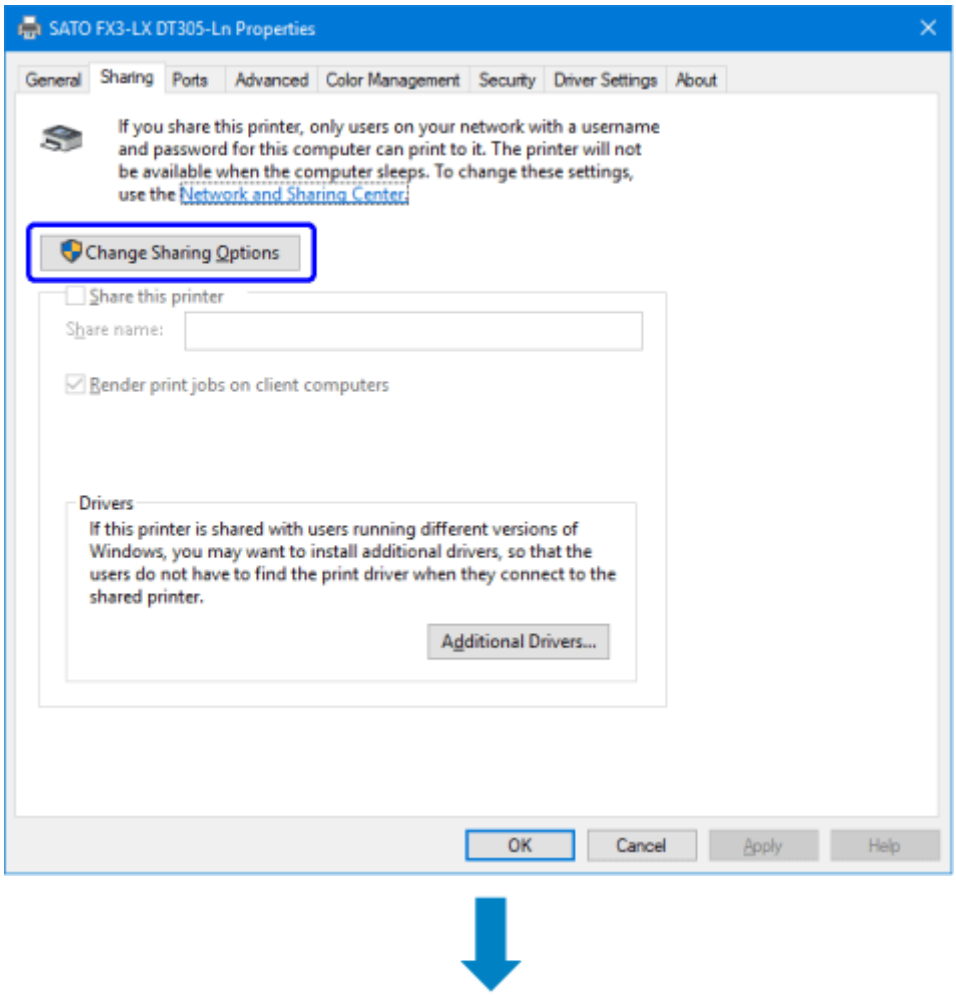
1. **Open the [Devices and Printers] folder.**
2. **Right-click the icon of the printer you use and select [Printer properties].**

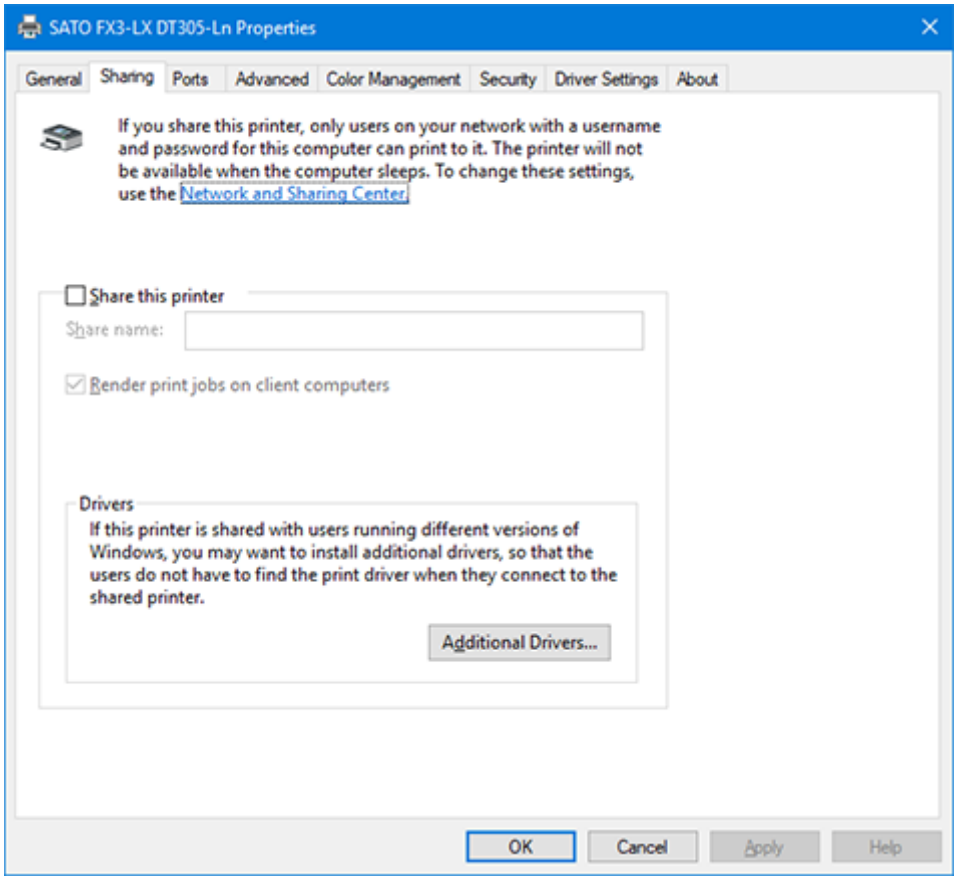


3. **Open the [Sharing] tab.**



4. **Click [Change Sharing Options].**

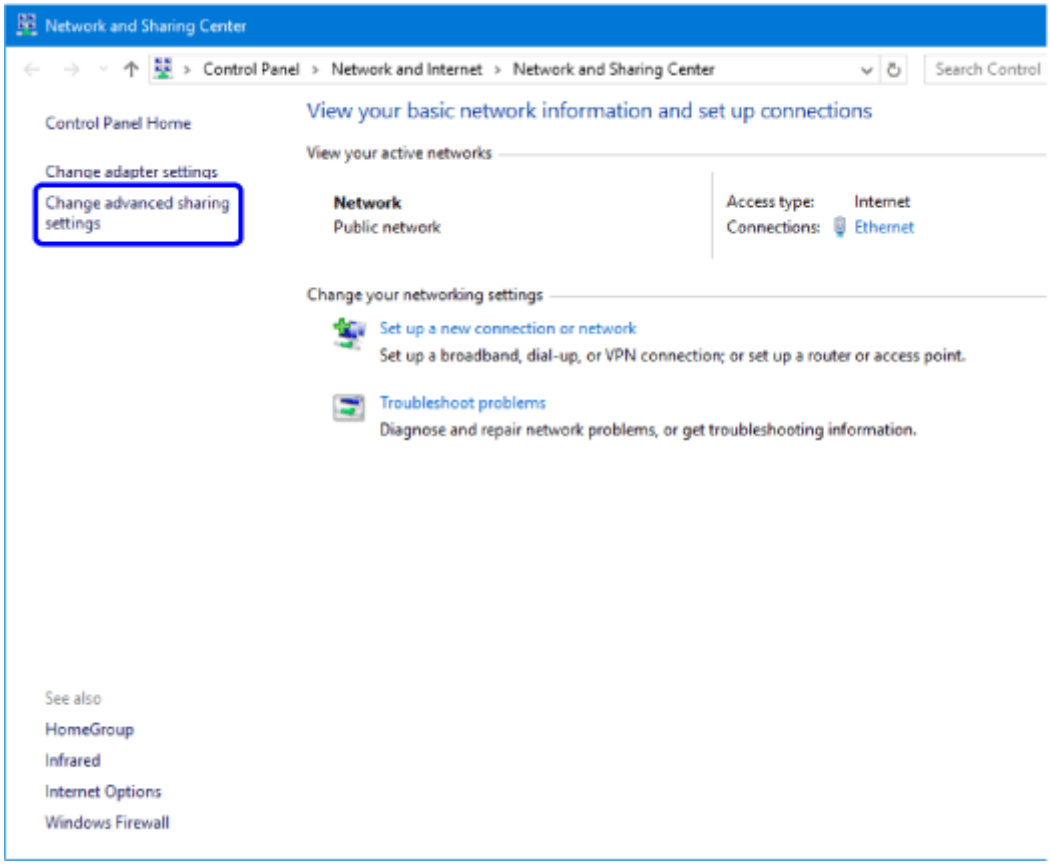




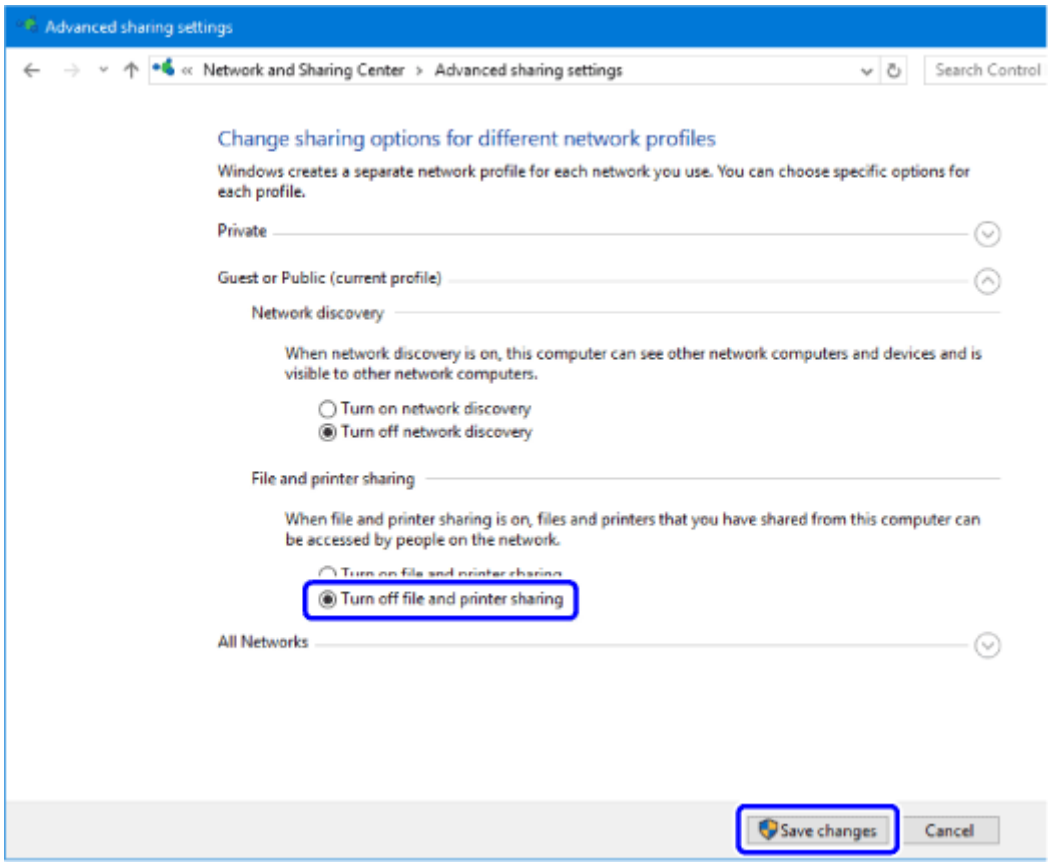
If [Change Sharing Options] is not shown, do the following procedures.

a. Open the [Control Panel] and select [Network and Sharing Center].

b. Select [Change advanced sharing settings].



c. In [File and printer sharing], select [Turn off file and printer sharing] and click the [Save changes] button.



Configuring the Printer Driver Settings as an Administrator (Windows Server 2008)

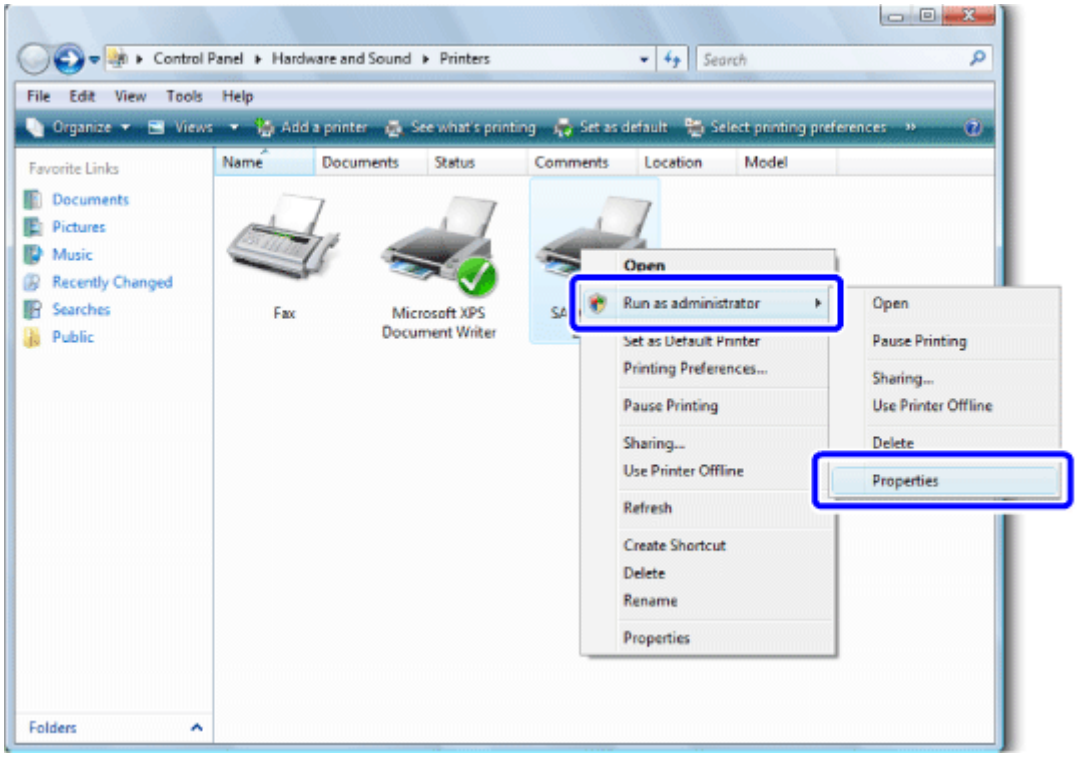
When printing a layout created by an application software, configure the printer driver settings first.

The settings of the printer driver should be done by the administrator. If you change a setting value or add a printer port through someone other than the administrator, an error screen appears and the processes you operated are not reflected.

In Windows Server 2008, open the properties screen of the printer driver as an administrator with the following procedures.

1. Open the [Printers] folder.

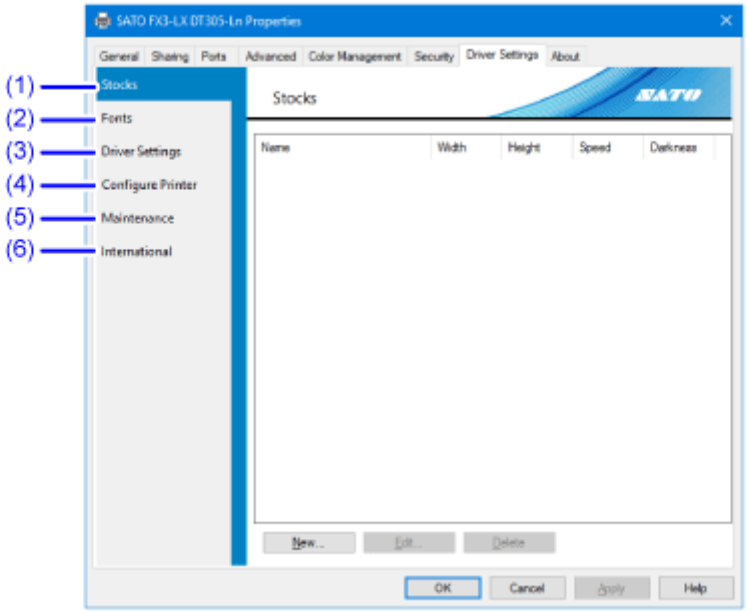
2. **Right-click the icon of the printer you use and select [Run as administrator], and then [Properties].**



Configuring the Driver Settings

In the printer driver [Properties] > [Driver settings] tab, various settings can be configured, such as adding media size and fonts and importing/exporting the driver settings.

- The settings of the printer driver should be done by an administrator.



(1) [Stocks]

Manages stored media. The stored media can be used from applications.

(2) [Fonts]

Defines and manages barcode fonts and command fonts. You can add, modify, and delete definitions. Also, you can print by replacing the system fonts with the printer's device fonts when defining replacement fonts.

(3) [Driver Settings]

Sets whether to enable the driver settings or application settings.

(4) [Configure Printer]

Obtains and changes the settings of the connected printer.

(5) [Maintenance]

Outputs the current driver settings to a file and reads the settings.

(6) [International]

Sets the display language of the tab for printer driver settings and the tab for displaying the version.

- Be sure to manage the master data for fonts by customer. SATO do not take responsibility for font data stored on the printer.

Configuring the Printer Settings

[Printing Defaults] and [Printing Preferences]

These functions can configure the media settings and printing modes of the printer from the printer driver and send them to the printer.

Use [Printing Defaults] or [Printing Preferences] from the properties screen of the printer.

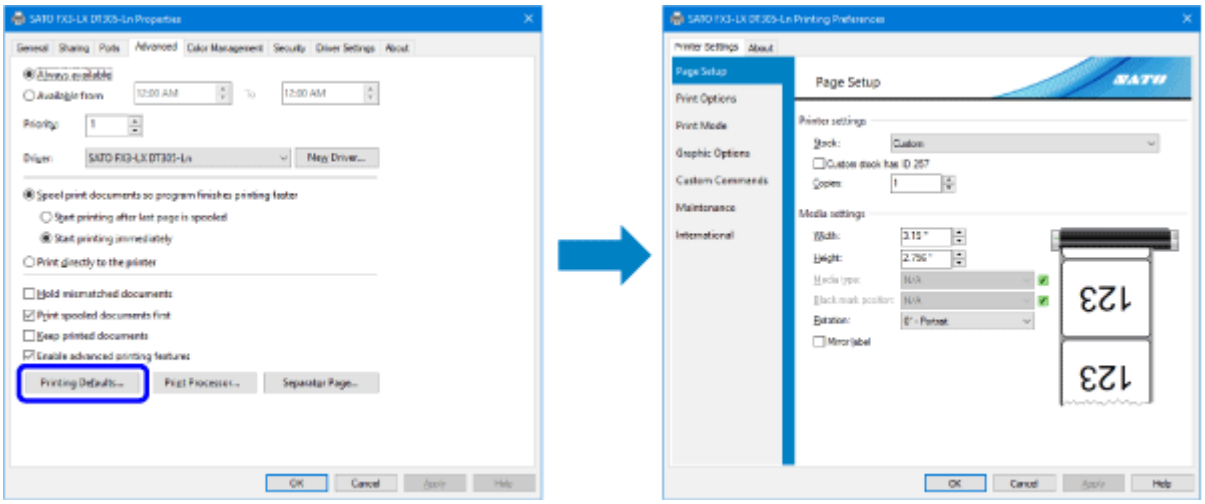
When configuring the printer driver for all users, use [Printing Defaults].

When configuring the printer driver for each user, use [Printing Preferences].

- The settings of the printer driver should be done by an administrator.

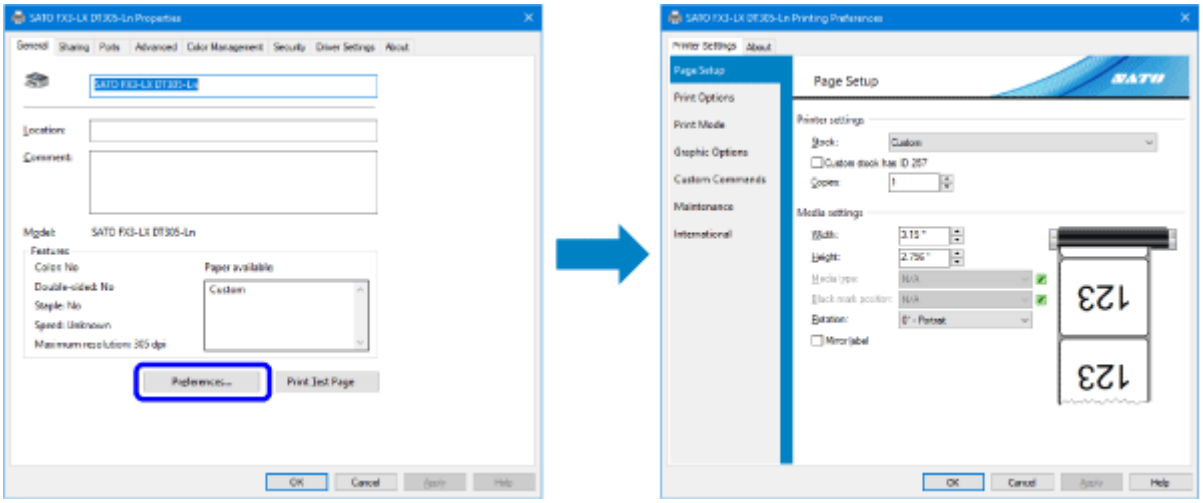
How to Show the [Printing Defaults] Settings Screen

When you open the printer driver [Properties], select the [Advanced] tab and click [Printing Defaults].



How to Show the [Printing Preferences] Settings Screen

When you open the printer driver [Properties], select the [General] tab and click [Preferences].

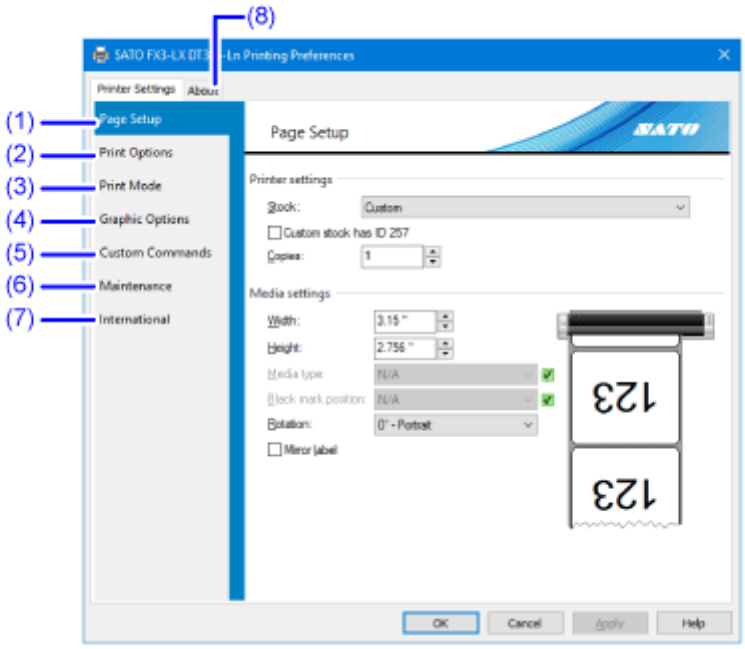


- When you right-click the printer in [Devices and Printers] and select [Printing preferences], the same screen as the settings screen for the [Printing Preferences] appears.

Overview of the Printer Settings

The printer settings can be configured from the printer settings screen of [Printing Defaults] or [Printing Preferences].

- The settings of the printer driver should be done by an administrator.



(1) [Page Setup]

Sets the size and sensor type of the media set to the printer.

(2) [Print Options]

Adjusts the settings of the print speed, print darkness, and base reference point.

(3) [Print Mode]

Sets the print mode of the printer.

(4) [Graphic Options]

Specifies dithering and the graphic form when sending to the printer.

It is not necessary to change it in particular, and it is available with initial values.

(5) [Custom Commands]

Specifies the method to control the printer behavior directly.

It is best to use this method only if user understands the SBPL command or the programming references.

(6) [Maintenance]

Returns the printer driver settings to their initial values.

(7) [International]

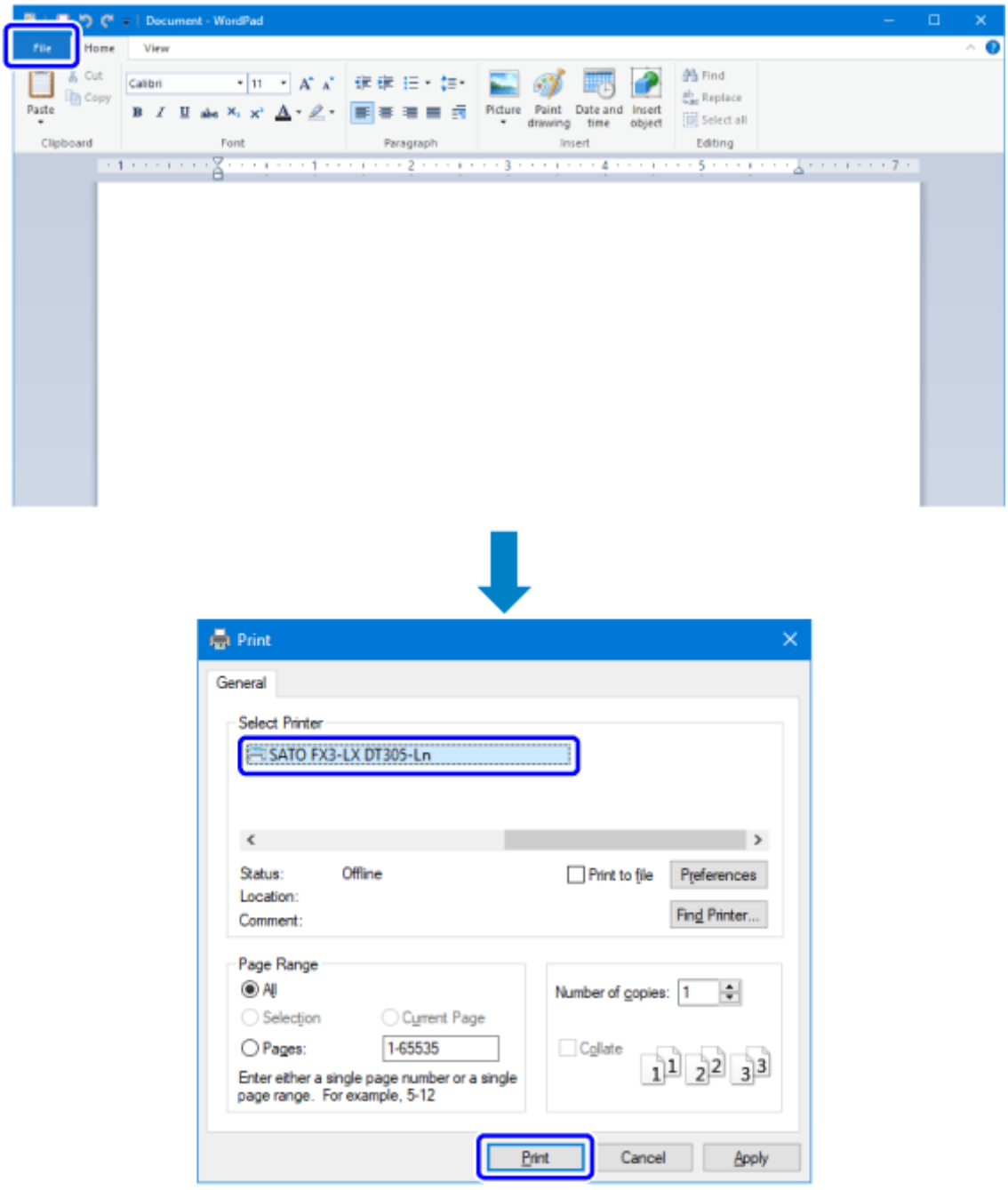
Selects the unit to be used.

(8) [About]

Shows the version of the printer driver and provides access to the SATO homepage.

Outputting a Label from an Application Software

The method for starting a print job varies depending on application software. In general, print jobs begin when you click [Print] button in the dialog that is displayed after selecting [Print] from the [File] menu. Refer to the user manual of the application software you are using.



Before starting the print job, confirm that the printer driver to be used in the application software is set to the appropriate printer driver for the printer you are using.

The method for setting the printer driver varies depending on the application software. In general, select the item you want from the list that is displayed when you select [Print] from the [File] menu, or when you click [▼] in [Printer Name] in the dialog.

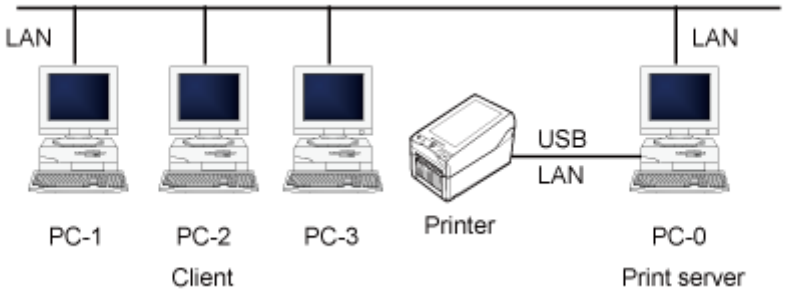
Depending on the application software, it may be necessary to select the media again in the media selection function of the application software to use the media selected in the [Page Setup] of the printer driver.

- If you use software such as NiceLabel, the settings of the software are enabled, not the settings of the printer driver.

Printer Driver Sharing Function

Connecting When Using the Printer Driver with Sharing Settings

The figure below shows how to connect when using the printer driver with sharing settings.



Set one computer (PC-0) as the print server and set other computers (PC-1, PC-2, PC-3, and so on) as clients. All computers should be connected using a LAN connection and the computer (PC-0) set as the print server and the printer should be connected using USB or LAN.

Printer Driver Sharing Settings

The following shows how to set the printer driver when using the printer driver with sharing settings.

1. **In both the print server and clients, download and install the printer driver from the SATO download site. http://www.satoworldwide.com/software/gallerydriver.aspx**

- If you are adding it with the [Add a printer] icon from the [Printers] folder, the necessary files may not be installed and may not perform correctly (the copy of the sharing printer icon on the network computer will be the same).

2. **After confirming that a label can be output correctly from the printer driver of the print server, set the printer driver to "Shared".**

3. **Specify the output port of the client's printer driver to the sharing printer configured on the server.**

Environment	Setting Method
Windows Server 2008	In the printer driver, open [Properties] > [Ports] > [Add Port] > [Local Port], and specify the port name as "\\Sharing computer name\Sharing printer name".
Windows 7/8.1/10/Server 2008 R2/ Server 2012/Server 2012 R2/Server 2016	In the printer driver, open [Printer properties] > [Ports] > [Add Port] > [Local Port], and specify the port name as "\ \Sharing computer name\Sharing printer name".

4. Disable the bi-directional communication of the printer driver in the client.

Environment	Setting Method
Windows Server 2008	In the printer driver, open [Properties] > [Ports], and uncheck [Enable bidirectional support].
Windows 7/8.1/10/Server 2008 R2/ Server 2012/Server 2012 R2/Server 2016	In the printer driver, open [Printer properties] > [Ports], and uncheck [Enable bidirectional support].

Restrictions When Using the Printer Driver with Sharing Settings

When you use the printer driver with sharing settings, the following restrictions occur because bi-directional communication is disabled in the client.

- Errors that occur with the printer, such as "Paper End" cannot be recognized.
- In the printer driver [Properties] > [Driver settings] > [Configure Printer], [Get from printer] and [Send to printer] cannot be used.
- The settings you change in the printer driver [Printing Preferences] > [Printer Settings] tab cannot be sent to the printer (when the green check box is not selected).

All-In-One Tool Features

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

- For details of the All-In-One Tool, download and read the All-In-One Tool Manual from the SATO All-In-One Tool download site. http://www.satoworldwide.com/software/all-in-one-tool.aspx

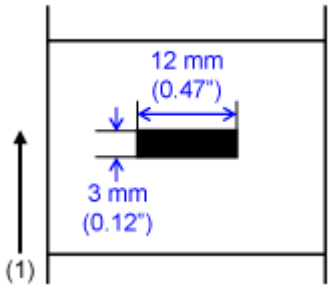
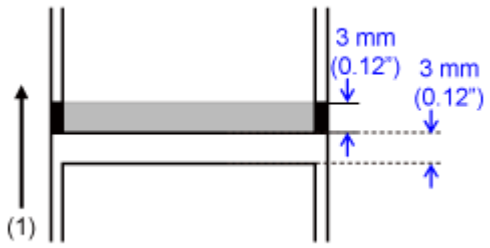
Loading Media

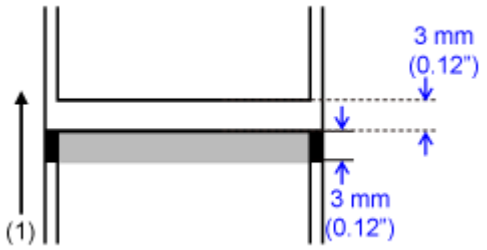
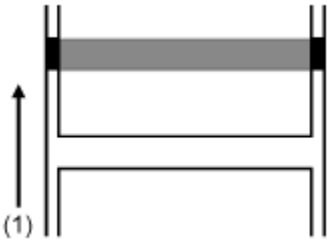
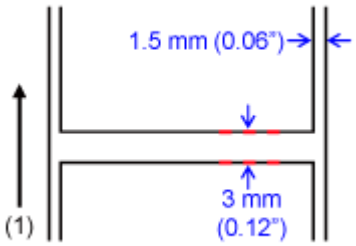
Usable Media

The printer can print on the following two types of media.

- Media roll
- Fan-fold media

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

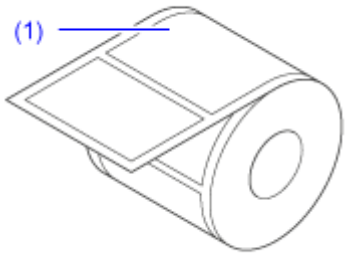
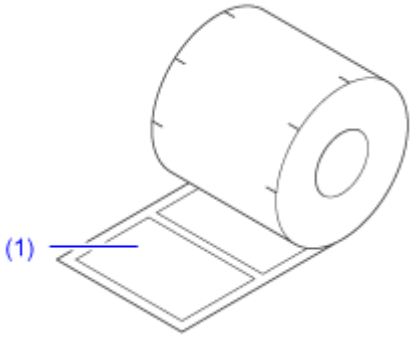
Label Type	Position
I-mark Label	Center I-mark  The I-mark position is determined by the label size. (1) Media feed direction
	Bottom I-mark  (1) Media feed direction
	Top I-mark

Label Type	Position
	 (1) Media feed direction
	Labels with I-marks other than our specifications (Custom I-mark)  This I-mark position is an example. (1) Media feed direction
Gap label	 (1) Media feed direction
I-mark journal paper/linerless label	

Label Type	Position
	(1) Media 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
The print side faces the outer side of the media.  	The print side faces the inner side of the media. 

(1) Print side

Loading the Media

Precautions for Loading the Media

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

- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.

- The usable media sizes, the output speed and print quality vary depending on the media specification, media, printer settings and outputting environment. It is recommended to perform a test print with the media to be used in advance.

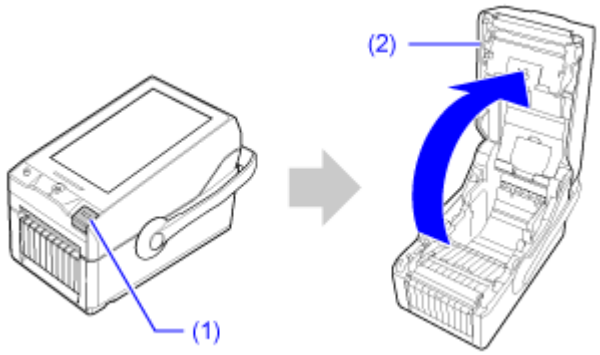
Changing the Flap Position of the Media Guide

Change the flap position of the media guide in accordance with the core diameter of the media roll. Set it to the upper position when using the φ40 mm (φ1.5") core, or the lower position when using the φ26 mm (φ1") core.

- When changing the flap position, do not use excessive force. Doing so may damage the printer.

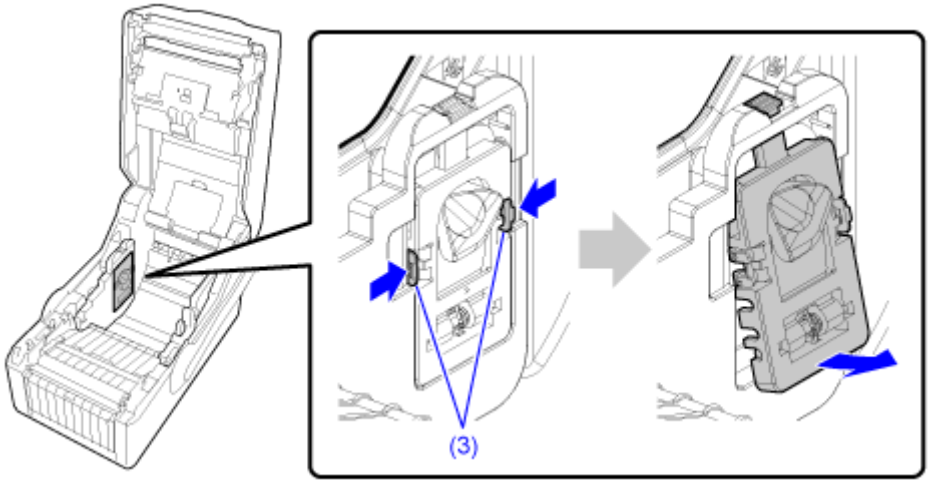
- The flap is set to the lower position after factory shipment. When using the φ26 mm (φ1") core, use it as it is.

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



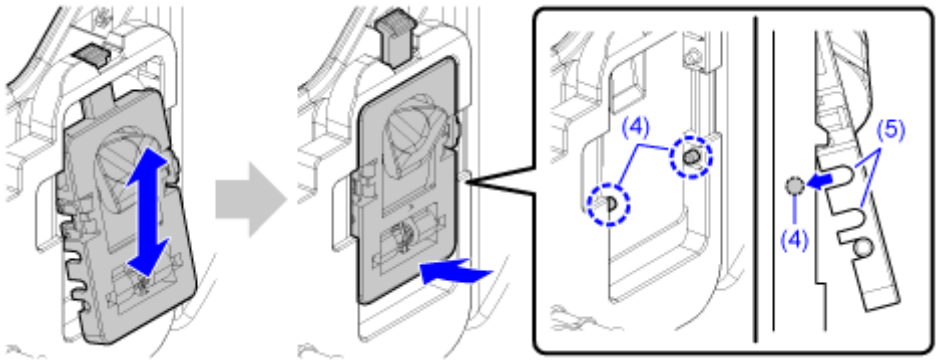
2. **Remove the media if it is already loaded.**

3. **Push the two tabs of the flap (3) inwards and pull them towards the front.**

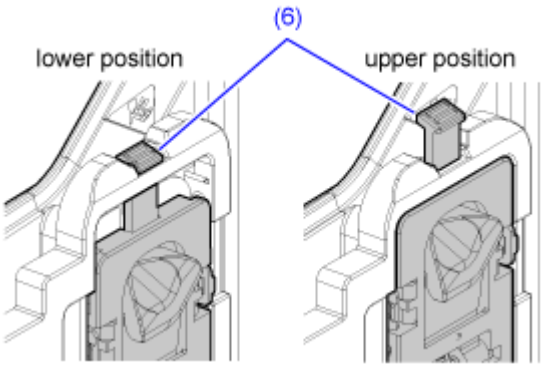


- The flap can also be removed completely from the media guide.

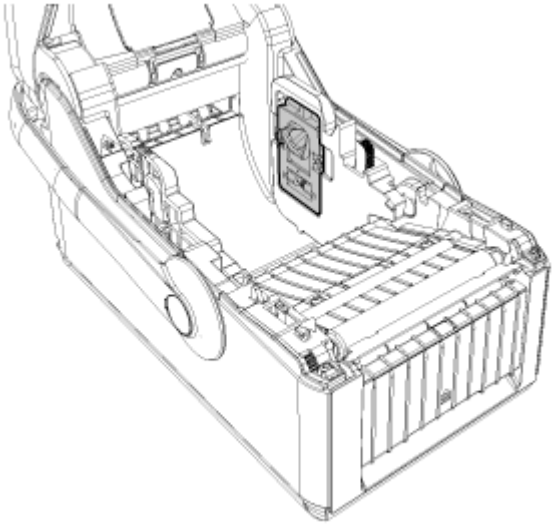
4. **Slide the flap upward when using the φ40 mm (φ1.5") core, or downward when using the φ26 mm (φ1") core. Then insert the groove of the flap (5) into the protrusion of the media guide (4).**



- When the left flap is set to the upper position, an indicator (6) pops out. Do not push the indicator in.



5. **Set the other side of the flap to the same position.**

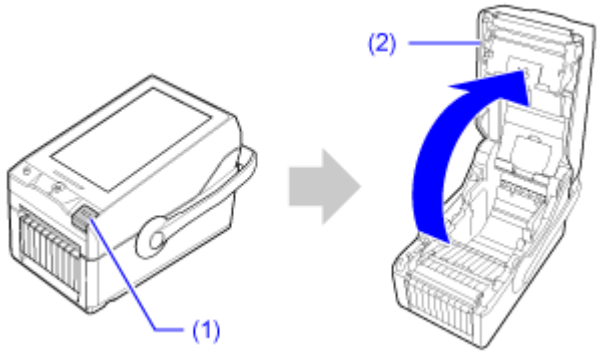


Loading the Media Roll

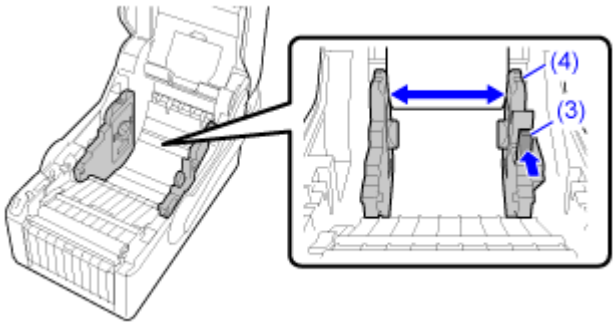
Loading the Media Roll (Printing in Continuous Mode/Tear-Off Mode)

- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.

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



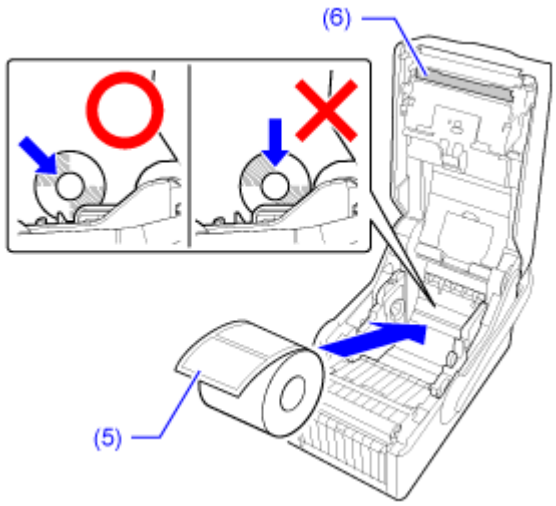
2. **While pushing the slide lever (3), move the media guide (4) which is on the right side to adjust its width to match the width of the media roll.**



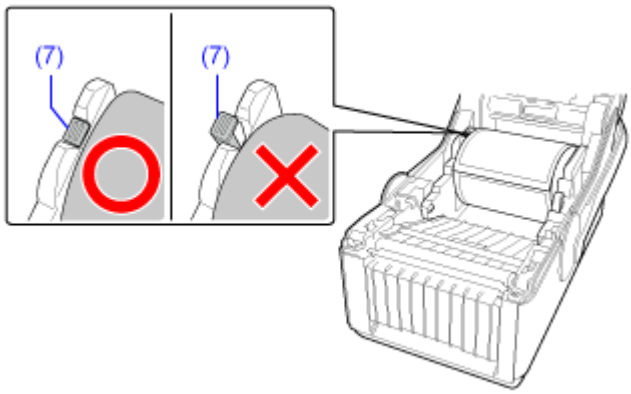
- Do not load the media roll yet.
- Change the flap position of the media guide in accordance with the core diameter of the media roll.

3. Load the media roll.

Set the media roll with the print side (5) facing the print head (6) and push it diagonally from the front.

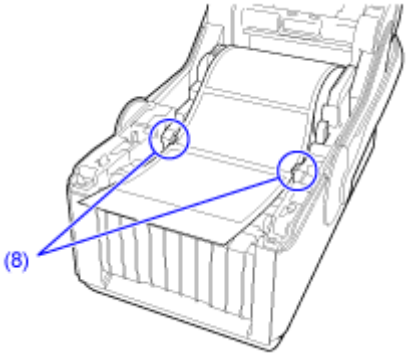


If the media roll is loaded correctly, the indicator part (7) of the media guide that moved to side returns to its original position.



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

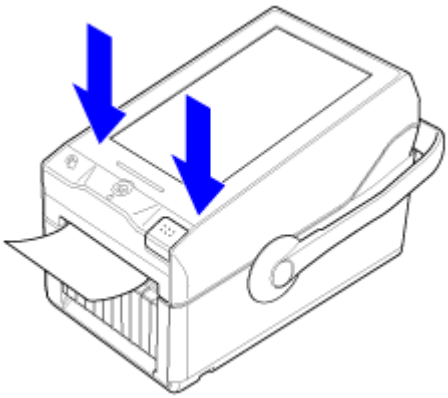
4. Pull out the media and pass it below the tabs (8).



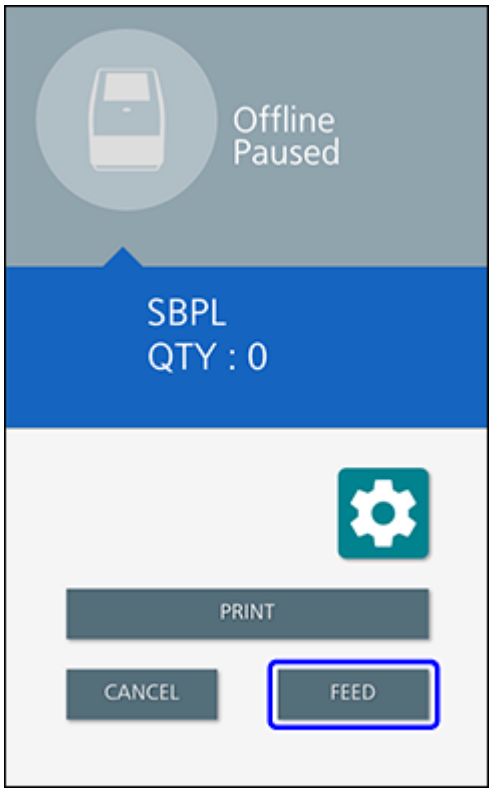
5. **Close the top cover.**

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].**

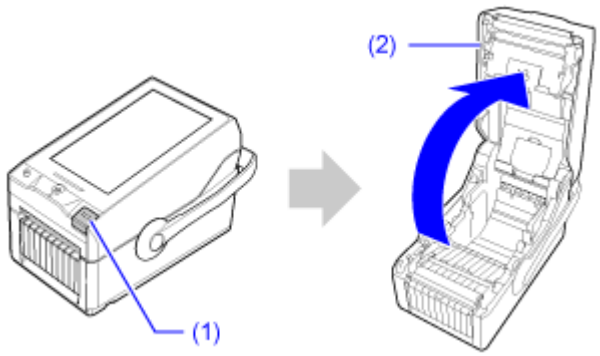


The media is fed to the print start position.

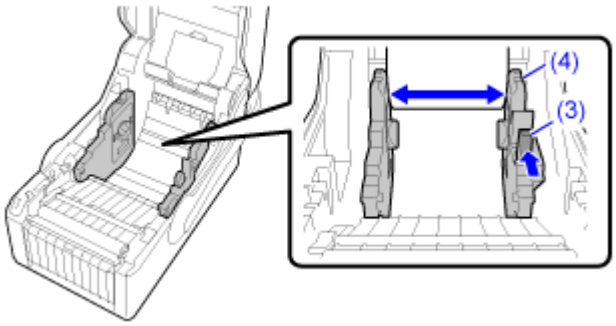
Loading the Media Roll (Printing in Dispenser Mode)

- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.

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



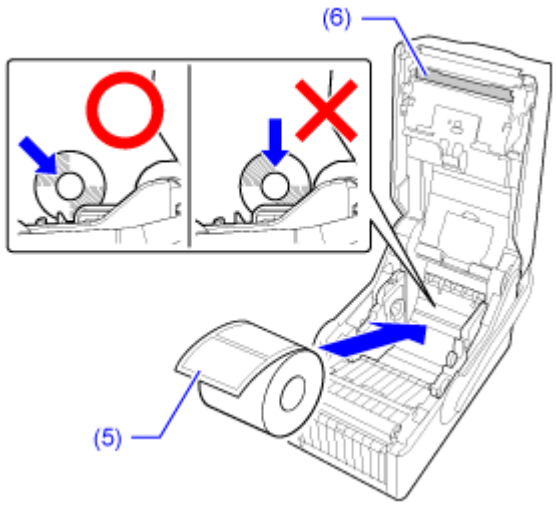
2. **While pushing the slide lever (3), move the media guide (4) which is on the right side to adjust its width to match the width of the media roll.**



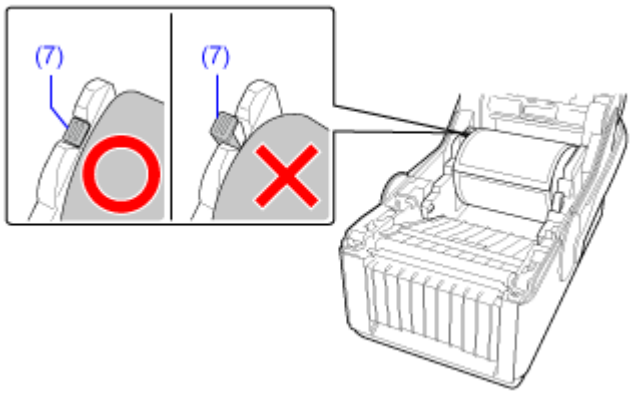
- Do not load the media roll yet.
- Change the flap position of the media guide in accordance with the core diameter of the media roll.

3. Load the media roll.

Set the media roll with the print side (5) facing the print head (6) and push it diagonally from the front.

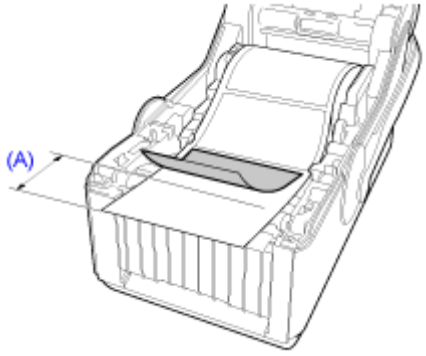


If the media roll is loaded correctly, the indicator part (7) of the media guide that moved to the side returns to its original position.



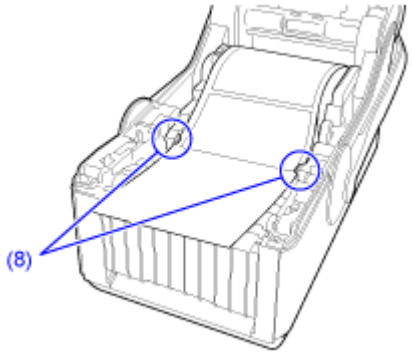
- There are two wind directions for the media. The illustration is for face-out media.

4. Pull out the media and peel off some labels (about 10 cm (3.94")) from the liner.

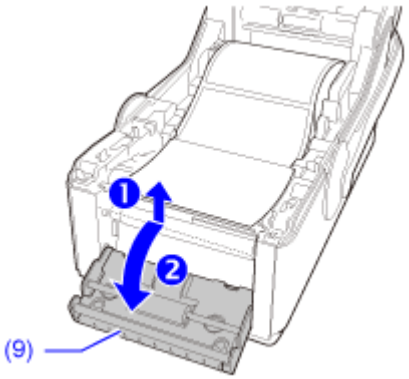


(A) About 10 cm (3.94")

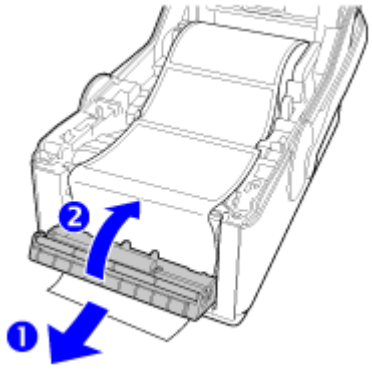
5. Pass the media below the tabs (8).



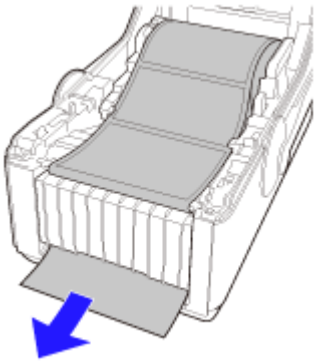
6. Lift the dispenser frame (9) on the front of the printer (❶) and tilt it toward the front (❷).



7. Pass the liner through the gap (opening) between the dispenser frame and the printer to the outside of the printer (❶), and close the dispenser frame (❷).



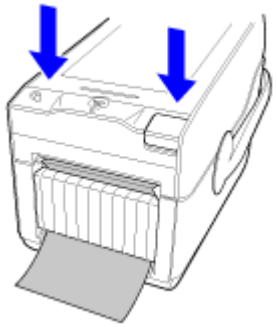
8. **Pull the liner lightly so that the liner or labels do not loosen.**



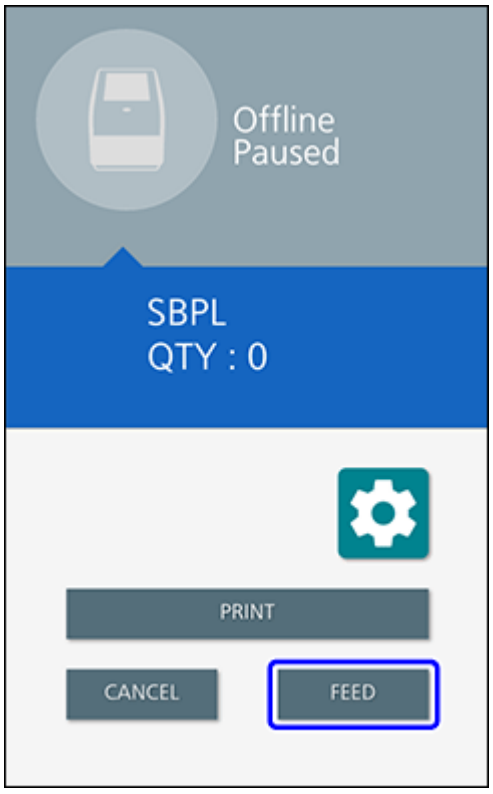
9. **Close the top cover.**

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.



10. Tap [FEED].



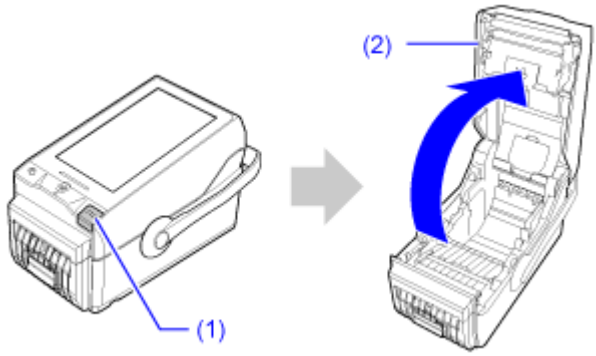
The media is fed to the print start position.

Loading the Media Roll (Printing in Cutter Mode/Partial Cutter Mode)

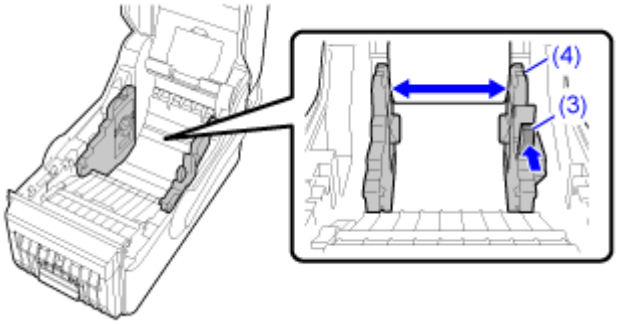
- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.
- Be careful not to touch the cutter blade.
- Adjust the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

- To print in cutter mode, the optional cutter kit is necessary.
- To print in partial cutter mode, the optional partial cutter kit is necessary.

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



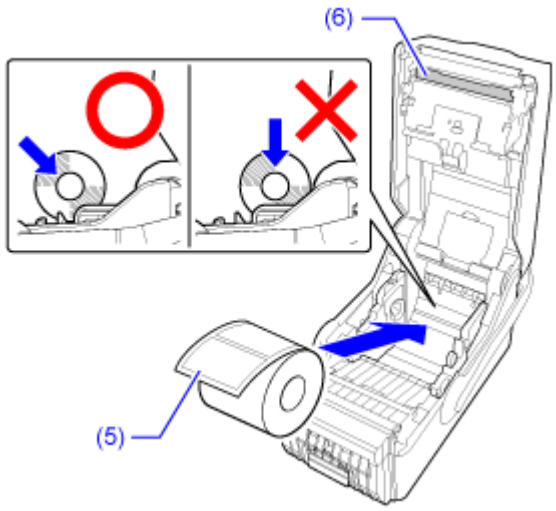
2. **While pushing the slide lever (3), move the media guide (4) which is on the right side to adjust its width to match the width of the media roll.**



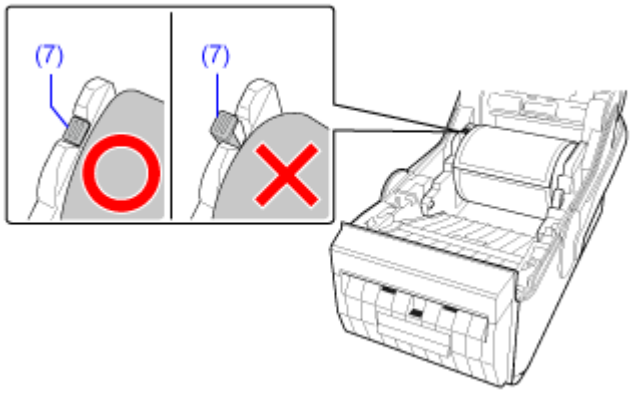
- Do not load the media roll yet.
- Change the flap position of the media guide in accordance with the core diameter of the media roll.

3. Load the media roll.

Set the media roll with the print side (5) facing the print head (6) and push it diagonally from the front.

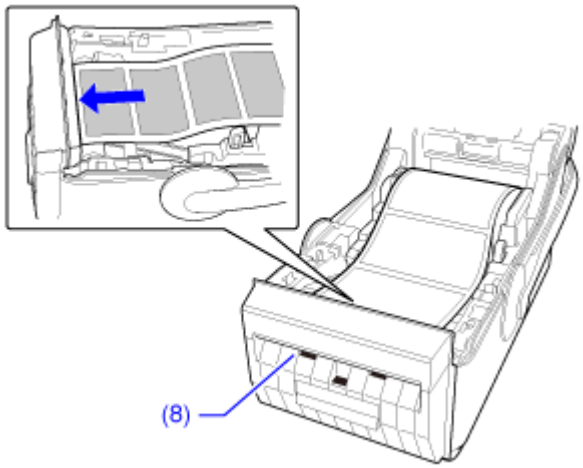


If the media roll is loaded correctly, the indicator part (7) of the media guide that moved to side returns to its original position.

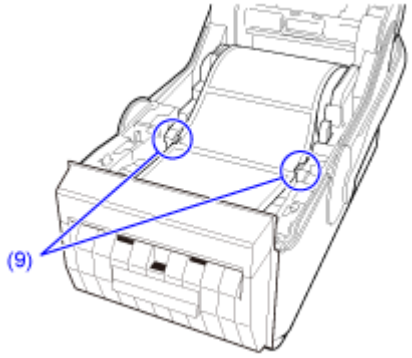


- There are two wind directions for the media. The illustration is for face-out media.

4. **Insert the media from the inside of the printer into the media discharge outlet (8).**



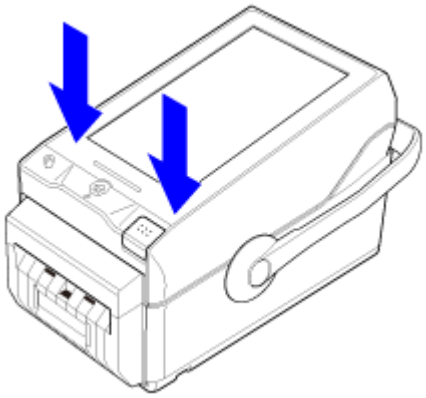
5. **Pass the media below the tabs (9).**



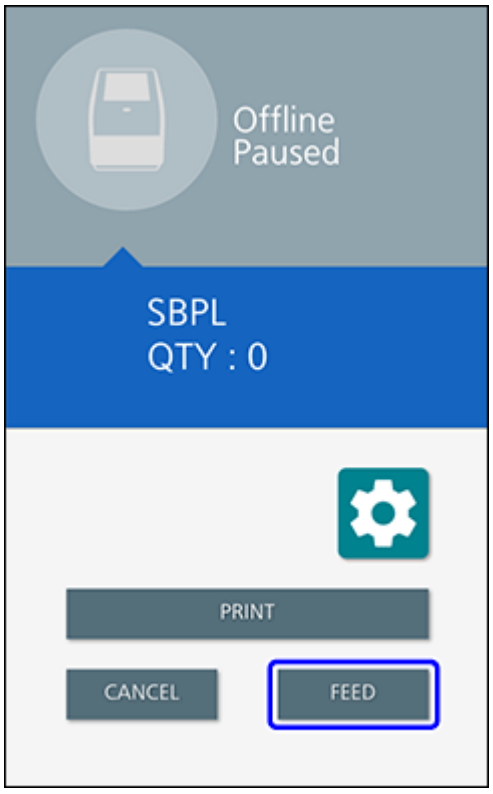
6. **Close the top cover.**

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. **Tap [FEED].**



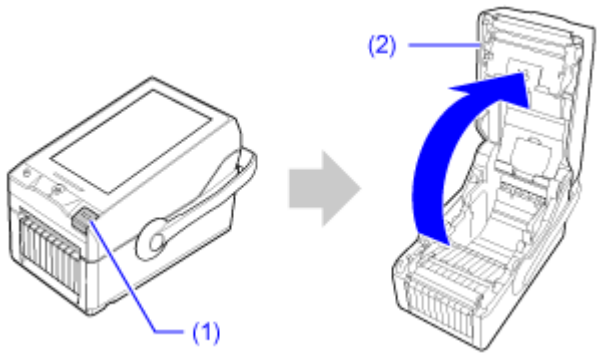
The media is fed to the print start position.

Loading the Media Roll (Printing in Linerless Tearoff Mode)

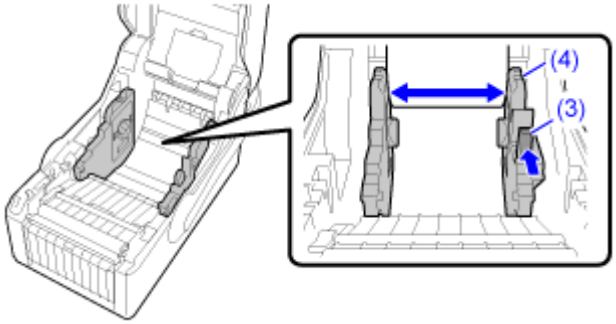
- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.

- When printing in linerless tearoff mode, install the optional linerless kit.

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



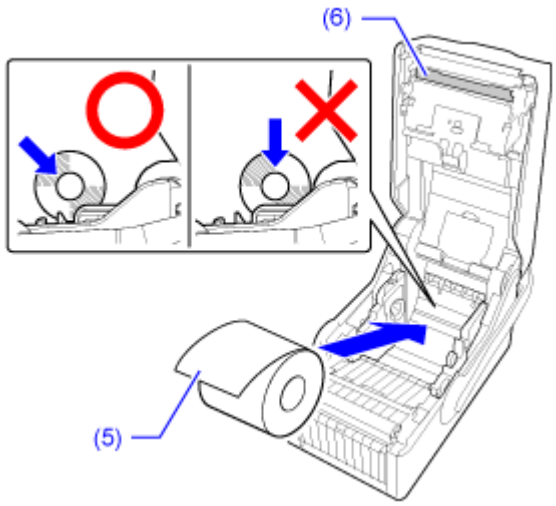
2. **While pushing the slide lever (3), move the media guide (4) which is on the right side to adjust its width to match the width of the media roll.**



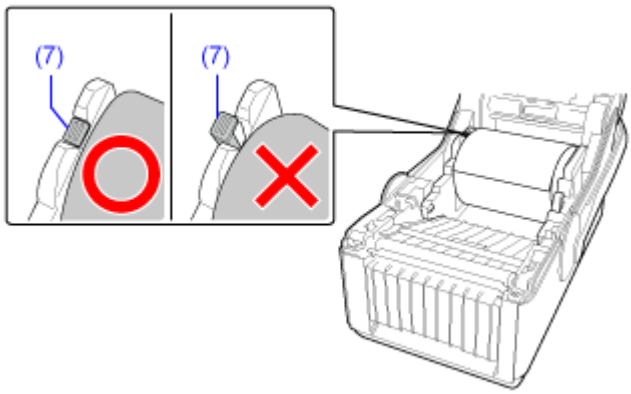
- Do not load the media roll yet.
- Change the flap position of the media guide in accordance with the core diameter of the media roll.

3. Load the media roll.

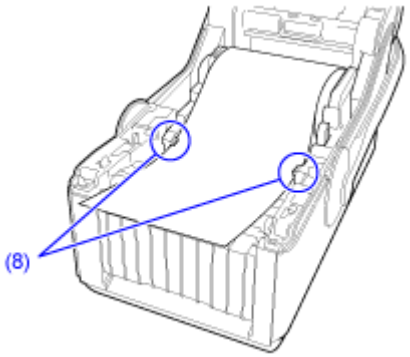
Set the media roll with the print side (5) facing the print head (6) and push it diagonally from the front.



If the media roll is loaded correctly, the indicator part (7) of the media guide that moved to side returns to its original position.



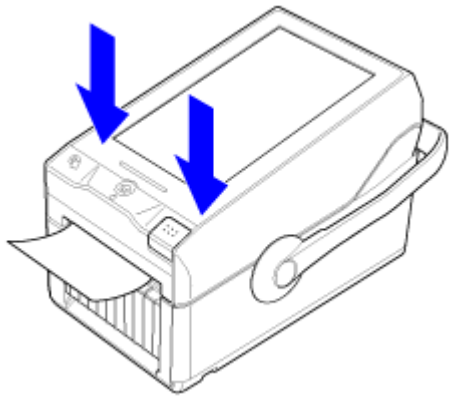
4. Pull out the media and pass it below the tabs (8).



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].**

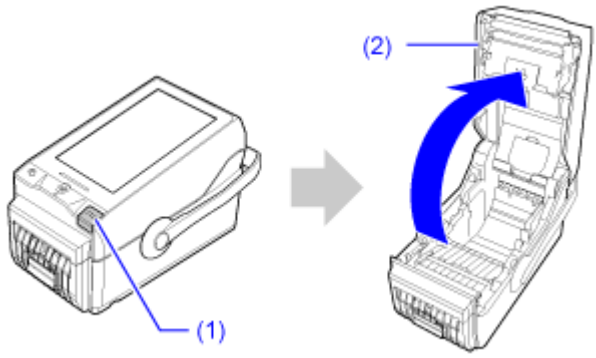
The media is fed to the print start position.

Loading the Media Roll (Printing in Linerless Cutter Mode)

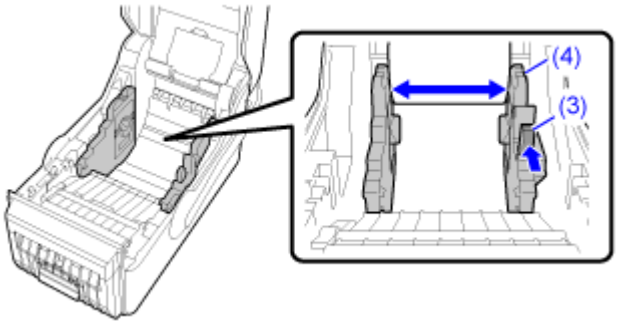
- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.
- Be careful not to touch the cutter blade.

- When printing in linerless cutter mode, install the optional linerless kit and cutter kit.

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



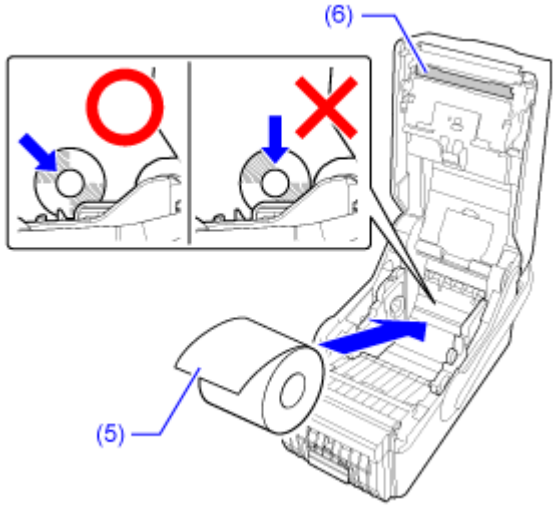
2. **While pushing the slide lever (3), move the media guide (4) which is on the right side to adjust its width to match the width of the media roll.**



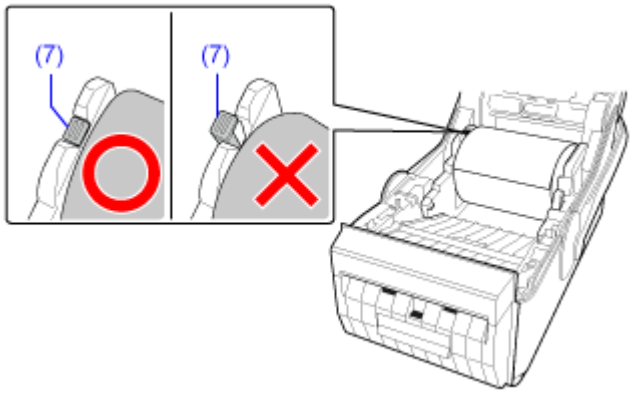
- Do not load the media roll yet.
- Change the flap position of the media guide in accordance with the core diameter of the media roll.

3. Load the media roll.

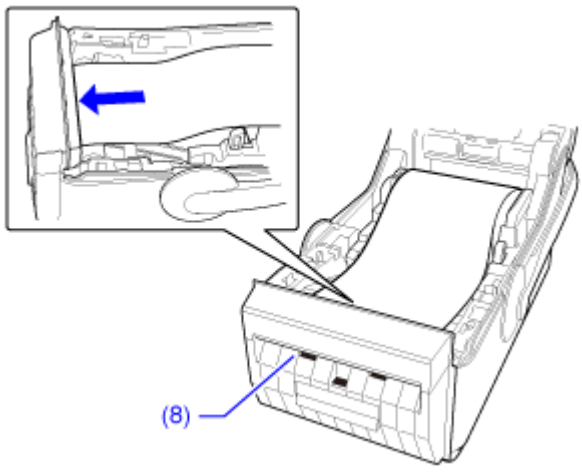
Set the media roll with the print side (5) facing the print head (6) and push it diagonally from the front.



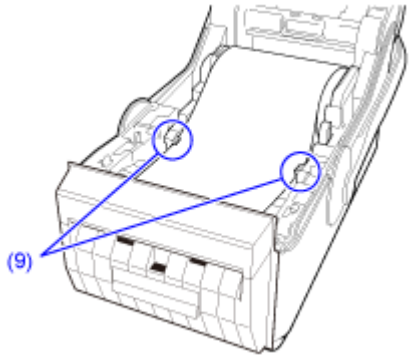
If the media roll is loaded correctly, the indicator part (7) of the media guide that moved to side returns to its original position.



4. Insert the media from the inside of the printer into the media discharge outlet (8).



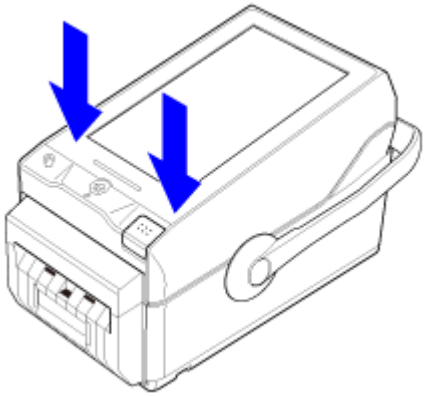
5. Pass the media below the tabs (9).



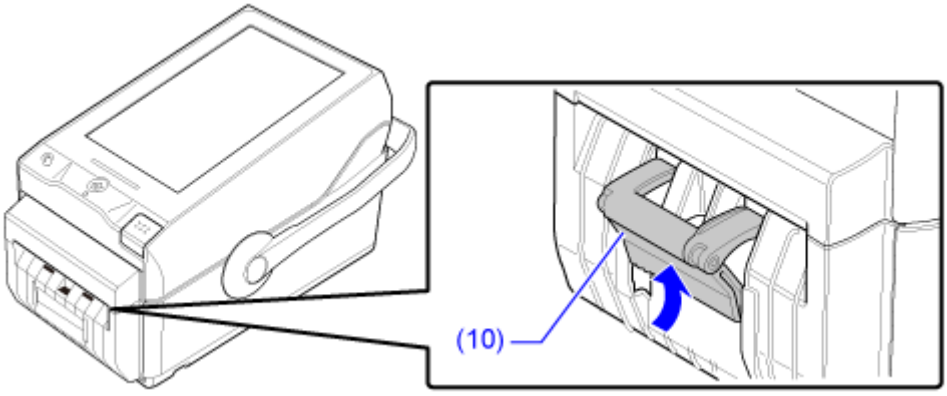
6. Close the top cover.

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

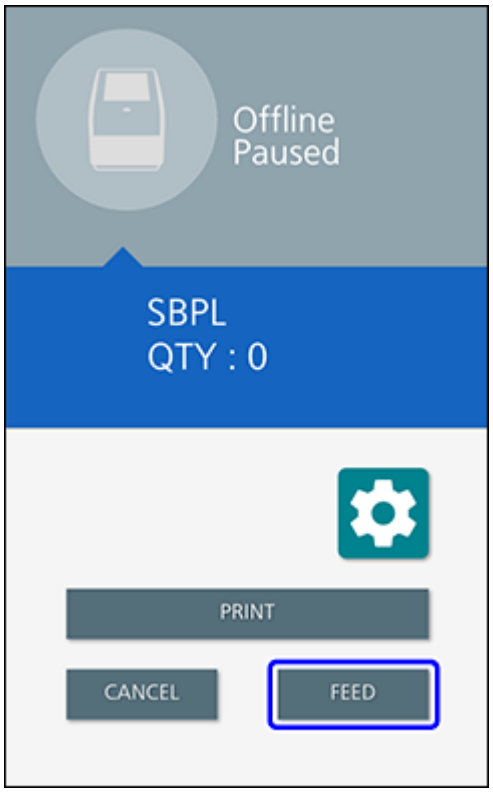
- When closing the top cover, be careful not to pinch your fingers.



7. Raise the label stand (10) firmly until it clicks.



8. **Tap [FEED].**



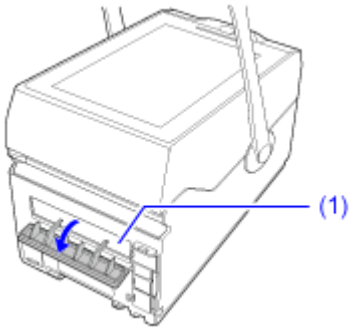
The media is fed to the print start position.

Loading the Fan-fold Media

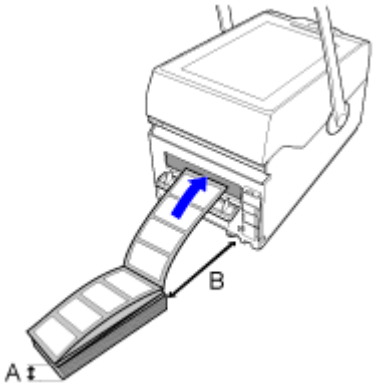
- The print head and its surroundings are hot after printing. Be careful not to touch it, to avoid being burned. Do not replace the media immediately after printing.
- Touching the edge of the print head with your bare hand could cause injury.

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

1. Open the media loading port (1) on the back of the printer.



2. Insert the fan-fold media from the media loading port.

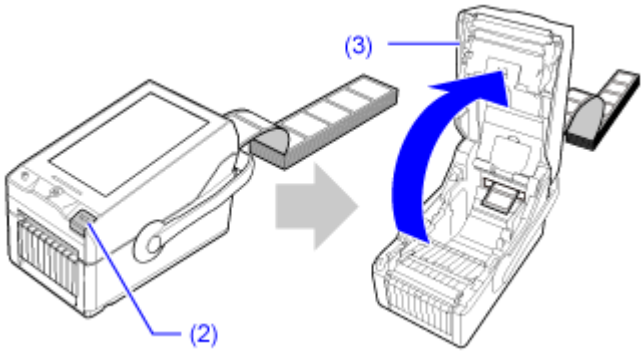


(A) Media height (from desk): within 100 mm (3.94")

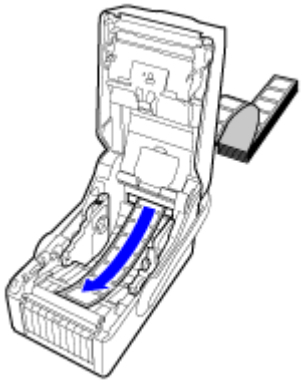
(B) Distance between the back side of the printer and the media: 150 mm (5.91") or more

- 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 printer is placed, place the media so as not to obstruct the printing operation.

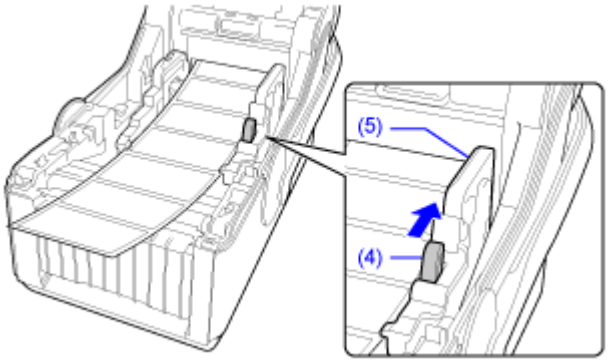
3. **Press the cover open button (2) to open the top cover (3).**



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



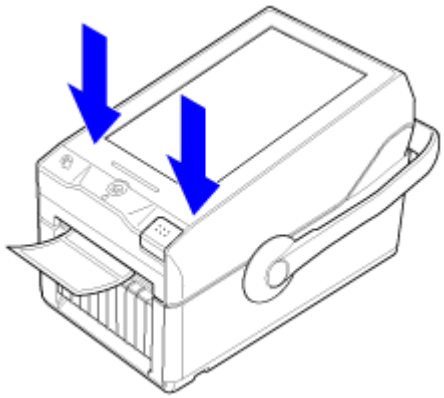
5. **Move the media guide (5) while pressing the slide lever (4), and adjust to the media width.**



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. **Tap [FEED].**

The media is fed to the print start position.

When to Replace Media

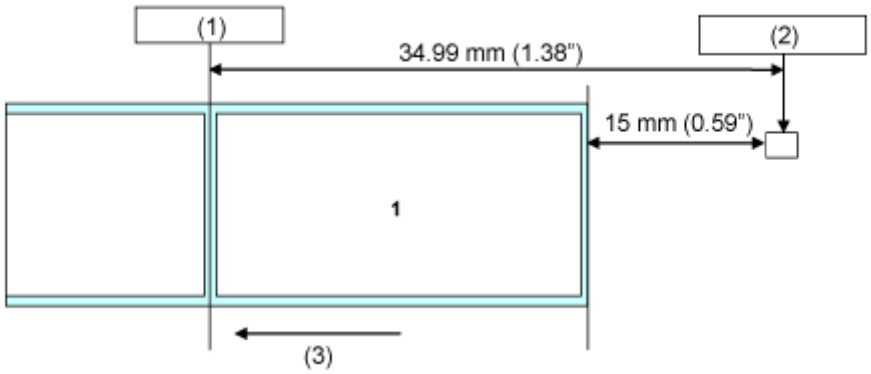
The printer has a paper end detection function that detects when the media runs out.

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

The conditions that trigger paper end vary depending on the operation of the printer.

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

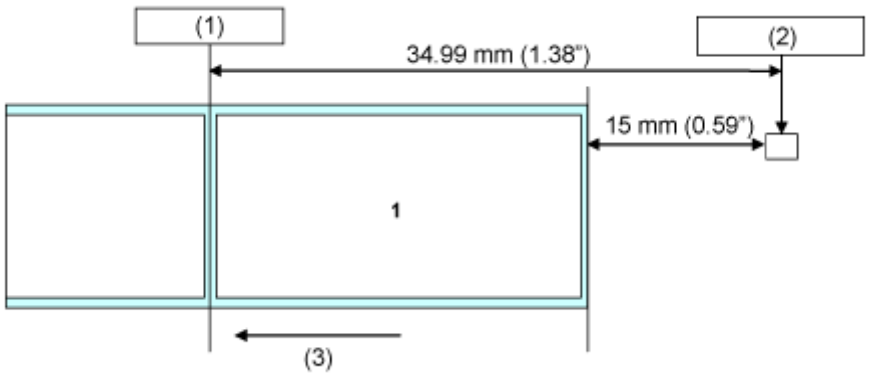
Select in [Printing] > [Advanced] > [Paper End] menu, or specify by command.

(3) Media 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 -15 mm (-0.59"), a paper end error occurs after completing the output of **1**.

   If the amount of media remaining is more than the distance between the print head position and paper end sensor -15 mm (-0.59"), a paper end error occurs right after detecting the paper end, and the printer will reprint after clearing the paper end error.



(1) Print head position

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

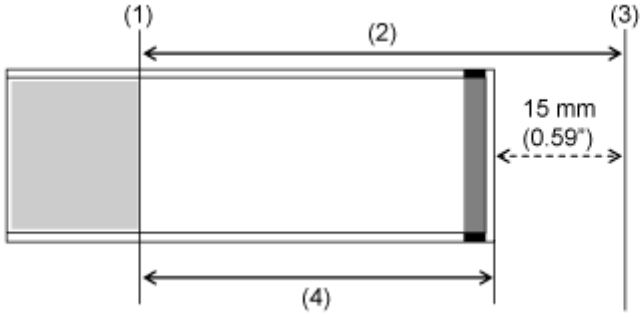
Select in [Printing] > [Advanced] > [Paper End] menu, or specify by command.

(3) Media 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:

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



(1) Print head position

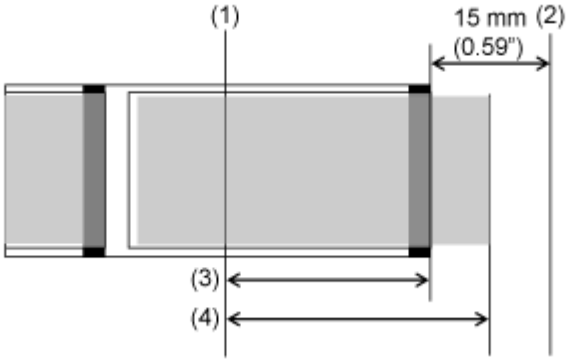
(2) Distance between the print head position and paper end sensor

(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 printer cannot finish the print job. Printing stops immediately and a paper end error occurs.



(1) Print head position

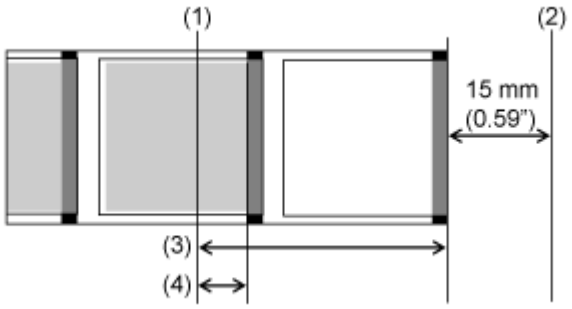
(2) Paper end sensor

(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 printer will finish the print job and a paper end error will occur.



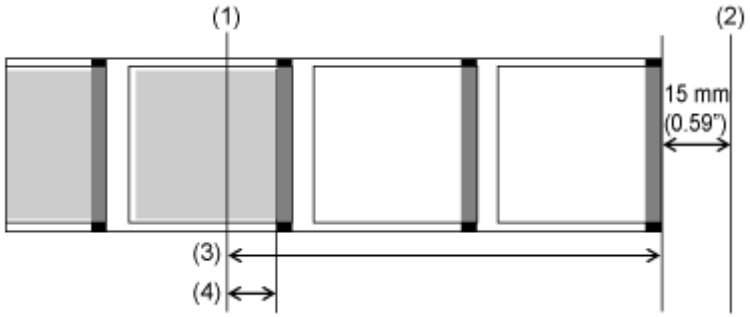
(1) Print head position

(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, a paper end error will occur only after finishing the label currently being printed.



(1) Print head position

(2) Paper end sensor

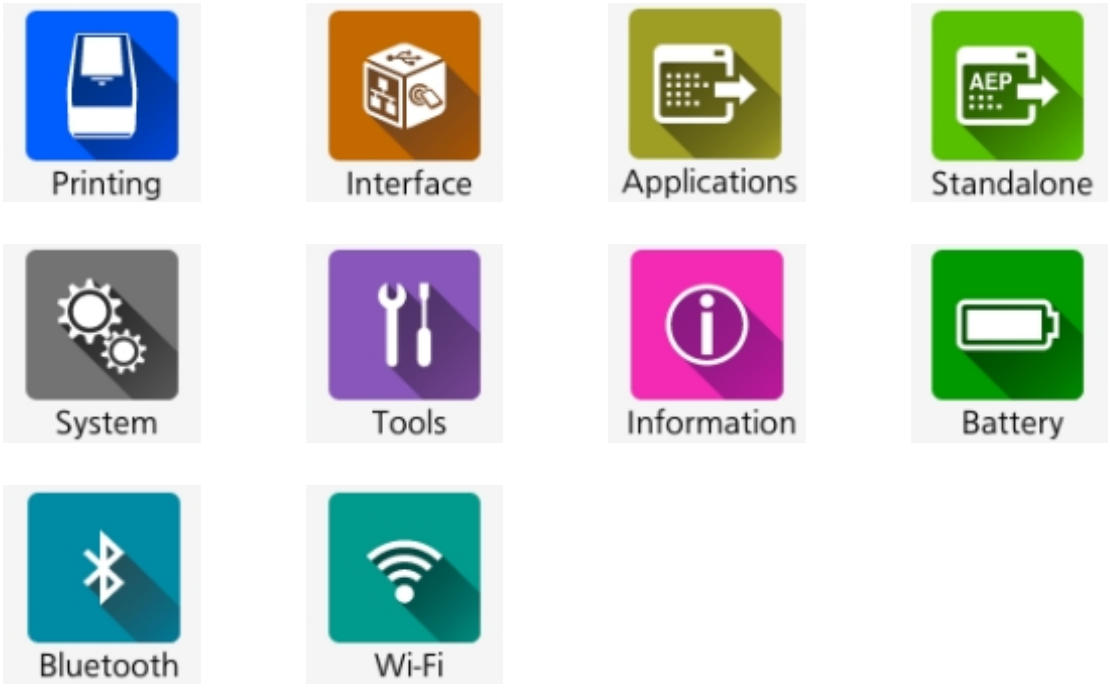
(3) Amount of media remaining

(4) Amount of printing remaining

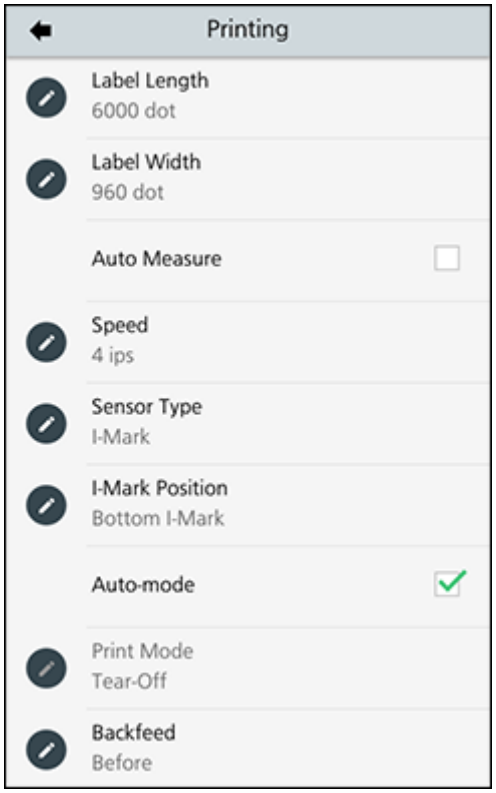
Printer Settings

The [Settings] Menu

There are menus of the following categories in the [Settings] menu of this printer. Click the icon to jump to the description of each menu item.



[Printing] Menu



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

[Label Length]

Set the length of the media.

The setting range of the label length is 1 to 6000 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches 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 of the label width is 1 to 960 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- Set the label size to a value that includes the liner.

[Auto Measure]

The printer automatically measures the length of the media.

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

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

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 / (Standby/Home) button to show the Home screen.
4. Open the top cover. (Cover Open error occurs.)
5. Close the top cover.
6. When you press the / (Standby/Home) button again, the printer feeds two pieces of label and measures the label length.
7. The measured label length is saved in [Label Length].

- When you enable [Auto Measure], this function executes in the following conditions:
  - When the printer changes to Online mode for the first time after being powered on
  - When the printer changes to Online mode after the top cover is opened/closed
  - When the printer changes to Online mode after the setting of [Sensor Type] is changed
- When [Protocol] in the [Applications] menu is changed to [SZPL], [Auto Measure] is enabled and executed automatically.

[Speed]

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

- When only the optional battery is installed, the setting range is from 2 to 4 ips (50.8 to 101.6 mm/sec).
- When [Speed] is set to more than 5 ips (127 mm/sec) while the printer is connected to an AC power supply, it changes to 4 ips (101.6 mm/sec) if the battery starts to be used.
- 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 type sensor.

I-Mark

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

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

[I-Mark Position]

Set the position of the I-mark.

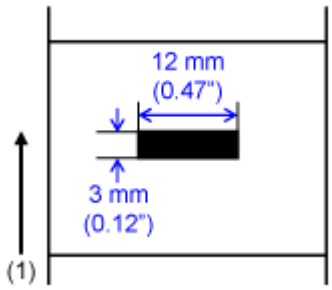
Appears only if you have selected [I-Mark] in the [Sensor Type] menu.

The options are as follows:

Center I-Mark

Select when the I-mark is positioned at the center.

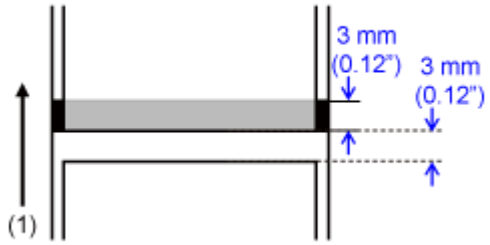
The I-mark position is determined by the label size.



(1) Media feed direction

Bottom I-Mark

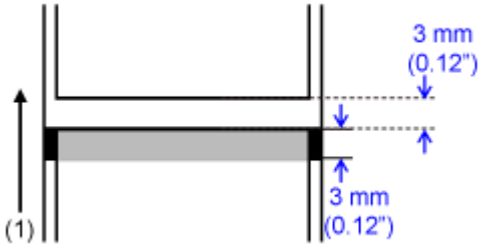
Select when the I-mark is positioned at the bottom.



(1) Media feed direction

Top I-Mark

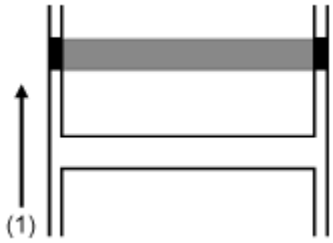
Select when the I-mark is positioned at the top.



(1) Media feed direction

Custom I-Mark

Custom I-mark allows using labels where the I-mark position does not correspond with [Center I-Mark], [Bottom I-Mark] and [Top I-Mark]. With the [I-Mark Offset] setting, you can set the position of the I-mark. The stop position and the printed image will be adjusted accordingly but the backfeed distance will not change.



This I-mark position is an example.

(1) Media feed direction

- If you have selected [Cutter], [Partial cutter], [Linerless cutter] or [Linerless tearoff] in the [Print Mode] menu, [Center I-Mark] is not available.

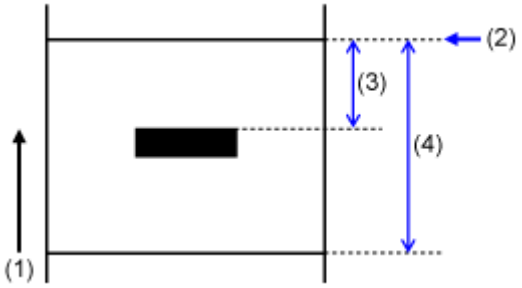
[Label Size]

Set the label size to determine the position of the center I-mark.

Appears only if you have selected [Center I-Mark] in the [I-Mark Position] menu.

The options are as follows:

- [16mm]
- [20mm]
- [25mm]
- [35mm]
- [38mm]



(1) Media feed direction

(2) Print position

(3) I-mark position

(4) Label size

The center I-mark position (3) is determined by the label size (4).

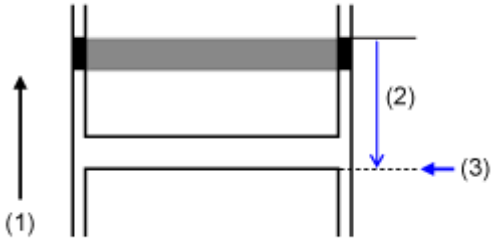
Label size (4)	I-mark Position (3)
16.0 mm	4.7 mm
20.3 mm	7.0 mm
25.4 mm	13.0 mm
35.0 mm	-3.0 mm (rear label end)
38.1 mm	9.0 mm

[I-Mark Offset]

Set the I-mark offset position.

Appears only if you have selected [Custom I-Mark] in the [I-Mark Position] menu.

The setting range is from 0 to 999 dots.



(1) Media feed direction

(2) I-mark position

(3) Print position

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[Auto-mode]

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

- With the standard model, operate in dispenser mode if you have loaded media for dispenser mode and tear-off mode if you have loaded media for continuous/tear-off mode.
- Operate in cutter mode if you have installed the optional cutter kit.
- Operate in partial cutter mode if you have installed the optional partial cutter kit.

[Print Mode]

Set the print mode.

The options are as follows:

Continuous

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

Tear-Off

After printing the specified number of media, the printer feeds the last printed media so that it is fully extended out of the printer'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.

Linerless tearoff

The printer feeds each printed media so that it is fully extended out of the printer's front for removal. After the printed media is torn off manually, the next media retracts and positions itself for printing. When using a linerless label, install the optional linerless kit and select [Linerless tearoff] instead of [Tear-Off].

Dispenser

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

Cutter

Cuts each media while printing the specified number of media. You can specify this option only if you have installed the cutter kit.

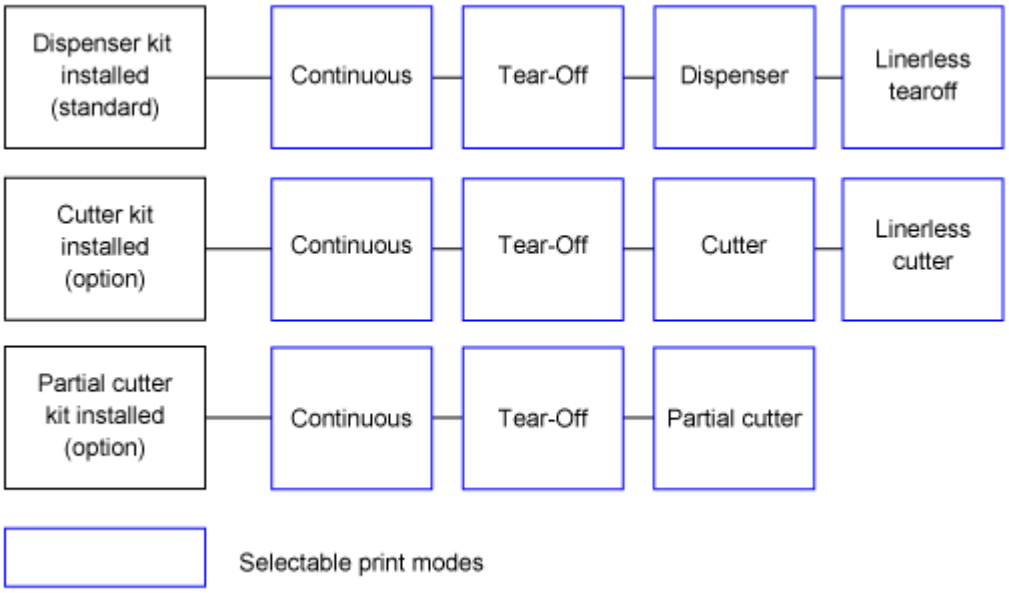
Linerless cutter

Prints and cuts each media. After the cut media is removed, the next media retracts and positions itself for printing. You can specify this option only if you have installed the cutter kit. When using a linerless label, install the optional linerless kit and select [Linerless cutter] instead of [Cutter].

Partial cutter

Cuts each media leaving a part of the media while printing the specified number of media. You can specify this option only if you have installed the partial cutter kit.

- The selectable print modes differ in accordance with the installed option.



- You cannot set the [Print Mode] if [Auto-mode] is enabled.

[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 front part of the next media to the print head position. For dispenser mode, backfeed the front part of the next label after dispensing the label.

Before

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

- If you have selected [Tear-Off] or [Partial cutter] in the [Print Mode], only [Before] is available.
- If you have selected [Linerless tearoff] or [Linerless cutter] in the [Print Mode], only [After] is available.
- If you have selected [Continuous] in the [Print Mode], only [None] is available.

[Eject Cut]

Set the Eject cut motion for the last printed media. Cut the last media after the specified timing.

Appears only if you have selected [Partial cutter] in the [Print Mode] menu.

The setting range is from 0 to 5 (sec).

If you set this to 0, the setting is off.

[Darkness]

Specify the print darkness from 10 steps.

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

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

[Imaging]

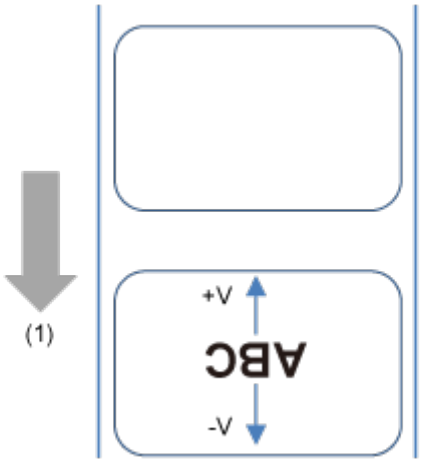
Set the print reference position in the vertical and horizontal directions.

The setting items are as follows:

Vertical

Set the print position in the vertical direction.

Set the correction value from the standard printing position as "-" for the direction of the paper feed and "+" for the direction opposite to the paper feed.



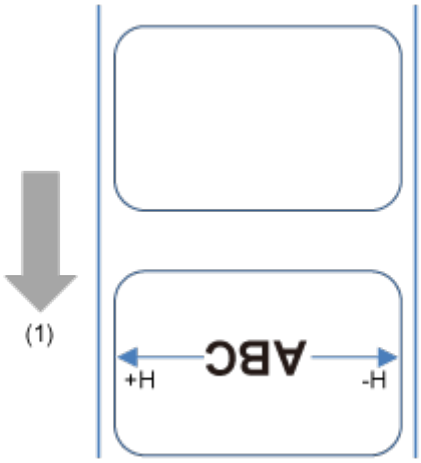
(1) Feed direction

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

Horizontal

Set the print position in the horizontal direction.

Set the correction value from the standard printing position when facing the printer as "-" to adjust to the right side and "+" to adjust to the left side.

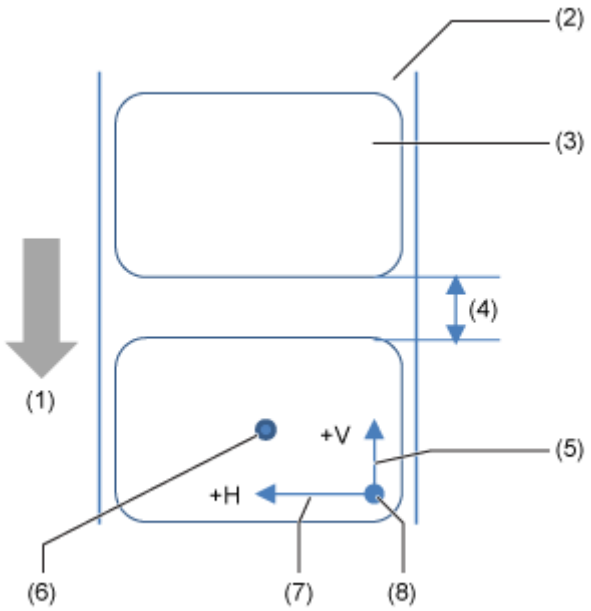


(1) Feed direction

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

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches 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

(5) Adjustment of vertical base reference point

(6) Base reference point after adjustment

(7) Adjustment of horizontal base reference point

(8) Print reference position

[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.

Dispenser

Adjusts the dispenser sensor.

- Does not appear when the optional cutter kit or partial kit is installed.

Linerless

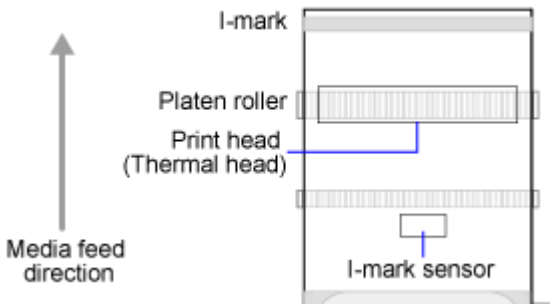
Adjusts the linerless sensor.

- Appears only if the optional cutter kit or partial cutter kit is installed.

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

1. Open the top cover. (Cover Open error occurs.)
2. Load the media.
   - **For [Gap + I-Mark]/[Gap]/[I-Mark]**

     Remove the label from the liner and pass the liner above the I-mark sensor so that it does not detect the I-mark (black mark).



   - **For [Dispenser]**

     Set the media for dispenser mode and pass the label through the media discharge outlet.
   - **For [Linerless]**

     Pass the media through the discharge outlet of the optional cutter/partial cutter kit.
3. Close the top cover.
4. Tap the type of sensor from the list to be adjusted.
5. When the confirmation screen appears, tap to start the sensor adjustment.
6. The result of the sensor adjustment is shown. To exit the adjustment, tap .

   If a failure message appears, set the media correctly and try again.
7. Set to Offline mode. Tap [FEED] to confirm that the media is fed correctly.

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

[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)

[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 [Gap Slice Level] value. Set the [Gap Slice Level] to the level calculated in step 1.
4. Tap to confirm the value.

- If you set the [Gap Slice Level] to 0.0 (V), the printer sets the slice level automatically.

[I-Mark Levels]

Manually set the I-mark sensor level.

The setting procedure is as follows:

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

1. Pass the media (attached with liner) above the 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)

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

- If you set the [I-Mark Slice Level] to 0.0 (V), the printer sets the slice level automatically.

[Dispenser Levels]

Manually set the dispenser sensor level.

Does not appear when the optional cutter kit or partial kit is installed.

The setting procedure is as follows:

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

1. Remove the media.
2. Tap [Dispenser Levels] in the [Calibrate] menu.
3. Change the [Emit] value until the [Sensor] value is below 0.5 (V).
   Set the [Emit] value as low as possible.
4. If the [Sensor] value does not decrease below 0.5 after you changed the [Emit] value, change the [Receive] value.
5. Take a note of the [Sensor] value from the above procedure. This is the "Low" level value for the dispenser sensor.

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

1. Load the media.
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 dispenser 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 dispenser 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 dispenser sensor are as follows:
   - Low (without media) < 0.5 (V)
   - High (media loaded) - Low ≥ 1.0 (V)

[Linerless Levels]

Manually set the linerless sensor level.

Appears only if the optional cutter kit or partial cutter kit is installed.

The setting procedure is as follows:

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

1. Remove the media.
2. Tap [Linerless Levels] in the [Calibrate] menu.
3. Change the [Emit] value until the [Sensor] value is below 0.5 (V).
   Set the [Emit] value as low as possible.
4. If the [Sensor] value does not decrease below 0.5 after you changed the [Emit] value, change the [Receive] value.
5. Take a note of the [Sensor] value from the above procedure. This is the "Low" level value for the linerless sensor.

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

1. Load the media.
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 linerless 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 linerless 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 linerless sensor are as follows:
   - Low (without media) < 0.5 (V)
   - High (media loaded) - Low ≥ 1.0 (V)

[Head Check]

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

The options are as follows:

Off

Disable the Head Check.

All

Check the entire print area.

Barcode

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

- Head check is a reference for checking for a broken element of the print head. This function does not guarantee barcode readability. A regular barcode reader test is required. When a void of printing got up, the head check function may not work immediately. Some gaps may occur.

  For the outputted label after the head error, perform the scanner reader of the printed barcode to check the label.

[Head Check Mode]

Set the method for head check.

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 command ESC+A1.
- 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 and print darkness.

The setting items are as follows:

[Offset]

Correct the offset position.

Offset adjusts the backfeed/stop position for Tear-off/Cut/Dispense operation.

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

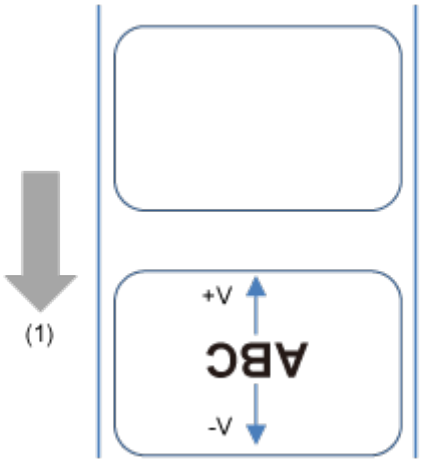
The setting range is from -45 to +45 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[Pitch]

Pitch adjusts the leading edge of media position thus effects the vertical print position placement.

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



(1) Feed direction

The setting range is from -45 to +45 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] 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.

[Start Online]

Set whether to power on the printer in Online mode.

- This setting is linked to the [Standalone] > [Initial Display at Start-Up] menu. When [Start Online] is enabled, [Application] is enabled for [Initial Display at Start-Up]. When [Start Online] is disabled, [Home Screen] is enabled for [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.

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 printer feeds the media when it is powered on and changes to Online mode.

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

[Feed At Power On]

Set whether to automatically feed the media at power on.

Feed the media when the printer is powered on and changes to Online mode.

Do not feed the media when changing to Online mode after the printer is powered on.

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

[Finisher Feed]

Set the media feed amount for Tear-off, 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 is from 0 to 3060 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[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 printer settings, set whether to prioritize the settings through the printer or through commands.

The options are as follows:

Commands

Prioritize the settings through commands.

Settings

Prioritize the settings through the printer.

[Reprint]

Enable or disable the reprint function.

If you enabled [Reprint], you can tap [REPRINT] on the Online screen to print the previous data again.

- The previous data will be lost if you power off the printer.

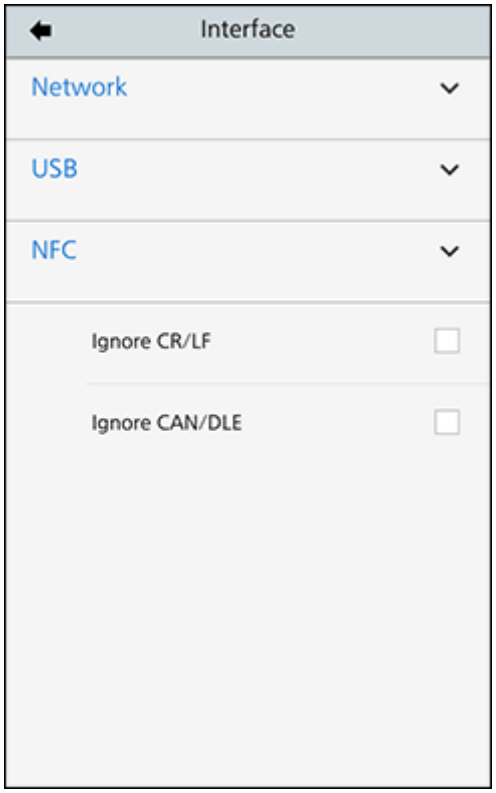
[Print End Position]

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 is from 0 to 6000 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[Interface] Menu



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

[Network]

This menu is to use LAN for the interface between the host and the printer.

The setting items are as follows:

[Settings] (USB+LAN Model Only)

Set the LAN settings.

The setting items are as follows:

[LAN] (USB+LAN Model Only)

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

The setting items are as follows:

[IPv4 (LAN)] (USB+LAN Model Only)

Set IPv4 for the LAN.

- After doing the settings, tap or press the / (Standby/Home) button. A message asking you whether to save the settings appears. Tap on the message to enable the new settings. Tap to cancel the new settings and return to the previous settings.
- If there are any errors with the input information, a message asking you whether to discard changes appears. Tap on the message to discard the changes. Tap to close the dialog.

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

The setting items are as follows:

[Mode] (USB+LAN Model Only)

Select the IP address assignment method.

The options are as follows:

DHCP

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

Static

Manually set the IP address, gateway and subnet mask.

[DHCP] (USB+LAN Model Only)

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

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

[IP Address] (USB+LAN Model Only)

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] (USB+LAN Model Only)

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.

Each group of the address can be set 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] (USB+LAN Model Only)

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] (USB+LAN Model Only)

If you have selected [Static] in the [Mode] menu, set and check DNS server addresses.

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. Tap ⊕ to add different IP addresses.
- The DNS server addresses set here are shared with the settings in [Wi-Fi] > [Wi-Fi Setting] > [IPv4 (Wi-Fi)].

[IPv6 (LAN)] (USB+LAN Model Only)

Set the IPv6 for the LAN.

- After doing the settings, tap ⬅ or press the ⏻/ ⌂ (Standby/Home) button. A message asking you whether to save the settings appears. Tap ✓ on the message to enable the new settings. Tap ✕ to cancel the new settings and return to the previous settings.
- If there are any errors with the input information, a message asking you whether to discard changes appears. Tap ✓ on the message to discard the changes. Tap ✕ to close the dialog.

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

The setting items are as follows:

[Mode] (USB+LAN Model Only)

Select the IP address assignment method or disable IPv6.

The options are as follows:

Disable

Disable IPv6.

Auto

Automatically generate the IP address and gateway (stateless mode).

DHCP

Automatically retrieve the IP address and gateway from the DHCP server (stateful mode).

Static

Manually set the IP address, gateway and prefix length.

[DHCP] (USB+LAN Model Only)

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

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

[IP Address] (USB+LAN Model Only)

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:

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

[Prefix Length] (USB+LAN Model Only)

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

The setting range is from 1 to 128.

[Gateway] (USB+LAN Model Only)

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:

0:0:0:0:0:0:0:0 to ffff: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] (USB+LAN Model Only)

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

The setting range is as follows:

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

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

[Ports] (USB+LAN Model Only)

Set the TCP/IP port number.

Roles of Port1 to Port3

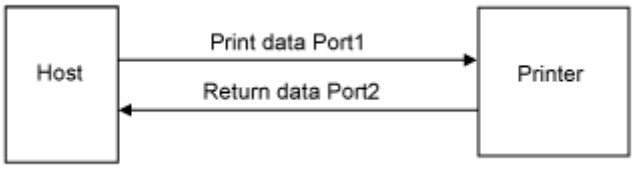
In the socket server function of TCP/IP, either of the following connection methods can be used.

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

Two-port connection

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

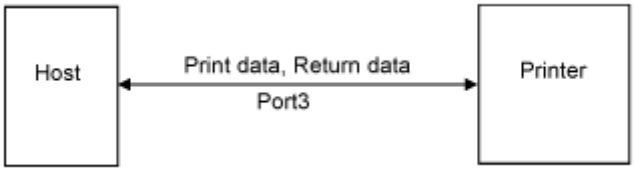
Two-port connection is available when the communication protocol is Status4.



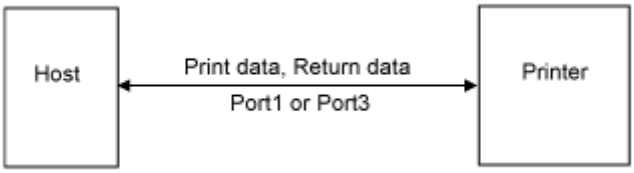
One-port connection

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

When the communication protocol is Status4, Port3 is used.



When the communication protocol is Status3 or Status5, Port1 or Port3 is used.



The setting items are as follows:

[Port1] (USB+LAN Model Only)

Set the port number of Port1.

For the two-port connection of Status4, this port is used for receiving print data. For the one-port connection of Status3/Status5, this port is used for both receiving print data and returning the printer status.

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

[Port2] (USB+LAN Model Only)

Set the port number of Port2.

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

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

- This setting is disabled when AEP mode is enabled.

[Port3] (USB+LAN Model Only)

Set the port number of Port3.

For the one-port connection of Status3/Status4/Status5, this port is used for both receiving print data and returning the printer status.

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

- You can change the return status format of Port3 to legacy status by enabling [Legacy Status for Port 9100].

[Flow Control] (USB+LAN Model Only)

Set the communication protocol.

The options are as follows:

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

[TCP Connection Queue] (USB+LAN Model Only)

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

☑

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

- When you enable the setting, be sure to use one port connection for Status3, Status4, and Status5. Operation using two port connections for Status4 is not guaranteed.

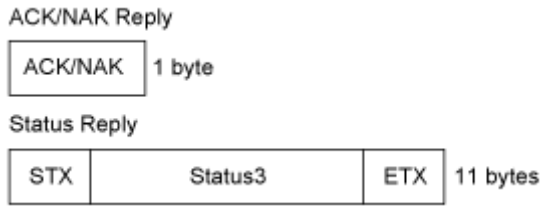
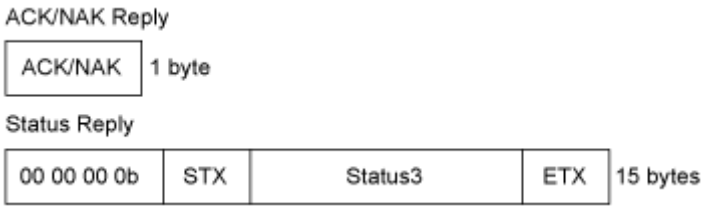
[Legacy Status for Port 9100] (USB+LAN Model Only)

Set whether to change the return status format of Port3 to legacy status.

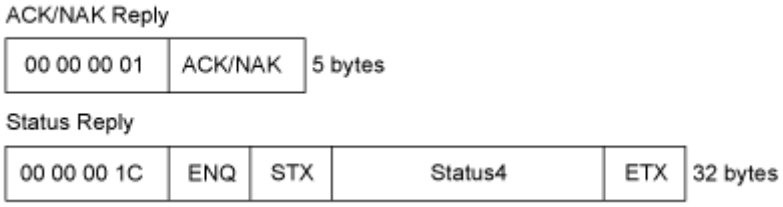
Does not appear if you have selected [NONE] in the [Flow Control] menu.

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

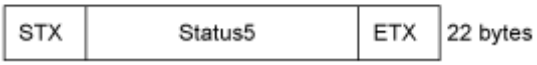
Status3

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	
Legacy status ([Legacy Status for Port 9100] is enabled)	

Status4

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	
Legacy status ([Legacy Status for Port 9100] is enabled)	

Status5

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	ACK/NAK Reply No Reply Status Reply 
Legacy status ([Legacy Status for Port 9100] is enabled)	ACK/NAK Reply No Reply Status Reply

[BCC] (USB+LAN Model Only)

Enable or disable the BCC check function.

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

[Delay Reply ENQ] (USB+LAN Model Only)

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

Available only if you have selected [STATUS3], [STATUS4 ENQ], [STATUS5], or [NONE] 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] (USB+LAN Model Only)

Set the interval for the cyclic status response.

Available only if you have selected [STATUS4] in the [Flow Control] menu.

The setting range is from 100 to 999 ms.

[Proxy (LAN)] (USB+LAN Model Only)

Set the proxy for the LAN.

The setting items are as follows:

[Enabled] (USB+LAN Model Only)

Enable or disable use of proxy.

- To enable the proxy, [Server] should be set and [Exclude] must contain at least 127.0.0.1 and localhost.

[Server] (USB+LAN Model Only)

Set the name or IP address of the proxy server.

Example: http://192.168.1.11:3128

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

[Exclude] (USB+LAN Model Only)

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

- Exclude must contain at least 127.0.0.1 and localhost.

[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 printer.

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 printer's FTP server and clients.

Specify the maximum number of seconds that the printer'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.

Initial setting: 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 Real-Time and On-Demand periodic notification, it is necessary to first create an SOS account and add the printer.

The setting items are as follows:

[SOS Mode] (SOS users only)

Select or disable the SOS (SATO Online Services) mode.

The options are as follows:

Disabled

Disables SOS.

On-Demand

Shows the printer information 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.

Real-Time

Sends the printer information to the SOS cloud in real time using the LAN/wireless LAN connection.

The confirmation screen is shown if you select [Real-Time]. To agree on the Terms of Use and enable the Real-Time mode, tap .

[Allow Remote Control] (SOS users only)

Set whether or not to allow setting the printer (remote control) from SOS (SATO Online Services).

Appears 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 printer reboots.

Always

Always allows remote control from SOS.

[SOS Association] (SOS users only)

Shows the serial number and association code that are necessary when adding the printer to SOS (SATO Online Services).

Appears only if you have selected [On-Demand] or [Real-Time] in the [SOS Mode] menu.

In Real-Time Mode

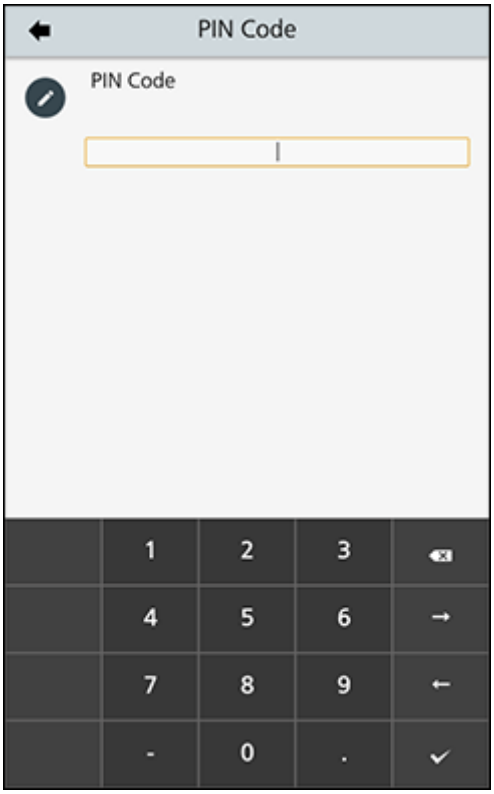
The screen shown below appears after the standby screen.

1. In the SOS specialized application, scan the QR code or input the information displayed on the screen.
2. Tap ✓ to complete SOS association.

In On-Demand Mode

1. In the SOS specialized application, scan the QR code or input the information displayed on the screen, and then tap ✓.

2. When a PIN code input screen appears, input the PIN code shown on the application and tap ✓ on the on-screen keyboard.



The screen including the association code appears.

3. In the SOS specialized application, scan the QR code or input the information displayed on the screen.
4. Tap ✓ to complete SOS association.

- To add a printer to SOS, refer to the SOS user manual.
  http://www.sato-sos.com/en/support/sos_usermanual.pdf

[Contact Information] (SOS users only)

Sets the SOS (SATO Online Services) contact information that is displayed at the time of the error outbreak.

Appears only if you have selected [On-Demand] or [Real-Time] in the [SOS Mode] menu.

The setting items are as follows:

Phone Number

Sets the phone number that is displayed on the error screen.

Up to 20 characters can be set.

[Periodic Notification] (SOS users only)

Sets the function for periodic SOS (SATO Online Services) notifications.

Appears only if you have selected [On-Demand] in the [SOS Mode] menu.

In this function, the printer 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.

Weekly

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

Monthly

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

Counter

Displays the notification screen when the counter of a consumable reaches to the specified value.

Offline

Displays the notification screen when the printer 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 the periodic notification.

Appears 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] (SOS users only)

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] (SOS users only)

Shows the print distance of the print head for the last periodic notification.

[Next Update] (SOS users only)

Shows the print distance of the print head for the next periodic notification.

[Current Value] (SOS users only)

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] (SOS users only)

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] (SOS users only)

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

[Next Update] (SOS users only)

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

[Current Value] (SOS users only)

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 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 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 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 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 selected [Weekly] in the [Type] menu.

The setting range is from Monday to Sunday.

[Day] (SOS users only)

Sets the date to perform the periodic notification.

Appears only 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 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 SOS update.

Appears 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

Prints with 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)

Specify the offset position of the QR code.

Appears only if you have selected [On-Demand] in the [SOS Mode] menu.

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

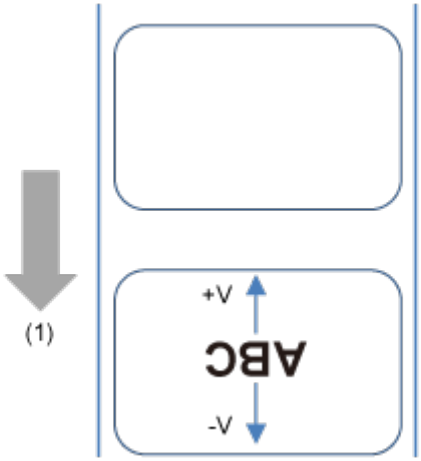
The options are as follows:

Vertical

Specify the offset position of the QR code in the vertical direction.

Set the correction value from the standard printing 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.

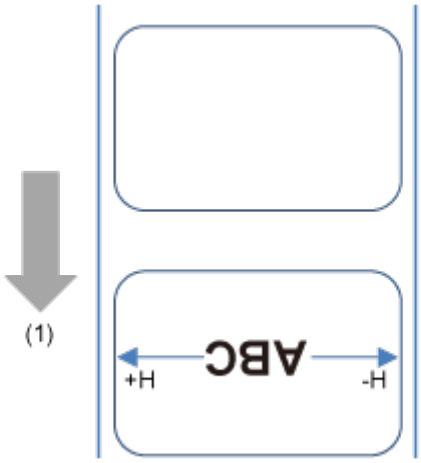


(1) Feed direction

Horizontal

Specify the offset position of the QR code in the horizontal direction.

Set the correction value from the standard printing position when facing the printer 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 is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[SOS Update] (SOS users only)

Shows the current printer information with a QR code. Scan the QR code with a tablet or smartphone, and send it to the SOS cloud.

Appears only if you have selected [On-Demand] in the [SOS Mode] menu.

A specialized application is required to scan the QR code.

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 item is as follows:

[ARP Announcement]

Set the functions for ARP announcement.

The ARP announcement is useful for updating other hosts mapping of a hardware address when the IP address or MAC address of the sender has changed.

The 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: 0

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

[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.

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

[Change USB Serial]

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

Returns the USB serial number (00000000).

This option is suitable when you want to replace the printer without adding a new printer driver.

To do so, you need to set this setting to enabled before installing the printer.

Returns the factory set USB serial number (unique to each printer).

This option is suitable when you want to set the printer driver for each printer.

- If two printers 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 item is as follows:

I/F Enable

Enables or disables the NFC interface.

[Ignore CR/LF]

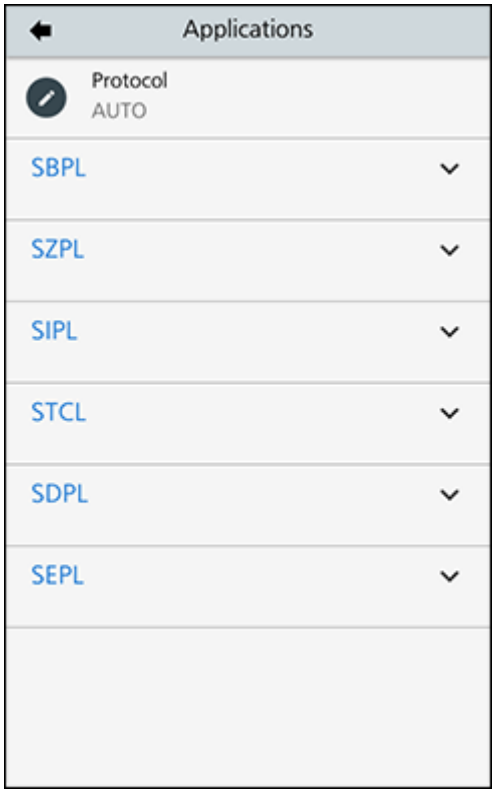
Set whether to ignore the CR/LF code (0x0D / 0x0A) in the received data.

[Ignore CAN/DLE]

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

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

[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 printer can change the language after startup by receiving another language.

SBPL

Set when you use the SBPL printer language or XML.

SZPL

Set when you use the SZPL printer language.

SIPL

Set when you use the SIPL printer language.

SDPL

Set when you use the SDPL printer language.

STCL

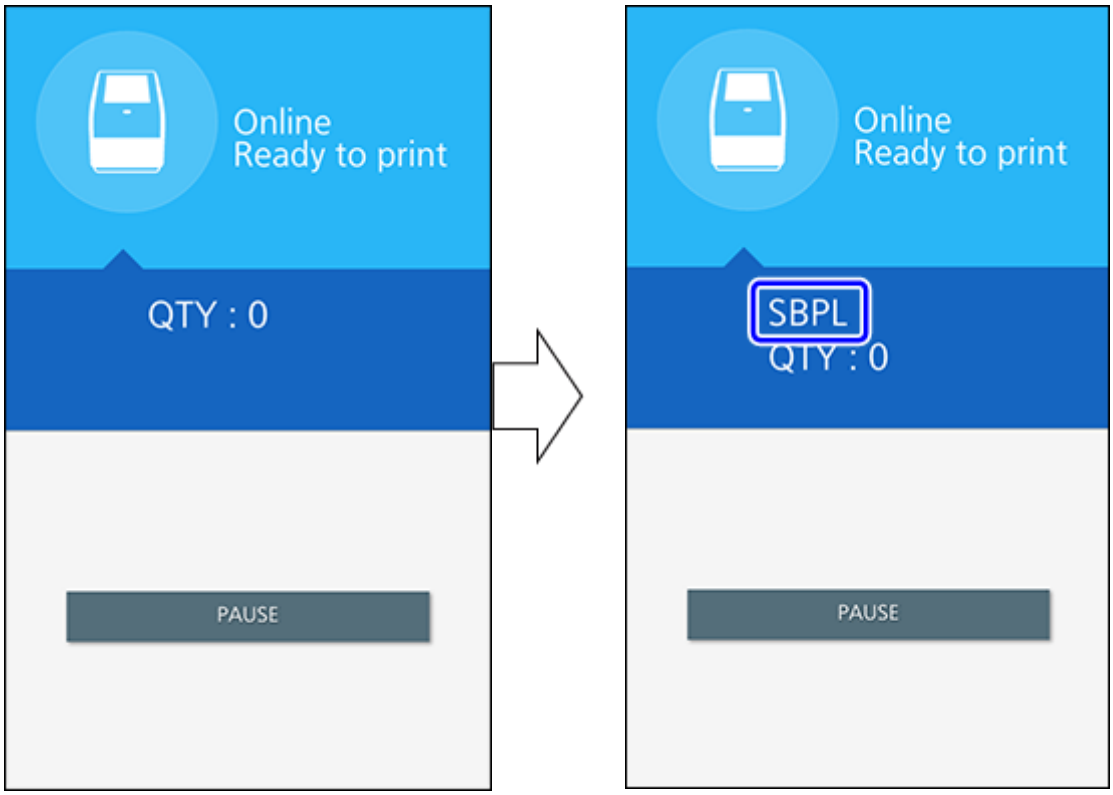
Set when you use the STCL printer language.

SEPL

Set when you use the SEPL printer language.

(When [AUTO] is selected in the [Protocol] menu)

- When [AUTO] is selected, a message prompting you to restart the printer will appear on the Home screen. In such a case, reboot the printer to apply the settings.
- Once the printer language is set, the name of the printer language will appear on the Online screen after the printer language is finalized.



The printer language does not appear until the printer language is finalized.

When the print data has been sent in SBPL.

The printer language appears on the screen.

- Printer language is finalized with the received print data.
- When [SBPL] > [Standard Code] in the [Applications] menu is disabled, the [Protocol] setting will be changed to [SBPL].

[SBPL]

SBPL (Sato Barcode Printer Language) is the common command that controls SATO barcode label printers.

To use SBPL as a printer command, set the following items:

[Show Error]

Enable or disable the command error indication when incorrect command or parameter is detected in the print data.

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 printer will appear on the Home screen if you have made any changes. In such a case, reboot the printer to apply the settings. When [AUTO] is selected in the [Protocol] menu while the setting is disabled, it is changed to be 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]

- **When set to [JP-JISX0213]**
  - [SJIS]
  - [UTF-16]

- **When set to [GB18030]**
  - [GB18030]

- **When set to [BIG5]**
  - [BIG5]

- **When set to [KSC5601]**
  - [KSC5601]

[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).

[Compatible]

Set the compatible code for SBPL.

The setting items are as follows:

[CODE128(C) Zero Fill]

Set whether to allow odd digits and print the barcode with zero-filling when start code C is used in CODE128.

Allow odd digits and print the barcode with zero-filling.

Do not allow odd digits. A command error occurs and the barcode will not be printed.

[Kanji Command]

Set the printer behavior when the received data includes the Kanji command ESC+K5, ESC+K6 or ESC+K7.

☑

Change the Kanji commands ESC+K5, ESC+K6 and ESC+K7 in the received data to the proper commands and print.

- ESC+K5: 16x16 dots Kanji in horizontal line with one-byte character
- ESC+K6: 24x24 dots Kanji in horizontal line with one-byte character
- ESC+K7: 22x22 dots Kanji in horizontal line

☐

Do not change the Kanji commands ESC+K5, ESC+K6 and ESC+K7 in the received data. The printer behavior when it receives these commands is as follows:

- ESC+K5: Print with 40x40 dots Kanji in horizontal line.
- ESC+K6: A command error occurs and the data will not be printed.
- ESC+K7: A command error occurs and the data will not be printed.

[Call Font/Logo]

Set how to process the character code specified in Recall font & logo command (ESC+RF).

☑

Character codes are processed in little-endian format.

☐

Character codes are processed in big-endian format.

[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 is from -960 to +960 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches 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 is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[Caret]

Set the caret (^) code.

The setting range is from 0 to 255.

- Each code (Caret, Delimiter and Tilde) must be set to different values.

[Delimiter]

Set the delimiter (,) code.

The setting range is from 0 to 255.

- Each code (Caret, Delimiter and Tilde) must be set to different values.

[Tilde]

Set the tilde (~) code.

The setting range is from 0 to 255.

- Each code (Caret, Delimiter and Tilde) must be set to different values.

[Clock Format]

Set the date format.

The options are as follows:

- [(none)]
- [MM/DD/YY (24-hour clock)]
- [MM/DD/YY (12-hour clock)]
- [DD/MM/YY (24-hour clock)]
- [DD/MM/YY (12-hour clock)]

[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 printer.

Save the user format data registered at printing in the printer.

Do not save the user format data registered at printing in the printer. The user format data remains in the printer memory until the printer 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.

[SDPL]

To use SDPL as a printer command, set the following items:

- [Format Attribute], [Pause Mode], [1 Byte Codepage], [SDPL Measure Unit] and [Scalable Font Style] are available only if [Settings] is selected for the corresponding setting item 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).

[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).

[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).

[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).

[Label Rotation]

Set the page orientation for label printing.

The label size set in the printer 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.

[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.

[Prioritize]

Select the settings to be prioritized for each setting item of the SDPL command. You can set whether to prioritize settings through the printer or through commands.

When you select [Settings] for an item, the setting specified in the [SDPL] menu of the printer will be used.

The setting items are as follows:

[Format Attribute]

Set whether to prioritize the settings through the printer 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 printer.

[Pause Mode]

Set whether to prioritize the settings through the printer 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 printer.

[1 Byte Codepage]

Set whether to prioritize the settings through the printer 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 printer.

[SDPL Measure Unit]

Set whether to prioritize the settings through the printer 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 printer.

[Scalable Font Style]

Set whether to prioritize the settings through the printer 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 printer.

Others

The option selected in the [Printing] > [Advanced] > [Prioritize] menu is applied to the following four settings and shown on the screen.

- [Darkness]
- [Factory Offset]
- [Speed]
- [Sensor Type]

[Format Attribute]

Set the format attribute.

You can change this setting only 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.

[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 is 0.083 mm (0.0033").
- You can change the unit to dots or inches 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 is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

[Memory Device]

Select the printer's memory space in which to store forms, graphics and fonts.

The options are as follows:

Internal RAM

Use the printer's RAM. The data will be lost if the printer is powered off.

Internal FLASH

Use the printer's flash memory.

USB1

Use the upper USB connector on the back of the printer.

USB2

Use the lower USB connector on the back of the printer.

USB3

Use the internal USB connector.

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

[Sim. 300 DPI Head]

Enable or disable 300 dpi simulation mode.

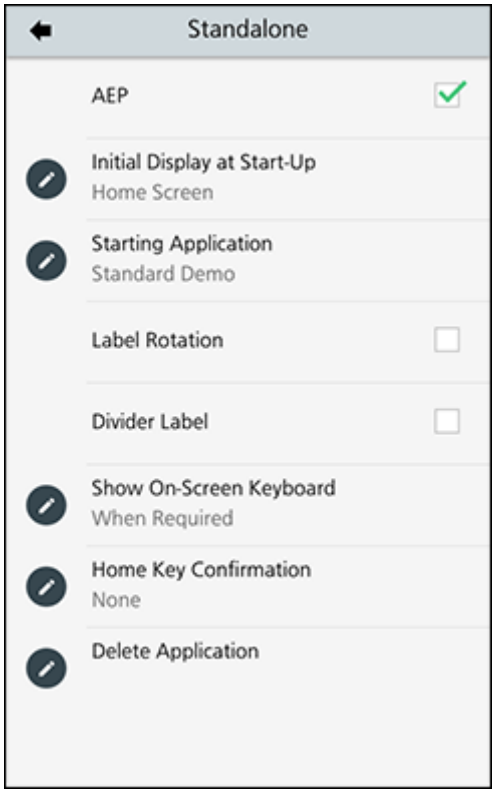
☑

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.

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 printer as a standalone printer by running applications within the printer.

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 printer will appear on the Home screen if you have made any changes. In such a case, reboot the printer to apply the settings.
- Online printing is not available when [AEP] is enabled. Disable [AEP] to perform online printing.

[Initial Display at Start-Up]

Select the screen to show at printer startup in AEP mode.

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 printer startup in AEP mode.

Available only if you have selected [Application] in the [Initial Display at Start-Up] menu.

[Label Rotation]

Set whether to rotate the page orientation for label printing.

Rotates the page orientation 180 degrees.

Does not rotate the page orientation.

[Divider Label]

Set whether to print a label with a slanted line.

[Show On-Screen Keyboard]

Set whether to show the on-screen keyboard on the application screen.

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.

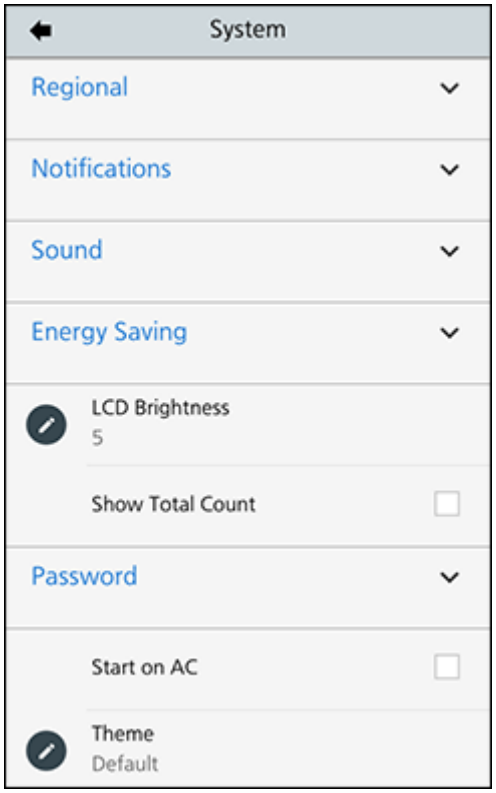
Home Key Password Lock

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 and unit.

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 printer.

Select the external keyboard layout from Western and 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.

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.

1. Set the current date by tapping the date on the calendar.
2. On the confirmation message, tap to cancel, or tap to confirm the setting.

[Time Zone]

Set the time zone.

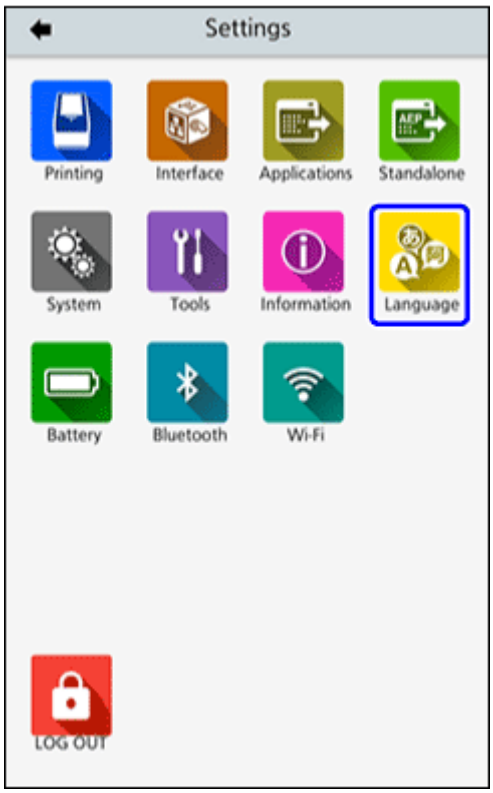
First select the region from the map.

Then select the city from the list.

[Display Language Icon]

Set whether to display the [Language] icon on the top screen of 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 printer shows the print distance as a setting value. The setting range is from 10 to 1,000 meters.

[Clean Counter]

Shows the current print distance.

[Change Printhead]

Notify when the print head needs to be replaced.

The setting items are as follows:

[Change Printhead]

Enable or disable the notification function about when the print head needs to be replaced.

[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 printer 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 printer shows the cutter count as the setting value. The setting range is from 10,000 to 1,000,000 cuts.

[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 printer 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 volume and the key sounds.

The setting items are as follows:

[Volume]

Set the volume for the printer sounds, such as the error buzzer and key sound.

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 swipe down menu as well.

[Key Sound]

Set the type of sounds when a key is tapped.

The options are as follows:

None

Mute key sounds.

Key Sound1

Key Sound2

Key Sound3

[Energy Saving]

The setting items are as follows:

[AC (Without Battery)]

Set the Energy Saving function when using the AC power supply.

The setting items are as follows:

[Sleep Timeout]

Set the period before the printer enters sleep mode.

The setting range is from 0 to 60 minutes.

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

Conditions Not to Transit to Sleep Mode

- While the Home screen is shown or during Settings mode
- When the temperature in the printer exceeds the tolerance range (Error 1022)
- When the printer is connected by wireless LAN ad-hoc mode or Wi-Fi Direct

Conditions to Return from the Sleep Mode

- When the top cover is closed and opened
- While the printer receives the data (only via Bluetooth or NFC)
- When the / (Standby/Home) button is pressed
- When the USB cable is removed or connected
- When the Auto Power-Off mode is selected

- When the printer transits to sleep mode during LAN/wireless LAN connection, the printer does not return to the normal mode when accessed from devices not compatible with Wake On LAN (WOL).

[Auto Power Off]

Set the period before the printer 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 printer exceeds the tolerance range (Error 1022)
- While the printer receives the print data
- While the printer is executing package update
- During sleep mode

[Battery-Powered]

Set the Energy Saving function when using the optional battery.

The setting items are as follows:

[Sleep Timeout]

Set the period before the printer enters sleep mode.

The setting range is from 0 to 60 minutes.

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

Conditions Not to Transit to Sleep Mode

- While the Home screen is shown or during Settings mode
- When the printer is in low-battery status
- When the temperature in the printer exceeds the tolerance range (Error 1022)
- When the printer is connected by wireless LAN ad-hoc mode or Wi-Fi Direct
- During battery charging

Conditions to Return from the Sleep Mode

- When the top cover is closed and opened
- While the printer receives the data (only via Bluetooth or NFC)
- When the / (Standby/Home) button is pressed
- When the AC adapter is removed or connected during battery use
- When the USB cable is removed or connected
- When charging is completed
- When the printer detects the low battery status (Error 1043)
- When the Auto Power-Off mode is selected

- When the printer transits to sleep mode during LAN/wireless LAN connection, the printer does not return to the normal mode when accessed from devices not compatible with Wake On LAN (WOL).

[Auto Power Off]

Set the period before the printer 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 printer is in low-battery status
- When the temperature in the printer exceeds the tolerance range (Error 1022)
- During battery charging
- While the printer receives the print data
- While the printer is executing package update
- During sleep mode

[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 printer has a built-in energy saving function, which will decrease the brightness of the screen when you have not operated the printer for a period.
- You can set this item from the swipe down menu as well.

[Show Total Count]

Enable or disable the indication of the total print count.

If 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 printer is on until it is off.

  When you power off the printer, 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, the printer requires you to enter the password set in the [Password] menu before you enter the Settings mode.

- 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 to 0, a password is required every time you log in.

The setting range is from 0 to 99 minutes.

[Install Security]

Enable or disable the password input for installing the pkg file to the printer.

If you have enabled the password input, the printer 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 center 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 printer 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 printer is powered off. The confirmation message or password input screen is shown when the printer 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 printer.

Confirm

The confirmation message is shown before the settings are written to the printer.

Password

You need to enter the password set in the [Password] menu before the settings are written to the printer.

[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 personnel use.

manager

The password for accessing the [Service] menu.

Strictly for SATO authorized personnel use.

level1

The password for accessing the [Settings] menu.

- The [admin] and [manager] passwords are for factory and maintenance personnel. You cannot change these passwords.

[Start on AC]

Set whether to power on/off the printer by powering on/off the main power source.

Power on/off the printer by powering on/off the main power source.

Power on/off the printer by pressing the / (Standby/Home) button of the printer.

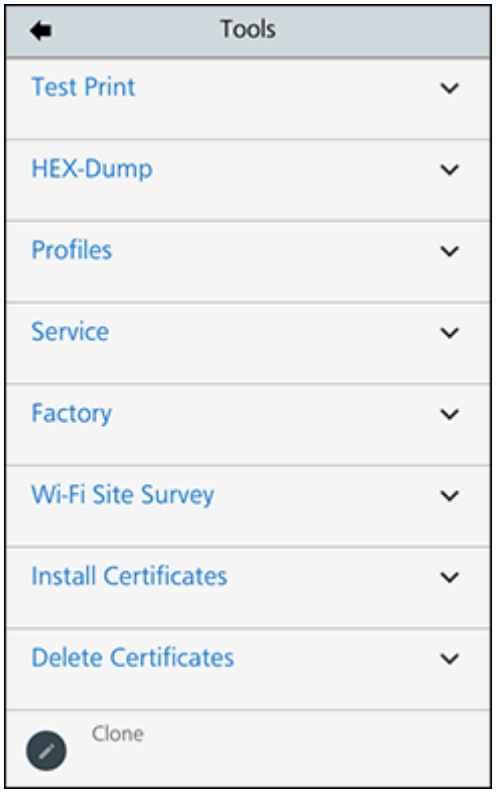
- Do not repeatedly power on/off the printer.
- If you power the main power source off and then on again quickly, the printer may not be powered on because it is still in the powering off process. In such a case, press the / (Standby/Home) button to power on the printer.
- Do not power off the printer during operation, such as when printing or updating. Doing so could cause a malfunction of the printer.
- Do not disconnect the power cord until the powering off process is completed on the printer.
- An incorrect power on/off operation may damage the printer settings. In such a case, the printer settings are reset to their initial values. It is always recommended to use the power button to allow proper shutdown of the printer and ensure changes made to menu settings are saved appropriately.

[Theme]

Set the display theme.

Select the color from the list.

[Tools] Menu



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

[Test Print]

Perform a test print.

The setting items are as follows:

[Factory]

Perform the factory test print.

1. Check and set the items as listed on the [Factory] menu.
2. 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 76.2 mm (3") for [Large].

Pitch

Set the print position in the vertical direction.

The setting range is from -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 is from -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.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- The value of [Pitch], [Offset] and [Darkness Adjust] set in the [Factory] menu will be reflected to the same item settings in the [Configure List] menu, [Configure QR] menu, [Paper Sensor] menu and [BD address] menu.

[Configure List]

Print the printer 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 the print.

To stop the test print, first pause the print 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 is from 600 to 2400 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -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 is from -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.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- The value of [Label Length], [Pitch], [Offset] and [Darkness Adjust] set in the [Configure List] will be reflected to the same item settings in the [Factory] menu, [Configure QR] menu, [Paper Sensor] menu and [BD address] menu.

[Configure QR]

Print the printer 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 the print.

To stop the test print, first pause the print 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 is from 600 to 2400 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -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 is from -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.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- The value of [Label Length], [Pitch], [Offset] and [Darkness Adjust] set in the [Configure QR] will be reflected to the same item settings in the [Factory] menu, [Configure List] menu, [Paper Sensor] menu and [BD address] 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 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 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 is from 600 to 2400 dots.

Pitch

Set the print position in the vertical direction.

The setting range is from -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 is from -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.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- The value of [Label Length], [Pitch], [Offset] and [Darkness Adjust] set in the [Paper Sensor] will be reflected to the same item settings in the [Factory] menu, [Configure List] menu, [Configure QR] menu and [BD address] 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 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 76.2 mm (3") for [Large].

Pitch

Set the print position in the vertical direction.

The setting range is from -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 is from -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.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.
- The value of [Pitch], [Offset] and [Darkness Adjust] set in the [BD address] will be reflected to the same item settings in the [Factory] menu, [Configure List] menu, [Configure QR] menu and [Paper Sensor] 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 printer 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 you enable [Hex Dump Mode], the design of the Online/Offline screen changes.
- 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 printer are as follows:

BT00xx.bin

Received data through Bluetooth.

LAN00xx.bin (USB+LAN model only)

Received data through LAN.

NFC00xx.bin

Received data through NFC.

PIPE00xx.bin

Received data through pipe.

USB00xx.bin

Received data through USB.

WIFI00xx.bin

Received data through wireless LAN.

[Buffer Dump]

Save the receive buffer data to the printer.

Available only if you disabled the [Hex Dump Mode] menu.

Tap [START] on the startup screen to save the data to the printer.

Save the receive buffer data to "buff/" in the printer.

- The data files of the receive buffer are created for each type of interface.
- The details of the file created inside "buff/" of the printer are as follows:

BT0001.bin

The contents of the receive buffer for Bluetooth.

LAN0001.bin (USB+LAN model only)

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.

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 printer to the USB memory.

Available only if you have connected the USB memory.

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

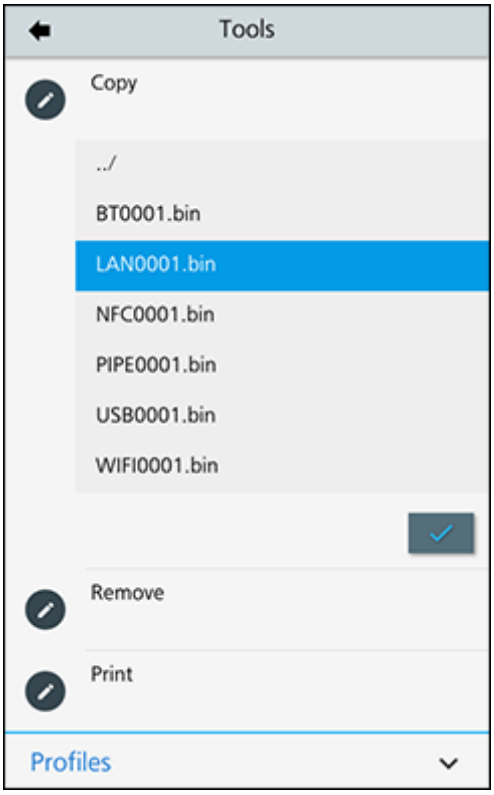
The procedure to copy the log files is as follows:

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 printer.

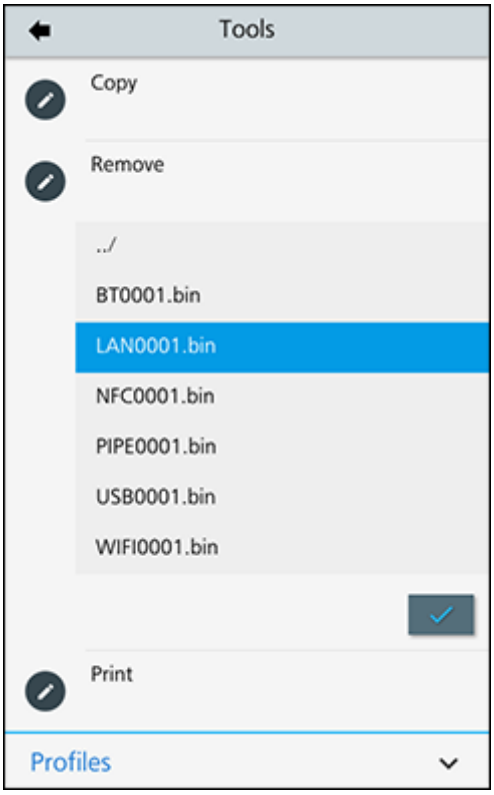
The procedure to delete the log files is as follows:

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 printer.

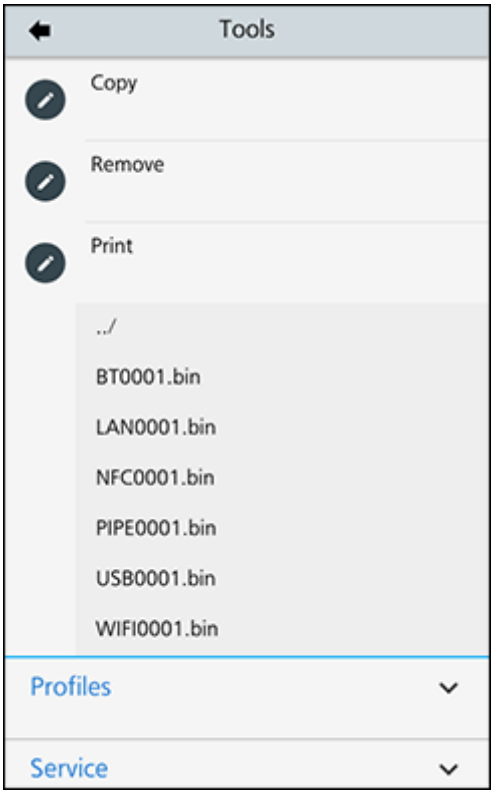
The procedure to print the log files is as follows:

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 [PRINT] 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.

[Profiles]

Maintain the customized profile of the printer settings.

The current profile name is shown in the [Load] and [Save] menus.

The setting items are as follows:

[Delete]

Delete the profile of the printer.

Not available if no profile is saved.

The procedure to delete the profile is as follows:

1. Tap the profile to be deleted.
2. Tap on the message.

   The profile name is deleted from the list.

[Load]

Load the profile of the printer.

Not available if no profile is saved.

The procedure to load the profile is as follows:

1. Tap the profile to be loaded.
2. Tap on the message.

[Save]

Overwrite the current profile and save the current printer settings.

Not available if no profile is saved.

The screen shows a list of the profiles saved in the printer.

The procedure to overwrite a current profile and save the current printer settings is as follows:

1. Tap the profile to be overwritten.
2. Tap on the message.

[Save as]

Save the current printer settings as a new profile.

Enter a name for the profile to be saved 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 printer startup.

Not available if no profile is saved.

The procedure to load the profile at printer startup is as follows:

1. Tap the profile to be loaded at printer 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.

Appears 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.

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

The setting items are as follows:

HTTPS

Installs the HTTPS certificates from the USB memory.

Wi-Fi Root CA

Installs the Wi-Fi Root CA certificates from the USB memory.

Wi-Fi Client

Installs the Wi-Fi client certificates from the USB memory.

Wi-Fi Private Key

Installs the Wi-Fi private key from the USB memory.

EAP-FAST PAC File

Installs the EAP-FAST PAC file from the USB memory.

SFTP/SCP Server

Installs the SFTP/SCP server certificates from the USB memory.

FTPS/SCP Client

Installs the FTPS/SCP client certificates from the USB memory.

The procedure to install the certificates and PAC files is as follows:

1. Save the certificate files to the USB thumb drive 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).
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 printer settings and installed data to the USB memory.

Available only if you have connected the USB memory.

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

This function is useful when you take over the printer settings to be replaced to a new printer, and when you set up multiple printers with same printer settings.

The options are as follows:

Excl. LAN/Wi-Fi/IP

Copy the printer settings and data, excluding network information, to the USB memory. This is useful when you set up multiple printers already configured for network with the same printer settings.

Incl. LAN/Wi-Fi

Copy the printer settings and data, including network information (excluding the IP address), to the USB memory. This is useful when you set up multiple printers to be connected to the same network with the same printer settings.

Incl. LAN/Wi-Fi/IP

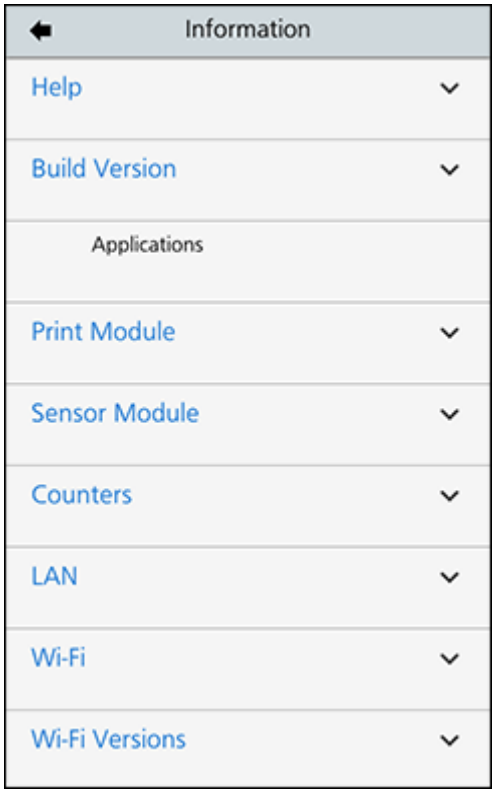
Copy the printer settings and data, including network information (with the IP address), to the USB memory. This is useful when carrying the settings of the printer to be replaced to a new printer.

[Startup Guide]

Enable or disable the startup guide.

If you enable this function, the startup guide appears when you power on the printer.

[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, installing the options, 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:

Continuous/Tearoff

Shows the video for loading the media roll to the printer to print in continuous/tear-off mode.

Dispenser

Shows the video for loading the media roll to the printer to print in dispenser mode.

Cutter/Partial Cutter

Shows the video for loading the media roll to the printer to print in cutter/partial cutter mode.

Linerless tearoff

Shows the video for loading the media roll to the printer to print in linerless tearoff mode.

Linerless cutter

Shows the video for loading the media roll to the printer to print in linerless cutter mode.

[Fanfold]

Shows the video for loading the fan-fold media.

[Cradle]

Shows the video for installing the printer on the optional cradle kit.

The items are as follows:

AC

Shows the video for installing the standard printer on the optional cradle kit.

Battery

Shows the video for installing the printer with the optional battery mount kit on the optional cradle kit.

[WLAN Option]

Shows the video for installing the optional wireless LAN/Bluetooth kit to the printer.

[Replace Head]

Shows the video for replacing the print head.

[Replace Platen]

Shows the video for replacing the platen roller.

[Replace Battery]

Shows the video for replacing the optional battery.

[Replace Battery Kit]

Shows the video for installing the optional battery mount kit.

[Cleaning]

Shows the video for cleaning the printer.

[Build Version]

Shows the information and version of the printer.

The items are as follows:

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 versions of the installed applications in the printer, such as printer languages.

[Print Module]

Shows the information about the print module of the printer.

The item is as follows:

Main

Shows the Main firmware information.

[Sensor Module]

Shows the information about the sensor module of the printer.

The items are as follows:

Boot

Shows the Boot firmware information.

Main

Shows the Main firmware information.

[Counters]

Shows the counter information of the printer.

- Only SATO authorized service personnel are permitted to clear the counter.

The setting items are as follows:

[Head]

Shows the head counter information of the printer.

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] (USB+LAN Model Only)

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.

Appears 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.

- When Wi-Fi Direct is active, this IPv6 address menu does not appear.

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.

Appears only when the optional wireless LAN/Bluetooth kit is installed.

[Bluetooth]

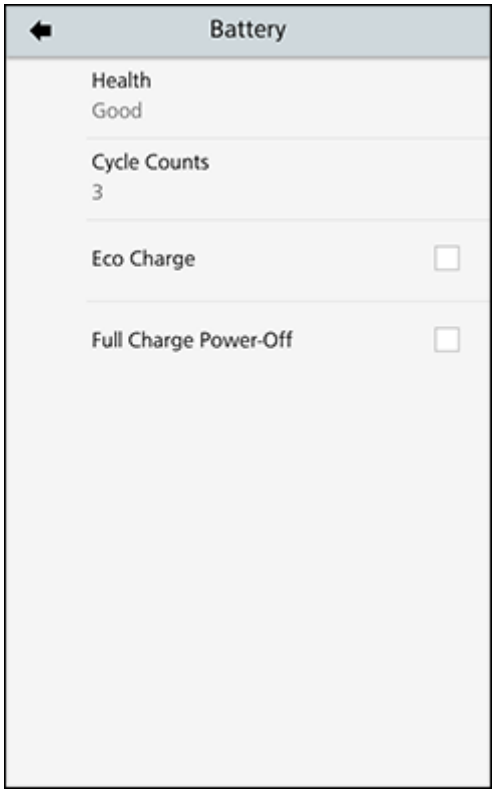
Shows the information of the Bluetooth connection.

Appears only when the optional wireless LAN/Bluetooth kit is installed.

[Regulatory]

Shows the regulatory information for this printer.

[Battery] Menu



Appears only if you have installed the optional battery mount kit.

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

[Health]

Shows the battery condition.

The statuses are as follows:

Good

Battery is in a good condition for use.

Replace

Battery is in a condition that requires replacement.

Poor

Battery is deteriorated and in a condition that requires replacement.

[Cycle Counts]

Shows the cycle count (charge/discharge cycle).

[Eco Charge]

Enable or disable the Eco Charge function.

The Eco Charge function is designed to extend the battery life by keeping the after-charged volume of the battery a little lower than the fully charged volume, thus delaying the degree of deterioration.

- When using the printer with the optional cradle kit, it is recommended to enable the Eco Charge function.

[Full Charge Power-Off]

Set up the printer's power-off function after charging is complete.

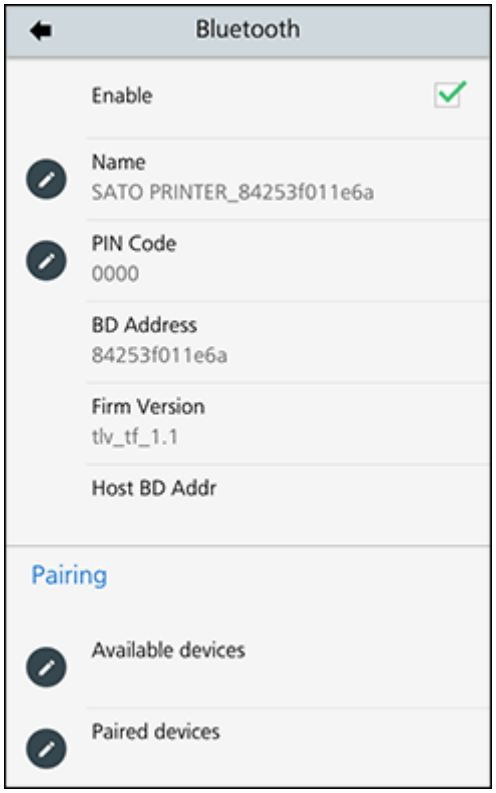
While the printer is paused in Online/Offline screen, the printer powers off 3 seconds after it completes charging.

Conditions to disable the Fully-Charge Power-Off function

- While the printer is printing or feeding the media.
- While the printer button is being used.
- During Adjustments or Settings mode.
- While the printer receives the data.
- When an AC adapter is removed.
- When the printer has restarted charging after a certain amount of battery discharge.
- While an error related to the battery is occurring.

- When using the printer with the optional cradle kit, it is recommended to enable the Full Charge Power-Off function.
- The printer powers off even if an error has occurred, if there is no change in the error status.

[Bluetooth] Menu



Appears only when the optional wireless LAN/Bluetooth kit is installed.

- Only [Paired devices] of the [Pairing] menu appears when the [Enable] menu is disabled.

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

[Enable]

Enable or disable the functions for Bluetooth.

[Name]

Set the device name for the printer.

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 printer. (You cannot change this address.)

[Firm Version]

Shows the firmware version of the Bluetooth. (You cannot change this value.)

[Host BD Addr]

Check the Host BD address.

[Pairing]

Pair the printer with a Bluetooth device.

The items are as follows:

Available devices

The printer 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 printer does not perform iOS reconnection. You need try reconnection from iOS device.

Manual

The printer performs iOS reconnection when the printer 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 from 0, or from 18 to 4096.

Set to a value that is higher than the ISW communication parameter setting value.

[ISW]

Set the ISW communication parameter.

The setting range is 0, or from 18 to 4096.

The setting range varies depending on the ISI communication parameter setting value.

Set to a value that is less than the ISI communication parameter setting value.

[PSI]

Set the PSI communication parameter.

The setting range is from 18 to 4096.

Set to a value that is higher than the PSW communication parameter setting value.

[PSW]

Set the PSW communication parameter.

The setting range is 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.

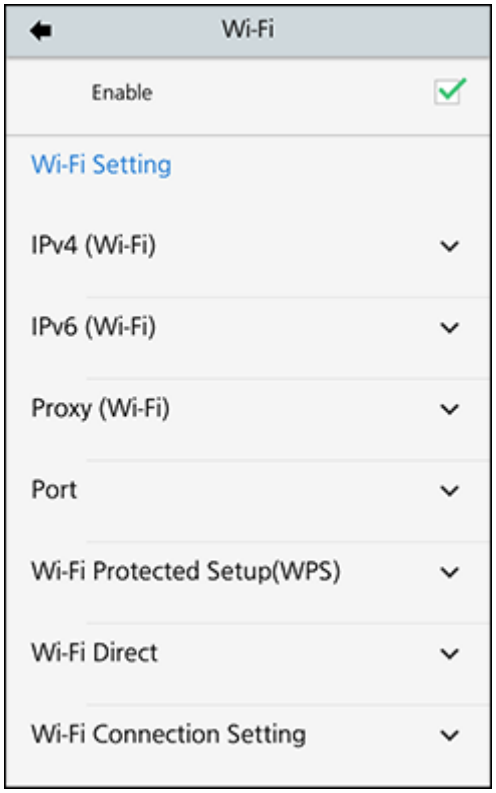
[Flow Control]

Set the communication protocol.

The options are as follows:

- [STATUS3]
- [STATUS4 MULTI]
- [NONE]

[Wi-Fi] Menu



Appears only when the optional wireless LAN/Bluetooth kit is installed.

- After doing the settings, tap or press the / (Standby/Home) button. A message asking you whether to save the settings appears. Tap on the message to enable the new settings. Tap to cancel the new settings and return to the previous settings.

- [Wi-Fi Setting] does not appear when the [Enable] menu is disabled.
- When [Wi-Fi Direct] is active, [IPv6 (Wi-Fi)] does not appear on the screen.

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.

The setting items are as follows:

[IPv4 (Wi-Fi)]

Configure IPv4 for Wi-Fi.

- After doing the settings, tap or press the / (Standby/Home) button. A message asking you whether to save the settings appears. Tap on the message to enable the new settings. Tap to cancel the new settings and return to the previous settings.
- If there are any errors with the input information, a message asking you whether to discard changes appears. Tap on the message to discard the changes. Tap to close the dialog.

- When [Wi-Fi Direct] is active, [Mode], [DHCP] and [DNS] do not appear. In addition, you cannot change [IP Address], [Netmask], or [Gateway] if [DHCP] or [Wi-Fi Direct] is active. [DNS] cannot be changed 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, gateway and subnet mask from the DHCP server.

Static

Manually set the IP address, gateway and subnet mask.

[DHCP]

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

Appears 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.

Each group of the address can be set 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 [Interface] > [Network] > [Settings] > [LAN] > [IPv4 (LAN)].

[DNS]

If you have selected [Static] in the [Mode] menu, set and check DNS server addresses.

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. Tap + to add different IP addresses.
- The DNS server addresses set here are shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv4 (LAN)].

[IPv6 (Wi-Fi)]

Configure IPv6 for Wi-Fi.

- After doing the settings, tap ← or press the ⏻/ ⌂ (Standby/Home) button. A message asking you whether to save the settings appears. Tap ✓ on the message to enable the new settings. Tap ✕ to cancel the new settings and return to the previous settings.
- If there are any errors with the input information, a message asking you whether to discard changes appears. Tap ✓ on the message to discard the changes. Tap ✕ to close the dialog.

- When [Wi-Fi Direct] is active, this [IPv6 (Wi-Fi)] menu does not appear. In addition, 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 and gateway (stateless mode).

DHCP

Automatically retrieve the IP address and gateway from the DHCP server (stateful mode).

Static

Manually set the IP address, gateway and prefix length.

[DHCP]

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

Appears 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:

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

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

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

The setting range is as follows:

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

- You can register only one IP address for the DNS server for IPv6.
- The DNS server address set here is shared with the settings in [Interface] > [Network] > [Settings] > [LAN] > [IPv6 (LAN)].

[Proxy (Wi-Fi)]

Configure the proxy for Wi-Fi.

The setting items are as follows:

[Enabled]

Enable or disable use of proxy.

- To enable the proxy, [Server] should be set and [Exclude] must contain at least 127.0.0.1 and localhost.

[Server]

Set the name or IP address of the proxy server.

Example: http://192.168.1.11:3128

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

[Exclude]

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

- Exclude must contain at least 127.0.0.1 and localhost.

[Port]

Set the TCP/IP port number.

Roles of Port1 to Port3

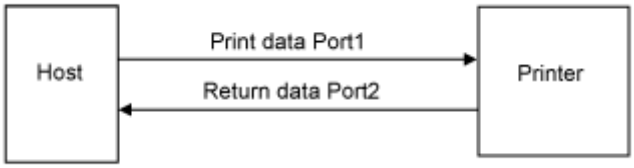
In the socket server function of TCP/IP, either of the following connection methods can be used.

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

Two-port connection

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

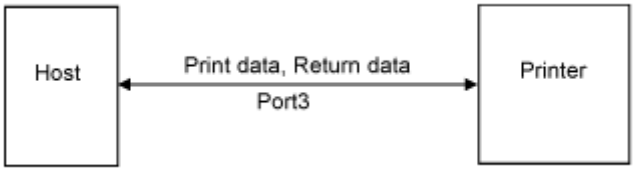
Two-port connection is available when the communication protocol is Status4.



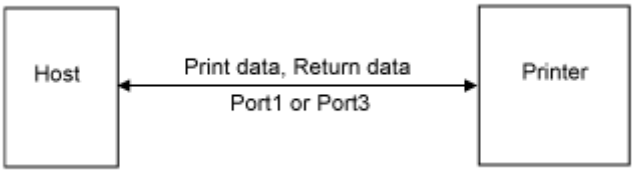
One-port connection

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

When the communication protocol is Status4, Port3 is used.



When the communication protocol is Status3 or Status5, Port1 or Port3 is used.



The setting items are as follows:

[Port1]

Set the port number of Port1.

For the two-port connection of Status4, this port is used for receiving print data. For the one-port connection of Status3/Status5, this port is used for both receiving print data and returning the printer status.

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

[Port2]

Set the port number of Port2.

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

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

- This setting is disabled when AEP mode is enabled.

[Port3]

Set the port number of Port3.

For the one-port connection of Status3/Status4/Status5, this port is used for both receiving print data and returning the printer status.

The setting range is from 1 to 65535.

- Each port (1, 2 and 3) must be set to different values.

- You can change the return status format of Port3 to legacy status by enabling [Legacy Status for Port 9100].

[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 printer.

While connecting with one host or application, the printer 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 printer 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.

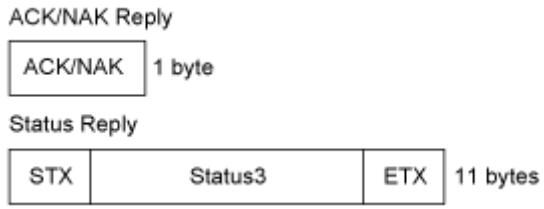
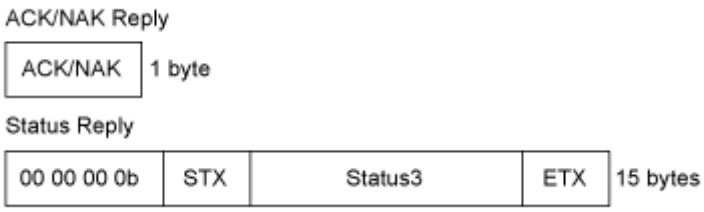
[Legacy Status for Port 9100]

Set whether to change the return status format of Port3 to legacy status.

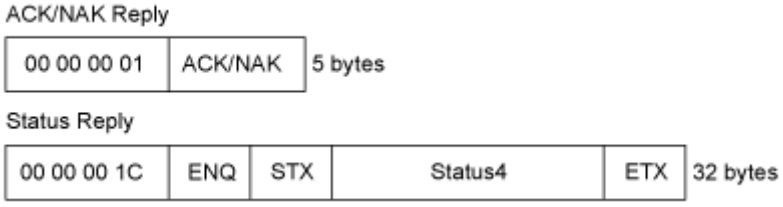
Does not appear if you have selected [NONE] in the [Flow Control] menu.

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

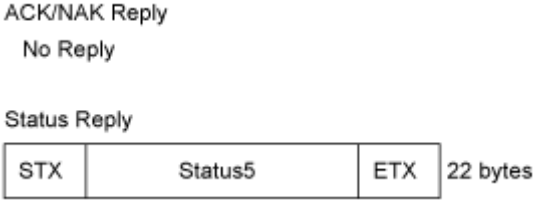
Status3

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	
Legacy status ([Legacy Status for Port 9100] is enabled)	

Status4

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	
Legacy status ([Legacy Status for Port 9100] is enabled)	

Status5

Mode	Data format
Normal ([Legacy Status for Port 9100] is disabled)	

Mode	Data format
Legacy status ([Legacy Status for Port 9100] is enabled)	ACK/NAK Reply No Reply Status Reply 00 00 00 16 | STX | Status5 | ETX | 26 bytes

[BCC]

Enable or disable the BCC check function.

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

[Delay Reply ENQ]

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

Available only if you have selected [STATUS3], [STATUS4 ENQ], [STATUS5], or [NONE] 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.

Available only if you have selected [STATUS4] in the [Flow Control] menu.

The setting range is from 100 to 999 ms.

[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.

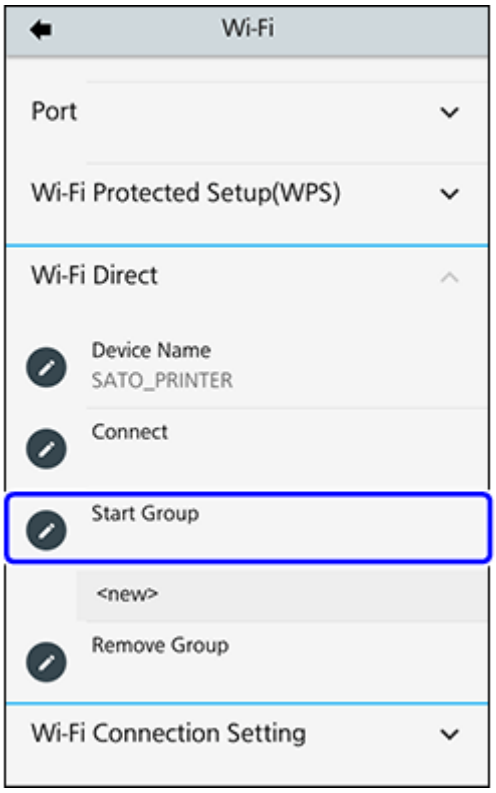
[Wi-Fi Direct]

Set the Wi-Fi Direct function.

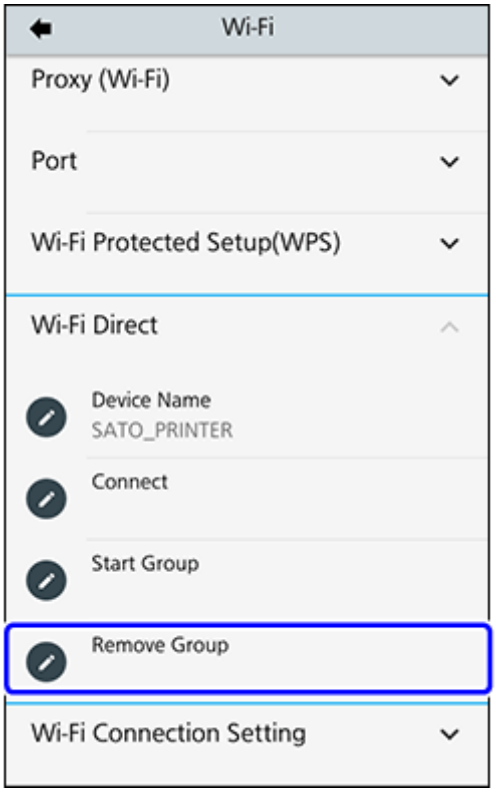
The Wi-Fi Direct function is enabled only if you have selected [Infrastructure] in the [Wi-Fi Connection Setting] > [Mode] menu. If you have changed the setting from [Ad-hoc] to [Infrastructure] in the [Wi-Fi Connection Setting] > [Mode] menu, reboot the printer before setting the Wi-Fi Direct function.

The setting procedure is as follows:

1. Set the device name for the printer 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 printer 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 printer 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 printer is not connected to a Wi-Fi Direct network.
- [Disconnect] is shown if the printer is connected to a Wi-Fi Direct network.
- After setting up a start group, the printer will be set to the GO (Group Owner) and will wait for a connection request from another device.
- If the printer is powered off during a persistent group connection, the group will be started automatically after the printer 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 printer.

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).

Appears 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 printer.

[Security]

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

The options are as follows:

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

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

[WEP Conf.]

Set the WEP key.

Appears 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 product, the range of the key index may be 0 to 3. In such a case, if you have set the printer to 1, set the product 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: Thirteen characters
  Hexadecimal: 26 characters

[WPA Conf.]

Set the WPA authentication.

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

The setting items are as follows:

[WPA Authentication]

Set the WPA authentication method.

The options are as follows:

- [Personal (PSK)]
- [Enterprise (802.1x)]
- [CCKM]

[PSK]

Set the PSK shared key.

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

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

[EAP Conf.]

Set the functions for EAP.

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

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

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

[PAC Auto Provisioning]

Enable or disable PAC auto provisioning.

Appears 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 Printer Settings from a Web Browser

Accessing to the Web Configuration Page

The printer 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 printer or perform the printer settings.

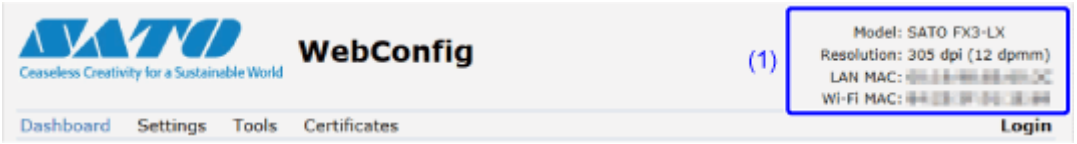
- You need the printer IP address to access the web configuration page. The printer IP address can be checked in [Settings] > [Information] > [LAN] > [LAN IPv4 Address].

1. Open up the browser and enter the printer URL.

If the printer 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.

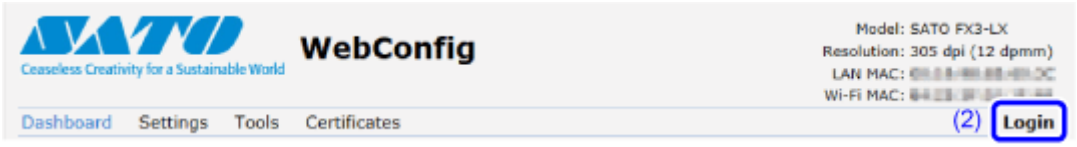
The web configuration page appears. On the upper right (1) of each page, the model name, current resolution and MAC address are shown.



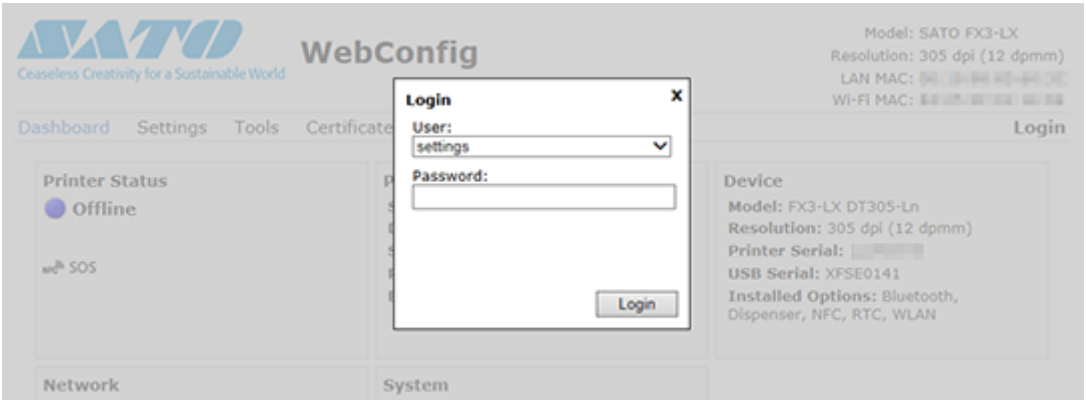
2. Log in to view [Settings] and [Tools] pages.

You can view [Dashboard] and [Certificates] pages without logging in.

a. Click [Login] (2).

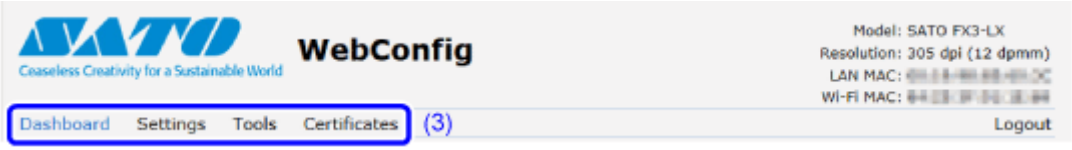


b. Select [settings] for the user, enter the password, and click [Login].



The default user is [settings], and the default password is "0310".

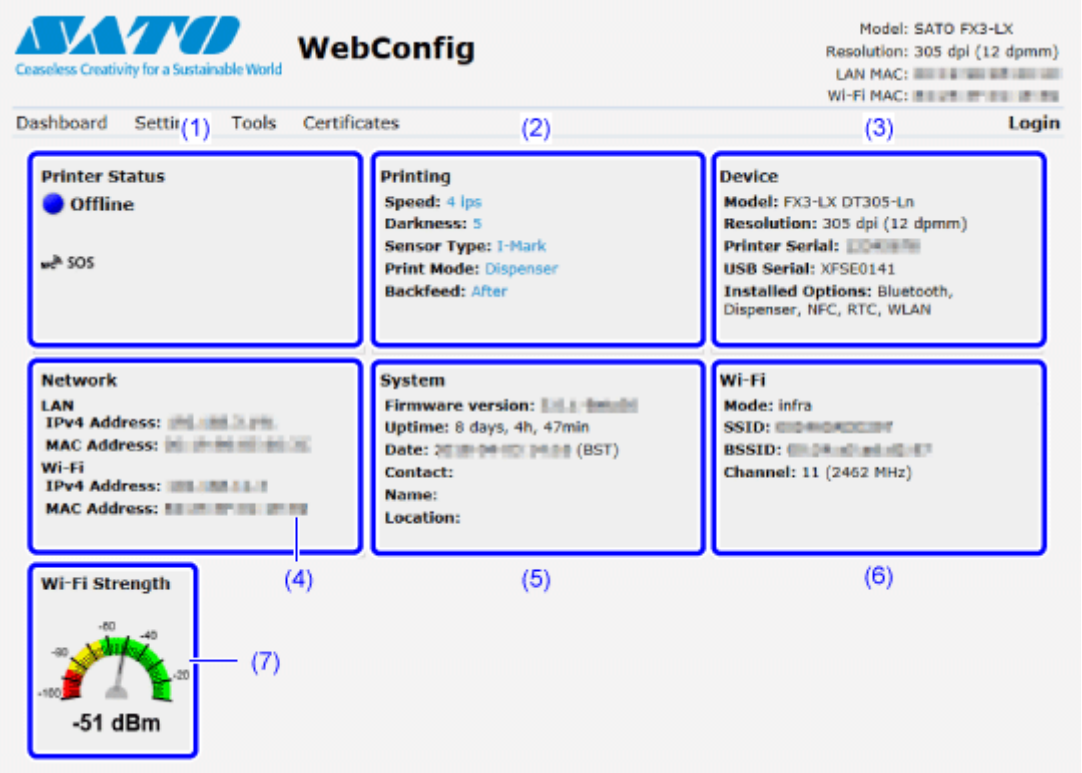
3. **Click on the page (3) you want to view.**



Dashboard

[Dashboard] is the default page of WebConfig. Each section shows specific information or status of the printer.

- You can view [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 printer is P2P GO, the Wi-Fi Strength will not be shown.

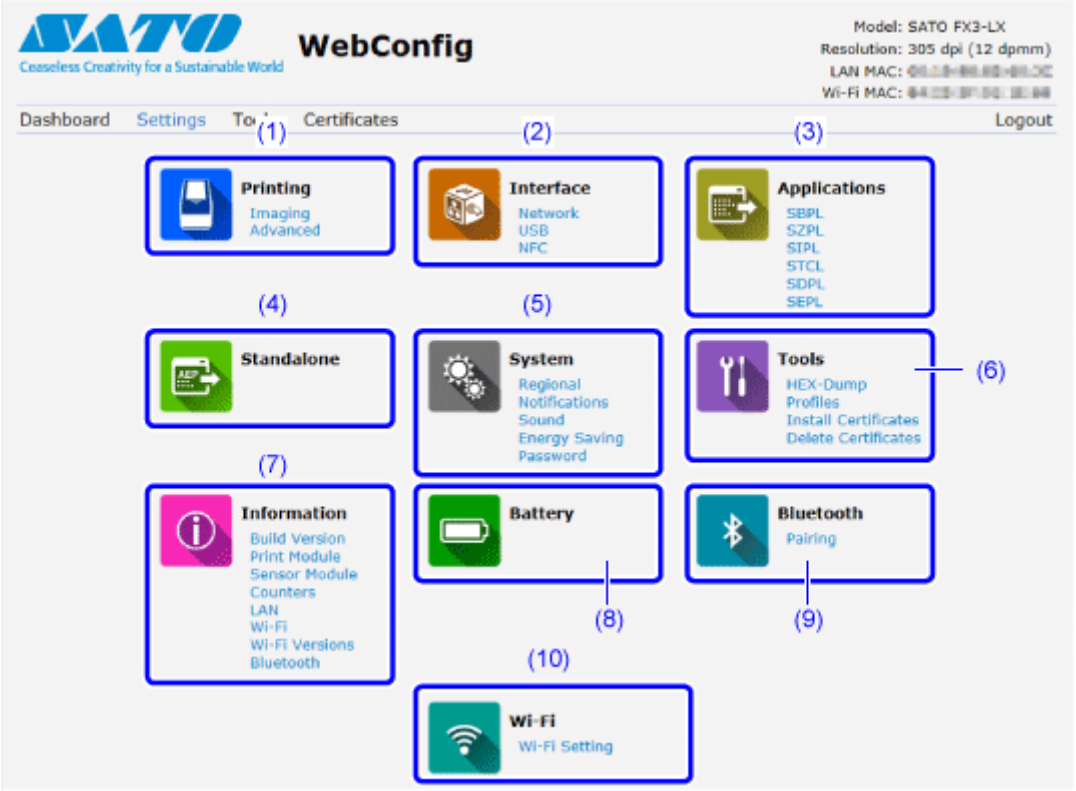
Settings

The settings equivalent to the printer's Settings mode can be performed on the browser.

- Login is required to view [Settings] page. Click [Login] to log in before opening [Settings] page.

  The default user is [settings], and the default password is "0310".

- The icon appears on the right side of the [Information] menu when the [System] > [Regional] > [Display Language Icon] menu is enabled.



(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) [Battery]

You can do the settings equivalent to the [Battery] menu in the Settings mode.

- This information is shown only when the optional battery mount kit is installed.

(9) [Bluetooth]

You can do the settings equivalent to the [Bluetooth] menu in the Settings mode.

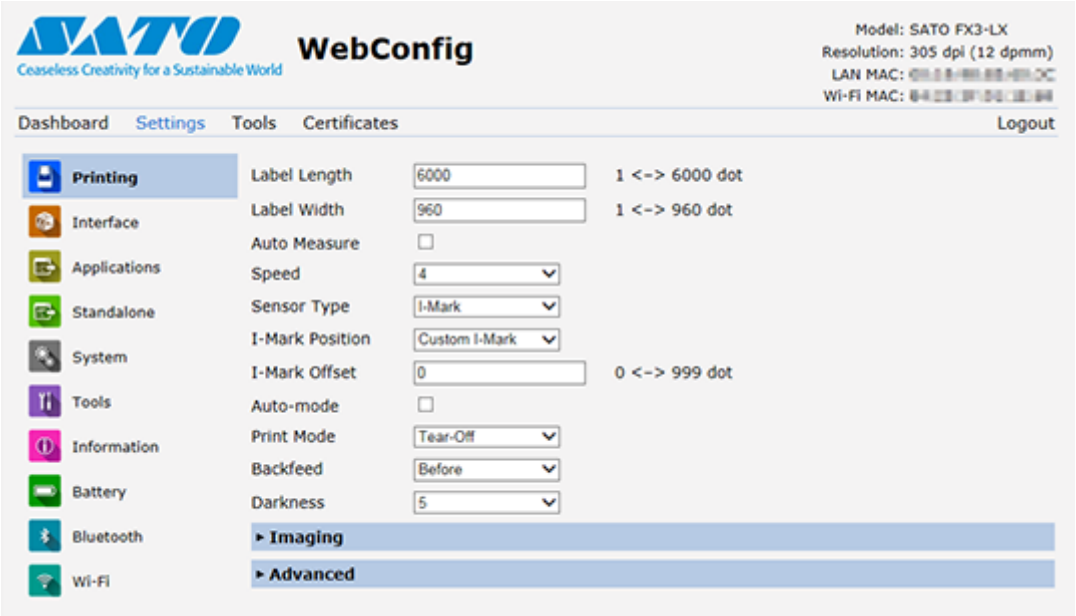
- This information is shown only when the optional wireless LAN/Bluetooth kit is installed.

(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.



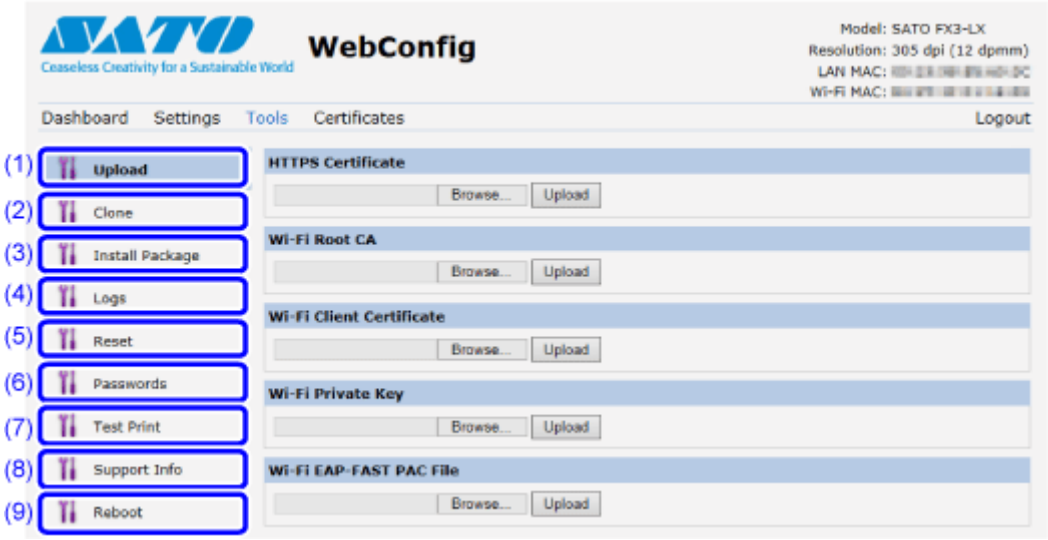
- If a message prompting you to restart the printer appears at the top of the page, click [Reboot printer] to reboot the printer to apply the settings.

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 [Tools] page. Click [Login] to log in before opening [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 printer settings and the installed data.

(3) [Install Package]

Refer to "Section 2.8 Checking and Updating the Firmware" of the FX3-LX service manual.

(4) [Logs]

List all log files in the log directory. Users can click to download the file.

(5) [Reset]

Initialize the settings or data of the printer.

(6) [Passwords]

You can do the setting equivalent to [System] > [Password] > [Change Password] in the Settings mode. Change each password of the printer.

(7) [Test Print]

You can do the setting equivalent to [Tools] > [Test Print] in the Settings mode. Perform a test print.

(8) [Support Info]

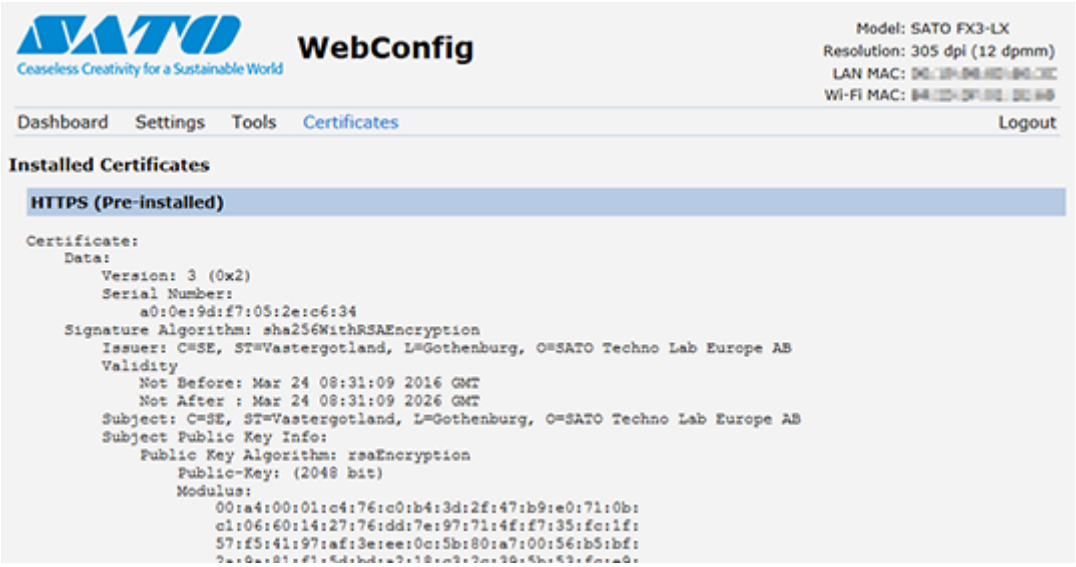
List various information of the printer such as attached options, serial number, application versions and settings configuration. You can also get a screenshot of the current printer display and an image of the last printout.

(9) [Reboot]

Reboot the printer.

Certificates

Shows the Root Certificate authority and client certificates installed on the printer.



- The client certificate that is a PFX (PKCS #12) file will not be shown.

Various Ways to Output

Outputting with Standalone (AEP) Applications

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

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

Outputting with General-purpose Software

If you use software such as the "NiceLabel" series, labels can be easily output.

- "NiceLabel" series

  This multifunctional, yet easy-to-operate, software allows you to create versatile layouts and print them on labels.

- 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 the SBPL (Sato Barcode Printer Language) command to the printer.

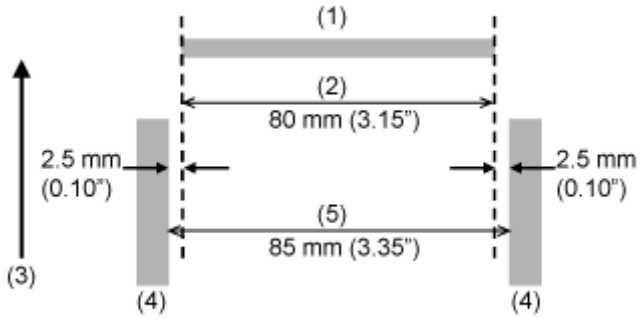
In addition, you can print characters, barcodes, and graphics in various styles by combining multiple SBPL commands. There are many functions for modifying the printed items, such as enlarging fonts, specifying a print direction, ruled line, and black and white reverse printing.

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

Printer Adjustments

Printable Area

The printable area of the printer is as follows:



(1) Print head

(2) Printable area

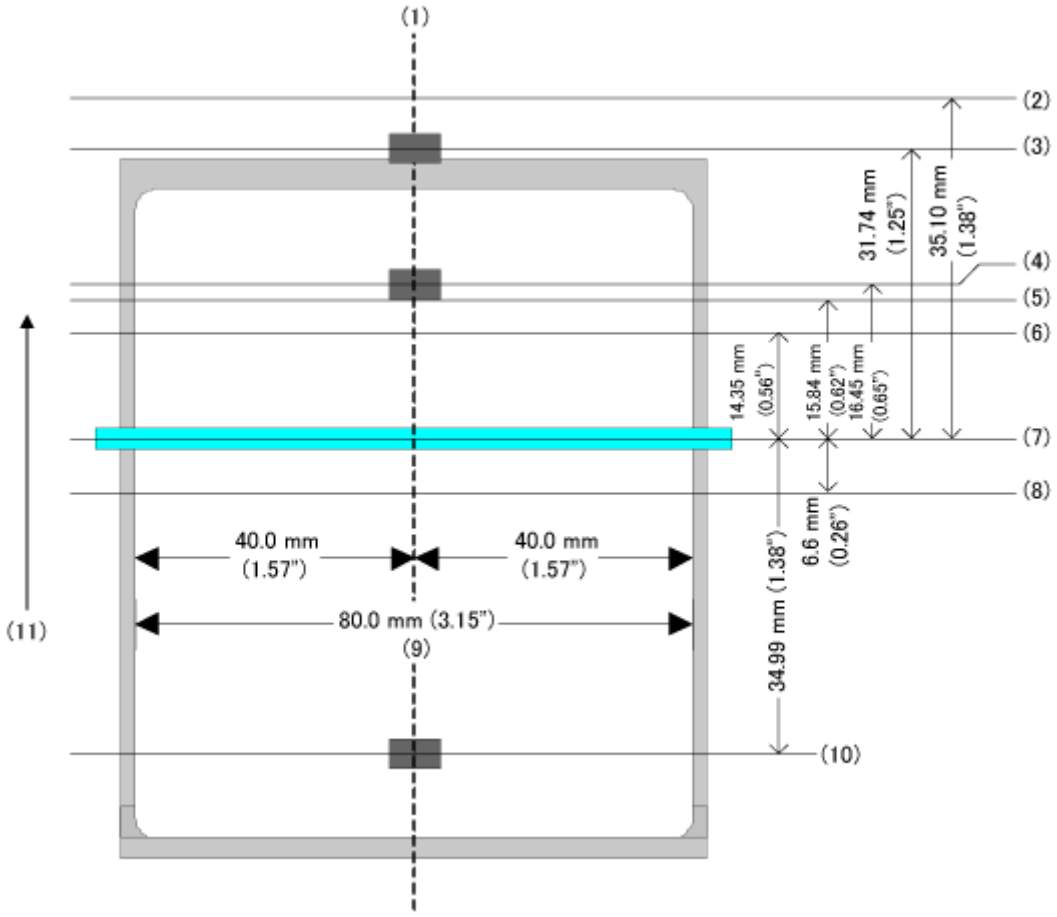
(3) Media feed direction

(4) Media guide

(5) Maximum media width

Media Sensor Positions and Media Stop Positions

The media stop positions with the media sensor and various operation modes are as follows:



(1) Center position

(2) Media stop position in tear-off mode (with the optional cutter kit)

(3) Linerless sensor position

(4) Dispenser sensor position

(5) Media stop position in cutter mode

(6) Media stop position in tear-off/dispenser mode

(7) Print head

(8) Linerless standby position

(9) Available print width

(10) Gap/I-mark sensor position

(11) Media feed direction

Flow of Printing Operations

Printing Operations

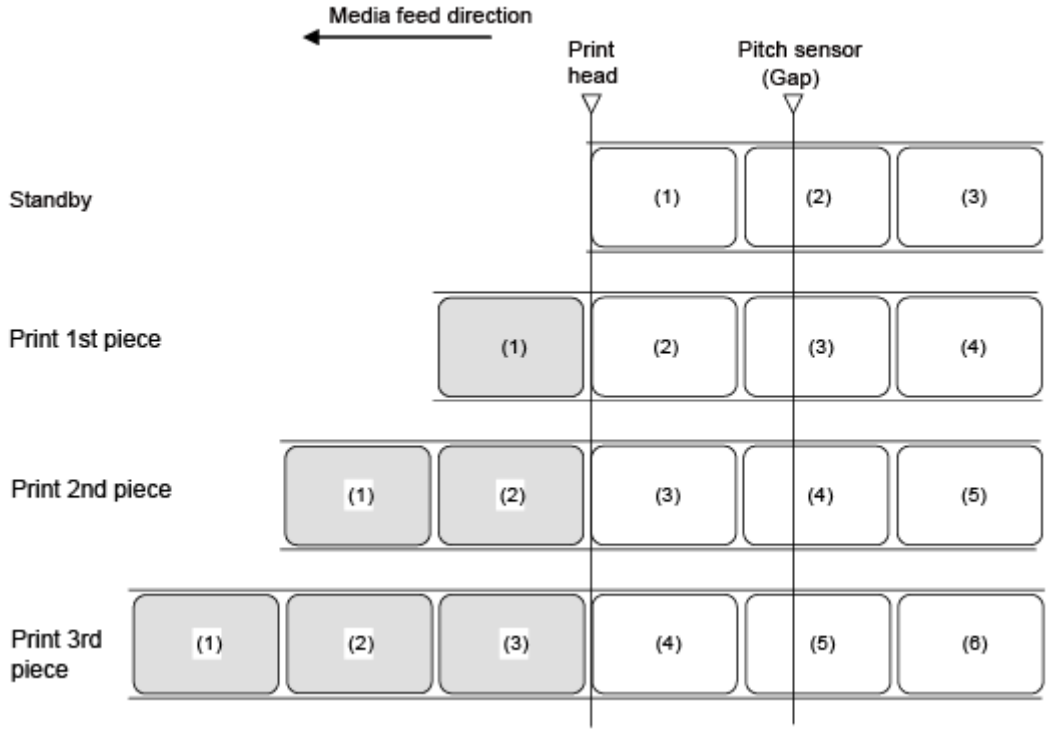
Printing operations vary depending on the combination of the following settings.

- Print Mode
- Enabled/disabled media sensor
- Enabled/disabled head check

Operations in Continuous Mode

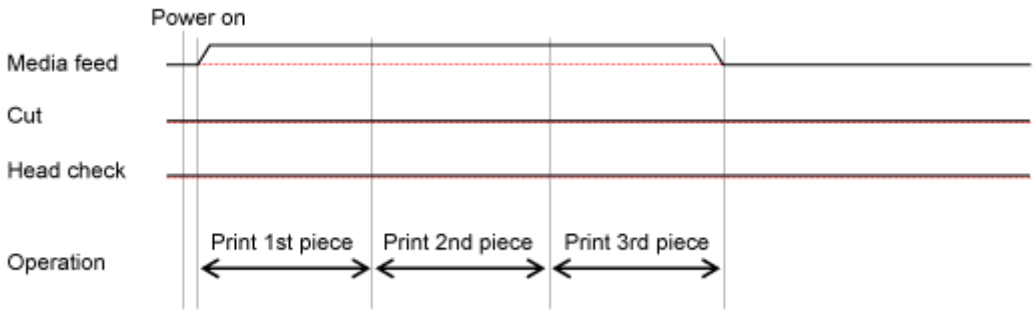
Operation 1: Continuous Mode (Head Check Disabled)

Operation



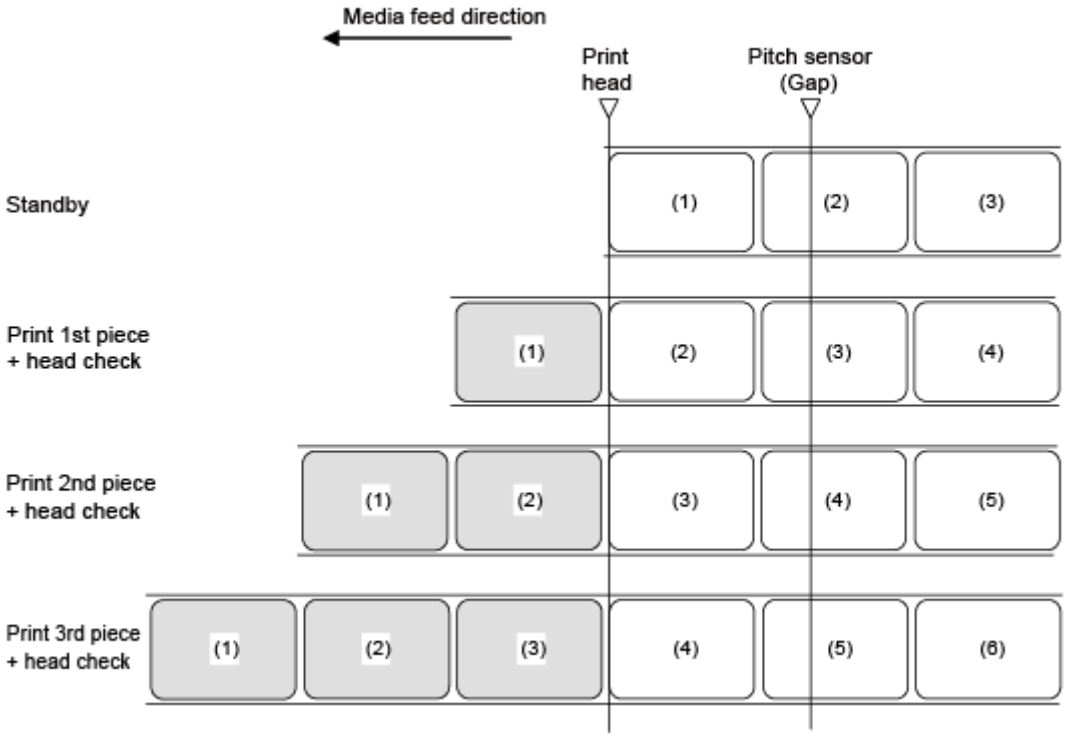
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



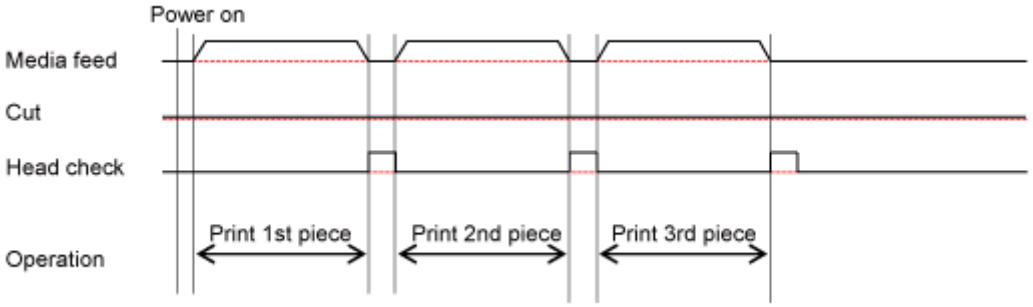
Operation 2: Continuous Mode (Head Check Enabled)

Operation



- The figure above shows the reference position when the Gap sensor is used.

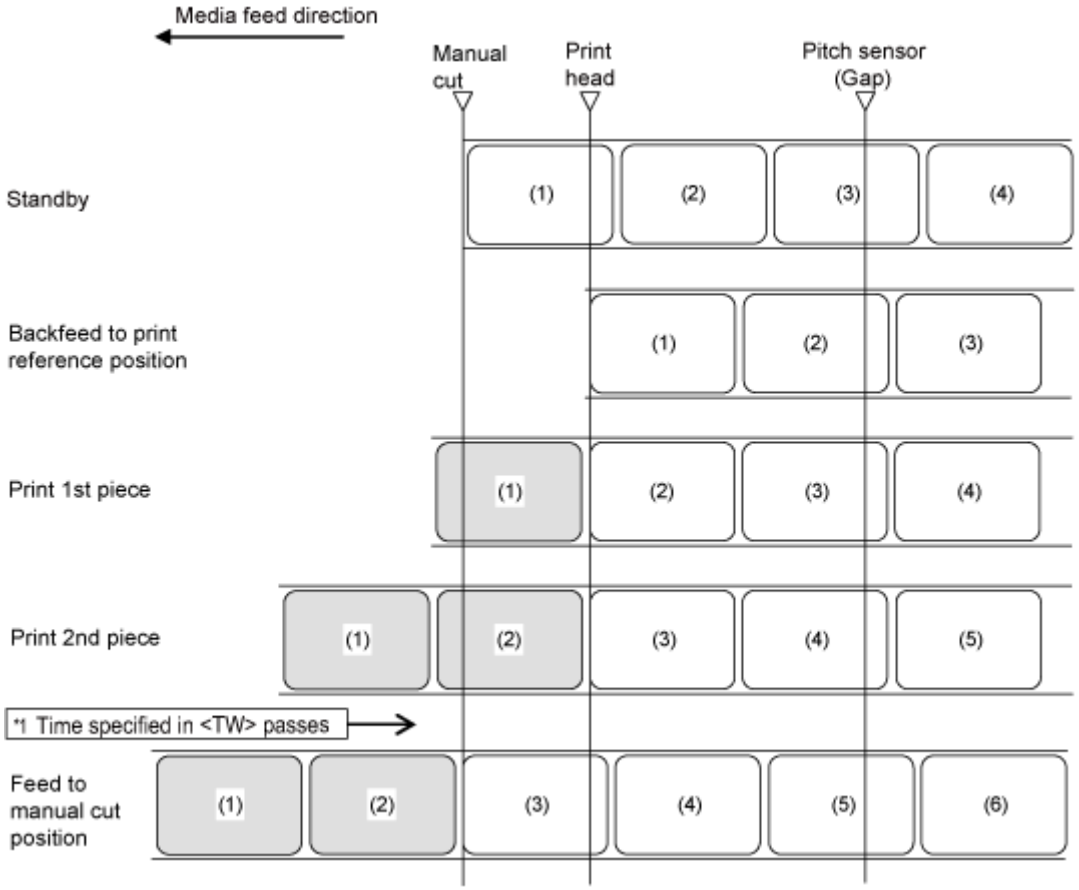
Timing Chart



Operations in Tear-Off Mode

Operation 3: Tear-Off Mode (Head Check Disabled)

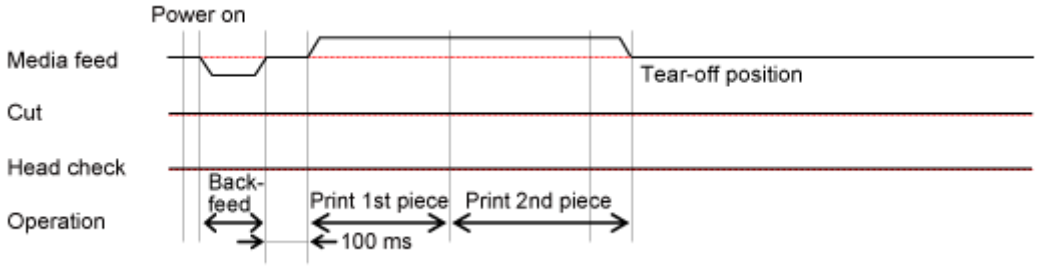
Operation



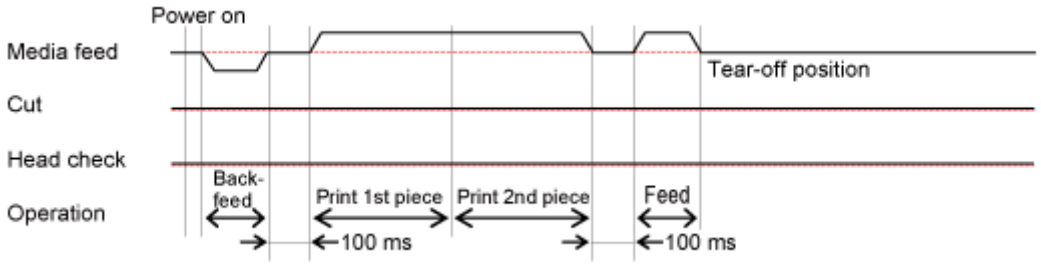
*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the printer will feed the media to the position for manual cutting.

- The figure above shows the reference position when the Gap sensor is used.

Timing Chart (When <TW> is 0)

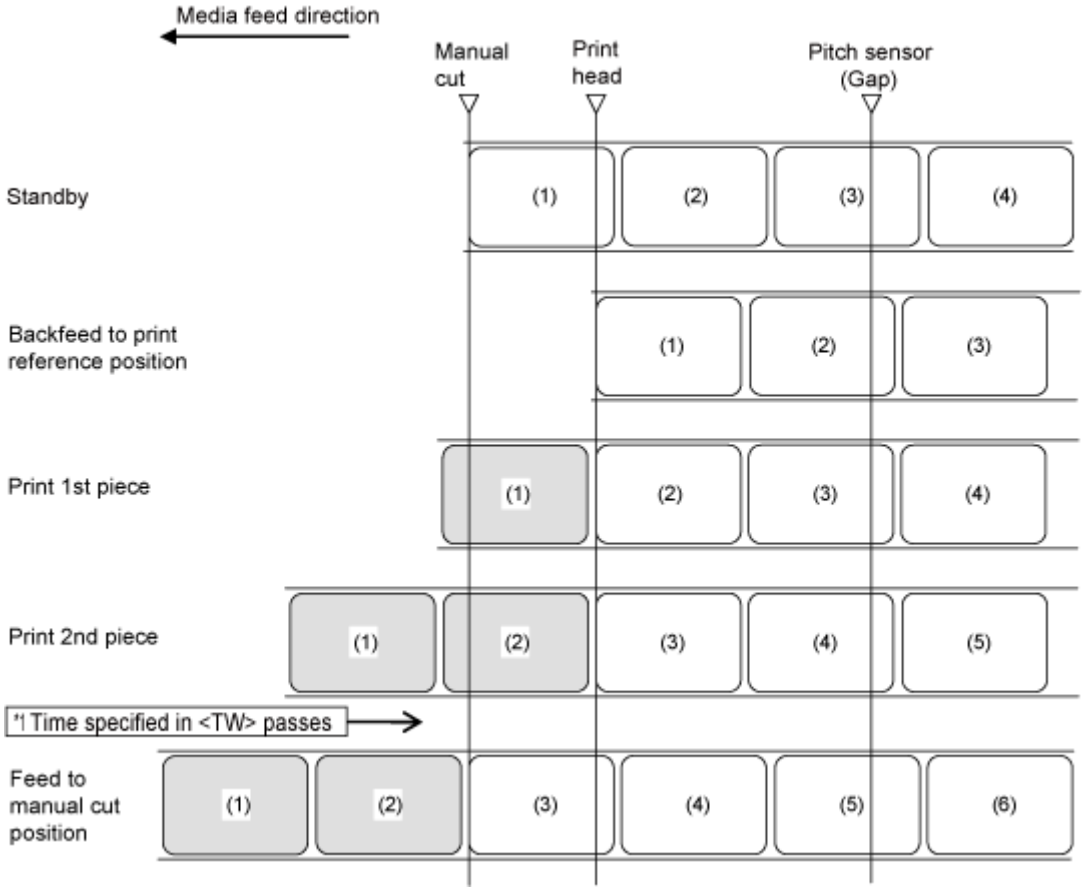


Timing Chart (When <TW> is 10)



Operation 4: Tear-Off Mode (Head Check Enabled)

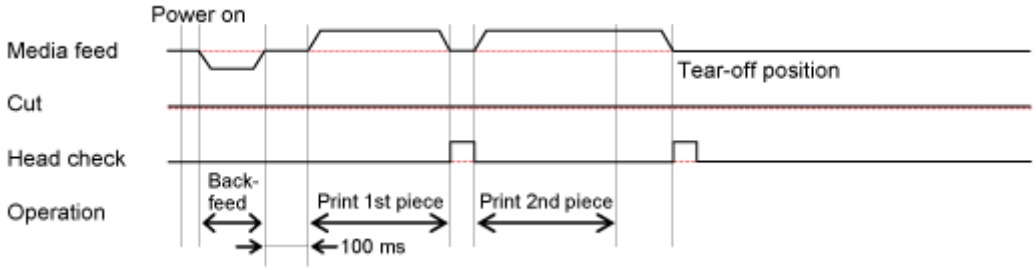
Operation



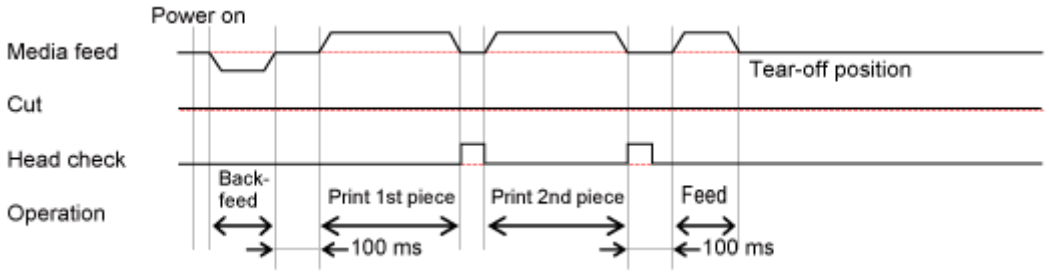
*1 After printing, if the period specified in Option Waiting Time <TW> (initial value: 0 ms) has passed and if there is no print data remaining, the printer will feed the media to the position for manual cutting.

- The figure above shows the reference position when the Gap sensor is used.

Timing Chart (When <TW> is 0)



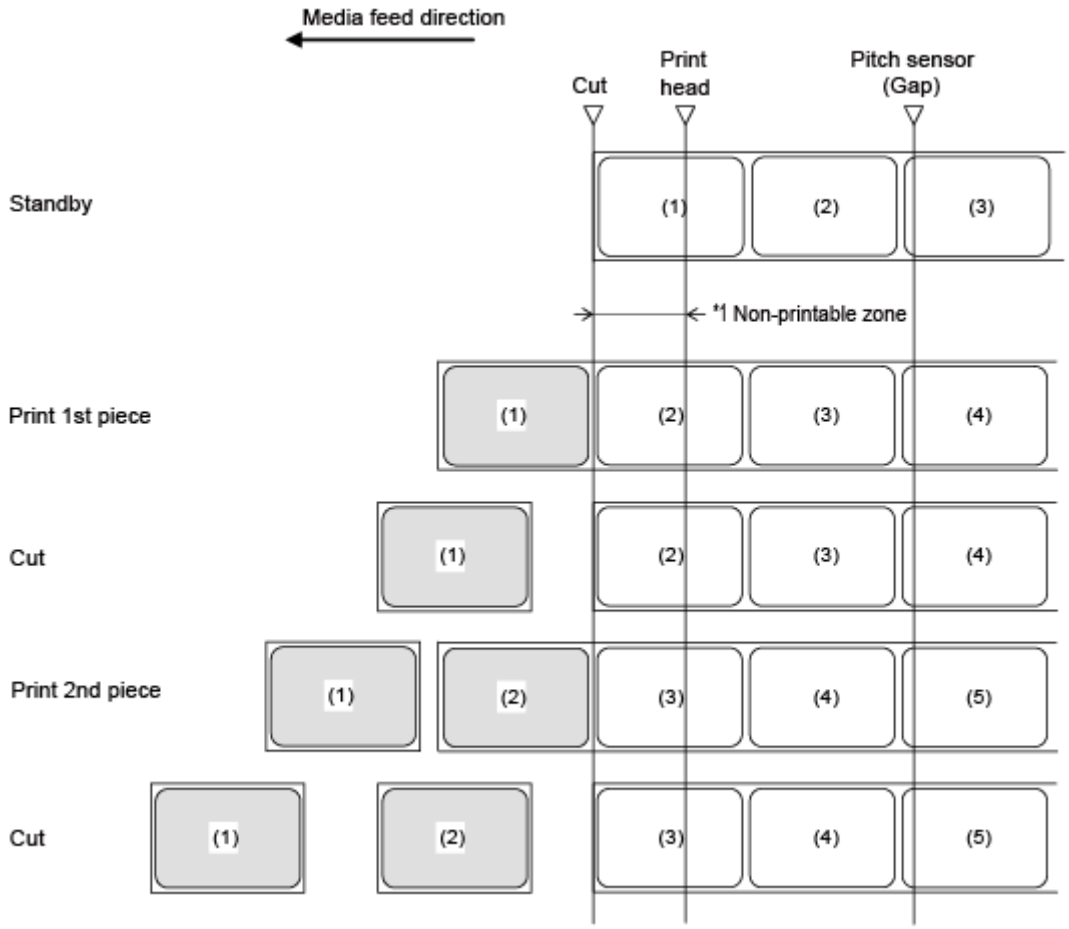
Timing Chart (When <TW> is 10)



Operations in Cutter Mode

Operation 5: Cutter Mode and No Backfeed (Head Check Disabled)

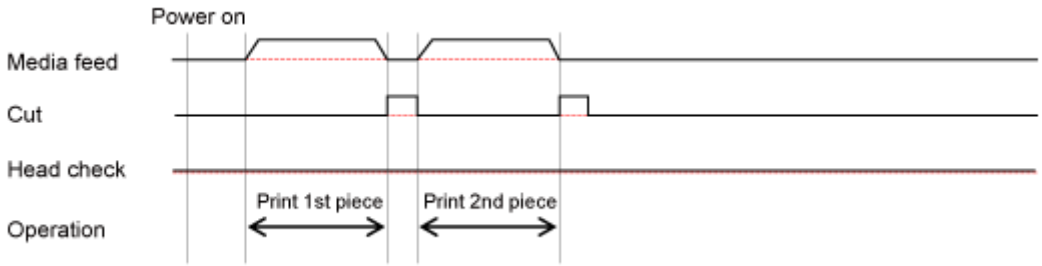
Operation



*1 Because backfeeding is not done, the media in the head area becomes non-printable.

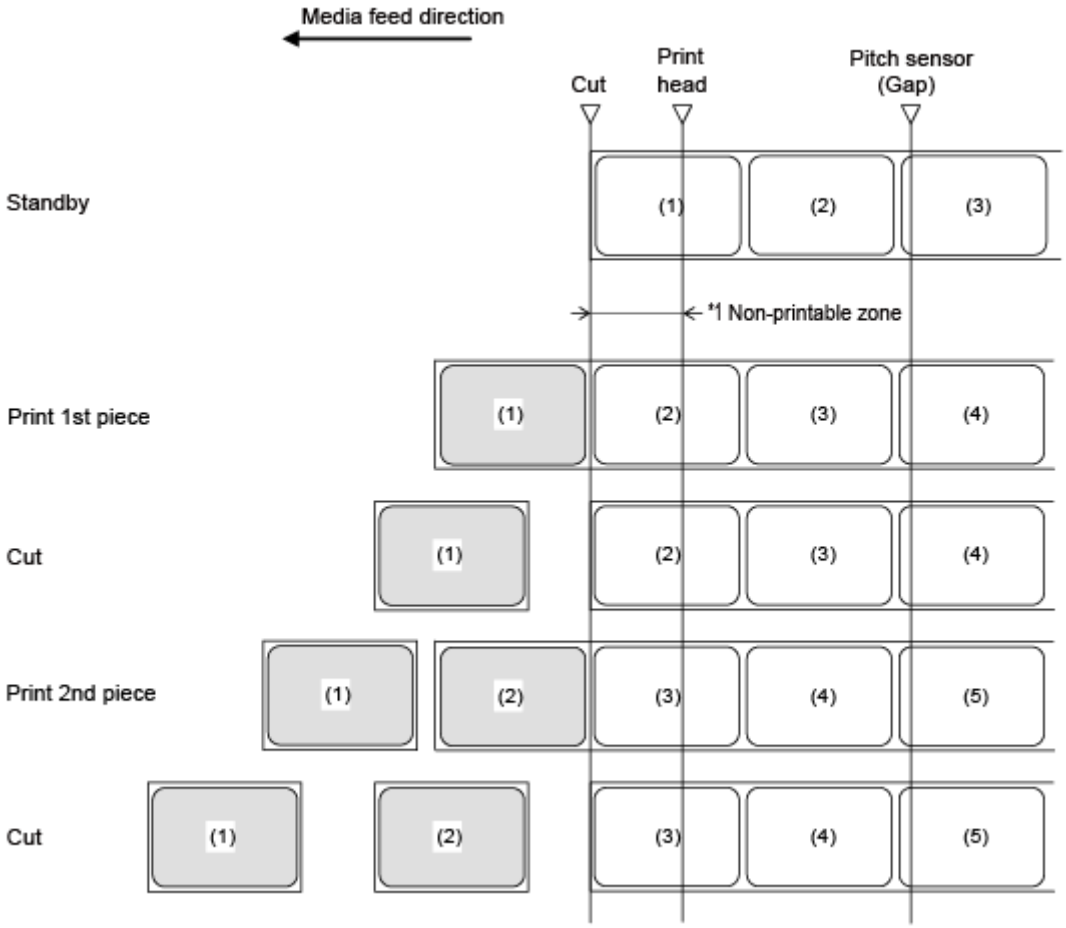
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 6: Cutter Mode and No Backfeed (Head Check Enabled)

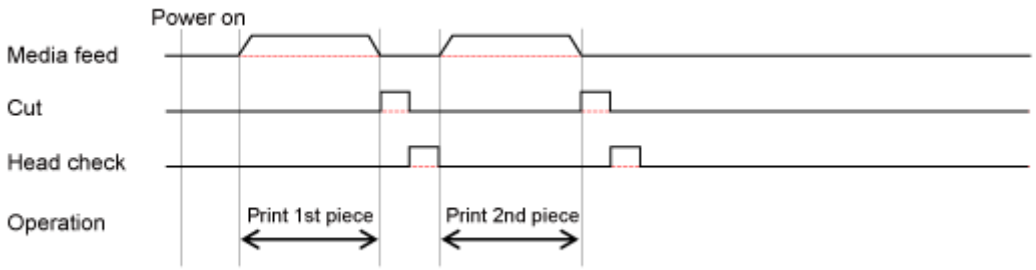
Operation



*1 Because backfeeding is not done, the media in the head area becomes non-printable.

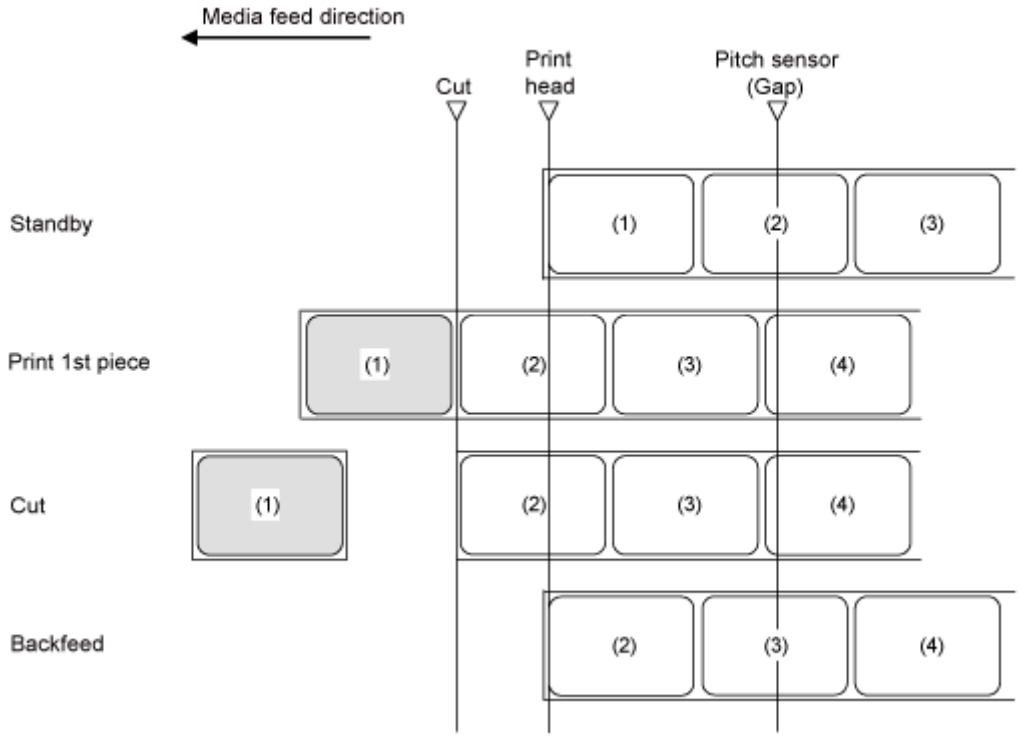
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



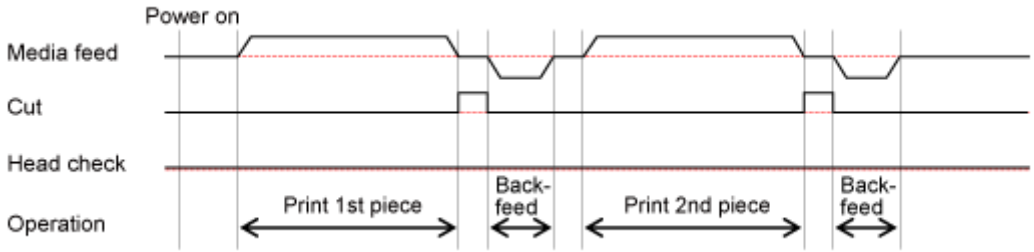
Operation 7: Cutter Mode and Backfeed After Printing (Head Check Disabled)

Operation



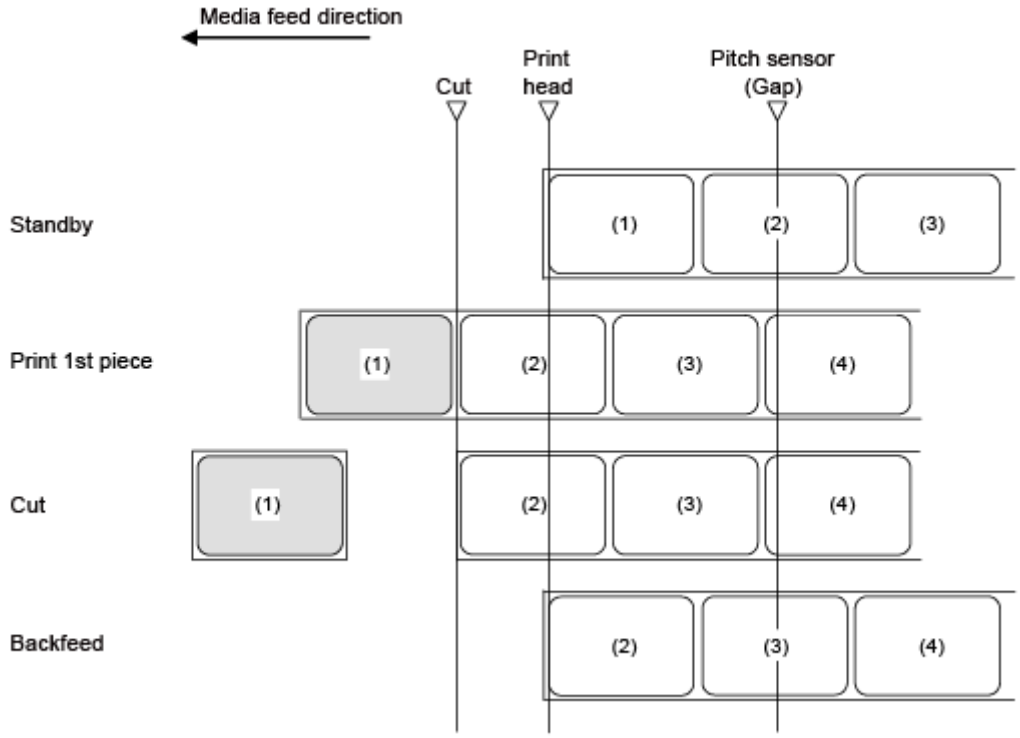
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



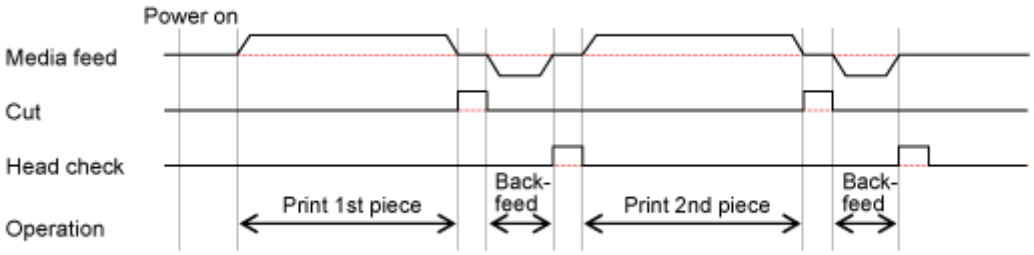
Operation 8: Cutter Mode and Backfeed After Printing (Head Check Enabled)

Operation



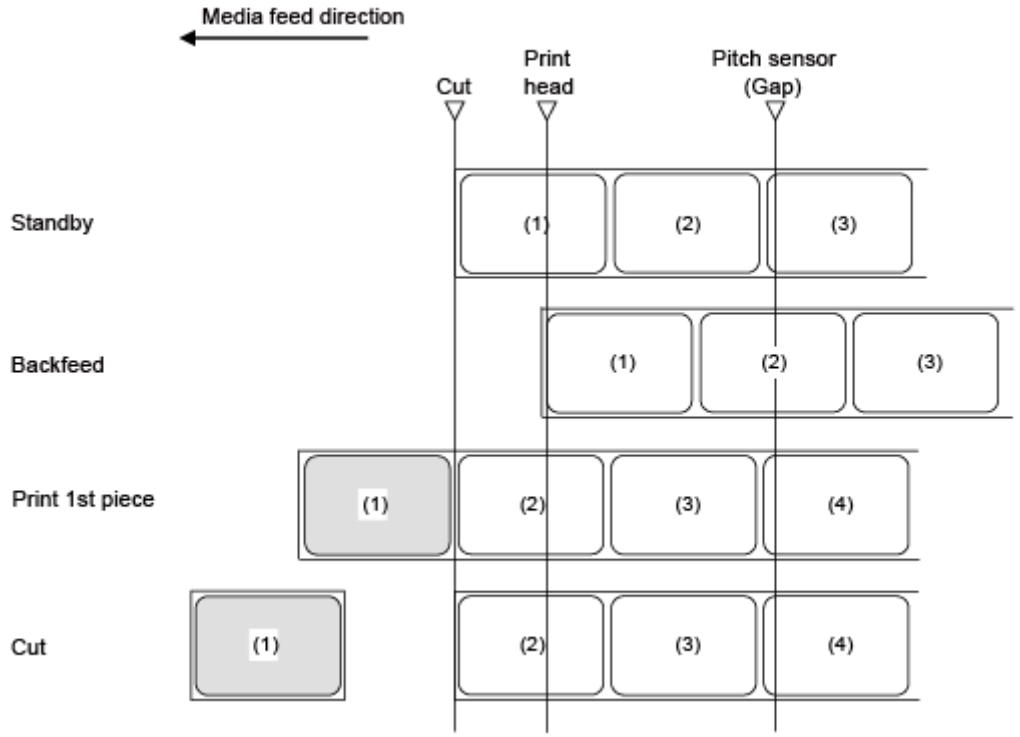
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



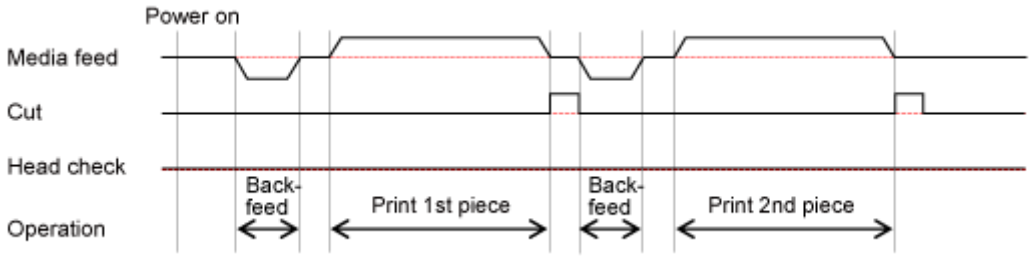
Operation 9: Cutter Mode and Backfeed Before Printing (Head Check Disabled)

Operation



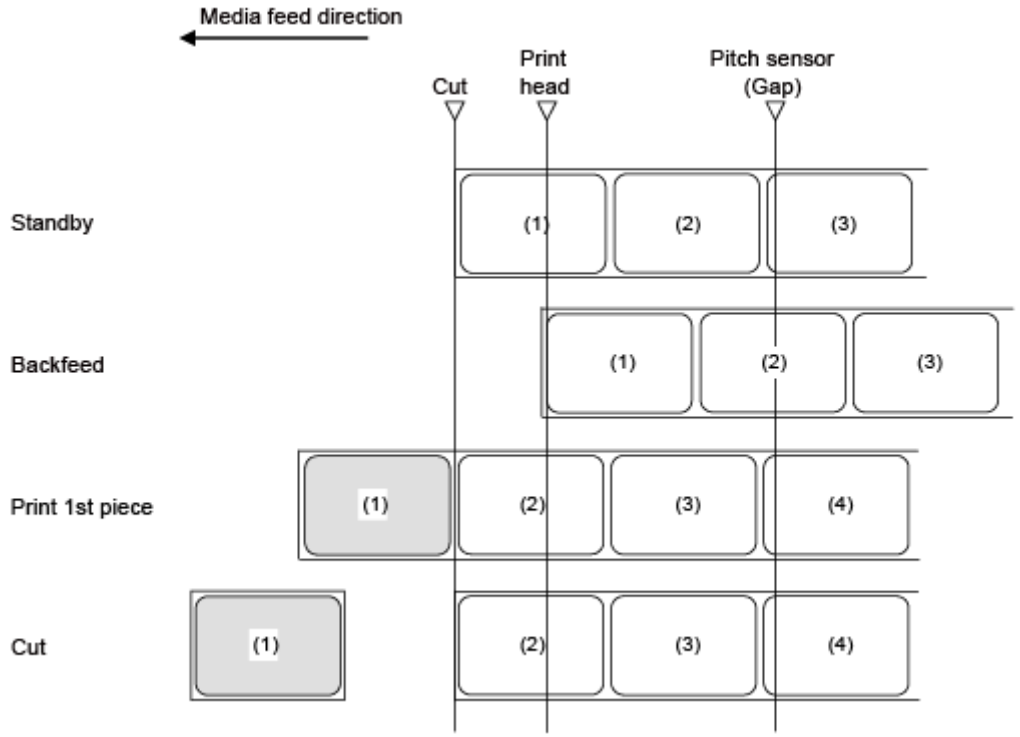
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



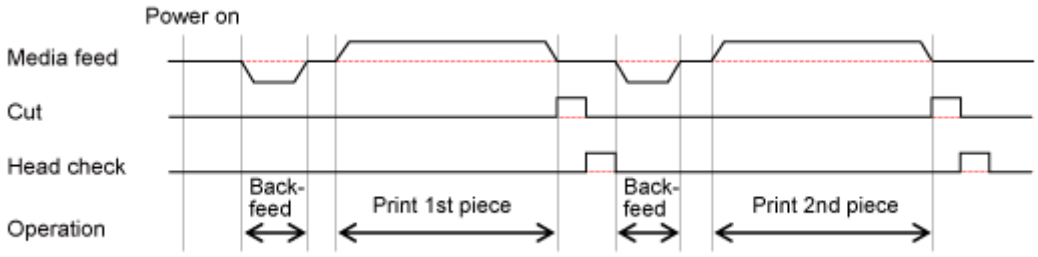
Operation 10: Cutter Mode and Backfeed Before Printing (Head Check Enabled)

Operation



- The figure above shows the reference position when the Gap sensor is used.

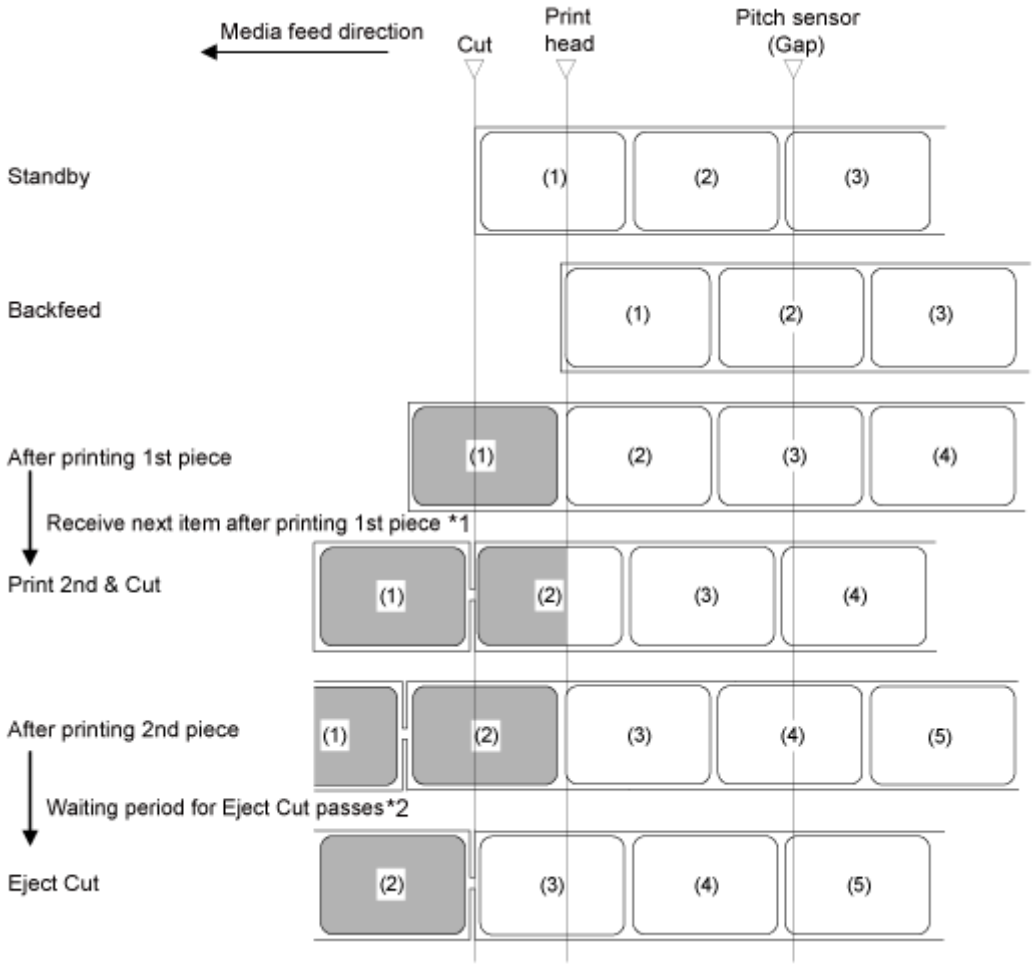
Timing Chart



Operations in Partial Cutter Mode

Operation 11: Partial Cutter Mode and Backfeed Before Printing (Head Check Disabled)

Operation

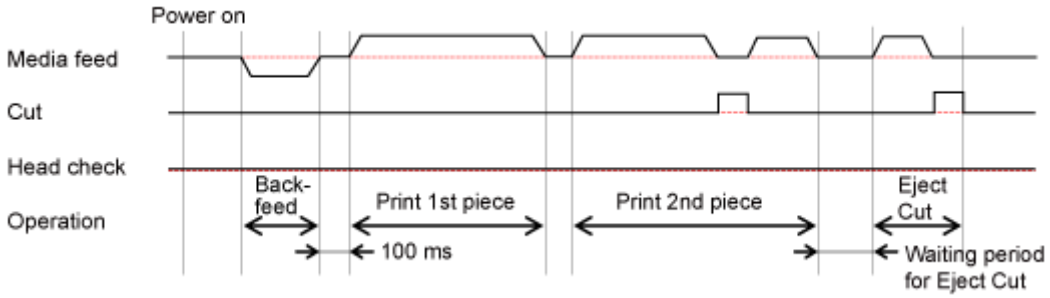


*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

*2 After printing, if the next data is not received and the waiting period for Eject Cut has passed, Eject Cut will be performed.

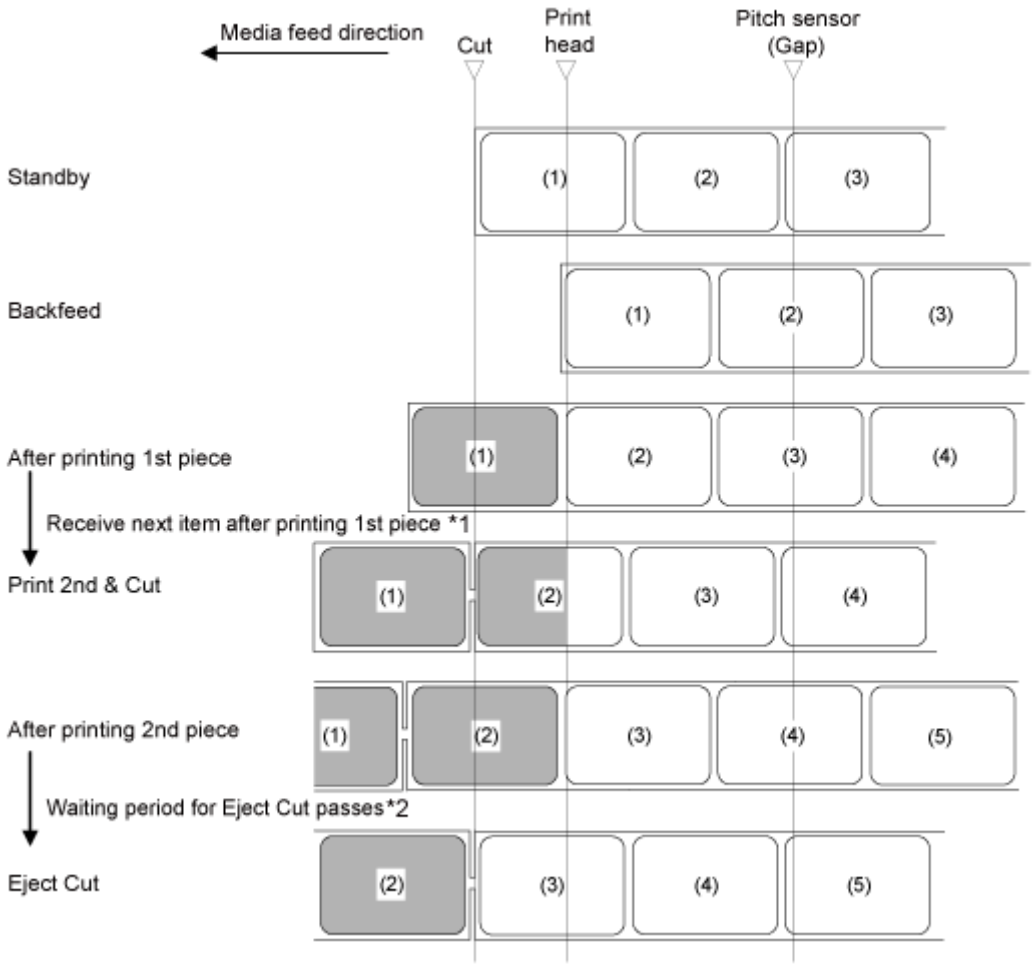
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 12: Partial Cutter Mode and Backfeed Before Printing (Head Check Enabled)

Operation

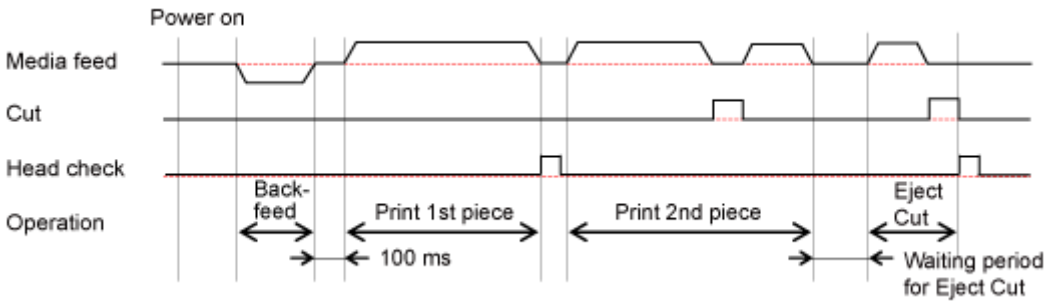


*1 After printing, if the next data is received, printing will be done and the media will be cut on the cut position.

*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.

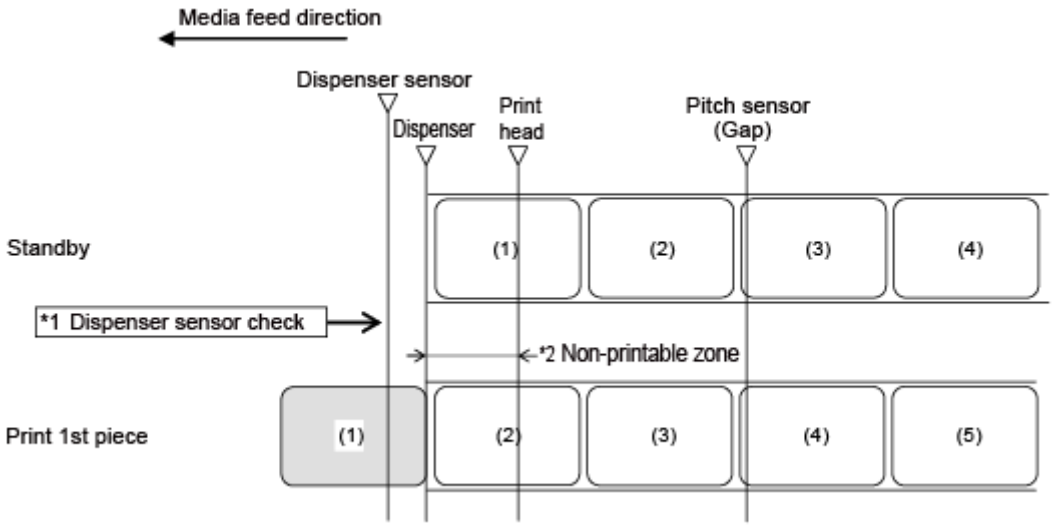
Timing Chart



Operations in Dispenser Mode

Operation 13: Dispenser Mode and No Backfeed (Head Check Disabled)

Operation

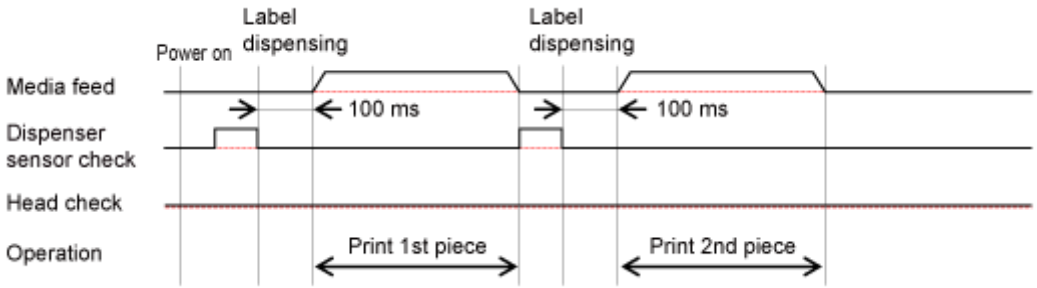


*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

*2 Because backfeeding is not done, the media in this area is non-printable.

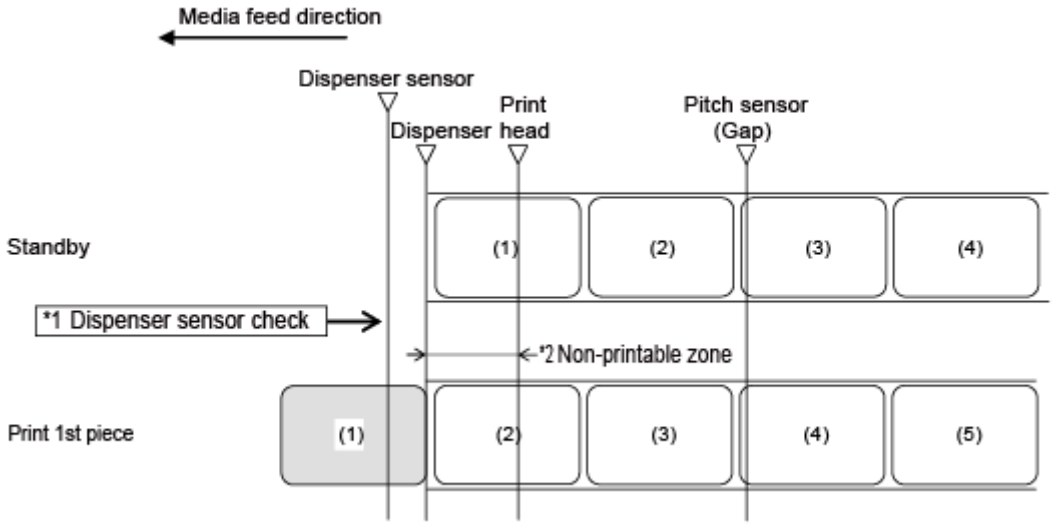
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 14: Dispenser Mode and No Backfeed (Head Check Enabled)

Operation

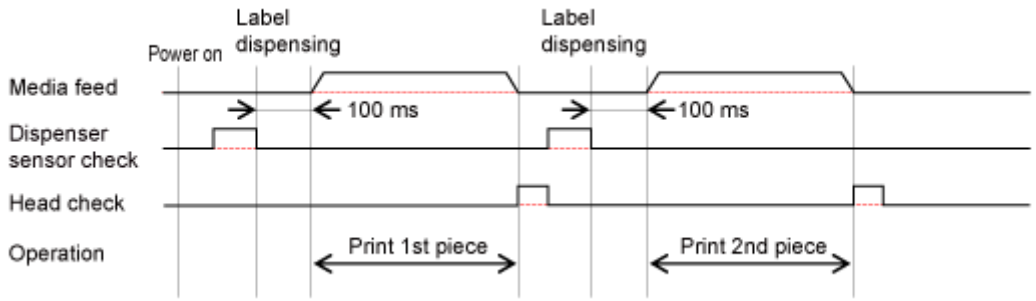


*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

*2 Because backfeeding is not done, the media in this area is non-printable.

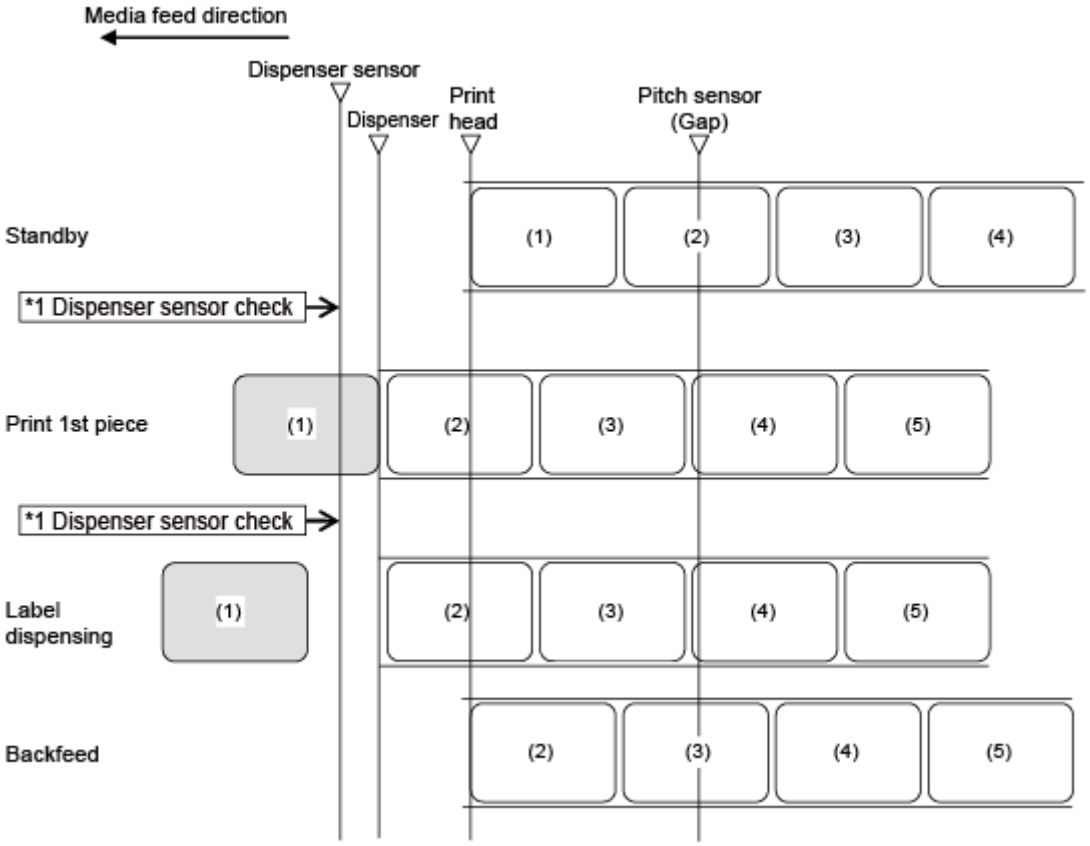
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 15: Dispenser Mode and Backfeed After Printing (Head Check Disabled)

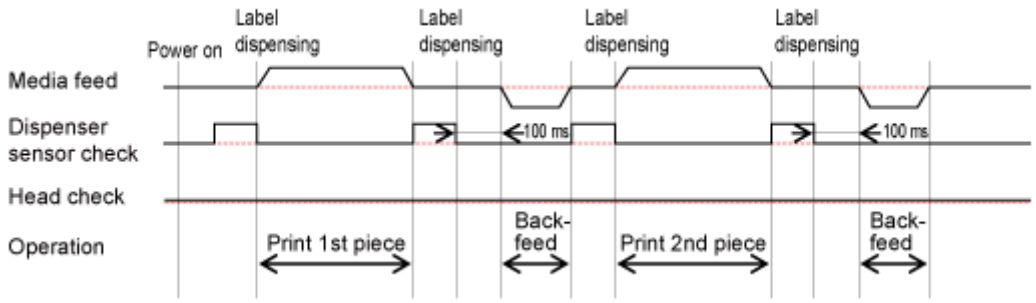
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

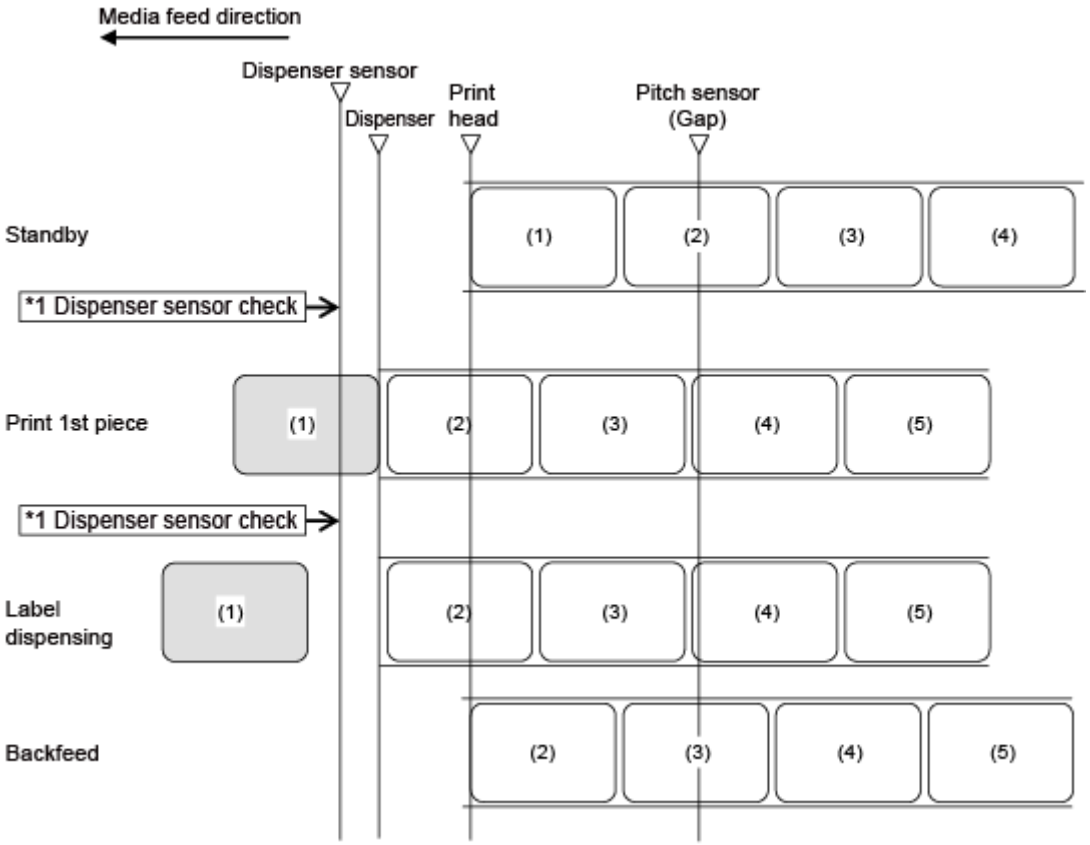
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 16: Dispenser Mode and Backfeed After Printing (Head Check Enabled)

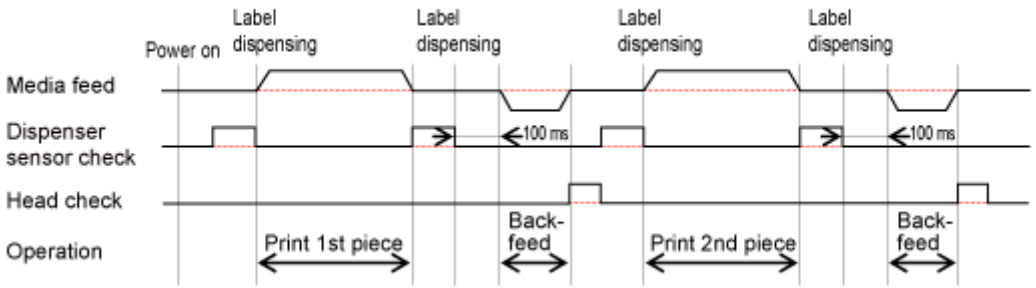
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

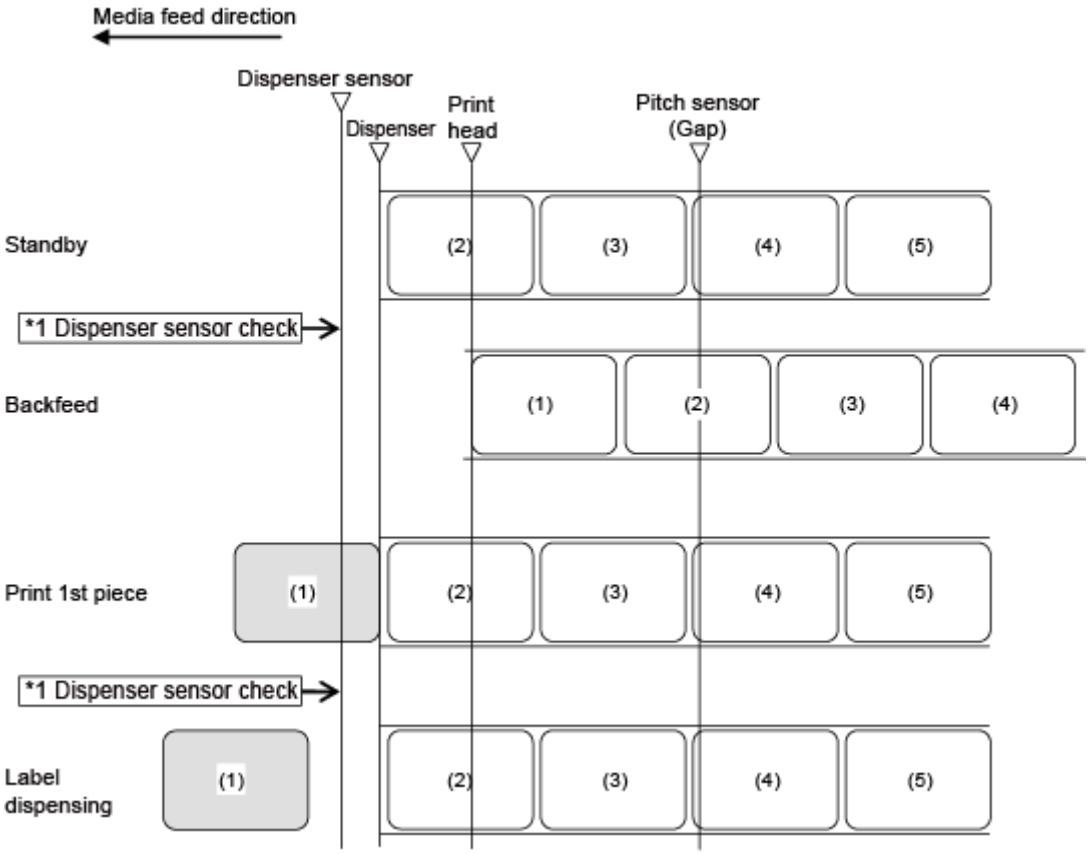
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 17: Dispenser Mode and Backfeed Before Printing (Head Check Disabled)

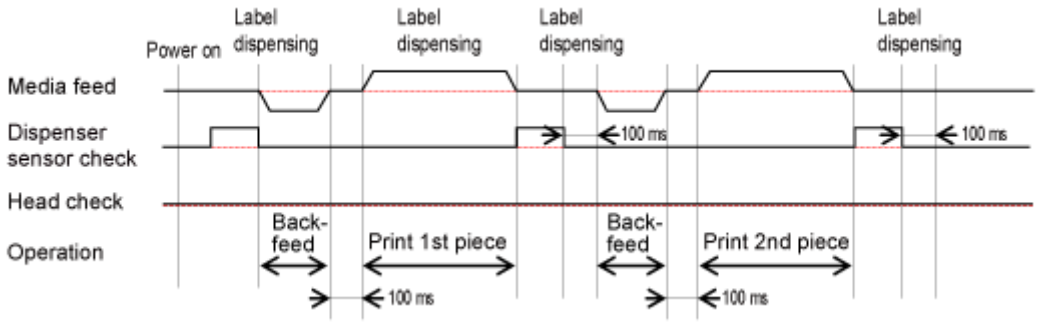
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

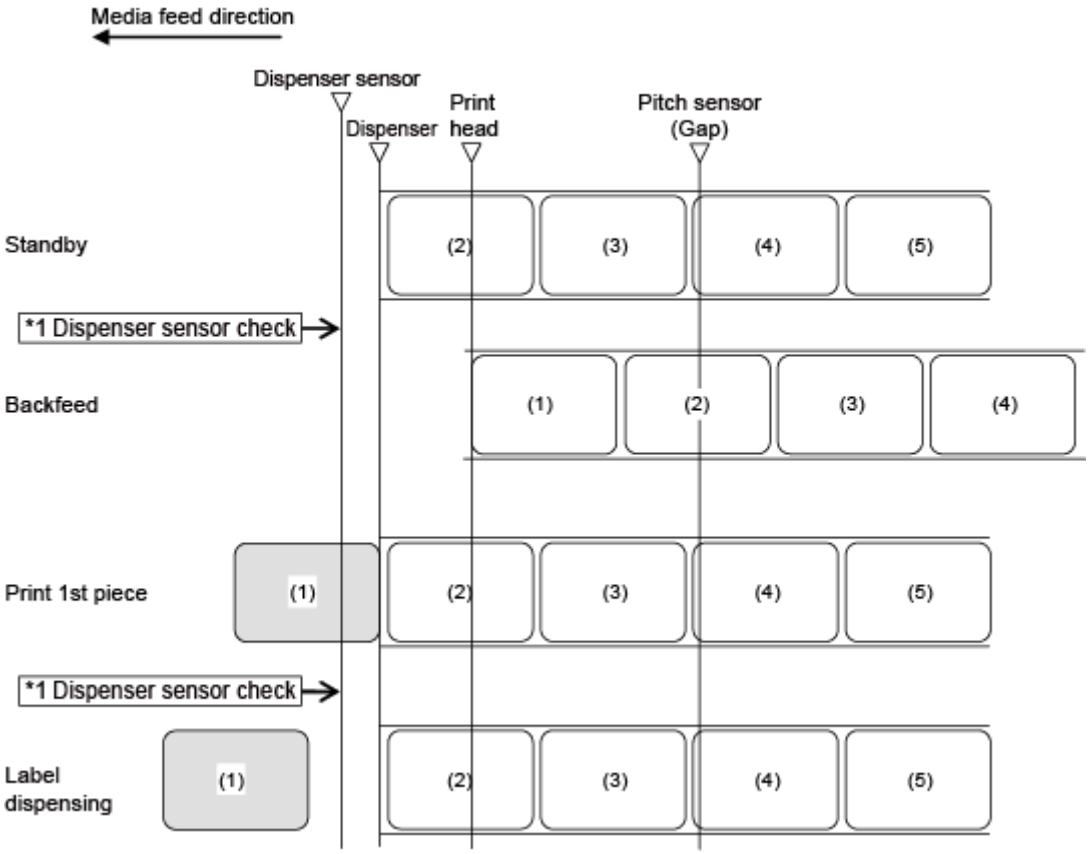
- The figure above shows the reference position when the Gap sensor is used.

Timing Chart



Operation 18: Dispenser Mode and Backfeed Before Printing (Head Check Enabled)

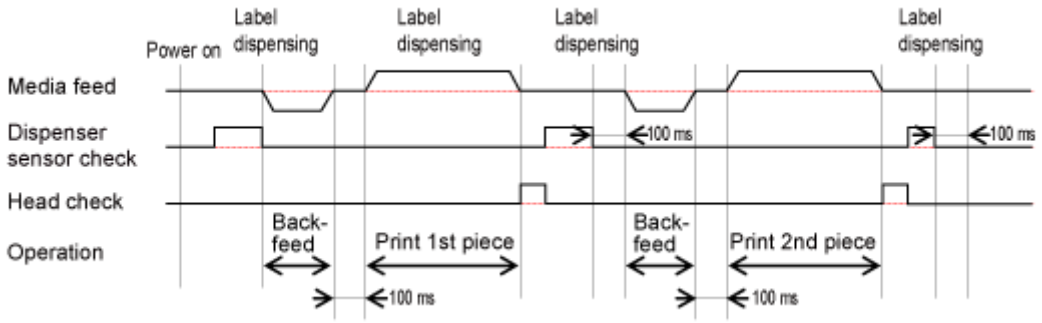
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

- The figure above shows the reference position when the Gap sensor is used.

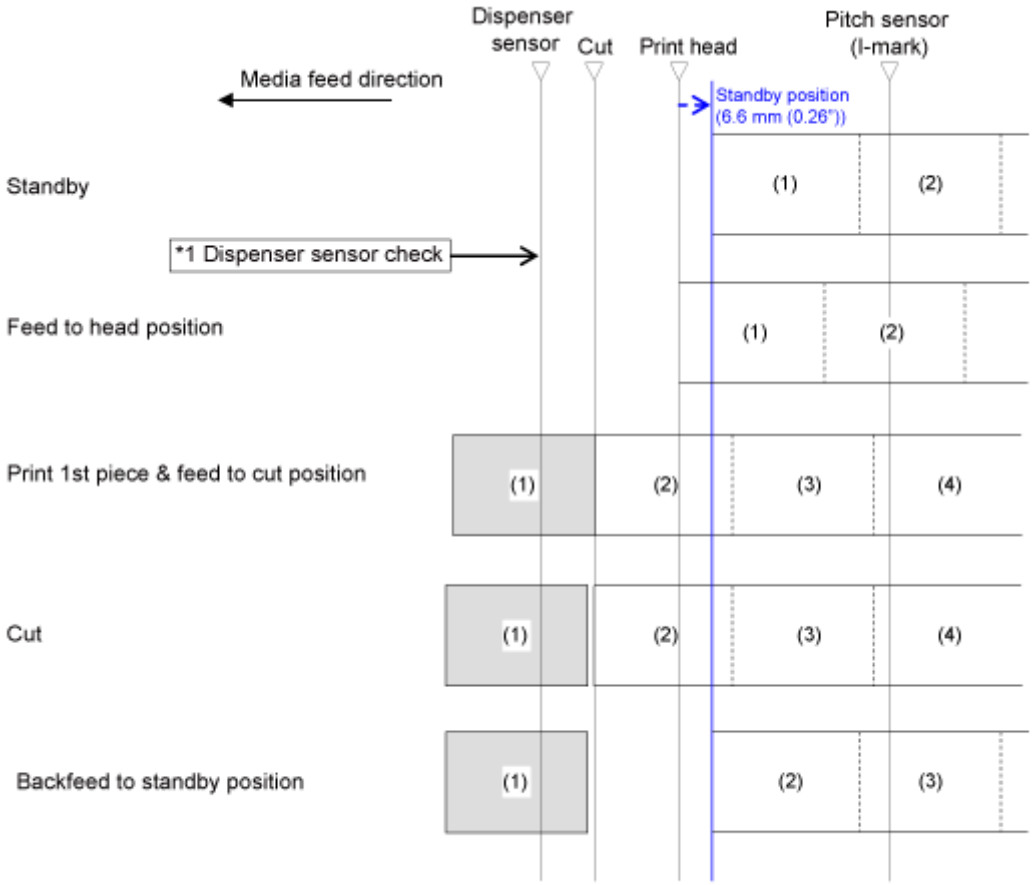
Timing Chart



Operations in Linerless Mode

Operation 19: Linerless Cutter Mode and Backfeed After Printing (Head Check Disabled)

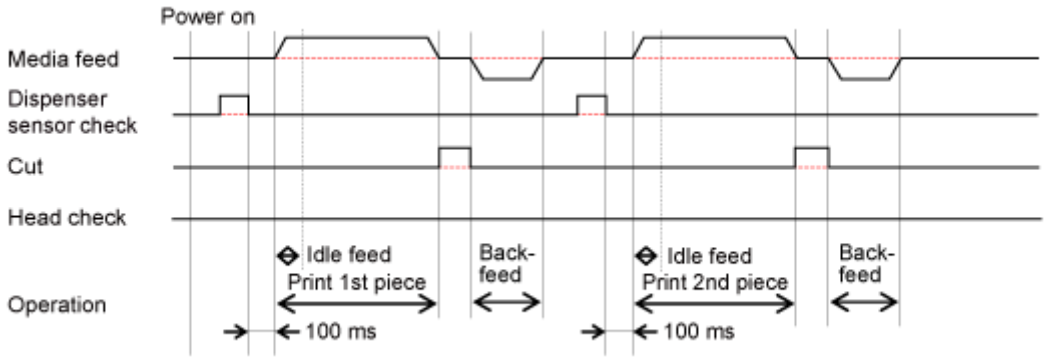
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

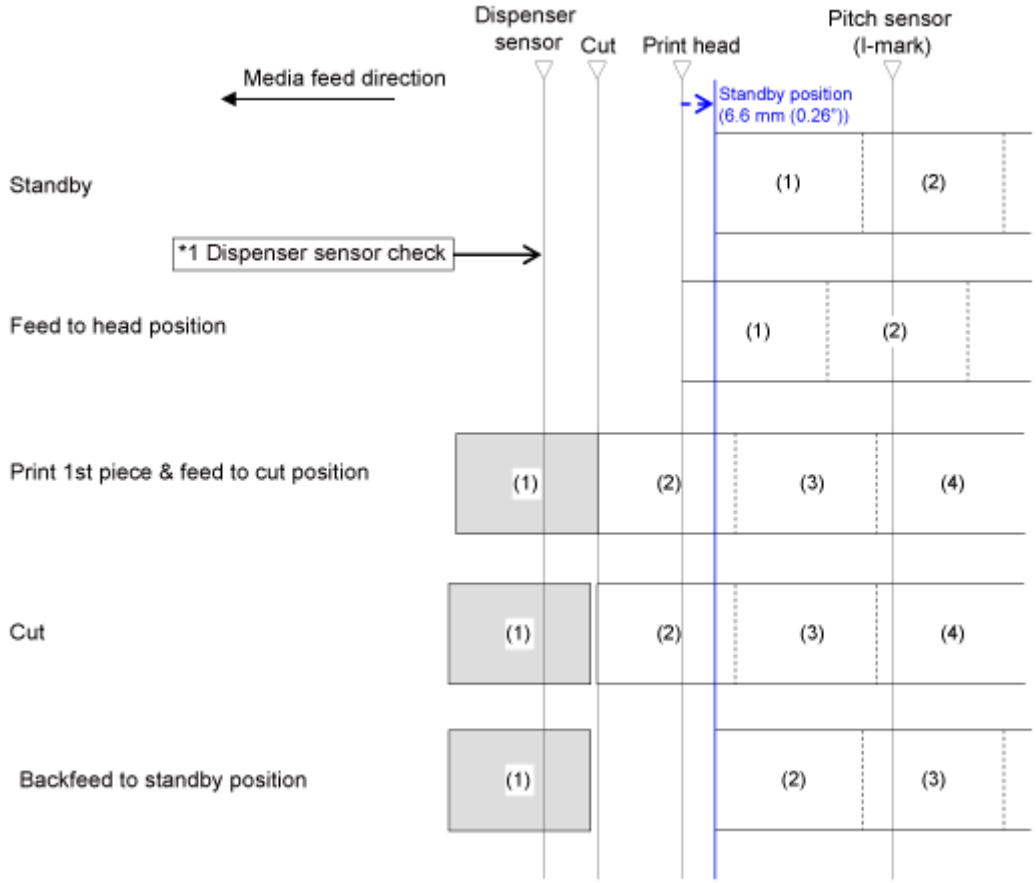
- The figure above shows the reference position when the I-mark sensor is used.

Timing Chart



Operation 20: Linerless Cutter Mode and Backfeed After Printing (Head Check Enabled)

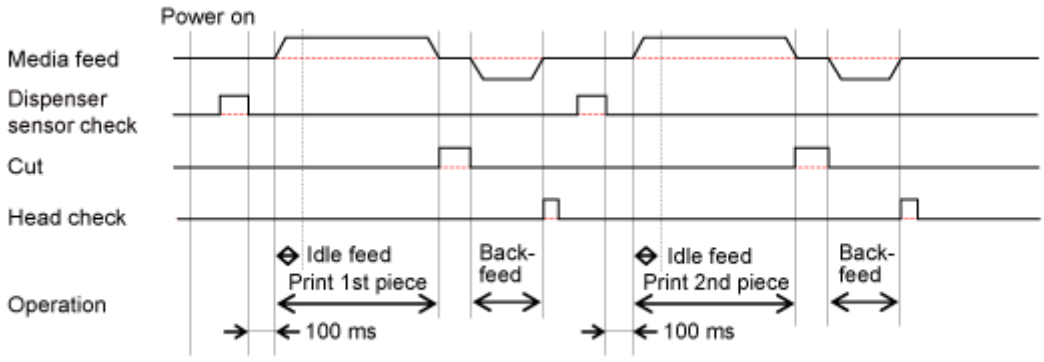
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

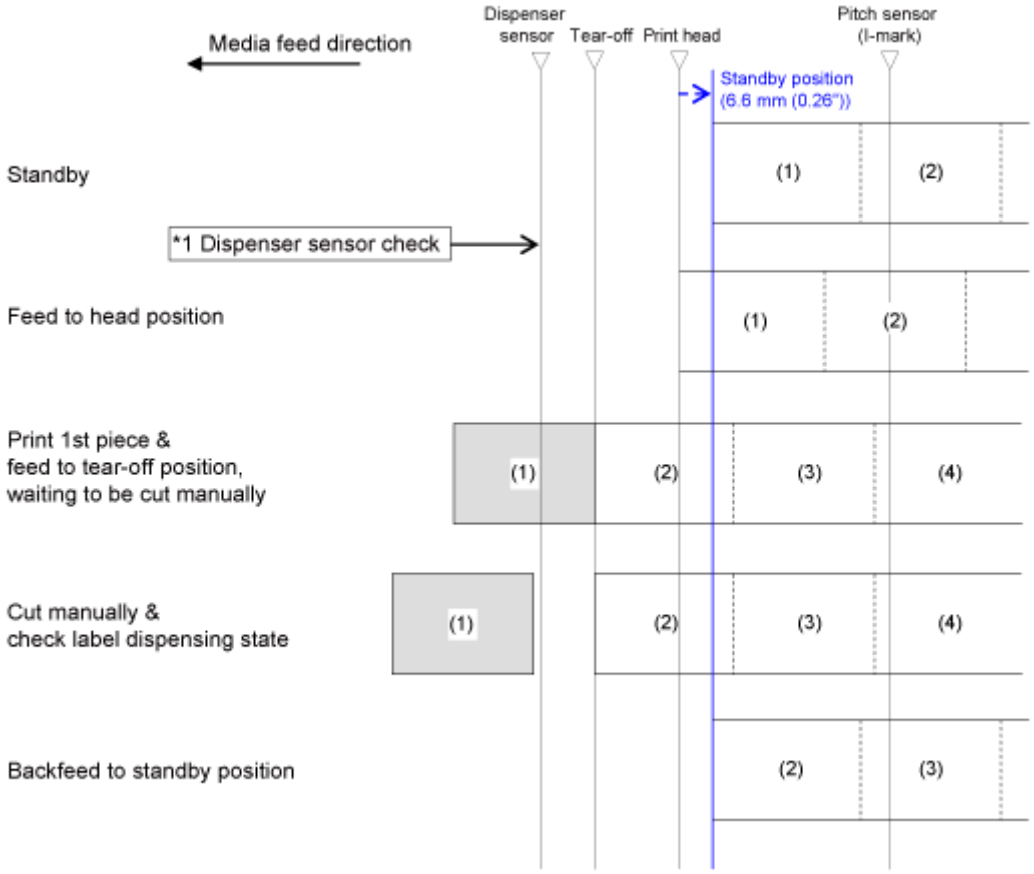
- The figure above shows the reference position when the I-mark sensor is used.

Timing Chart



Operation 21: Linerless Tearoff Mode (Head Check Disabled)

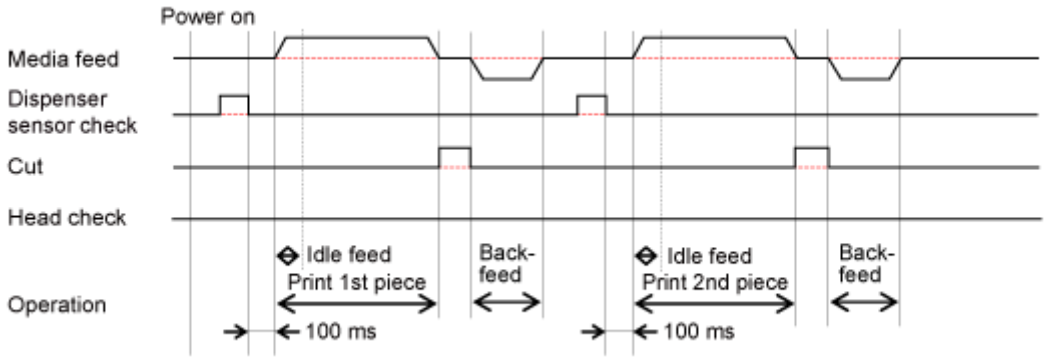
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

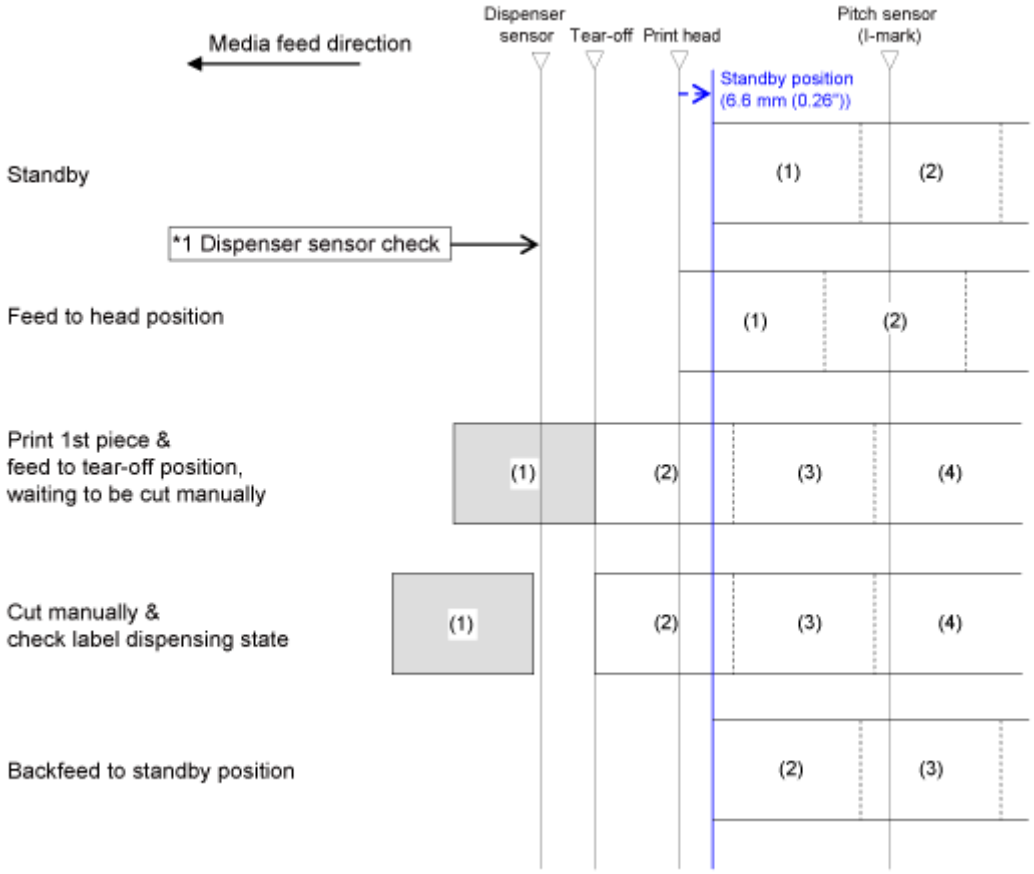
- The figure above shows the reference position when the I-mark sensor is used.

Timing Chart



Operation 22: Linerless Tearoff Mode (Head Check Enabled)

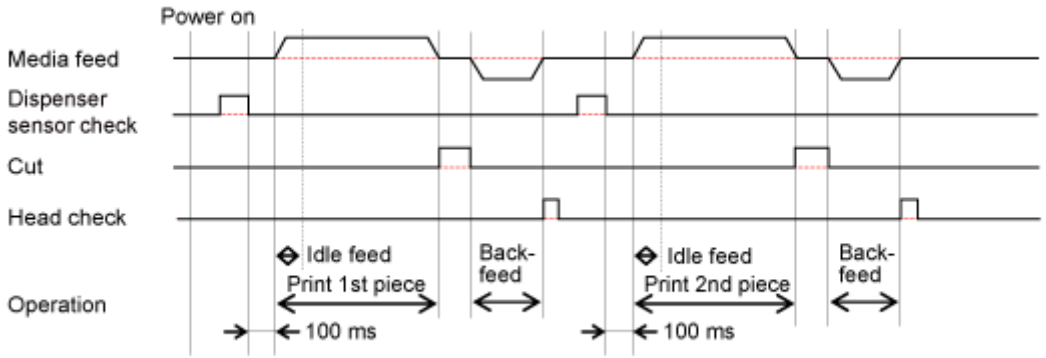
Operation



*1 The dispenser sensor confirms the dispensing condition and the printer does not perform the next operation until the label is dispensed.

- The figure above shows the reference position when the I-mark sensor is used.

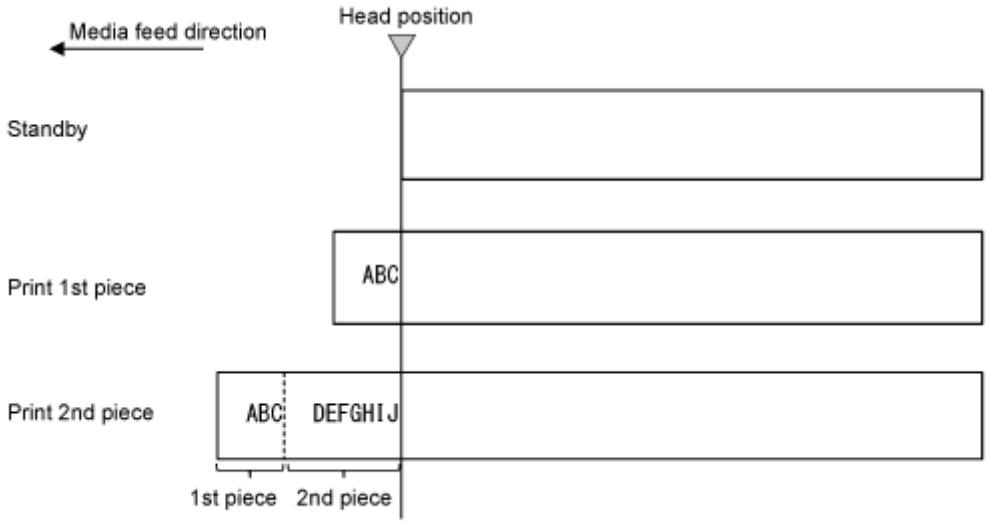
Timing Chart



Operations When the Media Sensor Is Disabled

Operation 23: Media Sensor Disabled

When the media sensor is disabled, media stops at the specified print end line.



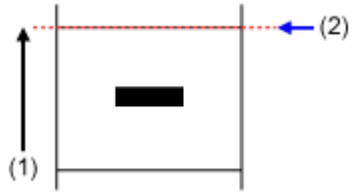
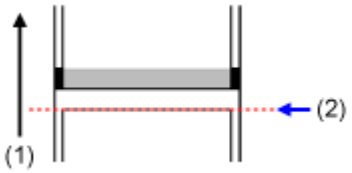
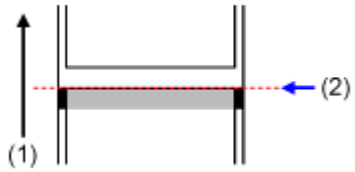
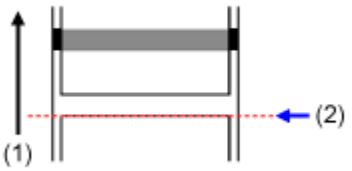
Adjusting the Base Reference Point

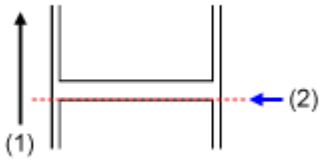
About the Base Reference Point

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 operation mode, or I-mark position or gap of the media you use.

Continuous Mode

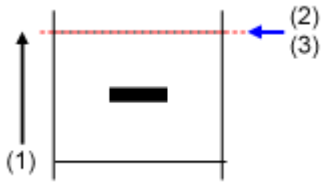
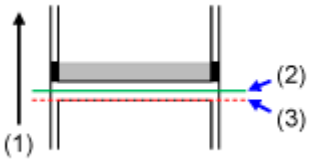
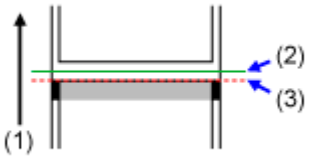
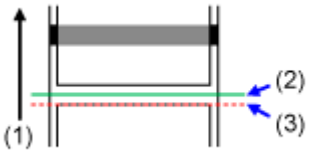
I-mark Position or Gap	Base Reference Point
Center I-mark	
Bottom I-mark	
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 This I-mark position is an example.

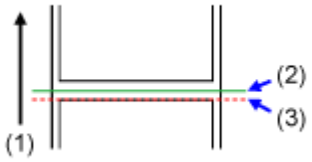
I-mark Position or Gap	Base Reference Point
Gap label	

(1) Feed direction

(2) Print position

Tear-Off Mode

I-mark Position or Gap	Base Reference Point
Center I-mark	
Bottom I-mark	
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 This I-mark position is an example.

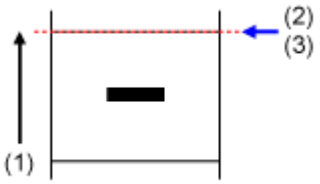
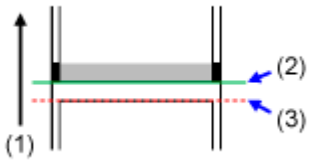
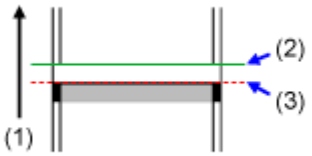
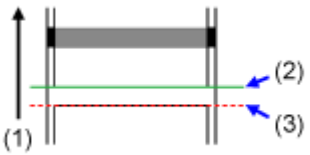
I-mark Position or Gap	Base Reference Point
Gap label	

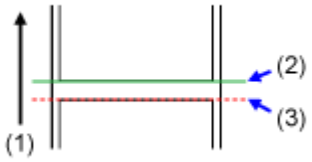
(1) Feed direction

(2) Tear-off position

(3) Print position

Dispenser Mode

I-mark Position or Gap	Base Reference Point
Center I-mark	
Bottom I-mark	
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 This I-mark position is an example.

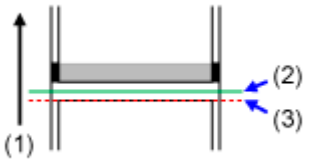
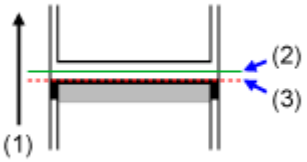
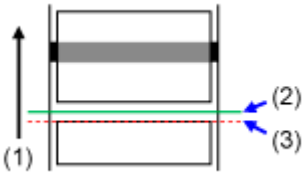
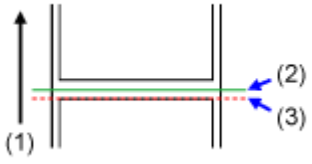
I-mark Position or Gap	Base Reference Point
Gap label	

(1) Feed direction

(2) Dispensing position

(3) Print position

Cutter/Partial Cutter Mode

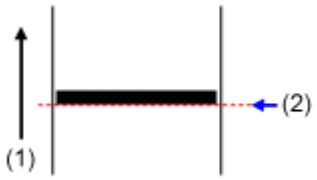
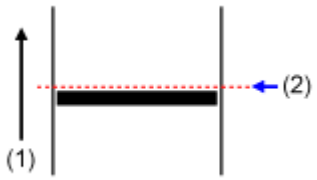
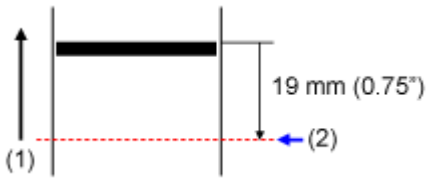
I-mark Position or Gap	Base Reference Point
Bottom I-mark	
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 This I-mark position is an example.
Gap label	

(1) Feed direction

(2) Cut position

(3) Print position

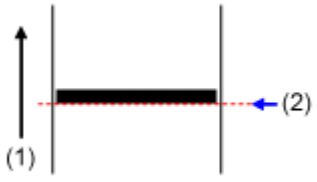
Linerless Cutter Mode

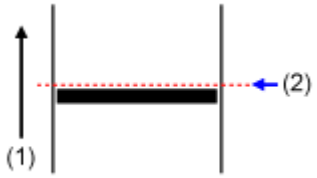
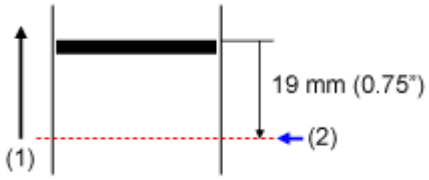
I-mark Position	Base Reference Point
Bottom I-mark	
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 When I-mark offset = 19 mm (0.75")

(1) Feed direction

(2) Print and cut position

Linerless Tearoff Mode

I-mark Position	Base Reference Point
Bottom I-mark	

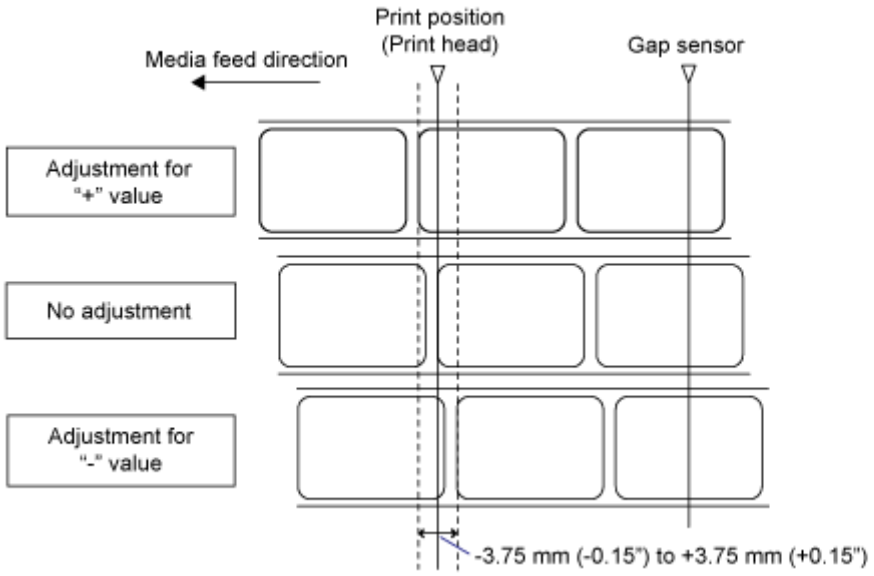
I-mark Position	Base Reference Point
Top I-mark	
Custom I-mark (Labels with I-marks other than our specifications)	 When setting I-mark offset=19 mm (0.75")

(1) Feed direction

(2) Print and tear-off position

Adjusting the Print Position

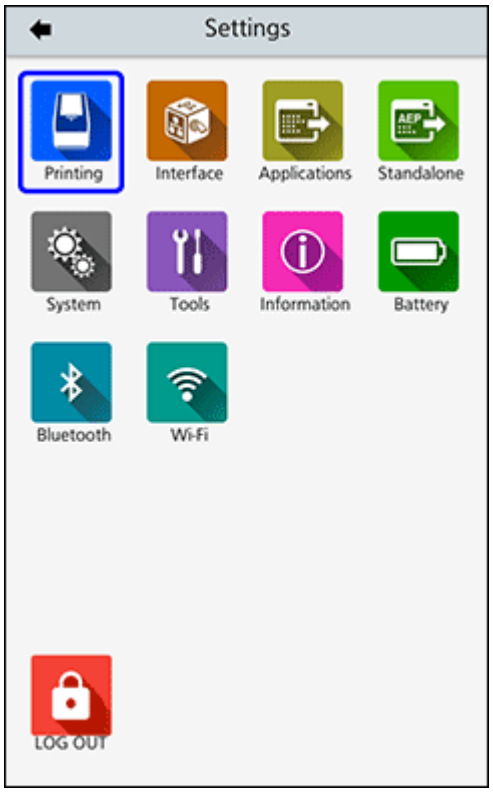
Set the [Pitch] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the print position.



- The above base reference position (print position) becomes the stop position when the sensor type is set to Gap.

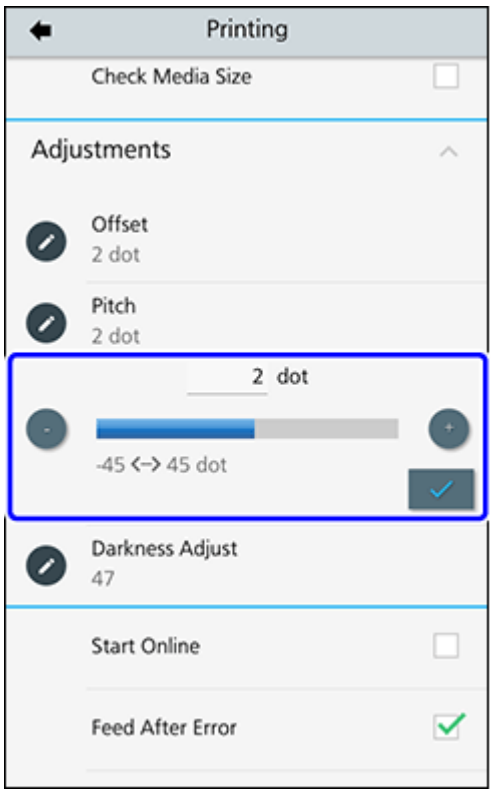
1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**

3. **Tap [Printing].**



4. **Tap [Pitch] under [Advanced] > [Adjustments] menu.**

5. **Change the setting value.**



The setting range is from -45 to +45 dots.

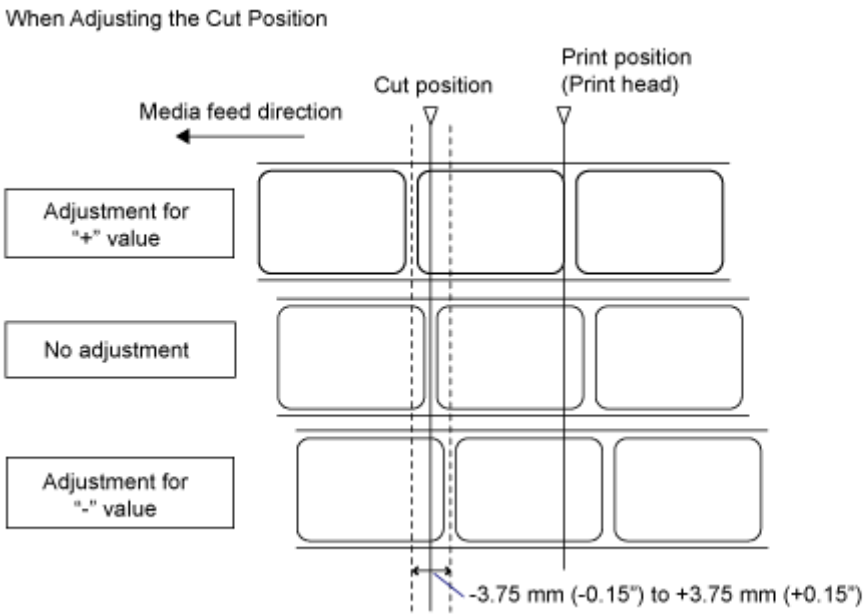
- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

6. **Tap to save the setting value.**
7. **Press the / (Standby/Home) button to show the Home screen.**
8. **Press the / (Standby/Home) button again to change to Online mode.**

You can print to check the adjusted print position.

Adjusting the Media Stop Position

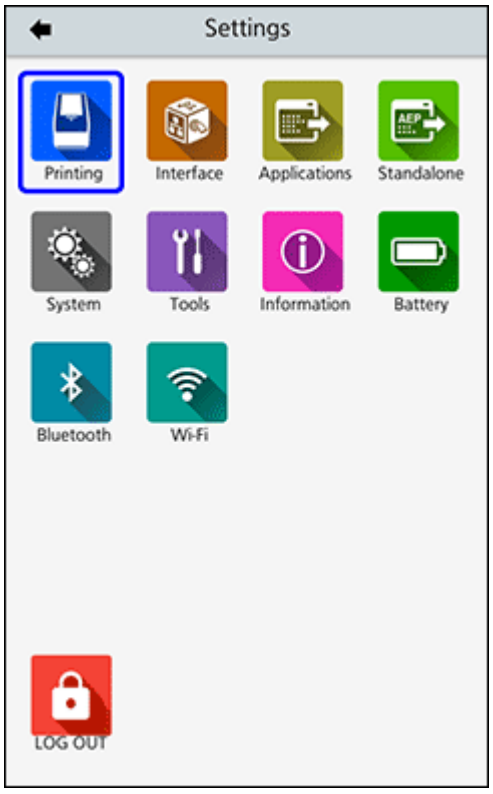
Set the [Offset] in the [Printing] > [Advanced] > [Adjustments] menu to adjust the media stop position (for cutter/dispenser/tear-off mode).



- The above cut reference position for printing indicates the label stop position when the media sensor is set to Gap sensor.
- The tear-off and dispensing positions are adjustable in the same manner.

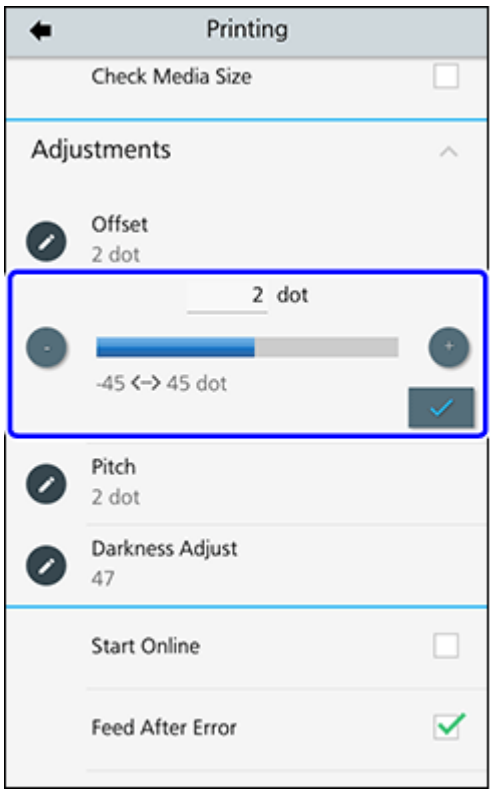
1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**

3. **Tap [Printing].**



4. **Tap [Offset] under [Advanced] > [Adjustments] menu.**

5. **Change the setting value.**



The setting range is from -45 to +45 dots.

- The length of 1 dot is 0.083 mm (0.0033").
- You can change the unit to dots or inches in the [System] > [Regional] > [Unit] menu.

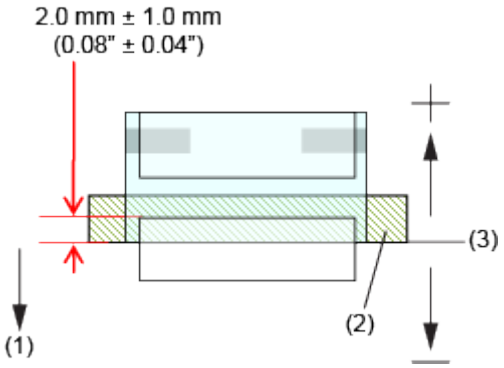
6. **Tap to save the setting value.**
7. **Press the / (Standby/Home) button to show the Home screen.**
8. **Press the / (Standby/Home) button again to change to Online mode.**

You can print to check the adjusted 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 ± 1 mm (0.08" ± 0.04") on the liner.



(1) Feed direction

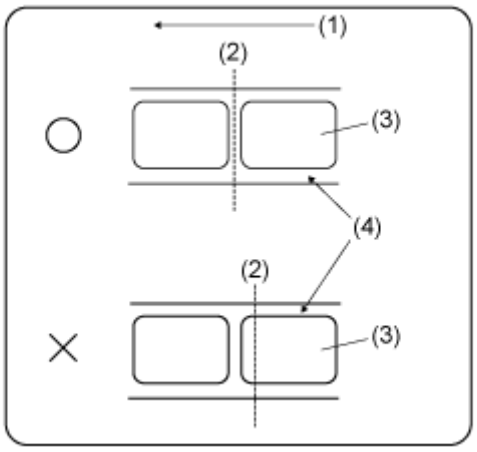
(2) Dispenser bar

(3) Stop position

Cut Position When Using the Label in Cutter/Partial Cutter Mode

The regular cut position is between labels (only cut on the liner).

When you cut the label, the glue adheres to the blade of the cutter and the blade will decrease the performance of the cutter. Adjust the cut position so as not to cut the label.



(1) Media feed direction

(2) Cut position (I-mark sensor/Gap sensor)

(3) Label

(4) Liner

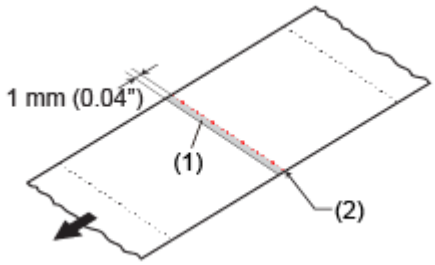
Cut Position When Using the Media with Perforated Line in Cutter/Partial Cutter Mode

Adjust the cut position so as not to cut the media on the perforated line and on the area near side from the perforated line (the area is shown in the figure below).

When the media is cut on the area not to be cut, it could cause a paper jam or damage.

- **Media Roll**

  The area not to be cut is on the perforated line and on the area within 1 mm (0.04") near side from the perforated line.

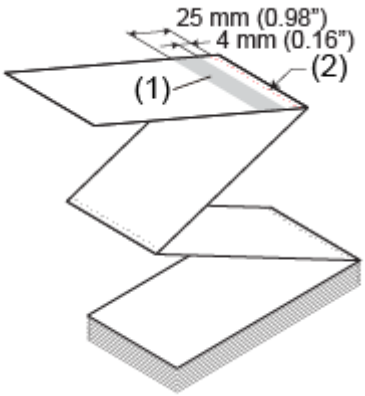


(1) Area not to be cut

(2) Perforated line

- **Fan-fold Media**

  The area not to be cut is on the perforated line and on the area within 4 to 25 mm (0.16" to 0.98") near side from the perforated line.



(1) Area not to be cut

(2) Perforated line

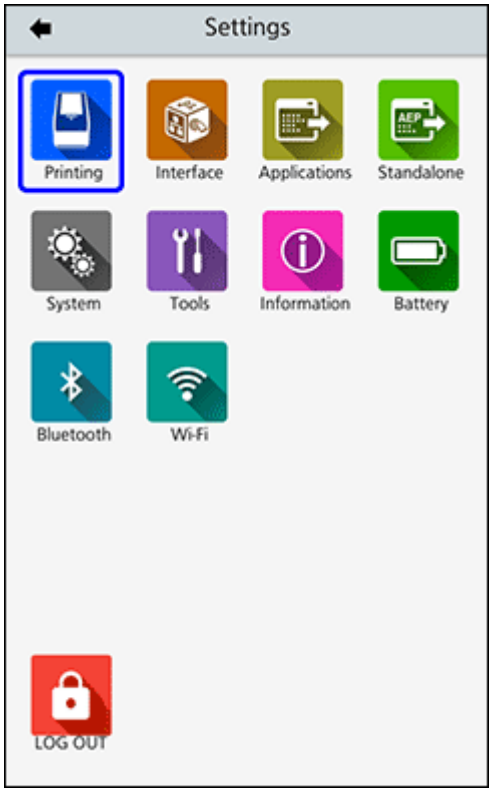
Adjusting the Print Quality

Adjusting the Print Darkness

The adjustment procedure for the print darkness is as follows:

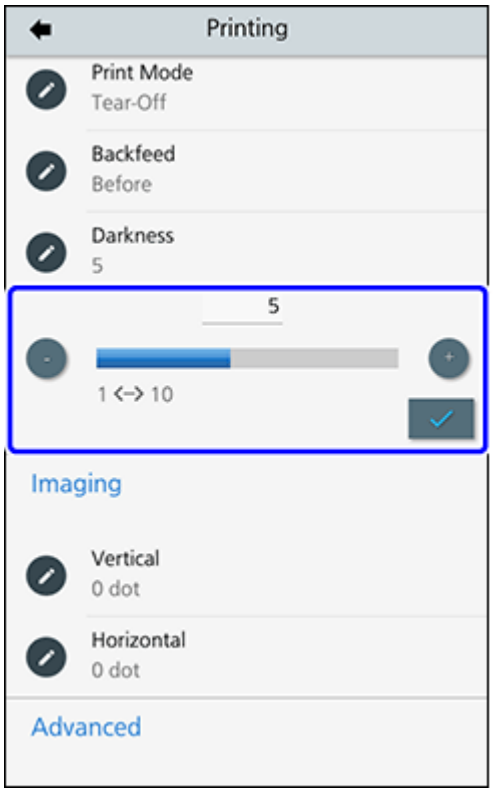
- You can fine tune the print darkness by setting the [Darkness Adjust] in the [Printing] > [Advanced] > [Adjustments] menu.
- When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands], the data will be printed with the print darkness specified by command.
- While the print job is paused, the [Adjustments] menu will appear instead of the [Settings] menu and you can adjust the print darkness.

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
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 / (Standby/Home) button to show the Home screen.**

8. **Press the / (Standby/Home) button again to change to Online mode.**

You can print to check the print quality.

Adjusting the Print Speed

The adjustment of the print speed not only changes the speed of printing but also affects the print quality.

The setting range of the print speed varies according to the following power connecting conditions:

When the AC adapter is connected to the printer

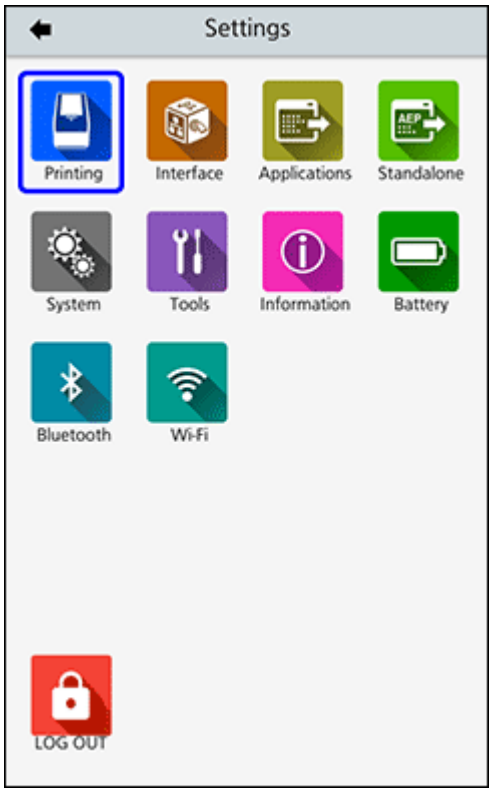
2 to 6 ips (inches/sec) (50.8 to 152.4 mm/sec)

When only the optional battery is installed

2 to 4 ips (inches/sec) (50.8 to 101.6 mm/sec)

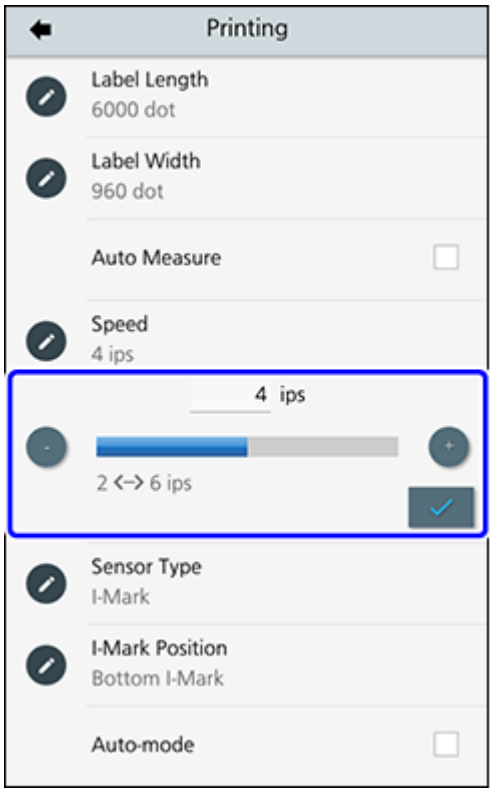
- When the [Printing] > [Advanced] > [Prioritize] menu has been set to [Commands], the data will be printed with the print speed specified by command.
- While the print job is paused, the [Adjustments] menu will appear instead of the [Settings] menu and you can adjust the print speed.

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**
3. **Tap [Printing].**



4. **Tap [Speed].**

5. **Change the setting value.**



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

- If the optional battery mount kit is installed and you are using the battery, the setting range is 2 to 4 ips (inches/sec) (50.8 to 101.6 mm/sec).

6. **Tap ✓ to save the setting value.**

7. **Press the ⏻/⌂ (Standby/Home) button to show the Home screen.**

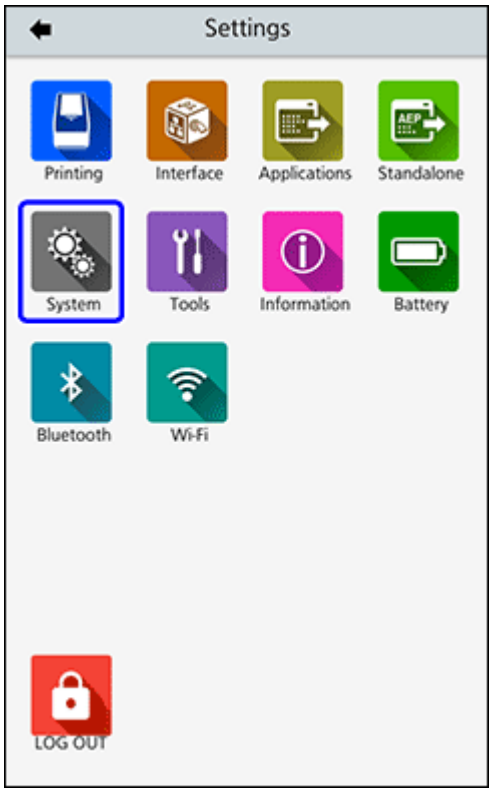
8. **Press the ⏻/⌂ (Standby/Home) button again to change to Online mode.**

You can print to check the print quality.

Adjusting the Volume

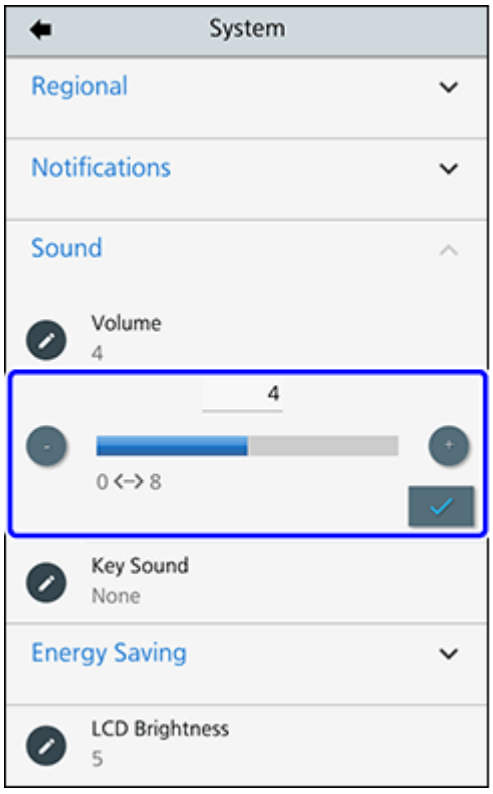
The adjustment procedure for the volume of the printer sounds such as the error buzzer and key sound is as follows:

1. **Tap on the Home screen or Offline screen to show the [Settings] menu.**
2. **Input the password if it is enabled.**
3. **Tap [System].**



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.

List of Initial Values

[Printing] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Label Length]	6000 dots
[Label Width]	960 dots
[Auto Measure]	Disabled
[Speed]	4 ips (If the printer is connected to AC power) 3 ips (If only the optional battery is installed)
[Sensor Type]	I-Mark (When [Print Mode] is [Dispenser], [Tear-Off], [Continuous], [Cutter], or [Partial cutter]) None (When [Print Mode] is [Linerless tearoff] or [Linerless cutter])
[I-Mark Position]	Bottom I-Mark
[Label Size]	25 mm
[I-Mark Offset]	0 dot
[Auto-mode]	Enabled
[Print Mode]	**If [Auto-mode] is enabled** Dispenser (If no option is installed and media is loaded for dispenser mode) Tear-Off (If no option is installed and media is loaded for continuous/tear-off mode) Cutter (If cutter kit is installed) Partial cutter (If partial cutter kit is installed) **If [Auto-mode] is disabled** Tear-Off
[Backfeed]	Before (If [Print Mode] is set to [Tear-Off] or [Partial cutter]) After (If [Print Mode] is set to [Dispenser], [Cutter], [Linerless tearoff], or [Linerless cutter]) None (If [Print Mode] is set to [Continuous])

Setting Item	Initial Value
[Eject Cut]	Off
[Darkness]	5
[Imaging]	
[Vertical]	0 dot
[Horizontal]	0 dot
[Advanced]	
[Calibrate]	
[Auto-calibration]	-
[GAP Levels]	Value adjusted by the factory.
[GAP Slice Level]	Auto
[I-Mark Levels]	Value adjusted by the factory.
[I-Mark Slice Level]	Auto
[Dispenser Levels]	Value adjusted by the factory.
[Linerless Levels]	Value adjusted by the factory.
[Head Check]	Off
[Head Check Mode]	Always
[Every Page]	1
[Check Media Size]	Disabled
[Adjustments]	
[Offset]	0 dot
[Pitch]	0 dot
[Darkness Adjust]	50
[Start Online]	Disabled
[Feed After Error]	Enabled
[Feed At Power On]	Disabled
[Finisher Feed]	0 dot (Standard)
[Paper End]	Using I-mark
[Prioritize]	Commands

Setting Item		Initial Value
	[Reprint]	Disabled
	[Print End Position]	0 dot

[Interface] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Network]	
[Settings]	
[LAN]	
[IPv4 (LAN)]	
[Mode]	DHCP
[DHCP]	-
[IP Address]	0.0.0.0
[Netmask]	255.255.255.0
[Gateway]	0.0.0.0
[DNS]	0.0.0.0
[IPv6 (LAN)]	
[Mode]	Disable
[DHCP]	-
[IP Address]	::
[Prefix Length]	64
[Gateway]	::
[DNS]	::
[Ports]	
[Port1]	1024
[Port2]	1025
[Port3]	9100
[Flow Control]	STATUS4 ENQ
[TCP Connection Queue]	Enabled
[Legacy Status for Port 9100]	Disabled

Setting Item	Initial Value
[BCC]	Disabled
[Delay Reply ENQ]	0 ms
[Status4 Cyclic Response]	500 ms
[Proxy (LAN)]	
[Enabled]	Disabled
[Server]	-
[Exclude]	-
[Services]	
[NTP]	
[Enable]	Disabled
[Error]	Disabled
[Time Server IP]	0.0.0.0
[LPD]	
[Enable]	Enabled
[DNS Lookup]	Disabled
[FTP]	
[Enable]	Disabled
[FTP Timeout]	300 sec
[SNMP]	
[sysContact]	-
[sysName]	-
[sysLocation]	-
[prtMarkerCounterUnit]	meters
[Agent]	
[Enable]	Enabled
[Read-Only]	
[SNMP Version]	1|2c|3
[Community]	public

Setting Item	Initial Value
[User]	rouser
[User Security]	None
[Authentication Protocol]	MD5
[Authentication Passphrase]	mypassword
[Privacy Protocol]	DES
[Privacy Passphrase]	mypassword
[Read-Write]	
[SNMP Version]	Disabled
[Community]	private
[User]	rwuser
[User Security]	None
[Authentication Protocol]	MD5
[Authentication Passphrase]	mypassword
[Privacy Protocol]	DES
[Privacy Passphrase]	mypassword
[Traps]	
[Enable]	Disabled
[SNMP Version]	1
[IP Version]	4
[Destinations]	1
[Destination 1]	0.0.0.0
[Destination 2]	0.0.0.0
[Destination 3]	0.0.0.0
[Community]	trapcom
[User]	trapuser
[Engine ID]	Hex string generated from MAC address
[Security]	None

Setting Item	Initial Value
[Authentication Protocol]	MD5
[Authentication Passphrase]	mypassword
[Privacy Protocol]	DES
[Privacy Passphrase]	mypassword
[Online Services]	
[SOS Mode]	Disabled
[Allow Remote Control]	Always
[SOS Association]	-
[Contact Information]	
[Phone Number]	-
[Periodic Notification]	
[Type]	Disabled
[Counter]	Thermal Head
[Head]	
[Meters]	1,000
[Last Update]	0.0 km
[Next Update]	1.0 km
[Current Value]	0.0 km
[Cutter]	
[Cuts]	10,000
[Last Update]	0
[Next Update]	10,000
[Current Value]	0
[Notifications]	1
[Time 1]	00:00
[Time 2]	00:00
[Time 3]	00:00
[Weekday]	Monday

Setting Item	Initial Value
[Day]	1
[Time]	00:00
[Update Screen]	Normal
[QR code offset]	
[Vertical]	0 dot
[Horizontal]	0 dot
[SOS Update]	-
[Advanced]	
[ARP Announcement]	
[Additional]	Enabled
[Periodic]	0
[USB]	
[Flow Control]	STATUS4
[BCC]	Disabled
[Change USB Serial]	Disabled
[NFC]	
[I/F Enable]	Enabled
[Ignore CR/LF]	Disabled
[Ignore CAN/DLE]	Disabled

[Applications] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Protocol]	AUTO
[SBPL]	
[Show Error]	Disabled
[Standard Code]	Enabled
[Orientation]	Portrait
[Font Settings]	
[Zero Slash]	Enabled
[Kanji]	
[Kanji Set]	GB18030
[Character Code]	GB18030
[Kanji Style]	Gothic
[Proportional]	Enabled
[Code Page]	858
[€]	d5
[Compatible]	
[CODE128(C) Zero Fill]	Disabled
[Kanji Command]	Disabled
[Call Font/Logo]	Disabled
[SZPL]	
[Label]	
[Shift]	0 dot
[Top]	0 dot
[Caret]	94 (^)
[Delimiter]	44 (,)

Setting Item	Initial Value
[Tilde]	126 (~)
[Clock Format]	(none)
[SIPL]	
[Font Settings]	
[Code Page]	1252
[New Font Encoding]	Disabled
[Proportional]	Disabled
[Zero Slash]	Disabled
[Format Save]	Enabled
[STCL]	
[Command Head]	
[Control Code]	Auto
[1st Byte Code]	27
[2nd Byte Code]	10
[3rd Byte Code]	0
[Font Settings]	
[Zero Slash]	Disabled
[€]	d5
[Code Page]	850
[Half-width Symbol]	Enabled
[Rotation]	0 degree
[Ignore Paper Size Command]	Disabled
[SDPL]	
[Control Code]	
[Code Type]	Standard
[SOH]	01
[STX]	02
[CR]	0D

Setting Item	Initial Value
[CNTBY]	5E
[Label Rotation]	0 degree
[SOP Emulation]	Auto
[Compatible Mode]	
[TTF]	Disabled
[Graphics]	Disabled
[Right-to-Left print]	Auto
[Prioritize]	
[Format Attribute]	Commands
[Pause Mode]	Commands
[1 Byte Codepage]	Commands
[SDPL Measure Unit]	Commands
[Scalable Font Style]	Commands
[Darkness]	Commands
[Factory Offset]	Commands
[Speed]	Commands
[Sensor Type]	Commands
[Format Attribute]	XOR
[Pause Mode]	Disabled
[1 Byte Codepage]	CP 850
[SDPL Measure Unit]	"
[Scalable Font Style]	
[Bold]	Disabled
[Italic]	Disabled
[SEPL]	
[Home Reference]	
[Horz. Offset]	0 dot
[Vert. Offset]	0 dot

Setting Item	Initial Value
[Memory Device]	Internal FLASH
[Sim. 300 DPI Head]	Disabled

[Standalone] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[AEP]	Enabled
[Initial Display at Start-Up]	Home Screen
[Starting Application]	Standard Demo
[Label Rotation]	Disabled
[Divider Label]	Disabled
[Show On-Screen Keyboard]	When Required
[Home Key Confirmation]	None
[Delete Application]	-

[System] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Regional]	
[Messages]	English, US
[External Keyboard]	English, US
[Locale]	English, US
[On-Screen Keyboard]	English, US
[Unit]	dot
[Time]	00:00
[Date]	(2000-01-01)
[Time Zone]	-
[Region]	Europe
[City]	London
[Display Language Icon]	Disabled
[Notifications]	
[Clean Printhead]	
[Clean Printhead]	Disabled
[Cleaning Interval]	400 m
[Clean Counter]	0 m
[Change Printhead]	
[Change Printhead]	Disabled
[Printhead Interval]	100 km
[Printhead Count]	0 km
[Change Cutter]	
[Change Cutter]	Disabled
[Cutter Life]	1000 K cuts

Setting Item	Initial Value
[Cutter Count]	0 K cuts
[Change Platen]	
[Change Platen]	Disabled
[Platen Interval]	100 km
[Platen Count]	0 km
[Sound]	
[Volume]	4
[Key Sound]	None
[Energy Saving]	
[AC(Without Battery)]	
[Sleep Timeout]	Off
[Auto Power Off]	Off
[Battery-Powered]	
[Sleep Timeout]	1 min
[Auto Power Off]	Off
[LCD Brightness]	5
[Show Total Count]	Disabled
[Password]	
[Password Enable]	Enabled
[Password Required After]	10 min
[Install Security]	None
[NFC Security]	None
[Start on AC]	Disabled
[Theme]	Default

[Tools] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Test Print]	
[Factory]	
[Label Width]	Large
[Pitch]	0 dot
[Offset]	0 dot
[Darkness Adjust]	50
[Configure List]	
[Category]	All
[Label Width]	Small
[Label Length]	660 dots
[Pitch]	0 dot
[Offset]	0 dot
[Darkness Adjust]	50
[Configure QR]	
[Category]	All
[Label Width]	Small
[Label Length]	660 dots
[Pitch]	0 dot
[Offset]	0 dot
[Darkness Adjust]	50
[Paper Sensor]	
[Label Width]	Small
[Label Length]	660 dots
[Pitch]	0 dot

Setting Item	Initial Value
[Offset]	0 dot
[Darkness Adjust]	50
[BD address]	
[Label Width]	Large
[Pitch]	0 dot
[Offset]	0 dot
[Darkness Adjust]	50
[HEX-Dump]	
[Hex Dump Mode]	Disabled
[Profiles]	
[Delete]	-
[Load]	-
[Save]	-
[Save as]	-
[Start with]	-
[Wi-Fi Site Survey]	-
[Install Certificates]	-
[Delete Certificates]	-
[Clone]	-
[Startup Guide]	Enabled

[Information] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Help]	-
[Build Version]	-
[Applications]	-
[Print Module]	-
[Sensor Module]	-
[Counters]	
[Head]	-
[Life]	Measured value
[Head 1]	Measured value
[Head 2]	Measured value
[Head 3]	Measured value
[Cutter]	0

[Battery] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Health]	Good
[Cycle Counts]	0
[Eco Charge]	Disabled
[Full Charge Power-Off]	Disabled

[Bluetooth] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Enable]	Enabled
[Name]	SATO PRINTER_xxxxxxxx (BD address)
[PIN Code]	0000
[BD Address]	xxxxxxxxxxxx
[Firm Version]	tlv_tf_1.1
[Host BD Addr]	-
[Pairing]	
[Available devices]	-
[Paired devices]	-
[IAP Ready]	Enabled
[iOS Reconnect]	Disabled
[Authentication]	Level 4
[ISI]	2048
[ISW]	18
[PSI]	2048
[PSW]	18
[CRC Mode]	Disabled
[Flow Control]	STATUS4 MULTI

[Wi-Fi] Menu

The initial value refers to the setting value of the printer when it was shipped from the factory. The table below shows the initial value of each setting item.

Setting Item	Initial Value
[Enable]	Enabled
[Wi-Fi Setting]	
[IPv4 (Wi-Fi)]	
[Mode]	DHCP
[DHCP]	-
[IP Address]	0.0.0.0
[Netmask]	255.255.255.0
[Gateway]	0.0.0.0
[DNS]	0.0.0.0
[IPv6 (Wi-Fi)]	
[Mode]	Disable
[DHCP]	-
[IP Address]	::
[Prefix Length]	64
[Gateway]	::
[DNS]	::
[Proxy (Wi-Fi)]	
[Enabled]	Disabled
[Server]	-
[Exclude]	-
[Port]	
[Port1]	1024
[Port2]	1025
[Port3]	9100

Setting Item	Initial Value
[Flow Control]	STATUS4 ENQ
[TCP Connection Queue]	Enabled
[Legacy Status for Port 9100]	Disabled
[BCC]	Disabled
[Delay Reply ENQ]	0 ms
[Status4 Cyclic Response]	500 ms
[Wi-Fi Protected Setup(WPS)]	
[Button (PBC)]	-
[PIN]	-
[Wi-Fi Direct]	
[Device Name]	SATO_PRINTER
[Connect]	-
[Start Group]	-
[Remove Group]	-
[Disconnect]	-
[SSID]	DIRECT-xx
[IP Address]	x.x.x.x
[Passphrase]	xxxxxxx
[Channel]	-
[Wi-Fi Connection Setting]	
[SSID]	SATO_PRINTER
[Hidden SSID]	Enabled
[Mode]	Ad-hoc
[Channel]	6
[Security]	None
[WEP Conf.]	
[Authentication]	Open System
[Key Index]	1

Setting Item	Initial Value
[Key #1]-[Key #4]	-
[WPA Conf.]	
[WPA Authentication]	Personal (PSK)
[PSK]	-
[EAP Conf.]	
[EAP Mode]	FAST
[Inner Method]	AUTO
[Username]	-
[Password]	-
[Anon. Outer ID]	-
[Verify Server Cert.]	Enabled
[Private Key P/W]	-
[PAC Auto Provisioning]	Disabled
[PAC Password]	-

Maintenance

Cleaning the Printer

Cleaning

A dirty print head or platen roller not only affects the print quality but also causes errors. Use a cleaning kit or cleaning sheet to clean the printer regularly.

- 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 or remove the optional battery before you begin cleaning.

  The print head and its surroundings are hot after printing. Wait until the printer 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 printer.
- Use a cotton swab or cotton cloth from a cleaning kit to clean. Do not clean with a hard object. Doing so could cause damage.
- Remove the media before cleaning.

- The printer cleaning kit and cleaning sheet are optional. Contact your SATO reseller or technical support center to purchase the options.

Cleaning the Print Head and Platen Roller

Cleaning Intervals

Clean the printer at the following regular intervals.

- The below cleaning intervals are only for reference. Clean the printer when necessary even if you are not at a regular interval.

- After you print ten media rolls or print media for 500 meters (1640.4 feet).

  Use the cleaning kit to clean following parts:

  - Print head
  - Platen roller
  - Media sensors
  - Media guide
  - Media route

  Use a dry cotton cloth to clean following parts:

  - Linerless platen roller

- After you print twenty media rolls and linerless labels or print media for 1,000 meters (3280.8 feet).

  Use the cleaning sheet to clean the following parts:

  - Print head

- After you print one media roll of the linerless label, print media for 70 meters (229.7 feet) or whenever there is any glue residue or paper dust on the media route.

  Use the cleaning kit to clean following parts:

  - Print head
  - Media guide
  - Media sensors
  - Media route

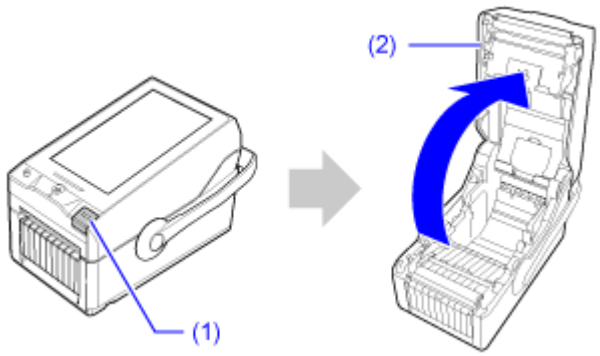
Cleaning Using the Cleaning Kit

The cleaning procedure using the cleaning kit is as follows:

- Never use organic solvents, such as thinner and benzine to clean the printer.

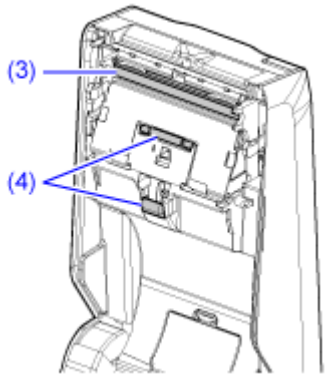
- For details on the cleaning kit, refer to the manual attached to the cleaning kit.

1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**

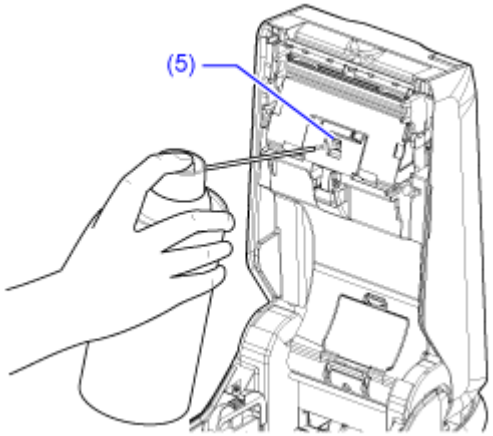


3. **Remove the media if it is already loaded.**
4. **Clean the dirt off of the print head (3) and two rollers (4) using a cotton swab dabbed with cleaning liquid.**

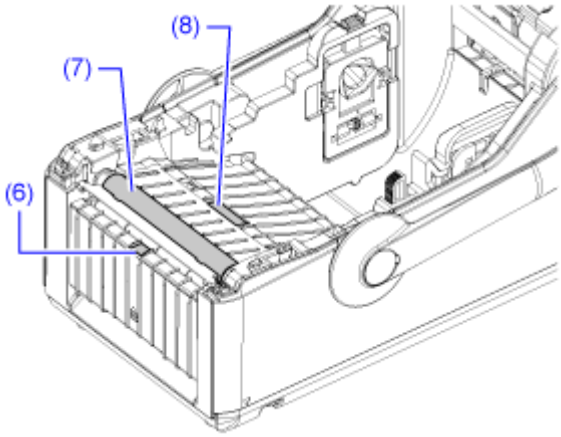
- The print head and its surroundings are hot after printing. Wait until the printer cools down.
- Touching the edge of the print head with your bare hand could cause injury.



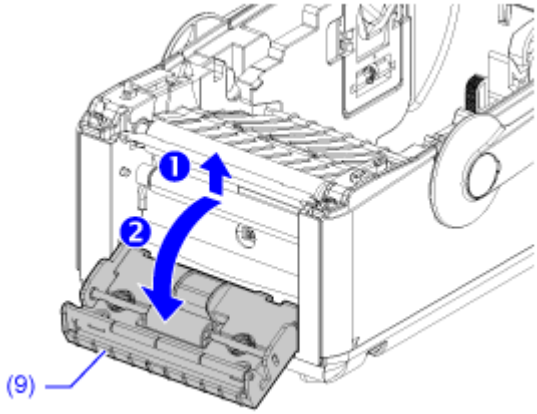
5. **Clean the sensor (5) using an air duster.**



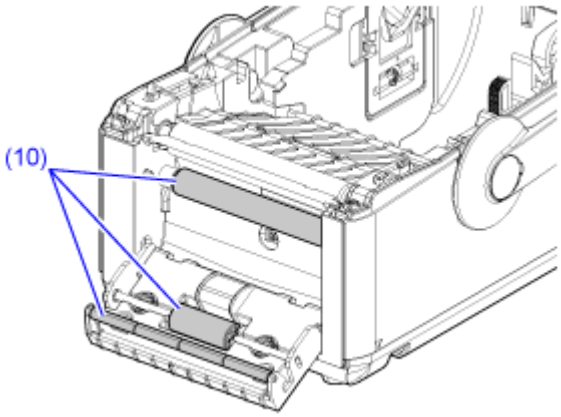
6. **Clean the dirt off of the dispenser sensor (6), platen roller (7), and liner sensor (8) using a cotton cloth dabbed with cleaning liquid.**



7. **Lift the dispenser frame (9) on the front side of the printer (❶) and tilt it toward the front (❷).**



8. **Clean the dirt off of the three rollers (10) using a cotton cloth dabbed with cleaning liquid.**



9. **Reload the media if you removed it in step 3.**
10. **Close the dispenser frame.**

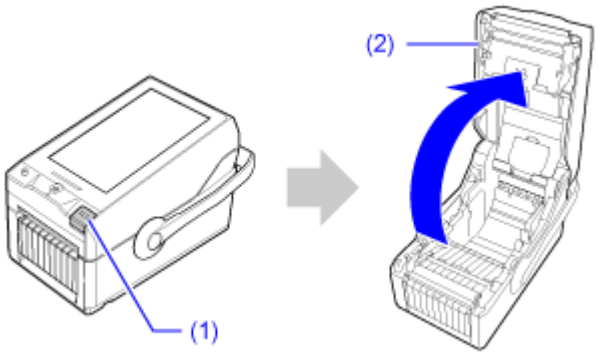
Cleaning Using the Cleaning Kit (with Optional Linerless Kit)

The cleaning procedure using the cleaning kit is as follows:

- Never use organic solvents, such as thinner and benzine to clean the printer.

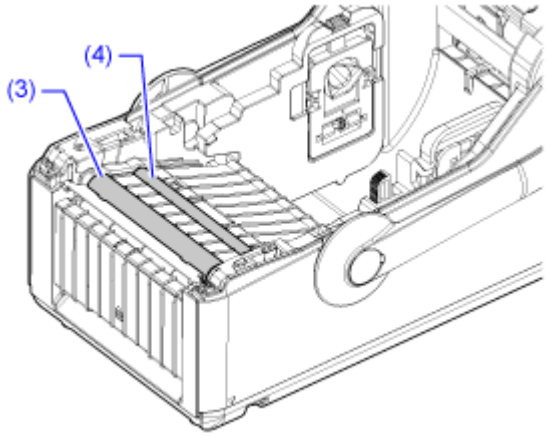
- For details on the cleaning kit, refer to the manual attached to the cleaning kit.

1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



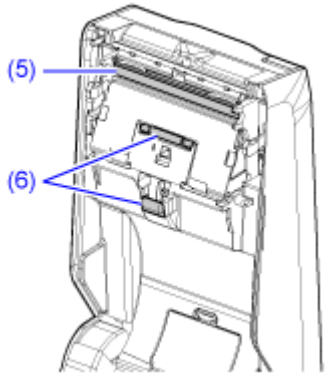
3. **Remove the media if it is already loaded.**

4. **Clean the dirt off of the platen roller (3) and feed roller (4) using a dry cotton cloth.**

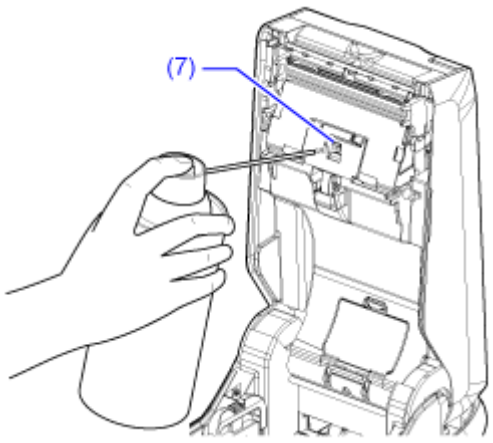


5. **Clean the dirt off of the print head (5) and two rollers (6) using a cotton swab dabbed with cleaning liquid.**

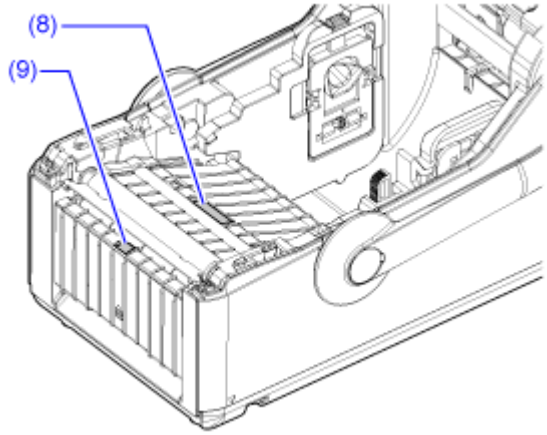
- The print head and its surroundings are hot after printing. Wait until the printer cools down.
- Touching the edge of the print head with your bare hand could cause injury.



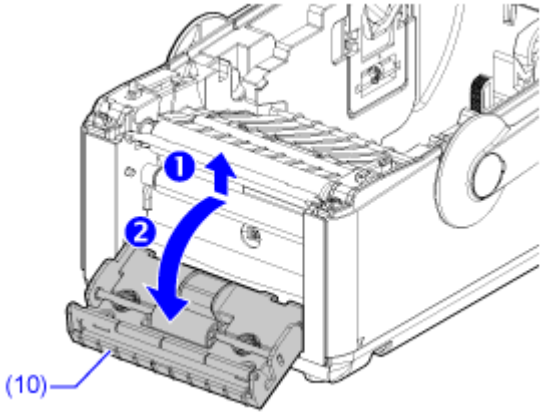
6. **Clean the sensor (7) using an air duster.**



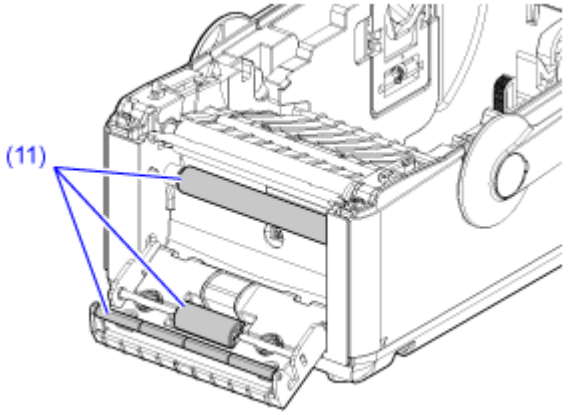
7. **Clean the dirt off of the liner sensor (8) and dispenser sensor (9) using a cotton cloth dabbed with cleaning liquid.**



8. **Lift the dispenser frame (10) on the front side of the printer (❶) and tilt it toward the front (❷).**



9. **Clean the dirt off of the three rollers (11) using a cotton cloth dabbed with cleaning liquid.**



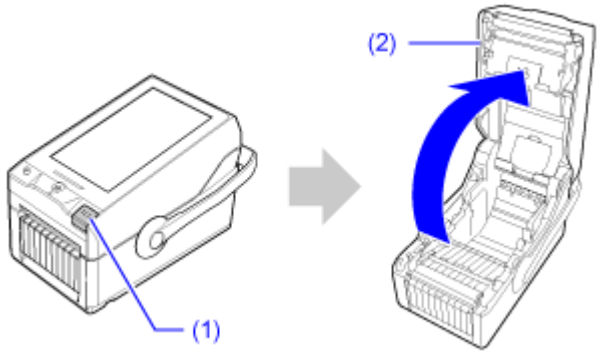
10. **Reload the media if you removed it in step 3.**

11. **Close the dispenser frame.**

Cleaning Using the Cleaning Sheet

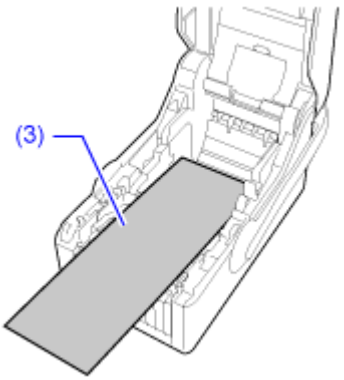
The cleaning procedure using the cleaning sheet is as follows:

1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



3. **Remove the media if it is already loaded.**
4. **Cut the cleaning sheet to a width of about 8 cm (3").**
5. **Place the cleaning sheet (3) on the platen roller.**

- Align the rough side of the cleaning sheet adjacent to the top cover.

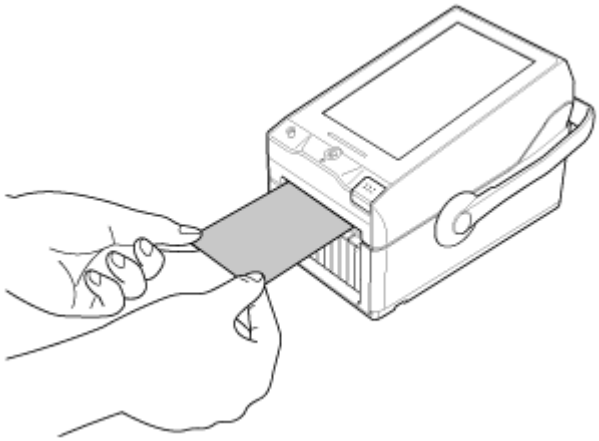


6. **Close the top cover.**

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 printer.**

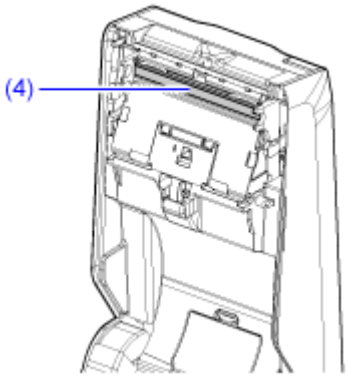


8. **After you pull out the cleaning sheet, repeat steps 2 through 7, two or three more times.**

   When no more dirt appears on the cleaning sheet after you have pulled it out, stop repeating these steps.

9. **Press the cover open button to open the top cover.**

10. **Use a cotton swab to clean the dirt off of the print head (4).**



11. **Reload the media if you removed it in step 3.**

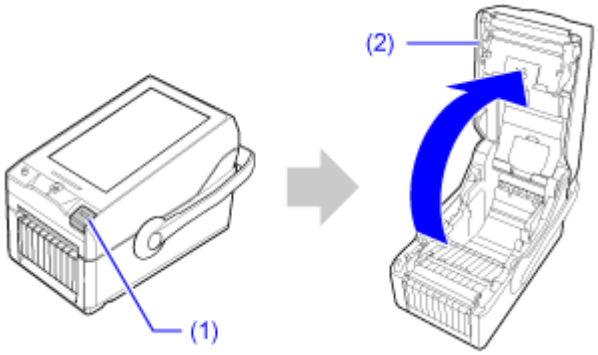
Replacing Consumable Parts

Replacing the Print Head

You can easily remove and replace a damaged or worn print head.

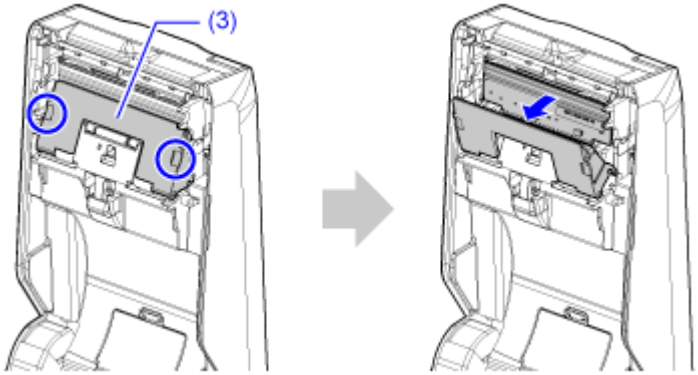
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
- Disconnect the power cord from the AC outlet or remove the optional battery before you replace the consumable parts.
- Wear gloves before replacing the print head, to prevent damage to the print head.

1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



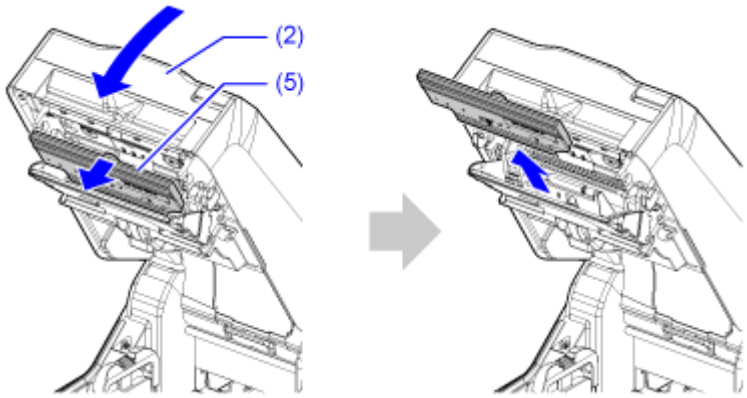
3. **Put your finger on the concave parts on the sides of the head cover (3) and open it toward the front.**

- The print head and its surroundings are hot after printing. Wait until the printer cools down.
- Touching the edge of the print head with your bare hand could cause injury.



4. Tilt the top cover (2) toward the front to remove the print head (5).

- Do not touch the heating unit and terminals of the print head.



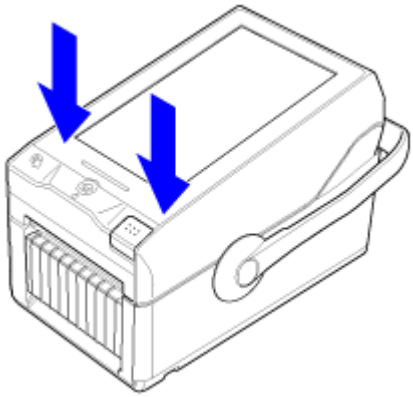
5. Install the new print head and close the head cover.

- Handle the print head with care. Do not contaminate or scratch the sensitive print head surface.

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.

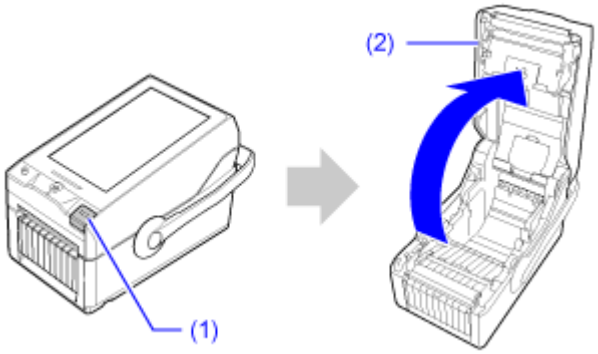


Replacing the Platen Roller

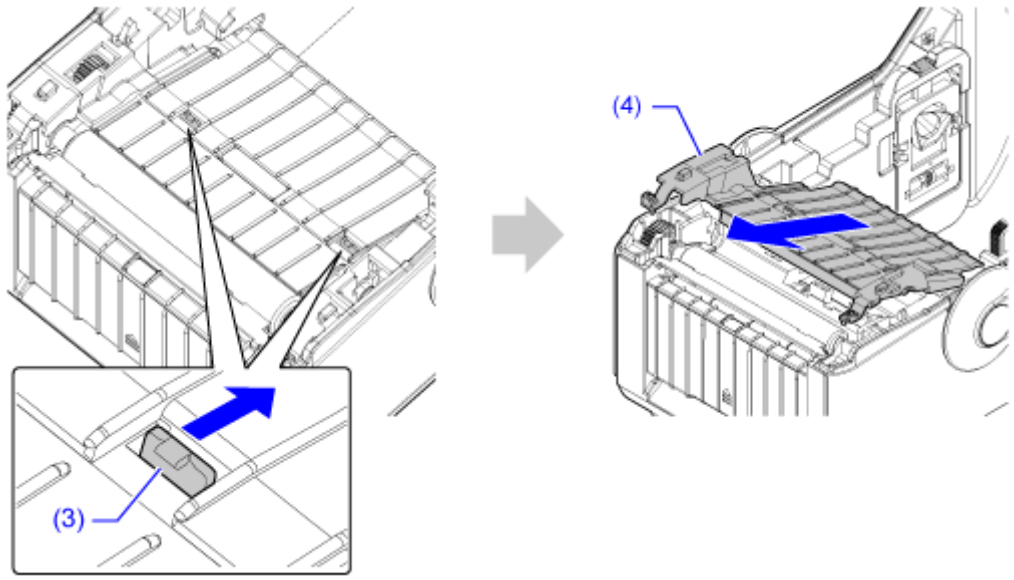
You can easily remove and replace a damaged or worn platen roller.

- 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 or remove the optional battery before you replace the consumable parts.

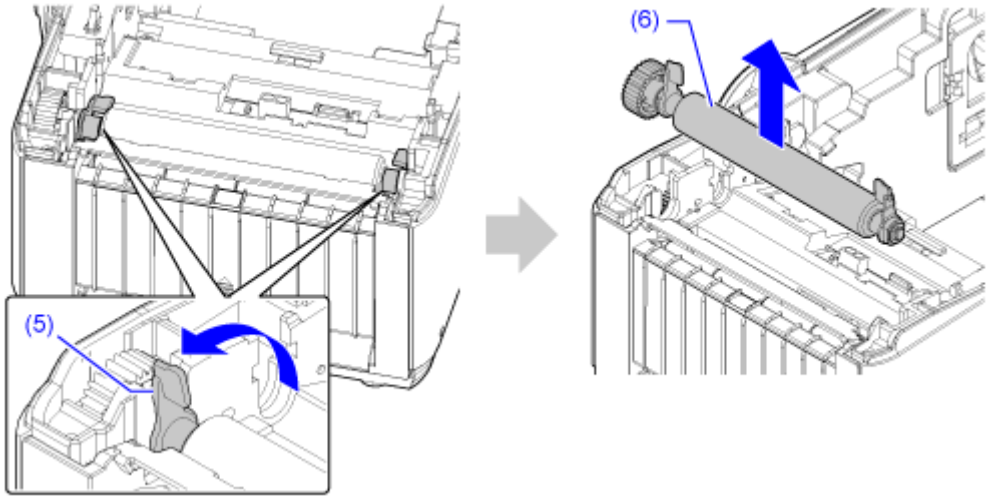
1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**



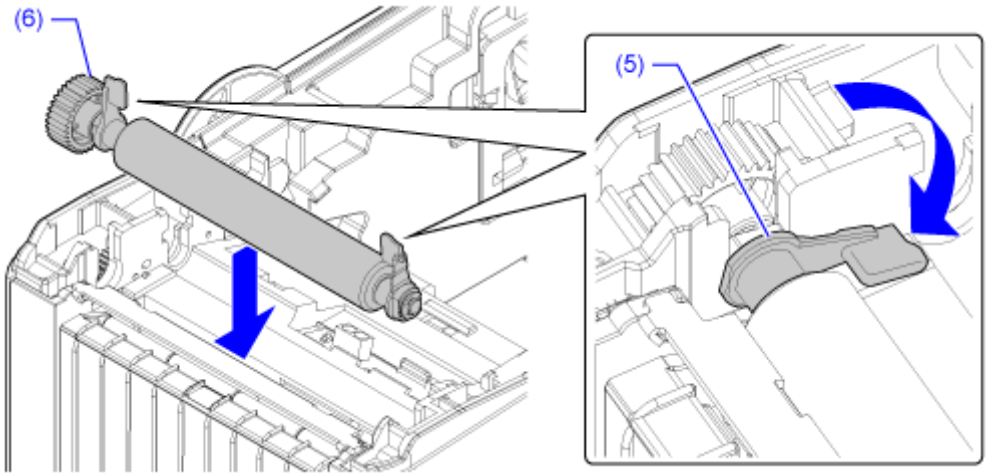
3. **Remove the media if it is already loaded.**
4. **Push the two tabs (3) toward the back to remove the inner cover (4).**



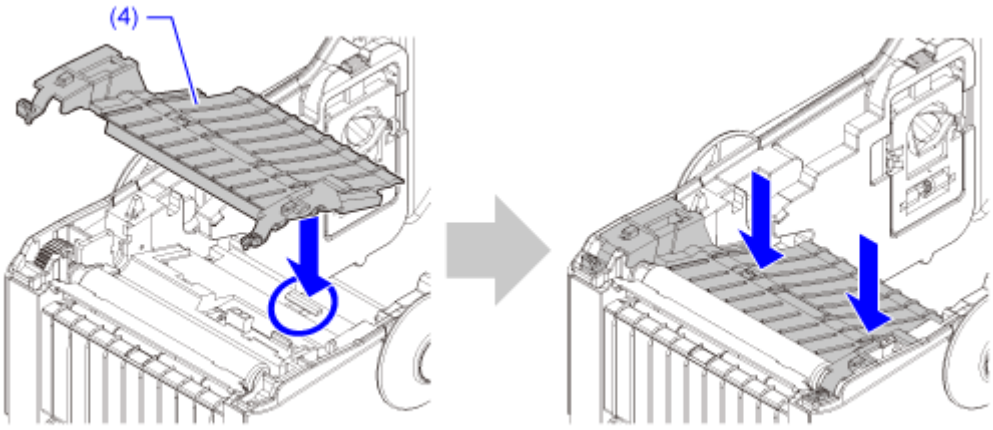
5. **Turn the two levers (5) of the platen roller (6) to the front to remove the platen roller.**



6. **Install a new platen roller (6) and turn the two levers (5) toward the back.**



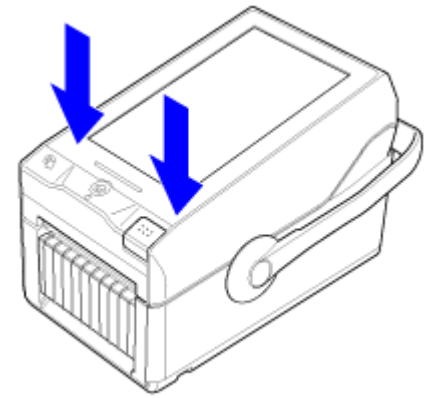
7. **Align the tab on the back of the inner cover (4) with the printer's slots and press it in until it clicks.**



8. **Reload the media if you removed it 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.

Replacing the Optional Linerless Platen Roller

You can easily remove and replace a damaged or worn linerless platen roller.

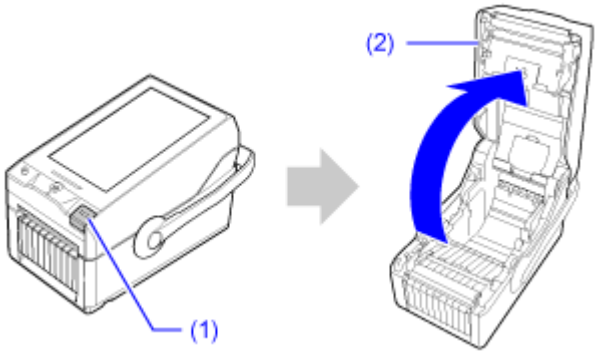
- Do not connect or disconnect the power cord while your hands are wet. Doing so could cause an electric shock.
- Disconnect the power cord from the AC outlet or remove the optional battery before you replace the consumable parts.

Guideline to Replace the Linerless Platen Roller

The linerless platen roller has a blue striped marking on the center. When the blue striped marking started to fade off, it indicates that you should replace the linerless platen roller.

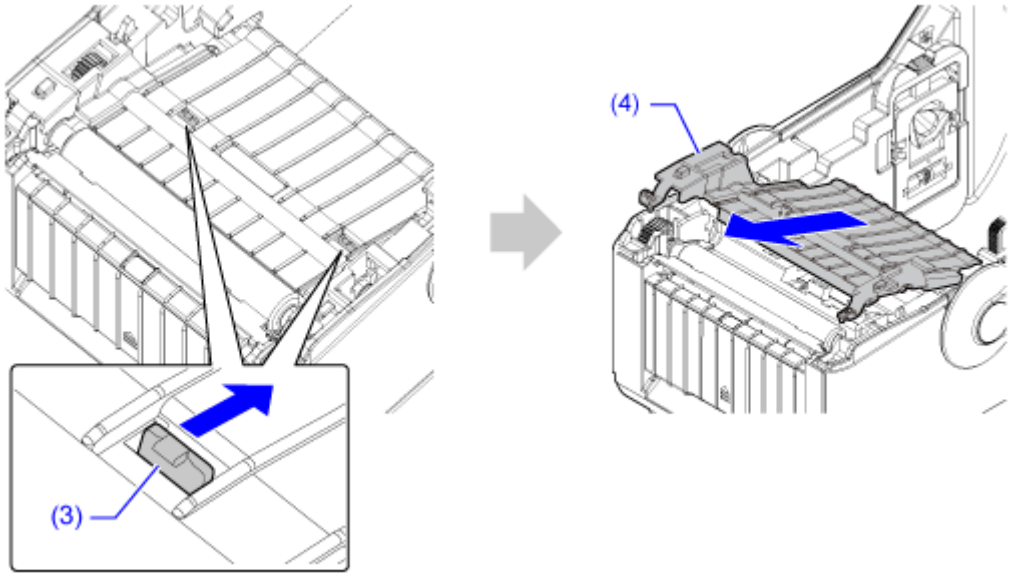
- This is only a general guideline. The condition in which the linerless platen roller wears out varies depending on the used media. In any cases, replace the worn linerless platen roller when it affected the printing quality of the printer.

1. **Make sure that the printer is powered off, and disconnect the power cord from the AC outlet or remove the optional battery.**
2. **Press the cover open button (1) to open the top cover (2).**

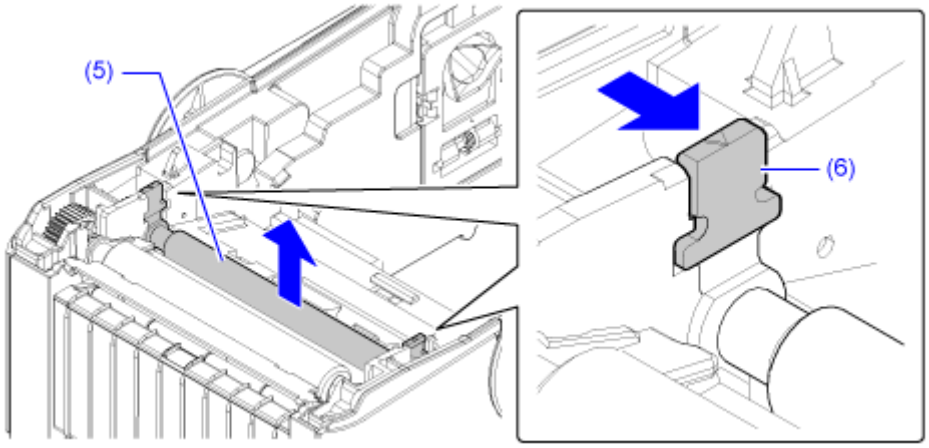


3. **Remove the media if it is already loaded.**

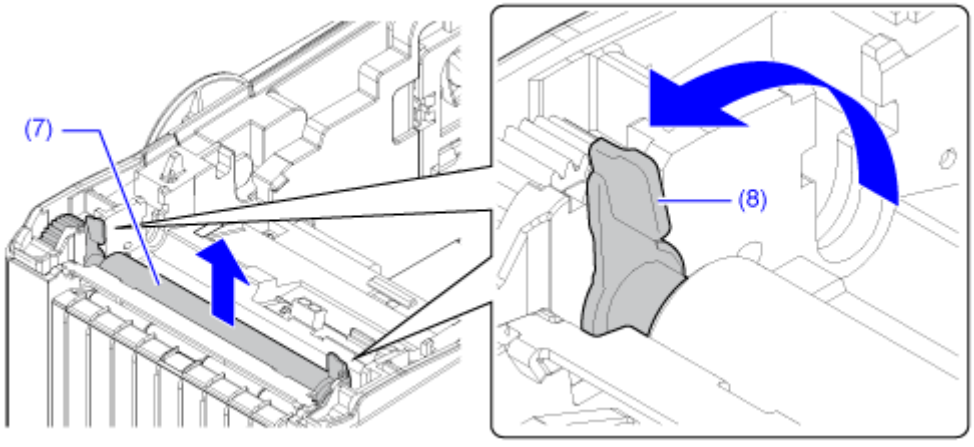
4. **Push the two tabs (3) toward the back to remove the inner cover (4).**



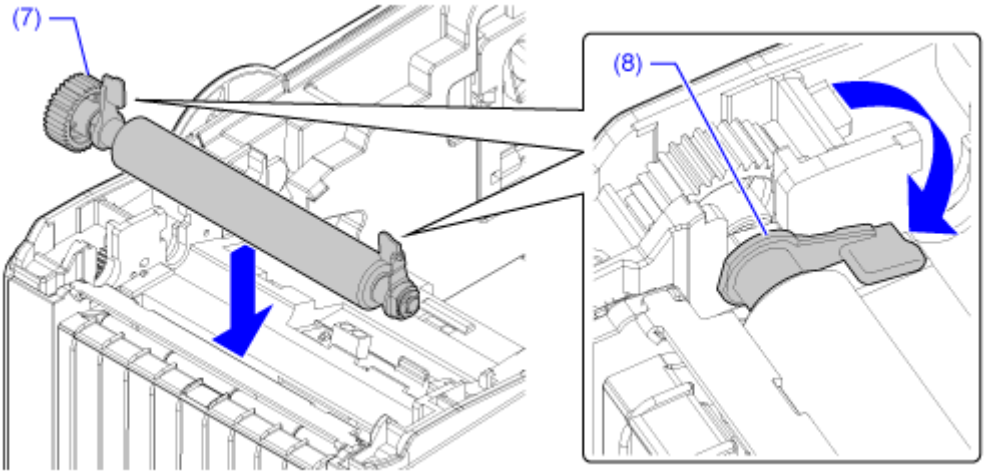
5. **Tilt the two tabs (6) of the feed roller (5) inside to remove the feed roller.**



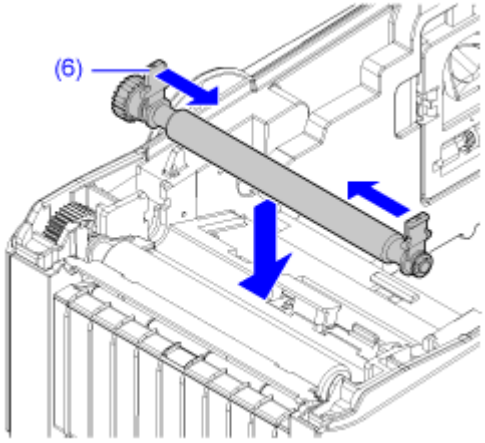
6. **Turn the two levers (8) of the linerless platen roller (7) to the front to remove the linerless platen roller.**



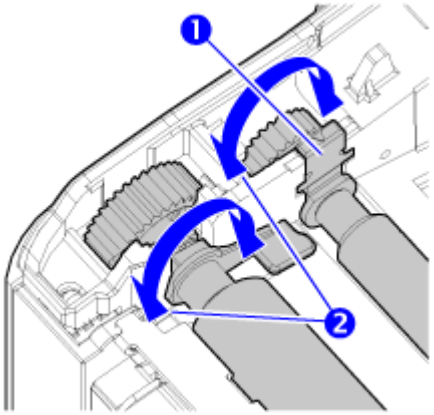
7. **Install the new linerless platen roller (7) and turn the two levers (8) backward.**



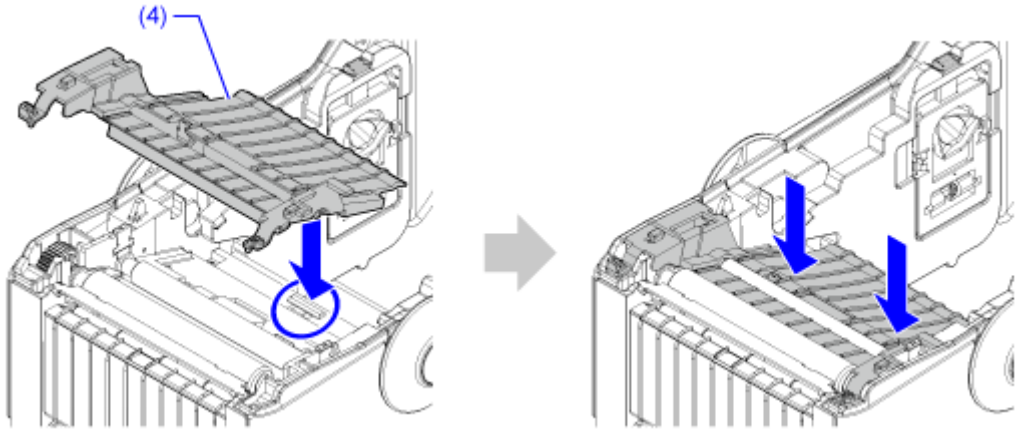
8. **Tilt the two tabs (6) of the feed roller inside to set the feed roller.**



9. **Make sure that the tabs are parallel to the both sides of the printer (❶) and the two rollers rotate in an interlocked manner (❷).**



10. Align the tab on the back of the inner cover (4) with the slot of the printer and press it in until it clicks.

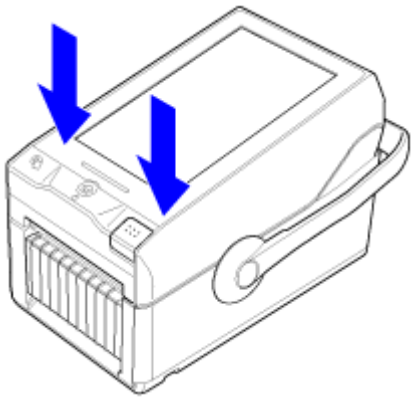


11. Reload the media if you removed it in step 3.

12. 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 SOS (SATO Online Services) (SOS users only)

Operating the Notification Screen of the SOS (SATO Online Services) On-Demand Mode (SOS users only)

In the SOS (SATO Online Services) function, the printer 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 [Interface] > [Network] > [Services] > [Online Services] menu and [Periodic Notification] is enabled. A QR code with the printer information is displayed on the notification screen. You can send the printer 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 changes according to the setting of [Update Screen].

When [Update Screen] Is Set to [Normal]

By tapping ×, 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 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 for periodic notification is reset and the display returns to the Offline screen.

The status icon changes to SOS.

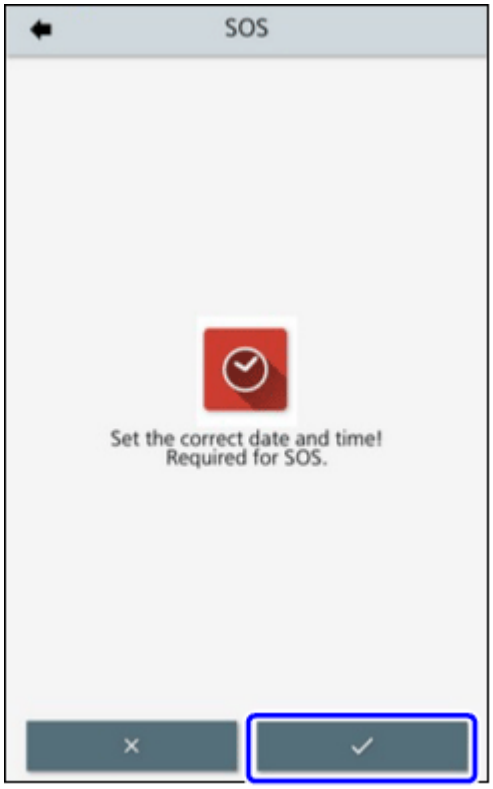
By tapping [PRINT], the QR code for periodic notification is printed.

- QR codes can also be displayed from [SOS Update].

Operating the Date and Time Settings Notification Screen of SOS (SATO Online Services) (SOS users only)

To use the SOS (SATO Online Services) function, date and time settings of the printer must be set correctly. A notification screen appears when there is a problem with the date and time settings and the printer cannot connect to SOS. Follow the steps on the screen and set the date and time correctly.

1. **Tap ✓ on the notification screen.**



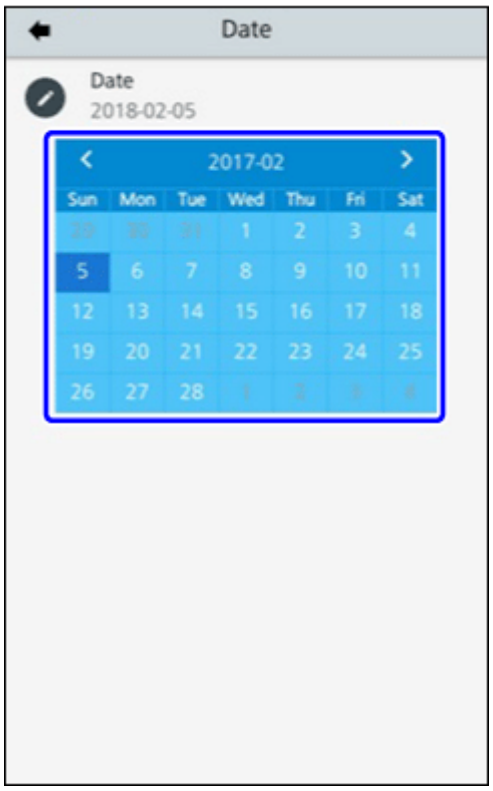
Clear the NTP server connection problem when the NTP function is enabled. The notification screen appears every 15 seconds until the NTP server connection problem is cleared.

Date and time setting screen appears when the NTP function is disabled. Proceed to step 2.

2. **Tap the correct date by tapping the date on the calendar.**

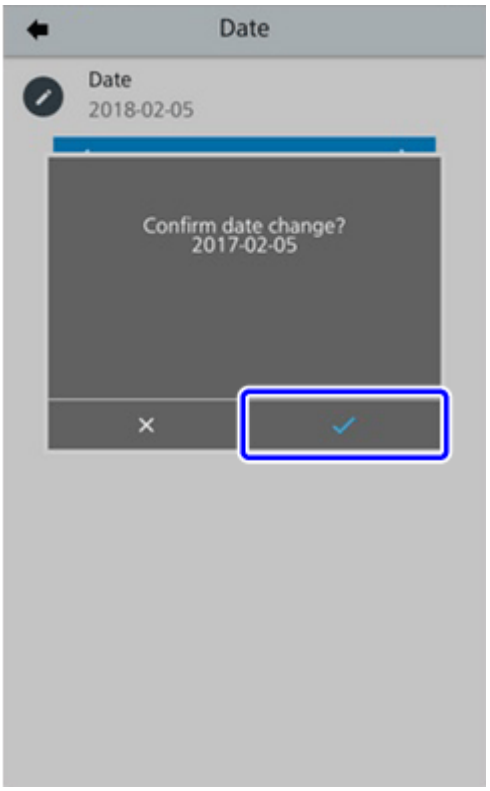
To change the month, tap < / >.

To change the year, tap "YYYY-MM" indicated on the upper part of the calendar, and then tap / .

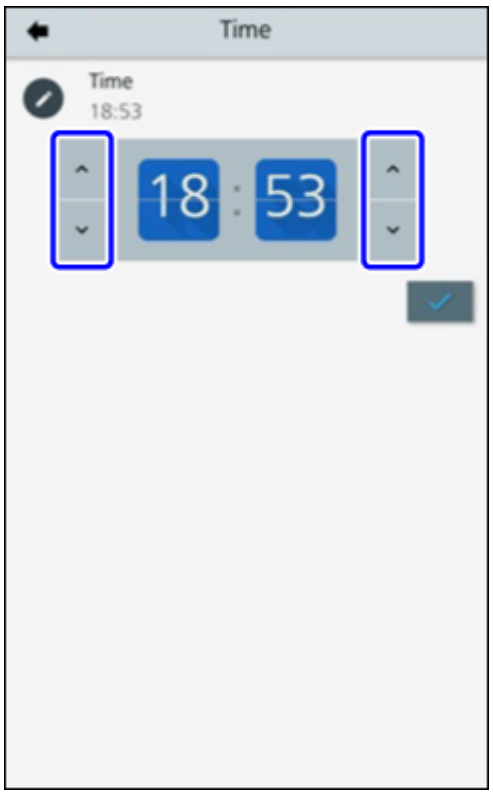


The confirmation screen appears.

3. **Tap on the message to confirm.**



4. **Set the correct time by tapping ^ / v.**



5. **Tap ✓.**

The confirmation screen appears.

6. **Tap ✓ on the message to confirm.**

- SOS will not operate if you cancel the date and time settings by tapping ✕ on the notification screen. To display the notification screen again, reboot the printer or change the setting of [On-Demand]/[Real-Time] in [SOS Mode] a few times to reboot the SOS function.

SOS (SATO Online Services) Application (SOS users only)

About the SOS Mobile Application

When the SOS (SATO Online Services) mode is enabled on the printer, 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 printer information in the QR code. You can also contact your SATO technical support center directly from this specialized application by phone or e-mail.

Please contact your local seller for availability of SOS mobile application.

How to Use the SOS Mobile Application

For instructions on using the SOS mobile application, refer to the SOS user manual.

http://www.sato-sos.com/en/support/sos_usermanual.pdf

When You Are in Trouble

When an Error Message Appears

Error Message 1001 (Machine Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Power off the printer.

Cause and Countermeasure
Cause A defect has occurred in the printer. **Countermeasure** Power on the printer again. Powering On/Off the Printer

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Power off the printer.

Cause and Countermeasure
Cause A program error occurred in the memory. **Countermeasure** Power on the printer again. Powering On/Off the Printer

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

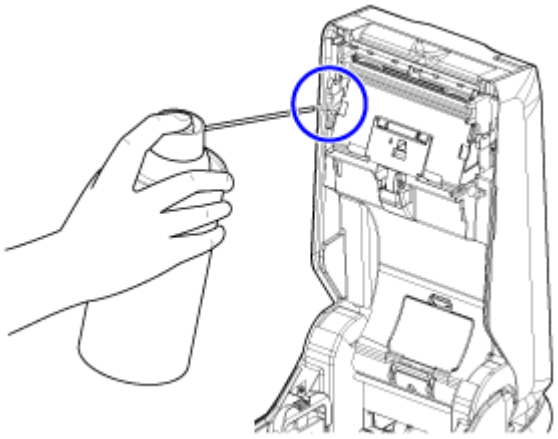
Close the top cover.

Cause and Countermeasure
Cause (1) The top cover is open. **Countermeasure (1)** Close the top cover so that it clicks when locked.
Cause (2) The sensor for detecting the open/close status of the top cover is defective.

Cause and Countermeasure

Countermeasure (2)

Clean the sensor using an air duster.



Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Load the media and open/close the top cover, or tap [OFFLINE].

Cause and Countermeasure
Cause (1) The media is not loaded. **Countermeasure (1)** Load the media. Loading the Media
Cause (2) The media is not loaded correctly. **Countermeasure (2)** Load the media correctly. Loading the Media

Cause and Countermeasure
Cause (3) The media sensor level is not set correctly. **Countermeasure (3)** Adjust the media sensor level. Calibrate
Cause (4) The media has jammed. **Countermeasure (4)** 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 printer. Loading the Media
Cause (5) The media sensor is not operating correctly. ◦ The media sensor is dirty, or there is a label attached to it. ◦ The media sensor has poor sensitivity. **Countermeasure (5)** Clean the media sensor. Cleaning Using the Cleaning Kit

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Load the media and open/close the top cover, or tap [OFFLINE].

Cause and Countermeasure
Cause (1) The media size of the print data and the actual media size are different. **Countermeasure (1)** Check the media size of the print data and the actual media size again. If the error is not solved, power on the printer again.
Cause (2) The media size of the print data is longer than the actual media size. **Countermeasure (2)** Check the print data. If the error is not solved, power on the printer again.
Cause (3) The media is fed a longer distance due to the incorrect sensor level.

Cause and Countermeasure
Countermeasure (3) Adjust the media sensor level. Calibrate If the error is not solved, power on the printer again.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Power off the printer, or change print head check conditions.

Head Check

To forcibly clear the head error and resume printing, slide until it reaches to the right end.

Cause and Countermeasure
Cause The print head is defective. **Countermeasure** Replace the print head. Replacing the Print Head

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

- For the label outputted after a head error, use a scanner to check that the barcode can be read.

Error Message 1013 (USB R/W Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Connect the USB memory and then disconnect it, or tap [OFFLINE].

Cause and Countermeasure
Cause (1) The USB memory is disconnected while writing. **Countermeasure (1)** Connect the USB memory.
Cause (2) The copy area in the USB memory is not sufficient. **Countermeasure (2)** Make sure that the USB memory has sufficient copy area.
Cause (3) Writing to the USB memory fails.

Cause and Countermeasure
Countermeasure (3) Replace the USB memory.
Cause (4) The USB memory is not formatted. **Countermeasure (4)** Format the USB memory.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Connect the USB memory with sufficient space, or tap [OFFLINE].

Cause and Countermeasure
Cause The space in the USB memory is not sufficient. **Countermeasure** Delete unwanted data from the USB memory.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [CUTTER ACTION].

Cause and Countermeasure
Cause (1) A media jam has occurred in the cutter. **Countermeasure (1)** 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 printer. ⚠ • Be careful not to cause injury with the cutter blade when removing the media. Loading the Media Roll (Printing in Cutter Mode/Partial Cutter Mode) If the error is not solved, power on the printer again.
Cause (2) The cutter blade does not return to the specified position.

Cause and Countermeasure
Countermeasure (2) Tap [CUTTER ACTION] to move the cutter blade back to the specified position. If the error is not solved, power on the printer again.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [CANCEL].

Cause and Countermeasure
Cause Incorrect command or parameter in the print data. For details about the error, check the "Caaa: <bb>: cc" part below the error number. ◦ Caaa: position of error occurrence ◦ <bb>: error command name ◦ cc: error content How to See the Command Error Information **Countermeasure** Check the print data. If the error is not solved, power on the printer again.

Cause and Countermeasure
• The command error appears when [Show Error] in [SBPL] in the [Applications] menu is enabled. Show Error

Contact your SATO technical support center 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 ESC+A is shown in "aaa".
  Note that the ESC+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/ external characters	Graphics or external characters are inappropriate.

Description ("cc")	Cause
Invalid registration area	• Specified memory area (card slot) is inappropriate. • Tried to write to a write-protected media.
This number is already registered.	Number specified by registration command has already been taken.
Over registration area limit	Exceeded the registration area. (Memory full)
Data is not registered	Data, such as form overlay is not registered.
Printing position is out of printable area	The specified print start position is outside the printable area.
Barcode image is out of printable area	The printing image is outside the printable area. (Barcode only)

Error Message 1020 (Calendar Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Change the calendar settings, tap [OFFLINE], or power off the printer.

Cause and Countermeasure
Cause (1) The date and time of the calendar are incorrect. **Countermeasure (1)** Set the calendar again. Regional
Cause (2) There is no remaining battery power. **Countermeasure (2)** Replacement of the calendar battery is required. Contact your SATO technical support center. Contact Information for When You Are in Trouble

Error Message 1021 (BCC Check Error)

When there is an error with the printer, the error message appears on the 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 center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Stop the operation of the printer to let the temperature decrease.

Cause and Countermeasure
Cause The temperature of the printer has exceeded its tolerance value. **Countermeasure** Stop the operation of the printer to let the temperature decrease.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE] or change the calendar setting.

Cause and Countermeasure
Cause Could not connect to the time server and set the calendar clock. **Countermeasure** ◦ Confirm that the address of the time server is correct. Time Server IP ◦ Confirm that there is a connection to the time server. ◦ The calendar can be set manually and operation can be resumed without NTP functionality. Regional

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open/close the top cover or tap [OFFLINE].

Cause and Countermeasure
Cause (1) Meandering media. **Countermeasure (1)** Load the media correctly. Loading the Media
Cause (2) A label is attached to the media sensor. **Countermeasure (2)** Clean the media sensor. Cleaning Using the Cleaning Kit

Cause and Countermeasure
Cause (3) The media sensor type is incorrect. **Countermeasure (3)** Set the media sensor type which is compatible with the media you use. Media Sensor Type
Cause (4) The media sensor level is incorrect. **Countermeasure (4)** Adjust the media sensor level. Calibrate

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open/close the top cover or tap [OFFLINE].

Cause and Countermeasure
Cause (1) Meandering media. **Countermeasure (1)** Load the media correctly. Loading the Media
Cause (2) A label is attached to the media sensor. **Countermeasure (2)** Clean the media sensor. Cleaning Using the Cleaning Kit

Cause and Countermeasure
Cause (3) The media sensor type is incorrect. **Countermeasure (3)** Set the media sensor type which is compatible with the media you use. Media Sensor Type
Cause (4) The media sensor level is incorrect. **Countermeasure (4)** Adjust the media sensor level. Calibrate

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1043 (Battery Low)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Connect the printer to an AC power supply.

Cause and Countermeasure
Cause The battery is running low. **Countermeasure** Charge the battery. Charging the Battery by Connecting the AC Adapter Charging the Battery by Mounting the Printer on the Optional Cradle Kit

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Change the Wi-Fi settings or tap [OFFLINE].

Cause and Countermeasure
Cause EAP Authentication failure. **Countermeasure** Use the correct Wi-Fi settings. EAP Conf.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause EAP Authentication failure. • This error occurs when authentication with the EAP authentication server times out. This error will not occur if the connection to the access point is not established. **Countermeasure** Use the correct Access Point (AP) and authentication server settings. EAP Conf.

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1058 (CRC Check Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

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.

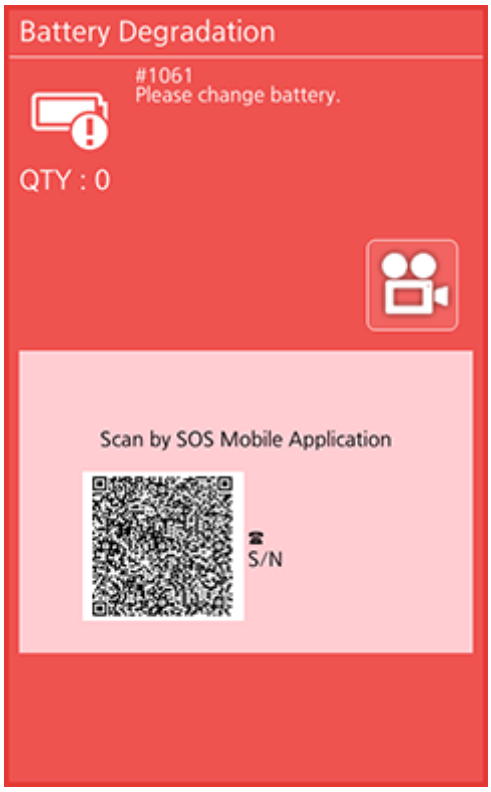
Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1061 (Battery Degradation)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Replace the battery.

Cause and Countermeasure
Cause The battery has deteriorated. **Countermeasure** Replace the battery.

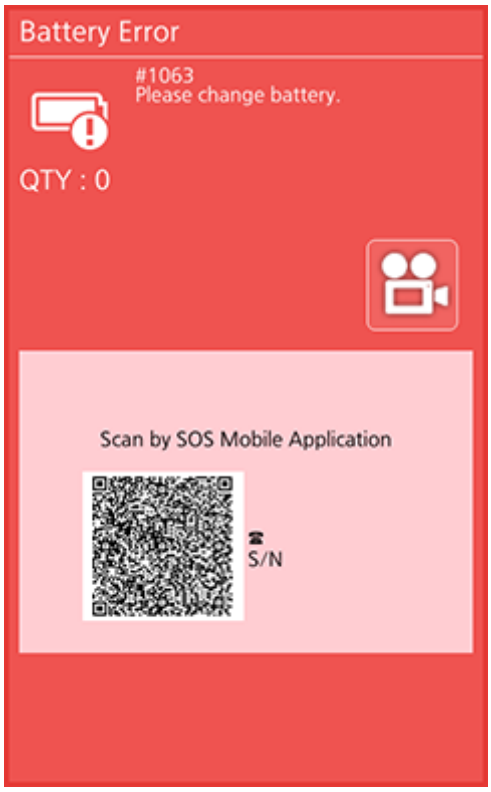
Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1063 (Battery Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.



To clear the error:

Replace the battery.

Cause and Countermeasure
Cause A defect has occurred in the battery. **Countermeasure** Replace the battery.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Open the top cover and load the media again.

Cause and Countermeasure
Cause (1) The media has jammed. **Countermeasure (1)** Remove the jammed media. Refer to the video for loading the media, for the media path and for the operation of each part inside the printer. Loading the Media
Cause (2) The media is not loaded correctly. **Countermeasure (2)** Load the media correctly.

Cause and Countermeasure
Loading the Media

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1070 (Battery wearing out)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause The battery is exhausted. **Countermeasure** Replace the battery.

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1071 (Worn out battery)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause The battery is exhausted. **Countermeasure** Replace the battery.

Contact your SATO technical support center 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 printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause The NFC module is not operating correctly. **Countermeasure** A replacement of the NFC module is required. Contact your SATO technical support center. Contact Information for When You Are in Trouble

Error Message 1076 (Invalid command in NFC)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause A command error occurs and the settings are not saved correctly. **Countermeasure** Check the command.

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1105 (Changed Power Error in Printing)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Tap [OFFLINE].

Cause and Countermeasure
Cause The power cord was pulled out while printing. **Countermeasure** Do not disconnect the power cord while printing.

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message 1106 (Power voltage value abnormal Error)

When there is an error with the printer, the error message appears on the screen.

Check the cause and countermeasure, and then take appropriate action.

To clear the error:

Power off the printer.

Cause and Countermeasure
Cause A nonstandard power supply was used. **Countermeasure** Use the supplied AC adapter.

Contact your SATO technical support center if the error cannot be resolved.

Contact Information for When You Are in Trouble

Error Message Indication and Operating Procedure When the SOS (SATO Online Services) Is Enabled (SOS users only)

A QR code containing the error information and the contact telephone number appear in the error message when SOS is enabled.

The menu for the specialized application for SOS appears after scanning the QR code with a tablet device or smartphone. A specialized application is required to scan the QR code.

Contact Information for When You Are in Trouble

Service and Support Page of Your Nearest SATO Office

Access the following site and select your country from the list. Check the information on the displayed page.

http://www.satoworldwide.com/service-and-support.aspx

Contact Us

Access the following site to send us your questions or comments.

https://www.satoworldwide.com/contact-us.aspx

Product Specifications

Printer Specifications

Hardware

Dimensions and Weight

Item	Description
Width	132 mm (5.20") (Excludes projection and handle)
Height	161 mm (6.34") (Excludes projection and handle)
Depth	225 mm (8.86") (Excludes projection and handle)
Weight	Approximately 2.5 kg (5.51 lbs.) (Excludes media, AC adapter and options)

Power Supply

Item	Description
Input Voltage	AC 100 - 240 V
Output Voltage	DC 19 V ±5.0% 2.7 A
Frequency	50 / 60 Hz
Power Consumption	Input power voltage condition: AC 230 V/50 Hz **At peak** 50 W / 113 VA (Print ratio 15%, print darkness 10) **Standby** 10.6 W / 32.3 VA **Sleep** 2.9 W / 12.7 VA 4.5 W / 16.2 VA (with the optional wireless LAN/Bluetooth kit)

Battery Specifications (Optional)

Item	Description
Battery Type	Lithium ion battery
Nominal Voltage	14.4 V

Item	Description
Nominal Capacity	1950 mAh
Charge-discharge Cycle	Approximately 300 charge cycles or 3 years from the date of first use, whichever comes first.
Charging Time	**With the AC adapter** Approximately 3 hours **With the optional cradle kit** Approximately 3 hours **With the optional 1ch battery charger** Approximately 2 hours

Processing

Item	Description
Flash ROM	4 GB
SDRAM	1 GB
User Registration Area	Maximum 1 GB
Receive Buffer	**Buffer full** 2.95 MB **Buffer near full** Occurrence: 2 MB, Release: 1 MB

Operation

Item	Description
LCD	TFT color 7-inch (177.8 mm)
LED	**STATUS** 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	**Continuous/Cutter/Tear-off/Partial cutter/Dispenser mode** 0 to 35 °C (32 to 95 °F) **Linerless Cutter/Linerless Tearoff mode** 5 to 35 °C (41 to 95 °F)
Storage Temperature (Without Media)	-5 to 60 °C (23 to 140 °F)
Charging Temperature	0 to 35°C (32 to 95 °F)
Operating Humidity	30 to 75% RH (Non-condensing)
Storage Humidity (Without Media)	30 to 90% RH (Non-condensing)

Print

Item	Description
Print Method	Direct thermal
Print Speed	**With the AC adapter** 2 to 6 inches/sec (50.8 to 152.4 mm/sec) **With the optional battery** 2 to 4 inches/sec (50.8 to 101.6 mm/sec)
Resolution (Head Density)	305 dpi (12 dots/mm)
Non-printable Area	Pitch direction (Excludes liner) **Top** 1.5 mm (0.06") **Bottom** 1.5 mm (0.06") Width direction (Excludes liner) **Left** 1.5 mm (0.06") **Right** 1.5 mm (0.06")
Printable Area	Length 500 mm (19.69") x Width 80 mm (3.15")

Item	Description
Print End Position	1 to 6000 dots (1 dot=0.083 mm (0.0033"))
Print Darkness	**Darkness level** 1 to 10

Sensors

Item	Description
I-mark (Reflective Type)	**Position and sensitivity** Adjustable
Gap (Transmissive Type)	**Position and sensitivity** Adjustable
Head Open/Cover Open	Fixed
Paper End Sensor	Detect with I-mark sensor or Gap sensor
Linerless	Adjustable • If the optional cutter kit or partial cutter kit is installed.
Dispenser	Adjustable
Liner	Fixed

• Specifications are subject to change without notice.

Interface

Supported Interfaces

For data communication with the host, the printer supports the following interfaces.

Standard (Built-in)

- USB Interface (Type B)
- NFC Interface
- LAN Interface (Ethernet) (USB+LAN model only)

Option

- Wireless LAN Interface
- Bluetooth Interface

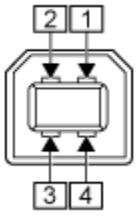
- You can set the interface settings of the printer through [Interface], [Bluetooth], [Wi-Fi] in the [Settings] menu.

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	Status4, Status5
Power Supply	BUS Power through cable



Pin Assignments	
Pin No.	**Description**
1	VBus
2	-Data
3	+Data

Pin Assignments	
Pin No.	**Description**
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.

LAN Interface

Basic Specifications	
Connector	RJ-45 Receptacle
Protocol	• Status3 • Status4 • Status5
IP Address	• IPv4 • IPv6
Subnet Mask / Prefix Length	• IPv4 • IPv6
Gateway Address	• IPv4 • IPv6

Cable Specifications	
Cable	10BASE-T/100BASE-TX/1000BASE-T Category 5
Cable Length	100 m (328 feet) or less

Software Specifications	
Supported Protocol	TCP/IP
Network Layer	IP, ICMP
Session Layer	TCP, UDP
Application Layer	LPD, FTP, DHCP, HTTP/HTTPS, SNMP, NTP

- Specifications are subject to change without notice.

Bluetooth Interface

This interface complies with the Bluetooth 4.1.

Basic Specifications	
Signal Level	Class 2
Communication Distance	10 m (32.8 feet)
Profile	SPP, HID, LAP, DUN, HSP, TIP, A2DP
Security Level	None, level 2-1, 2-2, level 3, level 4
PIN Code	4 to 16 characters consisting of ASCII code (20H, 21H, 23H to 7EH)
Disconnect Timeout (LMP Layer)	60 seconds

- Specifications are subject to change without notice.

Wireless LAN Interface

This interface complies with the IEEE 802.11a/b/g/n/ac standard.

- Before using wireless LAN near medical devices and facilities, consult your system administrator.

Basic Specifications	
Protocol	• Status3 • Status4 • Status5
IP Address	• IPv4 • IPv6

Basic Specifications	
Subnet Mask / Prefix Length	• IPv4 • IPv6
Gateway Address	• IPv4 • IPv6
Data Transfer Method	**802.11a** Max 54 Mbps **802.11n** Max 135 Mbps **802.11b** Max 11 Mbps **802.11g** Max 54 Mbps **802.11ac** Max 433.3 Mbps • These are the logical values based on the wireless LAN specifications and are not the actual data transfer speeds.
Frequency Band	• 2.4 GHz (2.412 to 2.472 GHz) • 5 GHz
Communication Channel	The number of channels you can set varies depending on the region where you use the printer.
SSID	Any alphanumeric character or symbols (Maximum 32)
Authentication	• Open System • Shared Key • WPA/WPA2 • Perform the RADIUS server authentication using 802.1x (EAP-TLS, LEAP, EAP-TTLS, EAP-PEAP, EAP-FAST protocol)
Encryption	• None • WEP (64 bits/128 bits) • TKIP (WPA-PSK, WPA-802.1x) • AES (WPA2-PSK, WPA2-802.1x)
Communication Mode	• Infrastructure • Ad Hoc

Software Specifications	
Supported Protocol	TCP/IP
Network Layer	IP, ICMP
Session Layer	TCP, UDP
Application Layer	LPD, FTP, DHCP, HTTP/HTTPS, SNMP, NTP

- Specifications are subject to change without notice.

Built-in Functions

Item	Description
Built-in Functions	• Status return • Graphic • Sequential numbering • Form overlay • Character modification • Black/white inversion • Ruled line • Dump list • Format registration • Outline font • Outline modification • Zero slash switching • Guidance video • LCD display in 31 languages • Cleaning notification • Calendar • Password lock • Logo, font download • LCD turns off • Standby • Total print count indication • Reprint • Power on in Online mode • Feed after error • Feed at power on • Command error indication • Non-standard mode • Priority settings
Self-diagnosis Functions	• Broken head element check • Cover open detection • Media size check • Paper end detection • Test print • Label detection at dispensing

Item	Description
Adjustment Functions	• Print darkness • Print position • Media stop position • Volume • LCD brightness

- Specifications are subject to change without notice.

Printer Languages

- SBPL
- SZPL
- SDPL
- SIPL
- STCL
- SEPL
- AEP

Standards

Item	Description
Noise (EMC) Standards	FCC PART15B ICES-003 EN55024, EN55032 RCM
Safety Standards	UL 60950-1 CSA C22.2 EN 60950-1 RCM
Wireless Regulations	FCC PART15C/E IC RE RCM
Environmental Standard	Compatible with the RoHS directive
Energy Saving	• The adapter used complies with the ErP Directive's level VI efficiency standards. • International ENERGY STAR® program • Complies with the California Energy Commission's standards for battery chargers.

- Specifications are subject to change without notice.

Usable Media

- Use our specified supply products.

Type

- Media roll (Face-in wound/face-out wound)
- Fan-fold media

Size

- Continuous/Tear-Off/Cutter/Partial Cutter/Dispenser

Item	Description
Media Length	16 to 500 mm (0.63" to 19.69")
Media Length (With Liner)	19 to 503 mm (0.75" to 19.80")
Media Width	25 to 82 mm (0.98" to 3.23")
Media Width (With Liner)	28 to 82 mm (0.98" to 3.23") (butt cut label) / 28 to 85 mm (1.10" to 3.35") (others)

- Above pitch and width are valid for die-cut labels. For media without liner like tags, refer to the value 'with liner'.

- Linerless

Item	Description
Media Length	20 to 500 mm (0.79" to 19.69")
Media Width	32 to 82 mm (1.26" to 3.23")

- Linerless Cutter

Item	Description
Media Length	45 to 500 mm (1.77" to 19.69")
Media Width	32 to 82 mm (1.26" to 3.23")

- The usable media sizes, the output speed and print quality vary depending on the media specification, media, printer settings and outputting environment. It is recommended to perform a test print with the media to be used in advance.

Core Diameter (Media Roll)

- When using the standard model, optional cutter kit, partial cutter kit, battery mount kit, or cradle kit
  - φ26 mm (φ1") core
  - φ40 mm (φ1.5") core

- Set the flap position of the media guide to the lower position (initial value) when using the φ26 mm (φ1 ") core, and the upper position when using the φ40 mm (φ1.5") core.

- When using the optional wall mount kit

  φ26 mm (φ1") core

- Set the flap position of the media guide to the lower position (initial value).

Roll Diameter (Media Roll)

- When using the standard model, optional cutter kit, partial cutter kit, battery mount kit, or cradle kit
  - φ26 mm (φ1") core

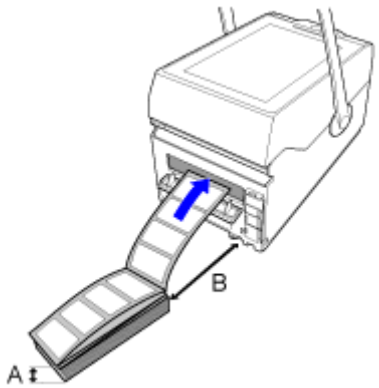
    Maximum φ105 mm (φ4.13")
  - φ40 mm (φ1.5") core

    Maximum φ90 mm (φ3.54")

- When using the optional wall mount kit

  Maximum φ90 mm (φ3.54")

Height (Fan-fold Media)



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

(B) Distance between the back side of the printer and the media: 150 mm (5.91") 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 printer 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

- 140 to 190 µm (0.14 to 0.19 mm (0.0055" to 0.0075"))

Usable Fonts and Barcodes

Fonts

Bitmap Fonts

Item	Description
U	9 dots H x 5 dots W
S	15 dots H x 8 dots W
M	20 dots H x 13 dots W
WB	30 dots H x 18 dots W
WL	52 dots H x 28 dots W
XU	9 dots H x 5 dots W
XS	17 dots H x 17 dots W
XM	24 dots H x 24 dots W
XB	48 dots H x 48 dots W
XL	48 dots H x 48 dots W
X1	75 dots H x 30 dots W
X2	30 dots H x 12 dots W
X3	32 dots H x 20 dots W
X20	9 dots H x 5 dots W
X21	17 dots H x 17 dots W
X22	24 dots H x 24 dots W
X23	48 dots H x 48 dots W
X24	48 dots H x 48 dots W
X80	42 dots H x 42 dots W
X81	48 dots H x 48 dots W
X82	59 dots H x 59 dots W
X83	59 dots H x 59 dots W
X84	59 dots H x 59 dots W
X85	59 dots H x 59 dots W

Item	Description
X86	65 dots H x 65 dots W
X87	89 dots H x 89 dots W
X88	118 dots H x 118 dots W
OCR-A	33 dots H x 22 dots W
OCR-B	36 dots H x 30 dots W
Markdown 1	80 dots H x 64 dots W
Markdown 2	80 dots H x 52 dots W
Markdown 3	80 dots H x 40 dots W
Markdown 4	80 dots H x 64 dots W
Markdown 5	80 dots H x 52 dots W
Markdown 6	80 dots H x 40 dots W
Markdown 7	92 dots H x 104 dots W
Markdown 8	92 dots H x 88 dots W
Markdown 9	92 dots H x 80 dots W
Markdown 10	92 dots H x 56 dots W
Markdown 11	92 dots H x 104 dots W
Markdown 12	92 dots H x 88 dots W
Markdown 13	92 dots H x 80 dots W
Markdown 14	92 dots H x 56 dots W
Markdown 15	138 dots H x 84 dots W
Markdown 16	138 dots H x 120 dots W
Markdown 17	138 dots H x 132 dots W
Markdown 18	138 dots H x 156 dots W
Price Character	36 dots H x 24 dots W
POP	133 dots H x 80 dots W
POP1	72 dots H x 42 dots W
POP2	102 dots H x 72 dots W
POP3	84 dots H x 39 dots W

Item	Description
JIS X 208 Kanji Fonts (Mincho/Gothic)	• 16 dots H x 16 dots W • 24 dots H x 24 dots W • 22 dots H x 22 dots W • 32 dots H x 32 dots W • 40 dots H x 40 dots W
JIS X 0213 Kanji Fonts (Gothic)	• 16 dots H x 16 dots W • 24 dots H x 24 dots W • 22 dots H x 22 dots W • 32 dots H x 32 dots W • 40 dots H x 40 dots W
Simplified Chinese	• 16 dots H x 16 dots W • 24 dots H x 24 dots W
Traditional Chinese	• 24 dots H x 24 dots W
Korean Fonts	• 16 dots H x 16 dots W • 24 dots H x 24 dots W

Scalable Fonts

Item	Description
Rasterized Font	• SATO CG Sleek • SATO CG Stream • SATO 0 • SATO Alpha Bold Condensed • SATO Beta Bold Italic • SATO Folio Bold • SATO Futura Medium Condensed • SATO Gamma • SATO OCR-A • SATO OCR-B • SATO Sans • SATO Serif • SATO Symbol Set • SATO Vica • SATO WingBats
Rasterized Font (Multilingual)	• SATO UD Mincho Japanese

Item	Description
	• SATO UD Gothic Japanese • SATO UD Song Simplified Chinese • SATO UD Hei Simplified Chinese • SATO UD Ming Traditional Chinese • SATO UD Hei Traditional Chinese • SATO UD Batang Korean • SATO UD Dotum Korean • SATO UD Serif • SATO UD Sans • SATO UD Naskh Arabic • SATO UD Kufic Arabic • SATO UD Serif Hebrew • SATO UD Sans Hebrew • SATO UD Serif Thai • SATO UD Sans Thai • SATO UD Serif Hindi • SATO UD Sans Hindi
Outline Fonts	• Helvetica Outline Font • JIS0208 Kanji Outline Fonts

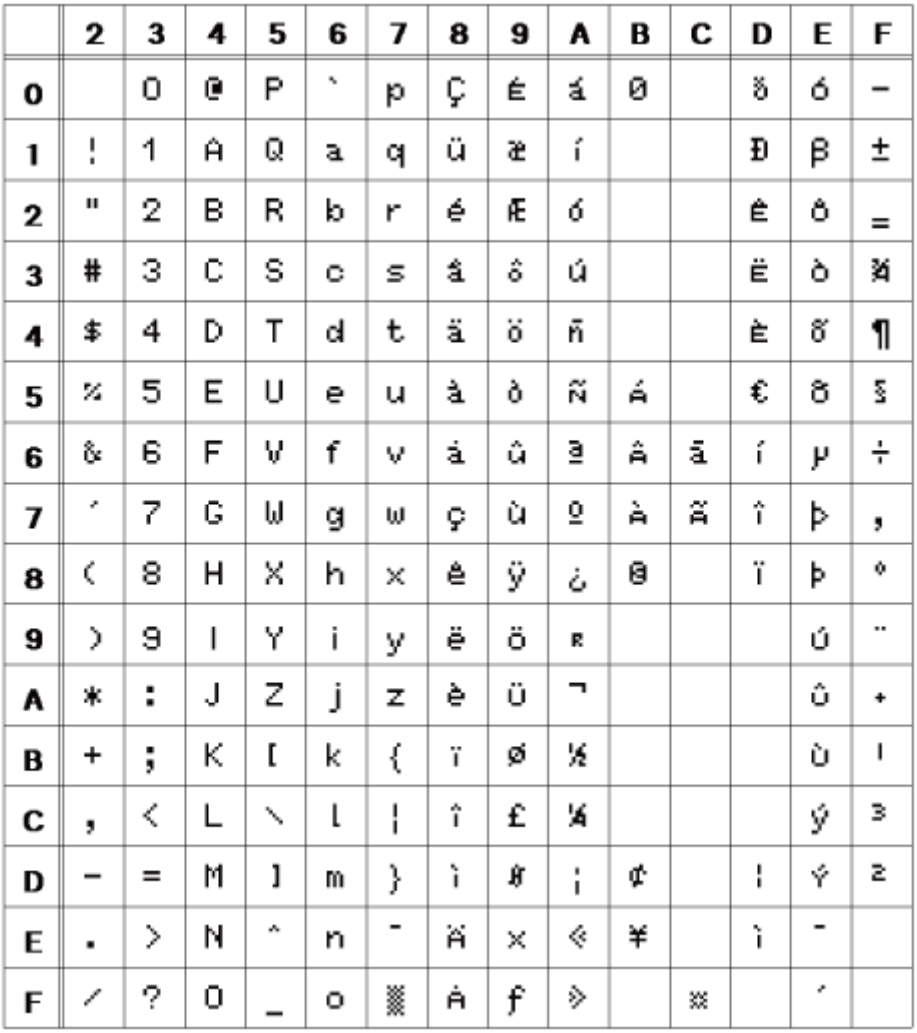
• Specifications are subject to change without notice.

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		ð	ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	à	û	ª	Â	ã	í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	·
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	¯	Ä	×	«	¥		ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		※		´	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	∅		ð	ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		¤		´	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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		0	@	P	'	p	Ç	É	á	∅		ð	ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	”	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	’	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		¤		´	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	-	=	M	]	m	}	ì	Ø	¡	Ø		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		¤		'	

- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	0		ð	Ó	-
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	”	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	’	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	1
C	,	<	L	\	l	¦	î	£	¼				ý	3
D	-	=	M	]	m	}	ì	Ø	¡	Ø		¦	Ý	2
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o		Å	ƒ	»		¤		´	

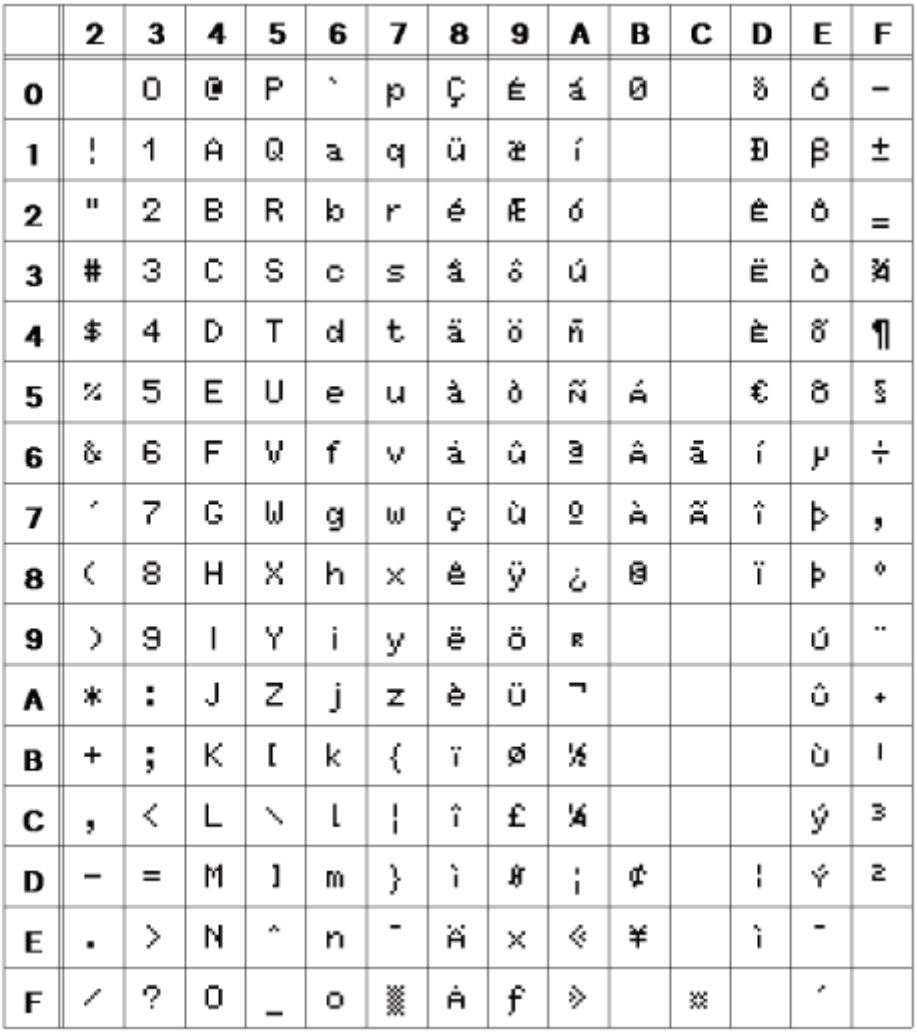
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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		ð	ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	=
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	à	û	ª	Â	ã	í	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	,
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	·
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		※		´	

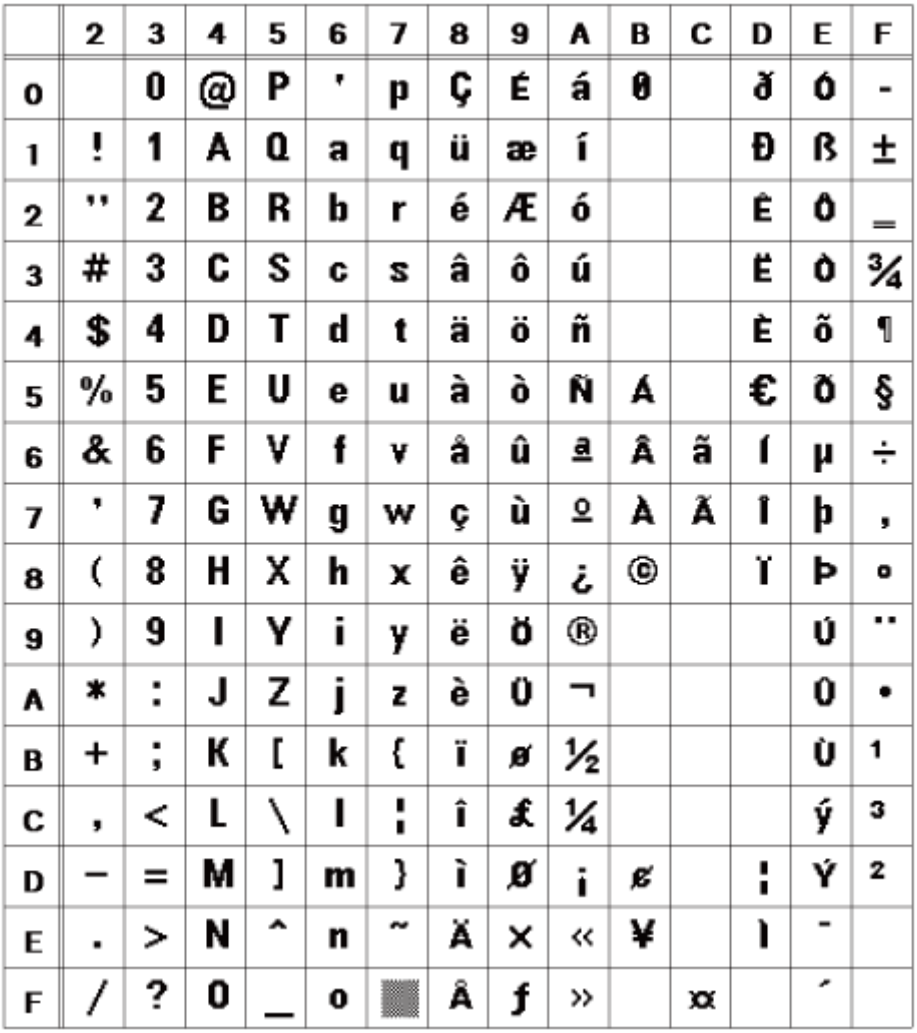
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	▯		ð	Ó	-
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	"	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	ı	µ	÷
7	'	7	G	W	g	w	ç	ù	º	À	Ã	Í	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Î	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	1
C	,	<	L	\	l	¦	î	£	¼				ý	3
D	−	=	M	]	m	}	ì	Ø	¡	ø		¦	Ý	2
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▩	Å	ƒ	»		¤		´	

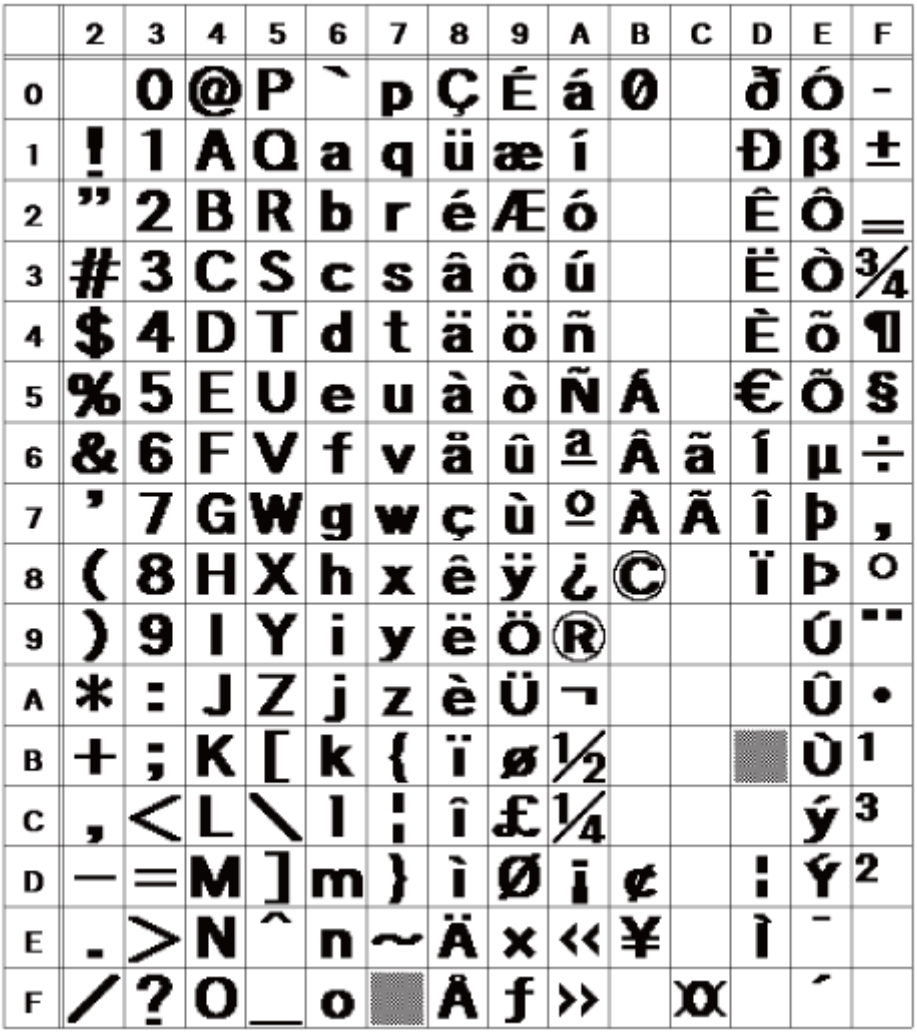
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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.



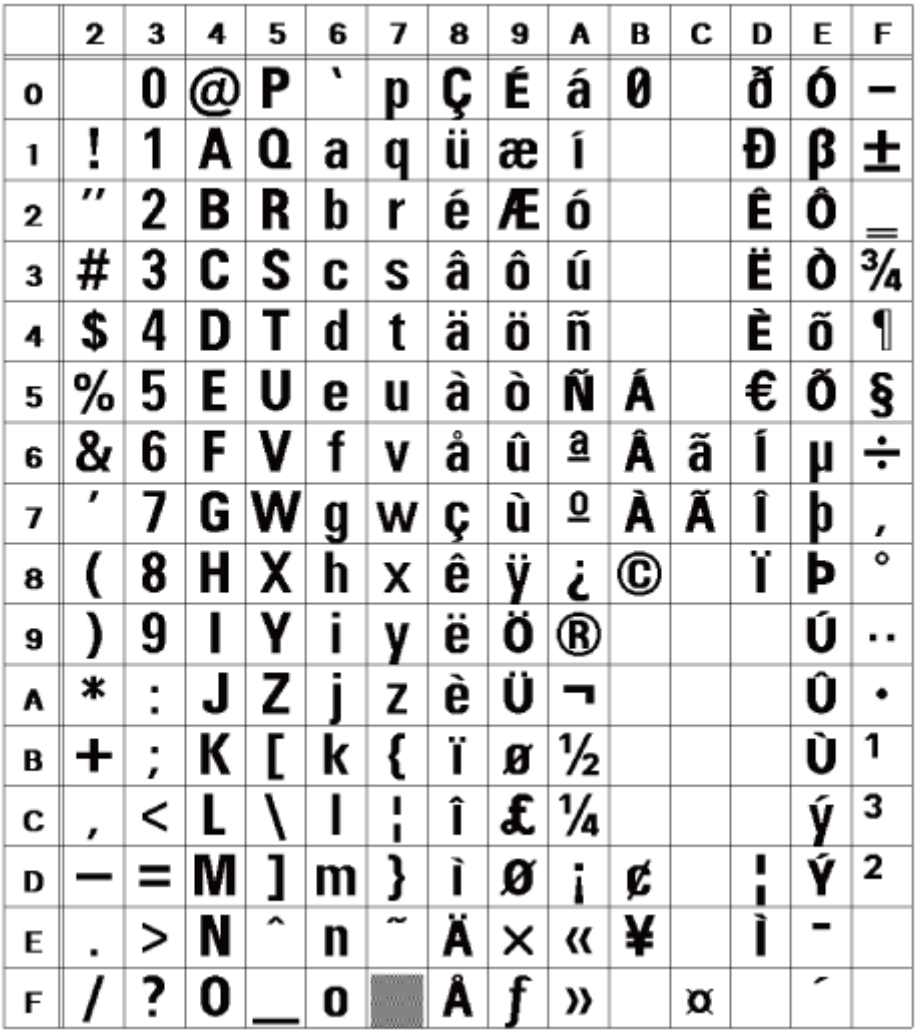
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	▯		ð	Ó	−
1	!	1	A	Q	a	q	ü	æ	í			Ð	ß	±
2	”	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	’	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	1
C	,	<	L	\	l	¦	î	£	¼				ý	3
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	2
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o	▒	Å	ƒ	»		¤		´	

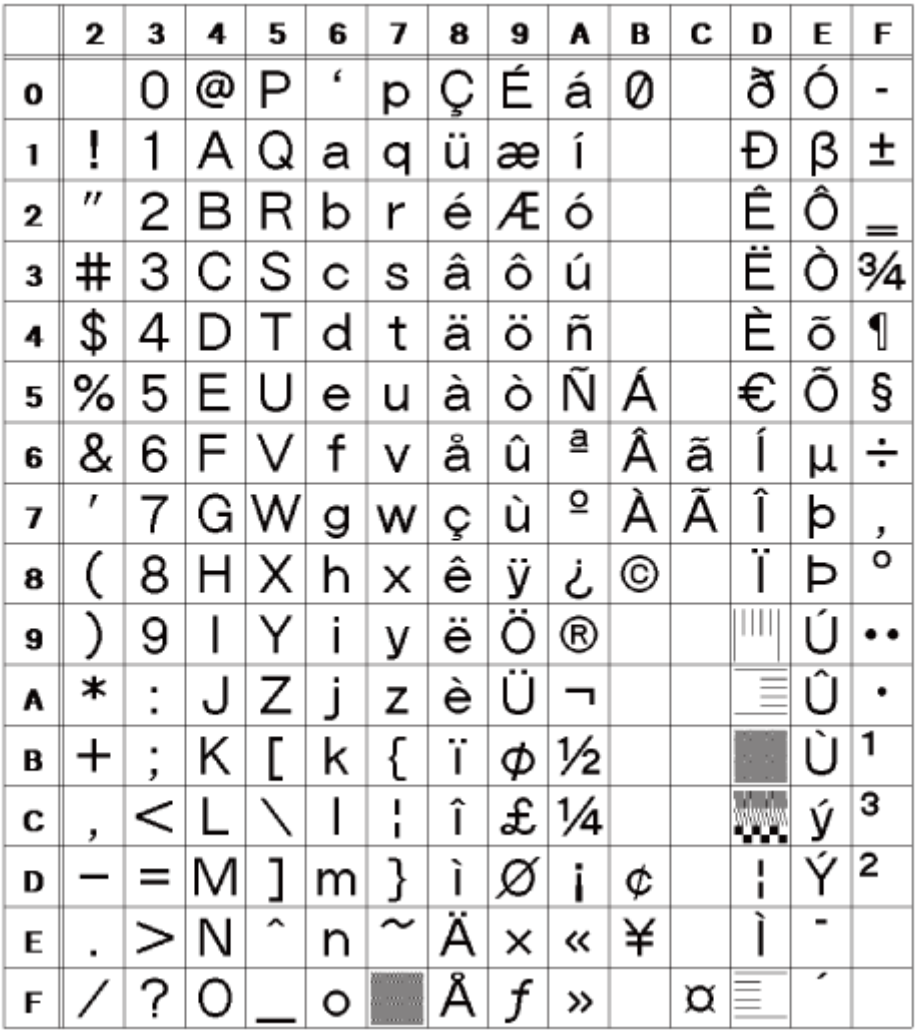
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

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	ß	±
2	”	2	B	R	b	r	é	Æ	ó			Ê	Ô	‗
3	#	3	C	S	c	s	â	ô	ú			Ë	Ò	¾
4	$	4	D	T	d	t	ä	ö	ñ			È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á		€	Õ	§
6	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	’	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	••
A	*	:	J	Z	j	z	è	Ü	¬				Û	•
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	−	=	M	]	m	}	ì	Ø	¡	¢		¦	Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o		Å	ƒ	»		¤		´	

- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.
- The character set varies according to the code page set in [SBPL] > [Font Settings] > [Code Page] in the [Applications] menu or specified by commands.

X1 Font

The X1 font is a bitmap font with a basic size of 75 dots H x 30 dots W.

This supports the fixed pitch only.

A font sample is shown in the figure below.

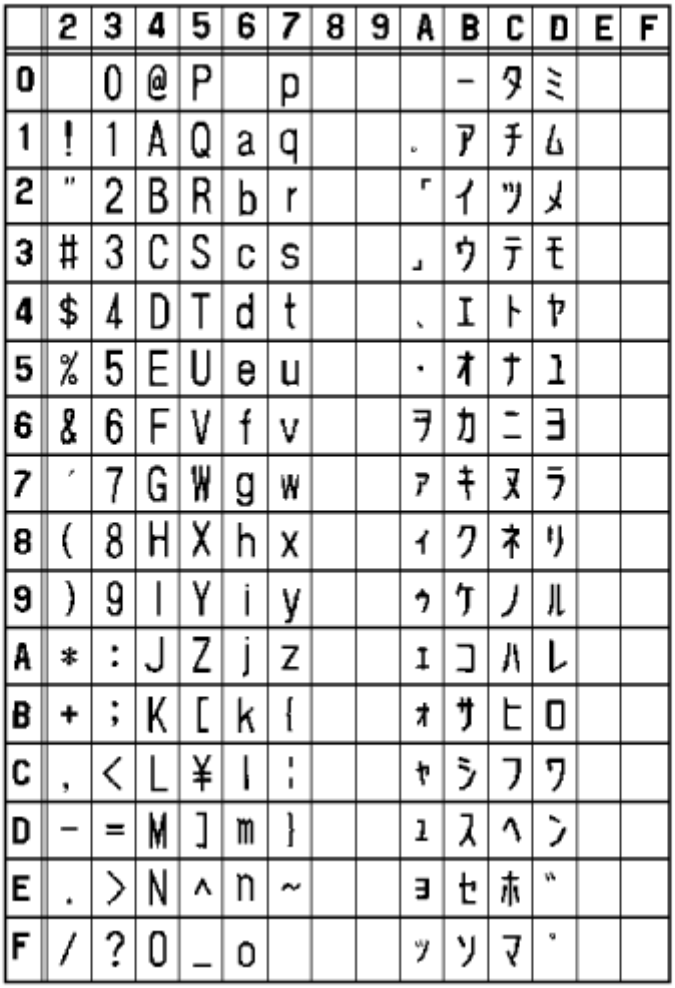
	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P		p				-	タ	ミ		
1	!	1	A	Q	a	q			。	ア	チ	ム		
2	"	2	B	R	b	r			「	イ	ツ	メ		
3	#	3	C	S	c	s			」	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	-	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

X2 Font

The X2 font is a bitmap font with a basic size of 30 dots H x 12 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
0		0	@	P		p				-	タ	ミ		
1	!	1	A	Q	a	q			。	ア	チ	ム		
2	"	2	B	R	b	r			「	イ	ツ	メ		
3	#	3	C	S	c	s			」	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	-	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	゜		

X3 Font

The X3 font is a bitmap font with a basic size of 32 dots H x 20 dots W.

This supports the fixed pitch only.

A font sample is shown in the figure below.

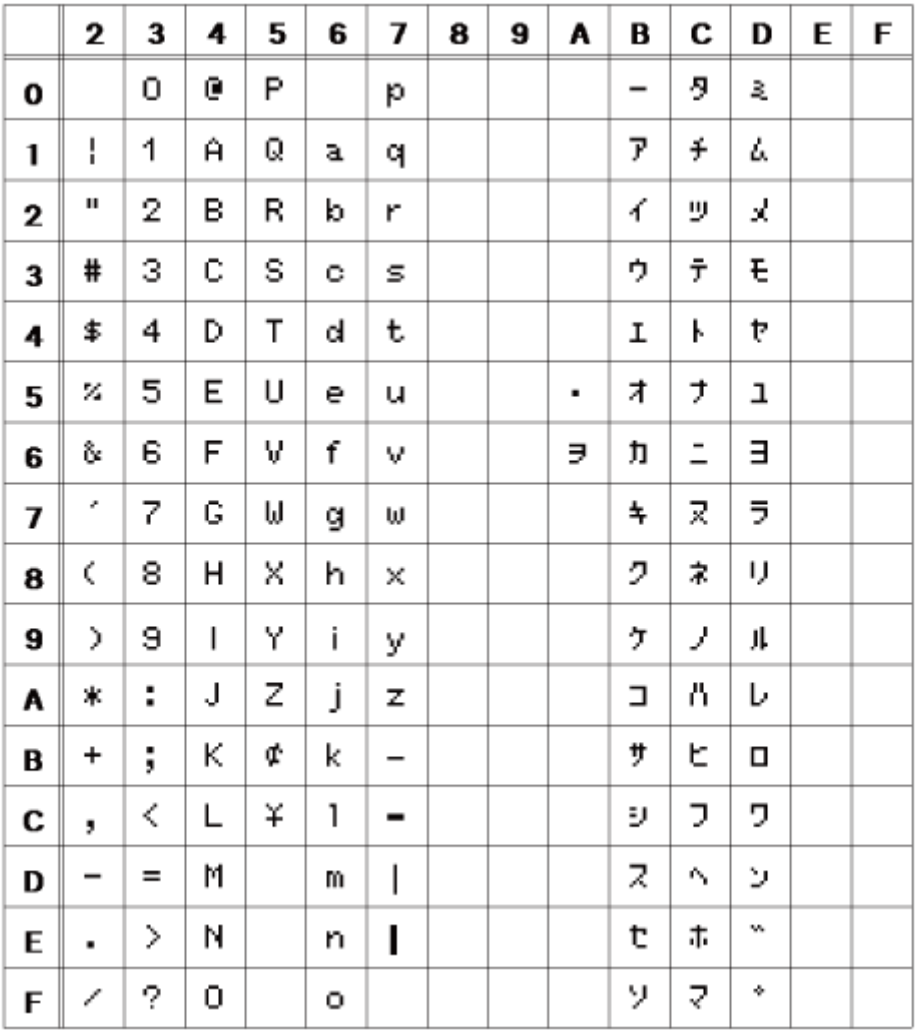
	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P		p				ー	タ	ミ		
1	!	1	A	Q	a	q			。	ア	チ	ム		
2	"	2	B	R	b	r			「	イ	ツ	メ		
3	#	3	C	S	c	s			」	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	−	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

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
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				ｷ	ﾇ	ﾗ		
8	(	8	H	X	h	x				ｸ	ﾈ	ﾘ		
9	)	9	I	Y	i	y				ｹ	ﾉ	ﾙ		
A	*	:	J	Z	j	z				ｺ	ﾊ	ﾚ		
B	+	;	K	¢	k	-				ｻ	ﾋ	ﾛ		
C	,	<	L	¥	l	ｰ				ｼ	ﾌ	ﾜ		
D	-	=	M		m	|				ｽ	ﾍ	ﾝ		
E	.	>	N		n	▌				ｾ	ﾎ	ﾞ		
F	/	?	O		o					ｿ	ﾏ	ﾟ		

X21 Font

The X21 font is a bitmap font with a basic size of 17 dots H x 17 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	'	p				—	タ	ミ		
1	!	1	A	Q	a	q			。	ア	チ	ム		
2	"	2	B	R	b	r			「	イ	ツ	メ		
3	#	3	C	S	c	s			」	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	−	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X22 Font

The X22 font is a bitmap font with a basic size of 24 dots H x 24 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p				—	タ	ミ		
1	!	1	A	Q	a	q			。	ア	チ	ム		
2	”	2	B	R	b	r			「	イ	ツ	メ		
3	#	3	C	S	c	s			」	ウ	テ	モ		
4	$	4	D	T	d	t			、	エ	ト	ヤ		
5	%	5	E	U	e	u			・	オ	ナ	ユ		
6	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7	’	7	G	W	g	w			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	−	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

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				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			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	-	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X24 Font

The X24 font is a bitmap font with a basic size of 48 dots H x 48 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	‘	p				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			ァ	キ	ヌ	ラ		
8	(	8	H	X	h	x			ィ	ク	ネ	リ		
9	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A	*	:	J	Z	j	z			ェ	コ	ハ	レ		
B	+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C	,	<	L	¥	l	¦			ャ	シ	フ	ワ		
D	−	=	M	]	m	}			ュ	ス	ヘ	ン		
E	.	>	N	^	n	~			ョ	セ	ホ	゛		
F	/	?	O	_	o				ッ	ソ	マ	°		

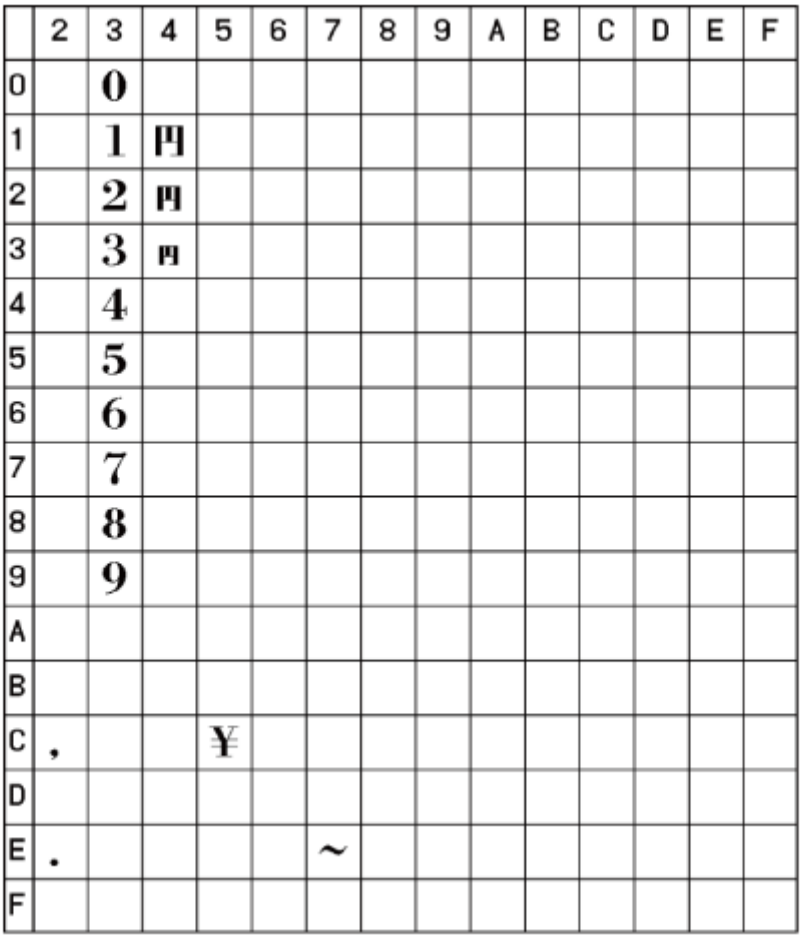
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X80 Font

The X80 font is a bitmap font with a basic size of 42 dots H x 42 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												
1		1	円											
2		2	円											
3		3	円											
4		4												
5		5												
6		6												
7		7												
8		8												
9		9												
A														
B														
C	，			¥										
D														
E	．					~								
F														

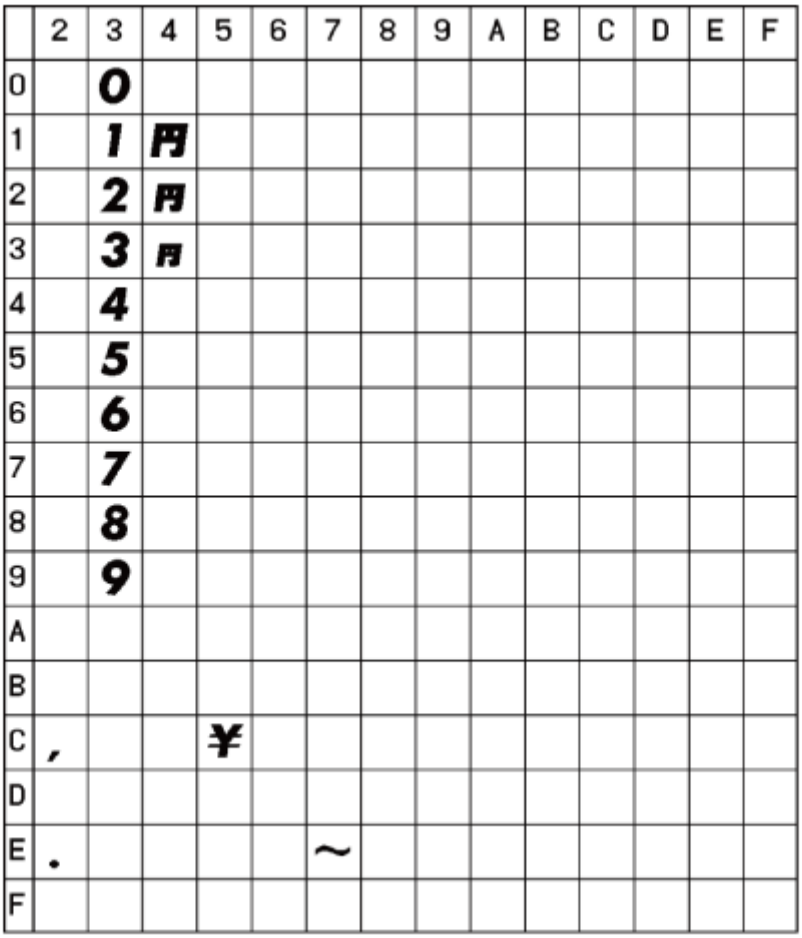
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X81 Font

The X81 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												
1		1	円											
2		2	円											
3		3	円											
4		4												
5		5												
6		6												
7		7												
8		8												
9		9												
A														
B														
C	，			¥										
D														
E	．					～								
F														

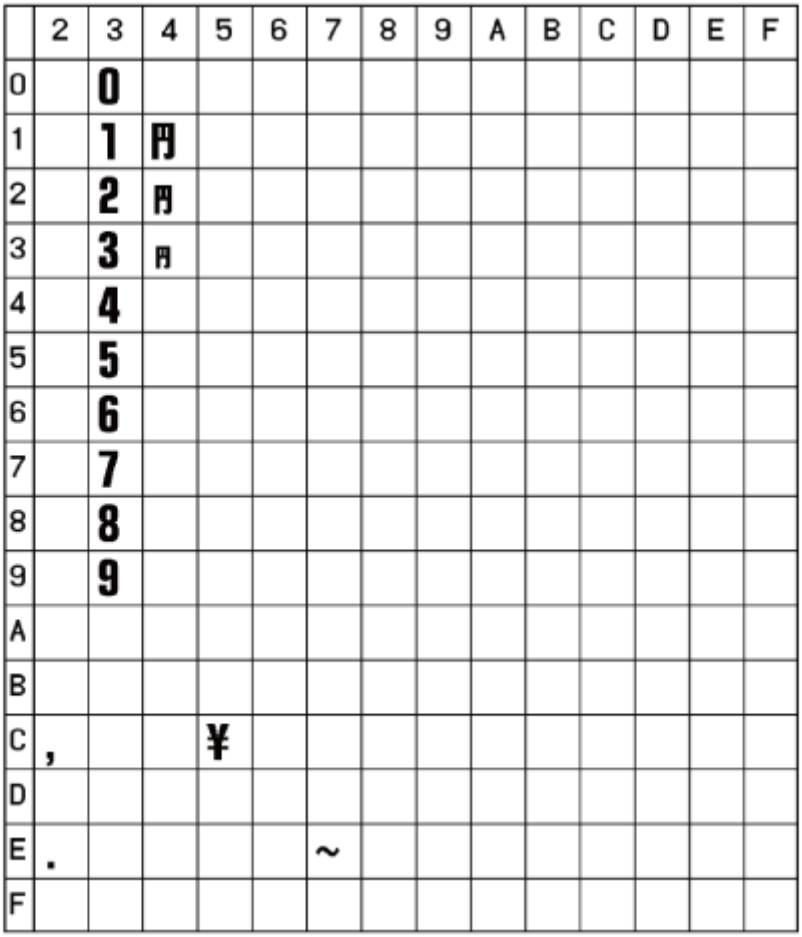
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X82 Font

The X82 font is a bitmap font with a basic size of 59 dots H x 59 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												
1		1	円											
2		2	円											
3		3	円											
4		4												
5		5												
6		6												
7		7												
8		8												
9		9												
A														
B														
C	,			¥										
D														
E	.					~								
F														

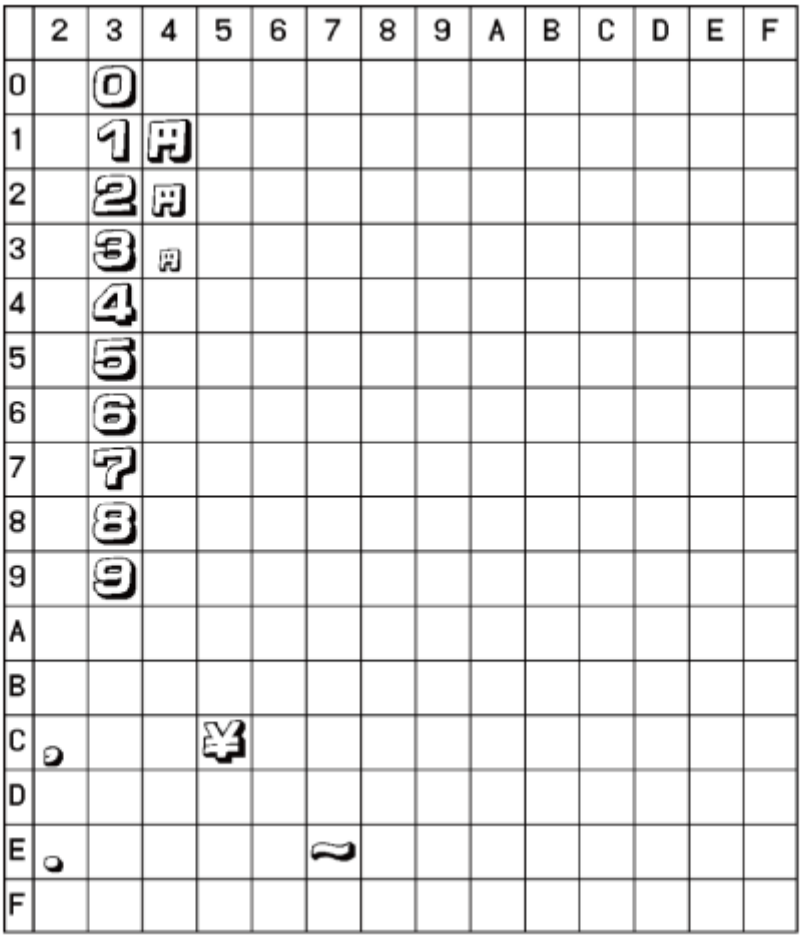
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X83 Font

The X83 font is a bitmap font with a basic size of 59 dots H x 59 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												
1		1	A											
2		2	A											
3		3	A											
4		4												
5		5												
6		6												
7		7												
8		8												
9		9												
A														
B														
C				¥										
D														
E						~								
F														

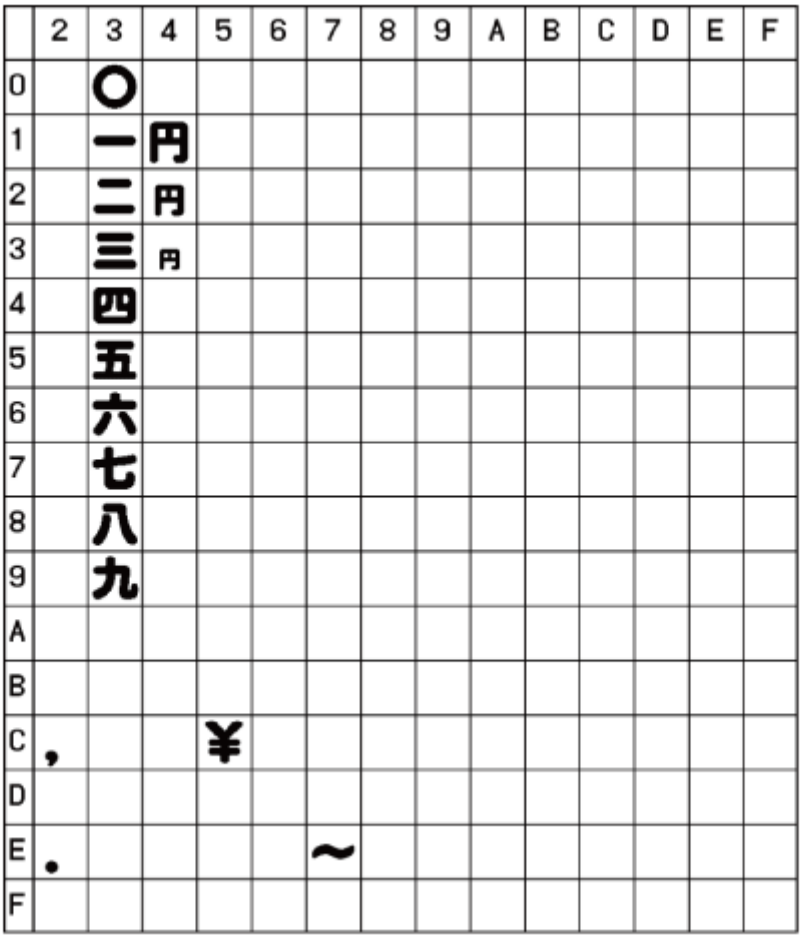
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X84 Font

The X84 font is a bitmap font with a basic size of 59 dots H x 59 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		〇												
1		一	円											
2		二	円											
3		三	円											
4		四												
5		五												
6		六												
7		七												
8		八												
9		九												
A														
B														
C	,			¥										
D														
E	.					~								
F														

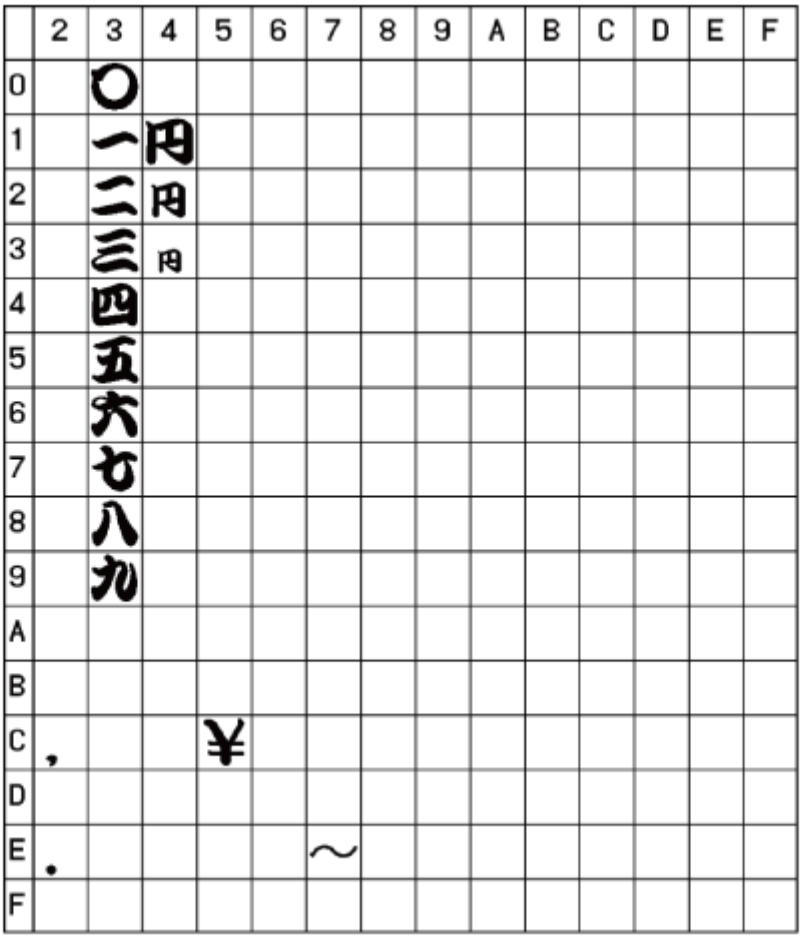
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X85 Font

The X85 font is a bitmap font with a basic size of 59 dots H x 59 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



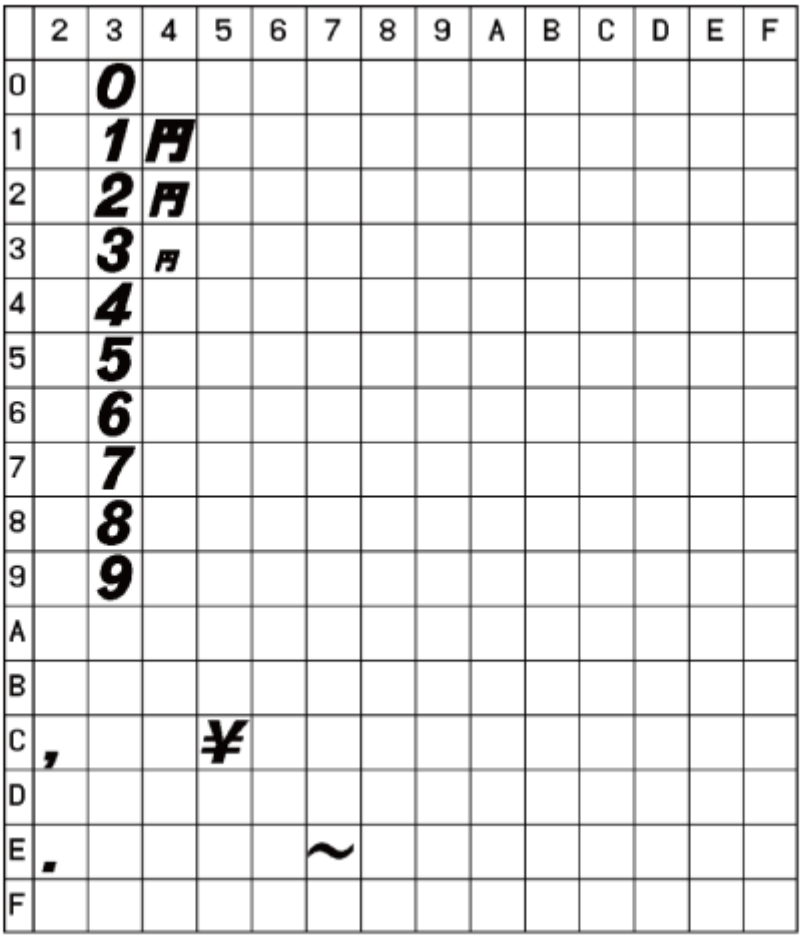
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X86 Font

The X86 font is a bitmap font with a basic size of 65 dots H x 65 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												
1		1	円											
2		2	円											
3		3	円											
4		4												
5		5												
6		6												
7		7												
8		8												
9		9												
A														
B														
C	,			¥										
D														
E	.					~								
F														

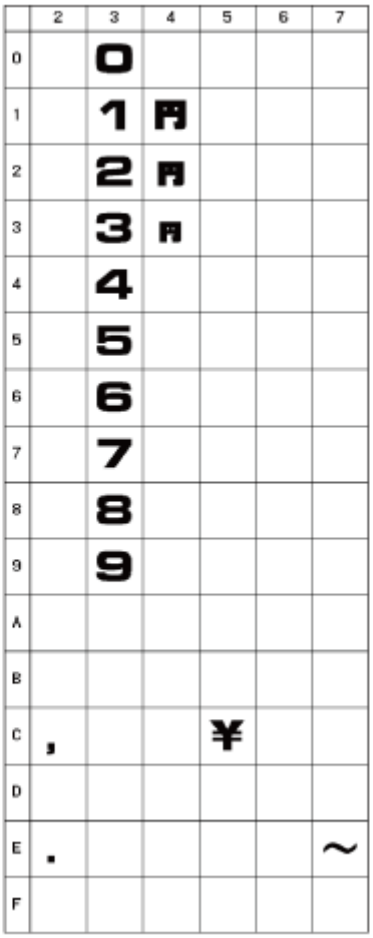
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X87 Font

The X87 font is a bitmap font with a basic size of 89 dots H x 89 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
0		0				
1		1	円			
2		2	円			
3		3	円			
4		4				
5		5				
6		6				
7		7				
8		8				
9		9				
A						
B						
C	，			¥		
D						
E	．					～
F						

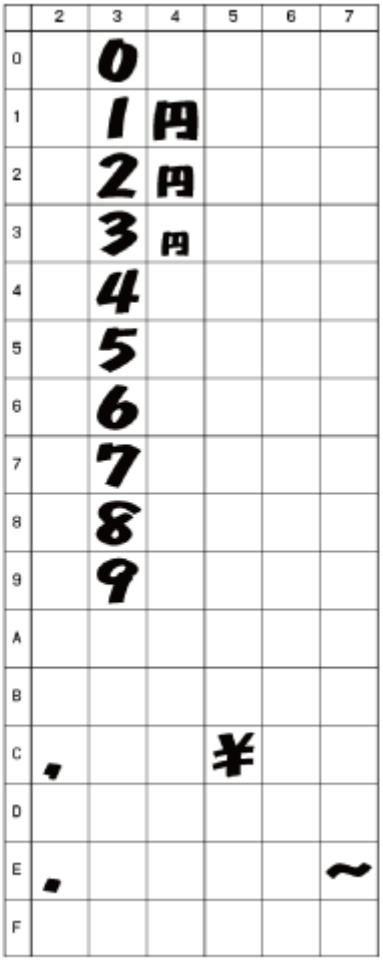
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

X88 Font

The X88 font is a bitmap font with a basic size of 118 dots H x 118 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

OCR-A Font

The OCR-A font is a bitmap font with a basic size of 33 dots H x 22 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0		P										
1		1	A	Q										
2		2	B	R										
3		3	C	S										
4	$	4	D	T										
5		5	E	U										
6		6	F	V										
7		7	G	W										
8		8	H	X										
9		9	I	Y										
A			J	Z										
B			K											
C			L											
D			M											
E	.	>	N											
F	/		◊											

OCR-B Font

The OCR-B font is a bitmap font with a basic size of 36 dots H x 30 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

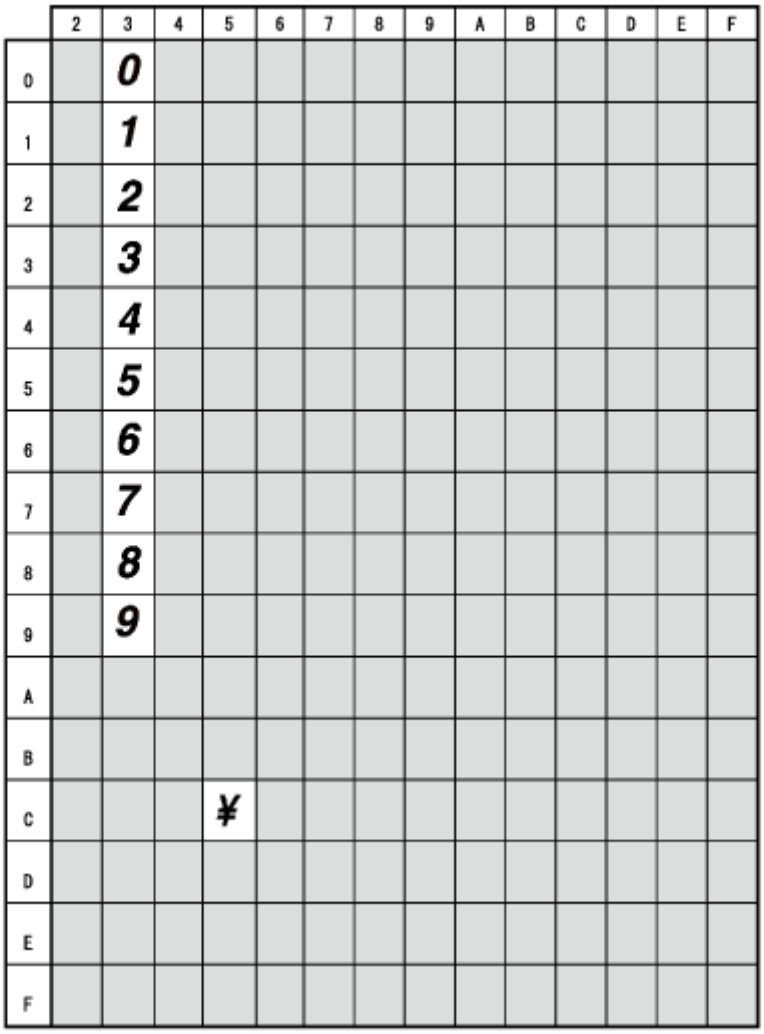
	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P										
1	!	1	A	Q										
2	"	2	B	R										
3	#	3	C	S										
4	$	4	D	T										
5	%	5	E	U										
6	&	6	F	V										
7	'	7	G	W										
8	(	8	H	X										
9	)	9	I	Y										
A	*	:	J	Z										
B	+	;	K	¥										
C	,	<	L	¥										
D	-	=	M											
E	.	>	N											
F	/	?	O											

Markdown Font 1

The Markdown font 1 is a bitmap font with a basic size of 80 dots H x 64 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



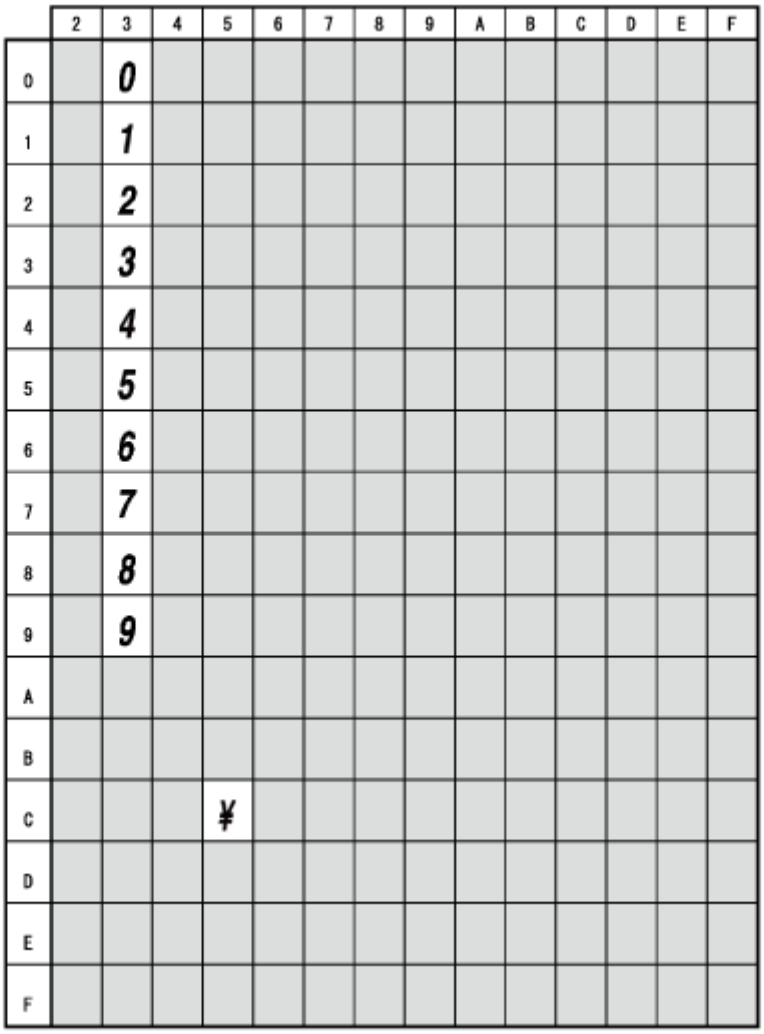
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 2

The Markdown font 2 is a bitmap font with a basic size of 80 dots H x 52 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



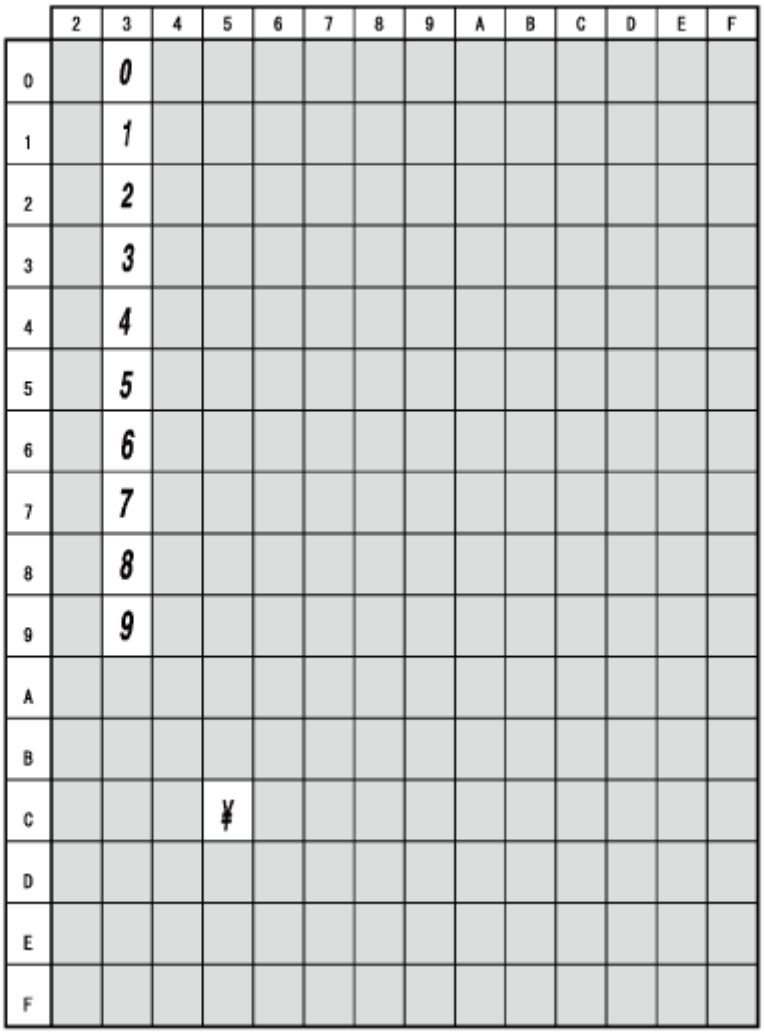
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 3

The Markdown font 3 is a bitmap font with a basic size of 80 dots H x 40 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



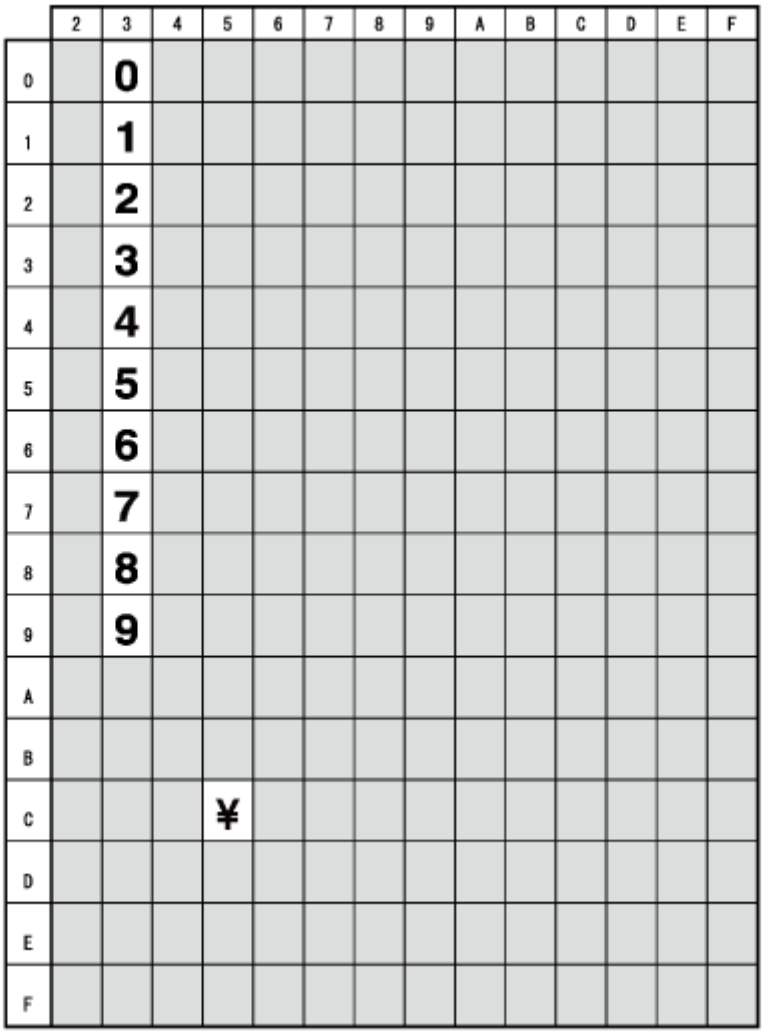
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 4

The Markdown font 4 is a bitmap font with a basic size of 80 dots H x 64 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



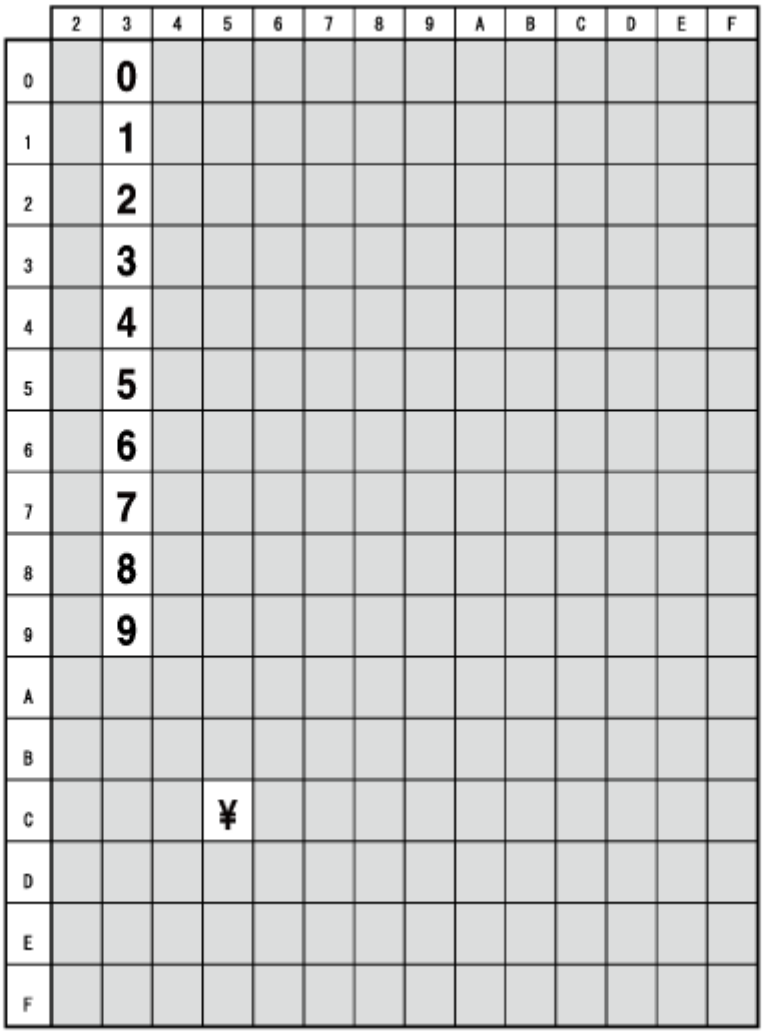
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 5

The Markdown font 5 is a bitmap font with a basic size of 80 dots H x 52 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



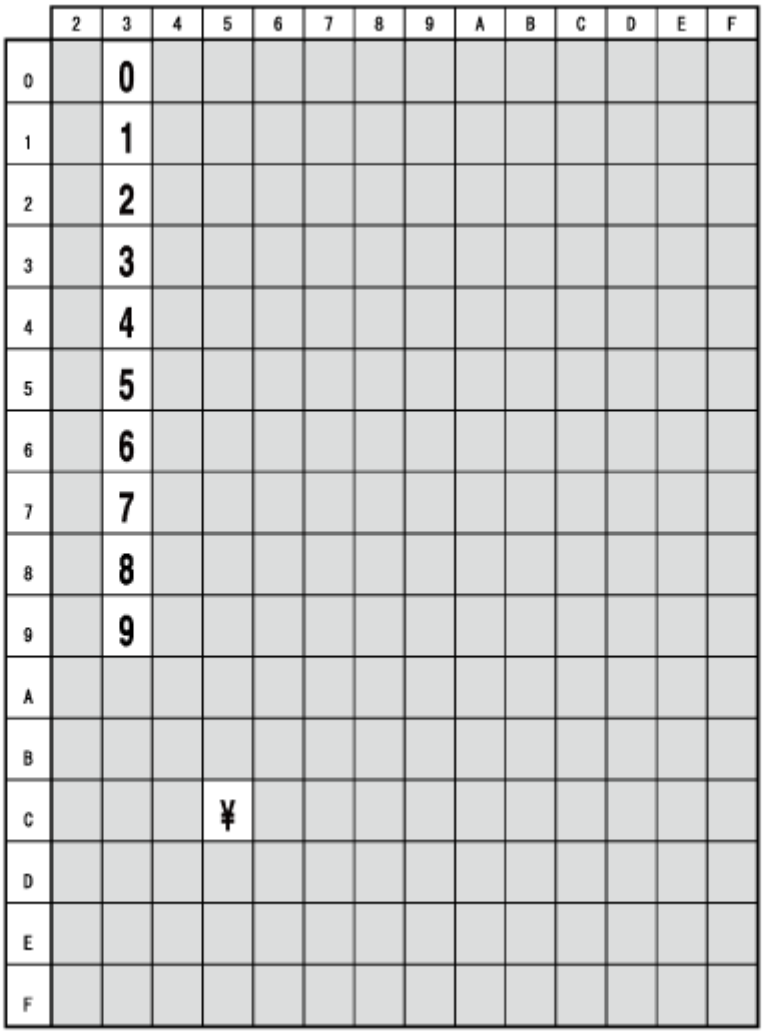
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 6

The Markdown font 6 is a bitmap font with a basic size of 80 dots H x 40 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



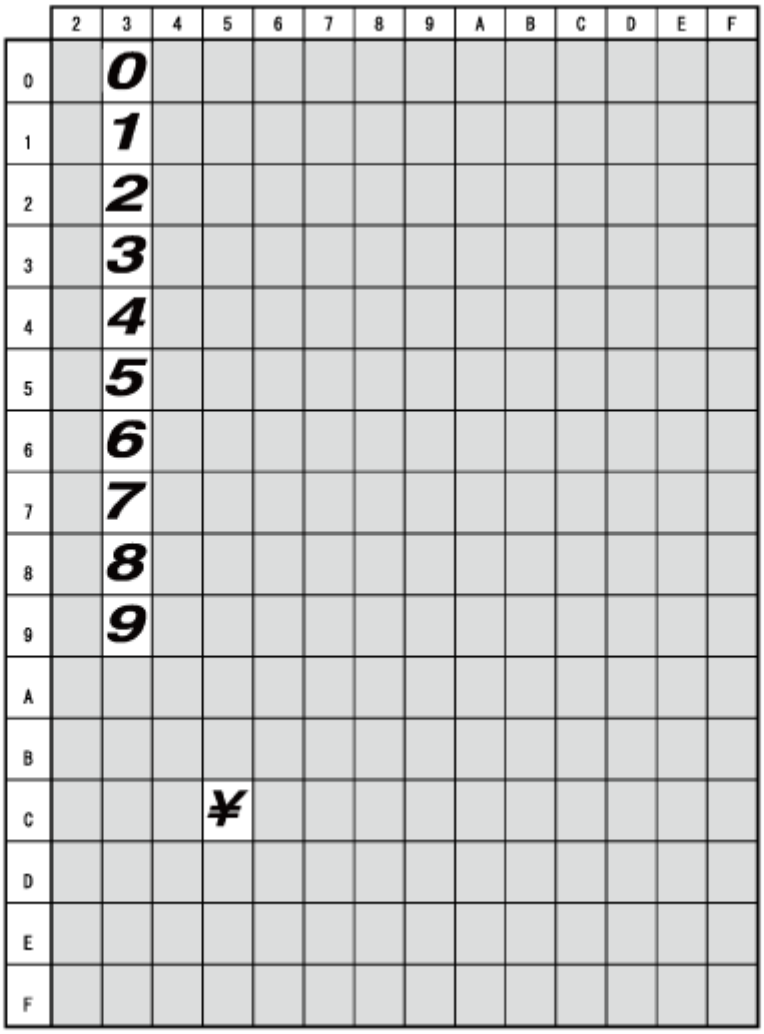
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 7

The Markdown font 7 is a bitmap font with a basic size of 92 dots H x 104 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



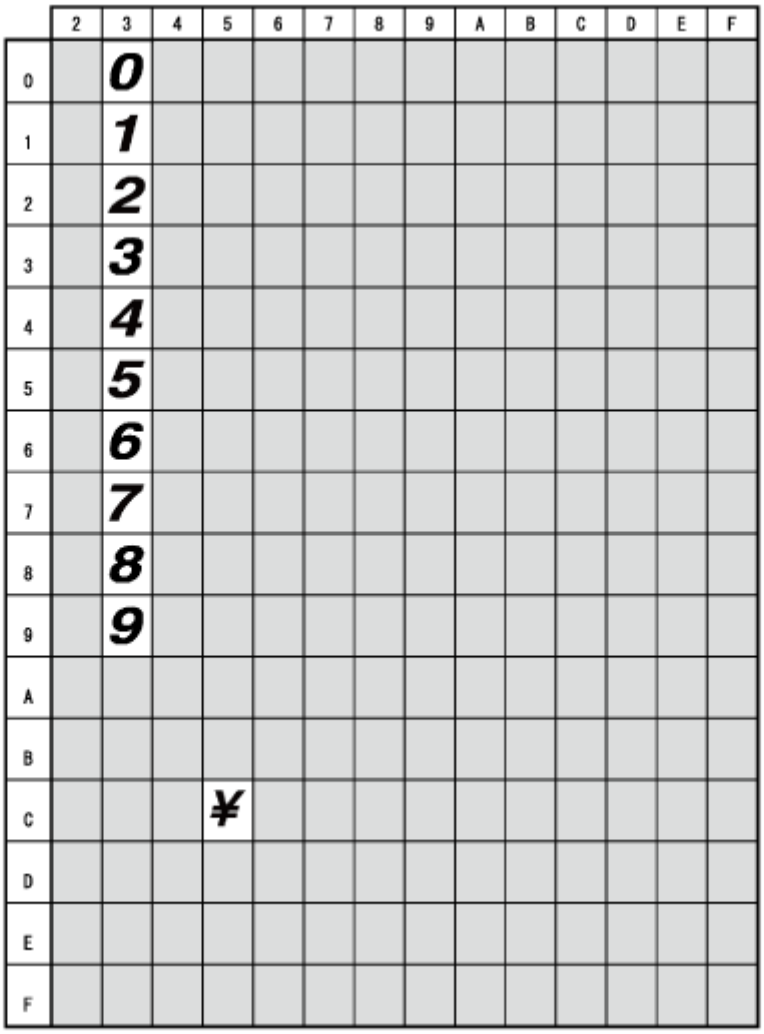
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 8

The Markdown font 8 is a bitmap font with a basic size of 92 dots H x 88 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



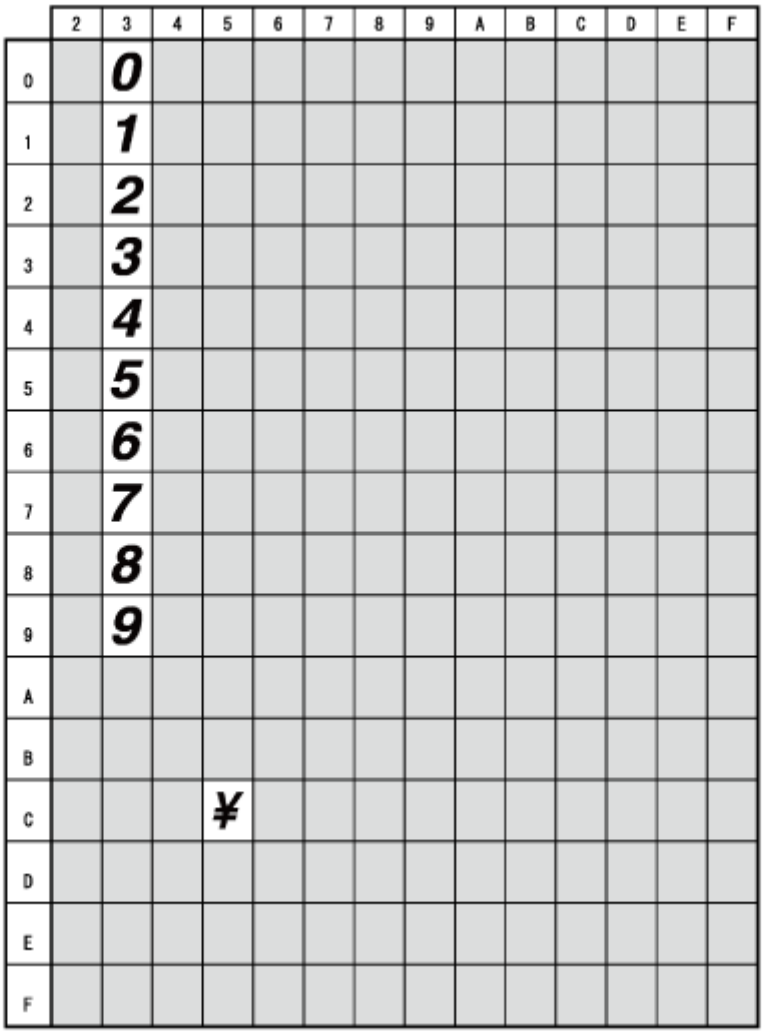
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 9

The Markdown font 9 is a bitmap font with a basic size of 92 dots H x 80 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



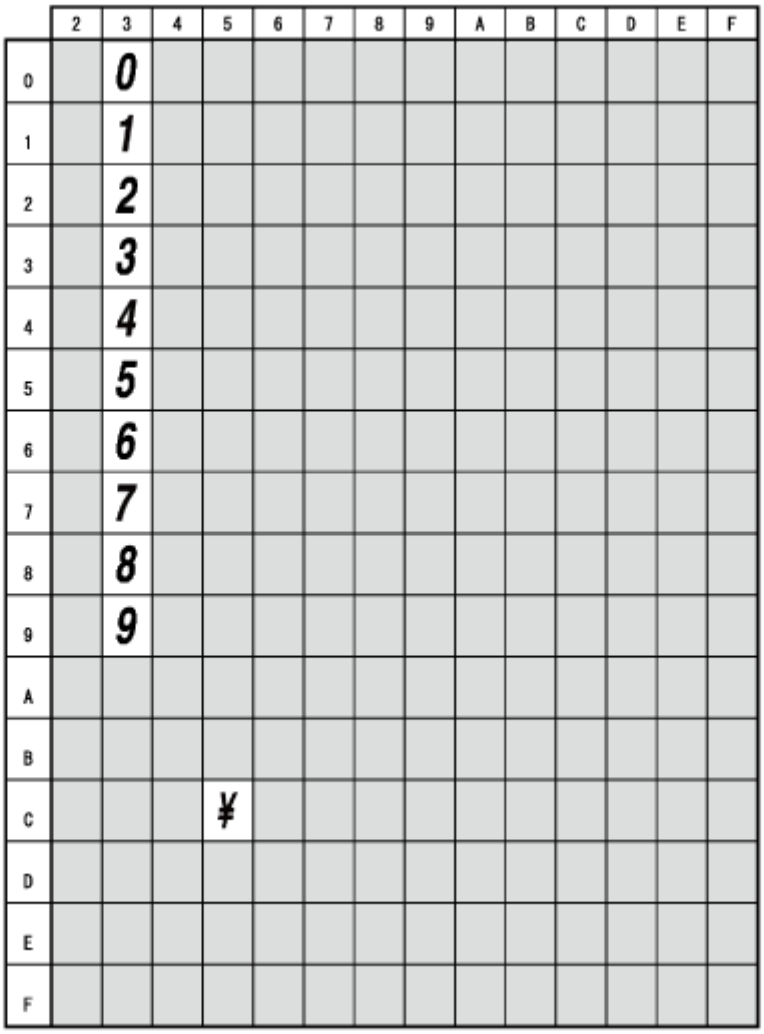
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 10

The Markdown font 10 is a bitmap font with a basic size of 92 dots H x 56 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



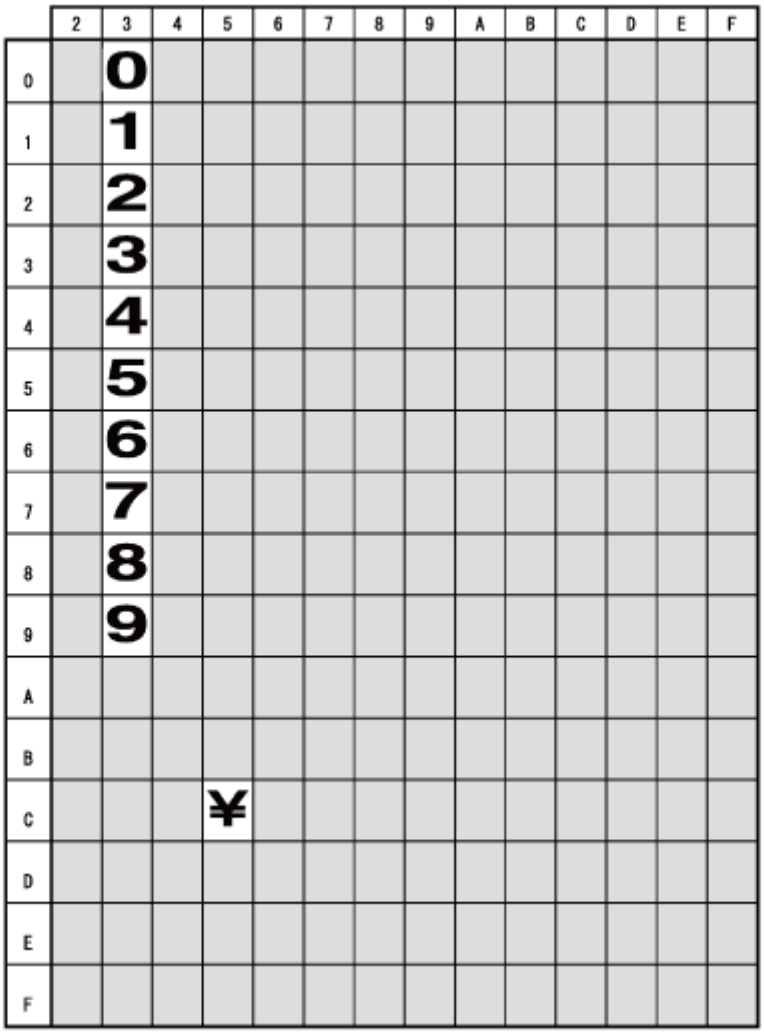
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 11

The Markdown font 11 is a bitmap font with a basic size of 92 dots H x 104 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



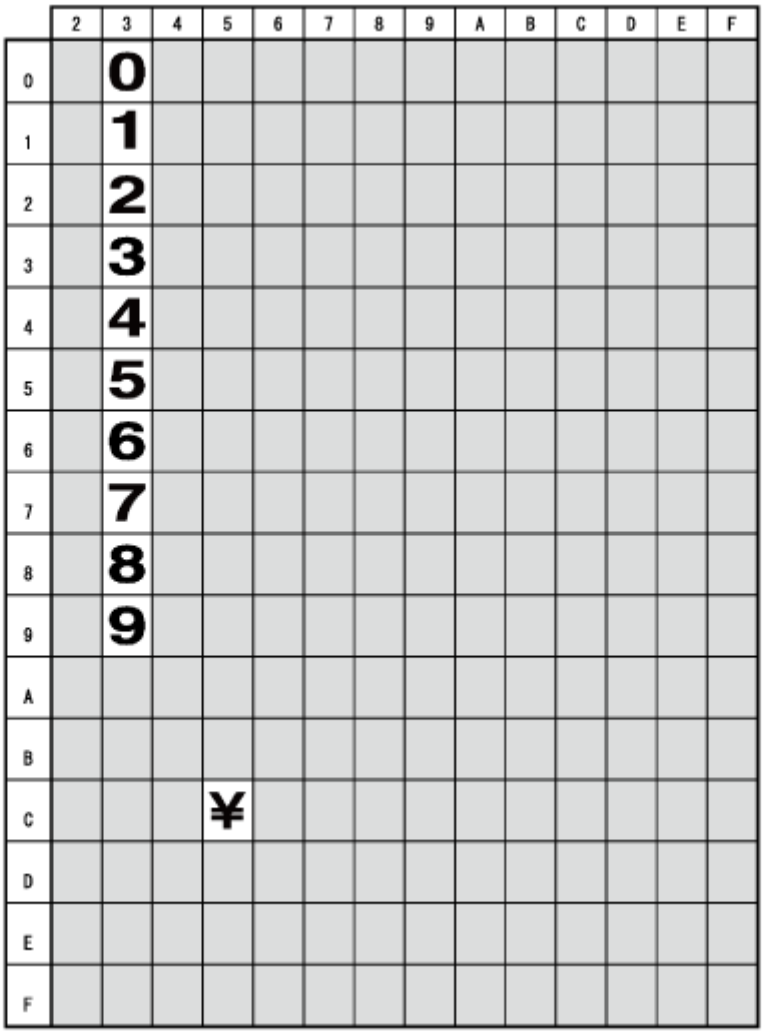
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 12

The Markdown font 12 is a bitmap font with a basic size of 92 dots H x 88 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



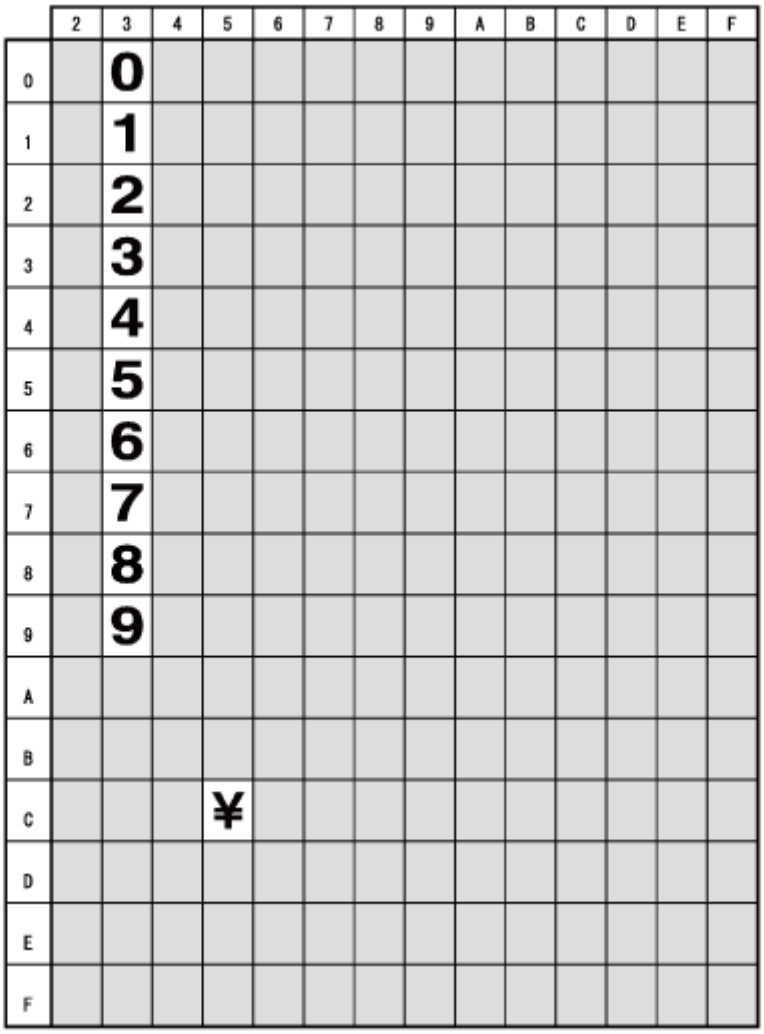
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 13

The Markdown font 13 is a bitmap font with a basic size of 92 dots H x 80 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



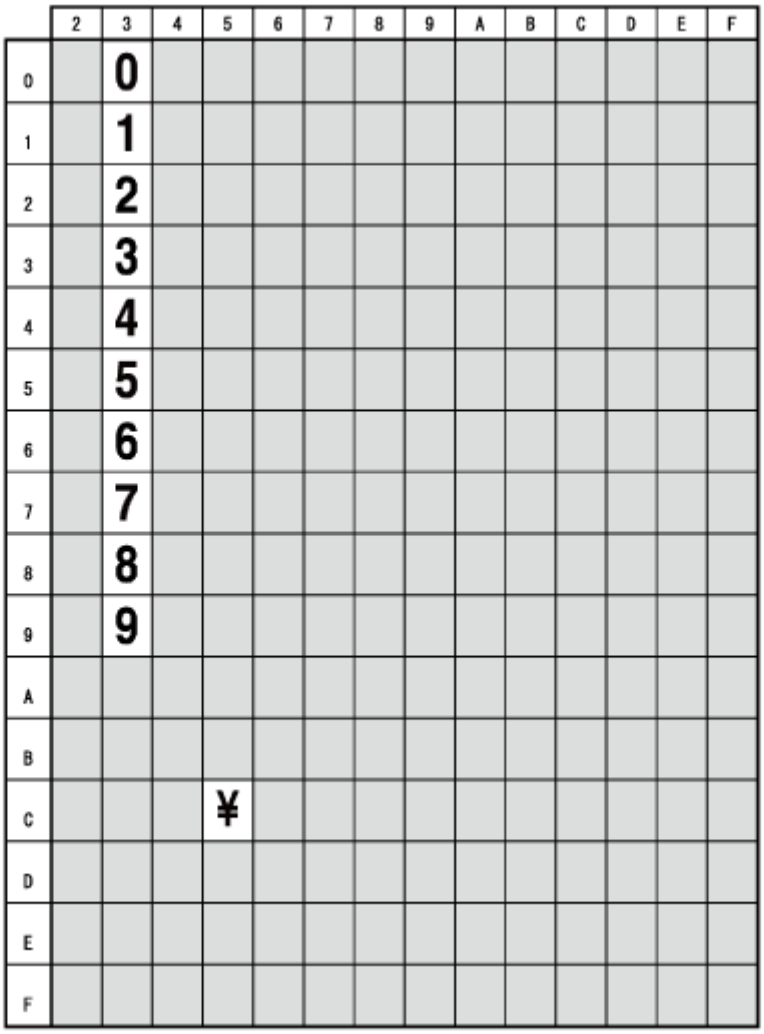
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 14

The Markdown font 14 is a bitmap font with a basic size of 92 dots H x 56 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



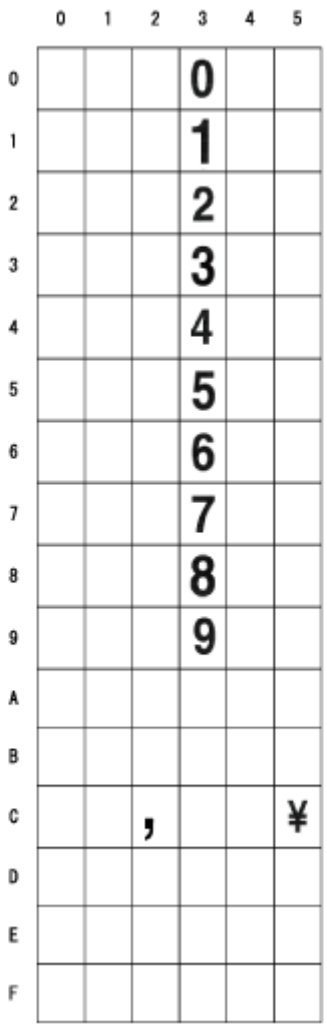
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

Markdown Font 15

The Markdown font 15 is a bitmap font with a basic size of 138 dots H x 84 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

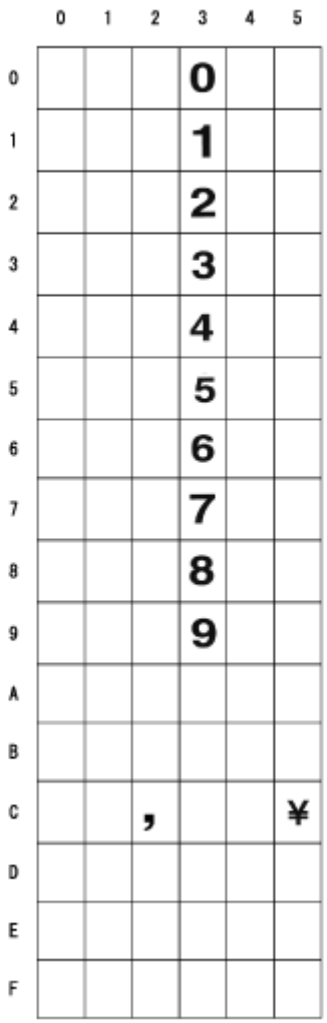


Markdown Font 16

The Markdown font 16 is a bitmap font with a basic size of 138 dots H x 120 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

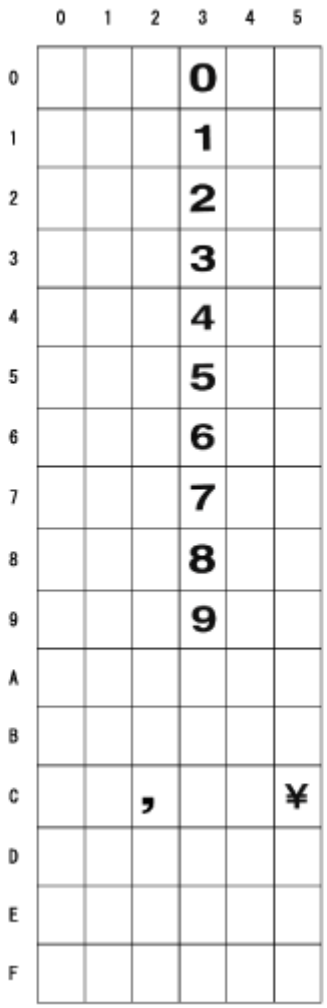


Markdown Font 17

The Markdown font 17 is a bitmap font with a basic size of 138 dots H x 132 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

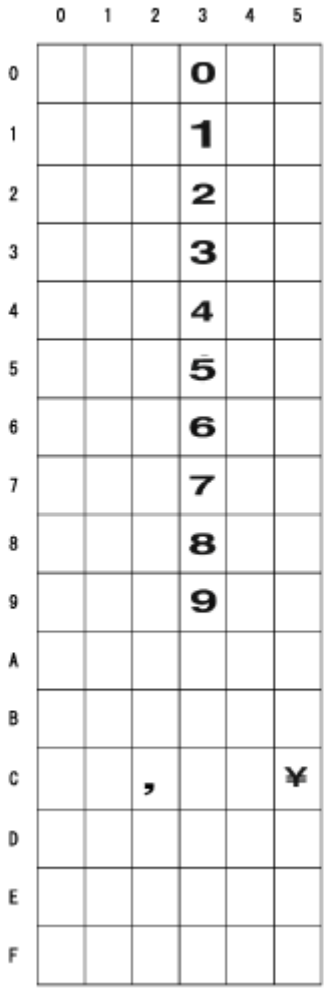


Markdown Font 18

The Markdown font 18 is a bitmap font with a basic size of 138 dots H x 156 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

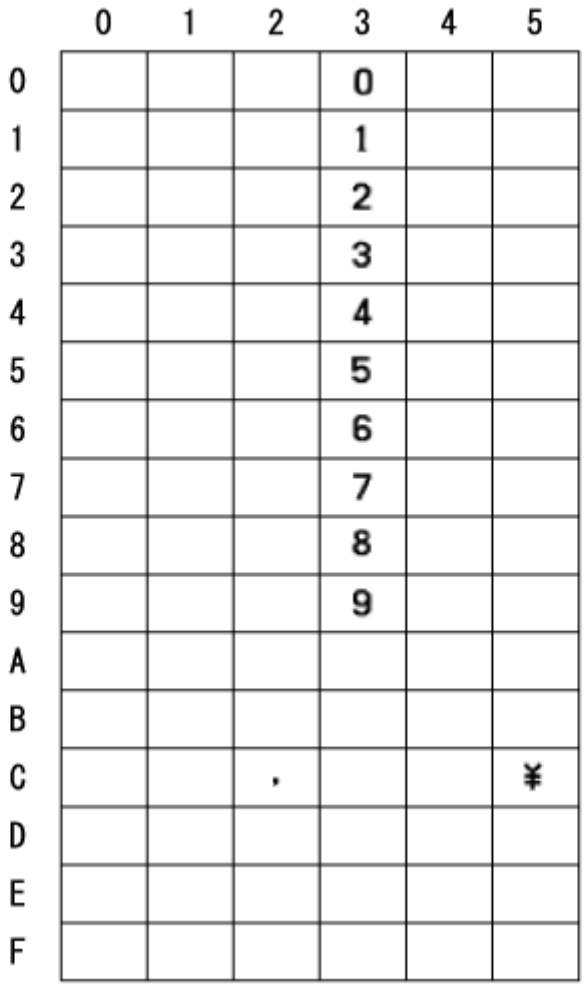


Price Character Font

The price character font is a bitmap font with a basic size of 36 dots H x 24 dots W.

This supports fixed pitch only.

A font sample is shown in the figure below.

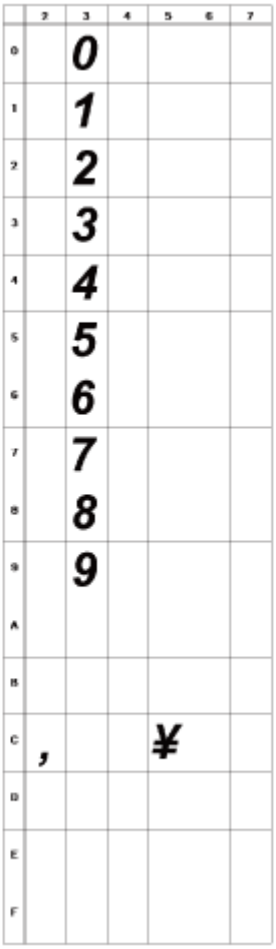


POP Font

The POP font is a bitmap font with a basic size of 133 dots H x 80 dots W.

You can select fixed pitch or proportional pitch.

A font sample is shown in the figure below.



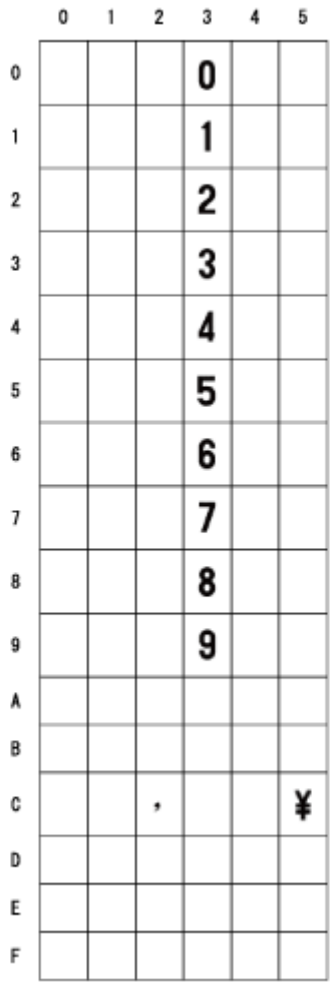
- To select proportional pitch, enable [SBPL] > [Font Settings] > [Proportional] in the [Applications] menu, or specify with the command.

POP1 Font

The POP1 font is a bitmap font with a basic size of 72 dots H x 42 dots W.

This supports the fixed pitch only.

A font sample is shown in the figure below.

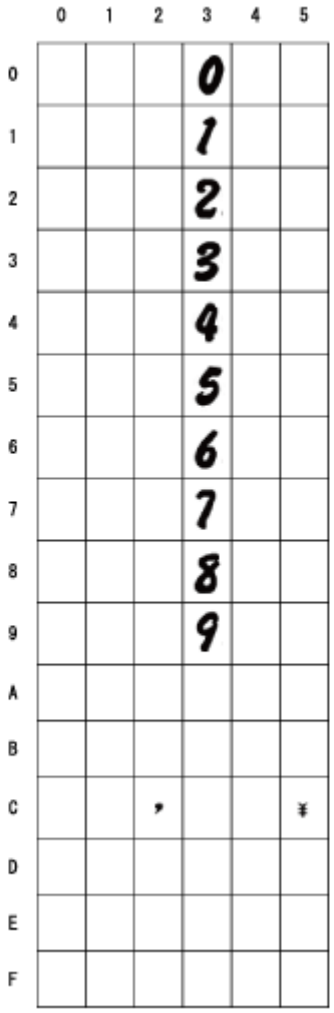


POP2 Font

The POP2 font is a bitmap font with a basic size of 102 dots H x 72 dots W.

This supports the fixed pitch only.

A font sample is shown in the figure below.



POP3 Font

The POP3 font is a bitmap font with a basic size of 84 dots H x 39 dots W.

This supports the fixed pitch only.

A font sample is shown in the figure below.

Scalable Fonts

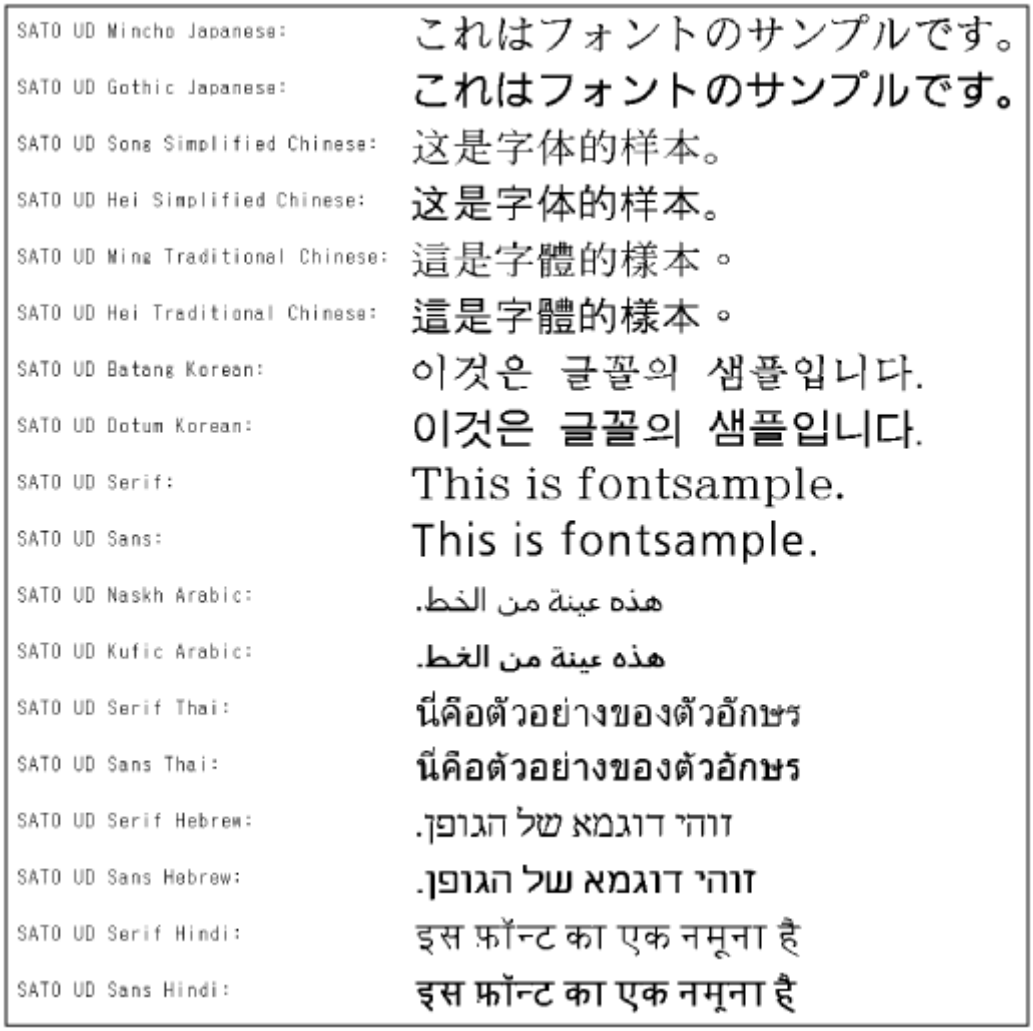
The printer contains various scalable fonts.

The figure below is a sample of some scalable fonts.

Multilingual Font

The printer contains various multilingual fonts.

The figure below is a sample of some of the multilingual fonts.

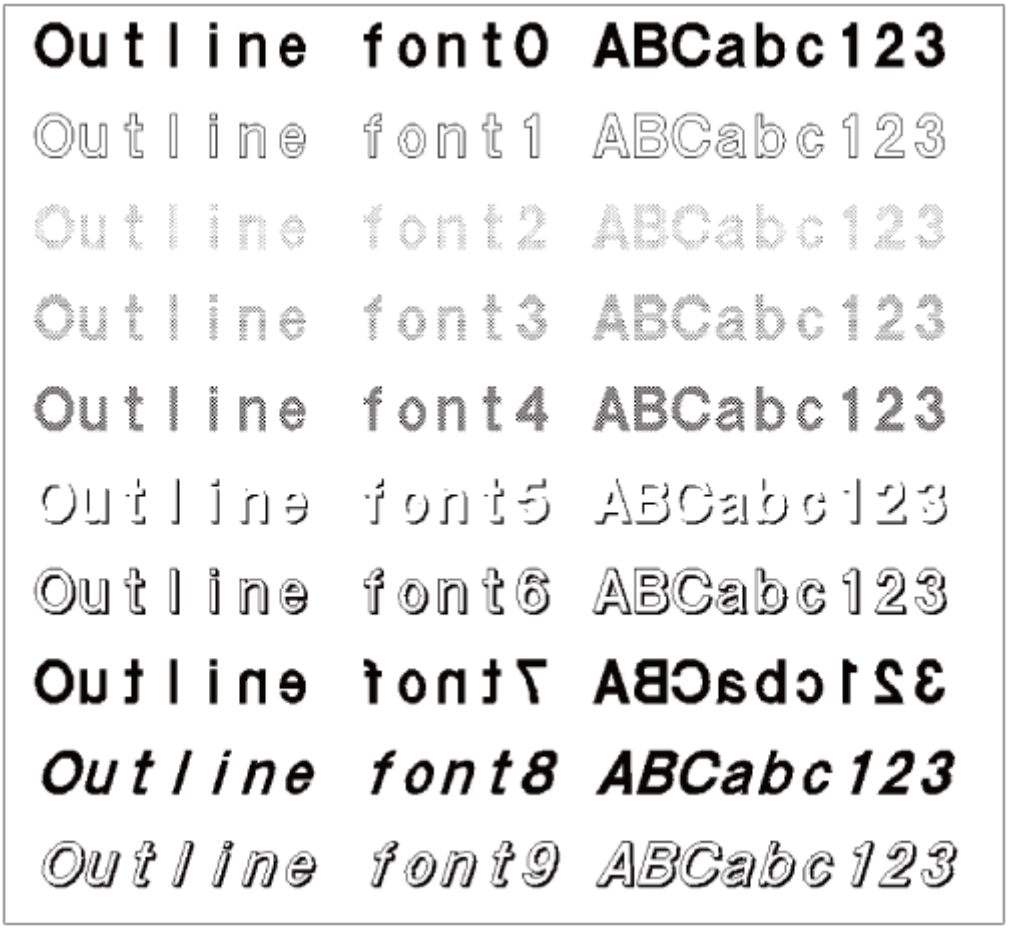


Outline Fonts

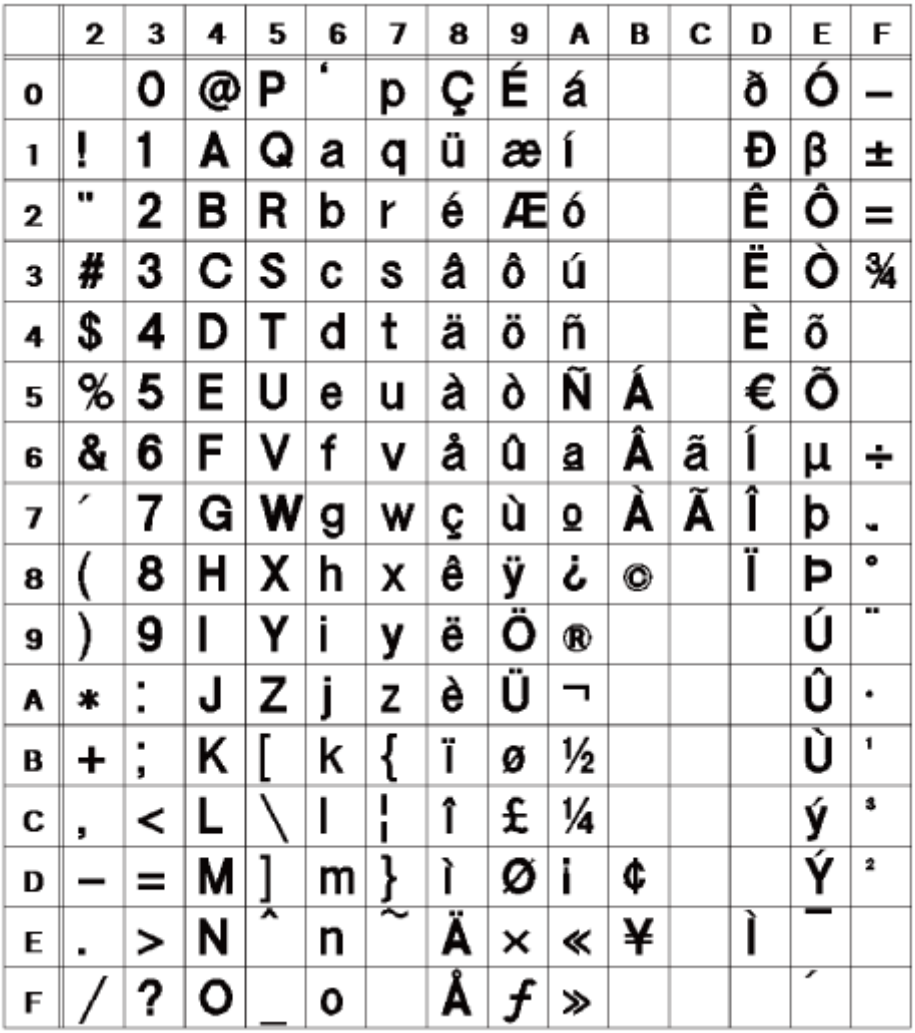
The font type, font size and font shape can be specified for the outline fonts.

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	º	À	Ã	Î	þ	˛
8	(	8	H	X	h	x	ê	ÿ	¿	©		Ï	Þ	°
9	)	9	I	Y	i	y	ë	Ö	®				Ú	¨
A	*	:	J	Z	j	z	è	Ü	¬				Û	·
B	+	;	K	[	k	{	ï	ø	½				Ù	¹
C	,	<	L	\	l	¦	î	£	¼				ý	³
D	–	=	M	]	m	}	ì	Ø	¡	¢			Ý	²
E	.	>	N	^	n	~	Ä	×	«	¥		Ì	¯	
F	/	?	O	_	o		Å	ƒ	»				´	

- The font size can be specified from 1 to 999 dots, but if the font size is too small for the font shape, it cannot be recognized as a font. Please be careful. Also, if the specified font size is too small, it may collapse, depending on the font.

Barcodes

Code Type	Description
Barcodes	• UPC-A/UPC-E • JAN/EAN • CODE39, CODE93, CODE128 • GS1-128(UCC/EAN128) • CODABAR(NW-7) • ITF • Industrial 2 of 5 • Matrix 2 of 5 • MSI • Customer Barcode • POSTNET • UPC add-on code • BOOKLAND • USPS code • GS1 DataBar Omnidirectional • GS1 DataBar Truncated • GS1 DataBar Stacked • GS1 DataBar Stacked Omnidirectional • GS1 DataBar Limited • GS1 DataBar Expanded • GS1 DataBar Expanded Stacked
2D Codes	• QR Code • Micro QR Code • PDF417 • Micro PDF • Maxi Code • GS1 Data Matrix • Data Matrix (ECC200) • Aztec Code
Composite Symbols	• EAN-13 Composite (CC-A/CC-B) • EAN-8 Composite (CC-A/CC-B) • UPC-A Composite (CC-A/CC-B) • UPC-E Composite (CC-A/CC-B) • GS1 DataBar Composite (CC-A/CC-B)

Code Type	Description
	• GS1 DataBar Truncated Composite (CC-A/CC-B) • GS1 DataBar Stacked Composite (CC-A/CC-B) • GS1 DataBar Expanded Stacked Composite (CC-A/CC-B) • GS1 DataBar Expanded Composite (CC-A/CC-B) • GS1 DataBar Stacked Omnidirectional Composite (CC-A/CC-B) • GS1 DataBar Limited Composite (CC-A/CC-B) • GS1-128 Composite (CC-A/CC-B/CC-C)

- Specifications are subject to change without notice.

Support and Warranty

SOS (SATO Online Services) (SOS users only)

The SOS (SATO Online Services) is a remote maintenance service that monitors your printer status for 24 hours and supports its stable operation. To use this service, create an SOS account and add your printer.

For details on the SOS, refer to the SOS Portal Site.

☞ http://www.sato-sos.com/en

Maintenance Support

SATO provides maintenance support to ensure reliable operation of your printer.

Access the following site and select your country from the list. Check the information on the displayed page.

http://www.satoworldwide.com/service-and-support.aspx

Warranty Period for Consumables

For information on the warranty period for print heads, platen rollers and cutters, refer to the SATO Global Warranty Program.

http://www.satoworldwide.com/global-warranty-program.aspx

June 2018

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